

Graduate School of Business

Scenario Planning as an Organisational Change Agent

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

Signature:

Date:

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Abstract

The thesis was based on a unique opportunity to compare the perceptions of participants before and after a scenario planning project conducted in a water utility. The researcher was able to explore the perceptions of the participants of scenario planning as a change agent directly, and so address a concern in some of the literature that much of the body of knowledge on scenario planning has been filtered through the viewpoints of scenario planning practitioners.

Through the use of an adapted grounded theory approach, the perceptions of the participants emerged independently of a pre-conceived theoretical framework and explanations of the outcomes of the process were developed from this data.

As well, the assumptions behind the practice of scenario planning were explored and from this a theory for scenario planning was developed. This was effected while constant comparison of concepts emerging from the data was in progress and provided a theoretical framework for the discussion of the empirical research.

In this case scenario planning was perceived more as an instrument than as an agent of change, with a role of setting a framework for the strategic conversation in the subsequent phases of the change initiative.

The outcomes of the research illustrated that uncertainties internal to the organisation had affected the implementation of change. In particular the conceptual ecologies of people in the organisation were not explored in depth, and this perpetuated a driving force for the future of the organisation that was not merely uncertain but remained unknowable.

It was concluded that whether a scenario planning project achieved its objectives was matter of perception, with evaluation differing depending on the viewpoint taken. Change of mind-set was not necessarily needed for a change of strategic direction, which could be explained using a political metaphor. However, for cultural change to be effected, there was a need for operatives to identify with it. It was concluded from this case that unless change and/or the change process were adapted to resonate with the world views of the operatives, it was unlikely it would become embedded in the organisation and may be resisted. Conceptual ecologies needed to be explored for this adaptation to occur.

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Definitions

Axiom:	A proposition that commends itself to general acceptance; a well established or universally conceded principle” (<i>The Shorter Oxford English Dictionary, 1973</i>).
Agent:	A cause or initiator of change (<i>The Macquarie Dictionary, 1997</i>)
Axial coding:	Process of putting data back together into new relationships, subcategories and then categories, after it has been fragmented by initial coding. Not used in this research.
Before and After analysis:	Comparison of participants’ viewpoints before scenario planning (i.e., from pre-workshop interviews) and afterwards (i.e., from Research interviews).
Bucket:	Broad categories from the first coding iteration.
Business idea:	An organisation’s strategic identity (<i>cf. 2.13 Where scenarios fit</i>).
Category:	The more specific groups into which buckets were coded.
Change initiative:	Synonym for Company One 2010.
Codes/coding:	Researcher’s interpretation of incident or idea. Locke (2001) considered the term naming was a more accurate description of the activity.
Company One:	Ongoing cultural change campaign initiated by the managing director in 1998.
Company One 2010:	Three-phase scenario-based change initiative that was the subject of the research for the thesis.
Company One 2010 team:	Three people who coordinated and championed Company One 2010.
Constant comparison:	As categories and concepts emerge through comparison of data incidents for similarities and difference, they are subject to an iterative process of revision and clearer articulation process continues.
Culture:	See “Organisational culture”.

Curtin University:	Curtin University of Technology, Perth, Western Australia.
Data incident:	Fragment of the data from an interview or written material that is selected as an occurrence to which a name or code is applied.
Decision Explorer:	A cognitive mapping and analysis software package.
Drought:	The 2001 winter in which rainfall was the lowest for 87 years, leading to difficulties with water supply in parts of Western Australia.
Executive:	The senior management team of the Corporation, as listed in the annual reports.
Heuristic scenarios:	Alternative term for institutive logics scenarios (<i>cf. 2.10.1 Intuitive logics</i>).
Hypothesis:	Proposition that is an outcome of grounded theory that has not been tested.
Implementation:	Implementation of the organisational changes resulting from the scenario planning and strategic intent phases of the change initiative (not, as proposed by Wilson (1998b), of a scenario planning culture, which was not an objective of this project).
Indicative concepts:	Categories of perceptions that are a form of data, mainly descriptive, organised so that their relationship provides a structure to facilitate the further emergence of concepts and theory (<i>cf. 5.3 Analysis Stage 1</i>).
Instrument:	A means of pursuing an aim (<i>The Shorter Oxford English Dictionary, 1973</i>).
Interpret:	The terms interpret and interpreted are used solely to describe an interpretation by the researcher. Other terminology such as “perceived” is used in relation to the participants.
Management:	Encompasses the executive and all line and divisional managers (see also “Executive” and “Senior management”).
Memoing:	Notes on interviews or ideas sparked during the coding and constant comparison process, also used to record ideas for new concepts and reasons for creating categories, concepts and links.

Nodes:	The container in NVivo for categories and concepts. Nodes can represent concepts, processes, people, abstract ideas, places or any other categories in the project (Richards, 1999).
NVivo:	Software for supporting qualitative research in which categories and concepts are coded as nodes.
Open coding:	Initial fracturing of the data, often in several iterations, by naming data incidents with identifying labels that place them in a category.
Operative:	Person who worked in the organisation and would be expected to put into practice any organisational change (whether or not they actually complied with this).
Organisational culture:	Pattern of shared basic assumptions that underlie organisational behaviour and values.
Paradigm:	A systematic set of ideas and values, methods and problem fields, as well as standard solutions, that explain the world and inform action (Clarke and Clegg, 1998).
Participant:	Person who participated in this research (includes interviewer/ researcher as well as interviewee). Also (depending on context) participant in the Company One 2010 change initiative.
Perceived:	The terms perceive and perception are used in this thesis solely in reference to the participants. Other terminology such as “interpreted” is used in relation to the researcher.
Pre-workshop interviews:	Interviews that were carried by SPARU as part of the scenario planning process.
Relational concepts:	Abstract conceptual relationships emerging from the data (in contrast to the more substantive indicative codes) (<i>cf. 5.4.1 Exploration of the change process</i>).
Research analysis:	Coding and interpretation using NVivo and Decision Explorer software tools.
Research interviews:	Interviews conducted by the researcher for this study, to be distinguished from pre-workshop interviews that were carried out by SPARU as part of the scenario planning process.
Scenario Thinking (project):	The scenario planning project that formed the first phase of Company One 2010. Distinguished from scenario thinking (lower case) (<i>cf. 2.9 What is scenario planning?</i>)

Senior management:	Synonym for “Executive”.
SP:	Abbreviation for scenario planning.
SPARU:	Scenario Planning and Research Unit of the Graduate School of Business at Curtin University of Technology. The Unit ceased operating in 2004.
Tendencies (=mechanisms):	Underlying cause-effect relationships that may be realised or may lay dormant, depending on the influence of other forces or tendencies (<i>cf. 3.2 Critical realism</i>).
Theoretical concept:	Concepts that emerge from indicative and relational concepts and are the foundation of the hypotheses.
Theoretical perspective:	World view to aid understanding of the theoretical model and findings of the research.
<i>Theoretical sensitivity:</i>	The ability to recognise what is important in the data and the subtleties of meaning in it, the insights that give meaning to the data. Theoretical sensitivity is sourced in the researcher’s experience and from the experiences of others through, e.g., the literature. (Sourced from: (Charmaz, 2001, Glaser, 1992, Glaser, 1998, Glaser and Strauss, 1967, Locke, 2001, Strauss and Corbin, 1990, Strauss and Corbin, 1998))
Transitive/intransitive:	Comparatively permanent/non-permanent (<i>cf. 3.2 Critical realism</i>).

*I am a part of all that I have met;
Yet all experience is an arch wherethro'
Gleams that untravelled world, whose margin fades
For ever and ever when I move.*

Ulysses, Alfred, Lord Tennyson

1 Introduction

1.1 Overview of themes and structure

The thesis originated from a singular opportunity to contribute empirical evidence to the understanding of how scenario planning affects organisational change: the researcher was in a position to study the ideas and perspectives of participants in a scenario planning project both before and after the project took place. As far as can be ascertained, the study is unique in examining the changes that occurred at both an organisational and individual level as a result of scenario planning in this way.

In this chapter, the outline and objectives and significance of the research are discussed and details are provided about the organisation and the scenario planning project that was studied.

The review of literature in Chapter 2 identified two apparent gaps in the research into scenario planning: there were very few empirical studies of scenario planning projects conducted independently of scenario planning practitioners, and claims at the time that there was a lack of theory in the field.

The main body of the research for the thesis has helped to address the dearth of independent empirical studies. However, it became apparent that the claims of the lack of theory in the field needed further study. The literature was searched with a view to discovering extant theory and the outcomes of this form the main part of the literature review. The theoretical framework that emerged was used in 7 *Discussion: from relational to theoretical concepts*¹ as a basis of comparison for the scenario planning project that was studied for this thesis.

A critical realist world view, combined with some concepts from hermeneutics, was shown to be a sound framework for understanding the scenario planning process. Within this paradigm, the assumptions that underlay scenario planning were identified and developed to provide a framework for understanding the type and limitations of the knowledge that it generated. The same theoretical perspective was

¹ Cross references throughout the thesis assume the format of chapter or section or subsection number and title.

then used to develop the interpretive research methodology and the research design, which were described in Chapters 4 and 5. Because a study of this kind has not, to the researcher's knowledge, been undertaken previously and there was a body of opinion that there was a lack of theory in the field, a grounded theory approach was taken to enable emergence of concepts and theory as far as possible independent of preconceptions.

The findings were presented in Chapter 6. These represented the researcher's interpretations of the data and included descriptive and initial emergent concepts. They have been presented graphically and in written form. However, in order that the richness of the data was not lost and the context from which the interpretations were made was transparent, the data have been presented in greater detail in *Appendix 2 Evidentiary quotes*.

In Chapter 7, the implications of the findings were discussed and emergent theoretical concepts were developed, with references to the scenario planning theory that was introduced in the literature review. In the conclusion in Chapter 8, emergent hypotheses and the implications of the research and its outcomes for the practice of scenario planning were examined.

The major outcomes of the research included the effect of the change initiative on the ideas and attitudes of participants; contributions to understanding of the nature of the knowledge generated by a scenario planning process and the role of scenario planning in a change process; and an examination of the factors affecting implementation of change in this context. The principal factor affecting change implementation was identified as a need to adapt change initiatives to the experience and mind sets of the operatives that must implement the change. If they did not resonate with the past experience, aspirations and perceived benefits to the individual and/or the organisation, there could be resistance.

1.2 Research objectives and research questions

The aim of the research was to increase understanding about the role of scenario planning as an organisational change agent, from the perspective of participants in the process rather than through the views of scenario planning practitioners.

Originally, the specific objectives of the research had been: to develop understanding about how organisations are changed by the scenario planning

process, including effects on organisational process and culture, and with emphasis on strategies and strategic direction; and, using the resulting data, to define guidelines on when it is appropriate for an organisation to choose scenario planning to meet its objectives, compared with other methodologies.

The objectives were firm when embarking on the research, but they proved to have value as working questions only. This resulted from a fundamental change in the research concept.

The original research concept was based on a comprehensive study of the effects of scenario planning on organisational change drawn from the perceptions of a limited number of individuals in several organisations. However, the research direction and design was settled when an opportunity arose for a unique study in depth within a single organisation of the attitudes and opinions of participants in a scenario planning project, with the potential to research their ideas and attitudes before and after the scenario planning process.

With the change in direction, the objectives were revised. The first objective was not greatly affected, as this was a change in emphasis rather than substance. It was able to be revised as follows:

- To develop understanding about scenario planning and about organisational change that occurred as a consequence of a scenario planning project, including effects on organisational strategy, process and culture.

However, the original second research objective was not achievable, since participants in a single organisation could not be expected to provide informed empirical data on when it might be appropriate for other organisations to undertake scenario planning.

The research questions to meet the objective of developing understanding about change based on scenario planning in the organisation were:

1. What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?
2. What were the objectives of the organisation in undertaking scenario planning and to what extent were the objectives met?
3. How did participants perceive the role of scenario planning in the overall change process?

4. How did any changes that participants perceived or believed had occurred compare with the changes revealed by a comparative analysis of their opinions and ideas early in, and later in, the change process?
5. What were the factors that influenced the acceptance or otherwise and implementation of proposed changes?

All but the first question emerged as a result of early data analysis, and are therefore grounded in the data.

1.3 Significance of the study

The thesis contributes new and important understanding of scenario planning in three main areas:

1.3.1 Direct perspective capture

In *2.3 Searching for scenario planning theory*, it has been demonstrated that much of the literature has been derived from the experiences of practitioners of the art of scenario planning, and so has been filtered through the perspectives of people who it would be reasonable to expect, in many cases, would be partial to the practice. As well, in many cases the literature has been derived from practitioners' experiences or observations of organisational behaviour and/or change, often anecdotal, rather than rigorous independent research based on the direct experiences of the participants.

Because of this, the research design was aimed at exploring as directly as possible the perceptions of participants about the scenario planning process and its effects on organisational change, unfiltered by any intermediary other than the researcher.

The emphasis was on the perspectives of the participants as operatives. Operatives were defined as people who worked in the organisation and would be expected to put into practice any change (whether or not they actually complied with this). All the participants were considered to be operatives. Some were also instigators of the change process. Instigators of change should be distinguished from leaders in the organisation, who may not be instigators and may also be reluctant operatives.

1.3.2 Before and After comparison

One of the early phases of the scenario planning method that was used in the change process under study was a series of individual interviews and focus groups, both with participants in the scenario planning workshops and with other people from inside

and outside the organisation who were considered able to contribute useful ideas to the workshops (*cf. 1.5.3 Description of the change process*).

Notes from these pre-workshop interviews had been archived by the Scenario Planning and Research Unit at Curtin University of Technology (SPARU), who facilitated the scenario planning project. Permission was sought from SPARU and from all the workshop participants and interviewees who still worked for the organisation for the notes to be accessed for the research. All agreed. Consequently the research interviews for the study were designed to incorporate questions that would enable a comparison of some of the main ideas expressed by interviewees in the pre-workshop interviews with what they said more than a year after the scenario planning project. As well, participants' views of what change had occurred, as expressed in the post-workshop interviews, could be compared with how their viewpoints were shown to have been changed by the Before and After questions. As far as could be ascertained, this comparison is unique.

1.3.3 Scenario planning theory

The study also contributes towards the development of the theoretical basis for scenario planning by exploring and extending extant scenario planning theory.

1.4 Outcomes

The outcomes of the research provide a grounded perspective on how cultural factors affected organisational learning and organisational change arising out of scenario planning and contribute to understanding of barriers to organisational change. The implications of this for scenario planning theory and practice are explored.

Van der Heijden (2004) has identified the motivation of people and organisations as an area that is as yet unexplored in the area of scenario planning based change. Although he suggested that the field of foresight may benefit from a study of the aesthetics in this regard, the findings from the data analysis in this thesis suggest a more prosaic approach, based on identity and continuity, to the motivation of people in approaching the future.

1.5 Context

In this section the context in which the research took place is described. The context consists of the organisation in which the change initiative occurred, the change

process itself, the participants in the change process, the participants in the research and the researcher.

1.5.1 Description of the organisation

The scenario planning project that formed the basis for this thesis was carried out for the Water Corporation in Western Australia as part of its Company One 2010 change initiative.

The Water Corporation had its genesis on 1 January 1996, formed by the corporatisation of the Water Authority, which was a department of the West Australian State Government. It operates under a 25-year licence issued by the Office of Water Regulation (Water Corporation b, 2001).

For the financial year 2000-2001, the year the Corporation undertook its scenario planning workshops, its turnover was \$1.024b. and the annual report recorded 2158 employees (Water Corporation b, 2001). For the 2002-2003 year, when the interviews for this research were carried out, the annual report recorded turnover of \$1.131b., with 2000 employees (Water Corporation, 2003).

Under the Water Corporation Act 1995, the Corporation is responsible for the provision of water supply, irrigation, drainage and waste water services throughout Western Australia. It has a near-monopoly on these services, but has limited competition from some local authorities and from businesses providing their own water services.

The creation of the Government-owned Corporation shifted direct responsibility for the operation of water services by the organisation from a Minister of the Crown to a Board of Directors. The Board has legislative authority to perform the functions and determine the policies and control the affairs of the Corporation, including approving its goals and direction, and its performance targets and budgets. It ensures proper risk management processes are in place and monitors performance, including legal compliance and ethical behaviour. The Corporation is a separate financial entity, returning a dividend to its sole shareholder, the Government. It receives annual grants towards the cost of community service obligations, which are the provision of services that would otherwise be uneconomic, mostly to rural and remote locations.

However, despite its independent accountability, the organisation is not free of political constraints. The effect of this is explored in *7.4.2 Attitude to government and regulators*.

The transition from a government department to a corporation with independent financial accountability and responsibility for its own future direction resulted in a cultural shift in the organisation. Manifestations of the change were an enthusiasm for expansion into new areas of business and an increasing emphasis on customer service and commercial and competitive concerns. The new way of thinking was encouraged by the managing director, who instituted a strategic direction initiative called Company One in 1998-99 to promote the change within the organisation. More information about this initiative can be found in *7.1.3 Company One*.

Company One 2010, of which the scenario planning project studied for this research formed part, was an initiative that built upon Company One. In its 2000-2001 Annual Report, the Corporation described the purpose of the initiative: “an important exercise in review and redefinition ... to distil those things that define who we are and what we do, as well as to identify how best we can serve our customers, and Western Australia, into the future” (for full quote, see *2000-2001* below). The reasons that individual participants believed the change initiative was undertaken are detailed in *6.3.2 Objectives*.

Part of the new way of thinking had been to encourage an entrepreneurial approach, including seeking new business beyond the borders of Western Australia. This change of approach had not been universally accepted in the organisation (*cf. 6.6.3.2 Business development*). The new business initiative had had some limited success, but the Corporation then opted out of a major contract it was tendering for in partnership, foreshadowing a change in business direction (see *1999-2000* below).

At the time of the scenario planning project, the threat of competition was perceived as a major concern for the organisation, and this was the subject of the focal question for the scenario planning project. Nevertheless, it was perceived at that time that the organisation was performing well in an operating environment that appeared stable and without major immediate threat. One uncertainty was the effect of the outcome of the State government elections that had been held in February, 2001.

Within six months, the organisation was facing two crises: the lowest winter rainfall since 1914, which resulted in the imposition of increased water usage restrictions in metropolitan Perth and elsewhere, and a threat of litigation concerning land near the Corporation's Subiaco waste water treatment facility.

1.5.2 History of the organisation

The following is a brief history of developments in the Water Corporation that are salient to the organisational change that was studied for this research. Incidents have been selected for their relevance to the changing culture of the organisation and to provide background to the concepts and themes that emerged from the data analysis. The historical information is sourced from the organisation's annual reports (Water Corporation annual reports, 1997-2002).

1996-1997

- The Corporation established a commercial division to partner with private enterprise and make competitive bids to provide services for major Western Australian developments and overseas. Increased commercial enterprise was viewed as the key to the Corporation's future, both in areas that traditionally had been considered the exclusive province of the public water utility and in new ventures.
- The Corporation planned an expansion of its focus on customer service, exploration of new relationships with the private sector, and an increase in research and development. It saw its role as a partner in the economic and social development of Western Australia. A customer centre was planned.
- Community consultation was seen as important and was being undertaken for projects.
- Administrative policies and processes had been developed for the new Corporation. Compliance with the requirements of regulators was one factor in these.
- Concern about continuing low rainfall over the past two decades was expressed. Development of new water sources was being accelerated. A day time sprinkler ban was made permanent.

1997-1998

- Overseas business in operating and maintenance management services and/or consultancy services was being pursued, particularly in South-East Asia and India.
- Administrative changes were introduced to centralise some functions that were previously the responsibility of self-contained regions and divisions.
- Concerns about continuing low rainfall and the low levels of dams were reiterated. Restrictions on day-time sprinkler use and a water-saving promotion had been effective.
- Consumers believed they were doing their best to conserve water but many felt water was a commodity on which there should be no restrictions, according to the Corporation. This had implications for planning and capital expenditure as well as environmental management and responsibility.
- A single-point customer service centre was introduced.

1998-1999

- Some contracts, for training services and a system review, had been won in Asia and others were under negotiation.
- A cultural change campaign called Company One was commenced. A firmly-held Board view was to encourage innovation and a pro-active attitude, with an emphasis on customer needs and a commercial and competitive approach. The managing director reported that there was strong evidence of a shift in staff thinking and behaviour.
- Supply levels were low and the accelerated source program continued. The Corporation noted that capacity had increased 76 percent in 10 years and more than half the supply was sourced from underground.

1999-2000

- Contracts had been won, either in partnership or alone, for contracts in the Cocos Islands, Solomon Islands, and Northern Territory. The Corporation led a consortium to tender for a contract to manage and operate Johannesburg's water and wastewater services, but did not continue with it.

It was noted in the annual report that this was an important catalyst for cultural change.

- A new set of values under the Company One initiative related to customer and staff relations, how business was done, the need for the Corporation to control its future, and its place in society.
- An independent study indicated there was a common understanding of Company One and progress made towards the goal of being the “company of first choice”. Innovation was a symptom of this.
- A commitment to serve Western Australia first was published in the annual report (p5). The managing director reported that, “We see this as the only way in which we can provide maximum advantage to our owners and our customers, helping to make WA an attractive place to live and invest.”

2000-2001

- Referring to Company One 2010, the managing director reported: “At the five-year mark following corporatisation, we began the year 2001 with an important exercise in review and redefinition. Building on our performance and experience to date, we looked to distil those things that define who we are and what we do, as well as to identify how best we can serve our customers, and Western Australia, into the future. What became very clear during this process of review was the depth and significance of our roots in Western Australia. While a globalising water industry tempts with opportunities in other places, most of our growth, both past and potential, is with residential, rural and industrial customers in this State. By understanding and serving them exceptionally well, we maximise our own opportunity. Beyond that, our greatest scope comes from exploiting the innovation, research and development we apply in serving those customers. Another key theme to have emerged is the importance of maintaining the position of trust and credibility in which we are held by Western Australians...” (Water Corporation b, 2001, p5)
- Company One behaviour was reported to be consolidated into the culture, including a sustainable way to do business and achieve a strong commercial focus. Company One values had been incorporated into people strategies,

planning, recruitment, employment conditions, performance management and training and development programs. Company One values are discussed in *7.2.1 Replacing the vision*.

- Continuing low rainfall was of major concern, bringing hardship to rural areas. Water storage reservoirs were under stress. Further sources were being brought into service.

2001-2002

- A new strategic framework (from Company One 2010) identified “People and Culture” as central to the ongoing success of the organisation. Planning workshops that involved a cross-section of employees were conducted with a view to developing a culture consistent with the organisation's new purpose and direction. However, the impact of the drought and other pressures on the business changed the focus to cost reduction in the latter half of the year. More than 120 jobs were lost.
- The winter produced the lowest rainfall for 87 years, about 10 per cent of the 100-year average (*cf. Appendix 7 Inflows to West Australian dams*). Sprinkler use was restricted to two days a week, and the need for water saving heavily promoted. The Corporation commented in its annual report (p5) that: “There can be no doubt that without the Corporation’s robust, long-term source planning and development, the State would have been in a dire situation. As well as far-sighted planning, we relied on the strong and professional relationships we have developed with our stakeholders, including regulators, customers and industry groups.”

2002-2003

- The notes to the accounts in the annual report recorded that: “A claim has been lodged against the Corporation by the University of Western Australia seeking damages of \$95 million relating to land endowed to the University that adjoins the Corporation’s Subiaco wastewater treatment facility. An agreement has been reached that, subject to approval by Government of a new subdivision application by UWA, their claim will be

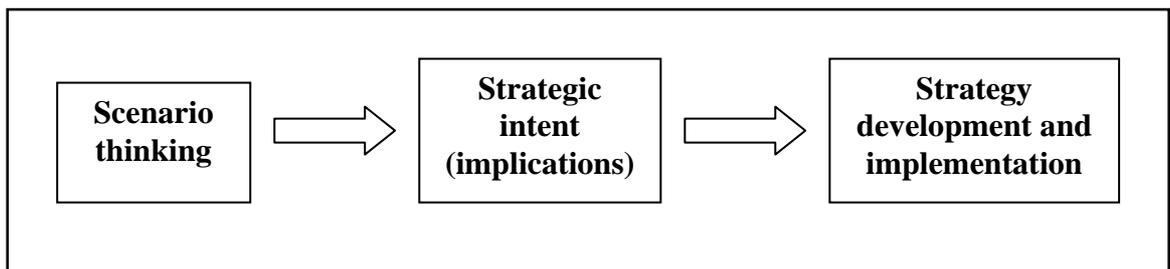
withdrawn and this matter will be finalised without material financial consequence for the Corporation.”

1.5.3 Description of the change process

The scenario planning workshops took place in April and June 2001. The post-workshop interviews for this research were performed in August to October 2002.

The Company One 2010 initiative was co-ordinated and championed by three Water Corporation staff, who were called the Company One 2010 team (the term that is used in this thesis) and who were not senior managers. It developed into a three part process, of which the scenario planning phase formed the first stage. The Corporation’s terminology, Scenario Thinking, is used for the phase from this point forward to distinguish it from the more generic concept of scenario planning. *Figure 1.1* shows the whole Company One 2010 change initiative process.

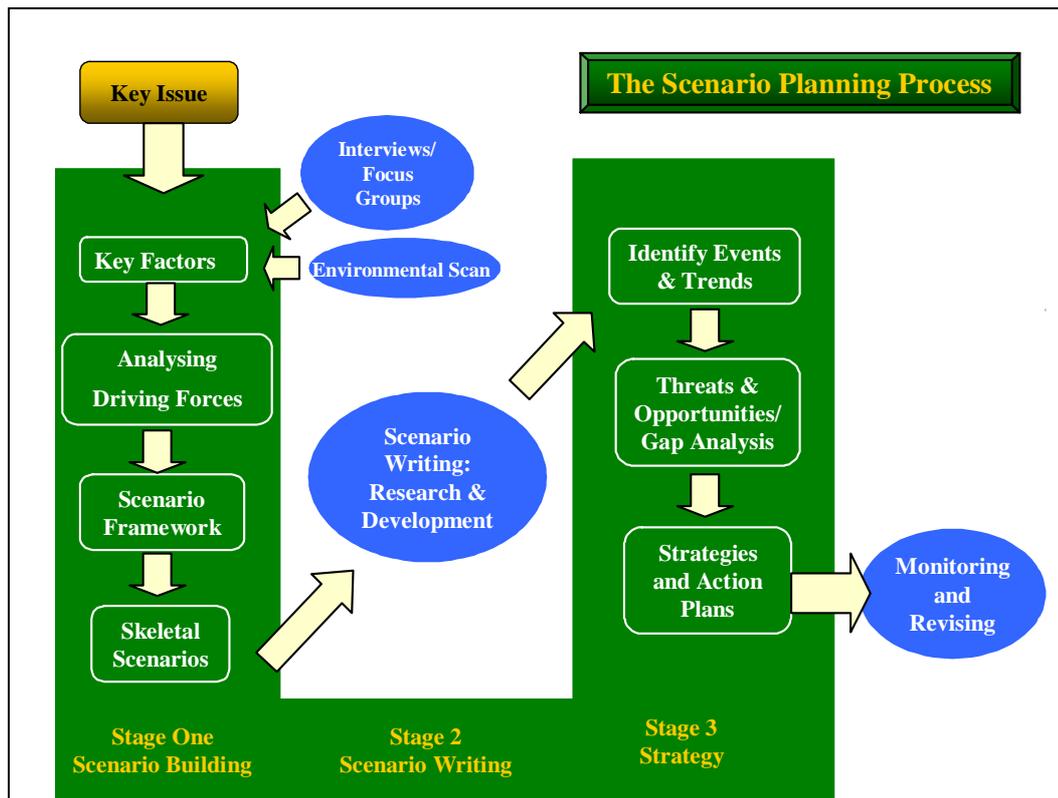
Figure 1.1 The organisational change process



1.5.3.1 Scenario thinking

The scenario planning process developed by the Scenario Planning And Research Unit (SPARU) and used for the Water Corporation project was based on a system developed by Professor Kees van der Hiejden, then Professor of General and Strategic Management at Strathclyde University (Barker et al., 1999). It consisted of nine steps in three phases. The process is outlined in *Figure 1.2*, which has been adapted from (Water Corporation, 2001) for use by the author in lectures.

Figure 1.2 The scenario planning process



Source: Adapted by author from (Water Corporation, 2001,

The following summary of the process is sourced from the first report on the Scenario Thinking project to the Water Corporation (Water Corporation, 2001)

1. **Key issue:** A matter of deep concern to the client, carefully formulated to focus on implications of change in the future and a major part of organisational life and widely applicable. The key issue chosen by the Water Corporation executive was “What will be the impact of competition and customer expectations on the Water Corporation in the year 2010?” As discussed in 7.3.3 *Summary of the focal issue*, the key issue is not necessarily directly related to the objective of the process. An environmental scan was conducted, which was an investigation of major trends affecting the industry, conducted by an outside organisation. The scan focused on social, technological, economic, environmental and political drivers of change and provided background for discussion of key factors and the analysis of driving forces.
2. **Key factors:** Interviews were held with 50 people, including Water Corporation staff and board members and selected external experts. As well,

three focus groups were held. These were called Young Turks (16 young staff members); Movers and Shakers (23 people felt to have contributing views); and the Board (5) and CEO. SPARU staff analysed the interviews and presented a list of key factors based on the concerns, trends and issues identified in the interviews and focus groups at the first workshop (5-6 April, 2001). There, the key factors were discussed, using a display technique called idons that enabled easy manipulation of the data, and sorted into what were termed global, external and internal factors, plus a group called inevitable or predetermined factors, which were trends or issues where the effect on the organisation is known or very likely. The global factors – over which the Corporation would have practically no control – were the uncertainties around which the scenarios were built.

3. *Analysing driving forces:* Workshop participants identified what they considered were the driving forces that would help shape the industry, grouped into Social, Technological, Economic, Environmental and Political (STEEP) categories. The environmental scan provided background material for this. The drivers were then ranked by each of four groups of participants, based on criteria of importance and uncertainty, and from the rankings a single list of six key driving forces was formed. These were: Government expectations; Technology; Environment; Customer and community expectations; Business models; Health of the West Australian economy.
4. *Scenario framework:* A table was constructed with the key drivers down the left hand side, and four columns for the scenarios. Values or positions across a broad range of effects were entered in the columns, to provide the most divergence possible between the scenarios. These would form the basis for the skeletal scenarios. Finally at this stage participants developed a list of improbable but high impact events (called “wild cards”) for possible use in the scenario narratives.
5. *Skeletal scenarios:* Using the table, as well as a selection of wild cards and other key factors, four groups of participants constructed four outline scenarios for the future. This completed Stage 1.
6. *Scenario writing:* In Stage 2, the skeletal scenarios were written in full narrative form by SPARU staff and checked for consistency, credibility and plausibility by external researchers and Water Corporation staff. The

scenarios are not reproduced in this thesis for reasons of commercial confidentiality. The next three steps, Stage 3, were conducted at the final workshop (11 June).

7. *Events and trends*: The major elements (events and trends) of each scenario were identified.
8. *Opportunities and threats / gap analysis*: The opportunities each element presented to the Water Corporation were listed, together with vulnerabilities that the element presented, and what competencies the Corporation had or needed to address the element (gap analysis).
9. *Strategies and action plans*: Finally, options for dealing with each element, and strategies and action plans for further development were listed, together with priorities for each.

Monitoring the environment for signals that assisted anticipation of elements identified in the scenarios was intended to be an ongoing process, as was revision of the scenarios from time to time as circumstances changed.

1.5.3.2 Strategic Intent (implications)

In the second phase, the implications of the knowledge gained from the scenarios were considered, with a view to setting a strategic direction for the Corporation. A participatory approach was adopted and an external consultant was used. The phase included facilitated workshops, some of which involved a cross-section of employees, and regular fortnightly meetings between management and the Company One 2010 project team. After a first workshop in which both decision makers and people fairly new to the organisation were involved in working out a tentative strategy, three groups, called “Changemaker teams”, were asked to research three areas that were felt to be key issues and report back to management with recommendations. There were also meetings involving the Company One 2010 team and some of the senior executive, during which parameters for the future direction of organisation were discussed. In two subsequent phases, the implications for the organisation of what was being proposed were discussed and revised, until, at the end of the third phase, the purpose and direction statement for the Corporation was crystallised.

1.5.3.3 Strategy development and implementation

The development of strategy (“Areas for Action”) and communicating the changes were the next phases. The Company One 2010 team was disbanded in August. Information about this phase, called “Implementation” in the thesis, was largely sourced from interview data and has been detailed in the 6 *Findings* and 7 *Discussion* chapters.

1.5.4 Participants in the change process

Apart from senior management and the Company One 2010 team, the following groups were involved in the change process:

- Interviews and focus groups, as explained (*cf. 1.5.3.1 Scenario thinking*).
- Workshop 1: 26 participants, including Water Corporation staff (14), board members (2) and selected external experts.
- Workshop 2: 26 participants, all Water Corporation staff.
- Changemaker teams: Three groups of six staff, each including a general manager.
- As well, a cross section of staff were involved in a number of internal workshops.

Further details of participants in the research for this thesis are provided in 5.1.3 *Sample*.

1.5.5 The researcher

Because in a grounded theory method the role of the researcher is as a participant in the gaining of understanding (*cf. 4.1 Adoption of the grounded theory approach*), the experience and competencies of the researcher can affect the outcomes. This subsection provides the relevant information to demonstrate how the researcher’s experience assisted in the conduct of the research.

The researcher graduated from the Masters of Arts (Futures Studies) program in the John Curtin International Institute (JCII) at Curtin University of Technology in 2000. It was in this program that his interest in the process of scenario planning began. He worked on a part-time basis for the Scenario Planning and Research Unit (SPARU) that was part of the JCII at that time from 2000 to 2004. In 2001 SPARU became part of the university’s Graduate School of Business. SPARU carried out consultancy work as well as research and teaching functions in scenario planning and associated practices.

The scenario planning project that is the basis of this thesis was conducted by SPARU on a commercial basis. However, the researcher's activities in the project were confined to minor analysis and reporting, and he played no active part in the process, although he did meet some of the workshop participants at the time. He had no further contact with the participants until the initial stages of the thesis.

The researcher's career background has been mainly in journalism, for trade publications, and then as a writer/ researcher, then research manager and later again editor for *Consumer*, the journal of the New Zealand Consumers' Institute. He has also worked as a marketer and systems analyst in a multinational computer organisation. This experience has provided him with more than two decades of practical experience in interviewing, surveys, report writing and detailed analysis of oral and written material of many kinds.

It is this experience that has enabled him to bracket his duties with SPARU when conducting the research and adopt a stance of empathic neutrality, i.e., supportive to the participants in interviews but neutral towards the findings (Patton, 1990). The research was designed to reflect the views of the participants without the intermediary perspective of a consultant, through the use of a modified grounded theory approach. Conflict of interest was avoided because the research was aimed not at critiquing the methods used by SPARU, but at examining the organisational change process of the Water Corporation and the part of scenario planning in it. Other staff members at SPARU have been supportive of this independent approach.

2 Literature review and scenario planning theory

2.1 Outline of literature review

The review identifies three main areas where the literature and research on scenario planning can profitably be enhanced ¹.

First, claims that scenario planning is a practice that lacks a theoretical base are identified (*cf. 2.3 Searching for scenario planning theory*). However, a considerable body of extant theory is revealed and in the following sections this is garnered. Drawing on the literature, the assumptions behind the practice are identified and used to formulate a theoretical framework for the practice. The framework is later used (in *7 Discussion*) in situating the theoretical concepts that emerged from the analysis of the research data.

The same subsection of the review also reveals that, because scenario planning practitioners dominate the literature, there has been little independent research into scenario planning that has not been filtered by their opinions. The research for this thesis has been designed to contribute directly to addressing that deficiency.

Finally, the amount of literature concerning the evaluation of the outcomes of scenario planning is limited and this is discussed (*cf. 2.14 Evaluation of scenario planning projects*). The methodology employed here is intended to increase understanding of how organisations can examine its effects.

The review starts with an explanation of the non-adversarial approach the researcher adopted in reviewing the literature. This is followed by identification of the need for the development of a theoretical framework and of the limited amount of independent research.

The review of theory and development of a theoretical framework for scenario planning begins with the reasons for doing it, followed by a brief explanation of the world of uncertainty that forms the context for scenario planning. Then, after a short

¹ A paper entitled *Critical Realism: Towards A Theoretical Perspective For Scenario Planning* based on some of the material in this chapter was published in the proceedings of the 2002 Work In Progress Conference at the Curtin University of Technology Graduate School Of Business, Perth, Western Australia (Nicol, 2002).

discussion of the importance of assumptions, four groups of key characteristics of scenario planning are identified through an analysis of the definitions of the term scenario in the literature. From this a generic definition of scenario and scenario planning for this thesis are derived, then a typology of scenario planning is briefly discussed.

The review then examines each of the four groups of key characteristics with a view to identifying the basic assumptions – called axioms in this thesis – of scenario planning.

The four groups are:

- *Communicating scenarios*: From discussion of the use of narrative emerges the assumption that effective communication of scenarios is essential, although the scope of the communicating depends on the purpose of the project;
- *Substance of scenarios*: Scenarios help make sense of unpredictable multiple possibilities by providing bounded frameworks of the future. It is postulated that they are concerned with uncertainties that include not only external environmental factors but also anything else beyond the influence of the organisation;
- *What scenarios are based on*: Scenarios are based on trends and forces that are discernable in the present, using the shared perspectives of participants in the process, with the intention of reducing what are termed unknowable aspects of the future;
- *Effect of scenarios*: The concept of change of mental models is explored, together with the difficulties of changing them, and the conceptual ecology is introduced as a framework for understanding how scenario planning can bring about change. The need for continuity and coherence for acceptance of change is discussed in this section.

Finally the axioms that have emerged during the discussion are brought together and developed into a model framework for the understanding of the theory of scenario planning.

Other aspects of scenario planning that emerged during the literature review that are addressed in the research are: where scenarios fit in the organisational change

process; how scenarios are evaluated (see above) and the implementation of scenario planning and/or its outcomes. These are considered in the final sections of the literature review.

2.2 Approach to literature

2.2.1 Welcoming the insightful details

In the thesis, there has been a deliberate attempt to avoid what Tannen (1998) identified as a proclivity in Western tradition to adopt criticism and attack as a primary form of rigorous learning. Tannen observed that this culture of critique had been a persistent aspect of culture from ancient to modern times, and confrontational attitudes had remained a feature of legal and political processes and some religious groups. De Bono (1990), too, saw argument as the basis of our political, legal and scientific systems. Western philosophy is steeped in this tradition, with its history of conflict over such classic dualistic concepts as mind/body, realism/idealism, and determinism/free will.

The adversarial approach to learning is considered to have originated long ago in the dialectical form of argument developed by Socrates in ancient Greece. The Socratic method, using questioning to expose unfounded beliefs and flaws and inconsistencies in arguments with the aim of arriving at real knowledge, was to become fundamental to the development of Western thought and philosophy (Tarnas, 1991). To Socrates, motivated by his view that knowledge was virtue, “The life not tested by criticism” was “not worth living” (ibid., p35.)

However, for the subjects of Socrates’ questioning, rigorous dialogue as a method of intellectual investigation could often end in perplexity and dismay. Thrasymachus of Chelcedon was led to complain that “Socrates can play his usual tricks, never giving his own views, but always asking others to explain theirs and refuting them” (Plato, 1955, p65). Many of Socrates’ contemporaries objected to what they saw as his abrasive style and his unsettling effect on the minds of the young, and Socrates, unrepentant, was put to death (Harrison-Barbet, 2001).

The purpose of the Socratic methodology, the Dialectic, was to challenge assumptions and jolt people out their habitual way of thinking - for “how can any chain of reasoning result in knowledge if it starts from a premiss (sic) it does not really know” (Plato, 1955, p302) – and thereby give greater coherence to the body of

knowledge. The identification and exploration of assumptions and presuppositions is also an exercise that is fundamental to both the practice of scenario planning and the subject matter of this thesis.

However, there is a view that today the Socratic method is viewed more as a systematic way of leading an opponent into error (Tannen, 1998). The effect can be to obscure the complexity of research, because it can lead to rejection of an entire viewpoint in situations where it may be more appropriate to accept some of the elements of a case that one does not agree with overall (ibid.). This leads to a simplistic position that only one framework – e.g., right or wrong – can apply to a theory or situation, which narrows the vision and blinkers the researcher from discovering the new paradigms and increased understanding that can emerge from a less adversarial stance.

The debate in social research over ontological and epistemological paradigm models – and especially between advocates of positivist and constructivist viewpoints and their variants – has elements of the adversarial approach. Recognising this, some researchers have adopted a different paradigm, based on critical realist philosophy, in an attempt to avoid the difficulties and inconsistencies that can arise from the adoption of these two viewpoints (Bell, 1997), (Partington, 2000).

In this thesis, a world-view based on critical realism has been used. This has an empirical foundation in the assumptions that are identified in *3 Theoretical perspective* as underlying the scenario planning process. The world-view places boundaries on the degree to which truth can be known and allows for the validity of different perspectives or individual truths while admitting a reality external to any one of them. By using this, rather than an adversarial approach, many apparently opposing viewpoints can become reconciled.

Consistent with this approach, in constructing the literature review ideas have been taken from many sources, even where the particular concept may form a part of a wider contention that is not consistent with the ideas on which the thesis is based. Wilber (2000, p140), advocated this approach: “Everybody – including me – has some important pieces of truth, and those pieces need to be honoured, cherished and included in a more gracious, spacious and compassionate embrace...” Mindful of criticism that some qualitative research tends to use data that supports the

researcher's argument but fails to mention contrary evidence (Silverman, 1993), opposing views that are relevant are reviewed. However, there has been a conscious endeavour to use any concepts that may help increase understanding, provided they are from a reliable source, even if they are applied outside their original context – an approach that has been called rejecting the framework but welcoming the “insightful details” (Jones, 1995). It is an approach that Prior (1997, p77) attributed to Foucault: “All my books are little tool boxes. If people want to open them, use a particular sentence, a particular idea, a particular analysis like a screwdriver or a spanner. . . . so much the better!”

2.2.2 Use of language

Where a term is used that has had a specialised meaning attributed to it in the literature, the term is defined (*cf. Appendix 1 Definitions*). Otherwise, language is used with its everyday meanings and terms are used with consistent meanings throughout (Creswell, 1994). There has been a conscious endeavour to avoid words with fuzzy meanings and the common obfuscation of using terms in quotation marks to denote a meaning the writer has appropriated but not defined (Stove, 1998).

2.3 Searching for scenario planning theory

The roots of scenario planning are in the military, but their use in organisational decision-making was developed from the scenario techniques developed by Kahn, at the Rand Corporation in the United States, and Berger in France, after World War 2 (van der Heijden et al., 2002). The first business scenarios to receive wide recognition were developed at Royal Dutch Shell in the 1970s under a team led by Pierre Wack with his concept of “reperceiving the future” (Tibbs, 1998). The method evolved and their use, after a period of decline in the 1980s, resurged in 1990s (Ringland, 1998).

Recent scenario planning literature has tended to be dominated by the writing of practitioners. Consequently, much of what has been written is descriptive of a multiplicity of methods and techniques for conducting scenario planning projects. For example Ringland (1998, 2002), apart from a short chapter partly devoted to change trends, was entirely concerned with scenario planning practice, scenarios and case histories reported by the author; Schwartz (1991), in what was a similarly practical book, did discuss some of the assumptions of scenario planning, e.g., the

need for change of mind set in preparing for change, but did not develop a theoretical base beyond this; in Fahey and Randall (1998a), 25 scenario planning practitioners offered their advice on aspects of how to undertake scenario planning. There has also been a large number of journal articles devoted to scenario planning practice and case histories extolling the merits of its many forms.

Hodgkinson and Wright (2002) pointed out that this predominance of practitioner-driven contributions in the literature had had the effect of restricting accounts of the practice largely to what they call success stories. The research for this thesis is intended to contribute to addressing the issue of practitioner intervention, through independent and rigorous analysis and interpretation of the direct responses of the participants in a scenario project.

Some researchers and practitioners have said that a further effect of the dominance of practitioners in the literature is a dearth of scenario planning theory. Few practitioners of scenario planning have reflected in print upon the theoretical roots of their field, and, consequently, upon the implications of their interventions into organisations and strategy (Chermack et al., 2001). Ogilvy (n.d.) called scenario planning “a practice in search of a theory”. Schoemaker (1993) stated that, because of its multiple facets, scenario planning seemed elusive and fuzzy when examined by academic standards. Bradfield et al. (2005) pointed to a lack of consensus on a framework for scenario planning and a diversity of decisions, characteristics, principles and methodologies. It is perhaps as a result of the perceived lack of theory and principles, that there are so many widely divergent methods of scenario planning in practice (Martelli, 2001).

Chermack (2002) asserted a need to articulate a theory for scenario planning. In Chermack (2005), a framework and proposed approach was set out for the creation of scenario planning theory using empirical indicators, which were defined (ibid. p68) as “an operation to secure measurement of values on a unit”, but, as the author noted, this was of little practical value.

Although undertaking the review described here confirmed to the researcher that practitioners did dominate the literature, it also revealed that a considerable body of theory did already exist, beginning with the work of the Rand Corporation (van der Heijden et al., 2002), and building over the years on the formative ideas of such

thinkers as Wack (1985a, 1985b) and de Geus (1997). What has been scarce is literature gathering together that extant theory, with *The Sixth Sense* (van der Heijden et al., 2002) the most comprehensive publication to date¹. In the main part of this review the theoretical base is assembled and extended. The result is a theoretical framework for deeper understanding of the relationship between scenario planning learning and organisational change.

First, the literature was scanned for definitions of scenario and scenario planning. The results provide a strong indication of what a wide range of researchers and practitioners consider are the essential elements of scenarios, characteristics they deem so important to the concept that they should be included in a definition. From the scan a definition of scenario planning for this thesis is derived.

The characteristics identified in this way are then examined in depth, with a view to revealing the assumptions behind them and so provide a basis for a synopsis of the established theory of scenario planning.

Finally the strands of the discussion are drawn together in an explication of the axioms that form the basis of a theoretical perspective for scenario planning. The next chapter situates these axioms in a philosophical base.

2.4 Objectives of the theory review

Clarity of the assumptions behind a concept is a precondition to understanding its nature, an idea captured in the 1980s cliché, “To know where you are going, you have to know where you came from” (Godet, 2001, p248) and dating back at least as far as Socrates (*cf.* 2.2.1 *Welcoming the insightful details*). What is it that defines the idea or entity and what is the conceptual framework that makes it recognisable and intelligible? Identifying the assumptions of scenario planning provides a base from which to review existing scenario planning theory. This in turn forms a foundation for a theory for the scenario planning field and its study and for the emergent theory from analysis of the research.

2.5 A world of uncertainty

There is a widespread belief that today “we live in a period of profound transition” (Broderick, 1997, px, Drucker, 1999, Ringland, 1998). In a climate of globalisation,

¹ The thesis was completed before the publication of (Van der Heijden, 2005)

of social and technological change, and of a recent history of economic and political shocks, we are said to live in an era of discontinuity (Robbins et al., 1994). The challenges for the future that arise from this climate of uncertainty are perceived by many to be different not only from those of the past, but also of today.

Godet ((2001), p9) took a contrary view: “Every generation has the impression that it is living in an era of unprecedented transition. Nothing could be more normal!” However, Godet concurred that change was certain - it was the direction of change was not (ibid., p7). Whether one takes the more or less dramatic of these viewpoints on change, it is clear that social, economic and technological uncertainties about the future can be reduced by anticipating possibilities and integrating them into strategies, which is the justification for forecasting and other futures methodologies, including scenario planning.

Although there would be little point in organisational planning or strategy if it was not considered that at least something in the future was predictable, it may be agreed that what the future, in a broad sense, holds is uncertain and even unknown, and that potentially there are multiple plausible futures (van der Heijden, 1996, 2000).

For many scenario planners, this uncertainty is a product of the context in which the organisation operates. Most organisations are unable to have much influence on the forces of change in their external environment, so adapt to it instead (Schwartz, 1991). This is in contrast to their internal setting, where they may be expected to have some degree of control (van der Heijden, 1996), although it is argued later in this thesis that this contention may be subject to modification.

For many organisations, planning is based on forecasts developed from past trends or for a single future considered most probable (Fahey and Randall, 1998, Georgantzas and Acar, 1995). However, it is a tenet of scenario planning that, in an uncertain environment, predictions or forecasts are likely to prove manifestly inadequate. This uncertainty needs to be recognised and built into planning. Jacobs and Statler (2003), taking a social constructionist viewpoint, ventured to suggest the issue facing the scenario planner was more about ambiguity in these interpretations of the present than uncertainty about the future, and van der Heijden and Schutte (2002) stated that “scenarios make uncertainty explicit”.

2.6 The importance of assumptions

At the basis of any constructed system of thought is a set of assumptions that cannot be verified for ultimate truthfulness and must be accepted on faith (Guba and Lincoln, 1998, Denzin and Lincoln, 1998b). The paradigms or frames of reference that are built on these assumptions are the foundations of the way we think and act.

In an organisational context, every organisation has a theory that governs the way it operates. The theory is its set of assumptions about what the organisation and its objectives are, how results are evaluated and an idea of the demand for and likely buyers or users of its products or services (Drucker, 1999).

These assumptions are usually held subconsciously by the members of the organisation. From the assumptions come both the idea of what the organisation exists for and how it approaches what it does. These shared values and knowledge about organisational processes, together with a sense of identity with the organisation, are attributes of the organisational culture (Godet, 2001).

A set of assumptions about reality is called a paradigm. The concept may be seen to have its roots in the ideas of Thomas Kuhn, one of the 20th century's most influential philosophers of science. Extended beyond the world of science, a paradigm can be defined as "a systematic set of ideas and values, methods and problem fields, as well as standard solutions, that explain the world and inform action" (Clarke and Clegg, 1998, p9). More concisely, it has been called a "basic set of beliefs that guide action" (Denzin and Lincoln, 1998b, p185).

For Kuhn, an important characteristic of the paradigm was that "when the individual scientist can take a paradigm for granted, he need no longer attempt to build his field anew, starting from first principles and justifying the use of each concept introduced" (Kuhn, 1962, p19). The commonality of purpose, method and communication provided by a paradigm that was almost universally accepted enabled scientists to work with a high degree of efficiency that would not be possible if methodology had to be constantly justified. However, he noted that the removal of the need to establish a paradigm before beginning research could also be a limiting factor, because research problems that could not be expressed in the conceptual framework of the paradigm either could not be solved or were not recognised. As well, it was a characteristic of paradigms that they outlived their usefulness.

In this thesis, the basic assumptions or beliefs at the root of a paradigm are termed the axioms of a system, in the sense that an axiom is “a proposition that commends itself to general acceptance; a well established or universally conceded principle” (The Shorter Oxford English Dictionary 1973).

In qualitative research literature, the axioms are considered to be propositions about the nature of reality and how we know about it (Denzin and Lincoln, 1998b, Guba and Lincoln, 1998, Patton, 1990). These fundamental assumptions that people make about reality determine what they consider worth paying attention to and what they ignore or neglect as irrelevant (Kuhn, 1962). But, although they are fundamental to any organisation and despite their importance in providing the grounding for what a field of inquiry or practice is all about, paradigms and their axioms are infrequently explicitly examined, analysed or challenged (Drucker, 1999).

In recognition of this, one of the objectives of scenario planning is to make explicit the assumptions made by managers with a view to opening up their mindsets to new perspectives and possibilities (van der Heijden et al., 2002). However, despite this, the literature on the assumptions of the scenario planning process itself is notable for its paucity. It is therefore appropriate to examine the characteristics and nature of scenario planning to try to determine the assumptions behind the practice.

2.7 Definitions of scenario

Definitions are useful not only for understanding what an author means by a term but also for identifying the elements of the subject that the definer considers are essential to understand its meaning. Here, a selection of definitions of scenarios from what Bradfield et al. (2005, p796) called the “large number of different and at times conflicting definitions” in the literature is presented. The key elements in each are italicised, then presented in a table to reveal what writers from different perspectives consider most important.

1. Scenarios are “*internally consistent* and *challenging* descriptions of possible futures *representative* of the ranges of possible future developments and outcomes in the *external world*” (van der Heijden, 1996, p5) .
2. A representation of an *interconnected* sequence of trends/events describing an *internally consistent* future (Amara & Lipinski, 1983), cited in Georgantzas and Acar (1995).

3. *Coherent pictures of different possible events in the environment* (Chandler & Cockle, 1982), cited in Georgantzas and Acar (1995).
4. Descriptive *narratives of plausible* alternative projections of a *specific part of the future* (Fahey and Randall, 1998).
5. A tool for *ordering one's perceptions* about alternative future *environments* in which one's *decisions* might be played out (that) resemble a set of *stories* (Schwartz, 1991).
6. The description of a future *situation* together with the *progression of events* leading from the base situation to the future situation ... this set of events should display a certain *consistency* (Godet, 1987); or, A scenario is the set formed by the description of a future *situation* and the course of events that enables one to *progress* from the original situation to the future situation (Godet, 2000).
7. *An internally consistent* view of what the future might turn out to be (Porter, 1985).
8. *Focused* descriptions of *fundamentally different futures* presented in *coherent* script-like or *narrative* fashion (Schoemaker, 1993).
9. A quantitative or qualitative picture of a given organisation or group, developed within the *framework* of a set of specified *assumptions* (MacNulty, 1977)
10. That part of *strategic planning* which relates to the tools and technologies for managing the *uncertainties* of the future (Ringland, 1998). Scenarios are possible *views of the world*, providing a *context* in which managers can make *decisions* (Ringland, 2002).
11. A set of potential occurrences which:
 - belong to a certain field of *relevance* (e.g., world population, energy or raw materials)
 - relate to a *certain time period*
 - are *connected by various kinds of relations* (e.g., temporal succession, causality, effectuality, intentionality, and conditional probability) in such a way that an *approximation* to the whole set can be derived from a subset of basic hypotheses taken from it (Ducot and Lubben, 1980).
12. Scenarios are carefully *crafted* stories or *narratives* about hypothetical futures. Although grounded in the present, each scenario must also take

cognisance of the past, with the future *emerging from the past and present seamlessly* (SPARU, 2002).

13. Scenarios are stories of the future based on *past experience* and the identification of *end-states and pre-determined events* (Wright, 2000).
14. *Hypothetical* sequences of events constructed for the purpose of focussing attention on *causal processes* and *decision points* (Kahn (1965), cited in Heugens and van Oosterhout (2001) and Jungermann and Thuring (1987)).
15. An outline of one conceivable state of affairs, given certain *assumptions about the present* and the course of *events in the intervening period* (Mitchell *et al.* (1979), cited in Jungermann and Thuring (1987)).
16. Scenarios are organisation *perception tools* (van der Heijden, 1999b).
17. They are a management *tool* to improve the quality of executive *decision making* (Wilson, n.d.).
18. Generally, scenarios are descriptions (not statistical projections) of *trend outcomes* expected by a *target year*..... they should offer alternative views of the future (Millet, 1988).
19. An *imagined sequence of events*, esp. any of detailed plans or possibilities (Coates, 2000, citing from Webster's Ninth New Collegiate dictionary).
20. The result of *systematic* attempts to develop complex statements about the future conditions *relevant* to your company (Linneman and Klein, 1979).

Four elements are considered to be axiomatic in all concepts of scenarios because they are self-evident and taken for granted by all writers, and therefore have not been listed in the table. These axioms are:

- *that scenarios are about the future;*
- *that they are descriptive;*
- *that they present alternative, or multiple, foresights*
- *and that a systematic structured process is needed to produce scenarios.*

Table 2.1 shows the key elements from the numbered definitions and in which of the definitions they are sourced. 'Ref' numbers are used for reference later in the text. It is assumed for the purposes of this discussion that the elements of scenarios that are included in the definitions are the ones that the authors consider to be the most important or defining characteristics.

Table 2.1 Elements in definitions of scenarios

Ref	Element	Definition number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
i	Internally consistent	√	√				√	√													
ii	Coherent			√					√												
iii	Plausible				√																
iv	Interconnected events		√									√			√						
v	Relevance											√									√
vi	Challenging	√																			
vii	Representative	√										√									
viii	External	√		√		√					√										
ix	Narrative				√	√			√				√								
x	Boundaries/ framework				√		√		√	√		√		√							
xi	Time-limited											√								√	
xii	Ordering perceptions					√											√				
xiii	Based on assumptions									√						√					
xiv	Different possibilities			√					√		√										
xv	Based on past/present												√	√							
xvi	Based on pre-determined events													√							
xvii	Trend outcomes																			√	
xviii	Imagined														√					√	
xix	Decision-making tool					√					√				√				√		
xx	Progressive						√									√					

2.8 A definition of scenario

These defining characteristics from a wide selection of perspectives can be amalgamated into a statement that summarises what the writers consider are the essential elements of scenarios. From this, a definition of scenarios that takes into account the various viewpoints can be distilled. In the statement that follows, each concept is keyed to the reference in the table above. However caution is needed in presenting these, as not all the concepts are necessarily applicable to all types of scenario planning. Because the scenario planning project that is the subject of this thesis used the intuitive logics approach (*cf. 2.10.1 Intuitive logics*), the characteristics of scenarios used in this type of scenario planning are preferred whenever there is a discrepancy with other types. These discrepancies are noted.

The statement is organised into four parts.

1. Scenarios are descriptive narratives (*ix*) (but note that although narrative is usually used in intuitive logics scenarios, this may not be so in other types). They need to be internally consistent (*i*), coherent (*ii*) and plausible (*iii*), about interconnected events (*iv*) and relevant to the organisation (*v*), which are all characteristics that help make narratives meaningful and acceptable. These characteristics concern *communication of the scenarios*.
2. Scenarios provide boundaries or frameworks (*x*) for considering the future, by encompassing a range of representative possible futures (*vii*) but limiting the number of different possibilities for the future to be considered (*xiv*) and by relating to a defined time period (*xi*). Usually, they describe the progress of events (*xx*), not just an end state. (But note that cross-impact analysis may be limited to static rather than dynamic descriptions (*cf. 2.10.3 Cross impact analysis*) and heuristic scenarios may also sometimes be what Jungermann & Thuring (1987) called “snapshot”, as opposed to “chain” scenarios). They concern the environment external (*viii*) to the organisation (but note that normative scenarios are likely to include some actions by the organisation (Coates, 2000), i.e. they are systems scenarios, and that there is disagreement on the use of internal or industry scenarios (*cf. 2.11.2.2 Should*

scenarios have an external focus?)). These characteristics all concern the *substance of scenarios*.

3. Scenario narratives are imaginative accounts (*xviii*) grounded in predetermined events (*xvi*) and trends (*xvii*) discerned from the past and present (*xv*). The stories reflect and order the varied perceptions (*xii*) of the participants in the process and are grounded in their present knowledge. These characteristics concern *what scenarios are based on*.

4. The narratives provide a structure, i.e., a framework, for the participants to explore (*xiii*) assumptions about and make sense of the otherwise incomprehensible multiplicity of possible future events. However, to be effective as a decision-making tool (*xix*) scenarios should challenge (*vi*) the mindsets – entrenched thinking – and assumptions of the participants. These characteristics concern the *effect of scenarios*.

Amalgamating these characteristics in the context of the intuitive logics type of scenario, the following summary of the four groups of characteristics is offered as a definition for scenarios as used in the context of scenario planning:

Scenarios are narratives, grounded in present knowledge, that have the purpose of communicating bounded possibilities for the future, challenging entrenched thinking and providing a framework for decision-making.

In the section that follows, the notion of a definition of scenario planning is discussed. Following this, the groups of characteristics identified above are examined with a view to identifying the assumptions behind them and their contribution to the theory of scenario planning.

2.9 What is scenario planning?

In a seminar at the Graduate School of Business, Curtin University of Technology on January 9, 2003, Jaap Leemhuis, president of Global Business Network Europe, stated his belief that the words “scenario” and “planning” did not fit well together (Nicol, 2003a). Scenarios were about exploring the organisational environment, not planning, which was for factors the organisation could influence.

Van der Heijden and Schutte (2002) have commented that the terms “scenario thinking” or “scenario learning” were increasingly replacing “scenario planning” and that this indicated scenarios were seen as useful in a wider area than as a planning instrument.

There is a similar reluctance about the term from some other writers on scenario planning. For example:

- The use of scenarios for decision makers as a prelude to decision making has been termed *scenario learning* (Fahey and Randall, 1998). Tsoukas and Shepherd (2004) discussed *scenario-based learning*.
- Georgantzas and Acar (1995) preferred the term *scenario-driven planning* to describe the use of scenario writing and analysis as a strategic tool to understand trends in the environment of the organisation.
- The French concept of *la prospective* has been translated as *scenario building* (Godet, 2000, 2001) – and carefully distinguished from another part of the planning process, strategy options.
- Describing a typology for scenario planning (*cf. 2.1.4 Three-axis and three-theme models*), van Notten et al. (2003) used *scenario analysis*.
- Schwartz (1991) avoided the use of the word planning – he used *scenario process* to describe scenario building.
- Jungerman & Thuring (1987) adopted the term *scenario method*, also used by Schoemaker when discussing experiential work (Schoemaker, 1993). The term has also been used by Godet (1987).
- Other writers (Harries, 2003, Mason, 1994, Petersen, 2001) have preferred the term *scenario-based planning*. Thomas (1998) used both “scenario planning” and “scenario-based planning” in the same paper, which was perhaps indicative that the term “scenario planning” was merely shorthand for “scenario-based planning.” Mintzberg (1994) argued that the purpose of planning was to reduce flexibility in an organisation – so the concept of “flexible planning”, and, by implication, scenario planning, was self-contradictory.

The use of “scenario-based planning” at least situates scenario development as a process distinct from planning. Van der Heijden et al.(2002) made further distinctions. They identified scenario thinking (i.e., a way of thinking that considers

future alternatives), scenario-based organisational learning (i.e., adaptations to new perceptions of the world), scenario planning (i.e., the process of developing scenarios and considering their implications) and scenario-based processes for strategic thinking (i.e., the use of scenarios as a basis for forward planning). Although they continued to use the term “scenario planning” as a label, the distinction was a development from van der Heijden’s earlier use of “scenario planning” as a term that encompassed a broad, ongoing approach to planning (van der Heijden, 1996).

On the other hand, most writers in the field have had no such hesitation with the term “scenario planning” (Chermack et al., 2001, Coates, 2000, Ogilvy, n.d., Schoemaker, 1995, Schoemaker, 1998, Wright, 2000). Ringland (1998) took an even wider perspective – “scenario planning” related to the broad range of tools that were part of strategic planning.

However, the unease with the use of the term that is evident in some of the literature is indicative of some ambiguity in the use of the term “scenario planning.” Although definitions of “scenario” abound, there is a paucity of literature with clear, brief statements of the meaning of “scenario planning”. Chermack et al. (2001) stated that there were several different definitions of scenario planning, but did not provide a definition themselves for it. Instead, they followed the statement with two definitions from the literature not of “scenario planning” but of “scenario”, together with two very general examples, rather than definitions, for “scenario planning”. Chermack (2004, p302) proposed “a process of positing several informed, plausible and imagined future environments in which decisions about the future may be played out, for the purpose of changing current thinking, improving decision making, enhancing human and organisation learning and improving performance” – which told a lot about what scenarios were and the purposes to which they were put, but about scenario planning only that it was a process. SPARU (2002) stated that “scenario planning is a structured way of setting a framework in which to build a strategy for the future. By analysing and projecting the driving forces of the present, scenarios provide plausible alternative futures in which the organisation may find itself.” For Schoemaker (1995), scenario planning was “a disciplined method for imagining possible futures”. One says scenario planning is a “structured way”, the other that it is a “disciplined method”. Again, they do not tell much about the

method or process. They are further examples of how precise definitions are avoided in the literature, where the properties and characteristics of scenario planning are described in lieu of saying just what it is.

Perhaps because of this lack of clear definition, scenario planning has become a label, a term that can mean different things to different people.

From the SPARU and Schoemaker definitions advanced above, it is clear that the definers consider that scenario planning is a structured or disciplined method for providing a framework for planning. But neither consider it to be planning *per se*. They appear to agree with Leemhuis that working with scenarios is not planning. If this is the case, what then does the term “scenario planning” refer to?

It is self-evident that it is a method based on scenarios, which have been defined above. If it accepted that it is not a holistic planning process in its own right, then following van der Heijden’s distinctions (above), scenario planning can be:

- scenario development, the production of scenarios which are then used as part of a planning or decision-making project
- scenario thinking, a way of thinking that can pervade an organisation and inform the development and implementation of strategy and tactics. Allied to this is continuous adaptive organisational learning (van der Heijden et al., 2002), which comes about when a culture of scenario thinking is instilled in the organisation.

It is suggested in the methodology section of this thesis that the decision on what approach to use for a research project depends on the goal of the research and the type of knowledge being sought (*cf. 4.1 Adoption of the grounded theory approach*).

Similarly, the objectives of a scenario planning project dictate the approach taken.

Van der Heijden (*ibid.*) outlines four possible outcomes, based on two dimensions:

- One-off problem solving, either with specific objectives of opening up and making sense of issues, or more general aims that achieve closure through the development of strategy.
- Ongoing projects, either to improve anticipation by addressing closed and narrow perspectives in the organisation or to promote adaptive organisational learning with a view to achieving closure on decisions and action.

The scenario planning process design – and consequently what is understood in the particular instance by the term “scenario planning” – is different for each, so it is important to establish clarity of purpose at the outset.

If it is accepted that scenario planning can mean different things depending on context, it seems futile to try to establish a precise definition, since a greater degree of precision will increase the likelihood of some understandings of the term being excluded. As stated, the term has become a label encompassing a wide range of processes. However, since the feature that all understandings of the process seem to have in common is the use of scenarios, a term that has already been defined here, then a broad definition of scenario planning would be:

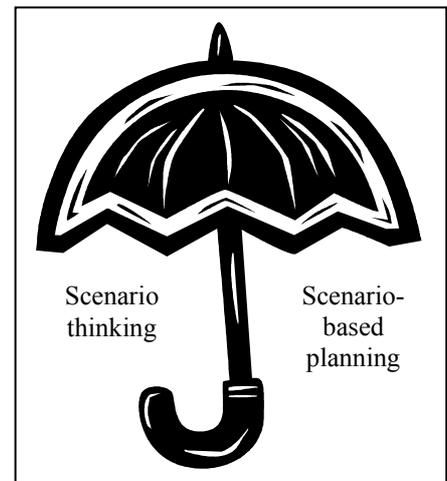
Any planning process or approach to anticipating the future that is based on scenarios.

While it may be argued that certain characteristics such as a structured methodology are also essential, the importance of such characteristics is in their contribution to the quality of the scenario planning process. They are not part of the essence of scenario planning itself.

The definition contains two elements – planning, based on scenarios, and other approaches to anticipating the future based on scenarios. The first may be more accurately termed scenario-based planning, while the second may be better termed scenario method or scenario thinking (*cf. Figure 2.1*).

In the rest of this literature review, scenario planning is used as a generic term that covers both, and the two are distinguished on occasions where it is necessary.

Figure 2.1 The elements of scenario planning



2.10 Typology

Several variations of scenario planning methodology can be distinguished (Chermack et al., 2001). Several writers (Georgantzas and Acar, 1995, Huss and Honton, 1987, Ringland, 1998) have identified three major categories of scenario planning:

2.10.1 Intuitive logics

This is the approach used by Royal Dutch/Shell, with variations developed by other organisations such as Global Business Network, SRI International and Decision Strategies International. It is different from other approaches in that mathematical or computer simulations are not used (Cairns et al., 2004). Instead, scenario development relies on exploring and developing the subjective and tacit knowledge of the participants, to improve their ability to anticipate and prepare for the future. The skill, reputation and communication skills of the scenario team, especially facilitators, are important factors in developing the scenarios and the process may not be suitable in some situations where a quantitative approach is required. An alternative term, also used in this thesis, is the “heuristic” approach.

2.10.2 Trend impact analysis

This is one of two methodologies categorised as part of the probabilistic modified trends school by Bradfield et al. (2005). A forecast of a key dependant variable or a trend is adjusted for possible impacting events over a time period. The method combines traditional forecasting tools such as time series and econometrics with qualitative factors. However, it is designed to evaluate how a single forecast variable is influenced by other factors, and does not address the dynamic interactive interplay of interdependent events. A variation of this is Ackoff’s reference scenarios, extrapolations from the past into the future assuming no major disruptions (Ackoff, 1981). In Schoemaker (2002), Ackoff argued that intuitive logics scenarios encouraged management to feel a lack of control and, to avoid this, it was better to project trends - reference projections or scenarios - to visualise their logical conclusions and take action accordingly.

2.10.3 Cross impact analysis

Computer analysis is essential for all but the simplest cross-impact analysis, the other part of the probabilistic modified trends school. The method takes into account the interaction in a complex system of a selection of potential future interdependent events and developments that are seen as likely, rather than considering developments in isolation from each other. Participants should improve their understanding of the relative importance of these factors. It is claimed to provide greater rigour for strategic decision making than the more qualitative intuitive approaches (Georgantzas and Acar, 1995). The BASICS methodology developed by

the Battelle Memorial Institute and the French MICMAC method (Godet, 1987) are well-known versions. Like any computer model, the results depend on the quality of the input to the system, which can include subjective assessments such as probabilities of occurrence of future events. The method has been criticised because of the limitation that the scenarios are set at fixed points in time, rather than dynamic (Huss and Honton, 1987). Van der Heijden et al. (2002, p129) described the French approach as “not so much descriptions of alternative futures as descriptions of ideal states towards which society can aspire.” An alternative term is the “rational” approach.

Godet has remarked that the two schools – heuristic and rational – were complementary rather than opposed (Godet and Roubbelat, 1996, Godet, 2000). This was supported by Bradfield et al.(2005) who stated that the French school of *La Prospective*, championed by Godet, blended intuitive logics and the trend-based methodologies.

All the approaches to scenario planning require a structured procedure to generate alternative scenarios, informed by analysis of the organisation’s environment.

2.10.4 Three-axis and three-theme models

Ducot and Lubben (1980) classified scenarios with a view to their intended application rather than by methodology. They developed a three axis model of classification:

- Exploratory - anticipatory (given causes, what are the effects, vs. given effects, what are the causes?)
- Descriptive - normative (possible occurrences, regardless of desirability vs. based on values or interests)
- Trend – peripheral (surprise-free, based on current trends, vs. allowing unlikely and extreme occurrences).

In their model, the three axes were represented as a cubic diagram, with 27 potential types of scenario based on combinations of the poles and central points of each of the axes, and the authors attempted to provide examples for each one. Much the same typology was advanced by Godet (1987), who added developmental (narrative of continuous development) and situational (“snapshot”) scenarios, and Godet and Roubbelat (1996). Ducot and Lubben (ibid.) contended that selecting a scenario type

and not departing from it would provide a greater degree of rigour for the scenario development process.

However, these, and other similar typologies were criticised by van Notten et al. (2003) as outdated because their categories were too broad to accurately describe the wide variety of scenario types that were in use since the typologies were published. They advanced a classification based around three themes that they contended were the key aspects of scenario development, i.e., the goal of the project, the design of the scenario development process and the content of the scenarios. Within these themes, 14 characteristics were listed, which included the four pairs mentioned above. The characteristics, perhaps better described as properties to distinguish them from the essential characteristics of scenarios identified in this thesis, were presented as polarities, e.g., long-term or short-term. As the authors acknowledged, the approach had limitations, in that scenario development and individual scenarios, rather than breaking down easily into such neatly contrasted components, could each contain elements of apparently polarised characteristics. Different interpretations of terminology would also lead to a degree of ambiguity in classification.

It has been said that most scenarios are a mixture of types, which may not be appropriate for their particular purpose (Jungermann and Thuring, 1987), but the difficulties of anything more than a broad typology like that of Ducot and Lubben (1980) would seem to render this unavoidable.

2.11 Characteristics of scenarios

In 2.8 *A definition of scenario*, the essential characteristics of scenarios were grouped into four categories. In this section, each of the categories are examined to determine the assumptions behind why the characteristics are considered important for scenarios. References to *Table 2.1* are repeated.

2.11.1 Communicating scenarios

Characteristics: narrative; internal consistency; coherence; plausibility; interconnectedness and relevance (*cf.* 2.8 *A definition of scenario*).

2.11.1.1 Narrative

For Schwartz (1992), stories about the future were too complex or lack sufficient precision to be expressed in numeric or graphic form. He saw narrative as a way of organising the information, including descriptions of how people from different

perspectives saw meaning in events. Elsewhere, Schwartz has discussed the importance of effective and imaginative communication of the scenarios and of the need for scenario narratives to be memorable and involving for decision-makers (Schwartz and Ogilvy, 1998).

Narrative is the central concept here. All other elements in this category may be considered characteristics that contribute to the effectiveness of the narrative: to be credible, a narrative will need to be plausible (*iii*) and to be plausible it will need to be coherent (*ii*), internally consistent (*i*) and concern interconnected events (*iv*). For stakeholders to see its implications and feel the importance of the issues it addresses, the narrative must be relevant (*v*) to them.

The important element is the need for scenarios to be constructed in such a way that they are seen to have implications for the organisation by the various stakeholders, who must be able to relate not only to what the story means but also its implications for them (van der Heijden et al., 2002).

In the intuitive logics school, narrative is considered to be the most effective way of communicating the output of the scenario development process because of its power to engage the imagination of the listener or reader. For Wilson (1998a), two of the three most important features in describing scenarios were a highly descriptive title and compelling story lines. (The third was a table of comparative descriptions). All three were necessary to bring the scenarios to life.

2.11.1.2 Participation and purpose

Hodgkinson and Wright (2002) contended that the underlying ethos of the scenario planning process was for the client rather than the consultant or facilitator to own the process. This required ensuring participants in the process arrived at their own solutions.

Such a process is highly participative and the narrative has to be convincing enough to reinforce and embed the feeling of participant ownership. Further, if change is to be implemented through a strategy that is based on the scenario framework, the scenarios themselves must be compelling to engage non-participants in order that the need for and the content of the change can be communicated to them.

On the other hand, Godet, who tended more to the rational school, saw scenario planning more as a decision-making tool than as a way of encouraging organisational

learning. This may have been a consequence of the use of computers in the process, but Godet saw the production of compelling scenarios as less important. “In any futures study, the final report counts for less than the process leading up to it” (Godet, 2001, p109).

In this divergence of opinion, one of the assumptions of the intuitive logics school can be discerned. It is that the importance of vivid communication of scenarios depends on the purpose of the scenarios.

It is widely agreed that scenario work must be purposeful (Burt and van der Heijden, 2003, Neuhaus, 2001, Schwartz, 1991, van der Heijden et al., 2002). As has already been noted, van der Heijden differentiated four types of purpose within two dimensions (*cf. 2.9 What is scenario planning*). Using these, it can be inferred that if the purpose is ongoing anticipation and learning through an organisation, it is important that all people who will be affected by change can relate to the scenarios on which the change process is based. Without such empathy with the foundation of the change, it is likely that the scenarios will have little effect on the continuing change process. In this case, vibrant and captivating narrative is important.

However, if the purpose is once-only problem solving, the scenario building process becomes more important than the scenarios themselves, because the effect on the understanding and perceptions and consequent decision-making of the participants is the paramount concern. It may not always be essential for any stakeholders other than the decision-makers to be involved with the scenarios if the subsequent change is not ongoing, so the quality of narrative may not need to be such that it is convincing to outsiders. These scenarios should serve the purpose of providing an insightful framework for decision-making and it may sometimes be preferable for communication with other stakeholders to be focussed on the change decision itself and the rationale for it, rather than trying to justify scenarios. This will depend on the disposition to change and existing mind-sets of the stakeholders (*cf. 2.11.5. The conceptual ecology*).

2.11.1.3 *Communication axioms*

This section has discussed the importance of narrative as a way of communicating scenarios for adaptive learning to occur and introduced the concepts of scenarios providing insight and as a decision-making framework for different purposes.

Two axioms have emerged:

- *For ongoing organisational adaptation or learning to occur, effective communication of the scenarios is essential.*
- *Narrative is the most effective way of communicating the outcomes of the scenario development process.*

2.11.2 Substance of scenarios

Characteristics: Scenarios are concerned with interconnected events that are external to the organisation. They are progressive, time-limited and representative of but limiting the range of future possibilities (*cf. 2.8 A definition of scenario*).

2.11.2.1 Making sense of the future

One of the elements of scenarios that has been assumed as axiomatic (*cf. 2.7 Definitions of scenario*) is that the scenario development process is structured and systematic. From a complex multitude of future possibilities, decision makers need a disciplined method to understand what is significant and what doesn't matter much. Scenarios are intended to provide a way of doing this that allows the simultaneous interaction of several interacting variables to be considered.

A further tenet of scenario planning is that the future is not predictable (Jacobs and Statler, 2003), even though some elements of it may be (van der Heijden, 1996). Because of this, scenarios are not forecasts (Wilson, n.d.) or predictions (Wack, 1985b). De Geus (1997) noted the lack of utility of predictions of any kind, not only because they were so distrusted that they were rarely acted on, but also because acting on them could alter the events they forecast. Instead, scenarios provide contexts, grounded in present driving forces, in which decisions about the future can be formed. This framework provides a story line within a defined time period (*xi*) and is bounded by the choice of driving forces that are included. The output of a structured scenario development project is a limited number of stories of the future that are representative (*vii*) of the many possibilities (van der Heijden, 1996). This provides boundaries and a framework (*x*) for decision-makers that is less rigid than the single future allowed by other forecasting methods.

Scenarios constructed using the intuitive logics method are often progressive (*xx*) – they describe events as they unfold through the time period. This contrasts with cross impact analysis methods, where scenarios may be set at a point in future time (*cf. 2.10.3 Cross impact analysis*).

For van der Heijden (1996), scenario planning was a process for anticipating the long-term future that was necessary because the complexity of the environment in which the organisation operated made forecasting beyond the very short-term unreliable. Scenario planning should be considered not as an alternative to forecasting, but complementary to it (Godet and Roubbelat, 1996).

“Long term” is relative however. Millet (1988), for example, considered that scenarios were suited for 5 -20 year time spans in complex, unquantifiable situations, beyond the range of forecasting techniques. But an appropriate time span does depend on the circumstances. Global scenarios have been produced for beyond 20 years, e.g., Business Council of Australia (2004), while in some fast-moving industries less than five years may be considered to be long-term.

The assumption behind these views is that the scenario development process and the scenarios themselves can provide a way for people to make sense out of the complexity and dynamism of the possible future events. Scenario planning is a method for admitting environmental complexity into the strategic planning process (Georgantzis and Acar, 1995), and this is best done by bringing together people with different mind-sets, problem perceptions and solutions (Schoemaker, 1993). The substance of scenarios is stories that are as representative as possible of a range of plausible possible futures while at the same time providing material that is intellectually manageable by participants.

2.11.2.2 *Should scenarios have an external focus?*

In the process of providing a manageable framework for addressing future uncertainties, scenarios are focused on the main area of organisational uncertainty, i.e., concerning events and situations that are outside its control. For many practitioners, this is assumed to be the environment external to the organisation, but this is by no means an generally agreed opinion.

Van der Heijden has been adamant that scenarios are about the external environment of an organisation: “The scenarios themselves should never contain the organisation as an actor” (van der Heijden et al., 2002, p214). For van der Heijden, including the organisation in the story carried the risk that the scenarios would become too much business-as-usual and fail to stretch the conceptual ecology of the participants.

Heugens and van Oosterhout (2001) asserted, like van der Heijden, that an assumption of scenario planning was that the strategy of company should not be part

of its scenario analysis. But this is not a universal view. De Geus (1997, p26) defined the environment in the context of organisational learning and scenario planning as “the sum total of all the forces affecting a company’s actions”.

Gausemeier et al. (1998) and Ringland (2002) identified three event spheres for scenarios:

- External scenarios, concerned with external factors the organisation cannot influence
- Internal scenarios, concerned with internal factors that are fully influenceable
- Systems scenarios, concerned with both internal and external factors, representing the complete systems of decision and environment elements.

The researcher’s experience, based on observation of and participation in scenario planning workshops, is that systems scenarios can be easier to write than external scenarios. This is because participants in scenario writing can sometimes have difficulty in envisaging a story about the organisational environment without at the same time considering how the organisation would act in it. Seeing the world from a perspective that does not include their interaction with seems to be too big a mental leap.

Porter (1985) disagreed with van der Heijden’s Royal Dutch/Shell approach of constructing scenarios that emphasised a global or macro environment, on the grounds that few factors in such macro-scenarios had important strategic ramifications for most industries. Instead, he advocated scenarios that focussed on the uncertainties in an organisation’s industry and analysed macroeconomic, political and technological factors for their implications for competition. The risks of this are that other forces besides competition may affect the future of the organisation and that, by casting the net only as wide as apparent trends, vital weak indicators of future impacts of the organisation may be missed. Porter recognised this and suggested using the opinions of people outside the industry as a way of addressing it. Fahey also saw a place both for more strategic scenarios, e.g., industry (Fahey, 1998a) and competitor (Fahey, 1998b) scenarios, and for broader frameworks.

There has been much diversity of opinion. Coates (2000) suggested a two-phase process: first create scenarios for the external world that the organisation needed to respond to, then create a scenario about the future of the organisation itself,

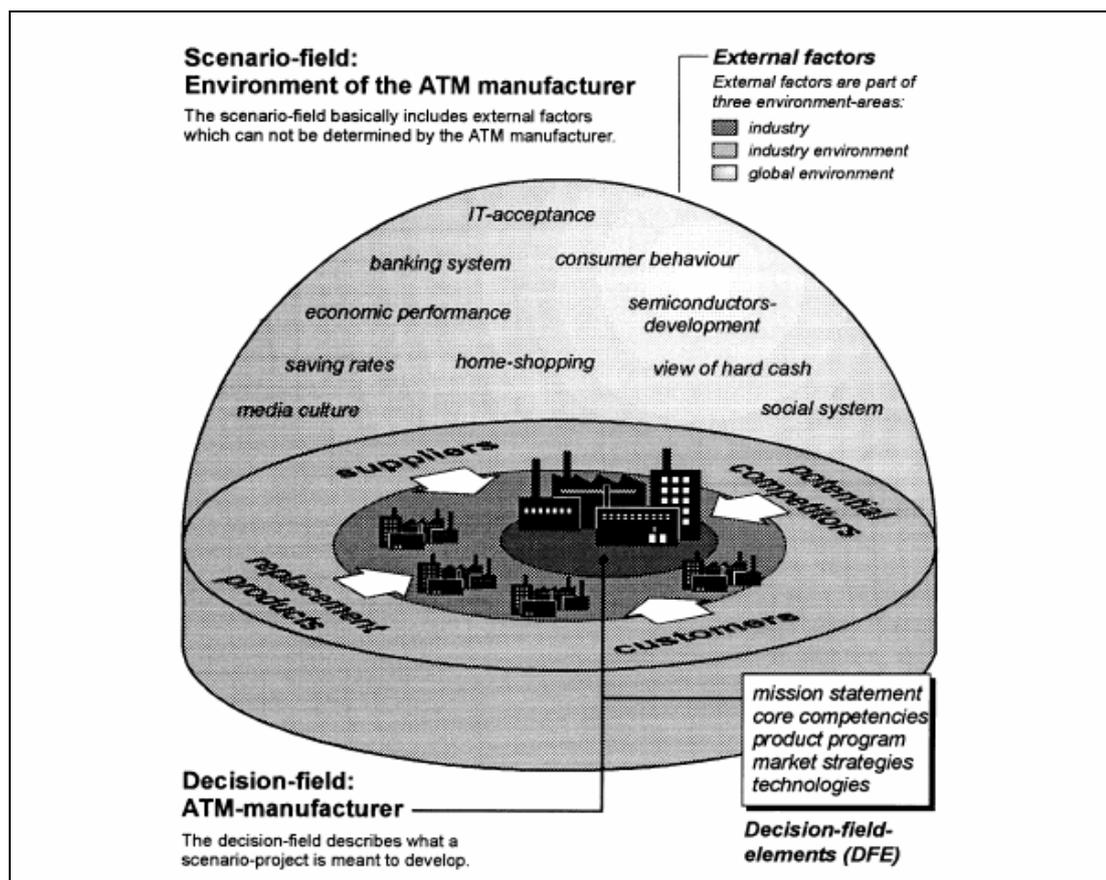
including the consequences of the actions it took. Russell (n.d.) created separate internal and external scenarios for a single project, and used both to examine strategy implications.

For Gausemeier et al (ibid.) the decision about where to focus the scenarios, and the focal question, depended on the decision situation and this seems a sensible and practical approach, considering all the inconsistency of opinion.

2.11.2.3 The BOW approach

However, one reason for lack of consistency of approach seems to be that the concepts of internal and external environment introduce a spatial dimension to scenario planning which does not seem appropriate. An example is Gausemeier et al.'s three environment areas – industry, industry environment and global environment – reproduced in *Figure 2.2*.

Figure 2.2 The business environment



Reproduced from Gausemeier et al. (1998), p 17.

In a similar model, Van der Heijden (1996) used the terms “transactional environment” and “contextual environment” for the same concepts, and substituted client or internal for decision-field.

It has been assumed in these examples that the external “global” or “contextual” factors, are essentially factors over which the organisation has little or no control. Gausemeier et al. (1998) used the concept of factors that could not be determined by the organisation as characteristics of the three environment areas. Van der Heijden (ibid.) made a different distinction. He identified the contextual environment with insignificant control, the transactional environment with a “degree of control” and the internal, or client, with a “great deal of control” (ibid., p 54). Scenarios “address driving forces in the contextual environment” (ibid., p155).

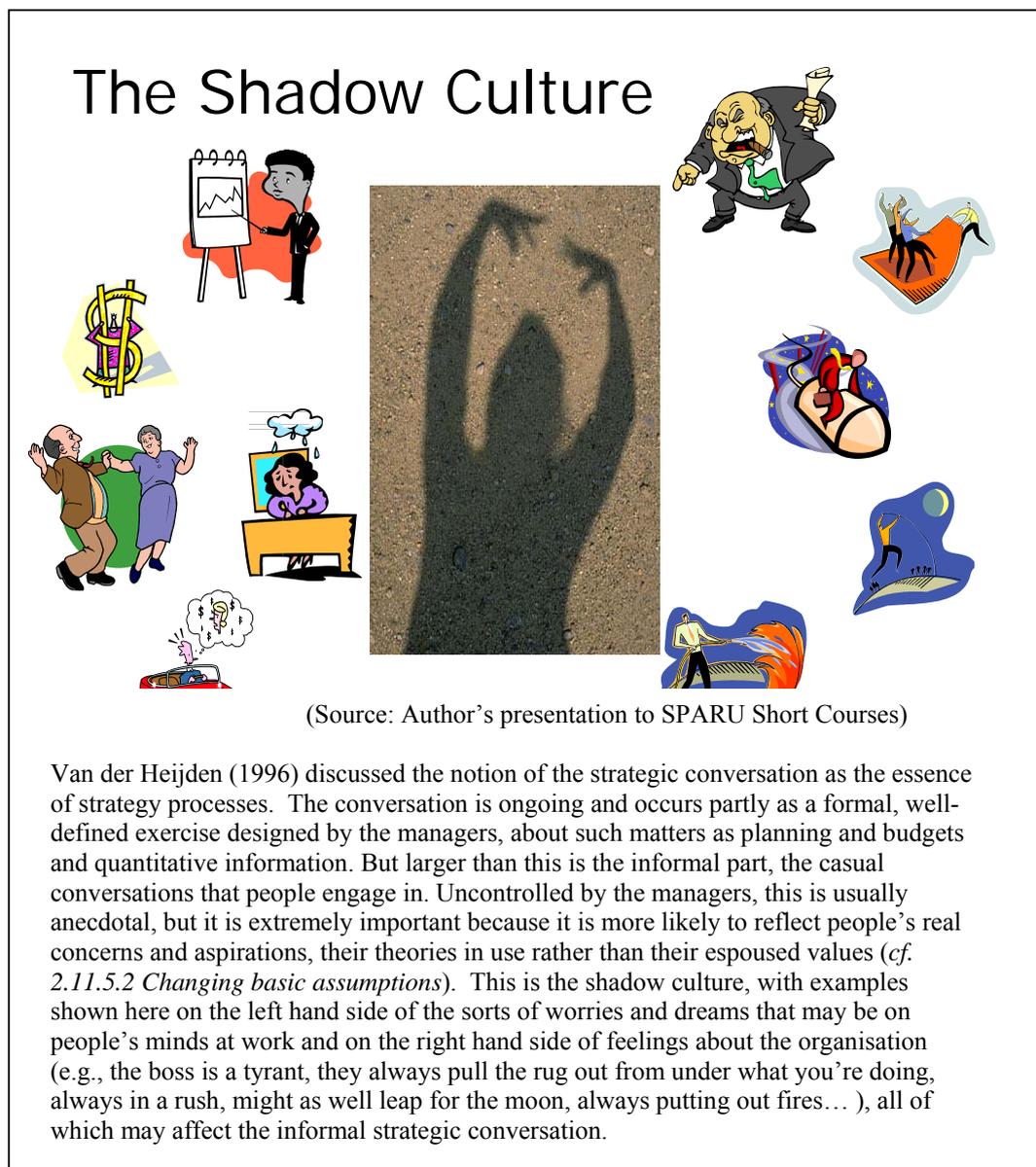
There are two difficulties here. The first is an inconsistency between the concept of organisational control and the processual paradigm that is an essential part of the integrative model of strategic management in which van der Heijden situated scenario planning (van der Heijden, 1996). In this paradigm, the organisation is seen metaphorically as a complex adaptive system, open to the outside world and adapting its activities in light of external events. Scenario planning is a mechanism that contributes to the adaptive process.

In the processual paradigm, control is an illusion. Knowledge of systems is inherently incomplete and consequently control is an impossibility (Lyons, 2005), (Ormerod, 2005). Control is a mechanistic metaphor, out of place in a complex adaptive system. Organisational learning is iterative and continuous and the organisation and its environment are in a constant state of change (*cf. 3.4 Limits of knowledge*). Stacey (1996) contended that if an organisation were viewed as a complex adaptive system, organisational stability would be a sign of complacency. For him, the creativity that was necessary for adaptation and survival came about through people engaging with one another, not to be in control, but provoking and being provoked, and so changing their minds and the minds of others. The evolution of order out of this chaos was essential for the organisation to learn, adapt and produce its best. Ultimately, control was beyond the capacity of any organisation or individual, since the outcome of the illusion of control was stagnation.

If little is ever completely under the control of an organisation, it seems out of alignment with the processual paradigm that internally there can be a great deal of control. A more feasible concept is influence (the term preferred by Gausemeier (ibid.)), which an organisation can exert through both the formal and informal strategic conversation (*cf. Figure 2.3*). One of the most important influencing

factors in an organisation can be considered to be what Stacey (ibid.) termed the shadow culture, which is the informal situation in which much of strategic conversation takes place and over which the formal organisation may have an undefined and uncertain degree of influence through, e.g., leadership or motivational activities, rather than control. The strategic conversation is distinguished from the organisational conversation, which is discussion of ideas in the organisation context. The strategic conversation is the part of the organisational conversation that concerns the emergent behaviour of the organisation (van der Heijden and Whiteley, 2000).

Figure 2.3 The shadow culture



There seems no good reason why the use of the term “control” should not be replaced with what it seems it is intended to mean in describing the organisational environment, i.e., factors that are **B**eyond our influence, **O**pen to influence and **W**ithin our influence (which might be termed the **BOW** approach...). This terminology was introduced to SPARU in 2003-4.

Adopting the BOW approach would remove the inherent contradiction in the process between adaptation and control, while also avoiding reinforcing any misconception that participants can control – rather than influence – the future.

Not only is this more consistent with the processual paradigm, but it is also seen as simplifying the analysis of key factors when identifying driving forces for scenarios. Participants in scenario planning workshops using the van der Heijden-based SPARU method are asked to classify factors using the spatial elements above. Only global factors can be considered as driving force for the scenarios. Part of the decision criteria is whether the organisation has control over the factor (*cf. 1.5.3.1 Scenario thinking* for a description of the scenario planning process).

This conjunction of the spatial concept of externality with the conceptual idea of control can cause difficulties. Van Notten et al. (2003)) noted that deciding whether a key factor was global or not could be a matter of some controversy in the workshops. The researcher has observed that the insertion of this spatial element can confuse scenario planning participants, because it is not always clear whether a factor should be considered contextual (global), transactional or internal, even without the additional consideration of a second criterion of control or influence.

This is because the conjunction of externality and influence is not universally applicable. For example, it may be considered that labour relations is internal to the company and therefore under its control. But influences that impinge on labour relations that are outside the control of the organisation may be external or internal or both – trade union activity and health and safety issues among them. Internally the organisation may lack control, although it is unlikely that it would lack influence.

Similarly, it may be assumed that most organisations would consider government policy to be external, yet some of them may consider that in some circumstances they may have a degree of influence on it. And, of course, a change of strategy may see an organisation that felt it had no influence on government policy taking up a

lobbying role. How issues like these examples are viewed may depend on the perspective or framework – or mental models – of the person making the judgement, i.e., different people will have different boundaries or horizons (*cf. 3.4 Limits of knowledge*).

By using the concept of influence, participants in a scenario development workshop could make their judgment on a single factor. Using the BOW categories would eliminate time-consuming and unsettling disputes over whether scenarios should be global or industrial. The spatial consideration would become irrelevant, and workshop participants could focus directly on one criterion for choice.

The issue is one of boundaries. Boundaries such as global/industrial are imposed limits. They can be appropriate in scenarios produced on a large scale, such as country scenarios or the Royal Dutch Shell scenarios. But van der Heijden (1999a) has argued that scenarios should be purposive and the type of scenario used should be appropriate to the purpose. The BOW concepts make provision for the use of different boundaries where these are appropriate.

2.11.2.4 *Substance axioms*

This section has discussed how the essential elements of scenario stories are events beyond the influence of the organisation, because these are the most uncertain from the organisational perspective. Scenarios provide a framework that enable participants to make sense of the complex and dynamic range of future interconnected possibilities by building boundaries in time and place that participants can focus on and understand.

The axioms that have been identified that govern the substance of scenarios, then, appear to be that:

- *Many future events are unpredictable, and so the future is to a considerable degree unpredictable.*
- *Events that appear most uncertain to an organisation are those beyond its influence.*
- *A framework is needed for people to make sense of the uncertainty and complexity of the multiplicity of possible future events and situations.*

2.11.3 What scenarios are based on

Characteristics: Scenarios are grounded in past and present trends and on pre-determined events. They are imaginative accounts of different possibilities for the future (*cf.* 2.8 *A definition of scenarios*).

2.11.3.1 Categories of uncertainty and risk

Scenarios are based on workshop participants' perceptions of the most important driving forces, based on past and present trends (*xvi* and *xvii*), affecting the organisation in the context of the focal issue of the scenario planning project. Driving forces are elements that have the power to steer an organisation in different directions (Bawden, 1998). They are the underlying forces that determine the way things happen, setting the pattern of events and determining outcomes (van der Heijden et al., 2002). Understanding them is a key function of scenario development and analysis, in order that participants/decision makers, rather than relying on forecasts based on someone else's judgement, can develop an appreciation of their own of the nature of the organisation and its operating environment (Wack, 1985b). For scenario writing, a limited number of driving forces are selected on the basis of their perceived importance to the organisation and degree of uncertainty with regard to the future paths of current trends, and participants imagine (*xviii*) possible futures grounded in these driving forces (*xvii*).

Not everything about the future is indeterminate. Wack (1985b) introduced the concept of "predetermined" events (*xvi*), where the momentum of driving forces already in place made future outcomes highly likely, though some uncertainty may remain. Demographic change is an oft-cited example. Porter (1985) identified three elements of industry structure; constant, where change was very unlikely; predetermined, where change was largely predictable; and uncertain, where aspects of future structure depended on irresolvable uncertainties.

Wack's predetermined and Porter's constant and predetermined categories seem to carry much the same meaning. Since by definition predetermined outcomes can be reasonably well forecast, this type of trend remains in the background of scenarios, which are concerned not with single but with multiple possibilities for the future, i.e., uncertainty.

Van der Heijden (1996) identified three categories of uncertainty:

- risk, where based on previous experience, outcome probabilities could be estimated, even if judgementally
- structural uncertainties, where the event was unusual enough that, although its possibility could be seen through a plausible cause/effect sequence, any indication of likelihood was precluded
- unknowables, which were events which were unimaginable in advance.

The driving forces which were selected as the basis of scenarios were concerned with the second category (ibid.). These were what made each scenario different, the factors that, unlike predetermined ones which appeared in every scenario, and predictable risk, addressed the elements of uncertainty with regard to the future.

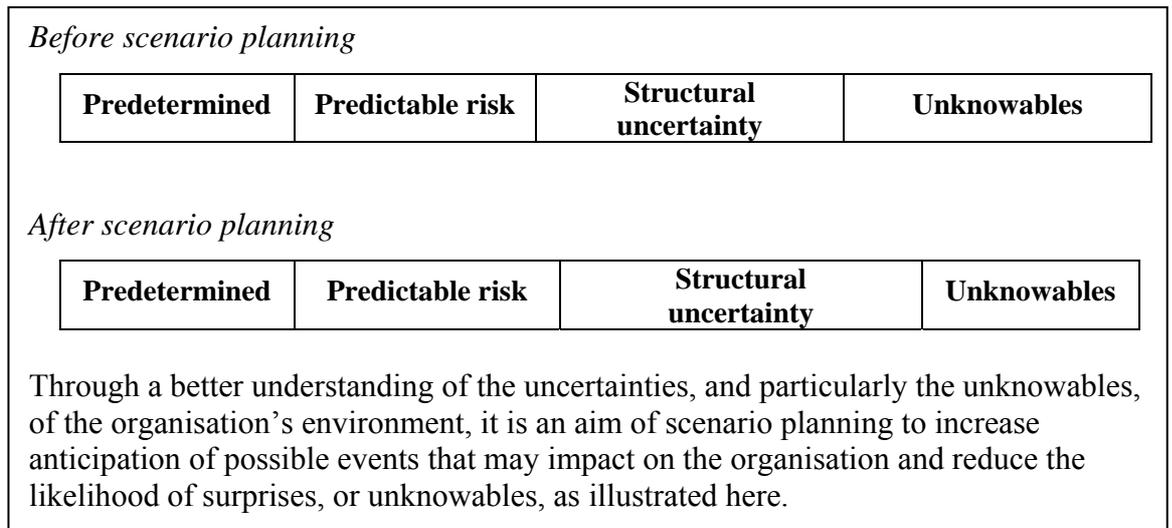
Van der Heijden's categories invoke a comparison with a typology of risk discussed in the context of project management that provided a practical example of risk (Florice and Miller, 2001). In this, there were two categories of risk:

- anticipated risks, which tend to be operational or implementation issues, in which future potentially adverse circumstances such as law changes or contractor failure are addressed in a project that is already established. This corresponds to van der Heijden's first category;
- strategic risks, which are considered during the project development process and can include both anticipated and unexpected events produced by environmental turbulence, or strategic surprises. Strategies can be developed to improve the robustness of systems in the face of anticipated risk. However, this is not the case for unanticipated events - the reactive activity of responding to surprises is termed governing. This second category corresponds to van der Heijden's second and third categories.

2.11.3.2 *Reducing the unknowables*

In both project management and business strategy, it is clear that it is advantageous for organisations to improve their anticipation of future risks, by gaining a greater understanding of the future of the environment they operate in, and as a result reducing the incidence of unknowables or strategic surprises (*cf. Figure 2.4* below). For Wack (1985b), anticipating and understanding risk was one of the main purposes of scenario planning.

Figure 2.4 Reducing the unknowables



On this understanding, scenario planning is less about an ability to anticipate the unexpected (i.e., an uncertainty that is recognised as a possibility, however unlikely) than about increasing the boundaries of understanding of what could possibly be expected in the future, i.e., to reduce the zone of the unknowables. It is not a matter of knowing the future, but of improving understanding of it. Flood (1999) called this “learning within the unknowable”, the subtitle of his book, and saw scenarios as a personal and organisational learning tool for improving this ability. What individuals could know was limited to what was local to them in space and time, i.e., they had immediate involvement, and not far into the future or past. For Flood, it appears scenarios were a means of broadening perspectives to increase the area of what is knowable.

2.11.3.3 Moving the boundaries of uncertainty

Like van der Heijden, Tsoukas and Shepherd (2004) identified the external environment as the principle source of uncertainty for organisations. However, four circumstances were distinguished:

- Where there is both knowledge of future events, e.g., seasonal demands, which may change quantitatively but not qualitatively, and knowledge of what to do in these circumstances. This corresponds closely with Wack's and van der Heijden's predetermined events;

- Where future events can be anticipated, but knowledge of what to do is deficient or lacking, e.g., rebuilding institutions after a government overthrow. This is akin to van der Heijden's predictable risk;
- Where future events cannot be predicted, although the possibility is known, but the knowledge of what to do if they do occur exists, e.g., earthquakes. Van der Heijden's structural uncertainty is close to this;
- Where events are unanticipated and the knowledge of what to do after they occur is deficient or lacking, i.e., discontinuities. These are similar to van der Heijden's unknowables.

Tsoukas and Shepherd (2004) listed what they considered were the appropriate ways for organisations to deal with each of these circumstances. They were, respectively:

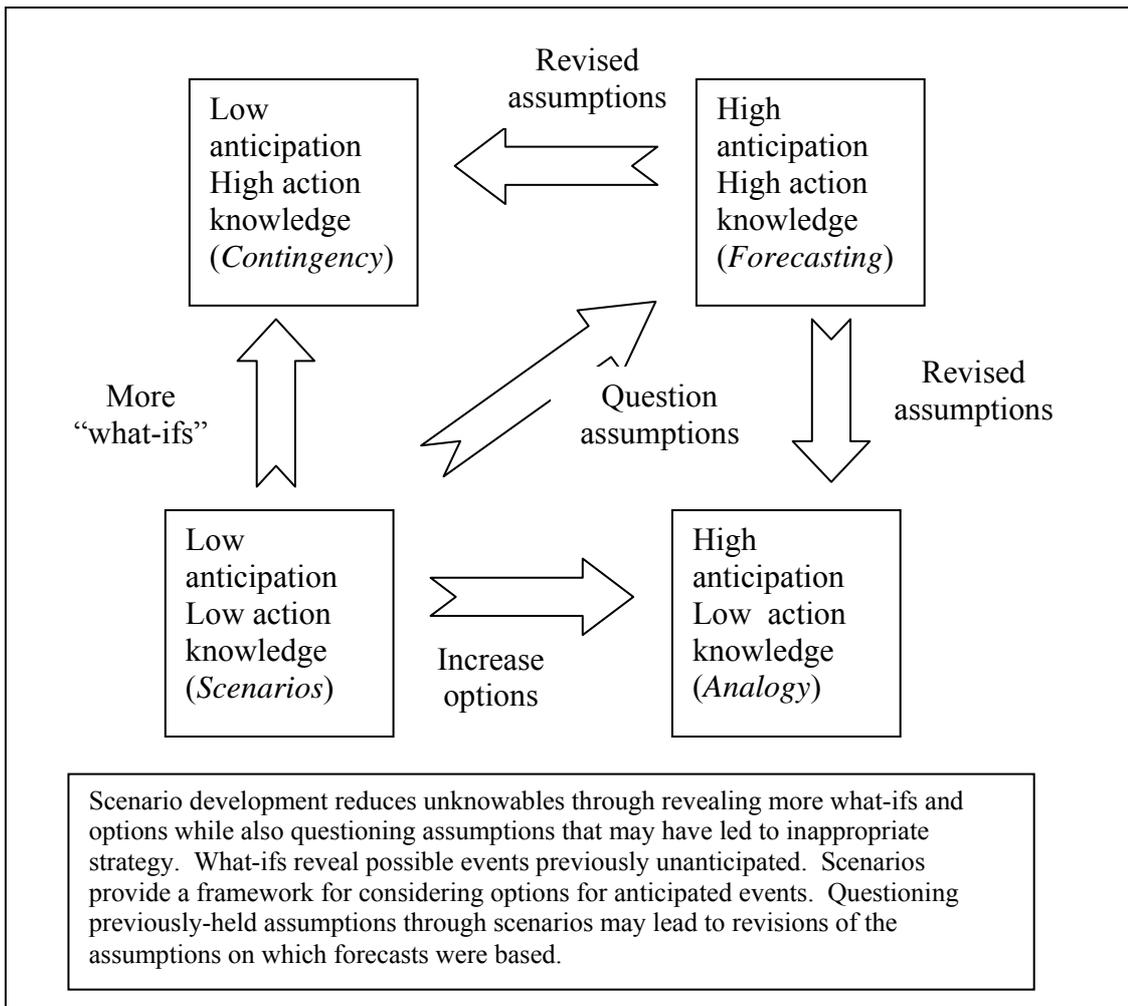
- Forecasting techniques, i.e., extrapolations from the past;
- Analogical reasoning, using knowledge from similar events;
- Contingency planning, preparation for "what if" events;
- Scenario-based learning, for discontinuities, rare events that are unpredictable.

It appears that Tsoukas and Shepherd (*ibid.*), in identifying scenario techniques with unknowables, were at odds with van der Heijden, who saw the driving forces for scenarios arising from structural uncertainties, and would introduce extreme discontinuities to scenarios by way of what he termed "wild cards". However, if the purpose of scenario planning is considered to be a reduction in the zone of the unknowables, the two viewpoints can be reconciled. Tsoukas and Shepherd were in agreement with van der Heijden that scenarios were less about the future than about increasing the perceptive capability of the organisation in the present. Scenario-based learning can be thought of as a way of moving an issue from the unknowable area to the anticipatable (even if improbable), i.e., into structural uncertainty. By introducing previously unconsidered key factors into scenario workshops, sourced from pre-workshop interviews or environmental scanning, what was previously unknowable is moved into the area of structural uncertainty. Consideration of options in the newly anticipated area may lead to knowledge of what to do in these circumstances.

As well, scenarios may reveal areas where the use of forecasting should be reassessed, by revealing inappropriate assumptions on which the forecasting is based.

Figure 2.5 illustrates the researcher’s concept of how to adapt the Tsoukas & Shepherd typology to demonstrate this.

Figure 2.5 Moving the boundaries of uncertainty



Adapted from Tsoukas and Shepherd (2004), p4

The graphic shows how the various foresight techniques are not discrete but interact. Although the flow is shown as unidirectional, there could also be input to scenarios from contingency planning (what-ifs) and analogy (uncertain effects of an anticipatable event).

2.11.3.4 Harnessing different world views

Uncertainty is, of course, a matter of perspective. For example, an increase in the proportion of total population of elderly people in Australia over the next few

decades can be treated as predetermined, and quantitative estimates can be made of the trend. However, how any individual locality or societal grouping will be affected is less certain, as the smaller population mix may be still subject to many unpredictable variables. For example, future government policy on provision of health and security facilities may influence what type of people settle in or leave rural communities, but for someone deciding whether to set up business in a particular community, Australia-wide data about this may be of little import. Van der Heijden (1996) pointed out that the difficulty of prediction increased the more precisely we tried to pin things down.

The question of perspective is fundamental to scenario planning. Hodgkinson and Wright (2002), for example, documented “marked differences” in the way participants in a scenario planning project interpreted the state of their organisation. The need to harness different world-views, which Wack (1985a) identified with mental models (but see *Figure 3.1 World view perspective*), and ways of looking at an organisation of a selection of participants is fundamental to scenario planning. Although scenarios are grounded in past and present trends, the identification of the trends and their driving forces that are the basis of the scenario story line depend on the varied viewpoints of the participants.

As well, methods and ways of building scenarios are diverse, and both the method and the facilitator (Masini and Vasquez, 2000) can affect the scenario output.

However, there is a broad structure which most heuristic methods follow:

1. Establishment of purpose: the task is defined and a focal issue identified. For scenario planners of the Royal Dutch/Shell based method, the issue should be something that addresses managers’ deepest concerns (Wack, 1985b) (though sometimes the focal issue may be finalised after the next stage).
2. Information gathering: Common sources of information are interviews, focus groups, environmental scans, organisational documentation.
3. Identification of trends and driving forces: Participants in a scenario planning workshop consider factors arising from the information gathering phase and from them identify trends and driving forces.
4. Scenario writing: Workshop participants develop scenarios, which may be skeletal, based on the trends and driving forces. These may be further researched after the workshop and developed into full-narrative scenarios.

5. Use of scenarios for learning and/or decision-making: The scenarios are examined for their implications for the organisation and may be used as a framework for developing strategy and/or ongoing organisational learning.

2.11.3.5 Basis axioms

This section has demonstrated how anticipation can be increased by reducing the zone of future unknowables. This is done by a sharing of varied viewpoints about past and current trends.

The axioms that have been identified that underpin this process include:

- *Future events and circumstances depend on trends and forces that can be discerned in the present.*
- *A process for sharing of perspectives and viewpoints can assist in identifying the assumptions that underlie present attitudes and trends.*
- *Through expanding knowledge of the past and present by sharing of perspectives, it is possible to improve anticipation and reduce the unknowability of the future and the area of future unknowns.*

But why does a process like scenario planning assist with anticipation of the future? The axioms behind this are at the heart of scenario planning theory and are discussed in the next section. They illuminate the emergence of the theoretical paradigm discussed in the next chapter.

2.11.4 Effect of scenarios

Characteristics: Scenarios are based on the assumptions of the participants. They provide a framework to help order perceptions for decision-making, but are challenging to both assumptions and mind-sets (*cf. 2.8 A definition of scenarios*).

2.11.4.1 The power of the cage

So far, scenarios have been discussed in terms of what they contribute to understanding areas that are beyond the influence of an organisation. However, this uncertain path of future events and trends, including the sort of discontinuities that chaos theorists posit, is only one of the aspects of uncertainty about the future. Another is the ambiguity and uncertainty in the minds of the future-gazers, due to limitations of perspective and prejudice (*cf. 3.3 Epistemological implications*). Wack (1985a) was adamant that scenarios were more about challenging the assumptions (*xiii*) and mind-sets of people in the organisation than setting future frameworks. Hamel & Prahalad (1994, p91) asserted that: "What makes the future

difficult to anticipate is not that the future is inherently unknowable but that the forces conspiring to produce the future often lie well outside top management's purview."

Van der Heijden (2000) discussed the phenomenon of confirmation bias on predispositions, i.e., the tendency for people to look for evidence that supports the favoured status quo. This tendency could be reinforced by their expectations – people may see what they expect to see (Evans, 1987). Since expectations and prejudices from past experience affect the capacity and adaptability of learning in individuals (*cf. 3.3 Epistemological implications*) as well as in organisations (De Geus, 1997), identification and understanding of predispositions can enhance the learning process and facilitate change.

In this section, what this implies is examined. An example to start:

In October 1962 the American government was taken by surprise by the revelation that Soviet missiles capable of reaching Washington were being installed in Cuba.

"I know there is no present evidence, and I think there is no present likelihood that the Cubans and the Cuban government and the Soviet government would, in combination, attempt to install a major offensive capability," said McGeorge Bundy, US Presidential assistant for national security affairs on 14 October, 1962 (Abel, 1966, p17). The same day, U-2 spy planes took the photographs that confirmed the existence of Soviet missiles on the island.

In hindsight, the installation should have been anticipated. That it was not was due not to any individual fault but "to a state of mind, an unwillingness to believe that Khrushchev would do anything so preposterous"(Abel, 1966, p36). Two decades before, US military officers with similar closed mind sets had failed to anticipate the Japanese surprise attack on Pearl Harbour (Janis and Mann, 1977).

The extreme consequences of these two examples of errors of judgement highlight the dangers of unchallenged assumptions. Because they had made up their minds what they should see, the authorities in both cases ignored signs that may have warned them if observed from a different point of view.

Mackay (1994) discussed what he called "the power of the cage", the framework or world view through which the world is perceived and made sense of. He asserted that attacks on world views that concerned two important factors influencing

individuals' interpretations - comfort and security - were likely to be resisted. Communication of a new idea alone was less likely to prompt change than experience, combined with communication. This would explain why photographic evidence was required before the US government could conceive of the possibility of Soviet aggressive weapons in Cuba. Most of the government would not entertain the idea until confronted with incontrovertible empirical evidence.

The framework people use to interpret the world is created from their own experience. The power of the cage is two-fold – it provides patterns to make sense of the world, but it also limits sense-making to the perspective that is constructed from the individual's experience.

2.11.4.2 *Sense-making and mental models*

Patterns or classifications that people use to interpret what they see are called schemata and are the basis of the assumptions that underpin sense-making (Abercrombie, 1960). No two people have the same experience, so no two sets of schemata, and consequently no two world views are identical and everyone will see the same event or phenomenon through a different cognitive filter. Schemata enable people to operate efficiently, because they do not have to reconstruct patterns every time they come across a situation, but recognise correlations and act accordingly. However, preconception that a particular pattern should be present can act as a filter that blocks out other possible ways of viewing a phenomenon, with a consequent loss of cognitive flexibility and innovative thinking.

The patterns or expectations that constitute the framework for interpretation are what Wack (1985b) called “mental models”, the creation and evolution of which were influenced by what were elsewhere called paradigms and world views (*cf. 3.1 Ontological and epistemological considerations and Figure 3.1 Worldview perspective* for the theoretical foundations for these concepts). Mental models are usually discussed as they apply to individuals, but van der Heijden et al. (2002) extended the concept as a metaphor for how organisations and communities shared outlooks on the world and the future.

So when Wack talked about changing mental models, he was tackling the frameworks of both the individuals in an organisation and the organisation itself. It is an enormous task (Morgan, 1997). Wack sought to encourage people to think the unthinkable.

Recognition of the difficulties of achieving this is not new. For example, about 500 years ago, Nicolo Machiavelli wrote the following:

It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new order, this lukewarmness arising partly from fear of their adversaries, who have the laws in their favour; and partly from the incredulity of mankind, who do not truly believe in anything new until they have had actual experience of it.

“The Prince”, c. 1513 (Machiavelli, 1935).

Machiavelli believed that force was the best way to persuade people to accept change: persuasion – “prayer” he called it – in his view was unlikely to succeed. However, it is noteworthy that, despite his advocacy of force, Machiavelli recognised that people would not really believe in new things until they had experience of them.

Although the political system of 16th century Italy is a context far removed from 21st century organisational structures, an analogy may be drawn between the imposition of political change by force and the infliction of organisational change on unwilling or uninterested employees by modern management. The gulf between initiating change, particularly when it is imposed rather than participative, and obtaining agreement, acceptance and belief in it is well known enough. In Wack’s terminology, the latter involves a change of mental models.

2.11.4.3 Changing mental models

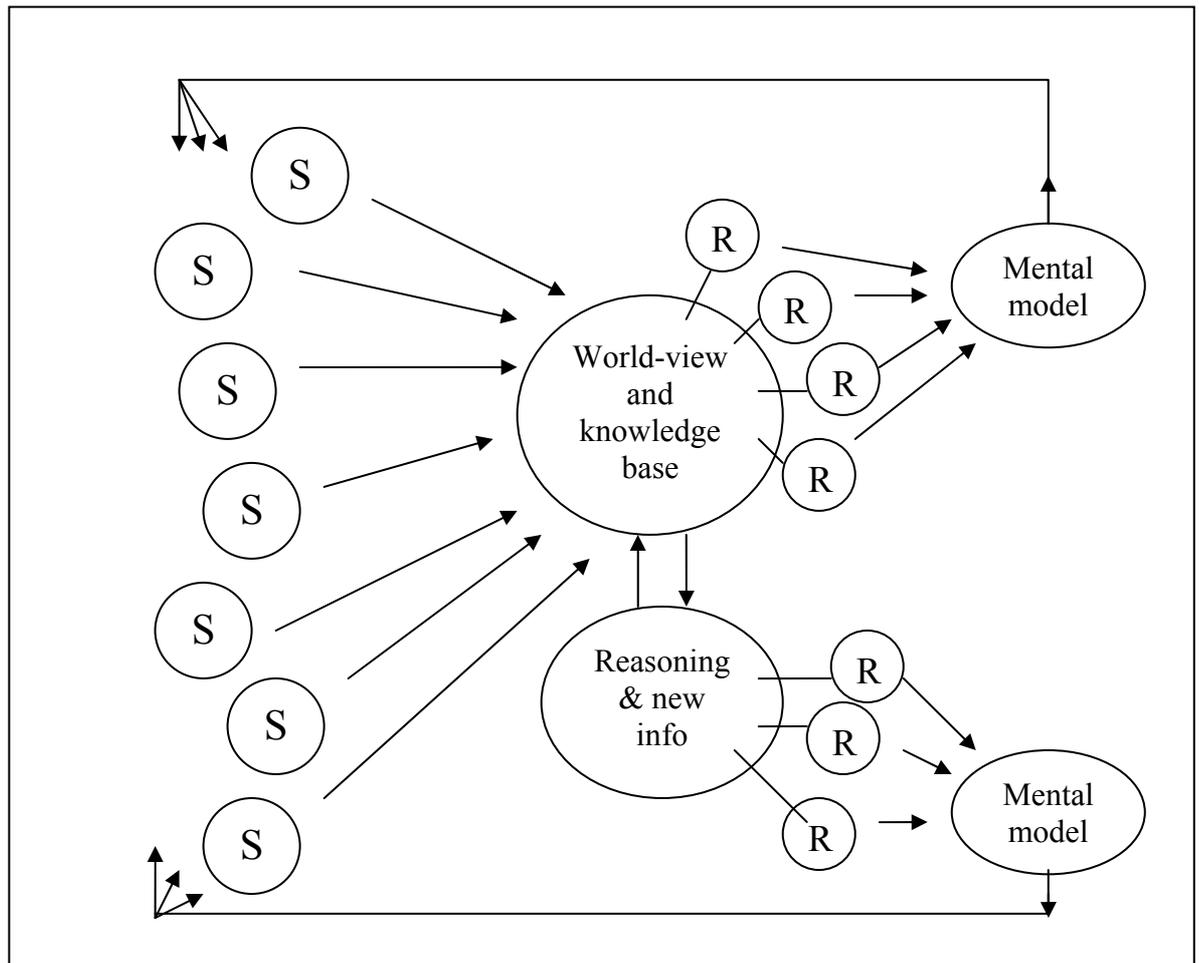
In seeking to change mental models, just what is to be changed is a question that is rarely answered in scenario planning literature.

Jungerman and Thuring (1987) described mental models as a mental map of the main relevant elements and relations of what was to be described. These could take the form of causal nets. However, individuals would have different mental models about the same phenomenon since the knowledge relevant for building them was found in the person’s long term memory.

There were two elements in the formation of mental models: the person's pre-existing knowledge, which included recognition that new knowledge may have to be sought, and constructive, reasoning activity. Mental models are the basis of scenarios, and may be affected by individuals' received values. Scenarios are mostly concerned with future economic or social issues, so, because of the application of the experiences of different people's experiences and values in their development, there can be no singular true scenario.

Drawing on the explanation given by Jungermann and Thuring (ibid.), the model shown in *Figure 2.6 Constitution of mental models* as an iterative process may be derived. Schemata, the first element of the model, are formed from experiences, whether considered to be originating in sensory perception or otherwise, and judgement, rational or emotional. The combination of schemata constitutes the individual's knowledge base and/or the world view, which are interactive and are themselves in a state of constant development due to the continuing influx of schemata. Mental models of particular phenomena are formed by selection of relevant elements from the knowledge base, informed by the world view. So not only would an engineer have a different view of a future situation than a psychologist, since they would be selecting different elements to form their mental models, but any two engineers would also be likely to have different models. Mental models affect not only what people do, but also what they see (Senge, 1992).

Figure 2.6 Constitution of mental models as an iterative process



Key: S = Schemata

R = relevant elements

Original graphic created for this thesis

Constructing a mental model is an iterative process. The creation of a mental model in itself may affect the perception of the phenomenon and therefore the schemata that are part of its building blocks. Abercrombie (1960) demonstrated this by showing how simple shapes could be interpreted in different ways depending on context and the experience of the perceiver.

In *Figure 2.6*, the whole box may be thought of as the conceptual ecology (*cf.* 2.11.5.5 *The conceptual ecology*) which experience is affecting.

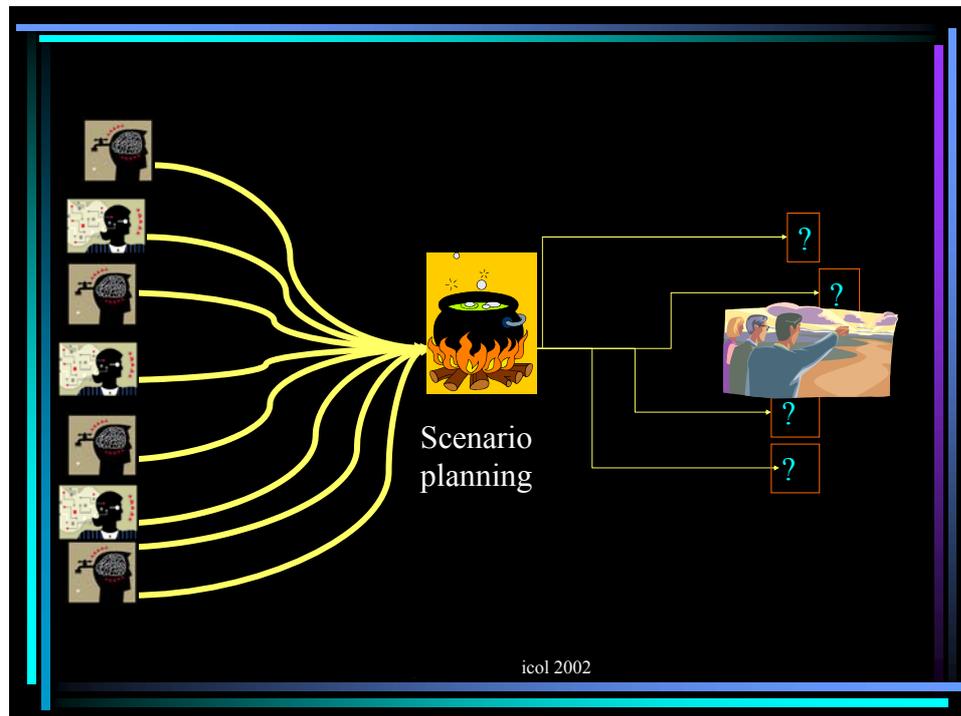
A particular kind of schema is the event schema, which Jungermann and Thuring (*ibid.*) described as a stereotypic sequence or pattern of events. They provided an example of a person's concept of dining in a restaurant and what should be expected in the course of that experience. The elements of the event schema were related not deterministically but probabilistically. The event schema was an order that people

imposed on a situation, the basis of the assumptions they made, and as such could also be termed a mental model. If a pattern was inferred without sufficient knowledge that it was entirely applicable, this could lead to error. It was also the reason people had different viewpoints in issues, since their different experiential backgrounds would lead them to have different schemata. It is reasonable to construe from this that sharing perspectives improves the chances of inadequate viewpoints and inappropriate assumptions being surfaced.

Scenario building may be thought of as a type of melting pot that brings together people with different world views and assumptions, and therefore different schemata and mental models, to provide a less incomplete viewpoint on an organisational issue, so the scenarios of the future are built on a wider perspective than that of any individual. In the process, the schemata, mental models and worldviews of the participants may be altered by their exposure to and participation in the process.

The process is demonstrated in *Figure 2.7*. The diagram illustrates how sharing the perspectives of different participants in the scenario planning process results in multiple plausible new outlooks, or scenarios, for the future.

Figure 2.7 The scenario planning melting pot



Source: Author's lecture to Master of Futures Studies course, 2002.

The discussion so far has been of individuals. The mental models that individuals hold may be conceived as constructs with an empirical and experiential foundation. However, what of organisations?

2.11.4.4 *Organisational world views and mental models*

Organisations consist of people who behave in a thinking way and it is through their interaction that institutional behaviour emerges (van der Heijden, 1996). Thomas (1994) suggested that a theory of the process of change should take into account the concept of the organisation as a collection of world-views. An organisation's ability to identify emerging patterns in its environment and to strategically plan and act accordingly depends on organisational learning – which comes from the learning experiences of the individuals in the organisation (De Geus, 1997). Van der Heijden credited de Geus with this insight: “Arie ... thought decision-making was really a form of learning” (Kleiner, 1989, p 13). Kolb's cycle of learning can be used to demonstrate how organisational learning is necessarily a continuous process of experimentation and feed-back, which supports de Geus's idea (van der Heijden, 1996, van der Heijden et al., 2002).

For van der Heijden et al. (2002), organisational learning was joint action, a social practice. It was a process of joint reflection and sharing of worldviews, where new ideas or theories could be developed and put into effect, and a shared understanding and alignment of mental models. Van der Heijden (1996) saw organisations as cognitive systems, with values and ways of interpreting the world. Knowledge resided in the people in the organisation, as well as its systems and artefacts. From this it can be seen that there may be an organisational viewpoint or opinion, but individuals in the group will all see things differently. Senge (1996) stated that a team's knowledge was not the sum of the individual players' knowledge but a collective phenomenon. For van der Heijden, organisational knowledge was less than the sum of the knowledge of the individuals in it, and what an individual could contribute was not always listened to. By listening to the different perceptions of others (the strategic conversation – cf. *Figure 2.3 The shadow culture*), individuals can question their own perspectives and assumptions about the organisation. The product of bringing together and sharing individual worldviews and their associated mental models is not an amalgam but a distinct organisational worldview and model that in turn informs and influences each individual.

By sharing in this way, the organisational view of the world may be modified. Scenario planning is seen as a providing a structure for this sharing to take place, and for the resulting issues to be discussed in the organisation.

The organisational mental model of a situation or a phenomena may not necessarily be any better than an individual one. As Senge (1992) pointed out, the collective IQ of a team can be higher or lower than the average of the individuals'. Neither can mental models be right or wrong – by definition a model is a simplification (ibid.)

2.11.4.5 *Changing basic assumptions*

To seek to change mental models, based as they are on organisational and individual experience, is therefore to seek to change something deep-seated and fundamental. Argyris (1993) distinguished between what he called espoused theories and theories-in-use. Espoused theories comprised beliefs, attitudes and values that were expressed overtly. Theory-in-use was the theory people actually employed. There could be mismatches between the two and people were often unaware of this. Their “theory-in-use” often prescribed actions that were intended to bypass embarrassment or threat, an idea which was akin to Mackay's resistance to attacks on comfort and

security (*cf.* 2.11.4.1 *The power of the cage*). These individuals' defensive routines – which Argyris called Model 1 – were sanctioned and protected by organisational defensive routines, a process which became iterative and self-reinforcing. Organisational defensive routines were “any policy or action that inhibits individuals, groups, intergroups and organisations from experiencing embarrassment or threat, and, at the same time, prevents the actors from identifying or reducing the causes of the embarrassment or threat. Organisational defensive routines are anti-learning and over-protective” (*ibid.*, p15). Their effect was to inhibit the detection and correction of error, inhibit problem solving and decision-making and reduce the effectiveness of organisational performance. The challenge for organisational change agents was to encourage inquiry and double loop learning and to introduce and implement Model II theories-in-use, which often started out as espoused theories and were open to testing by others.

Schein (1992) identified organisational culture with a pattern of shared basic assumptions and analysed it on three levels: artefacts, which were visible structures and processes, and which had their basis in the other two levels, although this was not always obvious: espoused values, which, if they worked, could become transformed into accepted assumptions and, if they did not, reflected Argyris's concept of espoused theories; and basic assumptions. Basic assumptions had become so taken for granted that they were accepted with little variation throughout the organisational unit. They were implicit guides for behaviour, like Argyris's theories-in-use. They were built from the previous experience of individuals and could sometimes have a cultural component. They were so inherent that questioning them would create anxiety and defensiveness.

The Machiavellian answer to the problem of creating changes in basic assumptions was to use force. But this is likely to produce change only at the artefact and espoused values levels. For example, Schein's experience with brainwashed prisoners of war in Korea demonstrated that when the prisoners were returned home, they quickly reverted to their previous beliefs (Coutu, 2002).

Senge (1992) distinguished commitment from enrolment (taking part by choice but not feeling fully responsible for outcomes) and degrees of compliance (where people were doing what is expected of them). Commitment involved choice, a feeling of responsibility for outcomes and a creative approach to achieving a vision. The

espoused values and basic assumptions of the person committed to change were likely to be in alignment. For the reluctant complier, there was likely to be a considerable gap and strong defensiveness. The outcomes of the research for this thesis demonstrated this phenomenon.

As stated above, mental models, like any models, are simplifications. For Schoemaker (1993), scenarios were a means of adapting consideration of the future to the limitations of how much complexity the human mind can handle. So knowledge is seen to be limited not only by the world view and perspective of the individual and their associated assumptions, but also by the characteristics of the human mind.

2.11.4.6 Barriers to change

One of the principal limiting factors is overconfidence. Russo & Schoemaker identified a general human characteristic of overconfidence in one's own beliefs and judgements or mental models (Russo and Schoemaker, 1989, Russo and Schoemaker, 1992, Schoemaker, 1993). This can arise from well-known cognitive causes, including availability bias (Schoemaker, 1993), which is what Ringland (2002, p91) called the "tyranny of the present", anchoring (Ringland, 1998, Schoemaker, 1993), and confirmation bias and hindsight (Russo and Schoemaker, 1992, van der Heijden et al., 2002). Overconfidence can be a powerful motivator. Russo & Shoemaker (ibid.) suggested that although overconfidence could be valuable in performance, realism was more important in decision-making. To this end, diversity of opinion should be welcomed and challenges to the normal approaches to issues should be encouraged.

Hodgkinson and Wright (2002) discussed the notion of "cognitive inertia", a version of overconfidence where overdependence on mental models resulted in failure to notice changes in a business environment until the changes were so far advanced that it had become difficult to adapt. Cognitive inertia led to strategic inertia, so, for them, it was important that strategists be involved periodically in processes that changed their assumptions and broadened their perceptions. One way of undertaking this was scenario planning.

Bolman & Deal (1997) and van der Heijden et al (2002) discussed overdependence on mental models at an organisational level. The term framing was used as a metaphor for how perspectives were formed by the role and world-view of the

individual, which determined the way that people saw problems or situations. Inappropriate framing could lead to seeing the wrong problem. Routines or strategies that had worked in the past might not be relevant for a changed situation. This, too, is a reason for assumptions to be tested from time to time.

A second limiting characteristic of the human mind is decision avoidance. Janis & Mann (1977, p15) examined the human characteristics of decision-making: “We see man not as a cold fish but as a warm-blooded animal, not as a rational calculator always ready to work out the best solution but as a reluctant decision-maker – beset by conflict, doubts, and worry, struggling with incongruous longings, antipathies, and loyalties, and seeking relief by procrastinating, rationalizing, or denying responsibility for his own choices.”

Among avoidance fallacies that led to poor decisions were the gamblers’ fallacy (chance is a self-correcting process, so it is expected that deviation in one direction will be followed by deviation in the opposite direction) and giving undue weight to irrelevant information.

Defensive avoidance was a way of coping with a painful dilemma, and could be just as damaging as overreaction. Janis & Mann (*ibid.*), whose work was concerned with major decisions that involved stress to the decision maker, identified three patterns of defensive avoidance behaviour – which can be seen to be closely allied to some of the biases already mentioned above. They were:

- bolstering – uncritically promoting what seemed to be the least painful course of action, sometimes characterised by increased commitment to an existing strategy
- shifting responsibility – trying to get someone else to make the decision, or at least be responsible for it
- Procrastination – delaying the decision.

For Janis & Mann (*ibid.*) decision-making was affected by preconscious biases and unconscious conflicts, in the Freudian sense. But although there might be lack of awareness of these at the time of the decision, they could be surfaced on reflection.

Van der Heijden et al.(2002) showed how this decision avoidance behaviour led inevitably to strategic inertia. A shock was needed to break the cycle, and, because it

provided multiple perspectives to address an issue, scenario planning was seen as providing the learning needed to achieve this.

2.11.4.7 *Learning*

So far this section has endeavoured to establish that the subject of organisational change is the world-views and knowledge base of the people involved, and that there are human characteristics that also need to be addressed. The tendency of people to resist attempts to change their mental models and their defensiveness with regard to stressful decisions has also been noted.

The Machiavellian approach of enforcement does not hesitate to tear down the structure of mental models if need be. Organisational change concepts such as creative destruction (Foster and Kaplan, 2001a, Foster and Kaplan, 2001b, Schumpeter, 1976) and re-engineering have this in common with the enforcement approach: they can disregard and /or ignore the world views, the experience and knowledge, of the people who are expected to implement and operate the altered system. However the literature indicates an different approach to learning that is fundamental to scenario planning theory.

De Geus (1997) applied to the organisational context a typology of learning that he attributed to Piaget. According to this, there were two types of learning:

- Learning by assimilation, where the learner already had the cognitive structure to recognize the meaning in, and knew what to do with, the information. This approximated teaching, which, according to de Geus, was not a very effective approach to organisational learning.
- Learning by accommodation, where the cognitive structure was changed. This was an experiential process of adaptation to changes in the world. Organisations, in de Geus's framework, learned by responding to changes in their world.

But, as has been discussed, organisations consist of people, so organisational learning is necessarily people learning. (This idea of a learning organisation as a place where the people learn is distinct from the somewhat incongruous concept of an organisation that learns, which is perhaps better described as an organisation where people and procedures and structures are flexible, responsive and adaptive (Senge, 1996)). Following de Geus, what is needed to change mental models is learning by accommodation, or experiential learning. Scenarios are seen as a vehicle

for achieving this by providing the experience of considering multiple possible futures and what strategies would be needed in those worlds – a concept called “memories of the future” (van der Heijden et al., 2002).

As has been seen, changing mental models entails an alteration in one’s world-view, which is built from the body of knowledge and experience of the individual. It follows that a change in mental models will require an experiential learning process of sufficient power and persuasion for it to take place. Scenarios are seen as a vehicle for providing a proxy or surrogate experience, a practice run (De Geus, 1997).

However, this will be more likely to succeed if the learner’s world view can accommodate it and it builds on existing mental models. Van der Heijden (1996) and van der Heijden et al. (2002) cited the work of Vygotsky in educational psychology. Vygotsky (1978) introduced the concept of the zone of proximal development, which, in children, he defined as the development potential, beyond the child’s actual knowledge but not beyond understanding with some assistance from a more knowledgeable person. It “defines those functions that have not yet matured, but are in the process of maturation, functions that will mature tomorrow but are in a currently embryonic state” (ibid., p 86). Eventually, the child developed and intellectual growth occurred through self-regulation. The process of building connections from observations that did not have any meaning to the observer to insights that made sense within a codified knowledge base was called scaffolding (van der Heijden et al., 2002).

Human development does not end when childhood is left behind, but can be lifelong. Wilber (2000) provided an explanation of how insightful or inspirational experiences could continue to be a factor in individual development. Scenario planners believe that participation in a scenario planning project can be a way of providing this sort of experience, what Wack (1985b) called the “aha” or sudden realisation of a truth from a new perspective. Vygotsky’s concept of the potential in individuals can be applied to adults too.

For scenarios to challenge mindsets, they need to move beyond the knowledge bases of the individual participants in the process, but remain in this zone of proximal

development, i.e., they will need the characteristics of relevance and plausibility (*cf.* 2.11.1.1 *Narrative*).

2.11.4.8 *The conceptual ecology*

However, the development of scenarios that challenge mental models is only part of the organisational change process. In order to show how scenarios contribute to further learning that is part of the change process, it is useful to delve a little further into educational psychology.

Strike & Posner (1992) assumed that learning took place in a conceptual context, which they called a conceptual ecology. Conception was more than a rational relationship between a theory and a set of observations: it was formed in a context of the individual's existing conceptions. A concept did not exist in isolation, but embedded in a web of other concepts, which were the source of its intelligibility and plausibility. Drawing on Kuhn's idea that people with different paradigms lived in different perceptual worlds and did not agree on what constituted evidence (Kuhn, 1962) (*cf.* 3.1 *Ontological and theoretical considerations*), Strike & Posner were of the opinion that the difficulty in changing people's concepts – and the uncertainty of outcome – was that other concepts (the “cognitive support group”) had to be changed too. Part of the resistance to learning, rather be rational, could be due to unrelated factors such as lack of motivation or personal concerns. Understanding the interaction of the elements of individuals' conceptual ecologies with one another and with experience, asserted Strike & Posner, could explain better than empiricist assumptions why even misconceptions were resistant to instruction. Single explanations were to be viewed with suspicion: individual conceptual ecologies would result in different perspectives of the world.

Successful conceptual change would require several conditions to be met:

- dissatisfaction with present conceptions
- the new conception must be intelligible and plausible
- the new conception must suggest the possibility of fruitful research.

Whether the individual recognised any of these conditions would depend on schemata, which were based on previous experience but which could also be generated on the spot as the individual tried to make the unfamiliar intelligible.

Effective learning was experiential, and arose from some perceived conflict between

a new concept and the previous experience. Preconceptions were not always replaced with new conceptions. Research cited by Strike & Posner indicated that students could simultaneously hold their original views and newly constructed concepts (Jones and Brader-Araje, 2002). Rather than displacing old ideas, new concepts became established in the conceptual ecology along with a vast array of other beliefs, knowledge, world views and mental models. Conflicting and even self-contradictory ideas could be part of this.

Kitchener (1992) argued that revision of beliefs must be based on epistemic rather than psychological grounds. Motivation to change depended on realisation that belief structures were inadequate. To reveal this, it was necessary to look at reasons rather than causes (e.g., the reason for a lack of interest in a discussion may have nothing to do with the subject of the discussion – it may be, e.g., other worries or even just day-dreams). Following an interpretation of Piaget, Kitchener claimed that meaning was due to the individual but was found inherent in the material that was perceived (and Socratic discussion was a way of revealing the reasons for inadequacy of belief).

The analogy of the conceptual ecology provides a framework for understanding how scenarios contribute to organisational learning. Van der Heijden (1996) described scenarios as devices for perception. Scenarios are determined by the schemata and concepts of individuals, which are expanded by considering more than one possibility for the future. As has been discussed (*cf. 2.11.5.4 Learning*), the scenarios provide “memories of the future” where possible events are played out in the mind, which creates a surrogate experience, a rehearsal that can provide insight and sense. Exposure of the conceptual ecology to the concepts of others widens the knowledge base. The scenario planning process aims to provide an experience that creates some commonality of schemata and language, and consequently the embedding of new concepts in the conceptual ecologies of each of the participants and stakeholders.

But the analogy can be extended further. For a new element in the environment to warrant action, it has to be noticed and considered important enough. (For example, awareness of the greenhouse effect and a recognition that something should be done about it has been growing for many years, but is still not universally accepted). Concepts may be embedded in the conceptual ecology without having any effect on

world views or mental models. For the experience of exposure to scenarios to be an instigator for change, the experience must be sufficiently vivid to create a realisation not only that existing concepts are not satisfactory (which may have happened before the scenario planning project and be a reason for the project) but also that there are different and worthwhile ways to explore and plan for the future. This is, of course, why scenarios must have gripping story lines and memorable titles (*cf. 2.11.1 Communicating scenarios*).

It follows that for scenarios to be effective agents for change there must be a resonance between their content and the conceptual ecologies of both the participants and the stakeholders. The difficulty of this is apparent when it is considered that a conceptual ecology is constantly evolving with a myriad of experiences and is also affected by cognitive limitations such as the biases discussed in *2.11.5.3 Barriers to change*. Concepts are not only the subject matter of thought but can also be tools of thought, in that the paradigms or world views contained in the conceptual ecology also determine what questions to ask and what is appropriate to be taken into account in any situation (which can change with time, including during a scenario planning project) (*cf. 2.6 The importance of assumptions*).

The power of the narrative of the scenario must be such that it can alter the conceptual ecology and in so doing affect mental models – and lead to the individual asking different questions. Asking the questions is part of what van der Heijden (1996) called the strategic conversation (*cf. Figure 2.3 The shadow culture*).

2.11.4.9 Change and identity

Both the strategic conversation and scenario planning, which may be considered to be part of it, rely on the experiences and knowledge base of the participants. Van der Heijden et al. (2002) stated that working with scenarios started with the identity and experience of the organisation, with the objective of widening the group perspective. It follows that the seeds of any change emerging from the processes are most likely to be found in the conceptual ecologies of the individuals concerned.

Burt (2003) drew an analogy, based on three case studies, with the biological concept of epigenetic change, from the work of Bateson (1988). Bateson identified two elements of change:

- epigenesis (preferred to its old name embryology) in which change was a rearrangement of existing elements, tautological in the same way as a geometric theorem like that of Pythagoras was already contained in the axioms and postulates of Euclid, and all that was needed to arrive at the theorem was a process of how to unfold the steps to be taken
- evolution and learning, which were ongoing processes that arose from the random, and were the spring for exploration, change and creation.

New notions or concepts must be coherent with what was already known or believed and their genesis would be almost always be an outcome of reshuffling and recombining existing ideas. Conformity with what had gone before was essential to both organisms and cognitive processes. Actions involved some trial and error, i.e., an exploration, even if it was no more than a verification of a past pattern, and consequently exposure to the random and therefore to learning and adaptation, but coherence and adaptation were components of any change. Learning was filtered by the mind and limited to or facilitated by what had previously been learned and by the feasibility of the idea.

Burt (ibid.) concluded that change must be consistent with mental integrity, i.e., with the individual's mental identity, or what had gone before. If transformational change lacked this essential ingredient of continuity, it would be resisted. It was a concept that echoed Schein (1984), who stated that leaders should provide security as a shield against the anxiety of changing old responses. Godet, too, recognised the importance of identity and the need for harmony between the old and the innovative (Godet, 2001). Burt (ibid., p391) posited the use of a transitional object, "a mental construct that establishes continuity between the proposed changed situation and the past." He cited three cases where scenarios were used as transitional objects to identify inadequacies in conceptualisation of organisational goals and strategies, which were then reconceptualised in terms that included or were consistent with existing aspirations.

Abrahamson (2004) proposed a similar idea of continuity in change with his concept of recombination as a basis for change, not only of values, which were seen to have their roots in long-standing cultural norms, but also finding ways to adapt extant processes, structures and talent to change, as an alternative to creative destruction. Thomas (1994), recounting case histories of introducing new technologies, suggested

that world-views and aspirations of operatives needed to be taken into account, with a dedicated effort to communicate across the boundaries of knowledge, status and class of different sub-groups within the organisational structure and culture.

2.11.4.10 Effect axioms

Two main themes have emerged from this section. The first is that acceptance of change requires experiential evidence that the individual sees as so powerful that it creates dissatisfaction with existing mental models. The second is that proposed change must resonate in the conceptual ecology and be consistent with mental identity.

However, while this addresses the questions of seeing a need for change and for establishing a climate or structure in which change may be acceptable, it does not focus on the issue of why people should embrace change. This is a motivational issue which can be partly addressed by the providing of incentives (Peters and Waterman, 1984). But there are more fundamental issues of motivation, which are interdependent with the two issues above, e.g., Mackay's comfort and security (*cf. 2.11.4.1 The power of the cage*) and Strike and Posner's unrelated factors (*cf. 2.11.5.5 The conceptual ecology*). Kanter et al.(1992) recorded that a common early reaction of what they called change recipients was, "What's in it for us?" In this research the issue of benefit – whether directly to the individual or the individual's perception of benefit to the organisation – was interpreted to be wider than mere incentives. Unless operatives perceived potential benefits to be so powerful that they overcame barriers to change, support for the outcomes of the change initiative was at best at the espoused level, and sometime resistance to change was the result.

The section has revealed several axioms that underlie scenario planning:

- *An organisation exists within and is influenced by an external environment. It can be conceived as a part of or as a separate entity within the environment.*
- *Organisations are social structures, constructed by people, whose interaction creates organisational culture and behaviour.*
- *Both an organisation and its environment are in a state of constant change, the course of which appears uncertain, but some of which is predictable.*
- *Human understanding is necessarily restricted, both through the constraints of perspective, affected by experience, customs, culture, and*

through limiting characteristics of the mind, e.g., conceptual deficiencies such as biases and decision avoidance. Therefore no two conceptual ecologies are the same and people within an organisation have different perceptions of both the changing environment and the organisation itself.

- *For change to be embraced, it must fall within the potential understanding of the individuals concerned. As the conceptual ecology is established through experience, the best path to learning and change is also experiential. Adaptation to change requires a progression from espoused theories to theories-in-use, based on retention of identity and coherence with past experience, rather than discontinuity.*
- *An organisational viewpoint is a collective phenomenon, neither the same as that of any individual nor a sum of individuals' knowledge. When considered from this perspective, an organisation can be seen to consist of its members but at the same time exist independently of any of its individual members.*
- *Organisational change is more difficult than individual change, since the adaptive process involves the collective organisational experience, or culture, as well as each of the individuals.*
- *An effective instrument for the instigation of change should be adapted to and augment the experience of the participants and powerfully communicate the need for and effects of change.*

In the next section, all the assumptions that have been identified are brought together and then modelled using the Decision Explorer cognitive mapping and analysis software package to show the relationships between them.

2.12 Summary of the axioms of scenario planning

The assumptions that have been identified are:

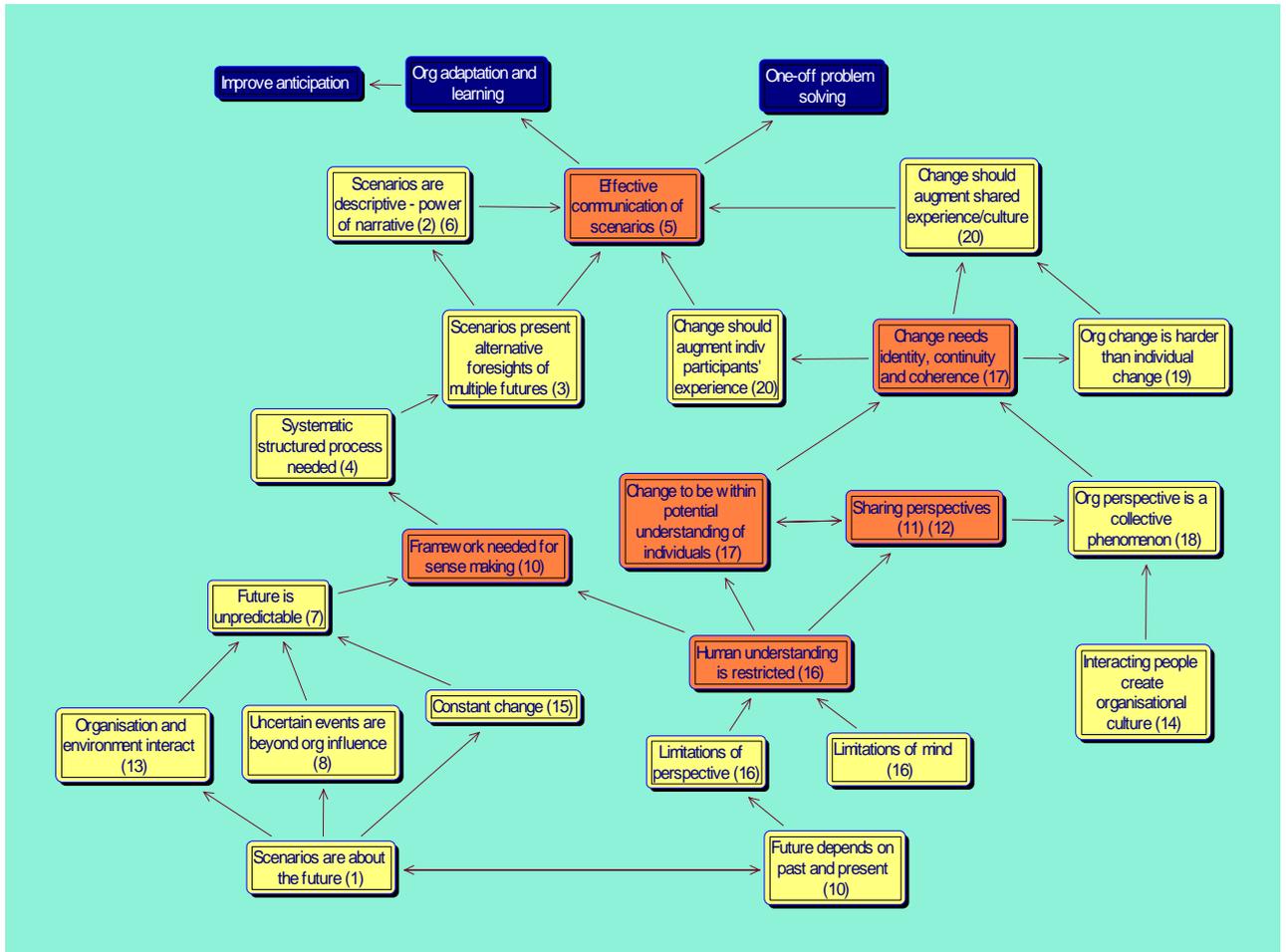
1. Scenarios are about the future.
2. Scenarios are descriptive.
3. Scenarios present alternative foresights (multiple futures).
4. A systematic structured process is needed to develop scenarios.
5. For ongoing organisational adaptation or learning to occur, effective communication of the scenarios is essential.

6. Narrative is the most effective way of communicating the outcomes of the scenario development process.
7. Many future events are unpredictable, and so the future is to a considerable degree unpredictable.
8. The events that appear most uncertain to an organisation are those beyond its influence.
9. A framework is needed for people to make sense of the uncertainty and complexity of the multiplicity of possible future events and situations.
10. Future events and circumstances depend on trends and forces that can be discerned in the present.
11. A process for sharing of perspectives and viewpoints can assist in identifying the assumptions that underlie present attitudes and trends.
12. Through expanding knowledge of the past and present by sharing of perspectives, it is possible to improve anticipation and reduce the unknowability of the future and the area of future unknowns.
13. An organisation exists within and is influenced by an external environment. It can be conceived as a part of or as a separate entity within the environment.
14. Organisations are social structures, constructed by people, whose interaction creates organisational culture and behaviour.
15. Both an organisation and its environment are in a state of constant change, the course of which appears uncertain, but some of which is predictable.
16. Human understanding is necessarily restricted, both through the constraints of perspective, affected by experience, customs and culture, and through limiting characteristics of the mind, e.g., cognitive deficiencies such as biases and decision avoidance. Therefore no two cognitive ecologies are the same and people within an organisation have different perceptions of both the changing environment and the organisation itself.
17. For change to be embraced, it must fall within the potential understanding of the individuals concerned. As the conceptual ecology is established through experience, the best path to learning and change is also experiential. Adaptation to change requires a progression from espoused theories to theories-in-use, based on retention of identity and coherence with past experience, rather than discontinuity.

18. An organisational viewpoint is a collective phenomenon, neither the same as that of any individual nor a sum of individuals' knowledge. When considered from this perspective, an organisation can be seen to consist of its members but at the same time exist independently of any of its individual members.
19. Organisational change is more difficult than individual change, since the adaptive process involves the collective organisational experience, or culture, as well as each of the individuals.
20. An effective instrument for the instigation of change should be adapted to and augment the experience of the participants and powerfully communicate the need for and effects of change.

An examination of the list reveals hierarchies of axioms, at the foundation of which are basic building blocks. The Decision Explorer model in *Figure 2.8* shows the relationships between the assumptions. Bracketed numbers refer to the numbers in the list of axioms above.

Figure 2.8 The axioms of scenario planning



At the top of the structure are the assumed outcomes of scenario planning, that it can improve anticipation and one-off decision-making, which are essentially the purposes identified by van der Heijden (*cf. 2.9 What is scenario planning?*).

Beneath this, the axioms are built into a hierarchy that shows the flow of theoretical ideas from the basic building blocks to the outcomes.

For example, in the bottom area of the model is the building block axiom that scenarios are about the future. Axioms about the future are that there is interaction between the organisation and the environment that it is part of, and that both are in a state of constant change, and that uncertain events are beyond the influence of the organisation. As a consequence of this, the future is unpredictable. This leads to a need for a framework to make sense of the future, which requires a systematic structured process. Scenarios provide this through presenting a limited number of alternative foresights of multiple futures. For them to be effective, they must be

communicated well, which is achieved through the power of narrative. Effective communication of the scenarios (whether to participants only or to a wider group) is necessary to achieve the outcomes.

The second building block axiom, which is, in turn, dependant on the first, is that the future depends on the past and the present. Discerning these trends is restricted by the limitations of human minds and bounded perspectives. The restrictions of human understanding lead not only to a need for a framework for sense-making (see previous paragraph) but also to a requirement that proposed change be within the potential understanding of the individuals involved and that perspectives be shared to identify assumptions and expand knowledge. Sharing perspectives is a basis for the development of a collective organisational perspective. For change to be understood and to become part of the organisational perspective or culture, identity, coherence and continuity are needed. For this to be achieved, the change should augment the experience of individual participants and operatives, and this is harder for an organisation than an individual. Accordingly, change should augment the shared organisational experience as well. This needs effective communication of the scenarios for both individual and organisational experience to be built on (the alternative is resistance to change).

There is also a building block axiom that organisations consist of interacting people who create organisational culture, which is different to that of any individual and is therefore a collective phenomenon (see previous paragraph for the remainder of this hierarchy).

The model can be seen to divide into two areas, which indicates that there are two fundamental concepts to scenario planning theory: on the left hand side, it is a framework for understanding the uncertainty of the future and on the right hand side it is a method for exploring the conceptual ecology of individuals. The first is situated largely (but not exclusively) in the world external to the individuals in the organisation and is concerned with ways of understanding that world; the second is internal to individuals and organisations and how they understand. This is shown more clearly by simplifying the model (*cf. Figure 2.9*).

A central analysis in the Decision Explorer analysis system used is a way of providing an indication of which concepts are the key issues in a model. Here this

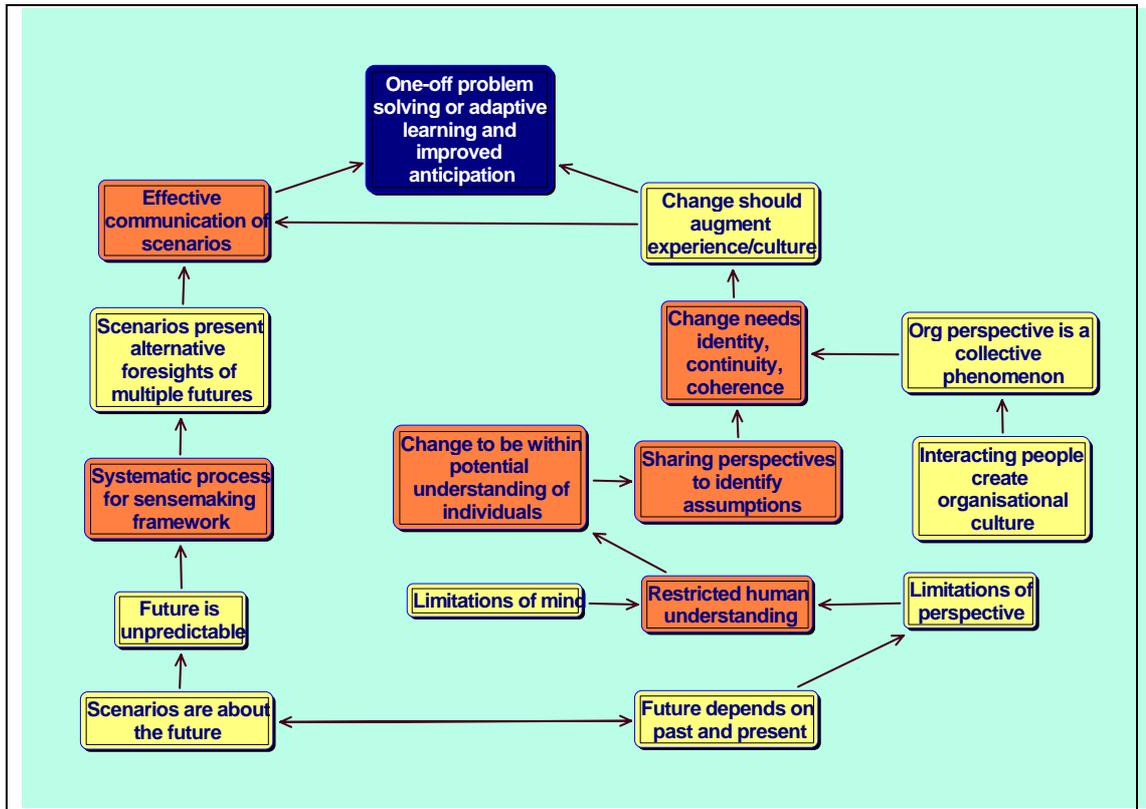
has revealed that the concepts most central to the model are restricted human understanding and the need for identity continuity. Other key concepts, but less central are: the need for a framework for sense making and coherence; the axioms about change to be within the potential understanding of individuals; the need to share perspectives to identify assumptions; and the effective communication of scenarios.

Each of these key concepts is either on the right hand side of the diagram or is a result of consequence of a right hand factor, which indicates that it is the conceptual ecology that is the central aspect of scenario planning theory. This is resonant of Pierre Wack's thesis that scenario planning is more about mind-sets than the future (Wack, 1985b).

It is this concept and its relationship with the future uncertainty issue that forms the starting point of the next chapter on a theoretical perspective for scenario planning.

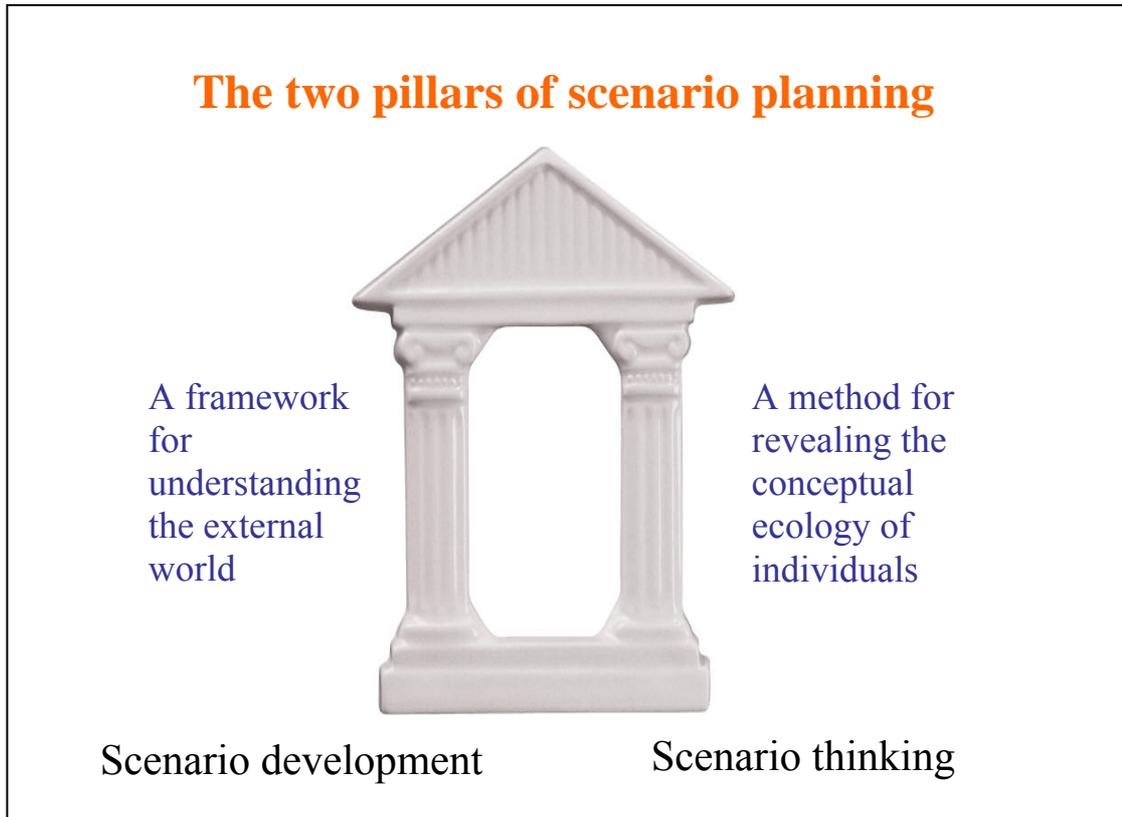
Figure 2.9 is a simplified form of *Figure 2.8*. Axioms that are causes of future unpredictability have been removed, and several other axioms have been combined to produce a simpler model. This form of the model shows more clearly the delineation between the right and left hand sides of the model, the internal and external aspects of scenario planning theory.

Figure 2.9 The axioms of scenario planning – simplified version



The two aspects may be thought of as the two pillars of scenario planning theory: a framework for understanding an uncertain future (the external focus) and a method for revealing the conceptual ecology of individuals in the organisation (the internal aspect), with a view to instigating and adapting to change. This is depicted in *Figure 2.10 The two pillars of scenario planning theory*.

Figure 2.10 The two pillars of scenario planning theory

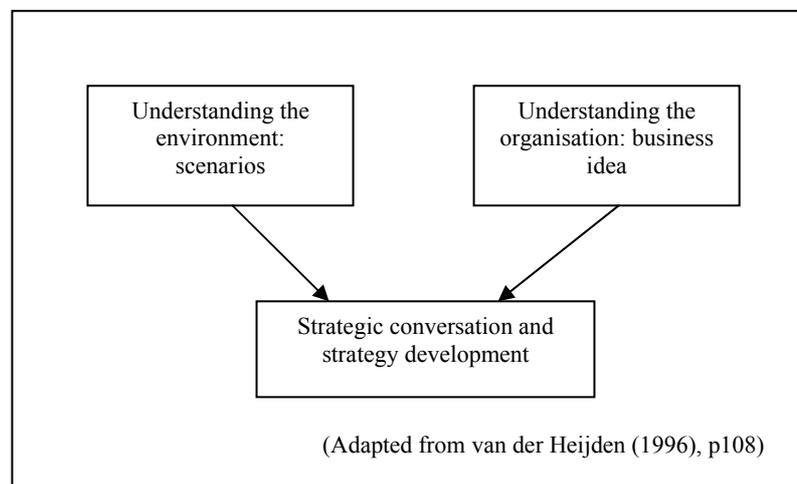


(Source: Author's presentation to Master of Futures Studies course 2004)

2.13 Where scenarios fit

As has been discussed (*cf.* 2.9 *What is scenario planning?*), scenario planning is considered by some to be a misnomer and scenario development is only a part of a planning and organisational change process. For van der Heijden (1996), scenarios are one leg of the input to the strategic conversation, which is a strategic thinking and strategy development process. Scenarios are used for understanding the environment the organisation operates in. The other leg of the input is understanding the institution itself, for which its business idea needs to be articulated. This is shown in *Figure 2.11*.

Figure 2.11 Where scenarios fit



The business idea is an organisation's strategic identity (van der Heijden, 1997). To have a clear appreciation of the business idea, it is necessary to have an explicit understanding of what it is that makes the organisation distinctive, what its distinguishing competencies and market are and what resources and knowledge it has for operating, maintaining and renewing its distinctive edge.

Then the business idea must be evaluated for its ability to deal with the environment in which it must operate in the future. For this, scenarios are developed.

But it is once the scenarios are developed that the biggest challenge comes. Armed with new insights about the organisational environment, scenario workshop participants are then left with the question, "So what?" Failure to examine the implications of the scenarios and/or draw conclusions for planning and change can

result in exasperation at the apparent lack of usefulness of scenario planning (van der Heijden, 1997).

There is, however, no recipe for answering the “So what?” question. Perhaps this is only to be expected from a process that has as its basis multiplicity and plurality. For example, the SPARU process, based on the method outlined by van der Heijden (1996), as used by the Water Corporation, ends with a workshop designed to identify competencies, opportunities, threats, options, strategies and action plans (SPARU, 2002). This step brings together the business idea and the scenarios but is limited to providing an understanding of the implications of the scenarios and what they might mean for the organisation. Specific planning and change initiatives are not addressed.

The question is, where does a scenario planning project end? For Wilson (1998b), scenario methodology was an ongoing process that became part of the planning cycle. However, if, as has been suggested in this review, the primary functions of scenarios are to provide a framework for decision-making and a vehicle for organisational learning, it is appropriate that development of strategy, policy and the relationships needed for a productive strategic conversation be left to the organisation itself. If the scenarios have provided an adequate framework for this, the success of the scenario planning project then becomes a question of whether the people in the organisation have developed the knowledge and capability for effective decision-making and strategy. Action is their responsibility.

This provides scenario planners with an acceptance – and a marketing – problem. Clients should have a realistic expectation of what the process can provide. But it can require a leap of faith for managers used to planning procedures that provide firm outcomes or recommendations to embrace a process that promises only a framework for making decisions and perhaps a different way of thinking. How do they evaluate its outcomes?

2.14 Evaluation of scenario planning projects

For scenario planning to be successful, it must be purposeful (van der Heijden et al., 2002). So for a scenario planning project to be evaluated, it is necessary to know what its aims were.

The little that has been written on evaluation of scenario planning projects concentrates on two levels: evaluation of how strategy options emerge from the scenario analysis, and evaluation of the effect of scenario planning on organisational change process and/or strategy outcomes. The former is a matter of how the scenario planning process should work, which is important for learning, in that deficient process can produce inadequate outcomes. For example, Goodwin & Wright (2001) were concerned that an unstructured decision process when contemplating strategic options from the scenarios could lead to groupthink and insufficient consideration of alternative actions. However, as has been seen, there is a multiplicity of scenario planning methods and evaluation of them is beyond the scope of the thesis.

Phelps et al. (2001) considered the effect of scenario planning on organisational performance. In an analysis of the effects of scenario planning in two UK businesses, in the water industry and the IT industry respectively, they concluded that scenario planning increased financial performance, but may have decreased or had little effect on customer service. However, as the authors noted, the sample size was small and the correlations were not strong. And, more importantly, other potential causes affecting changes were not taken into account.

It is questionable, if scenarios are about establishing frameworks and learning, whether quantitative measures can be applicable to scenario planning processes. Chermack (2003) set out a conceptual methodology for evaluating scenario planning, using economic measures and unspecified ways of assessing psychological and system foundation effects. However this appears to founder on the same complications as the Phelps et al. study – the difficulty of quantitatively measuring qualitative changes and the impossibility of isolating the effect of scenario planning from all the factors bearing on an organisation's performance. A theoretical framework for scenario planning, as understood, needs to take account of the

complexity of organisational culture and change. Scenario planning is only part of the organisational change process and it is not possible to separately quantify its effects. It is not possible, for example, to conduct two identical change processes, one as a control and the other including scenarios, and compare the effects.

Opinions on the effect of scenario planning on performance vary. For example, in an interview in 1995, Betty Sue Flowers, who wrote and edited Shell's 1992 and 1995 scenarios, was asked whether she had any concrete information on what differences the scenarios stories had made. She responded: "No, no way, they're too big. There's no way any one could do that...you could make a case that these have absolutely no influence at all, because there is no way to show it, and yet they continue doing it." (Davis-Floyd, 1998).

On the other hand, the chief financial officer of Royal Dutch Shell saw scenario planning as a mechanism that was designed to challenge assumptions that had had the effect of improving Shell's strategic response and outcomes in, for example, a Shell/Esso project in the North Sea and the liberalisation of the British gas market (Ivey, 2002). Hadfield (1991) saw the technique at Shell as a genesis for ideas, a wind tunnel for potential crises and a communication and participation instrument for a widespread company.

Wack (1985b) identified two tests to evaluate scenarios: What did they leave out, i.e., important events that subsequently happened, and whether they led to action, something that would not have been done otherwise. The first was objective, and, although Wack was primarily interested in driving forces, this passage seemed to indicate some lingering desire to predict. An example was discussed by Elkington & Trisgolio (1996) who concluded from the controversy that stung Shell over its plans to sink the Brent Spar oil platform in 1995 that the company had been surprised because its scenarios had missed a major shift in societal values. The second, whether scenarios lead to action, must be a subjective evaluation, because of the difficulty discussed above of isolating scenario planning from other factors.

Schoemaker (1993), recognising that the scenario method was cross-disciplinary and courted "contradiction and paradox", selected several psychological aspects of the scenario method that were considered to be analysable. In experiments in a class of MBA students he found scenarios produced a reduction in confidence, anchoring and

availability biases, although conjunction fallacies and correlation inconsistencies were apparent in some of the scenarios, and this may have contributed to the bias reduction. The work demonstrated an effect on human limitations, but not on how mental models were affected.

For Jungerman & Thuring (1987), use of the scenario method involved “disciplined intuition”, a type of knowledge for which there was no scientifically justified control technique. As a result, the output of the method, the scenarios, could not be evaluated easily for soundness, comprehensiveness or originality.

Harries (2003) distinguished real world and theoretical types of evaluation for the outcomes of scenario-based decision-making. Case studies, one of two real world types, tended to be of companies that conceptualised unlikely situations and attributed this ability to scenario planning. There was no way to validate these reports and unsuccessful stories were rare. Wider empirical studies, the other real world type, were inadequate because of the number of factors that were not taken into account. As well, both approaches lacked systematic verification because methods and processes of scenario planning differed. Theoretical evaluations were problematical because necessary and sufficient conditions were difficult to establish in an evolving process. Harries concluded that, as reference goals were difficult to establish, the way to success was to have a multitude of goals for scenario planning – one of them was likely to be met and if not a goal which was satisfied would emerge from the process. This was at odds with van der Hiejden’s insistence that scenario planning projects need a defined purpose and would seem unlikely to find much favour with commercial organisations.

Harries’ argument suffered from an assumption that scenario planning processes and purposes needed to be generalised. Although scenario planning projects must have a structure, neither the process nor the evaluation of their effectiveness need be standardised. Because of the qualitative nature of scenario planning, it seems that any evaluation is destined to be subjective and interpretive. Hodgkinson & Wright (2002, p966), in their analysis of a failed scenario project, pointed out that there was little evidence, other than anecdotal, for the efficacy of scenario planning. “Our interpretation is necessarily subjective, i.e., based on our personal, in-depth knowledge...”

As has been discussed, van der Heijden argues that scenario planning must be purposeful. The Harries argument that any goal will do provides no measure of success. This literature review has identified two broad goals of scenario planning. Within in these, each project will have its own expectations of outcomes. These may or may not be specific.

For example, Alcoa of Australia had a clearly defined problem: what to do with waste timber material from areas that had been clear-felled for bauxite mining? After all usable material had been taken out, the company had been burning the rest, but the resulting atmospheric haze and the contribution to greenhouse gases were causing increasing concern. The answer (utilise the material for power generation) emerged from a SPARU scenario planning project (Williams, 2000).

By contrast, HBF, which had begun as a health insurer and subsequently diversified, had a much more general aim: to help the membership organisation prepare for the future, it wanted a picture of what Western Australia would be like in ten years' time. Scenario planning was one of the methods it used and the SPARU process provided it with a framework to develop its own future. Its success was attributed at least in part to the structured nature of the process (Smith, 2000).

In terms of their own particular goals, the writers of these papers felt the scenario planning process had been successful. However, this is the sort of anecdotal evidence that carries so little weight with critics. While success can be judged in terms of goals particular to the organisation rather than with reference to broader benchmarks, a structured transparent process of evaluation will be of use in explaining the efficacy of the process to other stakeholders and interested parties. That is what the methodology in this thesis provides, for the particular case under study, and with sufficient transparency to enable it to be transferable where appropriate to other situations.

2.15 Implementation

Although the literature review deals with theory rather than practice, implementation of a scenario-based change initiative is an issue that emerged from the data analysis for this research. As has been noted, there is little in the literature about specific scenario planning projects that have been less than successful, but some cases have been recorded.

Petersen (2001) documented the failure of a scenario planning project to alter the mental models of decision-makers. Executives, faced with a burgeoning company crisis, were unable to break with past experience and models, constrained by what Petersen called “layers of techno-armour”. Petersen concluded that a one-time scenario planning activity was insufficient to change deep-set mental models and that it needed to be implemented and accepted as a normal part of the management process (see also van der Heijden (1996)).

Hodgkinson & Wright (2002) analysed a scenario planning project that did not achieve its objectives and discussed how defence avoidance strategies (*cf.* 2.11.4.6 *Barriers to change*) could impair the process. The authors concluded that, because participants were unable to devise robust strategies for any of the scenarios, stress levels rose to unacceptable levels with the result that psychological defences overwhelmed some participants and the process was sabotaged.

However, although few unsuccessful cases have been documented, there is sufficient advice on blocks to implementation to demonstrate that practitioners have had experience with failure. For example, Schoemaker (1998) listed 20 common pitfalls in the scenario building phase that preceded strategy design and Schriefer (1995) listed five. Wilson (n.d.) identified a predisposition towards single point forecasting and a cultural bias to equate managerial competence with knowing as a barrier to scenario planning because the process challenged those mental models, and suggested a step-by-step approach to changing attitudes so that scenario planning itself could be accepted.

The dearth of information on unsuccessful scenario planning hinders the development of scenario planning as a methodology. By looking at failures, deficiencies can be highlighted and guidelines for success drafted that are based on

empirical evidence rather than theory. Although there is plenty of literature providing broad guidelines on how to implement strategy or change based on scenarios, what is not clear from these is which parts work – or do not work – under what circumstances. This thesis provides a contribution to increasing understanding of the method, grounded empirically.

The next chapter situates the axioms and the model that have been identified here as the basis of scenario planning theory in a philosophical theoretical perspective.

3 Theoretical perspective: A world view for scenario planning

In the review of scenario planning theory in the previous chapter, the axioms of scenario planning were identified and two concepts fundamental to the theory of scenario planning emerged. These were scenario planning as an exploration of the cognitive ecology, and as a framework for understanding an uncertain future.

This chapter seeks to ascertain a world view that assists in the understanding both of the assumptions of the theoretical model and of the findings of the research¹.

“World view” is understood in the German sense of *weltanschauung*, translated as the overall perspective and collection of beliefs from which one sees and interprets the world.

3.1 Ontological and epistemological considerations

Ontology is one of the three subdivisions of metaphysics (the others are cosmology and psychology). Its subject matter is the nature of being or what kind of things actually exist (Harrison-Barbet, 2001). It is also used as a synonym for a systematic account of existence (“an ontology”) (Howe, 2001). In this thesis, the term “ontology” used without an article indicates the former meaning. In the context of the latter meaning, the term is used with an article, e.g., “an ontology” or “this ontology”.

The distinction between ontological matters and epistemological issues is an important one, and one which can be difficult to keep apart conceptually (Crotty, 1998). Some theorists, like Guba and Lincoln (1998), suggest that one’s ontological view determines one’s epistemological stance, as part of a set of basic beliefs. But it is not sufficient to be acquainted with an ontology to know its accompanying epistemology. For example, an ontology based on realism is compatible with not just an objectivist epistemology, as posited by Guba and Lincoln (1998), but also a constructionist one (Crotty, 1998). So discussion of a world-view must cover both ontological and epistemological considerations.

One of the major ontological questions that philosophers have wrestled with in the last approximately 400 years has been the debate between realism, the notion that

¹ A paper entitled *Critical Realism: Towards A Theoretical Perspective For Scenario Planning* based on material from this chapter was published in the proceedings of the 2002 Work In Progress Conference at the Curtin University of Technology Graduate School Of Business, Perth, Western Australia (Nicol, 2002).

reality exists outside the mind (Crotty, 1998) and idealism, “the doctrine that whatever exists, or at any rate whatever can be known to exist, must be in some sense mental” (Russell, 1912).

In the physical sciences, realism has traditionally been an axiom. Because it is taken for granted, physical scientists can progress with their research into the nature of reality without the need to start from first principles (Kuhn, 1962). In the social sciences – which are taken here to include research into organisational change – there is no such broad agreement on a paradigm. At the outset of many social science research reports, space is given to the epistemological and/or ontological assumptions that lie behind the study (Cassell and Symon, 1994), because it is these assumptions that inform the structure and techniques used in the study. They also directly influence the way the research is evaluated, because the outcomes of the research will reflect the assumptions and world-view that underlie the methodology. It is therefore advantageous if the same world view that informs scenario planning is used as the basis for research into it.

Patton (1990) preferred a pragmatic approach to research that ignored issues of theoretical perspective. He was concerned that what he called “paradigmatic blinders” and routine ways of thinking locked researchers into “unconscious patterns of perception and behaviour,” resulting in biased and predetermined courses of action (ibid., p38). Rather than basing methodology on ontological and epistemological frameworks, he preferred methodological appropriateness as the criterion of choice, choosing the method to suit the situation.

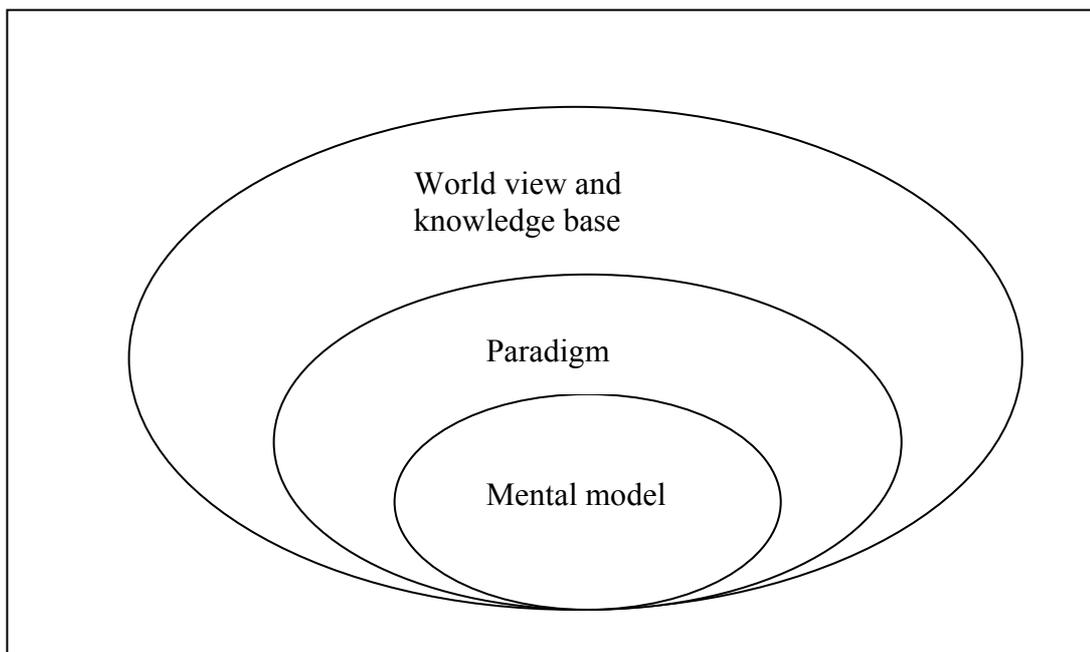
However, while this may be an acceptable approach to choice of methodology, one cannot avoid the theoretical perspective issue this simply. Whatever methodological paths are taken, there will be assumptions that arise from and are embedded in the researcher’s world view. As Cassell and Symon (1994) have pointed out, these assumptions affect what and how techniques are used and how the data are interpreted. The importance of identifying the assumptions that form the basis of a framework of understanding was discussed in *2.6 The importance of assumptions*.

The task addressed in this chapter is to set out a theoretical perspective that aids the understanding of scenario planning. To do this a world view is needed that is compatible with the axioms and theoretical model discussed in the previous chapter

and reveals the fundamental beliefs about the nature of being and how we know it that underlie the axioms, i.e., the ontology and epistemology that inform scenario planning. Lincoln and Guba (1985) have explained that these basic beliefs can never be proven. They are the most fundamental assumptions against which everything else is tested. A set of such basic ideas or beliefs about the nature of reality is called a paradigm. The test of the value of a paradigm is whether it fits the situation and helps or improves understanding. There can be a number of paradigms in a world view. Mental models, which may be thought of as mental maps based on schemata, are informed by paradigms (*cf. 2.11.5 Changing mental models*).

For the purposes of this research, the three concepts in the previous paragraph may be thought of as holons. Mental models sit within paradigms, which are part of a world view. *Figure 3.1* demonstrates the researcher's perspective of the way they are nested.

Figure 3.1 World view perspective



The world-views of protagonists in the paradigm wars of the second half of the 20th century were considered for this research for the purposes of understanding scenario planning, and found to be inadequate on ontological grounds. It is not proposed to enter into a long debate on the merits of either framework, but simply to summarise the objections as relevant to their fit for scenario planning.

Ackroyd and Fleetwood (2000) identified a critical weakness in the realist idea of positivism, which was that it posited the existence of constant conjunctions of events or laws in the social environment. If this were the case, there would be no need for narratives about multiple possible futures, and forecasting would be redundant as it would be usurped by prediction with the discovery of fixed causal laws governing relationships. In other words, positivism denied one of the fundamental assumptions of scenario planning, which was the uncertainty arising from different potential futures. For scenario planners, this plainly will not do.

However, the constructivist paradigm based on idealism posits a reality that is either constructed or created (Lincoln and Guba, 1985). There are either multiple realities or no reality at all, the latter being akin to the classical idealist philosophy. For scenario planners, the idea of the theoretical perspective that allows multiple constructed realities can look superficially attractive. After all, isn't that what scenarios are?

But this will not do either. Constructivists are victims of the epistemic fallacy, in which ontological statements are interpreted as epistemological ones (Archer, 1998, Collier, 1994). The fallacious reasoning leaps from a realisation that our knowledge of reality is incomplete or may be false to the conclusion that, because nothing can be known with certainty, external reality either does not exist or is merely a construction of our minds. This is like standing on top of an overhanging cliff and saying that because one cannot see the bottom, it either does not exist or it can be wherever you think it should be. A jump over the side will, of course, soon demonstrate a more solid reality.

For Bhaskar, on whose work critical realism is founded, this did not deny the existence of socially constructed reality, which was all around us (Bhaskar, 2000). However, although social reality is constructed, it is not merely socially constructed, but exists independently of each of us. Ackroyd and Fleetwood (2000) argued that it was dependent on concepts, but not determined by concepts. For example, social relations can be easily recognisable by people who have no prior knowledge of them. Scenarios are an example of a socially constructed reality. However, although they are narratives of potential futures, they need not be perceived as multiple realities. They are just a (single) group of stories, built from extant tacit knowledge and based on driving forces and trends that are perceived in the organisational environment.

They are constructed using real external world phenomena, as perceived by the participants, and their effects are assessed using real world criteria. Once constructed, they have an existence independent of the people who created them, as evidenced by the axiom of the need for effective communication of the scenarios to others (see *2.11.1 Communicating scenarios*). They cannot be reconstructed (and still be the same thing), although they may be altered.

On this view the notion of reality as constructs, as posited in constructivism – or its more social relation, social constructionism – may be seen as a necessary but certainly not a sufficient condition for scenarios. It seems something more than mere construction is needed in an ontology for scenario planning.

3.2 Critical realism

Futurists, of which scenario planners are a subset, generally subscribe to a critical realist outlook on the world (Bell, 1997, van der Heijden, 2000).

Realism is a theory, not of knowledge or truth, but of the nature of being. As such it has an ontological rather than an epistemological status (Bhaskar, 1989). In the philosophy of science, Bhaskar argued that the objects of our knowledge and of our experiments could only be intelligible if they existed and acted independently of the patterns of events they generated. Further, this was applicable to both the physical and social sciences.

Causal laws must be analysed as tendencies or mechanisms, only empirically invariant under relatively closed conditions. Tendencies may be exercised or not and may be realised perceived or not by people (Partington, 2000). The concept is essentially relational – whether a tendency is realised depends on the relationship or interplay between things (Collier, 1994).

The concept of tendencies is better understood with a comprehension of Bhaskar's notion of transcendental realism. This appears to be in direct contrast to Kant's influential theory that people have no insight into the transcendent, and can only know things in forms as they appear to them, not the properties of the things themselves (Tarnas, 1991). The influence of the Kantian concept of transcendental idealism can be seen in the development of phenomenology and in post-modern constructivism, particularly in the denial of a real world because it cannot be known.

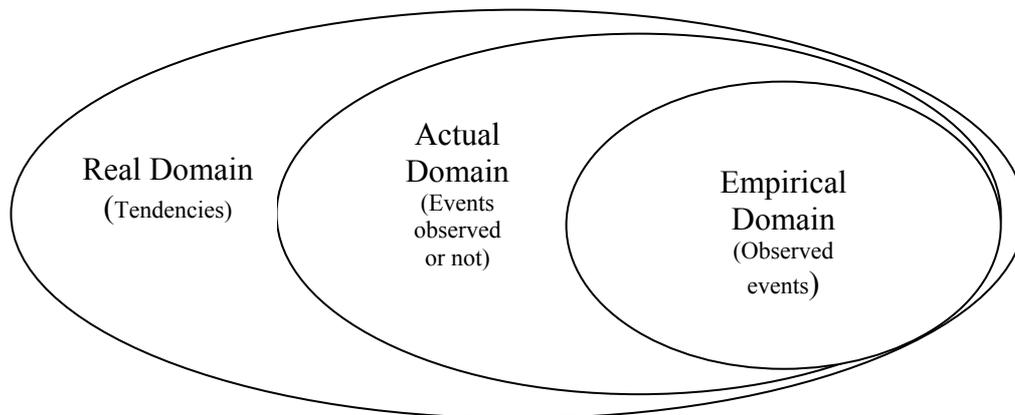
Transcendental realism, by contrast, admits of a domain of reality that, while it cannot be known directly or empirically, can be known through relationships, such as cause and effect. The comparatively new concepts of string theory in subatomic physics are an example of this, as are aspects of microbiology and astronomy/cosmology – direct empirical evidence is impossible but through examination of the relationships, science can penetrate beyond the empirical to the unseen and the theory can be inferred (Collier, 1994).

For Bhaskar, causal laws and forms of reality, although invisible, are real and part of the natural structure of things. The laws are seen as active or as potential, and there can be multiple tendencies, the exercise of which depends on conditions: tendencies may result in an action or may lie dormant. A tomato seed has a tendency to grow into a tomato in the right conditions. A car in the garage has the potential to carry people, or act as a shopping carrier, or even be an instigator of anger, if, e.g., it breaks down. The law against theft may result in punishment for an individual *if* he or she steals (and gets caught). There are echoes here of the Aristotelian theory of physics that objects can simultaneously have both actuality and potentiality, for example, a seed has the actuality of a seed, but the potentiality of becoming a plant (or perhaps food for a bird), the plant has the potentiality of flower, the flower has the potentiality of a seed, and so on (Russell, 1945). The tendencies are seen as relationships, independent of space and time, unlike traditional physical causal laws that are time and space dependent.

A tendency that is actualised may have causal autonomy, i.e., it is not reducible to its original cause, e.g., a tomato is not reducible to tomato seed plus soil plus water. In actualisation, it is said to have emergent properties (Bhaskar, 1986).

The critical realist ontology incorporates three overlapping levels or domains, as shown in *Figure 3.2*. In the empirical domain are experiences or observed events. In the actual domain are events, both observed and unobserved. In the real domain are, as well as the events, the underlying tendencies or mechanisms, which include the laws of nature.

Figure 3.2 Critical realist ontology



Adapted from Partington (2000)

In closed systems such as scientific experiments, general laws or tendencies can be identified that operate within limits or boundaries, which is what allows science to produce predictive theories. Limits or boundaries may be spatial, geographical, dimensional, or a host of other properties, and are frequently epistemological.

Unlike the closed boundaries that delimit scientific generalisation, social structures are open to extraneous influences, so that cause/effect relationships are multiple, complex, interdependent and often indeterminate.

As in the natural or physical world, society is an ensemble of tendencies and powers, but unlike natural ones, they lack some properties of space-time invariance (Bhaskar, 1989). Bhaskar called the relatively enduring physical world intransitive. By contrast, the transitive social world may be comparatively non-permanent, with its tendencies existing only as long as they were being exercised, and therefore dependent on the intentional activity of people.

Social structures do not exist independently of the agents' conceptions of what they are doing or of the activities they govern (Bhaskar, 2000, Outhwaite, 1998). Society would not exist without the activity of the people in it. This is similar to Giddens' structuration theory, but Archer (1995) pointed out there is a difference: Bhaskar (ibid.) said that people did not create society, because the society they lived in was already made; it was more accurate to say they were constrained by it and transformed or reproduced it. The concept of the relationship between agency and society was extended to include people's past experience.

Further, although society would not exist without the individuals that constitute its participants, there was more to society than the sum of the concepts of the individuals in it, just as an army was something different than the sum of its soldiers. Bhaskar sought for an explanation of society in terms of the relationships between people and the phenomenon of intentionality that characterises human action (Bhaskar, 1989). Thus, he explained that, for example, the reason that the city council called for the collection of garbage was not necessarily the same as the motives of the garbage collector (ibid.). And the motives of the garbage collector (e.g., to earn money) could have other outcomes (e.g. another job). There were multiple causes, or tendencies, that resulted in the emergent phenomenon of rubbish collection, and some could have had alternative outcomes. The social structure was not identical to and existed before and continued after the participation of individuals in it, even though it was continuously changing and may be affected by the action of any individual in it. Society was a complex totality subject to transformation both in its components and their interrelations (ibid.). Although it cannot exist without its individuals, it can usually exist without any single or group of individuals, albeit sometimes in a transformed state. Porter (2000) has stated that social structures can only be identified through their effects.

A consequence of this is that, because people are seen as causal agents, they are conscious participants capable of altering society (Manicas, 1998).

3.3 Epistemological implications

The critical realism ontology has epistemological implications that are important for the scenario planner.

Perhaps the most important is that meaning is to be found in the relationships in the real world, and is not something merely constructed. By exploring the real world, people gain understanding of it.

However, to understand this in critical realist terms, the notion of perspective needs to be introduced. Each person apprehends reality from a different point of view. To illustrate this, Bertrand Russell used an example of a table covered by a table cloth. If the table is completely covered by the table cloth we receive no sense data from it. How, then, do we know it is there or what it is? (Russell, 1912). People sitting round the table all see things from slightly different points of view, and so see something

slightly different. Russell's concern was to identify the universal aspects that enabled individuals to agree that an object was a table. However, for the critical realist, the properties that result in the identification of the table are emergent – and different aspects may be recognised by different people with different experiences in society.

This, however, seems to reify the problem: emergence needs an interpretative agent. For a framework for understanding this, it is helpful to turn to the hermeneutics of Gadamer. For Gadamer, understanding was obtained through language, in its broadest sense of expression, including both its descriptive and evocative aspects. Grondin (2002) described the three aspects of this concept of understanding: *verstehen*, a cognitive concept, best described as “I get it!” (or Wack's “aha” *cf.* 2.11.4.7 *Learning*); Heidegger's notion of practical know-how, ability or capacity; and a comprehension of subject matter that encompassed both the capacity of the receiver of information to understand and the intention of who said it. The emphasis was on what was said, not who said it. The metaphor of the hermeneutic circle of the whole and the parts called for a constant revision of tentative knowledge and propositions.

Gadamer (1989) emphasised the importance of what he called prejudices (*vorurteil*), or people's past experience and tradition, in determining understanding. People drew on their experience and traditions to fill in gaps to round out their perception of an object at hand. Through this historically effected consciousness, science could penetrate beyond the empirical to the unseen, such as sub-atomic physics, microbiology and aspects of astronomy/cosmology, an idea that resonated with critical realism.

There was a relationship between a person and what he or she was trying to understand. What was understood from, e.g., a text, would not be the same as what was intended to be conveyed, because it would be comprehended from the perspective of the reader/listener. Because of this, views of the world were subjective, but by communicating people shared the horizons of their perceptions and broadened their knowledge (Gadamer, 1989). Further, knowledge and understanding were in a continual state of flux, as communication altered understanding and consequently perspective.

Madison (2001) concluded that, for Gadamer, understanding was an interpretive process and truth and meaning were essentially relative, a shared understanding arrived at by exchange of opinions. Knowledge is therefore seen to be tentative, but adaptive (Fettes, 1999). What is held to be true may be negated by new evidence in the future. Each person's perceptions are limited by space, time and experience, and it becomes a nonsense for any individual or group to aspire to seek some sort of unbounded universal or total truth. The best we can do is broadening of our perspective by sharing.

This is a short selection of ideas from Gadamer's hermeneutics, and, as far it goes, it is compatible with a critical realist ontology, because it is the understanding of meaning that is relativist, not the concept of reality. It provides an epistemological framework and, provided this is sufficient for the understanding of scenario planning, there is little purpose or relevance in delving further into the philosophical literature. The framework is discussed in *3.5 Critical realism and scenario planning*.

3.4 Limits of knowledge

Because social systems are only manifested in open conditions, they cannot be the subject of predictive theories. Therefore theories in the social sciences must be explanatory, and will be confirmed or rejected on that basis. A theory may be developed in a non-ad hoc way to situate and explain a possibility, once, or even before, it is realised, but it can never predict it. However, the value of what we know may be the same - our subjective confidence in explanatory criteria, if there are independently validated claims, is just as warranted as the theories of natural science (Bhaskar, 1989). Social science theory can be tested empirically, but only with reference to its explanatory power, not as a prediction. This requires a modification of Popper's (1968) concept of falsifiability, by which theoretical constructs are subject to empirical examination and testing and potential refutation (Collier, 1994).

In both social and natural sciences, knowledge, or what we hold to be true, is always bounded. As the boundaries of experimentation and theory have been extended, physical laws that were thought to operate universally have been found to have limits ("Newton, please forgive me," Einstein is reputed to have said as he developed the theory of relativity that overrode the established concepts of absolutes in time and

space (Stix, 2004)). In social research, knowledge may be limited to the cases studied and comparisons or relationships drawn with other similar research.

Further, in critical realism there is the implication that reality is both being and becoming and objects or processes can have apparently contradictory properties. Physical features endure, and yet are also in a constant state of change. Social institutions may be less enduring, and subject to greater flux. Concepts of the properties of stasis or kinesis are a matter of perspective – for example, the solid enduring structures of St Paul’s Cathedral and the mighty Mt Everest are, at a sub-atomic level, seething with change. A consequence of this is that something can be true and false at the same time, depending on one’s perspective. Putting your foot cold into a warm bath will result in a perception that the bath is too hot for you. But someone taking his or her foot out of a warm slipper and putting it into the same bath may feel it is just the right temperature. Both are equally valid, depending on perspective, which in turn is affected by Gadamerian prejudice.

However, although how we understand the world is largely up to us, not all understandings are equally countenanced. Knowledge can be increased by incremental improvements in understanding. One way is by identifying ambiguity in previous views, and showing there is a better alternative. This does not necessarily refute a previously held view, but may complement it (Kirk and Miller, 1986). The negation of something held to be a truth or fact may falsify it, in the Popperian sense, or it may result in a re-drawing of the boundaries around it, or result in a modification of a theory, or the revised idea may simply co-exist with the original (Nicol, 2002).

It is from the notion of an external reality existing independent of our consciousness that the realisation follows that much of what we hold to be true depends on our perspective and our assumptions. With this realisation, knowledge becomes a voyage of discovery and emergence from the world around us rather than merely of the creation of constructs, and objectivity becomes a concept relating not to universality but to a shared understanding that carries a risk of falsifiability (Kirk and Miller, 1986) or modification.

The limitations are important in deciding methodology and designing method, both for research and for scenario planning, because they help define the type of knowledge that is being sought (see also *3.6 Methodological consequences*).

3.5 Critical realism and scenario planning

So will critical realism provide a theoretical framework that suffices for the understanding of scenario planning?

At one level scenarios can be seen as a hypothetical playing out of tendencies that are detected from the past and present. From this perspective, they are thought experiments, concerned not with empirical reality but with the emergence of new knowledge (Aligica, 2005). But they are also narratives, used as an instrument or agent of change, and as such exist in the empirical and actual domains. The process of building the scenarios can be seen as a hermeneutic process, with the interplay between the emerging scenario and the parts from which it is constituted, i.e., the driving forces and key factors.

The rest of this section is a consideration of how the major elements of critical realism and Gadamer's hermeneutics that make up the world view for this thesis, as explained in the preceding sections, fit the assumptions of scenario planning. In *Table 3.1*, the major elements of the world view are listed together with elements of scenario planning that illustrate how scenario planning fits into the world view.

Table 3.1 The fit between scenario planning and the world view

Element	Illustrations of fit with scenario planning
Independent reality	Presupposed – the external world is an essential part of the subject matter of scenarios. However, reality is seen as dynamic.
Tendencies (or mechanisms)	Driving forces are an example of tendencies: they are seen as causes, the outcomes of which are uncertain.
Transcendental realism	Scenarios are transcendental in the sense that they exist in the imagination. However, they are also a way of converting the transcendental to the experiential, through the concept of “memories of the future”.
Stratified (or holonistic) model of reality	Scenarios are built on both experienced and non-experienced but known events and draw on mechanisms (driving forces) to project potential futures.
Knowledge is bounded	A tenet of scenario planning is a recognition of the limitations of knowledge, expressed as mental models, and understanding.
Social structures have open boundaries	Presupposed – if social systems were closed systems, prediction would be possible and scenario planning would be redundant.
Interdependence of society and individuals	Scenario planning is a social activity. It can not exist without individuals, but individuals depend on the scenario planning structure, which exists independently of them, to produce the scenarios.
Perspectives	Scenarios aim to broaden understanding of the future through sharing of individuals’ perspectives, which are limited by experience and tradition.
Knowledge is tentative	Recognition of uncertainty is a tenet of scenario planning
Shared understanding through meeting of horizons	Communication of individual understandings to arrive at an enhanced understanding through language is fundamental to scenario planning.
Importance of prejudice (experience and tradition)	Scenarios are built on the mental models of individuals, which are dependent on the prejudices of the individuals, i.e., the results of their own experience and background.
Levels of understanding	Wack’s “aha” is an example of <i>verstehen</i> . The process of developing scenarios utilises the participants’ practical utility. Consideration of the key factors in forming the scenario narratives, and also of the implications of the scenarios themselves involves comprehension ability.
Interpretation as basis of knowledge	Scenario building is based on interpretation of past and present driving forces.

Finally, the axioms that emerged in *2.12 Summary of axioms of scenario planning* are revisited to consider whether the world view forms an appropriate framework for scenario planning.

1. *Scenarios are about the future.*

Scenario are products of the imagination and exist as imagined events; unlike the past and present, the future cannot be experienced. In this sense, scenarios may be thought of as an example of transcendental realism, imaginative accounts that have been grounded in the experience and traditions of the participants. They also provide a proxy for experience through the concept of the “memory of the future”, based on present perceived tendencies.

2. *Scenarios are descriptive.*

Description is a form of text that communicates ideas – the Gadamerian concept of the meeting of horizons.

3. *Scenarios present alternative foresights (multiple futures).*

Recognition of the possibility of multiple futures presupposes uncertainty, which presupposes mechanisms or tendencies (see 7, below) working in an independent reality, since in an entirely constructed reality, there need be no uncertainty.

4. *A systematic structured process is needed to develop scenarios.*

The scenario narratives are a product of the sharing of horizons. It is not a necessary element of the world view for sharing of horizons to be structured, but neither is it incompatible.

5. *For ongoing organisational adaptation or learning to occur, effective communication of the scenarios is essential.*

The concept of communication as the meeting of horizons as a way of enhancing understanding through broadening of understanding forms a framework for understanding the ideas of learning and adaptation.

6. *Narrative is the most effective way of communicating the outcomes of the scenario development process.*

Construction of a narrative in a scenario planning workshop presupposes sharing of interpretations by people with bounded knowledge and different perspectives of an independent reality. There needs to be consideration of tendencies with multiple possible outcomes – if the relationships between driving forces and the future were simply cause and effect, prediction would be possible and there would be no need for scenario planning.

7. *Many future events are unpredictable, and so the future is to a considerable degree unpredictable.*

Tendencies, or mechanisms, do not have predetermined outcomes: they may or may not be realised, unlike the cause-effect relationships of pure sciences. The concept of tendencies provides a framework for understanding the scenario planning tenet of unpredictability.

8. *The events that appear most uncertain to an organisation are those beyond its influence.*

Uncertain future events, beyond the influence of the organisation, belong in the real domain of the stratified critical realist ontology until they have occurred, when they may be either empirical or actual. Uncertainty may also be considered to be also a product of the open boundaries of social structures, which are subject to extraneous influences.

9. *A framework is needed for people to make sense of the uncertainty and complexity of the multiplicity of possible future events and situations.*

Social structures have open boundaries, but human understanding is limited by people's perspectives. So it is necessary to construct comparatively narrow boundaries in order for people to comprehend a representation of the multiplicity of tendencies. Scenario planning can be seen as a structural framework for building boundaries.

10. *Future events and circumstances depend on trends and forces that can be discerned in the present.*

The present trends and forces that drive the future are best thought of as tendencies.

11. *A process for sharing of perspectives and viewpoints can assist in identifying the assumptions that underlie present attitudes and trends, and*

12. *Through expanding knowledge of the past and present by sharing of perspectives, it is possible to improve anticipation and reduce the unknowability of the future and the area of future unknowns.*

Views of reality are both time and space dependent, resulting in differences of perspective. Through sharing of horizons, a broader view is obtained, which may increase understanding of events or phenomena and tendencies.

13. *An organisation exists within and is influenced by an external environment. It can be conceived as a part of or as a separate entity within the environment.*

The concept of an external environment that can be viewed from different perspectives, including the holistic view indicated here, presupposes an independent reality.

14. *Organisations are social structures, constructed by people, whose interaction creates organisational culture and behaviour.*

The scenario planning workshop is an example of the interdependence of individual and society – without the people, there would be no workshop, but both the scenario development process, a social activity, and its outcome, the scenarios, exist independently of any particular individual.

15. *Both an organisation and its environment are in a state of constant change, the course of which appears uncertain, but some of which is predictable.*

This is a concept that presupposes both a dynamic independent reality and the uncertain outcome of tendencies.

16. *Human understanding is necessarily restricted, both through the constraints of perspective, affected by experience, customs and culture, and through limiting characteristics of the mind, e.g., cognitive deficiencies such as biases and decision avoidance. Therefore no two cognitive ecologies are the same and people within an organisation have different perceptions of both the changing environment and the organisation itself.*

The cognitive ecology is built on a foundation of experience and traditions (i.e., Gadamer's prejudices), together with constructive, reasoning activity, interacting with an external reality observed from different viewpoints. The cognitive ecology is an example of transcendental reality.

17. *For change to be embraced, it must fall within the potential understanding of the individuals concerned. Because the cognitive ecology is established through experience, the best path to learning and change is also experiential. Adaptation to change requires a progression from espoused theories to theories-in-use, based on retention of identity and coherence with past experience, rather than discontinuity.*

Learning involves interpretation of what is perceived, which depends on past experience and reasoning. In critical realist terms, knowledge is transient and able to be transformed.

18. *An organisational viewpoint is a collective phenomenon, neither the same as that of any one of the individuals nor a sum of individuals' knowledge. When considered from this perspective, an organisation can be seen to consist of its members but at the same time exist independently of any of its individual members.*

The concept of sharing of horizons provides a framework for understanding the creation of a collective viewpoint and transformation of social structures built on individual perspectives and histories. Organisations are example of transitive structures.

19. *Organisational change is more difficult than individual change, since the adaptive process involves the collective organisational experience, or culture, as well as each of the individuals.*

Extant social reality can be transformed or reproduced but not created anew. This axiom is compatible with, but not dependent on, the world-view.

20. *An effective instrument for the instigation of change should be adapted to and augment the experience of the participants and powerfully communicate the need for and effects of change.*

Effective sharing of horizons can promote memories of the future and a shared understanding of new perspectives of an issue, leading to an appreciation of a need for change. The intentionality that characterises actions is diverse and can be transformed by sufficiently persuasive experiences.

3.6 Methodological consequences

While, from the previous section, the world view appears compatible with the scenario planning framework developed in 2 *Literature*, it is also appropriate to consider its implications for the research methodology. In particular what does the world view tell us about the type of knowledge that is the goal of the research?

3.6.1 Objectivity and subjectivity

An important epistemological distinction that arises from the realism/idealism issue is the objectivity and subjectivity of knowledge. In this section, the notion of

objectivity is discussed and it is demonstrated that within a critical realist framework the notions of objectivity and subjectivity are simply different ends of the same conceptual continuum.

In the critical realist-based philosophy explained in this chapter, meaning lies in the world around us and what we discover of it is based on our experiences of events and their underlying tendencies or mechanisms. Knowledge therefore requires a relationship between the individual and the world of which he or she is part. Understanding depends on the perspective of the individual, which is affected by cultural contextual factors such as his or her experience, history, traditions. This precludes one notion of objectivity, value-free knowledge (Kirk and Miller, 1986), as a goal for research in this world view.

Facts are transitive and exist in the actual and/or empirical domain, but are dependent on tendencies and mechanisms that exist in the real domain (Bhaskar, 1989). This idea of ontological stratification applies in the natural world too, with relations of dependence and effect between strata (Collier, 1994). Laws or tendencies are transfactual, i.e., they apply regardless of what are perceived as facts.

Because knowledge requires the conjunction of meaning (including transfactual tendencies) and understanding (which is personal), it is reasonable to expect that people with sufficiently similar perspectives are likely to share knowledge. So is sharing a characteristic that allows knowledge to be considered objective? It would seem that although sharing is a necessary factor for knowledge to be considered objective, it is not a sufficient one. For example, it is unfortunately not uncommon for religious practices widely shared within a sect or community to be ridiculed by another group, and for neither set of beliefs to be considered objective.

Neither can truth be a criterion. Phillips (1990) distinguished objectivity from truth, citing examples where subjective judgements could be true, while conclusions considered objective were not, and followed Popper's (1968) contention that although revealing objective truth was the aim of research, its accomplishment might not be possible. Phillips (*ibid.*) also drew a distinction between certainty and objectivity, on the grounds that no knowledge was certain, so to speak of objectivity in these terms would be meaningless; to speak of objective knowledge would be self-contradictory.

So the notions of value-free or shared knowledge and of truth or certainty fail as definitions of objectivity, although the capability of being shared is a necessary characteristic.

Phillips (1990) concluded that the notion of objectivity related not to categories of truth or certainty but to standards of research processes and procedures. “At any one time, the viewpoint that is the most objective is the one that currently is the most warranted or rational” (ibid., p 24). Implicit in this is the notion that objectivity and subjectivity are relative rather than absolute concepts: elements of both are found in research processes and viewpoints, to greater or lesser degrees. So objectivity and subjectivity are the same concept – different ends of the same continuum.

Phillips (ibid.) also pointed out that the same or similar understandings are almost universal on low-level concepts such as identification of colour. It was for higher-level concepts where more interpretation was needed that there was more likelihood that people with different theoretical perspectives or frameworks, or viewpoints, might see things differently. This has implications for research processes, which, since Kuhn (1962) introduced the world to his idea that inquiry always proceeded within the context of a paradigm, have been conducted within a multiplicity of theoretical frameworks (Guba and Lincoln, 1998), and is a reason for the researcher to explain his or her world view and paradigm.

Phillips (1990) argued that a test of objectivity was acceptance of the critical tradition, i.e., whether what was held up to be knowledge carried the risk that it could be shown to be in error. (Consequently, one boundary of the validity of a scientific theory is the next time it is put to the test). Silverman (1993) was emphatic that evidence must be subject to every possible test, and only if it could not be refuted should it be called objective. As was seen in *3.4 Limits of knowledge*, this idea needs to be extended to include the concept that new evidence may reinforce or modify current knowledge as well as the possibility that what is believed to be known may be shown to be plain wrong.

Dey (1993) followed a similar point of view. Interpretation should not be at odds with what actually happened. If interpretations were treated as purely subjective, the possibility of error was eliminated, which was untenable and rendered research

useless. Research outcomes needed to be well grounded conceptually and empirically so that they were sound and defensible.

Following this idea, research outcomes that are backed by robust empirical and logical evidence are likely to be considered more soundly based than mere hunches, particularly for higher level concepts. This is because the transparency and breadth of the arguments makes them more open to scrutiny and potential refutation or modification.

This needs to take into account that meaning has many faces, in both natural and social sciences:

Natural science is strongly identified with a commitment to objectivity. Like natural science, qualitative social research is pluralistic. A variety of models may be applied to the same object for different purposes. A man may be an object of a certain mass and size to an engineer, a bundle of neuroses to the psychologist, a walking pharmacy to the biochemist, and a bank account with desires to an economist. Light may have a frequency or (in this case, by a describable transformation) consist of photons. Water is the canonical acid and the ultimate primitive base. Natural human vision is binocular, for seeing the same thing simultaneously from more than one perspective gives a fuller understanding of its depth.

(Kirk and Miller, 1986), p 21.

Each of these models may be arrived at by a different process from a different perspective, but rather than refuting the others, can add to the level of understanding of the phenomenon. Each is testable from an appropriate perspective.

To summarise, objectivity/subjectivity are relative concepts, parts of the same conceptual continuum. Knowledge will be considered more robust the more objective it becomes. Two of the necessary characteristics of knowledge that may be considered objective are:

- it is capable of being shared
- of such a nature that it can be subject to scrutiny, with the possibility of being shown to be in error.

Such scrutiny may be of the inquiry process by which it is arrived at, or of the correspondence of outcomes to what is perceived as the real world. The former needs to be evaluated in the framework or paradigm in which the inquiry was performed; the latter may be open to critique from different perspectives.

However, while this provides the characteristics of robust knowledge, it does not address the issue of understanding. Understanding is the personal perspective, what would normally be called subjective. As subjectivity and objectivity are not mutually exclusive concepts (see above), understanding of subjectivity is also understanding of objectivity. Most knowledge probably falls somewhere in the middle area of the objectivity/subjectivity continuum (Phillips, 1990).

Few would call Foucault a realist, though Pearce and Woodiwiss (2001) have mounted an argument that a realist ontology underpinned the power of discourse. A realist interpretation of his work can help shed light on understanding. Seals (1998) argued that, contrary to the assertions of many commentators, Foucault embraced an idea of objective truth. In Seals' interpretation, Foucault (2002) distinguished three kinds of subjectivity:

- Unisubjectivity: truth that is personal to the subject of a statement, e.g., reasons for taking an action. Judgements about truth or falsity can only be made from the perspective of the person who made the statement (but not necessarily the author of the statement) (Foucault, 2002). There is a coherence between this and the ontological concept of the empirical domain.
- Intersubjectivity: truth that is asserted by different people who have an appropriate "positionality", which, in the terms adopted for this thesis, can be translated as "perspective." Truth or falsity is essentially empirical, based on the experience of the individuals concerned. This is akin to the notion of shared knowledge. There is a coherence between this and the ontological concept of the actual domain.
- Transubjectivity: statements are true regardless of the perspective ("positionality") of the individuals concerned. In the critical realist perspective, these statements are situated in the real domain.

The terms unisubjectivity, intersubjectivity and transubjectivity are Seals', who has interpreted a discussion by Foucault (ibid.) of these distinctions in the context of the

enunciative function of statements, which are units of a discourse of truth. Seals is not considered a critical realist and his interpretation may be open to debate, but for the purposes of this discussion, his distinctions are useful.

The categories are not discrete, but are holonomic: transsubjectivity requires intersubjectivity to exist, just as intersubjectivity needs unisubjectivity, in that a number of subjective viewpoints are needed to reach the agreement that is a necessary part of intersubjective truth. There will be overlap between the categories in most forms of knowledge, so that the categories can be seen as a subjectivity/objectivity continuum.

Seals (*ibid.*) argued that analysis of intersubjective statements produced a set of transsubjective, or objective, rules for judging what was required for intersubjective statements to be taken as true. However, a different set of rules was required for each type of statement. To apply the rules of one to another was a category mistake, i.e., applying the rules of one logical type or category to another (Ryle, 1963), e.g., it is absurd to validate a statement based on a performative theory of truth by the standards of a correspondence or coherence theory. In this, he was essentially in agreement with Guba and Lincoln (1998) (*cf. 4.4 Evaluation issues*). However, it is a category mistake that is commonly made and Seals argued that just such a category mistake was the basis of the inability of what he called objectivists and postmodernists to join in constructive debate. Both made assumptions based on the singularity of truth – either asserting it or denying it. If truth were viewed instead as a matter of the logic of the type of statement for the category of truth being sought – starting with the assumptions that are made (or axioms, *cf. 2.6 The importance of assumptions*) – the disagreement became a matter of attitude to the way of relating to reality, and sets of rules for judging truth or falsity became possible. In this context, the concept of truth appears to have been used as synonym for knowledge, in that a relationship was implied between the knower and what is known (*cf. 3.3 Epistemological implications*).

From this, it becomes clear that the type of knowledge being sought in both scenario planning and qualitative research is mostly intersubjective and can be interpreted as situated in the actual domain, which is compatible with the concept of scenarios as an experience - a “memory of the future” (*cf. 2.11.5.4 Learning*). In discovering the new knowledge, the experiences and ideas of the various participants are used, and

the outcomes are particular to the context. In keeping with the stratified ontology, establishing knowledge in the actual domain will draw on the subjective knowledge of the participants (i.e., the empirical domain) and incorporate causes or tendencies from which the outcomes emerge (i.e., in the real domain). The knowledge will be more robust the more it tends towards the objective end of the objective/subjective continuum, with its characteristics of sharing and scrutiny, and more likely to be transferable from the case studied.

3.7 Summary of theoretical perspective

The world view based on critical realism and hermeneutics has been shown to be compatible with and provide a framework for understanding scenario planning. Perspectives of people in the organisation of the world in which it exists, of what is important to focus on, of the effects of change and of the way the environment may affect the organisation will differ. Meaning is emergent from a real, dynamic world and understanding is subjective. Each individual viewpoint may have validity from a particular perspective (though not necessarily).

Scenario planning is designed to be a tool by which these perspectives can be shared and the people in the organisation come to broaden their understanding. Through combined perspectives, change in the organisational culture may develop. In the undertaking of scenario planning, there should be an acceptance of the fallibility of current assumptions and beliefs and the co-existence of permanence and change.

Pierre Wack, in his influential 1985 articles, came to the view that, by learning to re-perceive their environment, managers could begin to see the relevance of information that otherwise would go un-noticed because they failed to see its significance (Wack, 1985b). The world view that has been presented in this chapter provides a framework for understanding the assumptions and processes that underlie his view.

The discussion has also included epistemological considerations that reveal the type of knowledge that is sought both for scenario planning and for the research for this thesis.

Based on this, in the next chapter, the world-view developed here is used as a framework for the development of the methodology for the research for the thesis.

4 Methodology

Because this study is aimed at exploring the perceptions of participants about the scenario planning process and its effects on organisational change independently of the theories that appear in scenario planning literature, an exploratory qualitative approach was considered to be more appropriate than a quantitative methodology. The methodology was developed in the context of the world view explained in the previous chapter, in particular, *3.6 Methodological consequences*¹.

4.1 Adoption of the grounded theory approach

There is a considerable body of opinion that there are limitations to the explanatory scope of quantitative methods and that a qualitative approach to organisational theory, making use of process explanations and narrative understanding of organisational phenomena, can be a means for researchers to expand understanding beyond these limitations (Mintzberg, 1983, Partington, 2000, Tsoukas, 1998, Whiteley et al., 1998). Although the analysis of quantitative data, collected using properly constructed and bias-minimized questionnaires, is likely to yield results that can be generalised with wider horizons than qualitative data, the knowledge produced may be limited by pre-defined boundaries, because the data that are collected are structured in advance rather than provided in a form defined by the subject of the research (Dey, 1993). Qualitative methodologies, on the other hand, enable rich, in-depth exploration of multiple subjective experiences (Whiteley et al., 1998) that can circumvent the pre-definition. However, the outcomes can have narrower applicability: for the qualitative researcher, each case is unique (Patton, 1990). Patterns or themes that emerge from the data are applicable only to the phenomena under study and further research or comparative analysis is required to extend theory or explanations beyond the boundaries of the study.

Qualitative and quantitative methods are alternative, but need not be mutually exclusive. There is a body of opinion that (although arguing from different paradigms than this thesis), considers the two methods can be integrated in the same

¹ A paper entitled *Critical realism and hermeneutics as a paradigm for grounded theory* based on some material from this chapter was published in the proceedings of the 2003 Doctoral Conference at the Curtin University of Technology Graduate School Of Business, Perth, Western Australia (Nicol, 2003a).

research project, e.g., Cupchik (2001) (constructivist realism), Kleinig and Witt (2001) (heuristics); Maxwell and Loomis (2003), Teddlie and Tashakkori (2003). Some researchers make their choice of method based on their particular paradigm or epistemology. Others, more pragmatic, choose what they consider the most appropriate path after considering the strengths and weaknesses of the alternatives (Symon and Cassell, 1998).

For Creswell (1994), the nature of the research problem was an important factor in the choice, but also to be considered were the experience and training of the researcher, the rigorous rules of quantitative research compared with qualitative and whether the audience for the results would be receptive to the method chosen. A qualitative approach was appropriate when there was little information available in the literature, or in grounded theory, where the researcher was attempting to develop theory by constant comparison of the relationships in the data.

Following this view, choice of method should be a matter of selecting what is appropriate to the objectives of the research and the type of knowledge that is sought (*cf. 3.6 Methodological consequences*). Patton (1990) advocated approaching fieldwork without the constraints of pre-determined categories of analysis, because this would contribute to the depth, openness and details of the qualitative enquiry. That said, the choice of method must be seen to be compatible with the theoretical perspective for the research (*cf. 3 Theoretical perspective and grounded theory*).

In the critical realist-based world view developed in the previous chapter, the goal of the interviewer is discovery – in the case of this research, of the perceptions of the participants of the scenario planning process. Because the knowledge and beliefs of the participants would be retrospective and tacit, there was little choice of primary data source but the interview, although as a secondary source, the organisation was asked to supply any relevant written records (*cf. 4.5.1 Triangulation*). A quantitatively based survey may have been appropriate if the objective had been to validate or test the boundaries of a pre-existing theory or hypothesis about change in the organisation. But there was no such theory available that was applicable to the specific research situation here, and also little data about scenario planning gathered directly from the perspectives of participants anywhere. The research aimed to establish a new theory or explanation, so the choice of qualitative interview was appropriate, because:

The goal of any qualitative research interview is ... to see the research topic from the perspective of the interviewee, and to understand why he or she comes to have this particular perspective.

(King, 1994).

It was particularly important to adopt an approach independent of theory because so much of the scenario planning literature is derived from the experiences of practitioners of the art of scenario planning, who may have a different perspective to that of the participants (*cf. 2.3 Searching for scenario planning theory*). In most cases, the literature is derived from the practitioners' observations of organisational behaviour and/or change, often anecdotal, rather than rigorous research based on the direct experiences of the participants.

An adaptation of grounded theory (which could be used with any kind of data (Glaser, 1998)) was chosen as an approach that fitted the objectives of the research. "A grounded theory is one that is inductively derived from the study of the phenomenon that it represents" (Strauss and Corbin, 1990, p23). In this context it is an analysis process that is grounded in the data (Dey, 1993) and from which emerges an "integrated set of conceptual hypotheses" (Glaser, 1998) that build a theory that fits and works for the subject of the study. The groundedness and the emergent theory are the features that distinguish it from other qualitative methodologies. Rather than beginning with a theory, theory is allowed to emerge from the data, evolving during the research process through constant comparative analysis of the data (Strauss and Corbin, 1998). Grounded theory is concerned with behaviours and patterns, not people, but is grounded in the perspectives of people, an approach which fits the world view developed in *3 Theoretical perspective*:

GT is a perspective based methodology and people's perspectives vary. ... Multiple perspectives is often the case and then the GT researcher comes along and raises these perspectives to the abstract level of conceptualisation hoping to see the underlying or latent pattern, another perspective.

(Glaser, 2003, p168)

It is an important constituent of the grounded theory process that the researcher begins without preconceived ideas of theory or the direction of the research, or even of the categories that will be used (Becker, 1993, Glaser, 1992, Robrecht, 1995,

Whiteley, 2000). Although Strauss and Corbin (1998) allowed for the use of the approach to elaborate and modify existing grounded theory (see below), this does not eliminate the need to start without preconceptions. This is akin to the concept of bracketing used in phenomenological studies (LeVasseur, 2003).

However, preconceived ideas about where the research will lead are not the same thing as the preconceptions arising from cultural background, previous knowledge and experience in the same area or personal prejudices that the researcher brings to the research. “Routine biases are a part of normative models” (Glaser, 1998, p84). The influence of past experiences and tradition on individual world views was discussed in 3.3 *Epistemological implications*. In qualitative research, the researcher has an instrumental role as the interpreter of the data. How the experience of the researcher for this study has qualified him to perform this kind of research may be seen in 1.5.5 *The researcher*. Measures to ensure the integrity of the data and for transparency of the interpretation, or analysis, process are explained in 4.5 *Rigour* and 5.2.2 *Data integrity* (see also 4.3 *Theoretical perspective and grounded theory*).

An attraction of a grounded theory approach was that it could be expected to enable new theory to be built based on the data collected from scenario planning participants within the situated organisational context, without being tied to any particular academic discipline structure that might inhibit emergence. Robrecht (1995) has described how concepts emerge as the researcher develops his or her perspective, a process which is congruent with the theoretical perspective developed in the previous chapter.

As well, a grounded theory approach is considered to be well suited to both situated processes, such as cultural change and decision-making in organisational studies and research, and concerns associated with individual and group behaviour, because it allows complexity to be captured. As a consequence, the ensuing theoretical accounts should link well with practice and help people in the organisation gain a new perspective on their work situations (Locke, 2001), an outcome which resonates well with scenario planning theory. In a grounded research approach, the emphasis is on theory generation, where data are grouped and given conceptual labels, and relationships interpreted, rather than, as in some other qualitative methods, description with little interpretation (Glaser, 2001, Strauss and Corbin, 1990).

Glaser (1992, p16) explained the approach this way: “The grounded theory approach

is a general methodology of analysis linked with data collection that uses a systematically applied set of methods to generate an inductive theory about a substantive area.”

The use of qualitative research, and particularly grounded theory, has become increasingly accepted in organisational research. For example, Partington (2000) elucidated the trans-disciplinary nature of Mode 2 management research, an approach which, because it was aimed at crossing the boundaries that divided the academic and practical worlds, was likely to lack mature theoretical frameworks. In this context he recommended a grounded theory approach within a critical realism paradigm (*cf. 3 Theoretical perspective*) as an appropriate method for understanding the actions of managers. Parry (1998) advocated the use of grounded research in leadership research with the objective of investigating change incidents and the study of social processes in organisations, citing Glaser’s (1992) observation that grounded theory was useful for researching human behaviour in social organisations and groups. Martin and Turner (1986), in outlining a grounded process for organisational research, listed a number of studies that have used the approach.

4.2 Adaptation of grounded theory

However, some adaptation of grounded theory is needed in this context. There are two areas of precedent for this: adaptation is common and even the founders of grounded theory are unable to agree on procedures. These ideas are explored in this section.

Strauss and Corbin (1998) recorded that use of the grounded theory methodology in practice had varied with the needs of different research projects and the capabilities and/or new ideas of researchers. They also warned that the purity of grounded theory was being compromised as use of the methodology became more widespread. In particular, they were concerned that researchers emphasised coding aspects as the main feature of grounded theory, but did not perform theoretical coding, without which theory could not emerge. Some researchers did not even aim at producing a theory, while others thought that because they were being “inductive”, they were using a grounded theory method.

However, adaptations of the methodology are common, sometimes with heeding of the warnings and sometimes not. Adaptations of the theory in management and

organisational studies have included the use of aspects of grounded theory in combination with other methodologies such as statistical analysis, and the use of grounded theory procedures within the theoretical perspectives of other social science or humanities disciplines (Locke, 2001).

There are practical reasons for the adaptation in the business or organisational setting of the grounded theory approach from its original form.

First, because research in this area is often directed at exploring a pre-defined issue and/or has a particular focus in certain aspects of the phenomenon under study, it is not always practical to approach the research without some preconceived ideas of the direction or subject of the research. As well, faced with the prospect of having to deal with a deluge of unstructured data, some researchers in the organisational and management field, rather than seeking to discover new theory, set out using prior theory to direct, narrow and reduce the burden of the analysis – although the prior theory is of course subject to alteration as the research proceeds (Locke, 2001).

This seems contrary to the stance taken by Glaser (1992) who was adamant that although grounded theorists should have an interest in an area, they should not set out with a research problem. The problem(s) would emerge from the data. For Glaser, verification (or falsification) of a previous theory impeded the generation of theory and was not a function of the grounded theory method.

On the other hand Yin (1994) was dismissive of the avoidance in grounded theory of theoretical propositions in advance, on the grounds that identifying an issue or stating a purpose necessarily involved a theory or a blueprint for the research. While this idea of a theory may also be thought of as an assumption, the point of view appears warranted: if there is an issue to be explored, some preconceptions are necessary for the research framework to be set (Nicol, 2003a).

For example Whiteley (2002) explained how, in a study of waterfront reform, data from preliminary fieldwork was used to construct an interview schedule that was used to collect the data for a grounded theory part of the research. As well, there were “certain aspects of the EBA and change strategies that we wanted the data to yield” (ibid., p26). If the process described by Glaser (1998) were to be followed, this “partial use of legitimated preconceived research” (ibid.) would be seen as forcing of the data, rather than allowing categories and theory to emerge. Whiteley

suggested substituting the term “grounded research” for grounded theory if the principles and procedures of the grounded theory method could be met only partially (ibid.). The term has not been adopted in this thesis, because the principles of grounded theory have been adhered to, except in some areas that are made explicit in this and the next chapter. On the issue of preconceived theory, Yin’s proposal is accepted. However, although the title and objectives of the study specify the area of study, they do not identify an issue and no purpose is stated beyond developing understanding – which is why one undertakes grounded theory. The term adapted grounded theory has been preferred.

Secondly, adaptation can be adopted because the complexity of the grounded theory method can be seen as inappropriate. For example, Partington (2000) contrasted the methods used for the purposes of organisational or management research with those used for sociological research. His line of reasoning was based on the method developed by Strauss and Corbin (1990), which, like ethnography, had its roots in symbolic interactionism, where the importance of symbols – language and other types of interactions between people – in interpreting meaning was emphasised (Patton, 1990). Partington argued that the degree of complexity that was apparent in symbolic interactionism was inappropriate for management research, where there was a requirement for more utilitarian and assimilable causal models. In the Strauss and Corbin grounded theory model, the relationship between conditions and consequences was examined by use of a conditional matrix, a diagram of eight concentric circles that corresponded to different perspectives of the world (Strauss and Corbin, 1990). This, argued Partington, was too complex for translation into management action. For a management application, he proposed the matrix could be simplified to a more utilitarian four levels: external organisation context; internal organisation context; individual and collective management cognition; and action (Partington, 2000). In line with his utilitarian approach and the critical realism paradigm, Partington also argued for a simplified paradigm model. However, this proposal appears something of a compromise that does not fully address the issues at stake.

On this issue of complexity, as well as other matters, there hovers over the field of grounded theory a split between its originators – who prefer to be called discoverers (Glaser, 1998). The publication of *Basics of Qualitative Research: Grounded*

Theory Procedures and Techniques (Strauss and Corbin, 1990) invoked a bitter response from his colleague, who claimed the new book was not about grounded theory at all, but a merely a way of arriving at “full conceptual description” (Glaser, 1992, p3). How a researcher views the issues that caused the rift can have a considerable effect on the way a research project is constructed. The issues that were relevant in choosing the direction for this research were:

4.2.1 *The use of axial coding and a single paradigm*

Glaser (1998) objected strongly to the idea of axial coding in Strauss and Corbin (1990), arguing that it was an unnecessary step and that it formalised a process where theoretical sensitivity rather than a preconceived framework was paramount for the concepts to emerge. He particularly disapproved of what he called its reliance on a single coding paradigm. Use of one paradigm was “preconception and forcing theoretical coding concepts on data to the max,” he argued (Glaser, 1992, p63). Theoretical codes should simply emerge from the coding for categories and properties. Use of a preconceived framework would result in a conceptual description that was forced on the data and could not lead to a grounded theory that emerged in its own terms from the data.

It seems clear enough that a paradigm or framework to help integrate the categories into a theory can be a helpful analytic tool. However, flexibility in the choice of a coding paradigm, with the selection driven by the data - which can then be seen to shape the type of theory that emerges - would seem to be consistent with the data driven category and concept generation of open coding. For this research, the opinion of Locke (2001) has been followed, and no framework has been imposed on the coding process so that it could emerge as analysis proceeded. The interrogation of the data and which tools were used for coding (i.e., NVivo or Decision Explorer) at the various stages of the analysis were decided as the analysis progressed. For Glaser, open coding and selective coding were all that was necessary, and, as the coding paradigm associated with axial coding was not being imposed here, the Glaser path was followed, although different terminology was employed (*cf. Figure 5.6 Coding terminology*).

4.2.2 *Relevance*

The detailed naming of data incidents advocated by Strauss and Corbin (1990) in open coding was seen as a laborious tedious waste of time by Glaser (1992), who

questioned the need to summarise data and label every piece of data: much of it was irrelevant, and it was simpler and better to place data directly into categories and properties, reducing the number of data incidents that needed to be named.

The generation of categories was another source of disagreement. Glaser (1992) pointed to the difference between labelling an act and conceptualising a pattern among incidents. The tortuous questioning of the data in the Strauss and Corbin (1990) method produced a vast number of categories that were largely irrelevant, particularly when the answers to the questions might not be contained in the data itself. This sort of microanalysis created two dangers: restraining the direction of the analysis; and forcing intended meaning on the data by asking preconceived questions that did not emerge naturally from the data but could overtake the data as the focus of the research (Locke, 2001).

In this research, detailed analysis of the meanings of each phrase uttered by an interviewee was rarely necessary. The perceptions and ideas that were expressed in the interviews were the focus of the research, so the fragments of the data to be coded could vary from a single phrase to several paragraphs. No analysis beyond the expressed idea or perception was required, since this was the unit of analysis. Therefore the detailed naming proposed by Strauss was considered inappropriate in the context of this research.

4.2.3 *Conditional matrix*

Glaser's ire was also directed towards the conditional matrix that Strauss and Corbin (1990) introduced as a way of taking into account the broader context that influenced the phenomenon being researched (Glaser, 1992). As already noted, Partington (2000) considered the conditional matrix too complex for organisational research and proposed a simpler version, but this avoided the issue of whether to use a conditional matrix at all. Locke (2001) saw value in including wider elements in a sociological theory, but considered that other theoretical models might also be appropriate.

Consistent with the flexible approach adopted in the two previous subsections, in this research the approach adopted was Glaser's and Locke's view that which of the many theoretical possibilities should be used should be determined as the categories and theory emerged, and no conditional matrix was imposed.

4.3 Theoretical perspective and grounded theory

In the previous sections, the reasons that the less formalised approach of Glaser appeared to offer a methodology more appropriate to the aims of this research than Strauss and Corbin's (1990) more structured course were considered. However, it must also be established that the chosen approach is consistent with the ontological and epistemological stance described in 3 *Theoretical perspective*. As will be seen, the approach is in fact driven by that stance. There were two major elements in the critical realism/hermeneutical theoretical perspective that drove the choice of Glaser's over the Strauss and Corbin approach:

- the theory is seen to *emerge* from the external reality of data, rather than be conceived as a construct in the minds of the researcher and participants. Categories, concepts and hypotheses are seen as discovered, implying that their relationships are already extant. For Strauss, a theory is not a discovery of a pre-existing reality "out there", but a plausible interpretation, and a framework is imposed to assist with the construction of the theory
- the experiential history of the researcher and the participants influences their respective perspectives, and consequently the interpretation of the data. Strauss agrees that theories are fallible and temporally limited. However, for Strauss, it is the theories that are in a state of constant change. For the critical realist, it is the fluidity of reality, including experiences, that affects perspectives and necessarily limits theory.

Glaser (1998) saw no need to establish a theoretical perspective for grounded theory. "Does grounded theory represent a change in philosophy and scientific thought? Not from my point of view. It is just a method." (Glaser, 1998, p44). He also opposed combining it with other methodologies, such as phenomenology, ethnography or "even positivism" (ibid., p 42), because these could distort emergence.

However, he did recognise that his differences with Strauss had their basis in a divergence of philosophical roots. "Like researchers influenced by post structuralism and postmodernism, Strauss recognised explicitly the perspectivism involved in inquiry. Glaser on the other hand has a surer sense of where the real sense of grounded theory lies, which is precisely in its open-ended, discovery orientation" (Glaser, 1998, p38).

Grounded theory takes both constructivist and objectivist forms (Charmaz, 2001). Charmaz explained that constructivists consider that both data and analysis were created by the shared experiences of the researcher and research participants and their relationships. Analysis was a construction, positioning the data in context, including time, location and culture, as well as reflecting the thinking of the researcher. The outcome was a construct, not contained entirely in the data, but created by the shared experiences of the researcher and the other participants.

In objectivist grounded theory, the researcher discovers the meaning that already exists in the data, which seems closer to Glaser's and Strauss's notion that concepts are discovered not constructed (Glaser, 2003, Strauss and Corbin, 1990). Charmaz (2001) considered this assumed an external reality and an unbiased observer who records. The concept of the unbiased observer in grounded theory is borrowed from the idea of "bracketing" in phenomenology. Like other theoretical perspectives, phenomenology has evolved, in its case from an essentially objective approach, searching for objects of experience, to a more subjective stance, where the researchers attempt to understand the subjective experience of someone else, by, as far as possible, putting themselves in the place of the other person. Thus bracketing has evolved from a concept of attempting to set aside previous understandings about the object of experience being studied to an effort to identify with and describe, uncritically, the subjective experience of the respondents (Crotty, 1998). The former is, however, inherent in the latter.

However the hermeneutical tradition (*cf. 3.3 Epistemological considerations*) does not let us get away with the idea that beliefs can be suspended easily. The difficulties of escaping the preconceptions that arise from one's historical, cultural, traditional and contextual background were recognised by Glaser: "It is in the nature of man to force in order to make sense of situations by overlaying on them preconceived ideas" (Glaser, 1998, p92). He listed several types of forcing of data that the researcher should strive to avoid:

- *Normative forcing*: Expectations that a theory can be discovered or theorising can be done in a certain way.
- *Evidentiary rules*: Rules from an external authority that can result in preconceived theoretical codes which can lead to bounded data collection

and restriction of emergence. This can include partial use of legitimated earlier research.

- *Awe*: Following too closely the methodologies of others who have worked in the field or linking to other methodological frameworks such as “post positivism”, “social interactionism”, etc., when not fully trained in their use. Awe can bound the grounded theory before it is started.
- *Vested fictions*: The myths, paradigms, frameworks and values that make up everyday organisational life and may be maintained for, *inter alia*, structural stability, vested interest, career or power reasons. Grounded theory is unlikely to penetrate these fictions, since the respondent in many cases believes or has an interest in maintaining them and this is an unexpressed part of their perspective. Vested fictions, of course, can affect both researcher and researched.

What is required of the researcher is not the apparently impossible task of suspension of his or her experiential background, but recognition as far as possible of how it may affect his or her theoretical sensitivity. This is coupled with suspension of what one knows about the object of the research, which is not hard, but a natural occurrence in everyday life (Glaser, 1998). For this research, the first three types of forcing in Glaser’s list were minimised by designing the analysis to begin before the development of the scenario planning theory. The theory in *2 Literature review* and the theoretical perspective emerged and were written concurrently with and completed after the later stages of the data analysis, so as to minimise their influence on it. However, there were certain rules that had to be followed in the writing of a doctoral thesis, which included the identification of a research area, as discussed above, and it was accepted that this would influence the content, though not the direction, of the study. Vested fictions are encountered in any research, but may to some extent be exposed by a form of triangulation, i.e., obtaining several perspectives on the issues, and this was explicitly planned for in the research design. However, there is an apparent discrepancy in these epistemological considerations. Although the objectivist stance appears to be more compatible with grounded theory, as Glaser (2003) has argued vehemently, there is also a reliance in the discussion above on hermeneutical postulates that are more reliant on the subjective nature of personal experience and tradition. This was resolved in *3.6.1 Objectivity and*

subjectivity, where it was shown how the concepts of objectivity and subjectivity could be perceived as two aspects of the same concept, and the aim of research was to produce knowledge that was as objective as possible within the boundaries of scope and method.

It has been shown in the previous chapter that the sort of knowledge that is being sought as data in this research is largely in the actual domain and intersubjective. In explaining the experiences of the participants, the robustness of objectivity is sought by the use of all the data available, i.e., interviews with nearly all relevant participants in the Scenario Thinking process. The emergent theory, grounded in the data, should reveal tendencies that explain and increase understanding of the organisational change.

The adaptation of the grounded theory approach that is used in this research can be considered to be objectivist, in that theory is treated as emerging from the data, perceptivist in that multiple perspectives are needed for a shared concept of reality to develop, and interpretivist in that the researcher's experience is an important factor in the theoretical sensitivity needed for discovery of categories (Nicol, 2003b).

4.4 Evaluation issues

Inherent in the choice of methodology are assumptions about how the research will be evaluated. Denzin and Lincoln (1998a, p30) stated that "multiple criteria for evaluating qualitative research now exist There is no single interpretive truth.... There are multiple interpretive communities, each having its own criteria for evaluating an interpretation." Whiteley (2002) provided a list of some of the qualitative criteria in use.

This results from the multiple theoretical paradigms that, combined with an array of methodologies, make up interpretive practice. However, as a consequence of the freedom to adopt what the researcher considers to be an appropriate paradigm, constructing the criteria for evaluation becomes partly the responsibility of the researcher, who needs to set out clearly the philosophical perspective, the methodology and the research processes so that the work can be appraised within that framework. Guba and Lincoln (1998) discussed how it was inappropriate for research conducted in a particular paradigm to be appraised from a different perspective. This is, of course, applies to research *processes* but may not apply to

critique of the research *outcomes*, where multiple perspectives and opinions can be expected to be employed.

With the realisation that different world views require different approaches, researchers have sought to differentiate the criteria for evaluating qualitative and quantitative work. Winter (2000) concluded that a consequence of the different criteria was different evaluation rules for quantitative and qualitative methodologies. Maxwell (1992) set out evaluation rules for qualitative inquiry, but explicitly avoided adapting the typologies that were applied to quantitative research, because he believed using them distorted what qualitative researchers did in addressing validity issues.

Maxwell (*ibid.*) saw validity as inherent in the relationship of an account to the things it was intended to be an account of, rather than the procedures to produce and validate it. Validity was relative to purposes and circumstances. He cited (*ibid.*, p283) Hammersley and Atkinson (1983): “Data in themselves cannot be valid or invalid; what is at issue are the inferences drawn from them.” The validity of a method depended on both the conclusions reached and the community of inquirers on whose perspective the research outcome was based.

However, in terms of Seals’ typology (*cf. 3.6.1 Objectivity and subjectivity*), this differentiation is not quite right. It is the nature of the knowledge being sought that determines the appropriateness of the methodology and how it is applied. There is certainly a viewpoint that quantitative researchers may be seeking to produce knowledge that is different in kind to qualitative inquirers, in that they seek truths that are generalisable, i.e., true from any perspective. However, even such truths are bounded by perspective (Patton, 1990), e.g., statistical methods may be argued to give valid results regardless of perspective but they are still dependent on the presuppositions that are made in data collection, methodology and analysis.

It was contended in *3.6 Methodological consequences* that evaluation criteria for research methods should depend on the type of knowledge that is the goal of the research. Truth itself is not dependent on research process – the wildest hunch can turn out to be true. But for a research process – as opposed to its outcome – to be accepted as a valid, it must satisfy an appropriate set of rules. The set of rules will be affected by the kind of knowledge that is sought.

To summarise: Construction of the evaluation criteria is partly the responsibility of the researcher, through transparency of philosophical perspective and procedures, choice of methodology and suitability of research processes. Scrutiny of the research methodology should be performed:

- using an agreed set of rules, applied as appropriate to the goal of the research
- appropriate to the paradigm that informs the research
- using objectivity as a standard
- inclusive of both research process and outcomes.

The thesis structure and content have been explicitly planned for transparency of how these criteria are met.

4.5 Rigour

Rigour is a way of maintaining the validity and reliability of processes. Rigour is concerned with thoroughness rather than outcomes, i.e., knowledge, which may be arrived at and disputed from a variety of methodologies and paradigms. So reliability, which is concerned with the replicability of process, falls within the ambit of rigour. However, validity, the extent to which the research process provides an accurate answer, may encompass both the process and the outcome. If appraisal of an outcome shows it to be incommensurable with current knowledge, both the current knowledge and the research process may be called into question. Rigour is built into methodologies as checks during the research process. A discussion of some of the techniques considered for this research follows.

4.5.1 Triangulation

Whiteley (2002, p22) stated that triangulation in qualitative data evaluation was a “very important way of cross-checking emergent insights.” Marshall and Rossman (1995, p144) stated unequivocally that that triangulation could “greatly strengthen a study’s usefulness for other settings.”

However, in this thesis most of the data that were gathered were neither factual nor observational, but represented the personal opinions and ideas of the participants, and were subject to interpretation by the researcher. So it may be argued that there is the potential for subjectivity to dominate. Goulding (2002) made the point by asking of a grounded theory, whose research is it? The answer is that the research findings

are an interpretation of the perspectives of the participants, from the perspective of the researcher, who is actively involved in the process.

If this is the case, what purpose will triangulation serve? A subjective interpretation may be accepted or rejected by others, but there would seem to be little purpose in comparing it with other subjective interpretations, which may have no more claim to validity than the first.

However the type of knowledge being sought is intersubjective. As has been argued, subjectivity and objectivity are part of the same concept (*cf. 3.6 Methodological consequences*). In the quest for robustness through objectivity, the outcomes of the research are to be subject to scrutiny and triangulation may be a technique to increase the transparency of the process. What needs to be considered is how this can be achieved, and when and for what purpose it is appropriate to use triangulation.

Janesick (1998) listed five basic types of triangulation, four of which were attributed to Denzin (1989), and a fifth of her own. They were:

- *Data triangulation*: the use of a variety of sources of data in a study
- *Investigator triangulation*: several researchers or observers are used
- *Theory triangulation*: various theoretical perspectives are used to interpret the data
- *Methodological triangulation*: the use of multiple strategies within a method or different methods to study a single problem
- *Interdisciplinary triangulation*: use of different disciplines to broaden understanding of method and substance

In this research, *data triangulation* was used:

- to check statements of fact of what happened and when, using accounts by different people and supporting documentation
- to obtain a variety of data by capturing a wide range of perspectives from different interviewees, by the comparison of sets of data and by basing emergent theory on constant comparison
- in transcription checking by a third party, to ensure the text accurately reflected what was said on the tapes, performed after the transcription had been checked by the interviewer personally to ensure that transcribers who

were not involved in the interview process had not generated different and inappropriate interpretations of the words on the tapes (Poland, 2001), through lack of appreciation of context-specific discursive interactions (Whiteley et al., 1998).

Silverman (1993) expressed concern that there was a potential in qualitative research for the researcher to seek confirmation of emerging or extant concepts and theories, rather than looking for contradictions and alternatives. If objectivity was to be achieved by scrutiny, data triangulation should not be a confirmatory exercise, but used to strengthen the developing theory by discussing and accounting for diverse data. Kirk and Miller (1986) argued that the value of triangulation for what they called synchronic reliability was in forcing the researcher to consider how multiple different qualitative measures may be true at the same time, which is consistent with the theoretical perspective for this research.

Investigator triangulation is not used. In keeping with the grounded theory approach and the size of the project, a single researcher conducted all the interviews and conducted the analysis of the data.

Theory triangulation would be redundant here. The outcome relies on the theoretical sensitivity of the single researcher, who was the person who had contact with the participants in the interview process and was therefore the only person who directly experienced the tacit communication that took place in all interviews.

Methodological triangulation was also not required during the research process. As Glaser emphasised, the goal of grounded theory is to generate theory, not to test it. Therefore an emergent process was required. There was only one possible source of primary data, and that was the utterances of the participants, so use of methods other than interview, such as participant observation, was precluded. However, methodological triangulation by proxy can be used *post hoc*, by comparing emergent concepts with findings elsewhere and references are made where appropriate in 7

Discussion.

Interdisciplinary triangulation was obtained to some extent by interviewing people from a number of disciplines, e.g., engineering, finance, environmental science. As well, the background of the researcher is not grounded in a particular academic discipline.

Silverman (1993) cast doubt on the value of triangulation in social research because it required the consideration of data gathered in different contexts. Apart from the checking of independently verifiable material like times and historical events, and the accuracy of transcription, the only triangulation used has been the use of different perspectives on the change process, gathered as far as possible in similar contexts and from people who experienced the change initiative in much the same temporal and partially the same spatial context, and the limited use of a survey conducted within the organisation soon after the Research interviews were completed.

4.5.2 *Inter rater reliability*

Inter rater reliability checking (King, 1994) was not considered appropriate for the same reasons that investigator and theory triangulation were rejected, i.e., there is the possibility that people who had not participated in the interview process would code the data differently to the interviewer, who in turn may well consider such interpretations to be inappropriate. If the research reporting is sufficiently transparent, so that the processes and emergent thinking are clear to readers, it is contended that *inter rater* reliability checking should be redundant. There is no requirement for qualitative research to be replicable and in a changing world this would be impossible. The best that can be done is make the processes available for inspection (Marshall and Rossman, 1995).

4.5.3 *Participant checking*

The interview process captures views at one point in time and analysis relies on the interpretation of researcher. Participant checking as advocated by some authors, e.g., Miles (1983), may be useful if the interviewer is relying on note-taking to record the interview, particularly if there is doubt about factual information or about just what was said. However, where the interview is recorded by audio tape and transcribed, the researcher can check what was said without referring to participants after the interview. As well, by taping, the interviewer can concentrate on assisting the interviewee develop his or her views rather trying to interpret on the spot for note-taking, a procedure which carries the risk of influencing the interviewee towards or against the researcher's interpretations.

Allowing the interviewee the opportunity to revise the information subsequently will not necessarily result in better information, because:

- the participant's view may have been changed by subsequent events

- the participant may have provided baseline data as a result of trust built up in the interview process, only to rethink later and try to replace it with properline or interpreted data or vaguing out (*cf. 5.2.2.1 Researcher and participant integrity*).

Glaser (2003) was dismissive of techniques like participant checking, on the grounds that grounded theory was not description and therefore did not have to aim at accuracy. Rather, it was conceptualisation and the product was abstractions that transcended the data.

4.5.4 Audit trail

Whiteley (2002) stressed the importance of an audit trail, to show the systematic development of the research. Emergence of concepts could be tracked by use of software package such as NVivo, while cognitive maps, also called mind-maps, could be used to show how categories were connected and concepts were developed (*ibid.*).

Morse et al. (2002) were less enthusiastic about the use of audit trails, pointing out that they provided evidence that decisions were made, but contributed little to the quality of the decisions, nor to the rationale or theoretical sensitivity of the researcher.

Audit trail records for the thesis are listed in *5.5 Audit trail*.

4.5.5 Issues of rigour in grounded theory

Issues of rigour considered so far have been applicable to most qualitative research. However, there are particular issues concerning grounded theory.

4.5.5.1 Side-stepping the issue of rigour

Silverman (1993) was of the opinion that grounded theory researchers side-stepped the issue of validity because of their emphasis on generating categories and theory, with little interest in testing of the theory.

For Glaser, this was not an issue – he would agree. The purpose of grounded theory was not to produce accurate description but to generate conceptual theory to account for a pattern of behaviour (Glaser, 1978, 2003). Concepts are grounded, not proven but merely suggested (Goulding, 2002). It is for others to test the theory if they wish. Glaser (1978, p4-5, 1998, p17) listed criteria for good grounded theory:

- Fit: because concepts are generated direct from the data, rather than trying to fit data to pre-conceived concepts, theories that fit will emerge from the data as constant comparison progresses and patterns emerge.
- Relevance: by using grounded theory processes, and doing away with what he calls “theoretical capitalism”, relevance is automatic. Emergent concepts that relate to “the true issues of participants” emerge with fit.
- Work: the concepts and theories should be seen to be what Locke (Locke, 2001, p59) calls “pragmatically useful.”
- Modifiability: There is no such thing as a “wrong theory”. Data, rather than be forced by the theory, modifies it when appropriate. The literature review may also modify the theory. Subsequent data may further modify the theory. Transferability to other areas is attained by modifying the theory for its new context.

Locke (2001) added to these criteria the need for a lot of and a variety of data that allowed for comparisons that created rich and generalised categories. She also listed the importance of writing practices that made clear how the concepts had been developed. “Readers must be able to imagine the observations and particular situation that pointed to the theoretical categories” (ibid. p 60).

Goulding (2002) summarised this by citing Glaser’s (1978) assertion that integration of the theory, and its relevance and workability, were the basis of its credibility.

Glaser (2003) was particularly scathing about what he called the quest for “worrisome accuracy” in qualitative data analysis. He saw grounded theory as distinct from qualitative research, because its goal was conceptualisation rather than description, and as a result, the validity criteria applied to qualitative work were not applicable to grounded theory work.

Glaser would have us accept that the rigour, validity and reliability criteria that are applicable to other types of inquiry are not necessary for grounded theory. Rigour would appear to be a matter of following the constant comparison processes and ensuring transparency of reporting, which, if done well, should ensure fit, relevance and usefulness. The question is whether this is sufficient.

The domain of a grounded theory study is the concepts and theories that emerge, i.e., transitive and situated in the real, but grounded in and explanatory of the physical

(actual and empirical) domains and restricted to the area or case under study. Extension of theory to other areas (transferability) is a question of relevance and pragmatic usefulness.

Assessment of the transferability of outcomes of a grounded theory is necessarily *post hoc*. If a theory is found to be irrelevant or useless, it is too late for the process to be adjusted. It is just a poor theory, but it may be modifiable by other data.

4.5.5.2 Transparency

However, the grounded theory adaptation here is subject to Glaser's "theoretical capitalism" – it has been presented in a theoretical perspective, that, while not conceived at the outset of the research, emerged and evolved during the study. Part of the world view framework developed for the thesis is that not all understandings are equally tolerated (*cf. 3.4 Limits of knowledge*). The more objective the knowledge, the robust it will be.

It has been seen that knowledge requires a relationship between a person and what is known (*cf. 3.6.1 Objectivity and subjectivity*). Understanding is subjective.

Grounded theory depends on the theoretical sensitivity of the researcher, a subjective quality, so that for knowledge to be shared with and understood by others, they need to be provided with insight into how categories and concepts are arrived at. The researcher should seek to make clear the reasoning and interpretations that lead to the emergence of theoretical concepts and hypotheses, in order that others can ascertain whether the process is sound – whether or not they agree with the outcomes, which are a matter of perspective. Following accepted rigour, validity and reliability criteria may help achieve acceptance because, if the process is widely accepted as sound, the knowledge will be considered more objective than less comprehensible procedures. As seen above, Locke has stressed the importance of good writing practice in achieving this (see also *6 Findings*).

It is important that the illustrations of process are not construed as any kind of proof Glaser (1978), but as a demonstration that the methods used and interpretations are a reasonable way of arriving at the conclusions, consistent with the theoretical assumptions of the methodology.

4.6 Summary of methodology

The grounded theory approach was chosen for this study because it provided a means of allowing theory to emerge as far as possible independent of preconceptions and of the part of the body of previous literature that may have been considered to be less than impartial. Grounded theory was adapted for the purposes of this research by the necessary identification of an area of study in advance and the approach of the Glaser school was preferred because it was a simpler process than that developed by Strauss and Corbin. A further adaptation, with regard to sampling, is explained in *5.1.3 Sample*.

The approach was shown to fit the world view developed for this thesis, in the type of knowledge that was being sought, through drawing on different perspectives for data and in its objectivist nature.

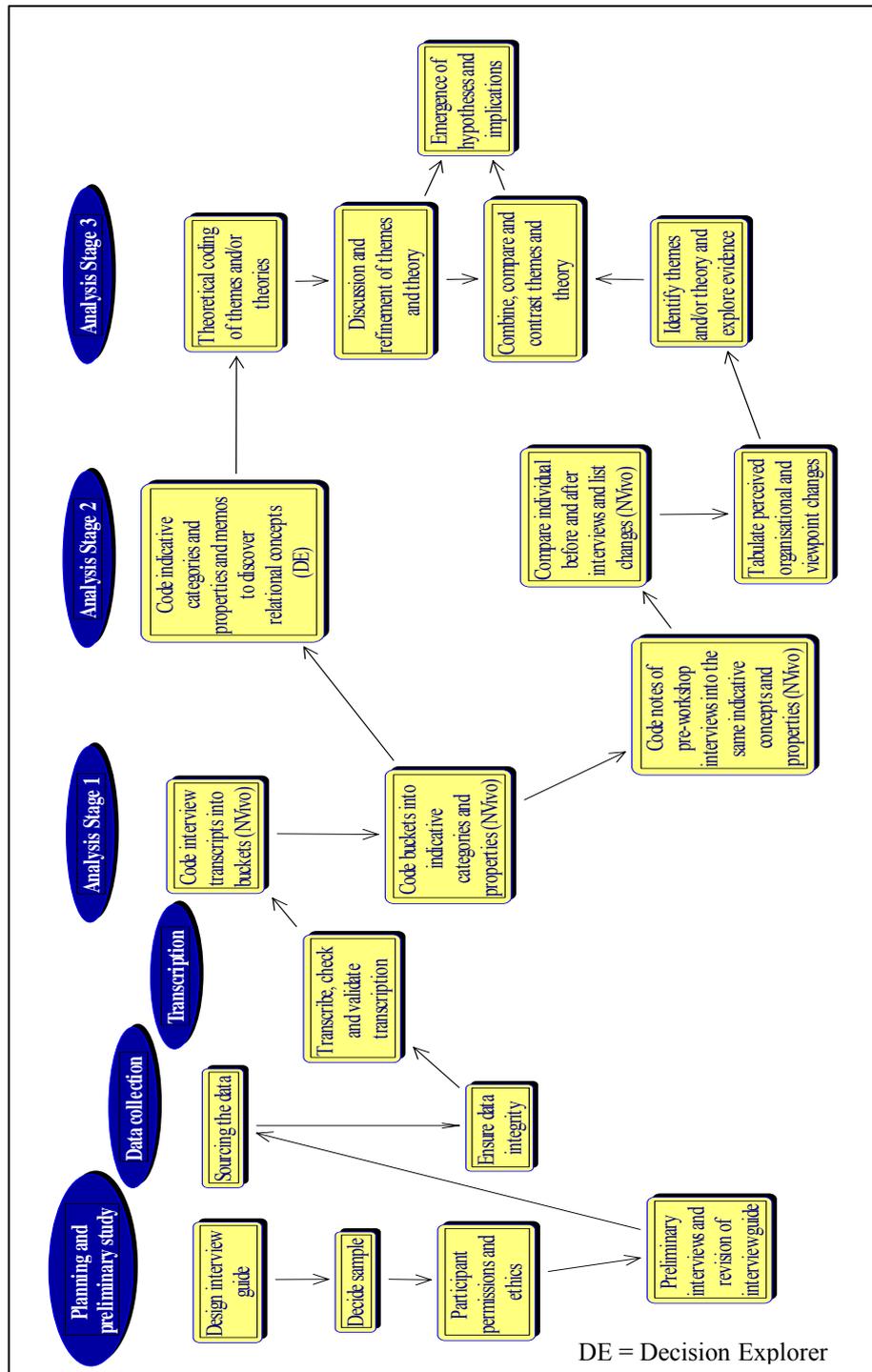
The next chapter describes the way in which the methodology developed in this chapter was translated into a research design.

5 Research Design

This chapter describes the research process in detail, setting out the research design and a step-by-step account of the method. Specific issues related to the use of retrospective data, data collection and the integrity of the data are discussed.

The chapter follows the path of the research design, which is set out in *Figure 5.1*.

Figure 5.1 Research design



Note
For simplicity, the research design is presented in a linear form. Each step could not have been performed without its predecessors. However, the process was iterative and this is shown in *Figure 5.5 The iterative process of constant comparison*.

5.1 Planning and preliminary study

5.1.1 Designing the interview guide

The purpose of the interview guide was to encourage the participants to provide data, much of which was their opinions and tacit knowledge. How it was designed would have a direct effect on the quality of the data gathered. For concepts and theory to emerge for grounded theory, data must be collected without, as far as possible, influence from an intermediary. Glaser (1992) stated that the issue for research, as well as the theory, would emerge through the constant comparison process.

However, forcing of the data (*cf. 4.3 Theoretical perspective and grounded theory*) could begin at the interview stage if the interviewer placed his or her interpretation or framework on the proceedings too early.

The ideal structure for this type of emergence is the unstructured interview, where the interview progress and direction is set by the interviewee. However, as discussed in *4.2 Adaptation of grounded theory*, grounded theory procedures are also used when an issue has already been identified – in this case the relationship between scenario planning and organisational change. Several research questions had been developed to help explore the relationship and the interview guide was designed to assist understanding in the areas of those questions.

Therefore a semi-structured questionnaire design was selected, because this enabled the interviewer to influence the topics and direction of the discourse while having minimal effect on the content of the emerging data. The interview guide was constructed in five parts: introduction and the scenario planning process (questions 1 and 2); changes (question 3); effects (questions 4, 5 and 6); questions relating to the scenario planning focal issue (questions 7 and 8); and any other matters (question 9). The questions in the final interview guide and the purpose of each one are shown in *Figure 5.2 Interview guide*.

The purpose of the questions was to initiate a conversation and provide some structure to it. From the preliminary study it was learned that the questions should be comprehensive with respect to an area of interest, so that the conversation did not become repetitive. In some cases, double questions were used to ensure adequate inclusiveness.

Figure 5.2 Interview guide

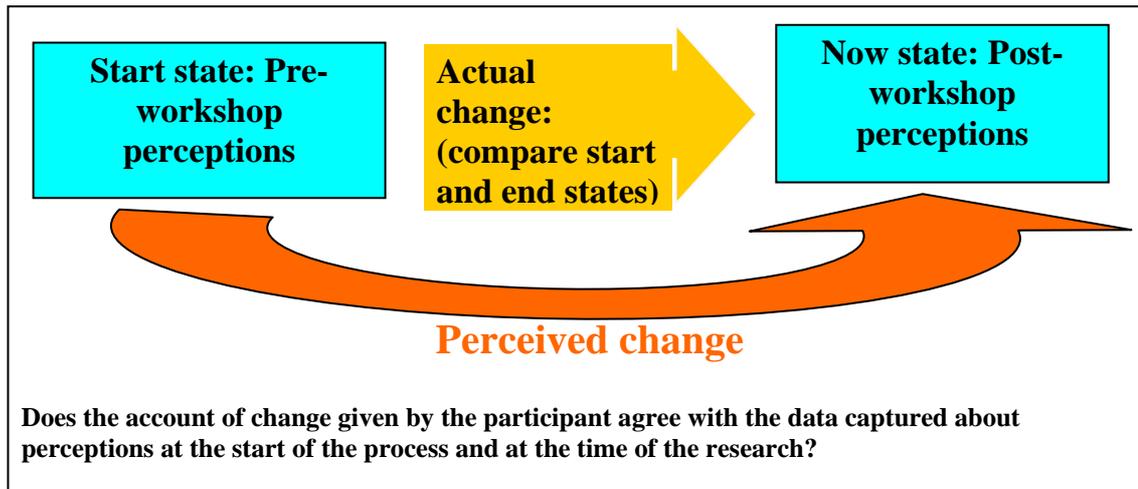
Question	Purpose		
<p>1. First, would you tell me what in your view is meant by the term “scenario planning” and after that tell me about your involvement in the scenario planning process that was undertaken in your organisation.</p>	<p>Q1. All interviewees To qualify understanding of scenario planning and record interviewee’s perception of his/her part in it.</p>		
<p>2. I’d like to discuss the effect that the scenario planning project has had on the organisation and then on you personally. Could we start by discussing what in your opinion were the reasons the organisation chose to do scenario planning?</p>	<p>Q2. All interviewees Outlines what the interview is about and identifies interviewee’s perception of the objectives of the scenario planning project.</p>		
<p>3. In your opinion, what changes – of any kind - have taken place in the organisation that are attributable in any way to scenario planning?</p>	<p>Q3. All interviewees Interviewee’s perceptions or recollections of change. Focuses on process of events from workshop to now.</p>		
<p>3a. I have here a list of specific areas. Can you tell me as I read them out about any changes that have taken place in the area in the last 12-15 months? (List – (see 5.2.1 <i>Data sources</i>), plus “your particular area”)</p>	<table border="0"> <tr> <td> <p>Q3a. Workshop and interviewed participants Focuses on areas (usually four) that interviewee discussed in pre-workshop interview, to ascertain perceptions of change that can be compared with pre-workshop and other groups.</p> </td> <td> <p>Q3a. Focus group participants Focuses on four broad areas that were frequently mentioned in pre-work shop interviews. Group’s perceptions can be compared with other groups if appropriate, but not with pre-workshop.</p> </td> </tr> </table>	<p>Q3a. Workshop and interviewed participants Focuses on areas (usually four) that interviewee discussed in pre-workshop interview, to ascertain perceptions of change that can be compared with pre-workshop and other groups.</p>	<p>Q3a. Focus group participants Focuses on four broad areas that were frequently mentioned in pre-work shop interviews. Group’s perceptions can be compared with other groups if appropriate, but not with pre-workshop.</p>
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<p>4. Were there any effects you did not expect? If so, what were they?</p>	<p>Q.4 All interviewees Explores unexpected effects because of the possibility they may have triggered a change of mind-set.</p>		
<p>5. Were there any adverse effects you have not mentioned yet? If so, what were they?</p>	<p>Q5. All interviewees To ensure reticent participants did not overlook negative effects (e.g., for fear of offending interviewer).</p>		

<p>6. What difference has participating in scenario planning made to the way you personally approach your work?</p> <p>7. How do you envisage the Water Corporation responding over the next nine years to changes in competition and customer expectations?</p> <p>8. With regard to those changes, please tell me about any organisational strengths or other positive factors that you think might affect the Corporation's response and any constraints or limitations that might limit its response.</p> <p>9. Is there anything else about the scenario planning process undertaken in your organisation that you would like to discuss?</p>	<p>Q6. All interviewees To indicate whether any claimed mindset change was actioned.</p> <p>Q7 & 8. Workshop and interviewed participants Both questions directly relate to two questions in pre-workshop interview, for direct comparison.</p> <p>Q7 & 8. Focus group interviewees Answers provide basis for comparison with other groups if required.</p> <p>Q9. All interviewees Chance to mention anything so far not discussed.</p>
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The interview guide was designed to provide two classes of primary data: participants' accounts of changes that had taken place since the workshops and data collected specifically for direct comparison with the pre-workshop interviews. Notes from the pre-workshop interviews were the third source of primary data.

The intention was to make it possible to ascertain similarities and differences between the perceptions of the participants at the beginning of the scenario planning process and their perceptions on the same subjects at the time of this research ("actual change"). These similarities and differences could then be compared with the accounts the participants gave of changes in the intervening interval ("perceived change"). This is illustrated in *Figure 5.3*.

Figure 5.3 Comparing perceived change with the Before and After analysis



5.1.2 Preliminary study

A preliminary study was conducted from May to July 2002. The study was carried at the Central Metropolitan TAFE in Perth, Western Australia, where SPARU had facilitated a scenario planning project several years before.

The TAFE participants reported that in their view the project had stimulated significant specific organisational changes as well as a cultural shift and an ongoing strategic conversation. However, the primary purpose of the preliminary study was to test the adequacy of all procedures, including introductory letters and consent forms, the interview guide, interview techniques and equipment, transcription techniques and NVivo analysis of data. Although it had been intended to interview three people for the preliminary study, the procedures were found to work well enough during the second one, after some minor adjustments resulting from the first interview, and the third interview did not proceed. Some of these adjustments are described here as they may be of use to other researchers in similar circumstances.

There were minor adjustments to the interview guide. In the experience of the researcher, an important factor in the construction of semi-structured questions or interview guides is in avoiding a structure and wording that results in repetition in the interviewee's replies. Participants can become irritated if the interview structure leads them into repetition, and this can detract from the quality of the conversation. In the first interview, the first two questions asked produced a repetition, with the interviewee at least partly answering question 2 in the course of discussing question 1. Although the semi-structured interview is not dependant on a formal questioning

sequence and immutable phraseology, a partial answer to a question that appears subsequently in the interview guide may leave the interviewer in a quandary whether to then ask the subsequent question, knowing some of the answer will be repetitious, or omit the question, and possibly miss some useful data.

In this case, the two questions were redesigned into a single two-part question that was still short enough to be manageable but which enabled the interviewee to discuss the area of interest adequately.

Other minor difficulties such as timing of switching on the tape recorder so that the initial acknowledgement by the interviewee of consent for the recording was captured in full were discovered and rectified.

The major difficulty was in transcription. The plan was to use speech recognition software to transcribe the interview recording, by dictating a playback of the interview while listening to it through headphones. The initial attempt at this ended in frustration, because of the very high error rate. It appeared the changing pace of the dictation as the researcher followed the interviewee's conversation and the vocabulary and grammar of conversational English were beyond the capabilities of the Microsoft Office XP software originally used.

Consequently, Dragon NaturallySpeaking 6 Standard software was purchased. This proved to be a considerable improvement, and the program was better able to adapt to changing pronunciation and new words. Although the error rate was still high, it was felt that the method was worth proceeding with - although this would not have been the decision had the researcher been a more competent typist!

The preliminary study also provided a valuable learning process and trial for NVivo software. The researcher was familiar with the NUD*IST program from the same software house, but had not previously used NVivo.

5.1.3 Sample

Initially, verbal consent for the project was received through discussion with the organisation. Next a list of potential participants was drawn up in co-operation with the organisation. This consisted of all the Water Corporation staff who had been interviewed prior to the Scenario Thinking workshops and were still with the organisation, all who had participated in either or both of the Scenario Thinking workshops, and a selection of people who had been involved in focus groups (*cf.*

1.5.3.1 *Scenario thinking*). The participants from focus groups were selected by the organisation, based on their participation in and knowledge of the process.

The participation in the Scenario Thinking project of the 34 people in the sample was:

- Interviewed and attended both workshops: 13
- Interviewed and attended second workshop: 3
- Interviewed and attended no workshop: 7
- Focus group and attended second workshop: 6
- Focus group and attended no workshop: 4
- Other (included for expertise) 1

Only one person (not included above) who had agreed to participate in the research was unable to be interviewed in the time frame available, due to other commitments.

Because the focus of the research was on the perceptions of the people who were working with the organisational change, it was inappropriate to conduct interviews with people who had participated in the scenario planning process that were from outside the organisation or from the Board, and therefore not involved as operatives.

The sampling procedure is a departure from the sampling techniques for grounded theory described by both Glaser (1998) and Strauss & Corbin (1990), in which data collection becomes progressively purposive as categories and paradigms begin to emerge from the analysis and coding becomes more relational. Sampling and coding continues to saturation, i.e., when no new data are appearing and the relationships between categories are well established (Strauss and Corbin, 1990). Glaser (1998) maintained that there was little point in collecting and coding data that was not relevant. Becker (1993) distinguished between selective sampling and theoretical sampling. Only a form of selective sampling was possible here, and that was performed not by the researcher but by the organisation in selecting participants from the focus group members.

There were two main areas where the circumstances of the research led the researcher to depart from the sampling techniques. First, the sample size was dictated not by theoretical saturation but by the ability to interview practically all participants. At the outset it was decided that even if theoretical saturation was reached, the interviews would continue, in order that all participants in the scenario

planning process were able to contribute to the research. This was backed by the organisation itself, because it would maintain compatibility with the idea in scenario planning that participants in organisational change should feel the change belonged to them - which would not be the case for any who did not take part.

Secondly, it was surmised that the data base had the potential to serve other research purposes. So, rather than coding solely to emerging theory, it was decided that initial coding would cover practically all the data, to provide a data base for future work. As well, Perakyla (1997) has maintained that a large data base has advantages because the analysis process is inductive, and the researcher may not know what to focus on (which was the case at the outset of this inquiry). There is the possibility that some data may occur infrequently or not be focussed on, so that data which could be important to the inquiry is lost. The first three iterations in the analysis covered all the data.

5.1.4 Participant consent and ethics

Once the sample had been determined, a letter was written to all potential participants. This set out the details of the study and included confidentiality provisions and a request for their participation in a recorded interview, and, where applicable, permission for the notes from their pre-workshop interviews to be used as part of the research. A written consent form was attached to the letter, to be completed prior to the interview. As well, a letter encouraging their support was e-mailed to each person from the senior manager who was deputising for the managing director at the time. The letter was followed up by a telephone call to each participant, to provide any further explanation of the research and what would be required from the participant, and to set an appointment for interview. All potential participants gave their consent. Verbal consent was also recorded in the transcription tape at the start of each interview, a procedure that was intended to provide evidence of consent in case for some reason a consent form was not received.

To ensure anonymity, each interview was given a code number, with which it was labelled immediately on completion of the interview. The audio recording and transcript are identifiable only by that code, the key to which is held solely by the researcher in a password protected computer file. The researcher has also taken care that quotations from transcripts cannot be linked back to their source because of

context or content. In accordance with the Curtin University of Technology *Code of conduct for the responsible practice of research*, the transcripts have been stored electronically under password protection and the cassettes of recorded interviews have been stored in a secure place.

5.2 Data collection

5.2.1 Data sources

As the source for the pre-workshop data, the organisation agreed to make available, subject to the permission of the individual participants, the notes that were taken by the SPARU during interviews conducted prior to the organisation's first scenario building workshop. The purpose of these interviews had been to discover key factors pertaining to the key or strategic issue for the planning process (Water Corporation, 2001). They were used in the research for this thesis as the base from which to establish changes in participants' attitudes and ideas in the period following the completion of the final report after the second scenario planning workshop. The questionnaire used by SPARU appears in *Appendix 5 Documentation*.

The presence of data to compare with the pre-workshop interviews for every interviewee was ensured by asking in the Research interviews about some of the same information as had been discussed in the earlier interviews. This was achieved through Question 3a in the interview guide (*cf. Figure 5.2 The interview guide*). The subject matter was selected from the notes of the pre-workshop interview on the basis of what the participant had appeared to talk most about and/or in which he or she appeared most interested. By asking about changes in that area, it was intended that the participant be encouraged to talk about the state of affairs and their views on the same issue at the later time.

The topics chosen were a matter of interpretation by the researcher of notes taken by a third party (the SPARU interviewer). As in all such cases, other interpretations may have been possible, but this was not considered important, because all that was required was the discovery of a few topics suitable for later comparative analysis for the participant to discuss in the second interview. In this way, it was ensured that every interview provided at least some comparative information, regardless of whether or not the interviewee raised other matters that had also been discussed earlier. The intention was to analyse the answers from the two interviews for each individual and compare ideas and attitudes in each. The interviewees were not told

that these items had been inserted for this purpose, as this could have led to them asking what they had said earlier and potentially have influenced their responses.

Participants' accounts of changes in the organisation and in their personal approach to their work were asked for by direct questioning in the course of the interview.

Data collection was carried out over a period of three months. This was appropriate to the grounded research method because coding was commenced while interviewing was still in progress, in order that any early emergent concepts or theories could be further investigated in later interviews (Glaser, 1998).

5.2.2 Data integrity

5.2.2.1 Researcher and participant integrity

Data has no intrinsic value on its own: "all is data" (Glaser, 2001, p145). Its qualities - properties such as applicability, accuracy, dependability, plausibility - are a matter of interpretation by the researcher(s) and others who read the research outcomes. Silverman (1993) borrowed from interactionism the concept of interview data as displays of perspectives or moral forms rather than as true or false reports of reality. The conclusion from this is that all data may be admissible. But, if this is the case, it needs to be considered whether the validity of the research could be affected by lack of data integrity, which could originate from either interviewees or the researcher.

The integrity of some of the data can be checked by looking for corroborating evidence and for inconsistent and conflicting evidence, which may have been fabricated, misinterpreted or even discounted, perhaps from the researcher or the participant following his or her own interests or agenda (Dey, 1993), but because the data mainly consist of the perceptions, tacit knowledge and opinions of the interviewees, the capacity to check is limited. The ethical code of the research community is one check to acceptance of unreliable data, and so to is the fear of being found out. One technique for checking the integrity of research is replication, but this is not possible in social research: the factors are sensitive to time and place (i.e., to the critical realist concepts of perspective and dynamic reality discussed in 3 *Theoretical perspective*). Instead a proxy of internal replication is needed, i.e., the procedures can be inspected (Dey, *ibid.*). This notion of transparency is discussed 4.5.5.2 *Transparency* and the method described here has been designed for transparency of process.

Discussing data integrity, Glaser (1998) has identified four types of data that may emerge in the course of an interview:

- *Baseline*: The best description a participant can offer. (This is analogous to Argyris's theory-in-use) (cf. 2.11.5.2 *Changing basic assumptions*).
- *Properline*: What the participant thinks it is proper to tell the researcher. (This is analogous to Argyris's espoused theory).
- *Interpreted*: What is told by a professional to make others see the data his professional way, despite the fact that it alters the normal way of seeing it.
- *Vaguing out*: There is no stake for the participant in telling the researcher anything, or it is considered none of the researcher's business, so the participant gives uninformative replies, that Glaser called vagueries.

It is likely that an interview would contain a mix of these types, and it would be an impossible task for a researcher to classify them through a whole interview, even using the checks suggested by Dey (ibid.). However, this need not devalue the data. In the critical realist-based paradigm that has been adopted in this thesis, all data types represent different perspectives and can add to understanding. Glaser (ibid.) was adamant that no matter what type of data was being obtained, it must be allowed to emerge and its meaning must be induced, even if the researcher didn't like it. All types of data can be conceptual or factual, or, more likely, a mix of the two. Secondary analysis of other data sources can also add to understanding and theory building. Grounded theory, according to Glaser, is not about facts, but about concept and theory building (Glaser, 2001).

In this thesis, identifiable historical events such as those chronicled in 1.5.1 *Description of the organisation* have been treated as fact, but interpretations and accounts of them are perceptions and could be subject to re-interpretation at different times and from different perspectives or world views. In taking this stance, it was decided that, unless there was compelling evidence that it was spurious, all data would be accepted for analysis (See also 4.5.1 *Triangulation*).

5.2.2.2 *Retrospective data*

The aim of the research design was to enable collection and analysis of relevant data about experience with scenario planning and the change process, from the perspective of the people in the organisation who had been involved in the process. The Company One 2010 change process was largely in the past by the time of the

interviews, although some facets of implementation were still ongoing. Much of the data was retrospective and the information tacit.

There are issues that methods for collection and analysis of retrospective data need to address. Retrospective data are based on second-hand accounts, in contrast to the direct experience by the researcher that is approximated by the participant observation used in, e.g., symbolic interactionism (Partington, 2000). In some cases, where the interviewee has not directly observed the event, the experience may be third-hand or even more remote (which in critical realist terms, is in the actual domain). This is a source of potential distortion.

Some of the issues that are specific to retrospective data are:

- *Memory reliability*: Memory may not be reliable, often tailing off quite quickly, then more gradually (Baddeley, 1979, Hindley, 1979).
- *Interpretation*: Remembering is a reconstructive process. It is affected by people's assumptions and beliefs, so that people will often recall their interpretation of an incident rather than what they literally saw (Baddeley, 1979). Subsequent events or influences can distort memory of what happened, and, as goals and projects alter, so perceived meanings can change (Weick, 1995).
- *Expectations*: Memory may be affected by how the expectations of the person were realised by the outcome of a data incident or process (Baddeley, 1979, Hindley, 1979).
- *Position*: The participant needs to have been in a position to observe and have paid sufficient attention to be able to talk meaningfully about the research subject (Hindley, 1979).

The problem for the interpretive researcher may often be in choosing which of many possible meanings in the data are to be used in sense-making (Weick, 1995), an issue which is compatible with both the Glaser's concept of purposive sampling (Glaser, 1992) and the world view explained in *3 Theoretical perspective*.

5.2.2.3 Interviewing

In addition to the issues with respect to retrospective data, there are other matters that need to be addressed with the interviewing process, in particular:

- *Phrasing of questions* (Hindley, 1979) can affect the way the interviewee responds.
- *Contextual effects*, such as the interpretation of paralinguistics, e.g., gesticulation, tone of voice, the spatial relationship of the people in the room, gender, relative status and timing (both of the interview appointment and of the way the questions are timed in the interview), can also affect the meaning of data that were gathered (Whiteley et al., 1998).
- *Discounting evidence*: The researcher's biases and pre-existing beliefs can lead to data that don't suit being omitted (Dey, 1993), e.g., because appropriate follow-up questions are not asked during the interview or notes are incomplete.

5.2.2.4 Addressing retrospective data and interviewing issues

The following techniques were used to address the retrospective data and interviewing issues.

Memory reliability:

- The collection of the two classes of primary data (*cf. 5.1.1 Designing the interview guide*) was intended to give an indication of memory reliability with respect to the change processes, by allowing a comparison of changes indicated by the Before and After data with participants' accounts of what had changed.
- Collection of data from nearly all the participants in the scenario planning process allowed for data triangulation through constant comparison, i.e., checking for consistency.
- Some secondary data sources were also collected, which could be compared with primary data as appropriate. These included Water Corporation annual reports, results of an internal survey conducted soon after the Research interviews and documents describing the new purpose and direction, at that time in draft form.
- The interview guide was planned to allow for follow-up questions to prompt the memory of the participant, as the researcher thought appropriate. Questions were framed to avoid leading by using phrasing like "Could you tell me more about..."

- A direct question was asked to evaluate participants' recall of the scenario planning process. This was question 1, which was intended to qualify the participants' retrospective memory of the scenario planning process, as well as to begin the interview with a question that required a response that was more substantive and than interpretative: such questions, in the experience of the researcher, are usually easier to answer and as such would enable the participant to begin to feel more at ease.

Interpretation:

Participants' interpretations of the organisational change initiative, at the time of the interviews, were the data that was sought, including any distortions. All data were captured, with no attempt to correct any statements, even if at the time of the interview they did not appear to fit the researcher's understanding, which, as expected in the grounded theory methodology, developed as the research progressed.

Expectations:

As for interpretation, the data sought were the perceptions of the participants, regardless of influences. Where it seemed that the interviewee's comments may have been influenced by or tailored to what he or she thought was expected by the interviewer, e.g., about the scenario planning process, follow-up questions were used to qualify the nature of the expectations and any bias resulting from the outcomes differing from expectations. In addition, Question 5 (*cf. Figure 5.2 Interview guide*) was specifically designed to identify any negative perceptions.

Position:

It was comparatively easy to gauge to what extent the participants were in a position to provide data because their history of contact with the scenario planning project was known. In addition, the first question in the interview guide was designed to qualify the participants' present position by establishing their recollection of scenario planning.

Phrasing:

The researcher has long experience in interviewing and in phrasing questions that are clear to interviewees and avoid leading them (*cf. 1.5.5 The researcher*). The semi-structured interview format was used to encourage the interviewees to express their opinions and experiences with a minimum of guidance from the interviewer, to reduce the possibility of interviewer influence.

Contextual:

Paralinguistics such as tone of voice and gesticulation on the part of the interviewee can affect the meaning of what is being said and need to be recorded where relevant as part of the data capture. How the interviewer behaves can also affect the quality and nature of the data gathered. The interviewer was careful to allow the interviewee plenty of time to complete answers without interruption.

To minimise paralinguistic effects, interviews were carried out in locations that were as standard as possible. All interviews were conducted at the organisation's premises, either in the office of the interviewee or in a familiar meeting room of his or her choice. The interviewer sat in the same position vis a vis the interviewee wherever possible, i.e., seated at a table and at right angles to the interviewee. This was not feasible in some office interviews. Proximity to the interviewee was a mix of what was practicable and what appeared comfortable to the interviewee. The cassette machine for recording the interview was placed on a table between the interviewer and interviewee with a tape sufficient to capture the entire interview in most cases, and therefore avoid interruption of the flow of conversation while a tape was being changed. The time set aside for the interview was discussed in advance and where the interviewee indicated a time constraint, this was adhered to, with reference to the time during the interview to ensure the interviewee was aware that the interviewer had the timing under control and to prevent time pressure affecting the quality of the data. Timing of interview appointments was mutually agreed and postponements accepted if necessary, to minimise timing inconveniencing the interviewee.

A particular issue of status arose because of the researcher's employment with SPARU. There seemed a possibility that because of this participants could have perceived the researcher to have been associated with the scenario planning process. As well, there was the possibility they would have assumed the researcher would be positively disposed towards scenario planning as a method. They might then have been inclined to discuss only positive aspects of the scenario planning process, for fear of offending the researcher. To try to overcome any reticence to mention negative aspects, participants were asked directly about adverse effects (Question 5, *cf. Figure 5.2 Interview Guide*).

Issues of relative status and gender may to some extent be handled through the sensitivity of the interviewer to the issues, but by its nature, this is a matter that is very subjective and non-transparent. The researcher relied on his long experience to minimise any effect on the data.

Data was collected once, at the time of interview, at one place and time. No opportunity was given to participants to review the transcripts or to provide any sort of later feedback until the completion of the thesis. This is commensurate with Glaser's (2002) insistence that the theory transcends the viewpoints of any of the participants, and with the critical realist paradigm, in which perspectives will change with time and new experience, so that viewpoints may have changed by the time of participant review, which could invalidate any checking.

Discounting evidence:

The semi-structured interview format encouraged interviewees to expound their views fully. The interviews were recorded on tape in full, to prevent loss of data. Notes were taken during the interview of any non-verbal events that may have affected the meaning of what was said. All interviews were conducted face-to-face, because this enabled better appreciation of innuendo and unspoken meanings than a telephone conversation. The researcher began with no preconceived ideas of the direction the research might take, and was careful to avoid allowing early apparent directions delimiting later evidence that, if allowed to emerge freely, could either reinforce or contradict earlier impressions.

Transcription

Consistent with the approach taken to sampling (*cf. 5.1.3 Sample*), all the data was transcribed and no attempt was made to identify themes or theory to limit the amount of data to be transcribed. Instead the researcher's approach was to capture all the data, creating a data base with the flexibility to be used not only for this but also for other potential research in the future, even though this was more time-consuming at this stage. Transcription commenced as soon as possible after each interview. Some ideas about possible themes were noted as temporary memos at this stage, for exploration in the continuing interviews (Glaser, 1998). However, the main effort was concentrated on achieving accuracy of transcription.

Of the 34 completed interviews, 12 were transcribed by the researcher using speech recognition software, as described in *5.1.2 Preliminary study*. The remainder were transcribed by a professional secretarial service due to time constraints.

The error rate in both transcription methods was quite high. Two correction runs were made for all interviews, listening to the tapes again. The first was the main correction run and the second to check that the corrections had all been made.

Where a comment on the tape could not be deciphered, this was noted, but it was rare. All correcting was performed by the researcher, who had also conducted all the interviews and was therefore familiar with the context and what had been said.

Once the researcher was satisfied that all corrections had been made, as a final check a professional secretary was asked to select any four of the tapes and to listen to any parts of them to verify the accuracy of the transcription. Her report appears in *Appendix 5 Documentation*.

5.3 Analysis Stage 1

The primary research tool in this stage was the NVivo qualitative analysis software package, version 2, which enables emergent categories or concepts to be coded, i.e., grouped, as what are termed “nodes” for analysis.

The analysis is the interpretation of the data. The first stage of it may be thought of as an exploration of what the participants were saying, with the output a conceptual data base. In the second stage theoretical concepts emerge.

Because theoretical sampling was unable to be undertaken, there was no opportunity to seek further empirical evidence by additional sampling as theory emerged.

The data that were sought were the tacit ideas and opinions of the participants, so the unit of analysis was the expressed idea or perception. In grounded theory, whether the analysis is done line by line, in sentences or paragraphs or even entire documents, depends on the type of data collected, the skills of the data collector, the density of ideas in the data, and the kinds of interviews (Glaser, 1992). In this research, the size of unit of text that formed an expressed idea was entirely flexible, and ranged from a few words to several paragraphs constituting remarks by both researcher and participant. For Glaser (2003), theoretical concepts, which were latent patterns discovered through naming of categories and properties, were enduring and abstract of time, place and people. The subject of theory was

behaviours and patterns, not people. So it was appropriate that, after the initial open coding of individual interviews, subsequent iterations would consist of coding of the NVivo nodes, rather than individual transcripts. However, this was an iterative process, and interview transcripts and the audio recordings continued to be referred to throughout the analysis where context was needed to clarify meaning or new trains of thought arose.

For the initial open coding, the data was categorised into broad nodes that were termed “buckets” in this thesis. The question that was asked of the data was: “What, in broad terms, is the participant discussing here?” This first step was merely a way of organising the data into manageable groups of broadly similar subject matter for further analysis. No value distinctions were made within the buckets and the same or overlapping data could be coded into more than one bucket. The buckets were not intended to be permanent and held no importance beyond organising the data.

The buckets were then coded into categories that provided more detail about the perceptions of the participants. The question asked of the data was: “What in specific terms is being discussed here?”

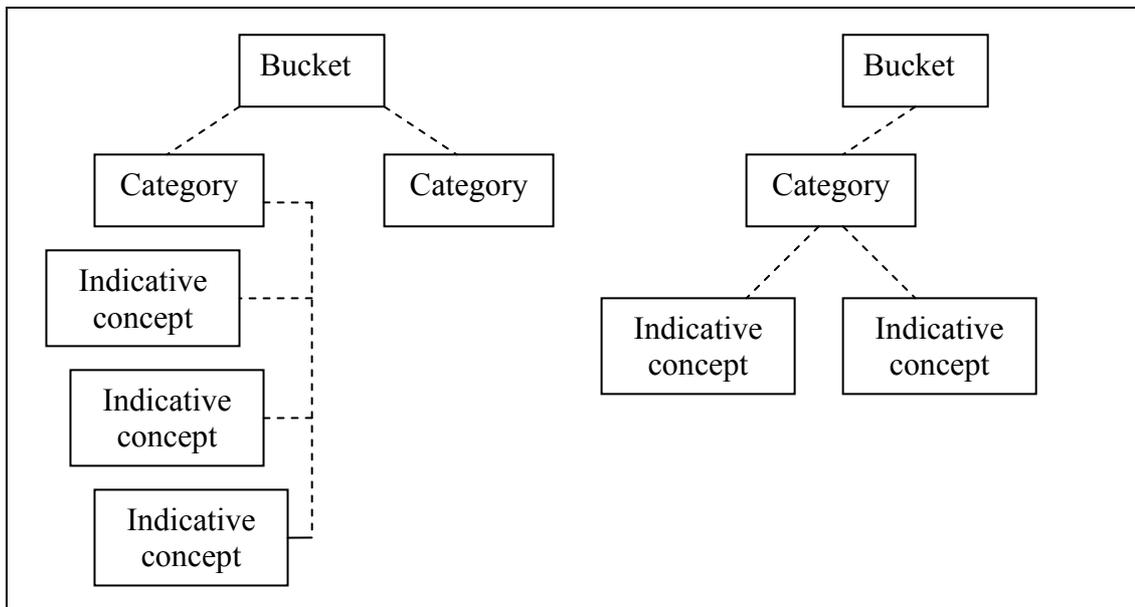
This was followed by a third iteration, which produced either properties of categories or sub-categories, with the question (now informed by memos and emerging concepts and themes): “What in this node needs to be coded in more detail to increase understanding.” Reasons for the need for more detail could include the presence of elements coded in a category that did not seem to fit, necessitating a new category, or the emergence of relationships of data as subcategories or properties. In both these iterations, the context of the phrase, sentence or paragraph(s) that constituted the unit of analysis were carefully considered, because of the importance of the context in establishing the meaning of what was said (Locke, 2001).

The contents of the categories were not necessarily consistent, because they were based on the different perspectives of the participants. Consequently they could not be designated descriptive, and for the same reason Glaser’s term “substantive” also seemed inapt, so they were termed indicative concepts. Indicative concepts were categories of perceptions that were a form of the data organised so that their relationship provided a structure to facilitate the further emergence of concepts and theory.

At the end of this phase, a data base of some 331 nodes of indicative concepts had been established. So far, the process had been largely one of data collection and sorting. But in qualitative research data are selected, not merely collected (Dey, 1993). In Analysis Stage 2, the coding became selective, i.e., purposive. However, the coding process was iterative, so some development of relational and theoretical concepts (see below), sometimes recorded as memos, was also taking place in the earlier phases and it was necessary in Analysis Stage 2 from time to time to refer back to or recode or amend coding of some of the data. These amendments were to remove duplications and some redundant coding, as well as reconceptualisation.

A model of the construction of part of the coding hierarchy at the end of Analysis Stage 1 is illustrated in *Figure 5.4 Analysis Stage 1 coding*.

Figure 5.4 Analysis Stage 1 coding



5.4 Analysis Stage 2

The second stage of the analysis was an exploration of the categories that emerged from Analysis Stage One. This proceeded in two parts: exploration of participants' perceptions of factors affecting the change process; and coding for the Before and After comparison. For the first part, the primary analysis tool was the Decision Explorer cognitive mapping and analysis software package, to which nodes from NVivo were transferred and developed. The purpose of the software was to assist the researcher in identifying links and relationships between ideas and perspectives. Decision Explorer maps are presented in *6 Findings* as an aid to transparency of

process. For the other part, the Before and After analysis, the NVivo software was used.

5.4.1 Exploration of the change process

This stage of the analysis was an interrogation of the data with specific questions.

The data questions could be sourced from:

- the interview guide where specific information was being sought, e.g., “What did the participant believe was meant by the term scenario planning?”
- emerging concepts, sourced from memos and constant comparison as the coding progressed.

The sourcing of questions from the interview guide may be seen as a departure from grounded theory practice, and open to criticism of forcing the data (Glaser, 1992). However, although the questions were directed at encouraging participants to talk about a specific topic, neither the interviewee nor the questions asked of the data were limited to these topics. In the analysis, the principle of emergence has been applied to the data and concepts, in that no hypothesis was tested, no preconceived ideas were brought to the analysis and no limitations were placed on the scope of the subject matter included in the analysis. Nevertheless, so that the areas where there was a departure from what Glaser would consider to be pure grounded theory procedure are transparent, the specific question asked of the data was recorded with the results to provide context for the findings (*cf. Appendix 2 Evidentiary quotes*). As coding progressed, it was expected that it would become more relational as concepts were developed and tendencies became apparent. These codes were therefore termed relational, because they concerned abstract conceptual relationships emerging from the data, in contrast to the more substantive indicative codes.

The data that was interrogated at the outset of Analysis Stage 2 consisted of the lowest level of nodes in the NVivo hierarchy shown in *Figure 5.4*, which were usually the sub-categories called indicative concepts. As previously explained, the Analysis Stage One buckets were discarded, because they were developed simply as a way of initially organising the raw data. For data interrogation purposes, categories were included only where the category was the lowest level of the hierarchy examined to ensure that there was no coding that was included in the lowest levels and then ignored. (When included in this way, they were also termed

indicative concepts). Discarding the hierarchical structure enabled the lowest levels to be placed into new groupings as it emerged that this was appropriate, and for building new theoretical concepts as they emerged from the Stage One indicative categories.

To ensure that the development of concepts was as transparent as possible, the NVivo coding that was used in Analysis Stage One was replaced by Decision Explorer maps in Analysis Stage Two. The maps, together with the accompanying text, were intended to allow readers to follow the thought process of the researcher in developing the core theoretical concepts without having to refer back to extensive coding of nodes.

As has been discussed, Glaser held that grounded theory was not description. The participant told what was going on and how to view it correctly his or her way, and adding the interviewer's interpretations to the recording of it "would be an unwarranted intrusion of the researcher" (Glaser, 2003, p169). The cataloguing of the participants' perceptions is what was achieved in Analysis Stage One.

However, grounded theory analysis is conceptualisation of the data provided by the participants, and the product of the process is abstractions that transcend limits of time place and people (Glaser, 2002). It does not have to aim at accuracy, but explores and theorises about the way the participant sees the world – a stance which critical realists could hardly dispute. An outcome of the exploration may be the emergence of patterns and theories which the individual participants themselves are not aware of. It is this theoretical conceptualisation that is the objective of Analysis Stage Two.

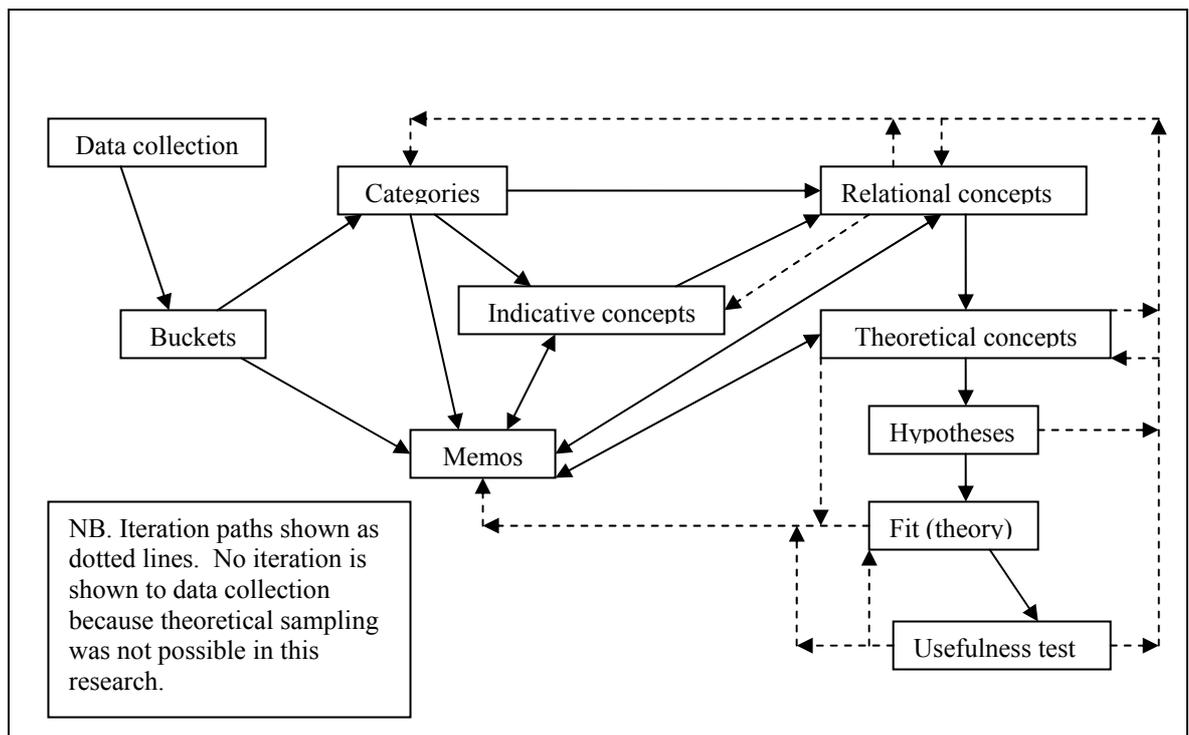
An implication of this is that theoretical concepts that emerge do not have to be validated. From them, theory will be formed, and the theory can then be tested and adjusted in other circumstances. For Yin (1994) this idea was also applicable in the case study context, not just for grounded theory: findings were generalisable to theoretical propositions, not populations or universes. For Glaser (2003), the criteria for assessing the adequacy of emergent theory were that it fit the situation, that it was relevant and that it worked (*cf. 4.5.5.1 Sidestepping the issue of rigour*), which in the case of this research meant it assisted people in making sense of their experience. However, this view applies to the outcome of the research, the

theoretical output. As discussed in 4.4 *Evaluation issues*, it remains incumbent on the researcher to demonstrate how conclusions were reached and that they were reasonable. To achieve this transparency of process, a format was developed to present the results in a transparent manner (*cf.* 6 *Findings*).

In this phase of the analysis, it was anticipated that a number of core theoretical concepts would emerge, within each of the research question areas. However concepts and theories might also emerge in unforeseen areas.

Although the process has been represented as a lineal description, the process of constant comparison was iterative, and coding in each developing node continued to saturation or exhaustion of all available data. The iterative nature of the process is shown in *Figure 5.5*.

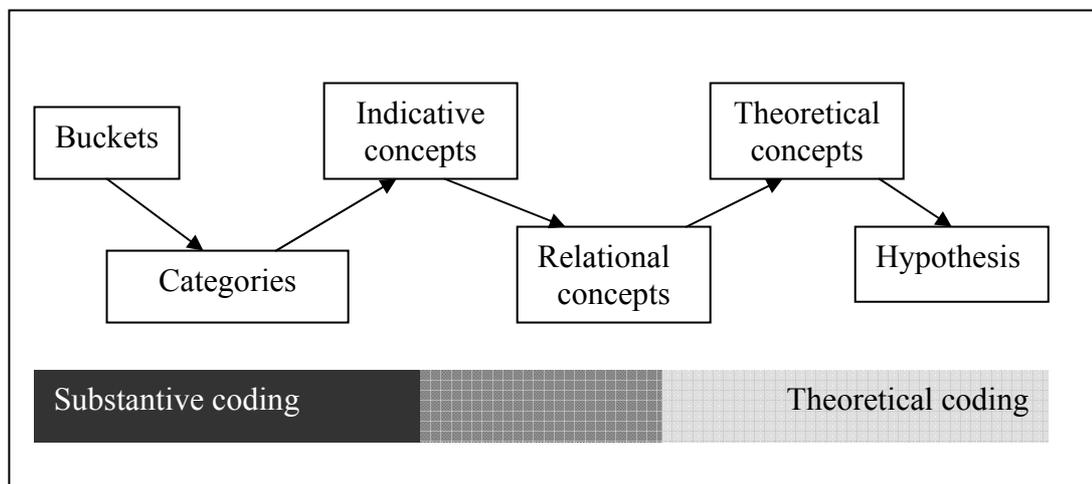
Figure 5.5 The iterative process of constant comparison



It should be noted that the questioning of the data here is not the constant questioning about which Glaser was so critical of Strauss and Corbin (Glaser, 1992) (*cf.* 4.2.2 *Relevance*). The questions here are either necessary as part of the objectives of the research, or emerge from memos and themes identified during earlier coding, and are aimed at conceptualising the data, to draw the relationships between the data and fix attention on underlying patterns. This is different to

constant questioning of data, taking apart single observations, sentences or paragraph and giving each a conceptual name, which Glaser argued could result in a large number of descriptive categories and a dearth of analysis. The coding terminology that was used is shown in *Figure 5.6*. Use of the terms “substantive coding” and “theoretical coding” introduced by Glaser (1978, 1998) has been avoided or modified. Substantive codes are about the actions in the substantive area, and can be generated in vivo, i.e. part of the conceptual talk of the participants, or by the researcher by constant comparison. Theoretical codes emerge in coding as ways of relating the substantive codes together when integrating the theory. As the coding progresses, coding becomes more abstract and theoretical. It was found that this was a gradual process and at times it was difficult to distinguish which was which, so the terminology that has been used in this chapter was introduced because it more aptly describes the process that was followed. In this thesis, buckets, categories and some indicative concepts and relational concepts are substantive. Other indicative and relational concepts are theoretical, and sometimes it can be hard to distinguish them. Theoretical concepts and hypotheses are, of course, theoretical. This overlap is shown in *Figure 5.6*.

Figure 5.6 Coding terminology



The outcomes of the Stage 2 analysis are presented in *6 Findings* as relational concepts and in *7 Discussion* as theoretical concepts.

5.4.2 Before and After coding

The pre-workshop interview notes were coded using the same nodes as had been developed for the Research interviews. Additional codes for pre-workshop interview note material that did not fit these nodes were not created, since the only purpose of

this analysis was to establish comparisons with the Research interview material. Because questions had been included in the Research interviews to encourage participants to discuss some of the matters or areas of interest that they had talked about in the pre-workshop interviews, a comparison was possible for every interviewee. However, it had not been intended that the comparison should be made only on these matters, and all data in the pre-workshop interview that fitted the nodes from the Research interview was coded.

Next, an NVivo set was created for each interviewee, consisting of the nodes for both interviews, to enable direct individual comparison of codes for the two interviews. Every node from the pre-workshop interview that had a comparable concept in the later interview was listed.

Each pair of nodes was assessed for change. The criterion for this was whether what the participant said on the topic appeared to the researcher to have undergone a significant change of viewpoint. The question asked of the data was:

“Does the response of the participant about this factor indicate any change in the organisation and/or the viewpoint of the participant from the first interview to the second interview?”

It was recognised that participants would not all talk about the same facets of the subject of the node. However, there was no need to explore this, because all that was sought was evidence of whether there had been any change in the individual’s viewpoint, rather than the specific nature of the change.

A table was created for each participant, listing the node that was compared, the viewpoint before, the viewpoint after and the change assessment. The results for each participant were summarised at the end of each table. Samples of these tables appear in *Appendix 4 Coding*.

Next a table was created to summarise the individual results. For this, the question for the analysis of the code pairs (above) was split into its two component parts:

- “Does the participant see a change in the organisation with respect to this factor?”
- “Has the participant changed his or her own viewpoint with respect to this factor?”

For all the nodes, assessments were made of the individuals' *in vivo* responses. The first assessment was whether there were any organisational changes that were identifiable from the participants Before and After comments, and whether the participant indicated that the change was related to scenario planning and or Company One 2010. The second was to identify whether individuals had changed their own viewpoints on any of the coded areas, as well as whether they intimated that scenario planning and/or 2010 had affected the viewpoint change.

All the nodes were listed in a table together with the results of the change assessments, with each participant listed by an ID code number. This table appears as *Table 6.8.1 Before and After comparison summary*.

Finally, areas where the occurrence of change had been identified were tabulated by interviewee to examine the relationship between individuals' perceptions of change in the organisation and change in their own viewpoints.

5.4.3 Analysis Stage 3

The third stage of the analysis was the development of theoretical concepts from the indicative and relational codes presented in *6 Findings*. Transparency was achieved through a combination of Decision Explorer maps and narrative of the emergence of the concepts, with associated discussion.

The analysis at this stage depended heavily on the researcher's theoretical sensitivity (Glaser, 1978), which has been described as an awareness of the subtleties of meaning of data and the ability to recognise what is important in the data and give meaning to it (Strauss and Corbin, 1990). The importance of the researcher as a research instrument was very much in evidence at this stage, and it was the researcher's experience and disposition that was integral to the interpretative process. The experience that the researcher brought to the task is explained in *1.7 The researcher*.

Much of the outcomes of Stage 3 analysis appears in *7 Discussion*, where the emergence of theoretical concepts from the relational concepts that were developed in Analysis Stage 2 is discussed.

Finally, in *8 Conclusion*, the emergence of hypotheses from the theoretical concepts is shown. This was a continuation of the constant comparison process. The completed research was then submitted to the Water Corporation as a test of

usefulness (*cf.* “Work” in 4.5.5 *Issues of rigour in grounded theory*) : did they find it helpful in understanding the change process they had undergone?

5.5 Audit trail

The importance of transparency has been stressed in this thesis. To enable further research, the following critical point records have been kept:

- Audio recordings of interviews (confidential)
- Transcripts of interviews (confidential)
- List of bucket nodes
- Complete NVivo project at end of Stage 1 analysis
- Complete NVivo project at end of Before and After Analysis
- Complete NVivo project at end of analysis
- Decision Explorer maps for analysis Stages 2 and 3
- Information contained or exemplified in the Appendices

5.6 Summary

This chapter has explained how the research method was designed to meet the objectives of the research within the framework of the chosen methodology. The ways in which grounded theory was adapted to the special circumstances that dictated the sampling process and the requirements of the Before and After research have been explained. Descriptions have been provided of the procedures for authenticating the data and transcriptions and of the adapted grounded theory methods and terminology employed in the analysis.

In the next chapter, the indicative and some relational concepts that were relevant to findings of the research are reported. In the chapter following that, the remaining relational concepts and the emergent theoretical concepts and hypotheses are discussed.

6 Findings: from indicative to relational concepts

In this chapter, the emergence of relational concepts from the indicative concepts in Analysis Stage 1 is documented.

In 4.4 *Evaluation issues*, it was contended that it was incumbent on the researcher to provide criteria for evaluation of the thesis. However, as Locke (2001), citing Glaser and Strauss (1967), has pointed out, it is the reader who finally determines whether a researcher has developed a credible theoretical scheme.

For Locke (ibid.), three elements were needed for the researcher to establish the necessary authority:

- the groundedness of the theoretical elements is demonstrated
- the account of the analytic operations performed reveals good practice
- the contribution the theoretical elements make to the wider theoretical issues in which the field has an interest is demonstrated

For the reader to be able to establish whether the criteria have been met adequately, the reporting and discussion of the findings must be presented in a way that makes transparent the thought processes and progression from concepts to theory.

Locke (ibid.) suggested that groundedness could be demonstrated by illustrating theoretical presentations with live excerpts or data fragments from the setting, rich descriptions and vivid detail so that readers could place themselves in the scene. Manuscripts should richly illustrate the theory and tables could enable more of the data to be written in, to underscore the groundedness of the data.

There is a risk in this, that Glaser (1978) warned against, of using the data as if it were proof of the theory. Rather, as Locke appeared to suggest with the concept of demonstrating groundedness, the data serve to illuminate the explication of how the theoretical concepts are developed. Goulding (2002, p90) also suggested that the grounded research writer needs to do more than illustrate the theory:

The author should also write the theory in such a way that it demonstrates to the reader how concepts ‘emerged’ and developed from the data, how the researcher moved from description through the process of abstraction, and how the core categories were generated.

This concept appears to call not only for the theory itself to be convincing and plausible but for the thought processes that lead to theory themselves to be transparent to the reader. Glaser (1978) argued that it was not incumbent on the researcher to provide a description of how each concept was reached, stating that an explanation of method and an example would do. This is all that could be expected within the constraints of a journal article, which is the context in which Locke (ibid.) has argued a similar case. But because the evaluation criteria set out for this thesis require a high degree of transparency, Goulding's approach of a higher level of demonstration of concept development has been adopted in the presentation of the findings in this chapter. The format that has been used enables the reader to follow the thought processes that led to the development of theoretical concepts from relevant concepts and categories.

Goulding (ibid.) stated there was no strict formula for the presentation of grounded theory. Locke (ibid.) identified that common approaches were to weave the literature in with the account of the data or to report on the findings from the data separately and reserve the integration of existing theory and research for a discussion section.

In this thesis, the latter approach is taken and the findings are reported separately from the integration of emergent with existing theory, which appears in 7 *Discussion* and 8 *Conclusion*. This approach is intended to be simpler for the reader, who may not wish to follow all the thought processes, and is closer to the traditional thesis format. The findings appear in several sections, based on groups of concepts that emerged as a convenient structure for reporting how the analysis process progressed through to the emergence of theoretical concepts.

This chapter explains the interpretations and concepts that emerged as the analysis proceeded. Evidentiary quotes are used to illustrate and enrich the text. A conscious effort has been made to avoid repetition in this, with the text of the quotes taking precedence where the content of the quote speaks for itself. The emergence of new concepts and memos is made transparent using both text and Decision Explorer maps that show the relationships between concepts. The chapter takes a narrative approach, so the reader can follow the unfolding emergence of the concepts.

However, the quotes here are mere illustrations of the findings. It can sometimes be difficult to judge what was meant by a quotation without understanding something of the context in which it was said. To appreciate the richness of the data and the diversity of perspectives of the participants, the reader is directed to *Appendix 2 Evidentiary quotes*, where the meanings of the individual concepts that emerged are described, together with the context in which they arose, i.e., the question that was being used to interrogate the data when the concept emerged. Each concept is illustrated by evidentiary quotes that have been selected from the coded transcripts to cover as comprehensively as possible the richness of the data, including nuances and disparity of opinion.

The concepts that are described in this chapter are based solely on the perceptions of the participants, which are their recollections, i.e., retrospective as explained in *5.2.2.2 Retrospective data*. Non-interview data, e.g., documentation, was not considered to be primary data. On occasion it was used for verification of data expressed as fact (*cf. 4.5.1 Triangulation*). The perceived outcomes of the Company One 2010 process are also recorded in *7 Discussion*.

Numerical data are cited occasionally when the weight of numbers provides clear-cut support for a statement, or to indicate how widespread a view or perception was, where either of these may be of relevance. However, due to the interpretive nature of the research, numerical evidence should not be treated as precise, since how a piece of evidence is categorised or coded is a matter of interpretation by the researcher and someone else's interpretation could yield a different numerical result. As described above, by referring to the rich data in *Appendix 2 Evidentiary quotes*, the reader can verify that the interpretations are reasonable and are consistent with the evidence.

Throughout this chapter, NVivo nodes and Decision Explorer concept codes and memos are designated in italics. Evidentiary quotes for a few of the nodes that appear on the Decision Explorer maps and in the text appear only in *Appendix 2*. Codes that appear in the text bracketed and in italics either refer to codes in *Appendix 2* or are emergent codes from the analysis. In the Decision Explorer maps, arrows between the concepts show the direction of influence relationships. In quotations, "... " designates a gap where irrelevant matter has been omitted and ".. " designates an utterance not completed by the participant.

The reader needs to bear in mind that the data that form the basis of the findings are the record and analysis of the perceptions of the participants (i.e., in critical realist ontology, grounded in the empirical and actual domains) (*cf.* 3.2 *Critical realism*). However, relationships between categories and concepts are tendencies (i.e., in the real domain). The concept of tendencies was an important driver for the research, because it enabled the shackles of cause-effect thinking to be cast off, allowing concepts to emerge freely and the uncertainty that is at the heart of scenario planning to be embraced.

6.1 Analysis Stage One

The output of Stage One of the analysis was a data base of NVivo nodes that were the results of interrogating the raw primary data, the transcripts of the interviews with the participants, with three questions:

- “What, in broad terms, was the participant discussing here?” The buckets of broad concepts developed in the first stage of the analysis had the sole purpose of organising the data into manageable groups of similar subject matter for further analysis and were later discarded. The nodes that emerged in this first coding iteration are listed in *Appendix 4 Coding*.
- “What in specific terms is being discussed here?” This second iteration provided a more specific coding of the perceptions of the participant.
- “What in this node needs to be coded in more detail to increase understanding?” This produced either properties of concepts or further more detailed concepts.

The data base of indicative concepts that resulted from this first analysis stage, together with memos noted during the coding, was used for the data interrogation and discovery of emergent relational concepts in Analysis Stage Two.

6.2 Analysis Stage Two

The second stage of the analysis, the exploration of the indicative concepts and emergence of the relational concepts, proceeded in two parts: exploration of perceptions of factors affecting the change process (*cf.* the next six subsections 6.2 to 6.7); and coding for the Before and After comparison (*cf.* 6.8 *Before and after comparison*).

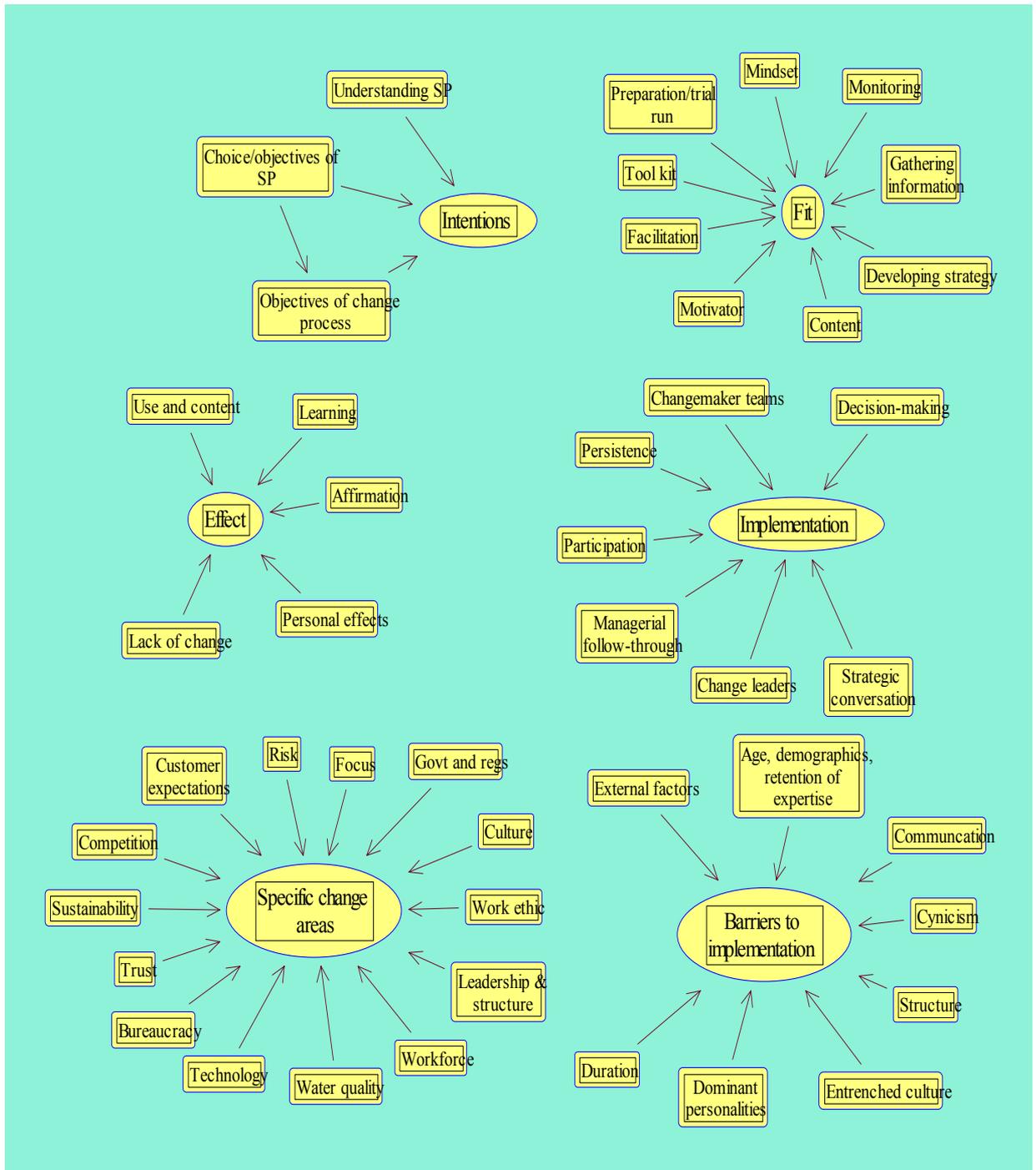
The analysis of the perceptions of factors affecting the change process proceeded by a series of interrogations of the data. The findings from the data interrogations are reported in several groups of emergent concepts. The contents of the groups were based on an interrogation of the indicative concepts that emerged from Analysis Stage 1 and which asked “What relationships are apparent between the concepts?”

The groups in which the findings are presented are:

- *Intentions*: What were the expectations and objectives of scenario planning and Company One 2010?
- *Effect*: What was the effect of scenario planning and Company One 2010 on individual and organisational viewpoints and approaches to operations and/or planning?
- *Fit*: How did scenario planning fit into the Company One 2010 process and what part did it play in the change initiative?
- *Specific changes*: What changes were perceived to have occurred at least partly as a result of scenario planning and/or Company One 2010?
- *Implementation*: What factors in the change process were perceived to have affected the implementation of the proposed change?
- *Barriers to implementation*: What factors were perceived as barriers to the successful implementation of the change initiative?

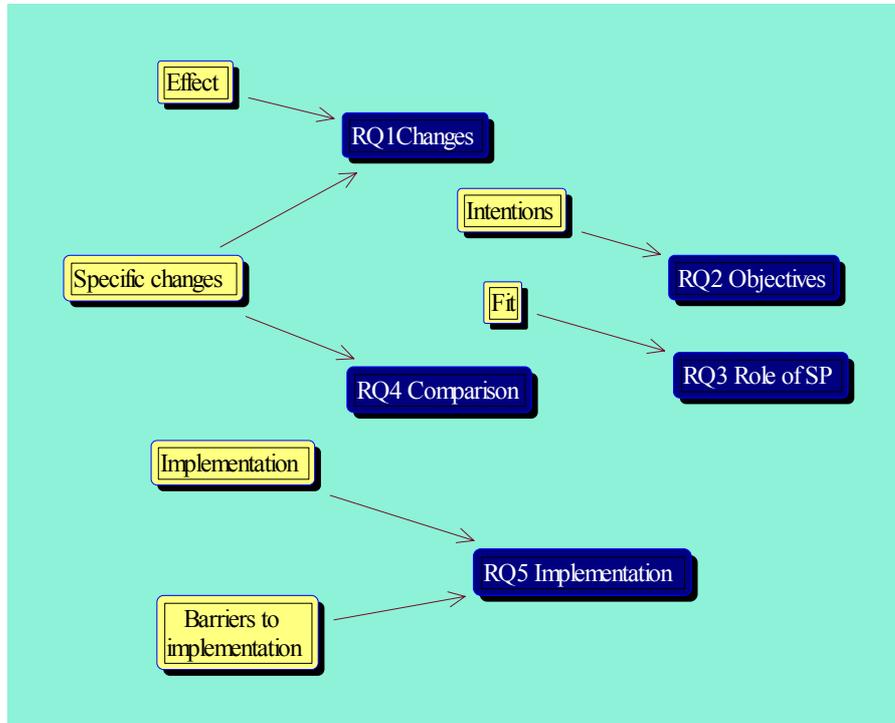
A map of the groups showing the major coding concept groups appears as *Figure 6.2.1*. Findings for each group are recorded in this chapter except for barriers to change, which emerged from the indicative concepts and appear in *7 Discussion*.

Figure 6.2.1 Factors affecting the change process



While these groups are emergent in that the relationships can be seen as a pattern inherent in the data, they also have direct relevance to the research questions (*cf. 1.2 Research objectives and research question*). This relationship is shown in *Figure 6.2.2* below.

Figure 6.2.2 How concept groups relate to research questions



Note: RQ = Research Question

The outcome of this part of the Stage Two Analysis was relational concepts from which emerged the theoretical concepts described in *7 Discussion*. Findings in each of the other five areas in *Figure 6.2.1* are documented in the rest of this chapter.

6.3 Intentions

6.3.1 Understanding scenario planning

For more richness of data and context for this subsection, see Appendix 2.2.1

At the outset of the interviews, participants were asked to discuss what they considered scenario planning to be. The question was intended to establish whether the participant recollected the Scenario Thinking process and to obtain an initial description of his or her understanding of it. Although they expressed it in different ways, nearly all the participants held a clear idea that scenario planning was a way of considering multiple possibilities for the future. For many, this concept of scenario planning was interlinked with the purposive idea of developing *Alternative strategies for Multiple potential futures*.

The most succinct description of this was:

My understanding of scenario planning is a process of, it's looking into the future, setting up a number of likely scenarios, and then preparing to meet those. Yeah, I guess that's it, in a nutshell.

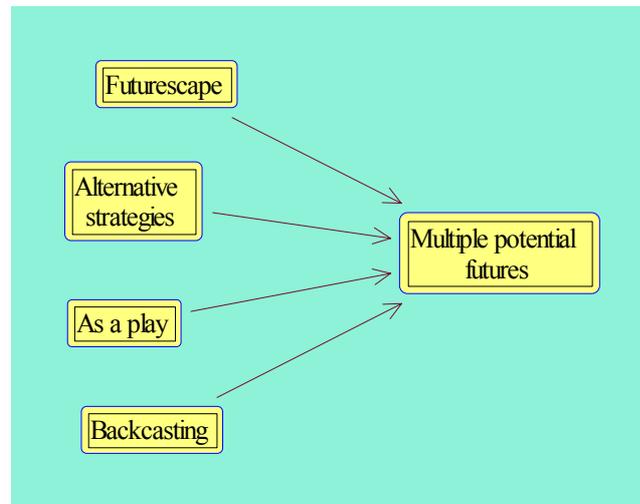
A few had a more organisation-centred view, with the emphasis on what the organisation itself would be like, rather than the external environment. These were also set in the context of multiple futures:

I understood scenario planning to mean to look forward to the future, the specific time-frame was 2010, to see what the Water Corporation might look like in 10 years, by providing some options, to try and provide some clarity to that.. and my understanding also was that, you know, whilst a number of scenarios were developed, none of those was necessarily seen as the total scenario.

Other perceptions were of scenario planning as a rehearsal for the future (*As a play*) and as a way of getting to an imagined state (*Backcasting*).

The emergence of the category *Multiple potential futures* from the concepts in Appendix 2.2.1 is mapped in Figure 6.3.1.

Figure 6.3.1 Multiple potential futures



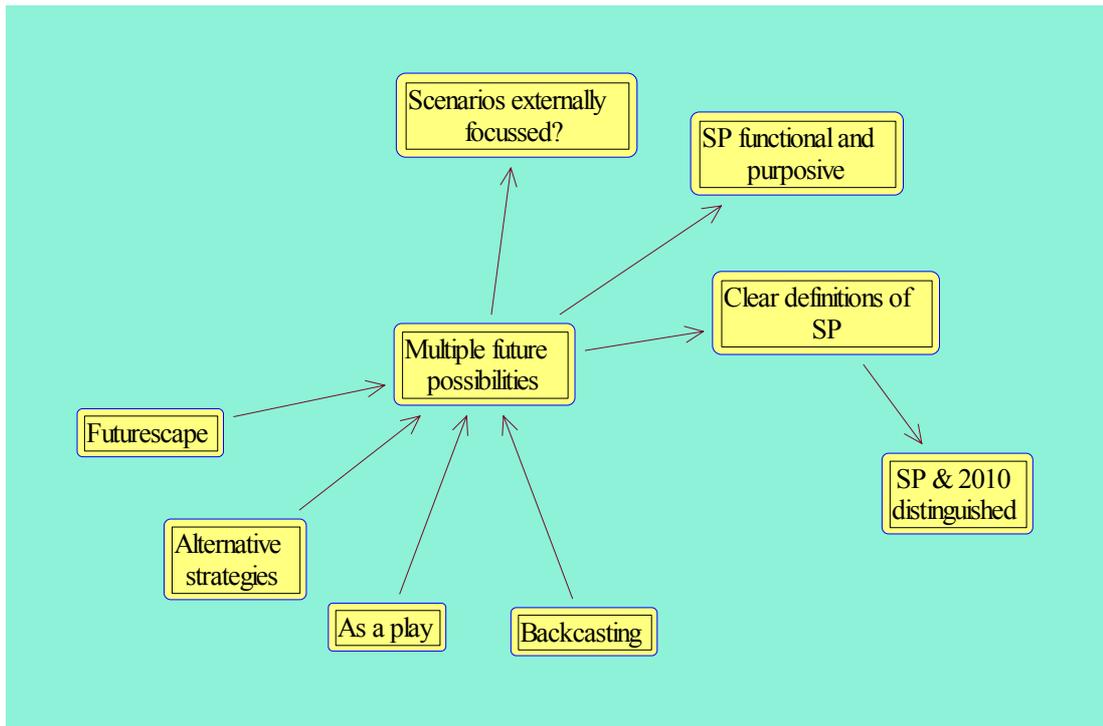
The initial interview question also qualified the participants' current position to provide data by establishing their recollection of scenario planning (*cf.* 5.2.2.2 *Retrospective data*). Only three did not have a clear recollection or perception of the Scenario Thinking process, but these were still able to talk about the Company One 2010 initiative. Therefore, all were considered to be in a position to contribute to the research.

6.3.1.1 Emerging concepts - intentions:

- Some participants had an organisation-centred view of scenario planning. This raised the question of the extent to which the completed scenarios concentrated on the external environment. (*Scenarios externally focussed?*)
- The clarity of understanding demonstrated by the participants in defining scenario planning suggested that they perceived a clear distinction between scenario planning and the other parts of Company One 2010 change initiative. (*Clear definitions of SP*) and (*SP and 2010 distinguished*)
- For many, the definition of scenario planning was interlinked with the purposive concepts of providing insight into possibilities for the future operating environment of the organisation and developing strategies for different future possibilities, i.e., they expressed their answer to the interview question at least partly in terms of what they saw as the broad purpose and/or outcomes of the Scenario Thinking process. (*SP functional and purposive*)

The emergence of these concepts is mapped in Figure 6.3.2.

Figure 6.3.2 Multiple potential futures – emerging concepts



6.3.2 Objectives

For more richness of data and context for this subsection, see Appendix 2.2.2.

The next question in the interview guide, and consequently the issue discussed next in most interviews, concerned the objectives of the organisation in undertaking the Scenario Thinking project.

Figure 6.3.3 Objectives

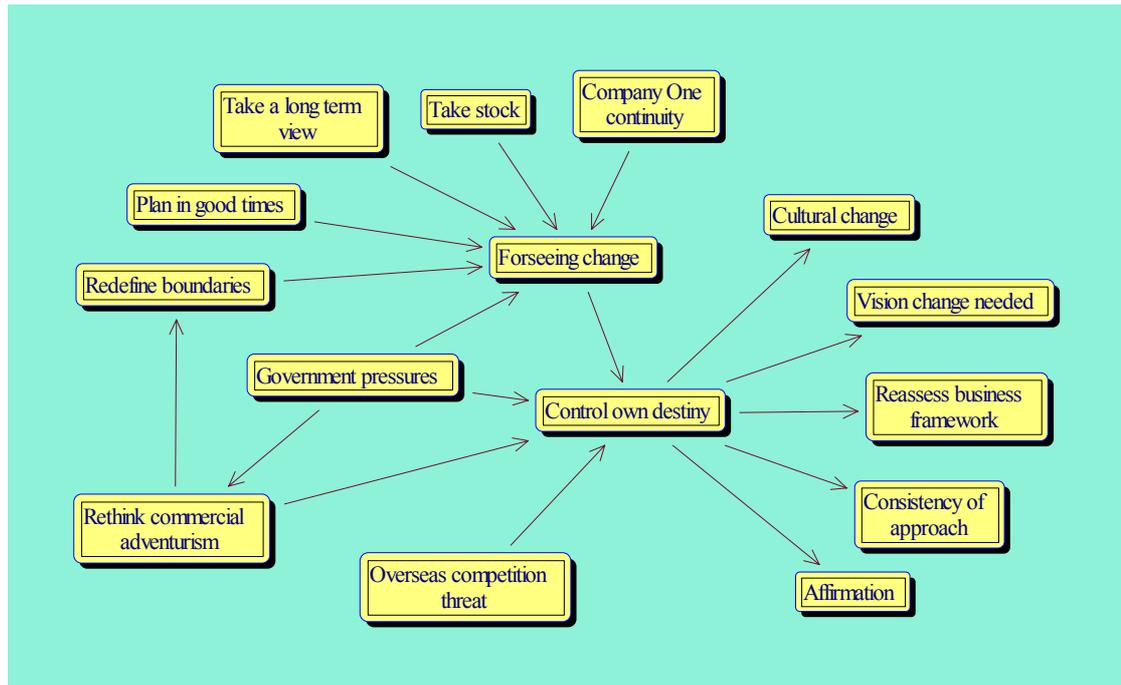


Figure 6.3.3 maps the NVivo nodes representing the objectives that were identified by the participants in response to the question about the reasons for the scenario planning project. Evidentiary quotes on which the nodes were based can be found in Appendix 2.2.2. Although the question asked concerned reasons for doing scenario planning, many participants answered this question in terms of objectives for the change initiative.

The nodes *Company One continuity* (Company One 2010 as a continuation of the Company One philosophy), *Take stock* (time to consider and look ahead), *Take a long term view* (take a longer term approach to organisational planning), *Plan in good times* (rather than in crisis) and *Redefine boundaries* (clarify what core business was) were all interpreted both as properties of and contributing to the broader concept of *Foreseeing change* that had emerged, because they all resulted from a recognition that there was a potential for change that would require a response and

adaptation on the part of the Corporation. If change had not been foreseen, none of the other concepts would have needed to exist.

The uncertainty of the nature of *Government pressures* as a result of changing governments and political policies and how they might affect the organisation also contributed to the concept of *Foreseeing change*, particularly as in the preparatory stages of the change initiative there had been the potential for the election of a new government, and this had become actuality by the time of the first Scenario Thinking workshop.

However, *Foreseeing change* and its properties do not represent potential outcomes of the process, and therefore cannot be seen as the objectives, i.e., the goals, of the project. They should be seen as reasons for undertaking the change initiative rather than the purpose of it.

An important aspect of *Government pressures* was a fear that the organisation's direction could be determined by political dictates if it did not take charge of its own destiny. In particular, there were doubts about future government funding for the provision of water service in regions where it was uneconomic. As well, the government was perceived to be unsupportive of the Corporation's recent business development direction in seeking to sell into overseas markets, a strategy labelled *Commercial adventurism* by some in the organisation. Results of this strategy had been less than hoped for.

We'd had an experiment with a thing we called the commercial division, and for a whole bunch of reasons that succeeded and then failed. And it was pretty important, especially after the failure of it, it was important to pick things up, and say, well, we're not scrapping this entirely, but we urgently need to redefine it.

It was felt that, if the Corporation did not do something to change the direction of business development, the Government would.

And we have to demonstrate that we are delivering to our stakeholder, or, I'm sorry, our shareholder, being the Government. And if we don't show that we. . . . if we don't define a strong future, and show how we're going to get to that, it will be done for us.

In addition, there was uncertainty about the policy direction of the new government and there was perceived to have been government pressure to cut costs. This uncertainty was one factor that prompted a need for the organisation to *Redefine its boundaries* with regard to its core business.

... well, from a Corporation perspective, they were getting a lot of signals back that it was unclear about what business we were actually in, and the boundaries of our business, moving forward. Since corporatisation in '96, there's been a very strong commercial focus. There's been a fair bit of blurring around the edges in relation to what business we're going to get involved in, and how we're going to grow the business.

This was a principal factor in the organisation aiming to *Control its own destiny*, rather than ceding control to the government or others.

At the time of the Scenario Thinking workshops, another perceived menace to the organisation's determination of its own destiny was the potential *Overseas competition threat* from large international organisations. However, although this had formed the focal issue for the Scenario Thinking project, only one participant recollected the issue in the context of objectives of scenario planning.

The other concepts that emerged as objectives, *Cultural change* (with regard to sustainability and bureaucracy), *Vision change needed*, *Change business framework*, *Consistency of approach* (between regions) and *Affirmation* (see below), were interpreted as consequential to the objective *Control own destiny*, i.e., they could follow from any action the organisation took to ensure it did not cede power over its future to others, and so were considered here to be sub-groups or properties of it. While cultural change as an result of the change initiative appeared to have been a hope of some people's minds at the outset, it was interpreted as a goal that emerged during Company One 2010.

Of these objectives, only *Affirmation* was not a transformational objective. *Affirmation* was the concept that the new direction of the organisation had already been decided, to a greater or lesser extent, and that the aim of scenario planning was to clarify and/or gain support for the change (see also 6.5.3 *Affirmation*)

The strategic rather than methodological nature of these objectives was noted, and is further addressed in *6.3.4 Objectives of scenario planning and Company One 2010*.

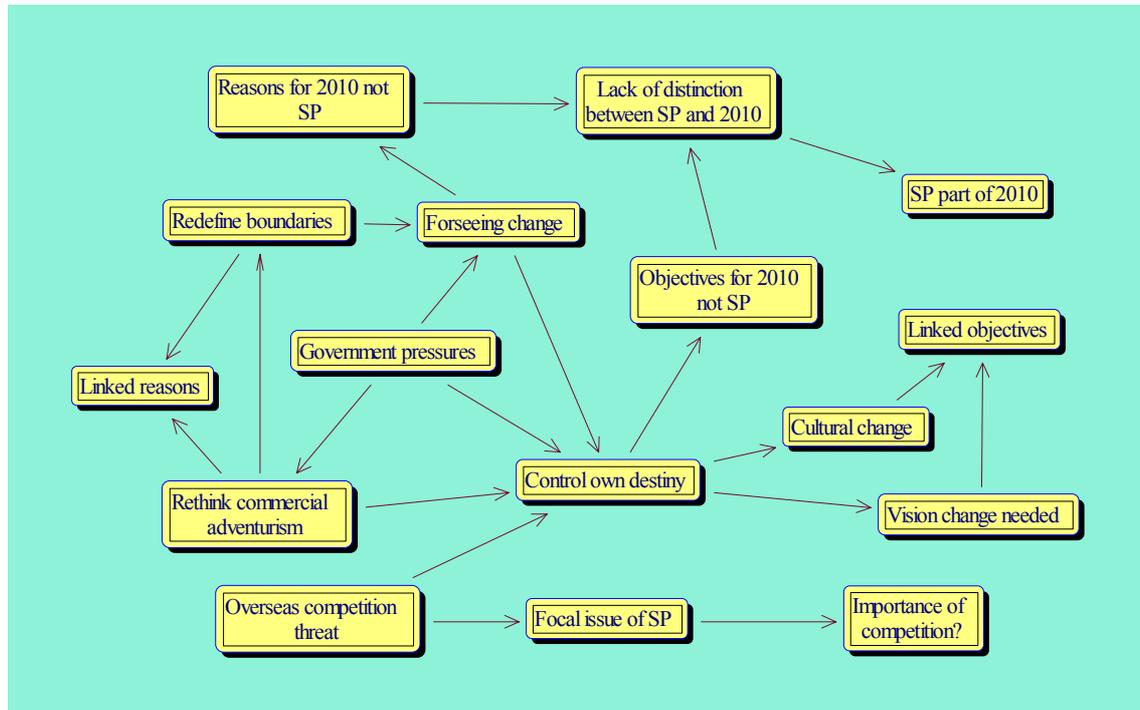
6.3.2.1 Emerging concepts – 2010 objectives

- Just as the central concept *Foreseeing change* was seen (above) as the major reason for undertaking the change initiative, *Control own destiny* was seen to be the principal objective because of its centrality. The emergence of the two concepts is mapped in *Figure 6.3.4*.
- Fear of competition was the focal issue of the Scenario Thinking, but only one person mentioned it in response to the question about objectives. How important was it? (*Importance of competition?*)
- Although reasons and objectives were coded separately and discretely, some were linked, e.g., the effect of government pressures and the commercial division failure or, as shown on the map (*Figure 6.3.4*), the objectives of cultural change and the need for a change of vision, where one would in many circumstances imply the other. (*Linked reasons; linked objectives*)
- Both the reasons and the objectives that most participants identified were almost entirely factors that applied to the overall change initiative rather than for scenario planning, even though the question asked in the interview referred specifically to scenario planning (*Reasons for 2010, not SP*), (*Objectives for 2010, not SP*). All were concerned with the reasons or the objectives for organisational change, rather than looking at why scenario planning itself was undertaken and what was sought to be achieved by the Scenario Thinking project. From this emerged the concept that, in contrast to their ability to clearly define the scenario planning process (*cf. 6.3.1 Understanding of scenario planning*), in this context many participants were not able to make a clear distinction between Scenario Thinking and the overall Company One 2010 process (*Lack of distinction between SP & 2010*)
- A corollary of this was the concept that scenario planning was seen as a discrete part of the Company One 2010 project (*SP as part of 2010 process*).

It was noted that nearly a third of the participants did not define a clear objective for either Scenario Thinking or Company one 2010.

The following map illustrates the relationships between the relevant concepts from *Figure 6.3.3 Objectives* and the emerging concepts.

Figure 6.3.4 Objectives – emerging concepts



These findings appeared to indicate that the participants viewed the objectives of the Scenario Thinking project itself as indistinguishable from the aims of the overall change initiative, compatible with the concept *SP as part of 2010 process*. However, further data emerged that challenged this finding. This is examined in the next subsection.

6.3.3 Choice of scenario planning as a method

For more richness of data and context for this subsection, see Appendix 2.2.3.

The conversations coded in this concept were often the result of a follow-up question or prompt when the researcher qualified the question about the reasons for undertaking scenario planning by asking about scenario planning as a method in particular.

The Company One 2010 team, who had the task of selecting the planning methodology, identified four main outcomes the organisation sought from a scenario planning project: it provided an opportunity to ensure senior managers in particular

participated in the process (*Participation*); it enabled a broad view of the business to be taken (*External scan*); it was a way for participants to explore future alternatives in a non-threatening situation (*Non-threatening*); and it was a highly developed tool for addressing uncertainty (*Structured way of addressing uncertainty*) (cf. Appendix 2.2.3 for evidentiary quotes).

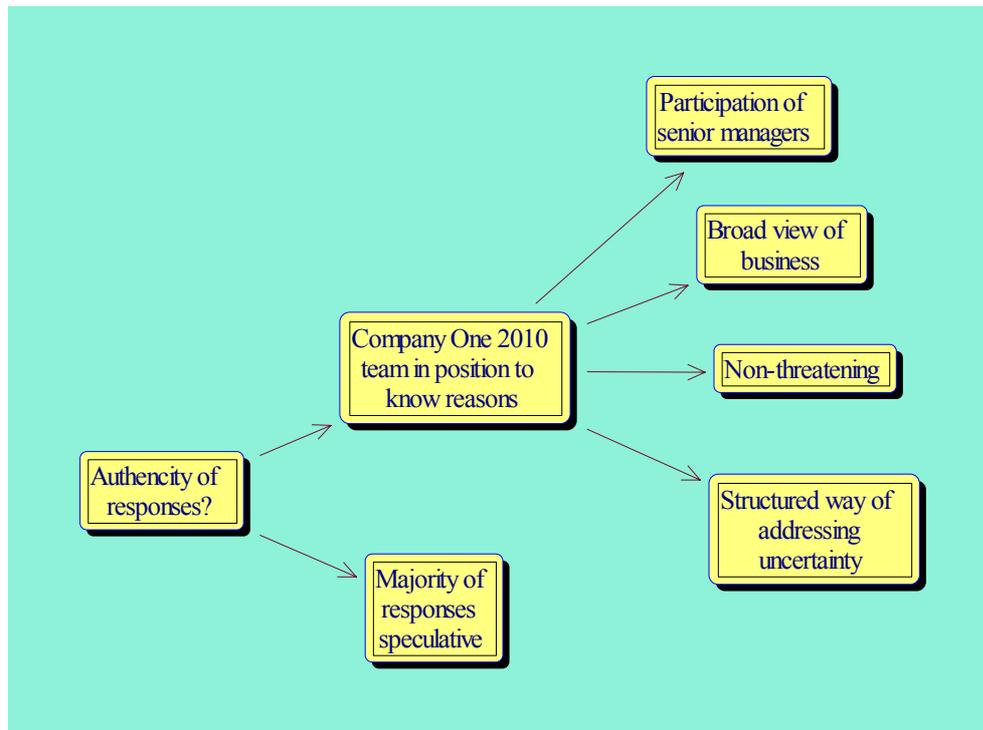
The responses from other participants to this qualified question in the interview tended to be expressed as characteristics of scenario planning rather than specific reasons for choice, and many were repetitious of the answers for the questions about what scenario planning is and its objectives reported in 6.3.2 *Objectives*.

Alternatively, some appeared to be retrospective speculation, rather than based on any direct or authoritative experience of the reasons for the choice. Others simply admitted they did not know. Apart from the Company One 2010 team and a few in senior management, there appeared to be little understanding of why scenario planning in particular was chosen as a method.

Consequently it appeared that on this particular point most participants were not in a position to talk meaningfully about the issue (cf. 5.2.2.2 *Retrospective data*) and the data lacked authenticity. Therefore, their responses were excluded from the analysis of this matter and, because this line of enquiry was not taken further, evidentiary quotes have not been provided for the codes listed in Appendix 2.2.3. Quotes for the three members of the Company One 2010 team, whose comments constitute this subsection because they were the only ones demonstrably in a position to provide the data, have also not been provided due to the difficulty of maintaining confidentiality in such a small group.

The following map shows the reasoning that led from the doubt about the authenticity of the responses from most participants to the four expressed objectives for the Scenario Thinking process.

Figure 6.3.5 Choice of scenario planning



6.3.3.1 Emerging concepts – choice objectives

The desired outcomes of scenario planning were that it was perceived it would ensure *Participation of senior management*; it would provide a *Broad view of the business* future; it was a well-developed tool for dealing with uncertainty, providing a structured methodology (*Structured uncertainty tool*); and it was a *Non-threatening* way for people to voice their views. These reasons are expressed in terms of what the participants perceived that the organisation expected from the scenario planning process. In that sense they are objectives, in that the expectations may or may not have been met. They are specific to Scenario Thinking, in contrast to the broader objectives identified in section 6.3.2 *Objectives*, and each of them is a methodological aspect of the process, in contrast to the more strategic tendency of the objectives discussed in section 6.3.2 *Objectives*.

6.3.4 Objectives of scenario planning and Company One 2010

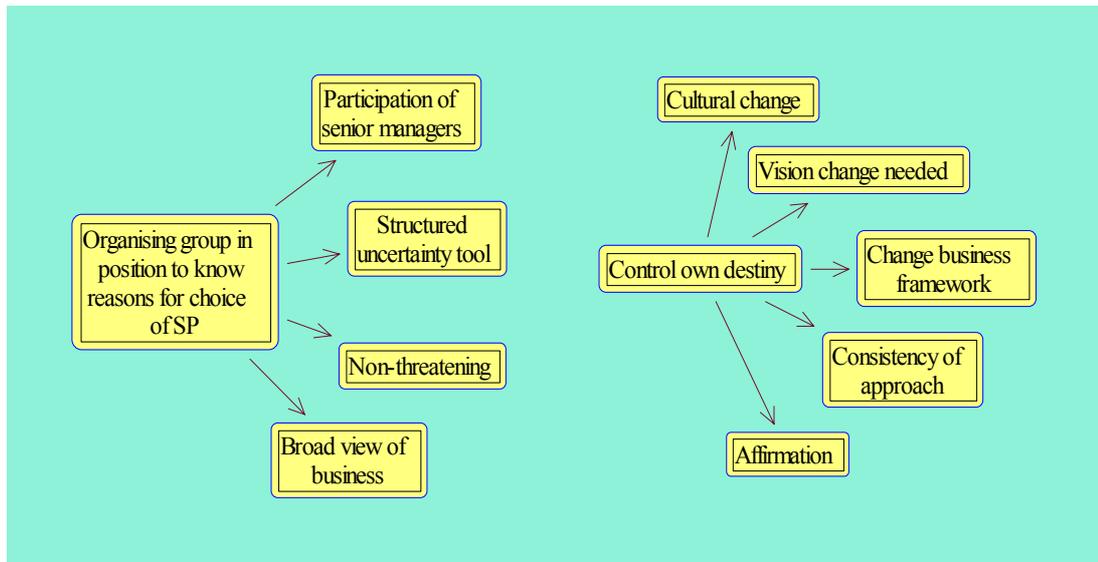
As recorded above, many participants, although specifically asked about the objectives of scenario planning, answered by discussing objectives that appeared to be related more to the wider change initiative. An implication of this was that it

became incumbent on the researcher to distinguish the two sets of objectives that were discussed by participants: for Scenario Thinking and for Company One 2010.

The following map summarises the objectives of the Company One 2010 change initiative and of the Scenario Thinking project, as perceived by the participants. It is an aggregation and simplification of *Figures 6.3.4* and *6.3.5*.

The factors on the left hand side represent recollections of the organisation's expectations of Scenario Thinking, the methodological aspects perceived by the Company One 2010 team. On the right hand side appear the recollections of the strategic objectives of the wider Company One 2010 project that emerged from participants' discussions about scenario planning.

Figure 6.3.6 Objectives of scenario planning and Company One 2010



These objectives are described in *Table 6.3.1* below.

It was noted that the purposive concept *Functional and purposive*, which emerged as part of participants' understanding of scenario planning as expressed in *6.3.1 Intentions*, did not appear here as an objective and did not appear among the expectations for Scenario Thinking listed by the central organising group. An explanation is that participants saw the functional and purposive nature of scenario planning as a characteristic of it, or as part of what it does, rather than as an objective of the process. Nevertheless, participants tended to couch the objectives of the change process in forward-looking terms or as situations that could be remedied and

that therefore may be viewed as *potential strategies*, i.e., they can be thought of as aspects of the concept *Functional and purposive*. The Company One 2010 team's expectations were also characterised by a perception of scenario planning as a *methodological tool*.

The difference between the two further indicated a lack of clarity in the minds of some participants about the distinction between scenario planning and Company One 2010 (see also *Figure 6.3.2 Multiple potential futures – emerging concepts*). A memo that was recorded at this stage was that scenario planning appeared to be considered to be a part of rather than separate to the overall change process, despite some confusion as to what part, and that how it fitted into the process should be explored further. This is done in *6.4 Fit*.

The principal perceived objectives of the organisation in undertaking the change initiative and the scenario planning process, as discussed above, are summarised in the following table:

Table 6.3.1 Objectives of scenario planning and Company One 2010

<i>Scenario planning objectives</i>	<i>Description</i>
Participation of senior managers	SP was seen as a way of ensuring that senior managers participated in the change process
Broad view of business	SP provided a broader view of the business than just the product, i.e., future water supply and demand, and looked at the wider organisational environment
Non-threatening	SP provided a non-threatening environment for people's different views to be voiced
Structured uncertainty tool	SP was seen as a well developed and structured method for putting uncertainty into a framework
<i>Company One 2010 objectives</i>	<i>Description</i>
Control own destiny	The need for the organisation to control its own destiny, rather be directed by government and events
Cultural change	A cultural change to sustainability and less bureaucracy (this objective developed during the process)
Vision change needed	Lack of commitment to the then current vision
Reassess business framework	Evaluation of core business and suitability of business framework for it
Consistency of approach	Regions were not consistent in their approach to marketing and organisational matters
Affirmation	The change initiative was to crystallise and confirm an already decided direction

A comparison of the perceived objectives and perceived outcomes appears in 7.14 *Comparison of change from both analyses*.

6.3.5 Environmental considerations

Within the concept *Control own destiny*, three aspects were identified as sources of uncertainty in the wider operating environment that contributed to the setting of the objectives:

- *Government pressures*: The organisation was perceived as subject to uncertainty because of changing political policies, which made long-term planning difficult. The State government election, which resulted in a change of government, and doubts about government support for overseas ventures, were contributing to heighten awareness of this.
- *Commercial adventurism*: The organisation had found marketing outside the State to be less successful than it would have liked.
- *Overseas competition threat*: There had been a fear of overseas competitors vying for some of the organisation's business.

6.3.6 Reliability of objectives data

It was noted that the perspectives described here were retrospective views of the objectives. While many of the participants' recollections would be subject to the limitations of reliability of retrospective accounts discussed 5.2.2.2 *Retrospective data*, the issue of objectives was an area where there seemed to be a high chance that the data could have been influenced by subsequent events, i.e., participants could have aligned their memories of the objectives of the change process with its outcomes. To check this, the researcher sought to triangulate the interview data with corroboration from documentary evidence of objectives, but the organisation was unable to provide the required evidence.

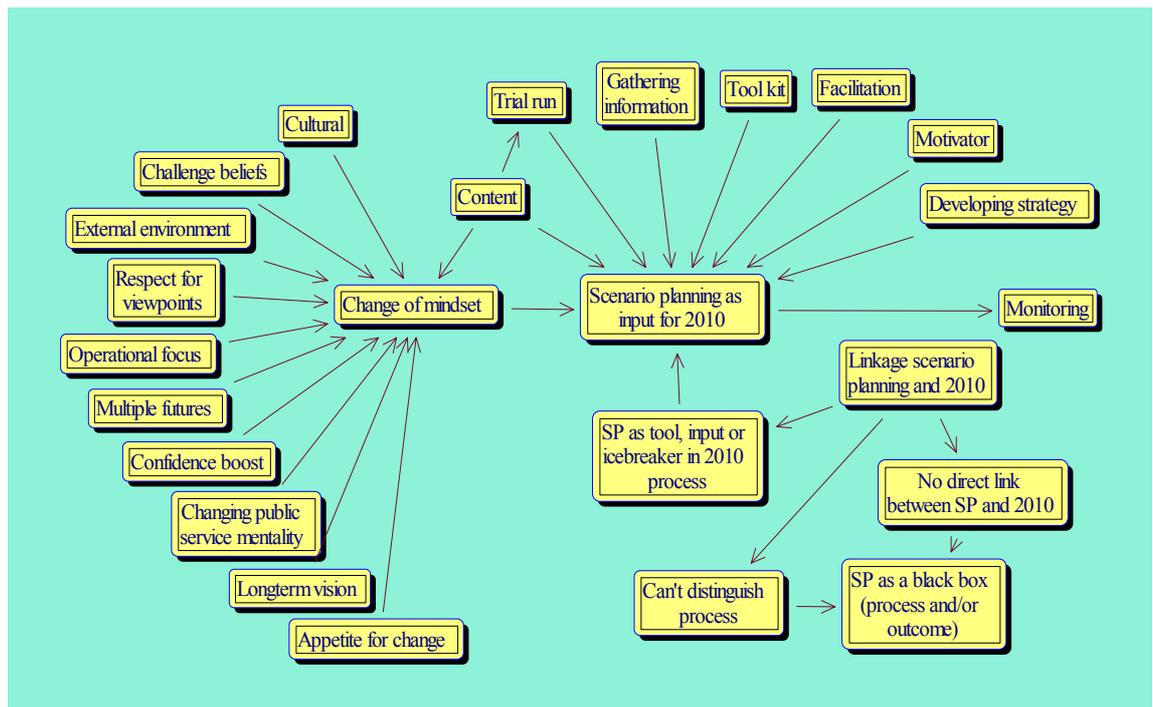
This section has identified the objectives for the scenario planning project and the Company One 2010 initiative that were retrospectively identified by participants in the research. The next section explores and develops the concept that has emerged here of the distinction between Scenario Thinking and the overall change initiative by exploring what part participants perceived scenario planning played in Company One 2010.

6.4 Fit

For more richness of data and detail of context for this section, see Appendix 2.3

In the previous section, two of the emergent concepts were that scenario planning was seen as a part of the overall change process (*SP as part of 2010 process* in 6.3.2.1 *Emerging concepts – 2010 objectives*), and that many participants did not or could not make a clear distinction between the objectives of scenario planning and the overall Company One 2010 change process (*Lack of distinction between SP & 2010*). These ideas were explored further within the broad category of *Fit*, i.e., the role of scenario planning in the organisational change process. The concepts that were coded in the NVivo analysis and the emergent categories are shown in Figure 6.4.1.

Figure 6.4.1 Fit



There were three central concepts that emerged during the analysis here.

6.4.1 Change of mindset

The first was *Change of mind-set*. For nearly half the participants, one of the major outcomes of scenario planning was its effect on the thinking of the participants, expressed either explicitly as “change of mindset” or as an aspect of it. Participants discussed a wide diversity of specific ways in which they thought that prevailing

viewpoints and mindsets in the organisation had been affected by scenario planning. These are grouped on the left hand side of the Decision Explorer map in *Figure 6.4.1* and described in detail with evidentiary quotes in *Appendix 2.3*. In brief they included:

- recognition of the importance of cultural issues, including the organisation's evolution from what was described as a public service mentality, and challenging of long-held beliefs
- changed assumptions about the organisation's external environment, a recognition that the future held multiple possibilities and the need for sustainability and long-term vision
- respect for the viewpoints of others
- encouraging enthusiasm for change.

The role of scenario planning was seen as preparing the way for the changes that were to follow by opening people's minds to different possibilities and perceptions about the organisation and its future. This was summarised by one participant who said:

I guess my view is the actual specific action didn't come from the scenario planning exercise, but probably the shift in mind-set which enabled that action to take place was born from scenario planning.

This view pre-empted the emergent concepts that are recorded in *6.5.1 Learning*.

There was also a view that there had been no change of mind-set:

I didn't see anything that really surprised me. I mean, I didn't sort of sit back and say ooh, wow, that's really interesting, that's a different way of looking at the world, you know.

6.4.2 Scenario planning as input

The idea that, by opening people's minds to new concepts through *Change of mindset*, Scenario Thinking was a preparatory or enabling step for the rest of the change initiative suggested the concept that participants perceived *Scenario planning as an input for Company One 2010*. A second category reinforced this idea. This category, *Scenario planning as tool, input or icebreaker in 2010 process*, grouped concepts in which scenario planning was seen a tool or functional input for Company One 2010. Scenario planning was seen as a precursor for the rest of the change

process, first as an icebreaker, by preparing participants for change through exposing them to other perspectives and providing a place for participants to consider strategic ideas, and secondly as a trial run framework to assess a number of possible new strategies. Hence, the concept from 6.3.4 *Objectives of scenario planning and Company One 2010* of scenario planning as a separate project, but, because it provided an input into the Company One 2010 initiative, also part of the change process, was reinforced.

All but one of the concepts in the second category were interpreted as inputs for Company One 2010. They were:

6.4.2.1 *Trial run*

The idea that scenarios can be used as a test bed for notional strategies is closely linked to the next concept, *Developing strategy*. Both are interpreted as inputs to planning strategic processes.

It does really allow you to at least conceptually go through some of the responses that you need to put in place.

6.4.2.2 *Developing strategy*

Awareness of the implications of things that may or may not happen as a foundation for developing strategy may be interpreted as a characteristic of the *Functional and purposive* concept that emerged in the participants' definitions of scenario planning in 6.3.1 *Understanding scenario planning* and links to the concept of strategic objectives for the change initiative in 6.3.4 *Objectives of scenario planning and Company One 2010*. Here the emphasis is on the way in which scenario planning contributes towards the setting of strategy, which included the concept of basing strategy on substance rather than what one participant termed "fantasy". The idea of developing strategy and using scenarios as a test bed links to *Preparedness* in 6.5.4 *Use and content of scenarios*.

...it probably helps us to guide our planning process into preparing for things that may happen, but also making us aware of what the implications are of things that may never happen.

The suggestion was made that scenario planning could be seen as an input to the planning of strategy.

... as an input to planning process, I think if that that's what it was set out to do, it did the job.

More specific was the perception by other participants that scenario planning was a process in its own right, providing a framework for the development of future thinking and strategy:

... it provided a fairly robust framework for thinking forward and formulating strategy.

6.4.2.3 Content

It was widely accepted that the scenarios were stories about the future that were not intended to be predictions. Although most found the narratives credible, there was a perception by some people that some of the scenarios lacked sufficient plausibility for them to believe they could actually happen, and, in contrast to this, another view that the scenarios did not contain anything surprising. But regardless of their view of the credibility, most participants perceived that the content was important only in the way it made people think about future possibilities, better understand the organisation's environment and driving forces and come to appreciate issues from different perspectives. Scenario *Content* was therefore interpreted as contributing to the concepts of both *Change of mindset* and *Trial run*, and consequently as an input to the change process.

But the actual scenarios that were written up, I see as less important than the process of understanding the environment and the drivers etc, etc.

6.4.2.4 Gathering information

Scenario planning was seen as a way of gathering information and viewpoints, as input to the change process. This introduced the concept of scenario planning as part of the *Strategic conversation* (cf. 6.5.2.7 *Emerging categories – personal effects*).

I read the scenarios as useful in gathering information, different views, from people.

6.4.2.5 Tool kit

Scenario planning was as a part of a tool kit of procedures that was used to produce the change outcome. The suggestion was also made here that scenario planning, as an early stage of the process, was an input to the rest of the change initiative.

I wouldn't draw a direct link between what's going on necessarily in scenario planning (and 2010) other than it being a pretty valuable input...I think it's (scenario planning) a tool within the (overall change) process.

6.4.2.6 Facilitation

The concept of scenario planning as a way of facilitating the change process – and therefore as an input to it – also links to the concept of scenario planning as part of the *Strategic conversation*.

... it was a sort of an icebreaker, in terms of, it uncovered a number of opportunities, explored a whole bunch of things, got people thinking in the right directions, and I think that enabled us to, sort of, reach the conclusions that we reached with all the other inputs as well.

6.4.2.7 Scenario planning as motivator

Closely akin to *Facilitation* is the use of scenario development as a way of generating enthusiasm for the change initiative.

... it certainly means that you get a whole bunch of people around with their tails up, they're all enthused, they've all got the mission and the same handbook, and away they go. That's a remarkable thing. They just self-propel from that point onwards.

6.4.2.8 Monitoring

While it cannot be considered an input to the change process, a function of scenarios is the potential for using them in monitoring emergent trends. This was recognised by some, but had not been put into practice.

I guess we could use them, they were structured this way, I don't know whether we'll ever use them this way, but there were sort of triggers to say, if this is the way the future is emerging, what are the key triggers you'd see in scenario A, B or C as coming up?

6.4.3 Inability to distinguish scenario planning

The third category was a perception that the linkage between scenario planning and Company One 2010 was indistinct. Two groups emerged within this category. One perceived scenario planning as running on into Company One 2010 project (*Can't distinguish process*):

I mean, the scenario planning ran on into the 2010....

The other saw it as something separate but participants were unable to perceive or articulate what the linkage was or perceived them as the same thing (*No direct link between SP and 2010*):

Well, once again, I'm probably confusing 2010 with scenario planning ... they hit me as two separate initiatives, but that doesn't mean there wasn't a link somewhere.

The view was also expressed by a participant who had been involved in the Scenario Thinking workshops that people who had not taken part in the scenario planning process would not understand it.

I don't think anyone that wasn't directly involved in the process would really know very much about the scenario planning and the part that it played there's probably little understanding in the organisation generally about the process.

That the relationship between scenario planning and Company One 2010 process and the reasons for its outcomes was not clear to some participants suggested they perceived a lack of transparency.

... the scenario planning itself, I'm not entirely how it fed into the remaining work afterwards ...

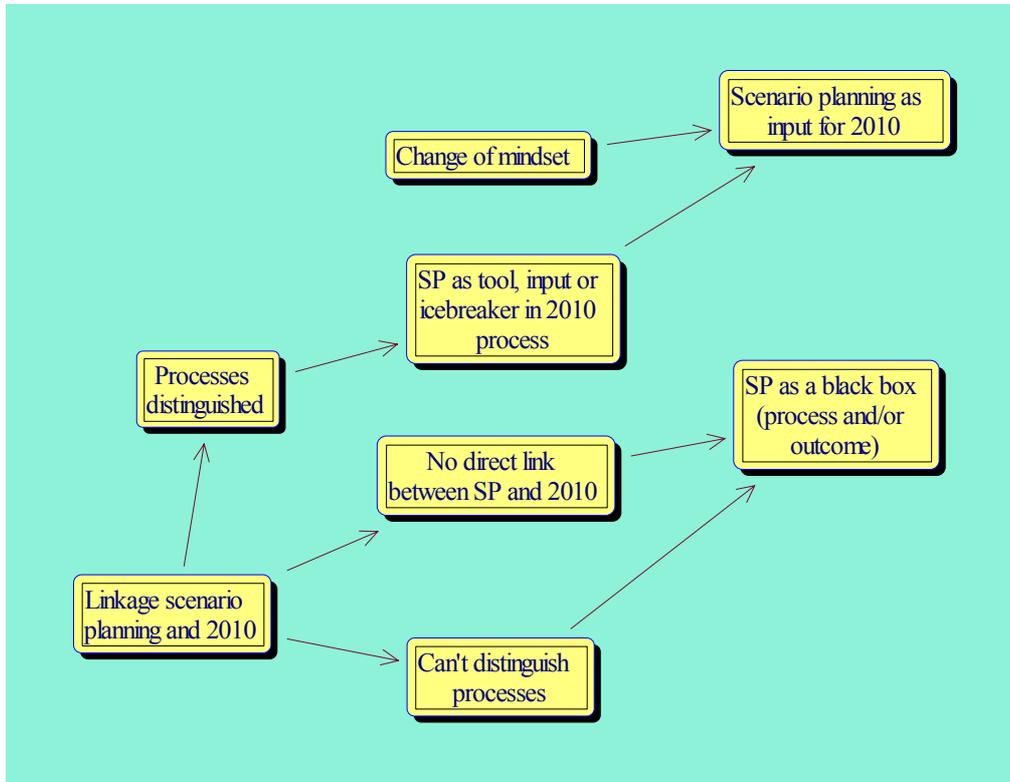
Two participants termed this perceived lack of transparency about the process and/or its outcomes a “*Black box*”, a further category to emerge here (*SP as black box*).

I don't know what happened in the black box, what was in that box.

6.4.3.1 Emerging concepts - fit

The two initial emerging categories here, *Scenario planning as tool, input or icebreaker in 2010 process* and *Change of mindset* were both seen properties of the broader category, *Scenario planning as an input for 2010*, the first as the functional aspects of it and the second as enabling. Scenario planning was seen as a part of, and contributing to, the change process rather than being a stand-alone procedure. A second category, *SP as a black box*, emerged, incorporating concepts about lack of transparency of process. The emergence of these categories is mapped in *Figure 6.4.2*.

Figure 6.4.2 Scenario planning as part of Company One 2010



6.5 Effect

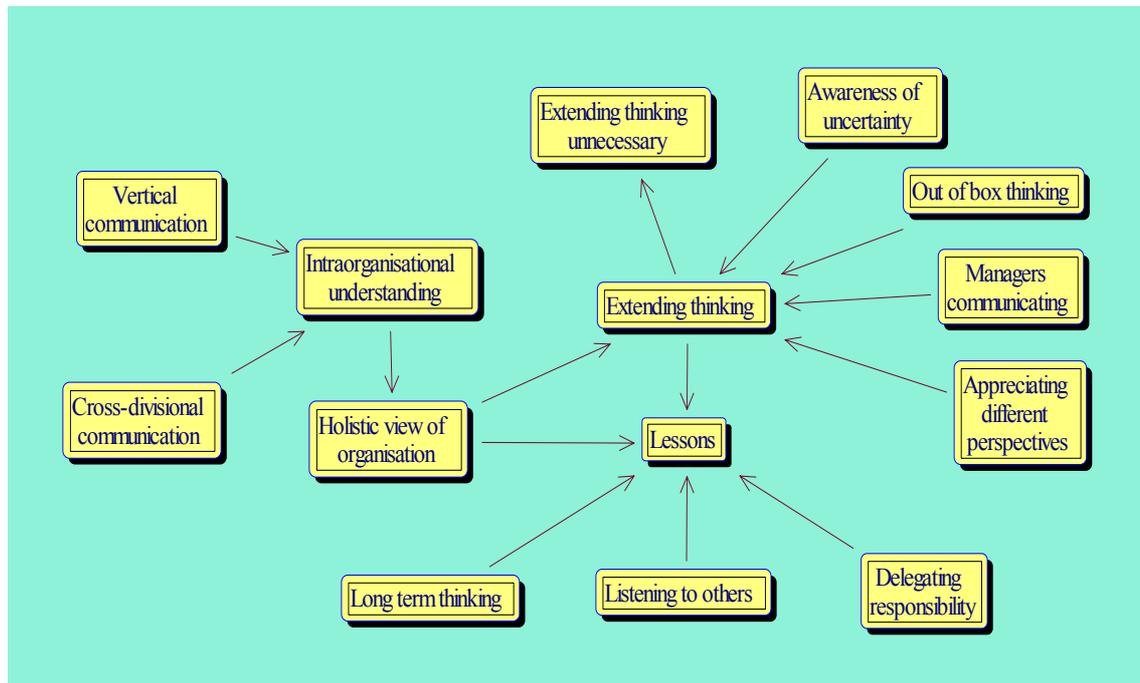
The analysis of effects of the scenario planning process on changes in the organisation included participants' perceptions of any causal links between scenario planning and change. The section deals with findings about broad effects rather than changes in specific aspects of the organisation, which are recorded in the next section, 6.6 *Specific Changes*. There were several major categories of effect:

6.5.1 Learning

For more richness of data and context for this subsection, see Appendix 2.4.1.

This category represents another perspective on the concept *Change of mindset*, which contained a multiplicity of specific facets of the organisation and its environment where viewpoints and mindsets were affected by scenario planning (*cf.* 6.4 *Fit*). Here, *Learning* was interpreted to be a consequence of *Change of mindset*. From the category *Learning*, three main concepts emerged. Their related concepts are mapped in *Figure 6.5.1* and explained in the following subsections.

Figure 6.5.1 Learning



6.5.1.1 Intra-organisational understanding

The concept of *Intra-organisational understanding* emerged from perceptions that the Scenario Thinking process provided the opportunity for improved communication and sharing of information. Participants said that out of the process they gained greater understanding of the perspectives of other divisions of the

organisation, and learned to consider aspects of the organisation that they had not previously taken into account (*Cross-divisional communication*).

And scenario planning, I mean one of the good things about that exercise, was that it was cross-divisional. It was not respecting of divisional boundaries at all. So I think that was a plus. And therefore it probably led to a different sort of empowerment, sharing of information, and individual accountability.

There was also the opportunity for management and others to communicate with, and understand the knowledge and viewpoints, of one another (*Vertical communication*).

I got to interact with some relatively senior people in the organisation, and people from around the organisation, you know, that have different perspectives and different experiences.

It helped disperse the knowledge that was being gained out in the field, to get it back to the more senior levels of management in the organisation.

People came to appreciate that, because all parts of the organisation were interlinked, they had to think in terms of wider organisational matters rather than just their own functions or divisions (*Holistic view of the organisation*).

I think the good discipline that it gave is that, say, people who only had normally a financial interest in their job, or an engineering interest, suddenly realised that you couldn't make the business bits fit and work unless everything was considered holistically.

But increases in intra-organisational understanding were not perceived by everyone in the organisation and some participants believed silo thinking was still prevalent.

... people was looked at as being HR's responsibility, rather than really driving it strategically, and assets may well have been looked at as engineering areas, those sorts of things. ... So the idea of the Areas for Action was that they were more... rather than being specific results and outcomes, they were areas we needed to take action in, as a corporation. My perception is that I'm not sure that a lot has

changed in that regard, and we've just reshaped, and we still see that we've got our one key area, only one Area for Action called customers and community, and CSD (Customer Service Division) still saying it's the area driving that, and the only area that they're driving.

6.5.1.2 Extending thinking

As well as learning to view the organisation more holistically (see *Intra-organisational understanding* above), some of the more conservative people in the organisation were perceived to have realised new possibilities through participating in the Scenario Thinking project (*Appreciating different perspectives*).

I think that the best thing scenario planning did was open the eyes of some of the more conservative elements of the Water Corporation to the fact that there are possibilities out there that are different. You know, that you can view the world differently.

It was perceived that some top managers came to appreciate the uncertainty and changeable nature of the organisation's future operating environment (*Awareness of uncertainty*).

I think we've sort of rocked the boat a bit with the top managers, like, because ... the scenario planning process has made them, you know, contemplate the future, and think about the different possibilities...

Specific examples were provided of how managers became aware of the complexity and uncertainty of their environment (*Awareness of uncertainty*).

... let's have a look at all water-borne pandemics in industrialised Western nations' water systems over the last ten years, and you go, oh my God! But have a look at the leaks, have a look at the system failures, both within our organisation, and nationally, and internationally. So partly it was taking some of those things that seemed like such remote impossibilities, and really coming to grips with the fact that they were very possible... So scenarios really helped us to realise that the world had changed and was changing, and it was changing rapidly.

As well, some long-serving branch managers were perceived to have realised a need to think differently and communicate more (*Managers communicating*).

Examples are, when you get branch managers who have been branch managers in this organisation, who have had fixed views on what our role is as a water authority, 'cause they're back from authority days, and they've been in senior positions since then, and before then - when you see them changing their outlook and recognizing that, by jeez, we do have to do things differently, and, by jeez, yeah, we do have to go and talk to that group out in wherever, because they have a valid viewpoint; and actually implementing some of the outcomes of those discussions - I think that's the change you can see.

However, there was a school of thought that believed there was no need for extended thinking – and consequently a scenario planning project – for the organisational change to have occurred. (*Extending thinking unnecessary*)

Many of us don't believe it was a learning exercise we needed to go through. ... Maybe scenario planning gave us the opportunity to test the boundaries, and really see whether, do we think that's achievable and what are the constraints? Again I don't think you needed to do scenario planning to do that. You could have done that on the back of a cigarette packet in half a day.

6.5.1.3 Lessons

Four lessons to be drawn from the scenario planning process received particular mention from participants:

Long-term thinking: A more long-term strategic approach may avert issues with the potential for adverse consequences for the organisation, like the Subiaco odour impingement litigation.

Now I just hope we learn from the scenario planning, and that experience, to sit back and consider a strategic. . . organise strategic consideration of our position on other issues of that sort of nature.

Holistic view of organisation: Planning in each part of the organisation should take into account the impact on the whole business. This concept is a consequence of *Intra-organisational understanding*.

You're actually part of the organisation, and perceived to be someone who contributes to the whole business, not just this little patch on the

side. And I think that's good for my team, as well, to recognise to see that, because I don't think they've seen that before.

Listening to others: Top management need to listen to others more often.

Actually, one thing, the GMs, we did agree to before we went into the workshop, to make sure we didn't speak too much, really. You know, we purposely tried to stay quiet, and hear everyone else speak. Which was a good lesson, I think. We need to do that a bit more often.

Delegating responsibility: There are benefits to managers being less controlling of people.

I've had to change, and it's been very good for me, in terms of being less controlling and more empowering of people.

However in many cases, the lessons tended to be normative rather than performative.

6.5.1.4 Emerging concepts – lessons

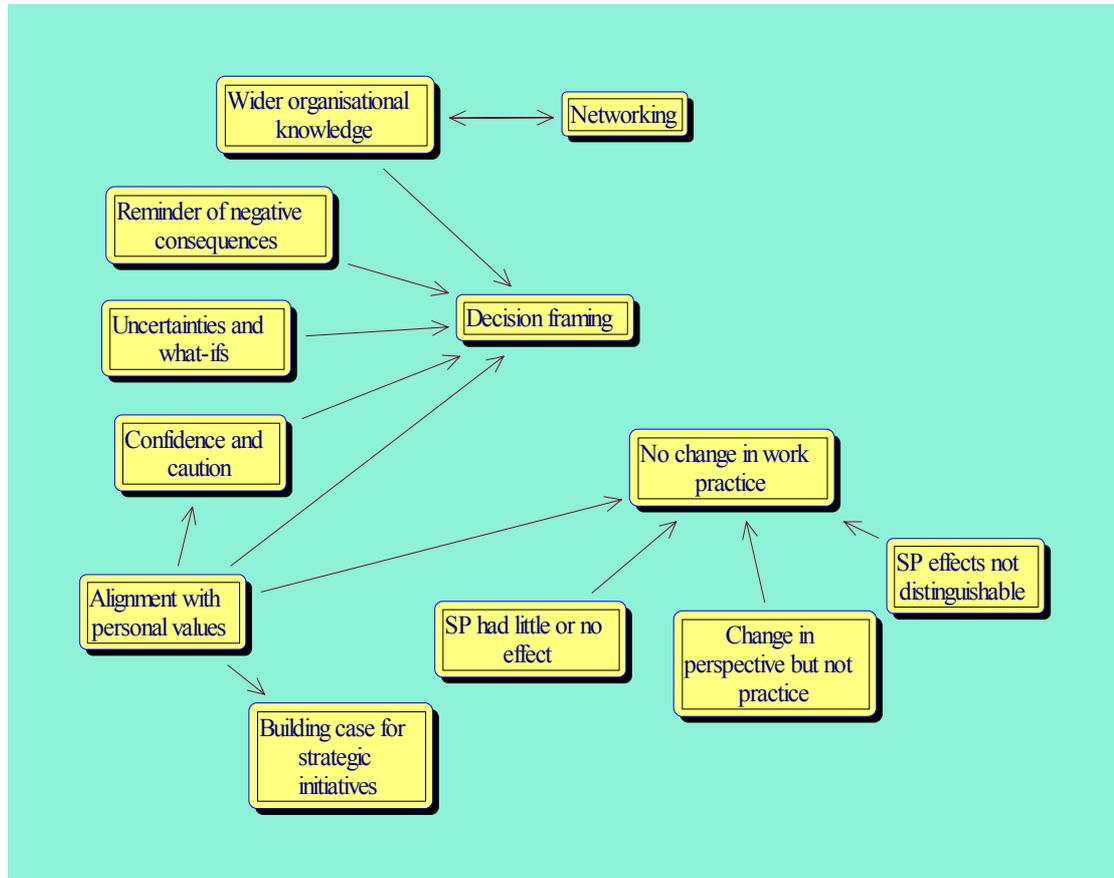
The core concept that emerged here was that of *Extending thinking*, which, as has been noted, is akin to *Change of Mindset*. An outcome of *Extending thinking* is *Lessons*. This is shown in *Figure 6.5.1*.

6.5.2 Personal effects

For more richness of data and context for this subsection, see Appendix 2.4.2.

Most of the discussion about the effect of scenario planning on the individual came in response to a direct question: “What difference has participating in scenario planning made to the way you personally approach your work?” Concepts in this group were centred around two relational concepts: *Decision framing* and *No change in work practice*. The interpretation of their relationship is shown in *Figure 6.5.2*.

Figure 6.5.2 Personal effects



6.5.2.1 Decision framing

Some participants stated that the Company One 2010 outcomes supplied a framework and context for decision-making and planning:

I think that's great, because that clearly defines our vision, and things we want to do. It gives direction when you're making decisions about things you do around the place.

Some said the Scenario Thinking project provided a way of thinking that affected decision-making within this framework, although some of these said they had not changed the way they framed decisions because they believed that they already used a form of scenario thinking in the way they considered alternatives.

Well, any person who manages anything, you do scenario planning in your head.

Two concepts in particular contributed to the idea of how scenario thinking affected *Decision framing*:

- By referring to the scenarios, participants were reminded of the unpalatable outcomes of some strategy paths (*Reminder of negative consequences*).
I always go back to the scenario planning, and think what would it be like in the Back to the Future scenario ...The effect of that is to further reaffirm that we determined that we weren't going to be this particular one, for some reasons that were fleshed out.
- The scenarios provided a reminder that the future was uncertain and what-ifs needed to be considered (*Uncertainties and what-ifs*).
The idea of testing some scenarios, I think, is something I'd do more now than I used to do before, the what-ifs about, you know, the possible outcomes.

There was also a view that the process had provided a more bounded view of the future that could be used to leverage strategic direction (*Building case for strategic initiatives*).

But I suppose what it's helped me to do is to latch on to a crystallised view of the future, which has made it easier for me to build a case around some of the initiatives that I want to progress.

6.5.2.2 Wider organisational knowledge

This was the participants' personal experience of the concept of 6.5.1.1 *Intra-organisational understanding*. However, *Intra-organisational understanding* tended to be a perception of the effect of scenario planning on others in the organisation. When discussing their own personal wider organisational knowledge, their greater understanding of the perspectives of people of other parts of the organisation and how they saw the effects of decisions and actions, participants tended to attribute this more to the wider Company One 2010 initiative rather than specifically to scenario planning.

I mean the whole 2010 project gave me a bigger, much bigger view of the organisation. There were so many things that I didn't understand previously that now I understand, in terms of how and why the organisation makes certain decisions and undertakes certain things, that have enabled me to better operate within the Water Corp system.

6.5.2.3 Networking

Several participants valued the opportunity afforded by Scenario Thinking to initiate contacts and build informal networks with people in other parts of the organisation, which enabled them to circumnavigate organisational silos and to get things done more readily.

I think the way that my networks have operated in the organisation are much broader, which is good.

... it's really the horizontal processes which are really the key ones, where we're very silo mentality like in all large organisations, and to break down those silos ... the informal network within the organisation is the only really efficient method of getting things done, especially in a short sort of time frame..

6.5.2.4 Alignment with personal values

This code is closely linked to *Affirmation* (cf. 6.3.2 *Objectives*). Change was easy to accept if it aligned with the participant's existing values, but doubt was cast on how he or she would respond if there was no alignment.

It rings true with my values, so therefore I espouse the values that are there, because that meets my personal sort of value set. And so that, for me, is sort of logical. Which is why I do it, but if it didn't, then I guess...

(Note that the Company One 2010 process was not intended to change values, and the outcomes did not include any change in values from those of the Company One initiative (cf. 6.6.4.1 *How scenario planning affected culture*)).

6.5.2.5 Confidence and caution

These findings relate to Company One 2010 rather than scenario planning specifically. Contrasting ideas were expressed. One viewpoint was that participants felt more confident in their work than previously because they were more comfortable with the new focus and direction. On the other hand, the view was expressed that people had lost confidence as a result of the Company One 2010 process.

...there're a couple of things there, in terms of it's given me more confidence, in terms of what we're doing in my particular role with key customers ...

...it's even made me more cautious. I'm probably the most cautious I've ever been ... And did it happen because of scenario planning? Well, no, but I think that was quite a major step downwards, was the end result of that.

6.5.2.6 No change in work practice

This was a strong concept, coded for 16 participants. Senior managers were represented in a similar proportion to others. Participants who had not changed their work practice as a result of scenario planning or the change initiative could be categorised as:

- those who felt the change aligned with what they were already doing and/or believed (*Alignment with personal values*):

So I don't think that the way I work has changed at all, but it just made me think I'm glad that other people have been thinking this way.

- those who felt their thinking or perspective had changed to some extent, but what they actually did had not (*Change in perspective but not practice*):

I'd say it's perhaps made me a little more open minded, and so on, but I would find it difficult to put my finger on any one thing I must say.

- those who could not distinguish the effects of scenario planning from other influences in the intervening time (*SP effects not distinguishable*):

I mean what's the effect of 18 months' water under the bridge versus going through a particular exercise.

- those who just denied any effect at all (*No change*):

Zip (laughter).

6.5.2.7 Emerging categories – personal effects:

Memos during the analysis of this group noted the emergence of two concepts: *Affecting the strategic conversation* and *Cultural change not embedded*.

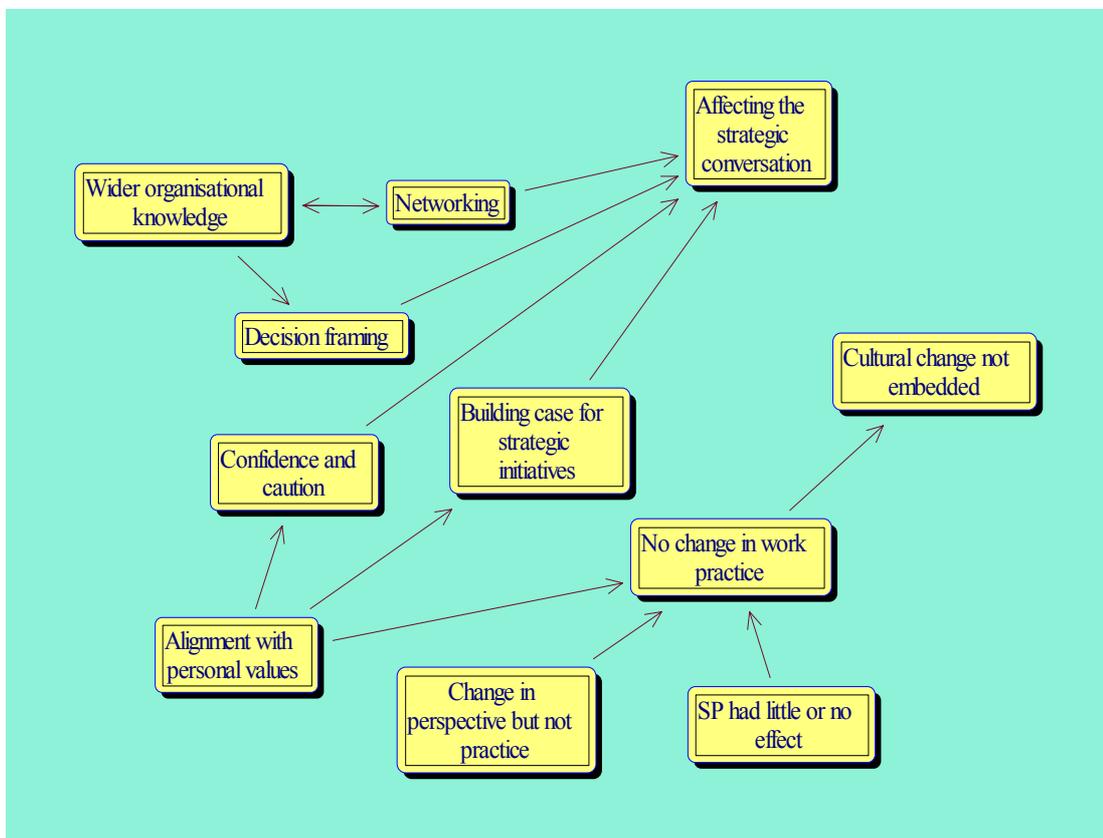
The notion of the strategic conversation was introduced in *Figure 2.3 The shadow culture*. When participants spoke of *Wider organisational knowledge*, and how that had affected their *Networking*, it was implicit in their discussion that they were

describing the effect of the change initiative on the strategic conversation in the organisation, including in its informal aspect. Similarly, in this interpretation, the effect of scenario planning and Company One 2010 on their *Decision framing* would have affected the way they conducted their relationships with others. How this affected the participant with regard to confidence and caution would have affected the tone of the informal strategic conversation. Also affecting the internal strategic conversation was the use of scenarios in *Building a case for strategic initiatives*.

On the other hand, there was a large number of participants who stated that *Scenario planning had little or no effect* or reported a *Change in perspective but not in practice*, and consequently *No change in work practice*. This suggested the possibility that, although participants were discussing change, the *Cultural change was not embedded*. It was noted that about nearly half of the 33 participants (16) who discussed this issue specifically stated that there had been no change in the way they approached their work as a result of the change process (cf. 6.5.5 *Lack of change*).

The development of these emerging categories is mapped in *Figure 6.5.3*.

Figure 6.5.3 Personal effects – emerging concepts



6.5.3 Affirmation

For more richness of data and context for this subsection, see Appendix 2.4.3.

There was a body of opinion that Scenario Thinking and the Company One 2010 project, rather than initiate change, had affirmed existing ideas or beliefs and practices at either the organisational or personal level.

There were two aspects to *Affirmation* as an effect. The first, which emerged in 6.3.3 *Objectives*, was that the purpose of the change initiative was to affirm the direction and purpose the organisation was following anyway (*Affirm organisational direction*).

So, we are very customer oriented organisation before. We are still. 2010's reinforced it. I think scenario planning probably re-iterated that it was the right track.

One perception of this was that the direction of the organisational change had already been decided before the Scenario Thinking project and the change initiative was to confirm and gain support for, rather than explore and initiate, the new direction (*Affirm preconceived change*) (See also 6.6.3.1 *How scenario planning affected organisational focus and direction*).

.. this scenario planning exercise was started with the outcome already known.

Another interpretation by participants was that the change initiative was to set a framework for proceeding in a pre-determined direction.

We knew where we wanted to go, but it needed to be crystallised through a planning process. And the scenario planning provided a good way of doing it.

The other concept of *Affirmation* was that the idea from 6.5.2.4 *Alignment with personal values* that the outcome of the change process was compatible with the participant's own viewpoint and/or practices – and consequently required no change on his or her part (*Affirm own views; Affirm own practice*).

So really what it did in a sense was confirm to me that I guess my personal approach was pretty close to the mark.

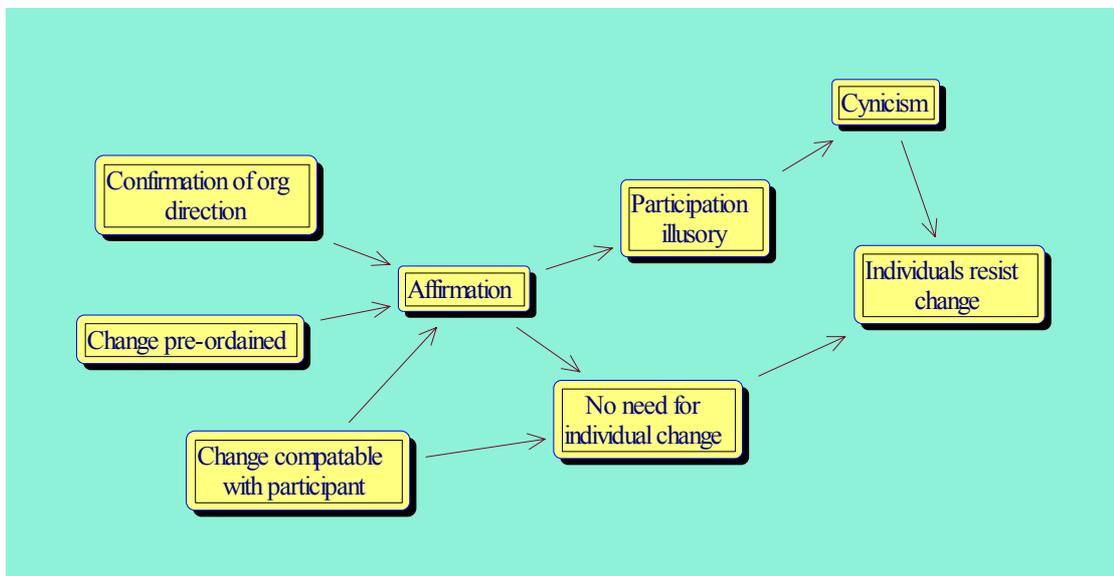
6.5.3.1 Emergent concepts – affirmation

Both aspects of *Affirmation* can lead to reasons for the participant to resist change. For those who see the changes as compatible with their existing views or practices, there is no need for them to alter anything (*No need for individual change*). For those who see the change initiative as confirming the extant direction, *Participation is illusory*, i.e., they perceived their participation had made no difference. This could lead to an attitude of *Cynicism* about the change process. In both cases, the tendency can be that *Individuals resist change*. The emergence of these concepts is mapped in *Figure 6.5.4*.

The researcher detected a feeling of *Cynicism* about the change process from participants which is explored in 7.17.3 *Cynicism*. An example of it at this stage was the following quote that was coded under *Affirmation*:

That was a complete {expletive for false} exercise, because all the actions were already known.

Figure 6.5.4 Affirmation and resistance to change



6.5.4 Use and content of scenarios

For more richness of data and context for this subsection, see Appendix 2.4.4.

This subsection was an exploration of participants' views of the ways scenarios were used and the effect of the content of the scenarios.

Two aspects emerged. The first was a concept that one of the four scenarios was to be chosen by the organisation, either as the way forward or as the most likely to emerge. It appeared that initially some people had expected that the scenario planning process would produce a prediction for the future of the organisation.

Q =You said earlier on that people had expectations that they would get a scenario for the future out of the scenario planning process. Did you share that expectation? A =I guess I had that hope. So rather than expectation, I guess we had that hope, and most of us thought if that's not going to be the outcome, then why are we doing it? It was made clear fairly early in the piece, and repeated all the way through, that that wasn't going to be an outcome.

While, by the time of the Research interviews, most people had realised that prediction was not an intended outcome of scenario development, a residue of the idea emerged when a few people stated that *Choosing a scenario*, the concept that one or more of the scenarios was chosen for the organisation to aim towards, was an outcome of the Scenario Thinking project. The persistence of this concept was also demonstrated by the occasional comment about a "right" scenario.

I didn't necessarily agree that the scenario that was chosen was the right one.

The other aspect was a widely held perception was at least one of the scenarios provided a vision of the future that the organisation would wish to avoid (*Avoiding a scenario*).

And that would be probably be part of my discussion on a particular issue, that we've decided that we don't want to go Back to the Future, because of X, Y. You know, some of the key reasons would come into my mind.

Akin to this avoidance idea was the concept of *Preparedness*. This was interpreted both as looking at different possibilities or multiple futures as preparation for change

and as future memory, i.e., a rehearsal of strategies for dealing with issues that could arise in the future. The scenarios and the notional strategies developed in the process were seen as useful rehearsals and a starting point for decision-making in real-life situations, because the driving forces and possible outcomes had already been explored.

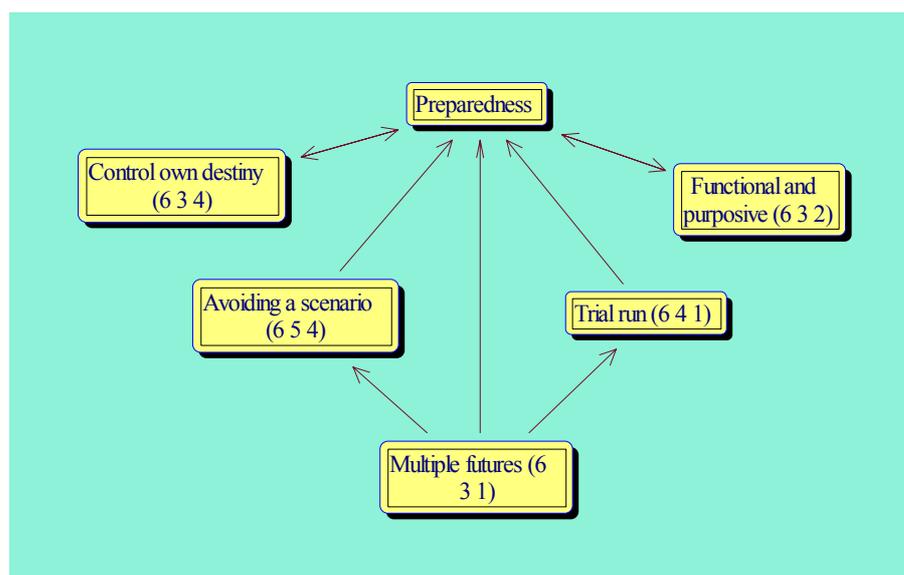
...when we get to a decision point or a situation in next week or next year, that we should be able to flick through the scenario planning and say well, hey, yes, this was identified as a possible scenario within one of the scenarios, or a possible situation within one of the scenarios, and this is how we thought we might deal with it through that scenario.

6.5.4.1 Emerging concepts – use and content of scenarios

The notion of choosing a scenario contrasts with the concept of the content of scenarios as a stimulator of thought and ideas recorded in 6.4.1 *Change of mindset*. However, the concept of using them to avoid unpalatable futures may be considered to be part of the concept of *Preparedness*, i.e., enabling avoidance by highlighting where particular strategic directions might lead in multiple possible futures.

Preparedness is an effect that is linked to the *Fit* concept in 6.4.2.1 *Trial Run* and is an outcome of both *Functional and purposive* and *Control own destiny*, as mapped in *Figure 6.5.5*.

Figure 6.5.5 Preparedness



6.5.5 Lack of change

For more richness of data and context for this subsection, see Appendix 2.4.5.

Comments on lack of change were widespread: there were 21 participants who commented on aspects of the organisation where there had been no change as a result of Company One 2010 or ways in which the change initiative had been ineffective.

Three groups of concepts emerged: *Areas of non-change*, which were specific areas of the organisation where participants denied that any change had occurred as a result of Scenario Thinking and/or Company One 2010; *Lack of effectiveness*, a perception that Scenario Thinking and Company One 2010 had not been effective as a change agent; and *Talk, no action*, the perception that discussion and planning during Scenario Thinking and Company One 2010 involved a lot of interesting discussion and communication but did not lead to effective action or change.

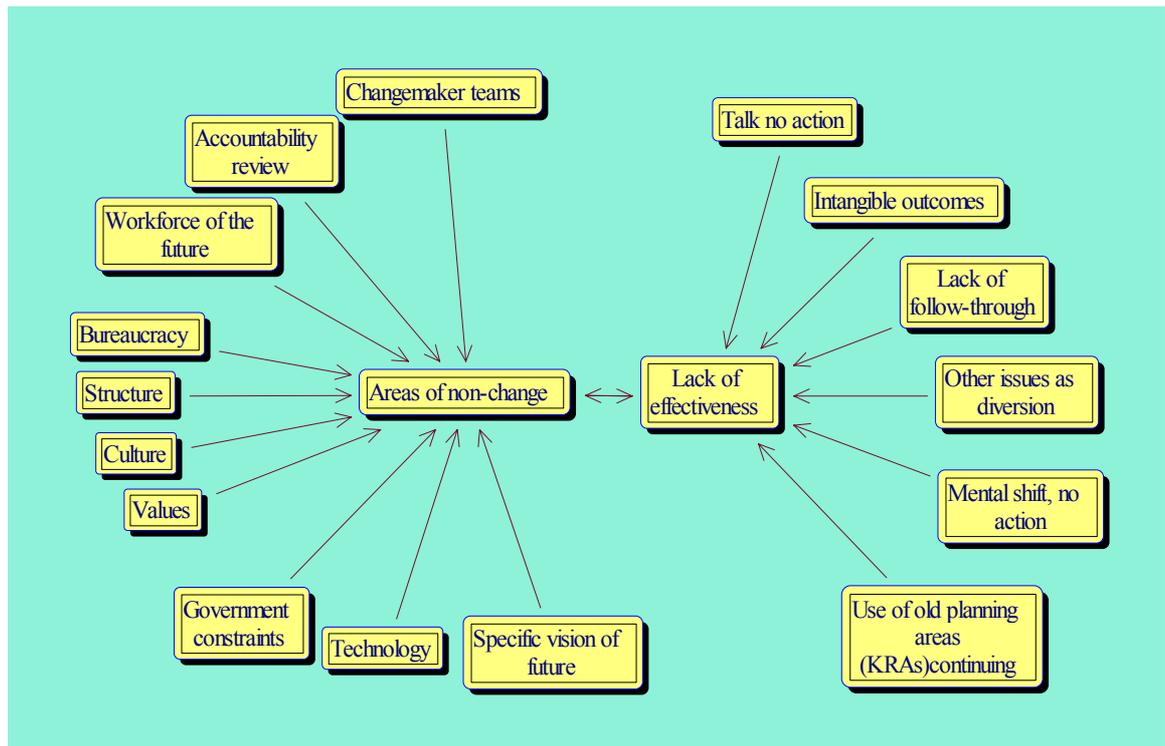
In *Figure 6.5.6*, the specific areas where *Lack of change* was identified are mapped on the left hand side. For this part of analysis, the relevant factor was considered to be whether change had occurred, rather than the specifics of the change itself.

Explanations of the change areas can be found in *6.6 Specific change areas* and *6.7 Strategic intent and implementation phases*.

Each of the properties of the node *Lack of effectiveness*, which are mapped on the right hand side, was interpreted as a reason it was perceived that the change initiative had not been effective.

The third group *Talk, no action* was an interpretation of some participants' view that the change initiative was a talk-fest that had been ineffective in producing change and was therefore interpreted as a contributing factor to *Lack of effectiveness*.

Figure 6.5.6 Perceptions that there had been no change



Evidentiary quotes for the concepts in the category *Areas of non-change* can be found in *Appendix 2.4.5*. They were grouped as follows:

- Change projects that arose from or around the time of Company One 2010: *Changemaker teams* (cf. 6.7.1 *Changemaker teams*), a proposed accountability review and *Workforce of the Future* (cf. 6.6.7.6 *Workforce of the future*).
- Areas within in the organisation where it was perceived that change had not occurred: *Bureaucracy*, *Structure*, aspects of *Culture* (cf. 6.6.4.1 *How scenario planning affected culture*) and *Values* (but it should be noted that it was not an objective of the change process to change values).
- Practices where it was perceived that there had been no change: use of *Technology*; and lack of *Specific vision for the future*.

It was also perceived that there had also been no change in the external environmental issue of *Government constraints*.

Although *Areas of non-change* was a node for perceptions of lack of change as a result of Company One 2010, in some of these areas other participants did believe change had occurred.

There were 11 participants who queried the effectiveness of the change initiative (*Lack of effectiveness*), e.g.,

I guess my perception, sort of that, to be perfectly honest is, I don't really think it's that had that much of an impact.

One of the difficulties they saw was that the outputs from the process were not considered to be tangible enough (*Intangible outcomes*).

I think people didn't see the outputs as being tangible enough, I don't think. They were unashamedly about cultural, rather than structural, change. They weren't about building new buildings; they were about changing the culture and the way that we work, the way we interact with the community. And for many of our people that was hard to engage with.

Other factors that were considered to contribute to *Lack of effectiveness* were:

- *Lack of follow-through*, particularly by management:
I'm not sure whether the senior managers are . . . I don't know what they thought about the process, and we don't talk about it in team meetings or anything like that.
- External issues that diverted the resources of the organisation away from the ongoing change process (*Other issues as diversion*):
And I think we've been really captured by a couple of key issues that have probably distracted senior management... a major court case litigation and a drought.
- Although there was change in people's thinking, this did not result in changes in what was being done in the organisation (*Mental shift, no action*):
I feel that we put people and culture at the centre, so I think that the mental shift was made, but I think very little has happened on the ground in that respect. Almost nothing.
- Some parts of the organisation were aware of but ignoring the new areas for action, continuing to use the old Key Result Areas (KRAs) (*Use of old planning areas continuing*):

So I see its results in a lot of work, and it's a new framework, it's a new way of slicing the orange, but is it a better way? Not for our business, not for this division anyway, because we still manage by those eight pre-scenario planning areas (laughs).

There was also the view that Scenario Thinking and Company One 2010 consisted of discussion that did not result in any change (*Talk, no action*):

But it was a giant gab fest, you know. The process was fascinating, it was terrific, you know. We got external people in, and we talked about all these things. But nothing fell out.

6.5.5.1 Emerging concepts – lack of change

The emerging concepts that are listed here were noted as memos during the analysis process and were selected for their relevance for the *Discussion* chapter.

As a consequence of the perceived lack of change after the work of the *Changemaker teams* and in the areas of *Bureaucracy; Accountability review; Workforce of the future; Structure; Culture; and Technology*, it was evident that there was a tone of disappointment and *Disillusionment* on the part of the participants. Of particular interest was a disappointment expressed at the lack of change in *Technology*, as this was *A major driving force for scenarios* – ranked second – identified in the scenario development workshop.

I mean, it said, the planning found we really need to be slick with technology and, you know, with e-business and all this sort of stuff. But I can tell you from where I'm coming it hasn't happened. I'm pretty disappointed actually.

From *Government constraints* emerged the idea of the *Government as a major influence* on the organisation and its strategy, a concept that matched the major driving force identified in the scenario development workshop.

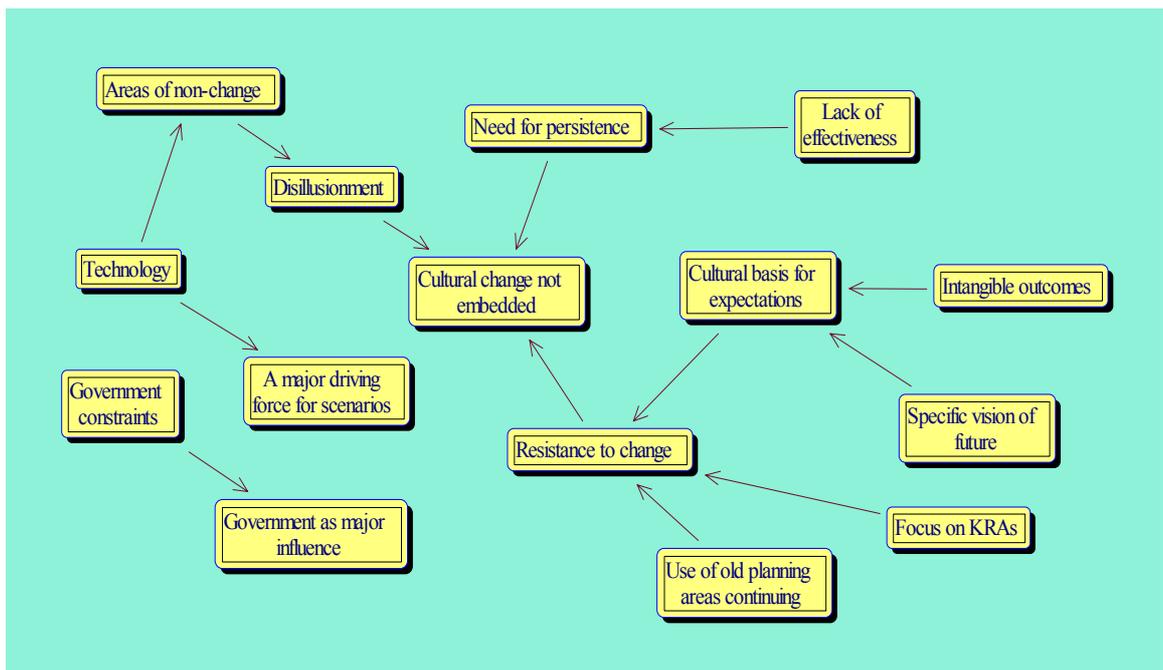
The concepts of *Talk, no action; Lack of follow-through; Mental shift, no action; and Other issues as diversion* all led to the interpretation that there was a *Need for persistence* in the implementation of change. A related theme here was that although good ideas had been put forward, insufficient resources, time and effort had been devoted to bringing them into effect (*cf. 6.7.1 Changemaker teams and 6.7.6 Persistence*).

A further idea to be explored was the concept that the difficulties with *Intangible outcomes* and the expressed desire for a more *Specific vision of the future* from the process resulted from the experience and training of the participants, who were trained in hard technologies like engineering, i.e., that there was a *Cultural basis for their expectations*. When expectations were not met in terms that were familiar to the operatives, there was *Resistance to change*, evidenced by the statements about refusal in some parts of the organisation to adopt the new more holistic focus and direction, instead continuing to *Focus on Key Result Areas*, which was the old Company One framework.

From *Disillusionment*, *Resistance to change* and an unmet *Need for persistence* emerged the tentative construct that, although some organisational changes may have taken place at a superficial level, *Cultural change was not embedded*, i.e., there may have been some changes in the way people thought and communicated with each other, but the negative attitudes shown by some operatives indicated acceptance of the intended change was limited. This concept and its aspects were carried forward for exploration in the next sections, *6.6 Specific change areas*, *6.7 Strategic intent and implementation phases*, and then explored further in *7 Discussion*.

The development of the emerging concepts described here is mapped in *Figure 6.5.7*.

Figure 6.5.7 Lack of change – emerging concepts



The concepts here appeared to contradict other findings that had indicated participants recognised positive effects from scenario planning and/or Company One 2010. However, it was quite possible for participants to have perceived changes at one level or in one area, but not in others. As well, there was diversity of opinion. Nevertheless, the high incidence of comment in this category suggested and reinforced the emerging category *Cultural change not embedded*.

6.5.6 Unexpected and adverse effects of scenario planning

For more richness of data and context for this subsection, see Appendix 2.4.6 and 2.4.7.

6.5.6.1 Unexpected effects

Questions were asked in all interviews about unexpected and adverse effects of the scenario planning project.

Approximately a third of the participants specifically stated they saw no unexpected effects. However, the researcher noted that the question seemed to catch some participants by surprise. A common reaction was that the participants had not known what to expect and therefore there could not have been any unexpected effects.

There were very few unexpected effects recorded. Apart from one participant who had not anticipated what was perceived as the apparent success of the Scenario Thinking project (see below), the only surprises expressed were that the effects were less than expected (*Less effect than expected*). Factors that led to this included disappointment that the scenarios were not, as expressed by one participant, more “way-out” (*Could have been more challenging and more radical*); that the organising group did not stay together longer to guide the change process (*Duration of 2010 organising group*) and that the project did not result in operational change (see also 6.5.2.6 *No change in work practice*).

I had expected there to be much more pushing of our mental boundaries, and hard questions being asked.

I guess, from my personal point of view, I was hoping scenario planning would provide a much less of the predictable outcome than we achieved. That sounds funny, I guess, but we didn't seem to end up with any significant way-out ideas.

Maybe I didn't expect the Company One 2010 group to stop as soon as (it did) ... it was good having them as a team working on it. It gave the whole thing credibility.

I suppose I was interested in how this was going to translate into practical things, practical change, in the workplace. And I suppose from that respect I have been disappointed.

The question about unexpected effects was asked in the hope that if an effect was unexpected it may also have triggered a change in mindset. The question did not achieve its purpose of revealing any indications of mind-set change. It did, however, indicate that some of the participants had expected more from the change initiative.

The effect of the perceived foreshortened *Duration of the 2010 organising group* (see also 6.7.6 *Persistence*) was that the change *Process was not continued* after the group ceased working together and championing the change initiatives.

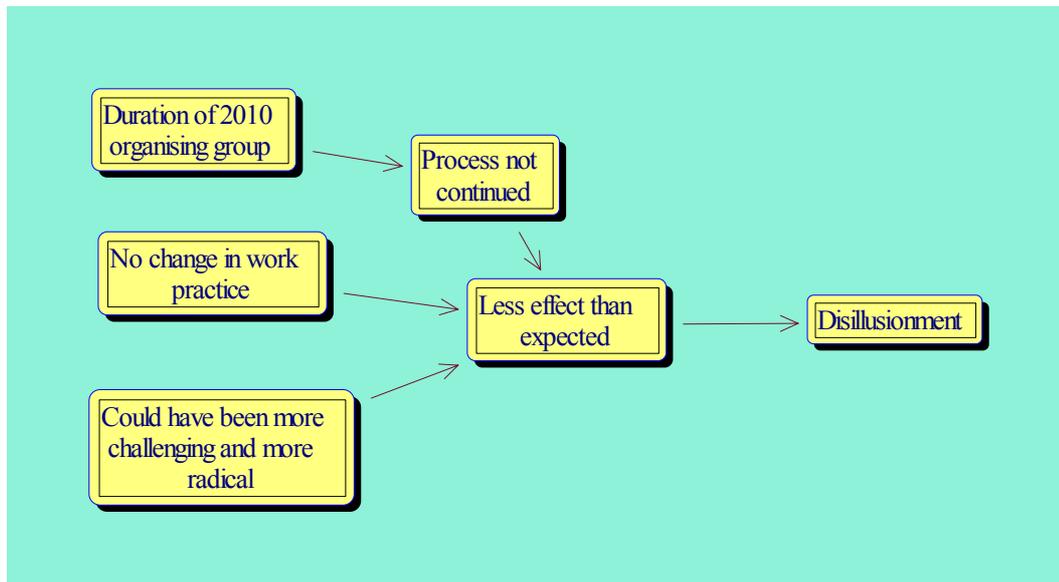
6.5.6.2 Emerging concepts – unexpected effects

The outcome that emerged from *Less effect than expected* was the impression of disappointment and *Disillusionment* arising from or with the overall process. The emergence of this concept is mapped in *Figure 6.5.8*.

The *Degree of acceptance of SP* was another unexpected effect that reinforced the concept of scenario planning as a component of Company One 2010.

... the scenario planning part of it was successful. There was a ringing endorsement across the organisation for it, which was good. I didn't expect that.

Figure 6.5.8 Unexpected effects – emerging concept



6.5.6.3 Adverse effects

Opinions that there had been any adverse effects of scenario planning were sparse, with 20 participants stating that there were no adverse effects. Where adverse effects were mentioned in response to this question, participants attributed them to the later stages of the change process or the overall Company One 2010 initiative, not Scenario Thinking specifically.

I don't think that the scenario plan once adopted - and you have to have good reasons to do so - really can have adverse effects. It is the way you implement it which can have adverse effects. But scenario planning itself, I doubt whether that really affects corporate behaviour. It only affects corporate behaviour if you do it wrongly. And that is not the fault of the scenario planning, that is the adaptation of it.

One contrary opinion was that because there had so few effects there could not be any adverse effects.

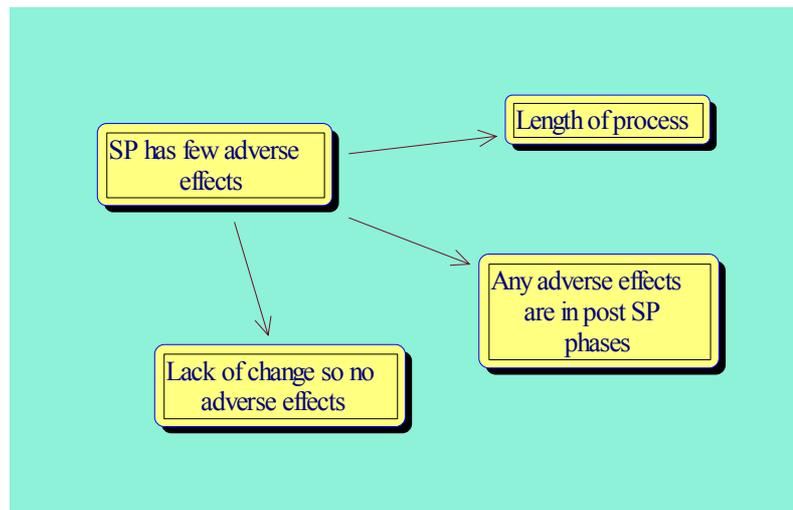
I guess that's the tragedy of it, that there weren't any adverse effects. There were so few effects, at all.

The only substantive complaint was the length of time the process took, a comment which was applied to both scenario planning and Company One 2010.

... it's got to be looked at, scenario planning and 2010, the time consuming nature of it needed to be considered, re working out what its implications are for senior executives off line, for some long period of time, and what do you think is going to be the implications of that?

Comments about effects of the overall Company One 2010 process tended to be voiced in other parts of the discussion and have been recorded under the specific change codes.

Figure 6.5.9 Adverse effects



6.5.6.4 Emerging concepts – adverse effects

Of particular interest here was the concept that any adverse effects of the change process were due to the later parts of the process rather than Scenario Thinking.

6.6 Specific change areas

For more richness of data and context for this section, see Appendix 2.4.8.

Participants were asked to identify any specific changes that had taken place in the organisation that they thought could be attributed to scenario planning. As well, in a follow-up question, they were asked about changes in specific areas that they had discussed in the pre-workshop interviews. The latter was intended to ensure that each participant discussed some areas common to both the Before and After interviews and the Research interviews. Inevitably there was some overlap between the two. Perceptions of change were diverse, as would be expected from a sample of participants from different areas of the organisation, and for some people change was perceived to be minimal or non-existent in some of the areas.

This section provides a brief interpretation of the evidentiary quotes in *Appendix 2.4.8*, with emphasis on distinguishing areas of change rather than exploring the detail of the change in depth. This approach was decided with reference to the Research questions, where the focus of the research was on identifying the occurrence of change rather than its situational context, and the factors that influenced the acceptance or otherwise of change. However, explanation of the context of the changes is included where relevant.

6.6.1 Attitude to risk

A recurrent perception in the interviews was the concept that there were many people in the organisation who were averse to taking risks (*Individual reluctance to accept responsibility*). This was perceived to have had its roots in the public service origins of the Corporation. However, there was a belief that risk aversion had increased since corporatisation, because the organisation had become responsible for its own actions rather coming under the umbrella of a government department (*Corporation more risk averse than Water Authority; Corporation accountable, not Government*).

There were two broad perceptions of the effect of the change initiative on the attitude to risk. Some participants believed that one of the outcomes of Company One 2010, the refocusing of business development to Western Australia, indicated that the organisation had a reduced propensity for risk-taking behaviour because the new policy was less adventurist. (*New business direction less risky*). A consequence of this concept of increased risk aversion was a perception that there was a lack of trust

within the organisation, with a resultant increase in bureaucracy (*Bureaucracy and lack of trust*). This perceived cautiousness had been reinforced by the drought and the public's response to it (*Conservative approach as effect of drought*).

Oh, I think the reduction of the broader outlook of the Corporation in terms of commercialisation, in other words, it is perceived that the Corporation, by not wanting to be as commercial as they previously thought they wanted to be, that therefore the risk-taking was a different picture, and because of that there's a retraction in all of these things. And I think that part of that is that bureaucracy increased, however subtle that might be, and therefore trust diminished and so on.

This perceived cautiousness had been reinforced by the drought and the response of the public to it (*Conservative approach as effect of drought*).

We're on a very tight trust and credibility line at the moment, you know, with a very strong likelihood that we're going into drought again, and restrictions, in the coming summer. So, yeah, I think we've become, we still remain very conservative.

On the other hand, others believed that the Scenario Thinking project had helped unfetter attitudes to innovation and risk, particularly with regard to acceptance that risk-taking was part of the business and needed to be managed, not avoided. The organisation was taking more risks because it was realised that perfect solutions were not always available so trade-offs were necessary (*Understanding of risk through SP; Need to accept risk and trade-offs; Innovation encouraged*).

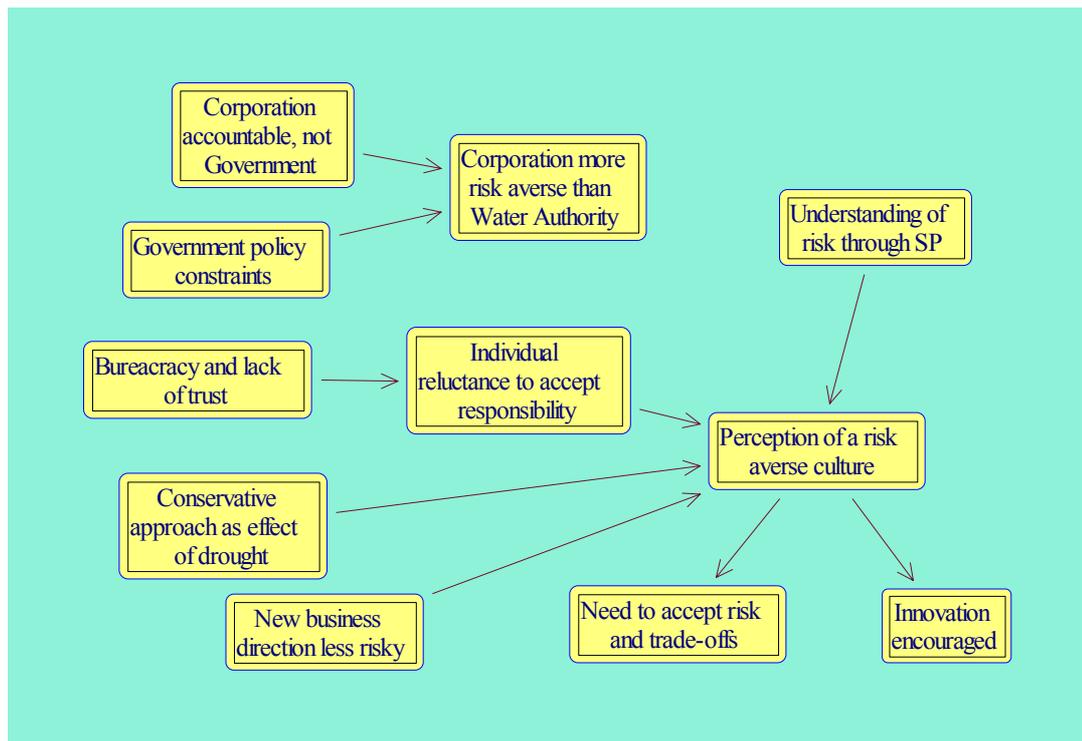
The innovative thinking has really been driven quite hard, and, even for those people who try to ignore it, you can't help but get caught up in it. And I think the scenario planning was just another one of those things that helped to broaden people's thinking about directions.

And the feeling after this was, well, you know, the world is changing, science is changing, you know, not all the answers to a lot of these things are known. So I think there's, in some ways, more acceptance that risk is a big part of our responsibility. So rather than trying to bullet-proof against it, because we can't afford to do that, we've no

funds to do that, it is more about making those risks known to people, making those trade-offs known.

The context in which the concept of a perceived risk aversion, together with the understanding of risk gained through scenario planning and the outcomes of the increased understanding of the two factors are mapped in *Figure 6.6.1*

Figure 6.6.1 Attitude to risk



6.6.2 Attitude to Government and regulators

In this category, perceptions of the nature of the organisation’s relationship with Government and with regulators and how these relationships were affected by scenario planning were analysed.

The influence of Government had been identified in the Scenario Thinking workshops as the major driving force for the organisation’s planning and strategy (*Recognition of importance of govt influence through SP*). Although the Corporation was nominally independent of Government, Government was its sole shareholder. Participants said this ensured it could have a strong influence over the Corporation, because it had ultimate control over the organisation’s resources, which constrained both its commercial activities and its access to capital (*Government as shareholder*). The organisation’s relationship with the Government was seen as political, with the Corporation having to negotiate for sufficient resources to carry out its strategy and

to ensure that it was able to maintain independence while still operating within Government policies (*Independent – with government*).

... we're independent of government as a Corporation, but we're not independent of government. What I would say is, we work independently with government.

It was perceived that the effect of this was that the Corporation had to satisfy the requirements of three groups of stakeholders – its industrial customers, the general public and the Government whose viewpoint could differ from the public they represented (*Customer vs. government demands*). A few participants felt that the government was allowed to have too much influence.

Government policy was seen as a constraint on the Corporation (*Political influence; Constrained by government policy*). The need to remain compliant with Government policy was considered to be one of the reasons for the bureaucratic structure of the organisation (*Bureaucracy*), which had reporting and compliance requirements akin to a Government department, although it was pointed out that as a Corporation it did not have the financial and legal protection of being part of Government. Long-term planning was especially difficult, because of the need to accommodate the short-term outlook of Government policies devised with a four-year electoral cycle in mind (*Electoral cycle time frames for planning*).

From the Scenario Thinking project came a recognition of the importance of the relationship with Government to the future of the organisation.

And I think the learning that was done, and the different pictures which were painted, in terms of how government and regulators can influence our future, probably had a significant impact in terms of shaping the outcomes, which we're sort of now seeing. So it was, as much as anything, about learning and seeing that, Jeez, these guys do play an important role with respect to where we end up in the future. We need to be perhaps taking a different line.

There was little agreement as to the extent, if any, scenario planning and Company One 2010 affected the change in attitude within the organisation towards the relationship with Government, which was seen to have moved from an adversarial to a more cooperative stance. Unlike participants with views like the one quoted

above, some felt that the drought was a major factor that had created the circumstances for the Government and the Corporation to work more closely together (*Drought and attitude to govt*), while another view was that it was happening anyway, regardless of scenario planning (*Importance of govt obvious*).

... there's far more notice of making sure we manage our stakeholders and shareholder, but I don't think that's a result of scenario planning, I think that's just something that was emerging anyway, and patently obvious.

There was a similar change in attitude to regulators. Increasing regulations (*Escalating regulatory regime*) were seen as adding costs and therefore adding to the price of water (*Effect of regulations on pricing*), as well as creating paperwork. It was perceived that regulators, who were subject to political demands, did not always appreciate the economic impact of what they were doing. The Government was planning to introduce what participants called the “economic regulator” at the beginning of 2003, which, it was hoped, would rectify this. (The Economic Regulation Authority took over the regulatory function for water on January 1, 2004) (ERA, 2004). Some participants anticipated this would be yet another bureaucratic burden, but others believed the new authority would provide a more holistic view of regulation, including its cost effects.

While it was recognised the Scenario Thinking project and Company One 2010 may have played a part in the recognition that it was necessary to plan ahead for the introduction of the economic regulator, no causal link was made by participants. However, Scenario Thinking was believed to have affected the attitude to regulators in a similar way to the attitude to Government, from adversarial to more cooperative. (*Recognition of importance of relationship with regulators from SP; Need for good relationship with regulators*).

I think what came out of 2010 was the recognition of the need to view our relationship with regulators as an opportunity for a positive engagement with regulators, not to view those things as adversarial relationships, where they were out to screw us and trip us up.

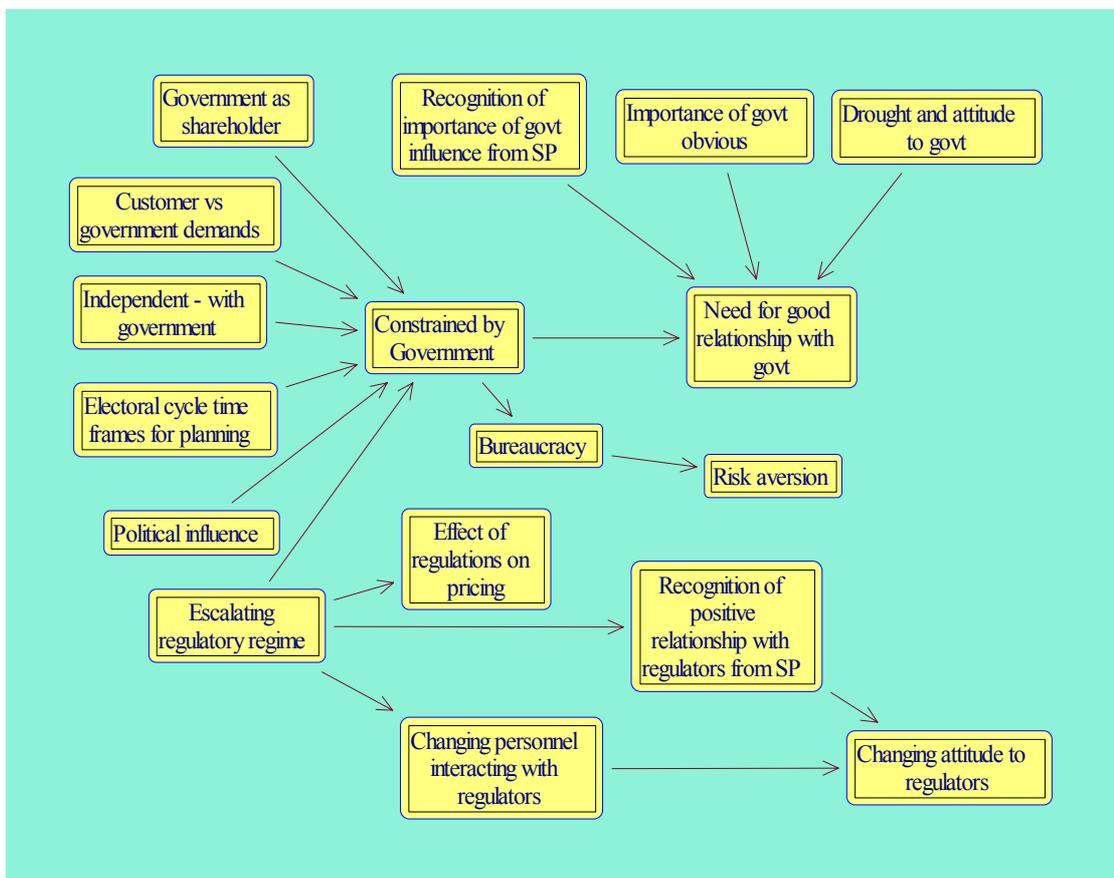
However, there was view that an improvement in relationships with regulators was the result of new people working in that area (*Better regulator relationship from new*

personnel), while others had not noticed any change in relationship (*Change not noticed*). The latter was not a contradiction but a result of participants not being in a position to make an informed comment.

Figure 6.6.2 maps the influences that emerged here that led to the changing attitudes to Government and regulators.

Bureaucracy, identified here as one outcome of government constraints, was a factor in the risk aversion identified in 6.6.1 *Attitude to risk*, and this relationship is included in Figure 6.6.2.

Figure 6.6.2 Attitude to Government and regulators



6.6.3 Organisational focus and direction

In this category the effect of scenario planning and Company One 2010 on the organisational purpose and direction emerged. The findings are grouped under four subheadings.

6.6.3.1 How scenario planning affected organisational focus and direction

Recognition of a need for change was not an outcome of scenario planning, but preceded it: the *Failure of the commercial division* was seen as providing an impetus for the need to reassess the organisational focus and business direction. However, the discussions in the Scenario Thinking project provided an understanding of the key elements of the core business of the organisation and how individuals related to that, which supplied the grounding from which some participants perceived the new purpose and direction had emerged (*SP discussion genesis of new purpose and direction*). Others perceived scenario planning and Company One 2010 as a whole *Guided the review of focus* by providing a framework for the development of the new purpose and direction, with the Scenario Thinking project providing focus by *Identifying key elements and fit*.

The scenario planning did help to focus on what we should concentrate on for the future, and the direction we have taken is to, in actual fact, be less commercially minded and more concentrate on our existing businesses, our core business, if that is the word to use.

Perceived as providing a focus, the scenario planning project was seen as an *Input to the 2010 process*, i.e., an input to the process that produced the *New purpose and direction*, an interpretation which echoed and reinforced the interpretation in 6.4.3.1 *Emerging concepts - fit*. As well, the focus provided to the overall Company One 2010 initiative through scenario planning was perceived to have a positive effect as an *Aid in acceptance of the change* in focus and direction.

There's more, probably more focus, more expectation, to some extent, than there was before. The Company One 2010 process might have given that a bit of a boost along, which was probably timely. And to the extent that we went through the scenario planning exercise, maybe that helped in there.

However, some people were unable to see a connection between the scenarios and the subsequent workshops in Company One 2010 where the new purpose and direction was being developed (*Scenarios not used in deciding purpose and direction*).

When I looked at the four scenarios, and then when I looked at the change in . . . because I was actually at the workshop where we came up with that new statement and the business direction and corporate purpose and that. And we weren't even looking at the scenarios. It was just more like, and so what do you think?

There were also some who failed to see any change in organisational focus and direction (*No change*).

Not everyone agreed that Company One 2010 was necessary as a way of developing new strategy in the wake of the failure of the commercial division (*SP not needed to decide direction*), echoing the sentiments in 6.5.1.2 *Extending thinking*. There were two aspects to this perception:

(1) it was clear that the overseas ventures had not worked and it did not need a scenario planning project to work out that the organisation should concentrate on Western Australia (*Focus on WA*):

Now, the cynics among us believe . . . that you didn't need to do a many thousands of dollars scenario planning exercise to draw that conclusion.

(2) that the new direction had already been decided to a greater or lesser degree, so Company One 2010 was seen as window-dressing for the change (*cf. 6.5.3 Affirmation*):

Now it was the managing director's view that this government was going to want us to contract back, stick to our knitting, just do what we're supposed to do, and concentrate on Western Australia. Okay. And there's absolutely nothing wrong with that. But to use the scenario planning exercise as a means of getting to that end, I think was just {expletive for nonsense}.

6.6.3.2 Business development

The Scenario Thinking project was seen by some as directly responsible for an understanding that it was untenable for the organisation to plan for a highly entrepreneurial strategy in the future. The strategy that had been adopted of trying to sell into overseas markets had not succeeded. Reasons given for this included lack of expertise and/or experience in that kind of venture and an unwillingness or lack of

mandate by Government, as major shareholder, and/or the Board of the Corporation, to commit to projects even when it appeared contracts could be won.

... in the scenario planning, the way we had been approaching business development was consistent with the more extremely entrepreneurial or independent scenario, the most extreme of those. And then you looked at the other scenarios, and our political and other circumstances, and it was quite obvious that that, the most extreme of the entrepreneurial scenarios, wasn't the one that was going to wash.

There were differing viewpoints on whether the decision to change business development direction was made before Company One 2010 or as an outcome of that process; a spectrum of opinions from the view that the decision to concentrate marketing on Western Australia was a result of Company One 2010 to a view that the whole change initiative was set up to rubber stamp a decision that had already been made (see previous subsection). However, it seemed clear that a decision to withdraw from overseas and interstate marketing had been made prior to the Scenario Thinking process. There was a general reluctance on the part of many participants to attribute the decision to focus all business efforts on Western Australia to scenario planning or Company One 2010, in the belief that the decision had already been made or was inevitable anyway.

And I think that scenario planning helped to formulate the view - start people thinking about the fact that, hey, we need to focus our activities a little bit ... the commercial division was removed ... I'm not convinced that that was an outcome ... I think the focus was a result of the 2010 thing, and the changes to the division, I suspect, would have taken place regardless ...

There was a feeling that appeared to be strongly held that people in parts of the Corporation had felt undervalued during the entrepreneurial commercial division period and there had been some resentment about the amount of resources diverted from what these participants considered to be core business. They believed the organisation should have been seen to be performing its core business – water and waste water – well in WA before expanding. For these people, the new purpose and direction was welcome.

... there was a bit of disillusionment, if that's a word, through a lot of people who work in the Corporation, because there was a feeling that that was no longer valued as strongly and not seen as being as important as they believed it was. So 2010 very clearly said, right, our business is water and waste water. It's about sustainable management of water services in WA. That's where we're focusing. We're going to cut the out all the other {expletive for nonsense} and just focus on what we do well.

Not everyone agreed. There was also a minority contrary view that the organisation should have continued to market its expertise widely, because this would have benefited the local people too when the profits from these ventures subsidised a cheaper water supply in WA.

6.6.3.3 Clarity of purpose and direction

There were 21 participants who expressed ideas that were coded in this concept. Whether the new focus provided more clarity of purpose than previously was an issue on which there was considerable disagreement (*Clarity of purpose*). Some felt that the outcome of scenario planning and Company One 2010, the new purpose and direction statement, provided a vision and framework that aided planning and/or decision-making as well as a clearer definition to guide the organisation in what activities it became involved in. This was seen as beneficial, even among some people who did not agree with the new purpose and direction.

I think that's great, because that clearly defines our vision, and things we want to do. It gives direction when you're making decisions about things you do around the place.

But for others, the new purpose and direction was not specific enough, lacking clearly defined vision and targets. One participant commented that clarity depended on the ability of managers, in particular, to articulate the changes.

... it relies a lot on, to some extent, on senior management being able to clearly, more clearly, articulate what those things are, and what it means, and so on. So I'm not clear how other people have dealt with that, or whether they've got a more clarity of purpose and direction,

and a clearer picture of what is that it will look like when we get where we're trying to go.

Consequently, some felt there was a lack of understanding of the terminology of the new purpose and direction.

There was also a view that the new focus represented a discontinuity, an “about-face” from previous policy, that had not been adequately explained (*New focus a discontinuity*).

You can certainly swing around and change direction, but you've got to have some pretty solid reasons for doing it, and you've got to bring everyone along with you, given the fact it costs a lot of money. And they seem to have invested a lot of money in the whole Company 2010, scenario planning business, but not adequately enough.

6.6.3.4 Framework

An outcome of the Company One 2010 process was perceived to be a new strategic framework, based on the new purpose and direction. Scenario planning was seen as a part of the process that resulted in this, although not all accepted that the new framework was appropriate (*Acceptance of new framework?*).

For some, the new purpose and direction was the major driver for the activity of the organisation and even built in to their reporting processes.

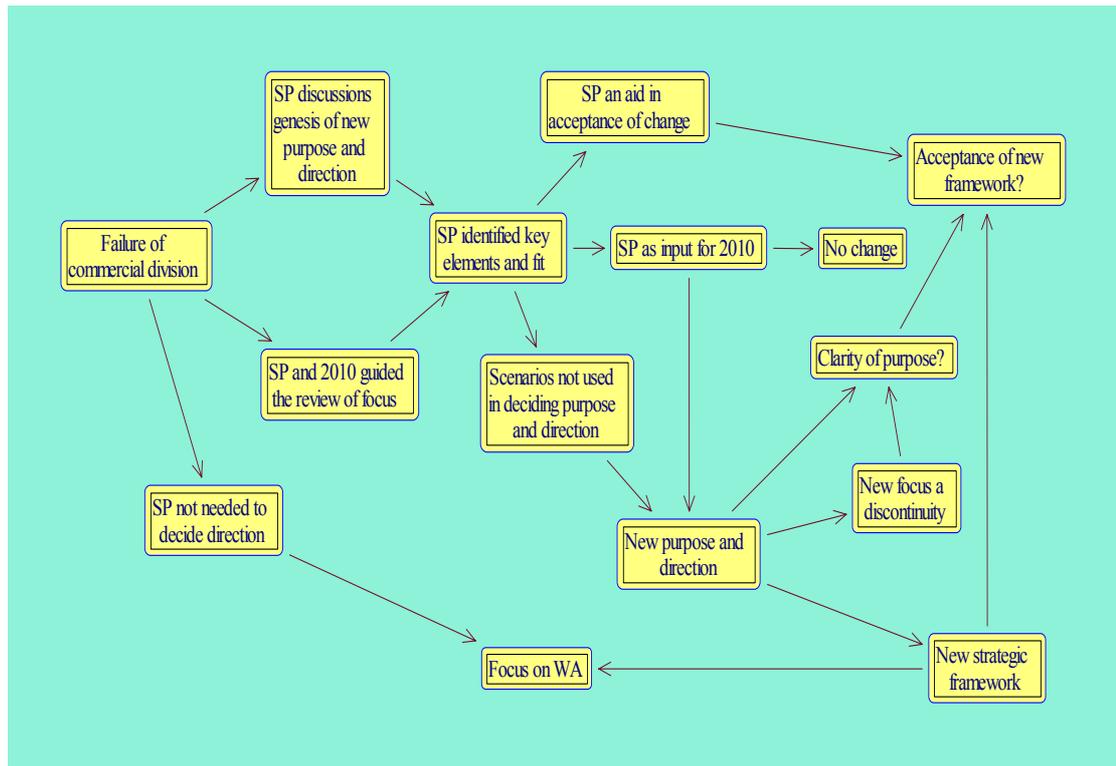
The strategic framework is used as the driver for everything. So, if you say the strategic framework was an outcome of scenario planning, then the way the Corporation's leadership is leading has changed, because they are very much driving things through that new strategic framework, through the areas for action, through that sustainability model, the triangle, those elements. So, yeah, certainly it has changed since scenario planning. ... there's no doubt scenario planning resulted in that framework.

This is our latest corporate monthly report. But we actually report against the Areas for Action, and so it's actually been built quite strongly into our business planning framework, into our business management approach, and then into our business reporting.

For others, the new framework did not appear to fit their concept of the business and what they did, and they reverted to the old framework (*cf. Use of planning areas continuing in 6.5.6 Lack of change*).

In *Figure 6.6.3*, the concepts of how the new organisational purpose and direction and the focus on Western Australia were perceived to have emerged are mapped.

Figure 6.6.3 Purpose and direction



6.6.3.5 Emerging concepts – purpose and direction

The doubt about whether the decision to focus business development on Western Australia was made before or after the Company One 2010 initiative raised the question of whether the change process had a role in initiating the development of a new purpose and direction or whether it was used to focus the direction and develop a framework for the implementation and acceptance of an inevitable change.

Clearly, once the decision to withdraw from overseas and interstate marketing was made, which was prior to Scenario Thinking, there was no other path the organisation could have followed except to restrict to WA. Viewed in this light, Company One 2010 should be seen as the latter of these two alternatives.

6.6.4 Organisational culture

This subsection explores participants' perceptions of change in organisational culture that had occurred since the Scenario Thinking workshops, with particular reference to where there are links with scenario planning and Company One 2010. Aspects of the change initiative subsequent to and distinct from the Scenario Thinking phase that affected organisational culture are presented in 6.7 *Strategy development and implementation*.

6.6.4.1 How scenario planning affected culture

It was pointed out during the interviews that the organisation's values, which could be expected to be a major influence on how people behaved, were not under review during Company One 2010. Since this was the case, it might have been expected that there would be little or no cultural change, and, for some participants, no change was perceived.

I haven't seen any (cultural change), as a direct result of 2010 or not, to tell you the truth. You know the way people behave is more to do with our values. The values weren't under review under the 2010.

However, there were very mixed perceptions of the effect that scenario planning had on the organisational culture. The Scenario Thinking project was seen as providing information that made many people realise the extent of change that had occurred in the Corporation's operating environment, particularly increasing expectations on the part of water consumers and the need to communicate more with customers and the community (*cf.* 6.4.2.4 *Gathering information*).

And so much of the research, particularly from the external research, has highlighted the fact that, no, you know we're out on a limb, in the way that we're not engaging the customers, that we're not open in sharing information, and so forth. And realised that that was a very finite strategy. So scenarios really helped us to realise that the world had changed and was changing, and it was changing rapidly.

There was a view that the Scenario Thinking project had had little impact on the organisational culture, but that there was a strong link between the overall Company One 2010 process and cultural change. However scenario planning had provided a

vision of the future that was perceived as affecting the way other people in the organisation viewed their jobs.

And they see the future. And people are looking to see how they see themselves as part of that future as well. And that's why some of these people are struggling to see how they fit into that future picture. And therefore it's encouraging them to maybe pull finger out a little bit. (laughter).

Scenario planning and Company One 2010 were perceived to have had a direct effect on the development of the people and culture Area for Action (*cf. 7.2.1 Replacing the vision*), as a result of a recognition that the workforce of the future would differ from its nature and mix currently (*cf. 6.6.7.6 Workforce of the future*).

But participants' perceptions of changes in organisational culture appeared to depend on their own definitions of "culture". For example, some identified culture with bureaucracy (which together with sustainability had also emerged as an objective (*cf. 6.3.2 Objectives*)):

Culture-wise there is no change in culture, I have not managed to see it. We are more bureaucratic than we have ever been.

Others saw negative effects on the culture and an increase in cynicism in the organisation as a result of Company One 2010.

I think the shock to the culture, and the cynicism that has come about as a result of that, has far outweighed any benefits that might come out of thinking about these scenarios.

Because it appeared that perceptions of changes in culture depended on what the participants identified as elements of culture, it was necessary to explore the areas of organisational culture that they had specifically identified. These emergent concepts are recorded in the rest of this section.

6.6.4.2 Attitude to community, customers (Engagement and consultation reinforced)

Although the commitment to customer service and relationships was a tenet of Company One and therefore not new, there was a widely-held view that scenario planning and Company One 2010 reinforced the importance of this to the future of the organisation.

I think we reaffirmed that customers are essential, vital, central to everything we do, but that wasn't a miraculous vision on top of a mountain. But we did clarify, reaffirm that the customers demand better value for money continuously, and that's not going to stop.

It was widely believed that the Corporation's attitude to its clients had been going through a transformation, from a paternalistic to a more consultative approach.

... I don't believe it's our job to say, you know, we know what's best for you, which is what we've tended to do ... We need to recognise what's required, work out what's the best and most effective way of delivering it, and then either work in consultation with the community, and in consultation with the Government, we've got to work out how we deliver those services.

Yeah. I mean, I'd like to think that, you know, we now have a much better awareness of the need to engage with the customer and the community in a much richer way than we historically have.

A main emergent effect of Company One 2010 was a realisation that good customer service was the responsibility of everyone in the organisation, rather than solely the responsibility of the customer services division. The new purpose and direction was seen as providing a consistent basis across the organisation for people to achieve this.

I think previously there were probably parts of the business that did (customer service) that very well, and parts of the business where every now and again we dropped the ball, and we didn't do it very well. But this provides us with a framework that people need to follow and can follow in all instances, so it should provide a consistency in our approach to the way we do our business.

6.6.4.3 Accountability and discipline

Two allied concepts that emerged were a historical reluctance for people to take responsibility for decisions and what was perceived by some as a lack of discipline in following organisational policy.

As part of Company One, the attitude that individuals, not committees, made decisions had been encouraged (see also *Corporate executive* below), and

accountability was increased for a lower level of managers. But the changes brought about by Company One 2010 were not seen as making any difference in this area.

I think one of the significant changes has been that notion of accountability and single point accountability, and trying to drive towards clarity of accountability. And recognising that people are accountable for decisions, not committees. And it's been quite an interesting change, of it being accepted and acknowledged that it's quite reasonable to get input from a range of people, and if you want to call a meeting to get input, that's fine, but you don't water down your accountability by sharing it with a committee. At the end of the day you're still accountable.

I think there was a massive change in that as a result of Company One, where accountability was brought down to regional manager level, and branch manager level. And that was something that a lot of people in the organisation struggled with, that people who are managing business units have full accountability for what happens in there. I don't think as a result of 2010, we've made any progress in that area, and I think we need to.

However, there was a belief by some participants that accountabilities were not sufficiently clearly defined in the organisation. One consequence of this was an independence that was sometimes evident in an entrepreneurial or innovative spirit (*evidentiary quotes withheld to avoid breaching confidentiality*) and sometimes as a non-cooperation with corporate policies.

There is a very strong culture of independence in the Water Corporation. And civil disobedience is tolerated, to an extent that is worrying, in my view. So that people can, even in senior line management positions, can say, well, this is what's come out of this exercise, basically, I think it's a crock ... it isn't necessarily normal practice in this place for line management to line up in solid support of the corporate.

Further evidence for this came from another participant:

I'm not good at hiding my views, and you come back from (activity deleted for confidentiality) and they go, well, what do you reckon? And I say, guys I'm not going to lie to you. It's {expletive for valueless}. But we'll carry on doing our thing. And that's what happens. People do their thing.

See 6.7.4 *Roll-out and managerial follow-through* for the emergence of the implications of this in the implementation of the outcomes of Company One 2010.

6.6.4.4 Getting on in the culture

Participants described a strong organisational culture that could be difficult for new people to relate to and get on in. If people didn't understand the culture and belong, they found it difficult to do their work and lost confidence (*Needing to belong*). The culture was perceived to support lack of vision and a bureaucratic approach, so that many innovative ideas just disappeared, which was especially exasperating to people who had come from the private sector. Many of these people would leave.

And there's an inherent difficulty in people outside that group that know how to behave and know how to get things done in the system; it's inherently difficult for the others that really want to try and do the job, and do things well, to actually be able to do anything at all. And I think that's a real weakness in the organisation, in that it doesn't harness the capabilities of its people well enough.

There was also a phenomenon where people who were brought into the organisation because of their different backgrounds and skill sets or approaches were gradually absorbed into rather than introducing change to the organisational culture.

And the Water Corporation tends to absorb people into its culture, even though they might have been employed because they have a different culture, cultural experience. So these people were trying to achieve certain outcomes and goals and states, but the Water Corporation itself as a whole was consuming them, and not allowing them to achieve that. ... And instead of you dragging us into the bright new world, the tendency is for us to try and drag you back down to our mentality. And the organisation lets that happen, even though we've appointed you because you've got that particular experience.

One way that some people employed to get on in the organisational culture was selective use of organisational policies to promote their own positions. It was perceived that this could be done by, e.g., quoting part of Company One 2010 outcomes selectively and possibly inappropriately to push a business case or personal interest, but a more relevant finding was the opinion that some people, especially managers, were able to be selective about which parts of the new purpose and direction and strategic initiatives from it that they took heed of (*Selective use of culture*).

So what you find is some people in the organisation have taken the message and run with it. I mean it has still shifted the organisation considerably, but it's been very easy for them to be selective about the parts they're listening to and the parts they're not.

I think that in any change organisation there are people who use that as a weapon, in a sense, to try and push their own agendas, you know, in the sense that they get on the bandwagon, this is a Company One thing and so if you attach Company One to everything, whether it should or shouldn't fit, and that's a sort of a mantra, that you attack it with your peril, I'm on the side of right and you're on the side of wrong. So some of that sort of behaviour happens. ...

6.6.4.5 Influence of age on culture

The senior management of the Corporation was perceived as consisting largely of older men nearing retirement. The ageing management affected the culture of organisation.

Well, it's a very old organisation and I'm afraid you're not going to change it overnight. And while there is still largely the management of the old guard, and that is so, most of the managers here have been here a long time. ... They came up from the bottom and became what they are. Good luck to them. ... And so culture wise, I think they're playing the same old games as they have done as long as I've been here, which is not all that long I'm one of the newcomers. And I've been here {more than a decade - altered to protect confidentiality}.

The high proportion of ageing people was perceived to result in a lack of incentive or will to adopt change. This included some of the senior management team:

So we're trying to come up with a ten-year vision here, and you guys are likely going to retire in the next, you know, most of you are probably, you know, most of them are over 55.

It was perceived that one reason the culture had the effect of discouraging new initiatives and inhibiting the promotion and advancement prospects and aspirations of younger people in the organisation was an advancement system based on seniority rather than ability (*cf.* 6.6.7.1 *Performance recognition*).

People should be valued based on the contribution that they can make, not on how many years of service they've got, or what level they are in the organisation. ... And I know I've had more than one occasion where I've been quite strongly advised to go and do my time in the core business, and sit and hide underneath someone, sit under a rock and hide away.

6.6.4.6 Engineering as influence on culture

Participants perceived the Corporation was dominated by a type of thinking attributed to an engineering-based archetype. It was believed by many participants that this type of approach was not always appropriate.

... we still are very engineering focused, even though, granted, it's an engineering corporation, but I think maybe less commercial minds, and more engineering minds. ... engineers take non-engineering management roles, in general. ... Our business development managers are engineers. ... I think it would be good to bring in a really driven business sort of, general business or economics or something other than engineering, because I think sometimes engineers don't look outside the square. I'm not, yeah, well that's the general perception anyway.

The effect of this was seen not only in the organisation's approach to its business projects (“*We like big sexy projects in this place*”) but also in its culture, with promotion and remuneration more closely allied to seniority and length of service

than performance and a way of thinking described as “*We get a little uncomfortable when we blur lines. We like them to be very sharp and thick.*”

However, some participants felt this was gradually changing, both with respect to the organisation’s perceptions of its core business and with the way demand for water be met in the future.

However, now, I think that very slowly we're starting to learn that instead of an engineering organisation we are a service organisation. So the emphasis of engineering is sort of shifting a little bit.

We’re an engineering organisation, mainly, and we like building stuff. So there is quite a valid argument that’s, again, starting to be tested, and sort of looking at demand management techniques. ... You know, sponsoring, supporting water saving devices, and so on. ...

The engineering background of so many of the participants was seen as affecting the way they engaged in the Scenario Thinking project. It was perceived that it was difficult for people used to project management to relate to a process that did not have a tangible and foreseeable outcome.

And I think, from memory, it took quite a while for most people to get their heads around what scenario planning was, and what it wasn’t, what value was it going to give us? So that same question kept coming up. So it meant it was never really answered to the satisfaction, or anyway, got into people’s head, why are we doing this, what’s the benefit of it? And the answer that normally came back was, well, let’s keep going, let’s do it and you’ll see. And that’s not how engineers think. They want to know, and you could see that in the guys. Very much so. You know, if I’m going to spend time on it, you need to. . . how does it work? Why are we doing it? Let’s not be subjective.

The way of thinking also was perceived as affecting how some people in the organisation reacted to the outcomes of Company One 2010, because the change initiative was aimed at cultural rather technical results (*cf. Intangible outcomes in 6.5.5 Lack of change*).

6.6.4.7 Decision-making (Consultation and committees)

Decision-making in the organisation was seen as affected not only by the engineering backgrounds of many of the people in the organisation, but also its public works heritage. Decisions were often made by committees or in meetings and it was perceived that there was often too much consultation. The inertia that resulted from this was seen as barrier to change generally, but there were no specific relationships seen with scenario planning or Company One 2010.

I think, again, if you're talking organisational change, you've always got the culture of an organisation. Of course, you've got to test is that culture good or is it bad? There's no doubt there is... this place tends to have too many, too much consultation.

... the Corporation is not that good at crisp decision-making some of the time. It tends to have the public works engineering decision - well non-decision by a committee ... I guess that's one of my frustrations with the culture in the place.

6.6.4.8 Conservative attitude to change and planning

Participants perceived the Corporation as a very conservative organisation. This was because of durable nature of infrastructure in the water industry, the stability of the industry and the risks, especially to public health, of ill-considered change.

We're in this very long timeframe business, that you have to get it right, and the impacts are very slow to come down. ... it's a very slow plodding conservative business.

I mean, one of the risks we've got is that we're seen to be bureaucratic, we're very resistant to change, and all of that's for good reason. I mean, you deal with things like wastewater re-use, and there are public health implications. I mean, get it wrong and you can kill people. You know, disease and that kind of stuff. So, yes, we are very conservative.

The other reason is pure and simply we're a stable organisation, stable industry, water utility, boring. So, if we don't already know what the issues that face us in terms of competition and pricing, environmental concerns, our regulators and so on, and so on, and so

on, and those issues aren't always factored into the way we do business, there's something wrong.

This made it difficult to implement change, especially cultural change.

Changes in here take years, and they have to happen very gradually. It's like leading a mammoth with a ring in his nose, you know, guiding it very gently through the obstacles. ...

This contrasted with a perception that, although it struggled with making decisions for the long-term future, in a crisis the organisation reacted quickly, effectively and flexibly.

We are fantastic in a crisis, because we have planners and we have engineers and we have all sorts of people that love doing that sort of thing. But, you know, stick people in a room and say ,well think about what we might doing in ten years' time, and we struggle.

There was a contrasting view that the organisation was good accepting change and was constantly being transformed.

I think the organisation's got a very loyal and capable staff. It is very professional. It's good at accepting change. So we're forever changing this organisation, and transforming it on a regular basis.

6.6.5 Work ethic and loyalty

There was perceived to be a high degree of loyalty and talent in the organisation's workforce. Participants considered the organisation treated them well. They saw it as having a good record in employee relations and providing diversity of vocation within the Corporation, even though some expressed cynicism.

Oh, look, I honestly think the organisation has a good record in terms of how it deals with its people. It therefore engenders and fosters a high degree of loyalty. It doesn't mean to say there isn't a healthy dose of cynicism floating round from place to place. But we do have a fairly loyal workforce.

People were given opportunities for diversity in their careers within the organisation, which engendered loyalty. However it was perceived that a high proportion of the workforce had never worked anywhere else, which resulted a narrowness of vision.

The strengths in the Corporation, that I see, are that there is such a diverse range of talent here. And the other thing I think is really important is that there's a huge loyalty to the Corporation here. It's almost nauseating, in fact, that there are so many people who don't envisage ever working anywhere else in their life. But, when I talk to them, they explain to me that they've actually done 20 different jobs in their time in the Corporation. So there's a massive loyalty to the Corporation. There is a huge amount of talent here, unbelievably large amount of talent and vision and strategy and planning and coordinating. But there's also, I guess, the downside is, that there's also a large core of people who have never been anywhere else, never seen anything else, whose vision is circumscribed by the Water Corporation, and they don't recognize that things might be done differently somewhere else, and that that has some potential.

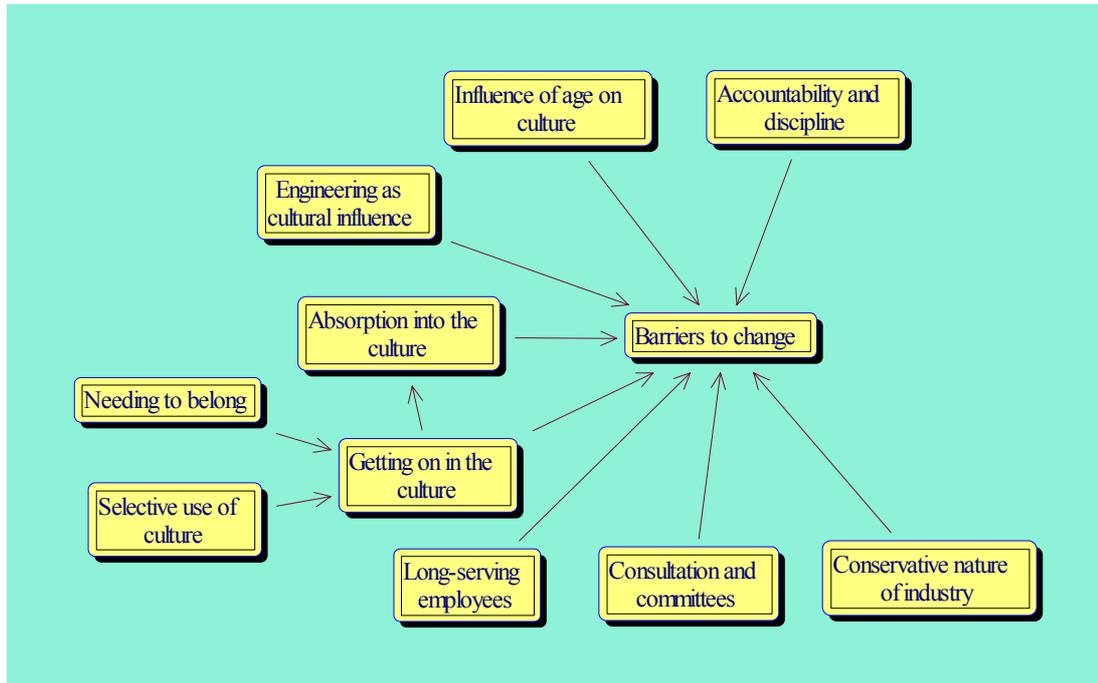
There was a view that some people's loyalty may have been tested by the decision to withdraw from overseas marketing, but that this effect was reduced because some of the participants in the Scenario Thinking project became advocates of the new purpose and direction and promoted it.

I think there were beneficial effects in that the organisation determined a direction as a result of scenario planning. And those people involved in the scenario planning became much more advocates of that direction as a result of that, than maybe had that not occurred. I think that was valuable. I mean there's a lot of people were very keen, very gung-ho, about getting into much more external business. And actually saying, hold on, we're not going to go there now could have had quite a debilitating effect on the business. And I think scenario planning probably helped us through that, to some degree.

6.6.5.1 Emerging category – culture

Most of the aspects of culture that were discussed were considered to have a negative effect on change in what was mostly perceived as a conservative organisation. They led to the emergence of the concept *Barriers to change*, which is explored further in 7.17 *Barriers to change*. The relationships of cultural aspects to this emerging category are mapped in *Figure 6.6.4*.

Figure 6.6.4 Culture as barriers to change



6.6.6 Leadership and structure

6.6.6.1 Effect on structure

Structural changes that had occurred since the Scenario Thinking workshops and were discussed by participants included the *Closure of the commercial division*; centralisation of some functions, e.g., finance, that had previously been conducted in the regional offices, and moving some sections of the organisations, e.g., IT, into other divisions or areas. There was divided opinion whether scenario planning and the Company One 2010 conversations had influenced these decisions (*Centralisation and changes of some functions*).

Well certainly there were some changes to structure. And the scenario planning may have played a part in that... One division was abolished, which was the commercial division. ... I can think of maybe probably four or five other small reorganisations that have occurred. ... Reshaping the finance division, a little bit of reshaping ... joining together some branches or taking out a branch, and moving some people from here to combine into another branch ... So, structurally, I would think both 2010 and scenarios played a significant part.

However, there was a widely held opinion that, despite a perceived need for, and work during Company One 2010 towards, managerial structural change, not much had been changed, particularly in the management structure, both at executive and branch manager level (*Management restructure rejected*).

... The branch managers are forced to deal with, and represent management across, the organisation. And I think there was a feeling that there needed to be some changes. There needed to be some new thinking amongst that group. And basically there was an unlimited amount of discussion about what could be done. And I think the outcome, it's fair to say, has been no change. ... And the reason why it hasn't was because there were one or two general managers who were not in favour of it, I think it's fair to say.

We didn't change the structure. We didn't change the executive team. They didn't even change roles. ... we probably spent ... three or four hundred hours on looking at structural options and ... how we would align that to 2010, as a way of creating new management opportunities for some of the more junior talented people in the organisation, as well as recognising that some people who were in management that should be what we called corporate treasures. You know, they have a wealth of technical expertise that needs to be tapped in to ... We weren't tapping into the technical expertise sufficiently well ... and they weren't necessarily particularly good managers. So ... in terms of moving them into the corporate treasure category, and leaving people to come up ... Anyway, that didn't happen.

I mean, we had the four scenarios. There were certain things in there that said if you're going to deal with that, surely you've got to have to have an organisation that's structured differently. That exercise was never done.

There was also an opinion that the structure of the organisation lacked clarity and clear lines of responsibility, which contrasted with a view that the structure worked well enough that it was not worth the effort and disruption to make major changes (*Organisational structure effectiveness issues not addressed*).

I think a constraint is our structure. I really believe that. I think it's just a mess. ... It's not intuitive. The things that you think should fit in certain places that don't. There's no clear lines of responsibilities. There's no clear accountabilities. I mean, it really is a proverbial dog's breakfast. ... It's organisational silos, without the clear silos. ... changing old structures is a fairly costly exercise, in terms of time, not money ... And if you look at the organisational structure, it actually performs quite well.

6.6.6.2 Corporate executive meetings

Decisions in the corporate executive had previously been made jointly. In a major change designed to increase the empowerment of individuals, responsibility for decisions was shifted to individual managers. Greater accountability was an attitude that was expected to permeate all levels of the organisation (*Committing committee-cide*).

Just one of the things that did change was, as a result of this, and that was partly, it's kind of an odd thing, but (the managing director) sort of cut out a fairly senior decision-making body, it was called corporate executive, which is when the general managers all got together. One of the things we found out is we needed to empower people, and (the managing director) basically said, well, there's no more decision-making by this inanimate body called corporation executive. Decisions are made by people, not committees, and he called it "committing committee-cide."

The change was not attributed to scenario planning. Opinion was divided whether it was partly an outcome of Company One 2010, or a decision that would have been made by the managing director regardless of whether Company One 2010 had occurred.

I guess, it was something we toyed with throughout the process. But then suddenly something snapped this year, and we decided, oh {expletive} it, we'll reinforce individual accountability. Yeah, so I guess that was an outcome of Company One 2010, but I don't think it was a product of scenario planning necessarily.

I don't believe that was anything in the scenario planning ... that's out of (the managing director's) dislike of committees.

6.6.6.3 Effect of scenario planning on leadership

It was perceived by some participants that the Scenario Thinking project had had an effect on the thinking of top managers and the way they viewed the future (*Mindset change in senior managers*).

...it's still in the back of their minds now. It's not business as usual, it's more anything could happen.

This was evident in the new purpose and direction and strategic framework that had been adopted and that was perceived to be driving decision-making in the senior management group (*Use of new framework in decision-making*).

The strategic framework is used as the driver for everything. So, if you say the strategic framework was an outcome of scenario planning, then the way the Corporation's leadership is leading has changed, because they are very much driving things through that new strategic framework, through the areas for action, through that sustainability model, the triangle, those elements.

However, some participants outside the senior management group believed that the number of changes that were proposed during the Company One 2010 conversations but not implemented demonstrated that for some senior managers there had been little change - it was still business as usual. This was seen as partly due to the extent and depth of change that was being proposed (*No mindset change in senior managers; Proposed changes profound*).

Well, I think at the end of the day, part of the problem is that I think the general managers. . . {unclear} the change to the organisation was potentially so profound and so could affect almost everything the organisation does. The scenario thinking process wasn't confined to a product or a specific issue. It was about who we are, you know, the meaning of life for the Water Corporation.

6.6.6.4 Relationship with Board

There was a belief that the Board of the organisation did not have a full understanding of the scenario planning process and what the organisation was trying to achieve. However, it was not suggested that this affected the change process.

I don't think they (the Board) really necessarily understood the scenario planning process, and what its role was.

It was noted, however, that the Board were involved in a pre-workshop focus group and received briefings from the facilitator after the Scenario Thinking project (J. Barker, personal communication, October 5, 2005).

6.6.6.5 Leadership characteristics

Perceived characteristics of the leadership and management team that were relevant to the change process included that many were approaching retirement, which encouraged a comfort with the status quo (cf. 6.6.4.5 *Influence of age on culture*); and a perceived lack of management training, especially for engineers in non-engineering management positions (cf. 6.6.4.6 *Engineering as influence in culture*);

...a lot of them are engineers and they've just ended up in management. And unless you actually teach them, a lot of them don't know how to deal with poor performance, and that sort of thing.

and how well some managers communicated with and motivated their staff (see also 6.6.3.3 *Clarity of purpose and direction*).

I think we've still got some challenges with certain managers in relation to how they motivate and instil enthusiasm in their staff.

There was divided opinion on the question of clarity of accountability between the divisions, with some participants outside the senior management groups holding a quite different view from the senior managers themselves (cf. 6.6.4.3 *Accountability and discipline*).

And if there's no accountability, or if the people at the very top are not held accountable for the things that they do or don't do, then nobody will be held accountable they're never actually called to account for why they've chosen that path.

And our GMs are very clear on the performance requirements and the accountabilities. We've got to a point where there's very little question now or misunderstanding about what is expected when, and who is accountable.

There was also a perception from some participants that some in senior management had not really adopted the new purpose and direction and that this had affected the way other people in the organisation responded to it as well.

I'd like believe (the new purpose and direction) now, but I see so many demonstrated behaviours from very senior people in this organisation that don't reflect that.

6.6.6.6 CEO's and general managers' support for scenario planning

This concept concerned the way the support given by senior management to scenario planning during the change process was perceived by others in the organisation, so only the opinions of participants who were not part of the senior management group were considered. It also covered the rest of Company One 2010, due to the propensity for participants to amalgamate their opinions about both.

There was considerable variation in perceptions of the support of senior management for the Scenario Thinking project and Company One 2010. Some were encouraged by what they saw as the commitment and support of the managing director and senior managers (*Management support for Company One 2010; Encouragement for change initiative*).

I could see that our managing director ... and also the general managers were deeply involved with the process. So ... it was good to see and good to know that, for instance, that the managing director was ... was having a significant influence in knowing what was going on, and charting the course of the Corporation. So, for me, that was very reassuring ...

Others, however, saw them as reluctant participants in the change process. (*Lack of management support for Company One 2010*)

I think they (the general managers) were honestly, in hindsight, quite reluctant participants. They didn't really want the world to change.

If you're one of the top half dozen managers in the Water Corporation, and you can't set aside, if you can't break out of your busy week, enough time to do some strategic thinking about the way the business needs to go, then I think that's a bit of a sad indictment on the place. Yeah. It was a big drain on their time, but I would have thought that was an appropriate level of engagement for people to be, at that level, to be thinking about the strategic direction of the business.

A further view was that the change initiative should have been led and championed by the managing director and senior management, rather than other people in the organisation.

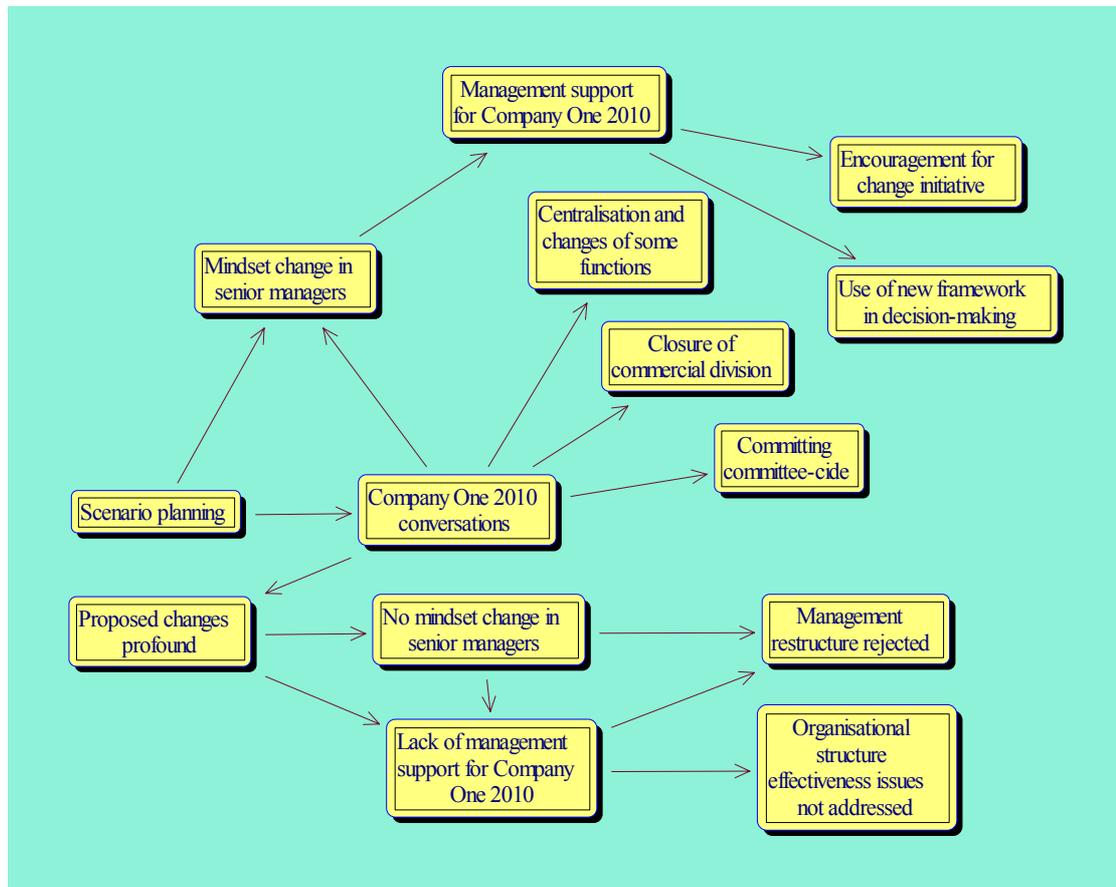
... So something with cultural change, value shifts, and whatever, needs to come from the M/Ds mind, or the CEO's mind, and actually he needs to drive and push it. He can't delegate it to some project. ... the M/D buy-in may not have been as strong as it maybe should have been.

6.6.6.7 Emerging concepts – leadership and structure

The mixed views of the effect of scenario planning and Company One 2010 on leadership and structure raised the issues of the effectiveness of the learning that was said to have occurred and how far into the organisation the apparent changes of mindset perceived to occur as a result of scenario planning actually penetrated (*Extent of change of mindset?*).

The findings described in this section are mapped in *Figure 6.6.5*.

Figure 6.6.5 Structure and leadership



6.6.7 Workforce issues

6.6.7.1 Performance recognition

The organisation's performance management system had been introduced prior to Company One 2010.

It was perceived that the participation of graduates and younger people in the organisation during the Scenario Thinking and the other phases of Company One 2010 was a departure from previous practice, when older, more experienced people would have been involved. This was seen as a positive outcome of scenario planning and one which changed the way the contribution of its younger and newer members was viewed in the organisation (*Increased involvement of young and new employees*).

But not really before have they (graduates) been elevated to, almost to equal status, with other opinion leaders in the organisation. This time,

through the scenario planning exercise, they were. ... So I think that paradigm has been broken.

However, it was also widely felt that the change initiative had had little effect on fundamental conditions, including seniority and pay, in the enterprise bargaining agreement, with experience rather than competence still dominating negotiations (*Little change in performance management*).

The enterprise agreement was renegotiated after, it was sort of in negotiations over the period from scenario planning ...It had embedded all the old problems, and almost sort of made them worse....

6.6.7.2 Retention of new recruits

Retention of graduates in the organisation was perceived as a problem that was closely allied to *Performance recognition*. The involvement of young people in both the Scenario Thinking project and the other parts of Company One 2010 was welcomed as a recognition that the contribution they could make was perhaps otherwise being stifled and of recognising their ability and possibly encouraging more of them to stay. The effort to involve them had not stopped after the Company One 2010 workshops and younger people were continuing to be involved in planning.

We have a problem in that we lose people after two or three years in the organisation. And often they get disillusioned in some way, or go on to other things.

So, yeah, I think a very good thing that came out of it was overt recognition of the value of young people, and several of the people who, particularly, who were involved with the scenario planning are continuing in important whole of Corporation things, like drought management and so on, you know. So that they've been given important roles within that, it's not just sort of retreated back to the old guard.

However, it seemed the increased involvement was not having the desired effect in this area. It was perceived that the retention rate of graduates had not changed. (*Retention rate of graduates unaffected by Company One 2010*)

I can think of very few promotions. I think graduates are still leaving the organisation. The graduate recruitment process has slowed. There's been some people put on special task forces, but that was always happening anyway.

6.6.7.3 Organisational demographic

There was perceived to be a gap in the age spread of the organisation, with a lot of older people who had been with the organisation a long time, and younger recruits, but a shortage of people around the age of 40 (*Organisational demographic*). As a result, there was a looming problem of loss of expertise as older people retired, with a perceived shortage of readily available suitably experienced replacements (*Importance of retention of expertise*).

... our workforce demographics are rather unusual, and we have a lot of people in the 30-year club. Our average tenure is very high, from memory, 18 years.

A demographic gap. The previous Water Authority stopped recruiting graduates. And you can't pick those sort of people up off the streets, sort of 40-year olds, it doesn't make sense, they don't exist.

6.6.7.4 Empowerment

Although some participants stated that they felt a greater degree of empowerment than before, this was considered to be more an outcome of Company One than Company One 2010.

I think there was a massive change in that (empowerment) as a result of Company One, where accountability was brought down to regional manager level, and branch manager level. And that was something that a lot of people in the organisation struggled with, that people who are managing business units have full accountability for what happens in there. I don't think as a result of 2010, we've made any progress in that area, and I think we need to.

The lack of effect was despite discussion of the greater responsibility for middle management and other staff during the Company One 2010 conversations, and the constraints that they felt from bureaucracy (*Little change re empowerment and accountability*).

I guess some of the things which came out were things around the empowerment of staff, and perhaps not so much the people at the front line, but people sitting in the middle of the business, the technical specialists who felt they didn't have the ability or capability to make change within their area, to do things differently, to challenge the status quo.

6.6.7.5 Cost reduction

Later in the same year as the Scenario Thinking and Company One 2010 workshops, more than 120 people in the organisation lost their jobs as a result of cost-cutting (cf. 1.5.2 *History of the organisation, 2001-2002*). Although only one or two people linked this to scenario planning or Company One 2010, it was perceived by some as affecting the organisational climate and environment in which the changes from Company One 2010 were being implemented, with people, unhappy and fearful, and their work disrupted, and in some cases, angry at the way the redundancy program was managed (*Disrupted work environment*).

As soon as the focus is taken away, people will get back to business as usual. And there's been an imperative for that, because of almost the same time as 2010 finished, the Corporation was subjected to severe cost cutting. And so people are under quite a bit of pressure to even do what they are meant to do, just to fulfil their accountabilities right now. Never mind trying to do things towards a brave new future.

However, others believed the redundancy had been handled as well as could be expected.

6.6.7.6 Workforce of the future

Issues affecting the Workforce of the Future initiative (cf. 6.5.5. *Lack of change*) were perceived as an important part of the people and culture outcome of Company One 2010, but the progress of change was slow (*Workforce of the future progress slow*).

... certainly one of the key priorities in the people and culture area in the current corporate performance contract is developing a sustainable remuneration framework. And the key word is sustainable. And also other key areas that come out of the people and

cultural area is workforce planning, a more corporate model for workforce planning. They were all issues that came out of the 2010 process.

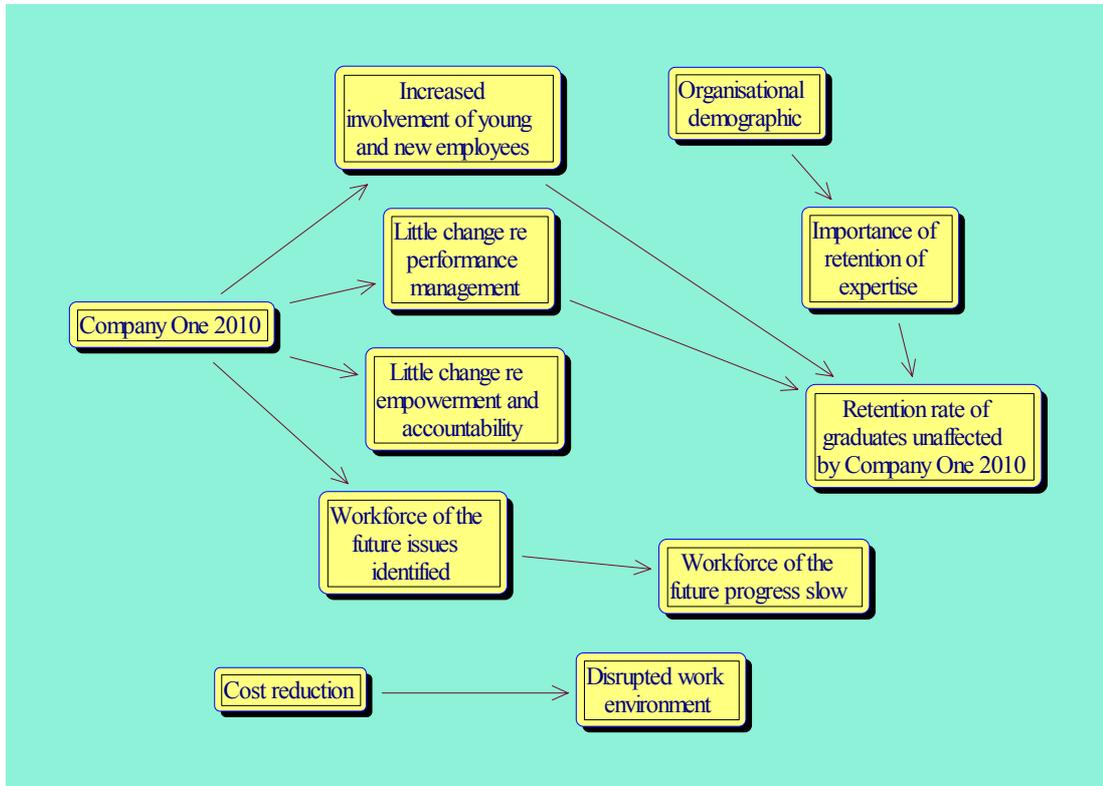
I mean, the Workforce of the Future stuff, which was supposed to incorporate all of the changes from the.. or all recommendations from the Changemaker teams, is still bubbling away in HR. But probably is not getting the follow through that it deserves.

Scenario Thinking was seen to have provided a vision that showed the nature of the workforce in the future would be different and that there were unlikely to be new positions produced through growth (*Workforce issues identified*).

Well, it became very clear through the scenario planning process, and the strategic review that followed, that a lot of the work that had to be done was around what we've since termed the people and culture Area for Action ... one of the things that came through very clearly was that the nature of our future workforce was likely to be very different from the nature and mix in our current workforce, in terms of academic disciplines, skill sets, pure numbers, and the mindsets that those people brought to the organisation.

How work force issues were affected by scenario planning is mapped in *Figure 6.6.6*.

Figure 6.6.6 Workforce issues



6.6.8 Water quality

Recognition of the significance of water quality was not new, but some participants saw a link between the new business direction, with its emphasis on customer satisfaction in WA, and increased awareness of the importance of water aesthetics to major industrial customers. A changed attitude to risk management was also seen as having the effect of increasing awareness of what was involved in maintaining water quality standards. There was divided opinion whether scenario planning had much of an effect in reinforcing the awareness of water quality issues, although it was perceived to be an important part of the Company One 2010 framework.

Again, I'm not sure that it's come out of scenario planning, but, I guess, there's a lot more emphasis, I guess, on understanding water quality, the fact that water quality isn't just about taking samples out of taps and looking at the results; that it's actually, you know, a complete, sort of, process that starts in our catchments, and goes right the way through. And that it's all about identifying hazards and managing the hazards, and those sorts of things. So it really has had a fundamental impact, I guess, on our attitude and culture.

6.6.9 Technology

Technology was the second-ranked driver in the Scenario Thinking workshops, but there was little comment in the interviews on technological matters. There was perceived to have been little change since the Scenario Thinking workshops, and none attributed to scenario planning or Company One 2010.

We've seen a change in e-business. Again I don't think it's a result of 2010 or scenario planning at all. I think it was natural progression, and getting the right people in those roles.

6.6.10 Effect of bureaucracy

The bureaucratic structure was perceived by some participants as necessary for the organisation both for risk mitigation, especially with the safety of the water supply (cf. 6.6.4.8 *Conservative attitude to change and planning*), and to ensure compliance with regulations (*Structure for risk mitigation*).

But, as a whole, our organisational structure has to be like it is, is structured like it is, because of the nature of our business, which is heavily subject to regulation and compliance.

While some people were in a mood for cultural change, the bureaucratic nature of the organisation was a major constraining factor, and could be used as a means of stifling change (*Barrier to change*).

There is quite a push for cultural change in the organisation, a sort of can-do attitude, and that sort of thing. But being such a large organisation, bureaucracy is enormous. That very much stifles any initiative or any streamlining approaches.

The bureaucracy was a source of exasperation for some. Particular sources of complaint were what was seen as unnecessary *Paperwork*, a continuing reliance on *Committee-based decision-making* and people using the bureaucracy for *Protecting their own interests*. It was perceived that there had been an effort as a result of Company One 2010 to streamline processes, but in many cases, this had had little effect.

You know, to get a project through, you have to have so many signatures, and so many bits of paper, and so many documentation. And they went through a process of sort of being more smart about that, and, you know, who has to sign off and all that kind of stuff. But it just seems that we're back to where we were again.

Now the project that I ... was involved in ... had no requirement for a steering committee ... So, I guess, that, to me, is a classic example of bureaucracy gone mad. It served very little purpose, was quite clearly against some of the objectives that had come out of the 2010 exercise and really didn't.. delivered no benefit to the organisation. Yet they still exist.

One of the parts of the culture is keeping your backside tin-plated. ... And that means not taking risks, and following the bureaucratic processes, because that's another way that you play it safe.

There was a view that since the Scenario Thinking workshops, there had been a reduction in delegated authority, but others believed there was a high level of

delegation. Viewpoints here appeared to be related to the participant's position in the organisation, with those not in senior management more likely to be dissatisfied with the level of delegation (*Delegation issues*) (cf. 6.6.7.4 *Empowerment*).

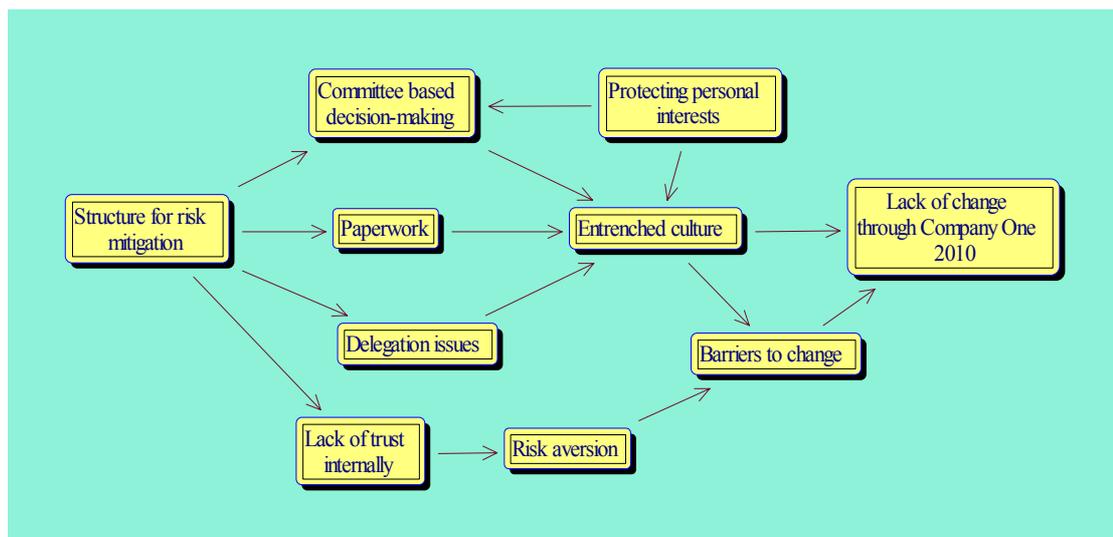
I know one of the examples which was brought out was one of the discussions that took place between a graduate and one of the general managers, and the general manager's response to an issue ... was 'Well it's easy, all it needs is one signature and that's mine. It's an easy thing to do'. And the graduate's response was 'You have a completely different perspective of the organisation and the bureaucracy which exists before it gets to you, and the reality is for me to get it to you takes who knows how many signatures.'

6.6.10.1 Emerging categories – bureaucracy

The bureaucratic organisational structure was perceived by many participants to be entrenched as part of the organisational culture (*Entrenched culture*), necessary for risk mitigation, but a *Barrier to change*. It was seen as a contributing factor to *Lack of change through Company One 2010*.

The relationship of the categories in this section and the emergence of the categories of *Entrenched culture* and *Barriers to change* are mapped in *Figure 6.6.7*, together with the relationship of *Internal trust and credibility* (see below) to *Bureaucracy*.

Figure 6.6.7 Bureaucracy and internal trust and credibility



6.6.11 Trust and credibility

There were two aspects to the issue of trust and credibility, which was also one of the Areas for Action in the new purpose and direction arising out of Company One 2010.

To gain trust and credibility with stakeholders, including customers and the government and regulators, participants stated that it was necessary to have good relationships with them. The findings on participants' perceptions of changes in these areas can be found in 6.6.4.2 *Attitude to customers and community* and 6.6.2 *Attitude to Government and regulators*.

The use of use of trust and credibility as one of our Areas for Action has been quite powerful in having people recognise the importance of alignment, or the importance of being aware of stakeholder expectations, stakeholder requirements, and the need to deliver on those, so as to build the trust and credibility.

However, there was a perception that the degree of trust and credibility within the organisation was related to the bureaucracy: a high level of bureaucracy betrayed a lack of trust in the people in the organisation (*Lack of trust internally*). This concept is mapped in *Figure 6.6.7*.

... bureaucracy is just a measure of how you trust your people. So the more bureaucracy, the less trust there is in the organisation. Now there is a certain level of bureaucracy required. Any large organisation must have a type of bureaucracy. We seem to be overplaying this, very, very much so. ... I mean anybody within the organisation, no matter where you are placed, is allowed to manage its own affairs to a certain degree. And within that degree, there is a certain amount of risk taking, much lower at lower levels, much higher at higher levels. But you know when you take that all away you become just dummies

6.6.12 Sustainability

Although opinions differed on the extent to which scenario planning and Company One 2010 affected the organisation's commitment to sustainability and a triple

bottom line approach, the sustainability focus was seen as one of the major changes in the period since the Scenario Thinking workshops. The change was seen as embedded in organisational thinking and practice, including managerial monthly reporting requirements. There was a belief among some participants that the change would have occurred whether or not scenario planning and Company One 2020 had occurred.

I think actually this is something you can peg back to scenario planning. The next round of corporate planning after the scenario stuff had finished ... the senior management were involved and there was unanimous adoption of sustainability as the key business driver for the Corporation. And I mean that in the broad sense, you know, social, environmental and financial.

I think the concept of sustainability is probably one of the main changes in the organisation. Probably getting more serious about triple bottom line, and what it means for us. Now would that have occurred with or without 2010? I think it would have occurred anyway, so I can't link it as a direct result of 2010 or scenario planning.

6.6.13 Competition and customer expectations

For more richness of data and context for this subsection, see Appendix 2.4.9 and 2.4.10.

The threat of competition had been a major concern in the organisation (*Fear of overseas competition*), and competition and customer expectations in the future were central to the focal issue for the Scenario Thinking project (*cf. 1.5.3.1 Scenario Thinking*).

I guess at that time we were looking at competition as a real threat to the organisation. We were looking at competition from overseas water companies, particularly the big French and British companies. We had a view that they might wish to use Australia as a platform to launch into Asia, and to get a foothold here. And so that was one external threat.

But not everyone agreed. Some participants believed that the threat had been overemphasised, although it appeared some were commenting with benefit of hindsight (*Competition overemphasised*).

I think the competition one was always a bit of a furphy. I don't think there was that much in that.

And I remember in the scenario planning and then 2010, everybody was mortified and terrified about competition, and it's just not happening.

I don't think the international companies are particularly interested in us. I don't think anyone in their right mind would want to take on our country operations.

There was also the view that the Government was not going to allow big overseas companies to take over water business in Western Australia (*Government attitude to competition*).

I don't think that competition will be a major issue while we've got this current government.

So I think, even at the highest level of government, they're realising that the legislative framework that was set up probably overstated the role of competition.

However, there was also a perception that the organisation was becoming complacent about potential competitors (*Competition underemphasised*)

.. to think that we couldn't have competition until it actually thunders up your driveway, is a bit of a narrow minded view.

Whether or not the participant thought the threat of competition was overemphasised or underemphasised, the best response to the threat of competition was widely perceived to be the establishment and maintenance of good relationships with customers (*Good customer relationships*).

...our best defence to competition is by being well-regarded by your customers and your stakeholders, like government.

The policy of listening more to customers and trying to meet their needs was seen as a Company One initiative, rather than Company One 2010 or scenario planning. Part of this had been a strategy called Defend and Extend (*Continuity of Company One; Defend and extend*).

It's very important that we continue to listen to what the customers want ... we didn't actually know our customers. We knew where their water meter was, but we didn't know what their names were, what their business, what they did with the water, stuff like that, you know. We had no idea what happened behind the fence. That was the beginning of the Company One thing.

... we've developed a defend and extend concept, if you like. And I think you defend the organisation against newcomers and competition by running the business very well and just being very good at doing, you know, running your business. And that will keep competitors out in any event.

Better relationships with customers involved more consultation than previously and participation by communities in decisions that affected them. Lack of consultation in the past was seen as a weakness of the organisation (*Community participation*).

I think the organisation needs to listen more to what the customers are saying, and not to say we can't afford to do things. Because customers want them done I don't believe it's our job to say, you know, we know what's best for you, which is what we've tended to do.

But I think our weakness is our ability to engage the public and involve them in those sorts of, you know, very strategic long term sort of things.

I think we're also really improving the way that we deal with our customers and community. Our consultation and the way that we involve the community in our decision-making is much better than it has been previously. ... I think we're tending to consult much earlier, and I think we're also really listening to what the community and key stakeholders are saying, and we're paying attention to how that affects the decisions that we make. Which I think is a good outcome.

There were two areas in particular where it was perceived that customers' expectations were focussed. These were consistency and sufficiency of supply (*Forward planning for resource*) and water quality (*Expectations of water quality*).

And also the Corporation, I think, is seriously looking at water quality and effective odour, on people's comfort and social surroundings, again, they're not directly rising out of the scenario planning, but I think genuine regard for customers' real needs, as distinct from their wants, has probably become a stronger focus if anything.

We'll be called into question about our ability to plan. Because people just get indignant, even though we have spent half a billion dollars on the last five years developing new sources, you know. I mean, I think that's been pretty good, but people are going to say, why haven't done this, why haven't you got grey water happening in a big way for normal domestic, why haven't you done this that and the other? And so we're really under a major threat, and I really don't know whether the scenario planning recognised that strongly enough.

Scenario planning was perceived by some participants as clarifying the issue of competitive threat and of reinforcing the importance of consultation with customers. (*Effect of scenario planning on attitude to competition and customer expectations*)

I believe as part of scenario planning we did look at some competition (from overseas), and that was part of what we thought. As we thought it through, we probably saw it emerged as less of a threat than we initially thought. And yes, I think that was good clarification.

I think throughout the scenario planning there was a great deal of information brought in, in terms of how society is changing, what the expectations of the community are, how the community expects to be involved in decision making, how the community or individuals expect to take greater control for their own water supply or energy supply, I guess the things that they do and the impacts that they have personally. And I think in the past this organisation didn't respect that change.

Customer expectations were perceived as increasing, a trend that would continue into the future (*Increasing demands*).

I think that the Water Corporation has to grow with the customer expectations. And has to prepare itself for those customer expectations, which will be packed higher and higher and higher, that will definitely not go lower.

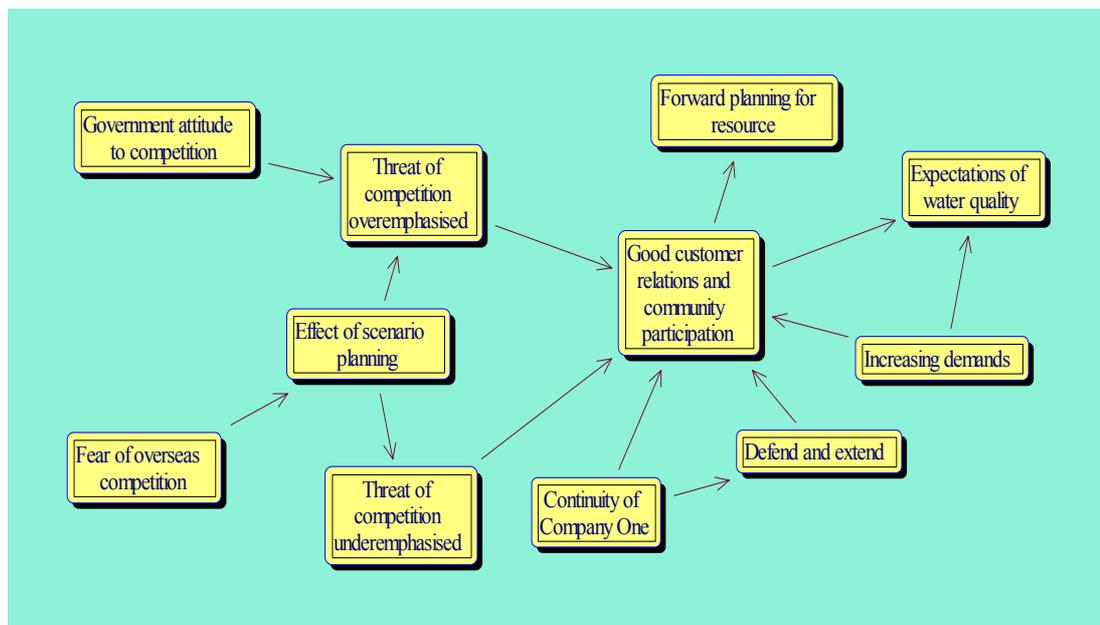
Although competition was the focal issue, its importance in people’s minds had diminished. Only one person mentioned it among the objectives of the change initiative.

6.6.13.1 Emerging concept – competition and customer expectations

A relationship between a perceived competitive threat and customers expectations’ emerged in the need for *Good customer relations*. The relationship was not considered to have been recognised as a result of scenario planning, but its importance was emphasised as a consequence of the scenarios, and it became part of the new purpose and direction statement.

The relationships between the aspects and evolving perceptions of competition and customer expectations are mapped in *Figure 6.6.8*.

Figure 6.6.8 Competition and customer expectations



6.7 Strategic Intent and Implementation phases

For more richness of data and context for this section, see Appendix 2.5.

The emergence of the importance to this study, particularly to Research Question 5, of the stages of the Company One 2010 process that followed its first phase, the Scenario Thinking project, has already been noted (*cf. 6.5.6.3 Adverse effects*). The findings in this section concern the final two of the three phases of the change initiative, i.e., the Strategic Intent phase and the Strategy Development and Implementation phase, called “Implementation” here for brevity (*cf. 1.5.3 Description of the change process*).

During the Strategic Intent phase employees and management were involved in considering the implications of the scenarios (*cf. 1.5.3.2 Strategic Intent (implications)*), and in particular what the purpose of the organisation was and the boundaries of what it should be doing:

So the boundaries we put on ourselves were not imposed, so much as ones that we were prepared to use to define us an organisation. Because what we felt was the organisation potentially had so many possibilities, that it was just having trouble in moving in any direction.

During a workshop facilitated by an outside consultant, the organisation identified what it called its “strategic elephants”. Strategic elephants were:

.. things that ... might on the surface seem rather benign and docile, but could quickly get out of control. If you don't manage them, they'll trample over you and run over you pretty quickly. Once they get a momentum up, they can be incredibly strong and powerful. But if you recognise them for what they are, and essentially train them, or work with them in a positive way, you can often use those kinds of issues to be quite constructive motivators for change within your business.

The issues that were identified as “strategic elephants” were:

- Need to meet customer and community needs (increased need to engage and respond)
- Need to meet Government needs (as shareholder - must be responsive and "in tune")
- Innovation (doing more, and better, with less)

- Delivery of quality, trusted water services (invest in improved quality in some instances and 'sell' improvements to customers, building trust)
- Increased employee empowerment
- Investment in more sophisticated asset management practices and tools (huge lever for improved customer service and cost efficiencies)
- Growth (service growing population base in Western Australia as an economic and customer imperative).

(Source: Personal communication, 2003)

At the end of this phase, the new purpose and direction statement was built, based on the “elephants.”

One particular aspect of the Strategic Intent phase had a profound effect on the change process. This concerned the Changemaker teams.

6.7.1 Changemaker teams

Changemaker teams were teams of six people each, constituted of both people new to the organisation and longer-serving employees, who, during the Strategic Intent phase, were asked to make recommendations for change in three areas that were identified as the biggest issues facing the organisation. The issues - which were understood to have been decided by the managing director - for the three teams were “Challenge bureaucracy”, “Empowerment” and “Performance management”.

The decision to set up the Changemaker teams was initiated by the Company One 2010 team. Participation in the teams was voluntary and of people who were invited to participate, approximately 40 percent declined. The time commitment was one or two days a week in addition to the participant’s normal work commitments (*Evidentiary quotes withheld to protect confidentiality*).

It was universally agreed that the Changemaker teams put in a large amount of effort and work. However, very few of their recommendations were adopted, which resulted in a lot of resentment, both on the part of participants and others. The following small selection of quotations narrates what occurred.

Eighteen or twenty people, or how many it was, spent six weeks of their lives doing two jobs, came up with good outcomes that were never really enacted. I was personally a bit disappointed by that, by that process. I think it was, it was a negative, it was negative result

across the organisation. I think all of those people have made. . . many of those people have made comments to me since then that it was just a load of garbage. And, you know, what sort of organisation gets already busy people and asks them to take on more work, and then does nothing with it.

I think there was a high expectation on the part of team members, and others around them, and around the organisation, that this would bring about some breakthroughs. The outcome has been far less than that.

And they took all these motivated people, put them through this process, and now, for a large part, we're somewhat demotivated, because nothing's happened ... So I guess my experience, apart from the first phone interview, which I can't really comment on what sort of happened with that information, is that, my input has been useless.

The particulars of the changes that were recommended and an examination of the detailed reasons why management did not adopt many of the Changemaker teams recommendations are not relevant for this thesis, which is concerned with the change process rather than the detail of substantive changes. However, the reasons, as perceived by participants, were, in summary:

- The Changemaker teams did not all focus on what was said to have been requested of them, i.e., mostly recommendations about specific changes
- The recommendations were not to the liking of the managing director and/or the executive
- One major recommendation, which was for what might be described as an anti-bureaucracy flying squad, was seen by the managing director as adding to bureaucracy
- Senior management did not follow through on changes, neither was there other ongoing support
- Drought and the Subiaco litigation diverted attention from the change process.

Several participants stated that feedback from senior management on the recommendations had been adequate.

I don't think they necessarily accepted the reasons why. But, no, they did get a fairly thorough de-brief, fairly substantial feedback on the work that they'd done. And, certainly, there was recognition for the amount of effort. But the greatest recognition for a group of that sort is to see their recommendations driven through, and in the main that hasn't happened.

But others disagreed and there was a perception that the reasons for this were not adequately explained:

The managing director met with our individual change maker groups personally. And we weren't happy with the feedback that he gave us So he was going to go away and come back. And he's never come back. And that was sort of Christmas last year. So there's certainly a feeling of despondency, because we put a fair bit of effort into these things.

The effect of the experience of the Changemaker teams was to create disillusionment among both Changemaker team participants and others in the organisation whose expectations of change had been raised.

... if you get these people on board and you ask them to give you recommendations, then you really need to act on them. And they have {expletive for greatly disappointed} a lot of people by just putting that stuff on the shelf.

I think that's the problem when you do that sort of thing, you get people involved like that, you create an expectation that what they're doing is going to make a difference. And if it doesn't, and it's not taken seriously, you would have been better not doing it in the first place.

Several participants mentioned a survey of employees that had been carried out several years before, where, it was perceived, the outcomes were not acted upon by management. They drew an analogy between that survey and the Changemaker experience of what they perceived as the attitude of management in ignoring what other employees had to say.

6.7.1.1 Emerging concept – Changemaker teams

The *Disillusionment* generated from the Changemaker teams episode led to *Cynicism* and even bitterness among many of the team participants and others in the organisation and a reluctance by some to participate in future change initiatives. For those who had been involved in it, this was a reinforcement of the disillusionment they felt from the previous survey.

6.7.2 Participation

The participatory nature of scenario planning, which was continued into the rest of Company One 2010, was perceived to have had a positive effect on the implementation of the new purpose and direction and was seen as one of the most important functions of scenario planning. Participants stressed the value of the buy-in to strategy decisions that resulted because, having been involved in the creation of it, people felt a sense of ownership of, and had an understanding of, the new purpose and direction, even those that didn't fully agree with it (*Buy-in*).

...the value of scenario planning was that it actually got a hell of a lot of people around the place, including key people, thinking ahead, thinking of these different possibilities, and casting their strategies accordingly. And actually, when we came up with strategies, they would all understand it. It didn't have to be explained to anyone. They all had buy-in.

I mean, as I said, there were some of the outcomes feeling a little bit, not let down, but thinking that's not quite what I had in mind, but feeling still, as I had been involved in it, I didn't feel ripped off at all.

However, there was a view that it was not necessary for everyone in the organisation to understand what occurred in the scenario planning project for them to accept the outcomes of the whole change initiative, because scenario planning was simply a tool that was used to explore possible strategies (*Understanding of SP by all not essential*).

I think there was, generally in the organisation there was uncertainty about what all this scenario planning was about. And I don't necessarily think everybody in the business had to fully understand it. It was a process that we went through to explore, sort of, opportunities

and potentials, and to identify through that some possible outcomes and some strategies that we might use to achieve those outcomes.

Participants discussed participation in the change initiative at different levels of the organisation and at different stages of the process. There was some comment that participation in the process was something of a façade and the views of some in the organisation were not being taken account of sufficiently, which referred more to the later stage of the change process (*Importance of listening*).

..how do you get the participation? You only get that if you get feedback, and you listen. Okay, you've got to listen. If you don't listen, then you're not going to get any feedback. And participation by people at lower levels in that kind of exercise has got to be done genuinely. It's not even being done genuinely at our level.

Inevitably, it was believed, some people who thought they should be involved felt left out of the scenario planning process (*Limits of inclusiveness*).

Yeah I guess there was the usual things whenever you're targeting or whenever you're selecting a group of people to be involved in stuff, inevitably by the process of selection, not everyone is involved, so there were a few people whose nose went out of joint and they weren't selected in one of the groups.

6.7.3 Decision-making

Despite the recognition of the value of participation, there was a perception that the final decision on the new purpose and direction had been by a small number of people, including *inter alia* the managing director and the Company One 2010 team, and there appeared to be little understanding among some people not involved of the process and what factors finally influenced the decision. For some, the relationship between what they perceived had been discussed in workshops and the outcomes was not clear.

...one of the things that I would have liked to have seen is a much clearer line drawn between the input that occurred at interview focus group stage, and the output in terms of the four scenarios. It seemed to me that there was a lot that happened in between, and when I saw

the scenarios come out ... back to us in the focus group, I didn't see a sort of a linear straight line between input and output.

According to some of the people closely involved in that part of the change initiative, the decision hinged on resolving what was not negotiable to the organisation and then, from the information available from Scenario Thinking and the strategic conversation projects that followed, settling on what was feasible for the future direction of the organisation.

And it became quite obvious by that time, especially with the benefit of all the scenario planning thinking, that there were certain things that we shouldn't do any more. And that there were certain things that we weren't giving enough attention to, and we better {expletive} well focus on them. And so that's what we wrote indelibly on the white board. So that became the new direction.

There was also a perception by some participants that more feedback should have been sought at the decision-making stage about issues with regard to implementation (*Black box*) (cf. *Black box* in 6.4.3 *Inability to distinguish scenario planning*). Allied to this was an opinion that the change initiative had been conducted just to make it appear as if people were involved, so that participation was to gain support rather than make decisions (cf. 6.5.3 *Affirmation*).

And the divisional planners, the people who do the strategic management in this organisation were never, never given that new framework to critique, to provide feedback on. It was just, we declare this to be the way. Now, so when it was just pushed down from above, it was, oh well, that's nice, actually, but it doesn't align with our business. ... I was at the point of thinking, what's the purpose of it? Was it just so we could feel that were involved we have ownership? But actually, I don't see any of what was agreed by this group in that. So who made the decision over there? ... It's the big black box, the whole thing's a big black box for me.

6.7.4 Roll-out and managerial follow-through

The strategy for the roll-out of the changes leading from the outcome of Company One 2010 was for them to be implemented by line managers. However, perceptions

of how managers had followed through the implementation of the change initiative varied greatly and the strategy appeared to be more successful in some areas than others.

The decision was made that the implementation of a lot of those strategies or decisions should be the responsibility of the people in the organisation who were responsible for those areas. And whether or not that was the best decision is, you know, remains to be seen... some of the things that we talked about, discussed, were agreed areas for change - and I think agreed at the very senior levels - certainly have not been carried out by branch managers and people given that responsibility further in the organisation. I think that's been a failing of the whole process, is there has been not enough follow-through.

The implementation process was envisaged as a sequential roll-out, with levels and areas of the organisation progressively introduced to the new purpose and direction. Operatives were situated not only in different divisions but in diverse geographic regions. The language and concepts were to be adapted to the circumstances of each group. This required local managers or team leaders translating it into terms that were relevant for their part of organisation and to the operatives involved (*Progressive devolved roll-out*).

... at the moment we've only rolled it down to that team leader level, with the idea that once they've got a level of comfort and feel empowered with it, they'll then have that discussion in a team environment ... By which stage, it'll be in quite a different language.

There was an attempt to build continuity into the change process, by involving operatives in the transitions. For example:

We had a workshop on people and culture, and we talked about shift statements. We'd have shift from centralised decision-making, for example, to decentralised, and we had scales where we said, well where are we now, where do we want to be, and what are we going to have to do, and they were all involved in it and so on and so forth.

In some areas, it was perceived that the strategy had worked well and the new purpose and direction had become the framework for planning. Managerial

compliance was encouraged by a revamped reporting system incorporating the concepts of the new purpose and direction.

And then, we've then since translated that into the regional context, and our regional business plan, and planning framework, and planning approach, 100 percent completely in line with the new model. So it's fully embraced, and it means all of our initiatives, or our strategies, are all combined with the framework, and they're tested against the objectives of the framework, and prioritisation occurs around that.

And it flows right the way down. So when I ask for my monthly report, I ask for an environmental assessment, and so forth. So that works very well, and I think that's a big change. And I think it's flowing on to the community too.

But there were many reasons offered for why it had not worked so well elsewhere. These included managers concentrating on the effects of the drought and cost reduction; managers who were not themselves convinced of the value of the change; managers lacking communication skills and a culture of independence leading to refusal to implement the change (cf. 6.6.4.3 *Accountability and discipline*).

Managers, due to a whole range of reasons, they'd just been through the cost reduction initiative, there's certainly significant impacts in the business due to the drought and the challenges that we were facing. The longer term view was sort of dropping off the agenda a bit, and people were more focussing on the 2002 and 2003 priorities. ... I think you're relying on a range of managers to communicate the message, and they're going to have varying skills in how they communicate that. And some managers may or may not believe it themselves. There hasn't been sufficient analysis or feedback, you know, objective feedback, on whether that message is instilled.

I guess what everyone keeps looking for, and maybe it's not that easy to achieve, is, you know, more clarity in, okay, if this is a scenario, what does it actually mean? How do you translate it into something that I can talk to the people who work for me about, and say, this is

what it means for the Corporation, and more importantly, this is what it means for us ...

And so I think a little bit of the message was occasionally white-anted, as it progressed across the organisation.

6.7.4.1 Emerging concepts

The concept of a *Culture of independence* links closely with 6.6.4.3 *Accountability and discipline*. The concepts of *Progressive rollout* and *Translation into operatives' language* are a recognition of the need for a participatory approach not only to change design and planning but also to implementation (cf. 6.7.2 *Participation*).

6.7.5 Change leadership

The effectiveness of the Company One 2010 team was commented on positively by participants. It was observed that the group disbanded before the changes had been fully developed and put into practice and that, without someone senior – even the managing director – to champion the cause, the implementation of the change had lost momentum.

...it was good having them as a team working on it. It gave the whole thing credibility. And they were senior people, and good people, and good communicators and all that ... And when they sort of disbanded or whatever, I guess the whole concept wasn't so widely. . . . it would have been probably good had those things been really bedded down, and a good package of activities been established, with short term initiatives, longer term initiatives, who would be responsible, who would oversee it, and all that sort of stuff, done before the team was split up. Because I think what happened was we ended up with a number of ad-hoc type actions, quick wins, which the managing director focused on, with the effect of starting to build momentum. And I think that had a place, but because that momentum was never really capitalised on, because the well thought out plan, initiatives and actions wasn't there.

It strikes me that you don't end up with a champion, or with somebody pursuing it with passion, or taking some time - I guess it would be

best if it was the managing director. Yeah, then these kind of things are going to wither away, you know, because I guess just the pressures of day-to-day stuff become so great.

6.7.6 Persistence

Closely linked to the need for continuing *Change leadership* was the concept of *Persistence* when implementing change. Some participants admitted to difficulty in remembering many of the aspects of the outcomes of the change initiative and saw this as an indication that, as a consequence of insufficient perseverance with implementation, the change had failed to be embedded (*Lack of persistence*). Another view was that once the Company One 2010 team disbanded, people who had been less than willing to adopt change simply reverted to their old ways.

... the fact that we're now having this interview and I'm struggling to actually remember much about it, you know, possibly means that it would be perceived by some people, again, as just being another exercise we went through in 2000 or 2001.

With this stuff, it struck me that, once it got back in to being allocated to line managers to do and deliver, there was almost a sigh of relief that, well, you know, we're back in control again, the pressure's off, thank God the {expletive for people who are a nuisance} have gone away and all those silly {expletive} ideas and the workshops that we had to think and. . . .

There was a perception that the lack of perseverance was demonstrated by the timing of the disbandment of the Company One 2010 team, which, it was felt, should have been able to champion and guide the change process for longer.

I think there should have been an ongoing support. I think they were disbanded a bit too quickly after what had been quite a significant change. I think the things like the Changemaker teams, and Company One 2010 in general, needed the ongoing resource to keep the fires burning and bed it down for at least 12 months.

However, there were some who were not surprised by the lack of perseverance, seeing a lack of follow-through as an organisational characteristic and a reflection of past experiences.

There's no capacity to follow through, and do the real hard yards which will make the changes. And I guess that's the biggest thing I see, that there's absolutely no capacity to follow through with anything to the end.

For some, the pressure of other events (such as drought, litigation and redundancies), and the dictates from management in response to them, limited their capacity to introduce or embrace change (*Top down approach*).

And, as much as possible, the priorities, and where the resources are to go, is almost dictated top down. Obviously, through the year, we're influencing on many, many fronts as to what the priorities ought to be, but, at the end of the day, the corporate framework and planning framework is such that there is only so much money to go round, and so much energy available, and the priorities are determined there, and that's what we embrace.

Another factor that was viewed as limiting the implementation of the change was a *Lack of specific targets*, which constrained the ability of managers and others to follow up the new purpose and direction with actions.

It's very hard to then follow-up in the absence of hard targets being developed, do you know what I mean?

6.7.7 Strategic conversation

Scenario planning was perceived to be an effective mechanism for introducing and developing ideas, and participation in structured strategic conversations was continued through the workshops in the other phases of the Company One 2010 process. Some stressed the importance of working to make sure their views were heard and the danger of dominant personalities and the more vocally adept dominating proceedings was mentioned.

And so therefore you get very disparate views within the organisation, and I guess that scenario planning is a very good mechanism of forcing those sorts of issues to be thought through, and at the high-level corporate position and direction, at the very least being developed.

I think a very important step following the 2010 process was the workshops that were run on each particular area of action to capture the key priorities moving forward. My branch, we did a lot of work on making sure that we could influence at those workshops to get some key issues not falling off the agenda ... you had to make sure, that from your professional perspective, that things that were strategically important were argued and debated, and didn't drop off because someone else had viewed something else as more important.

They were very structured, these workshops, as I remember it, and you were almost guided in a direction by the group leaders ... the process was good, I think, but ... whether the considerations that went into those outcomes were really, truly open, I perhaps think they were a bit stiff and stunted. ... only the strong vocal personalities end up being the spokespersons for the groups (laughs).

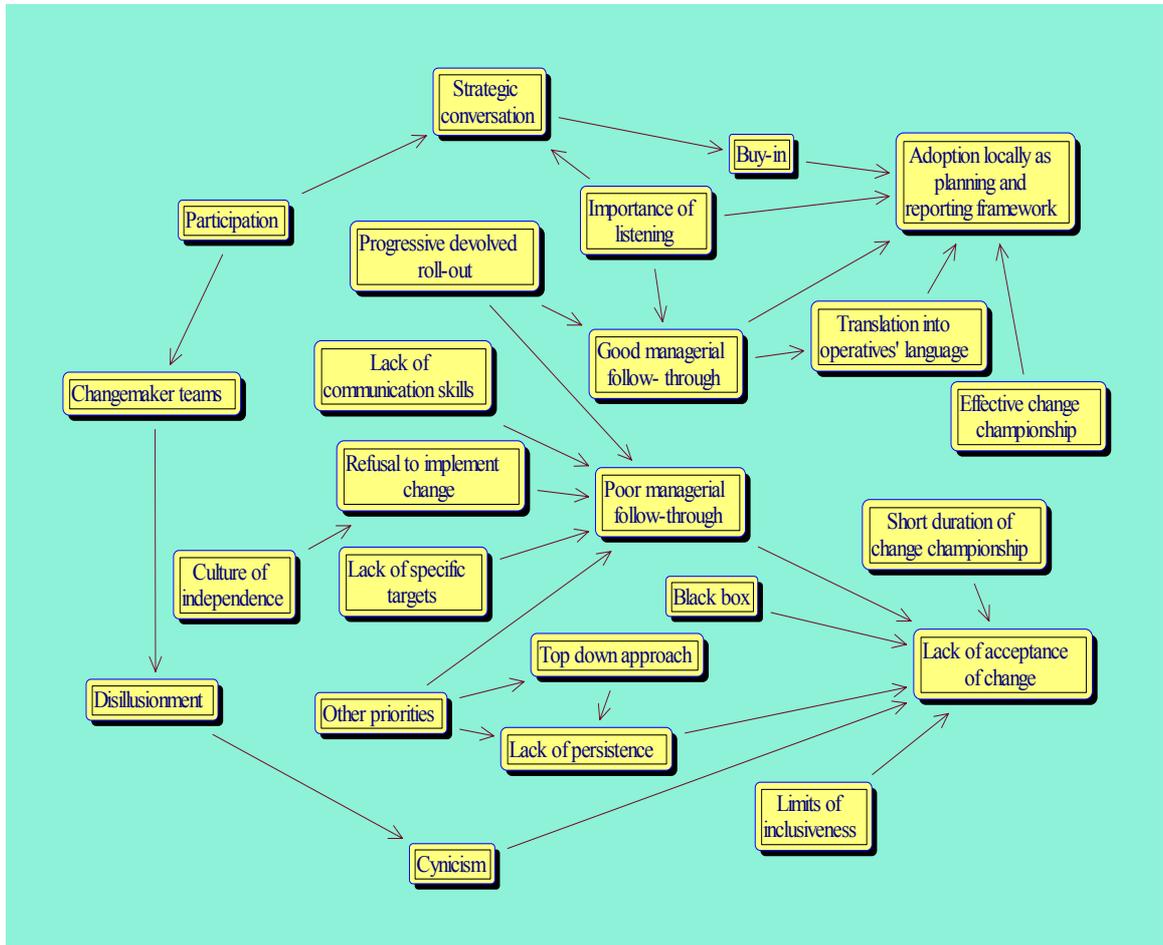
There were a few references to informal strategic conversations.

Some people have a similar view to me; yes, I know, talking in the corridor, that some people sort of said, yeah, well it would have been nice if we had have gone a bit further, and a few people had come to the organisation, some of the undergraduates, thinking that that's the sort of place that they're going to be in.

However, direct evidence of informal strategic conversations was scarce.

The factors that affected the implementation and adoption of the new purpose and direction are mapped in *Figure 6.7.1*.

Figure 6.7.1 Implementation



6.7.8 External factors

Participants discussed the effect of the low winter rainfall in the year of the Scenario Thinking workshops on the implementation of Company One 2010 and the effect of Company One 2010 on the organisation's response to the drought (*cf. 1.5.1 Description of the organisation and 1.5.2 History of the organisation, 2001-2002*).

An effect of the drought was perceived to be to divert attention and resources away from the change initiative and long-term thinking (see also 6.7.4 *Roll-out and managerial follow-through*). Part of this was a cost reduction, with approximately 120 people laid off.

... because of the water restrictions, the Corporation's income was down about \$40 million. ... as a direct result of that reduction in income last financial year, we've got a \$12 million and 120 people budget cut this year.

As well, the pressure on the organisation was a factor in the disbandment of the Company One 2010 team, which left the change initiative without leaders to champion it (*cf. 6.7.5 Change leadership*).

Perceptions of the effect of the change initiative on the way the organisation responded to the drought were varied. Evidentiary quotes are found in *Appendix 2.6 Barriers to implementation*. The factors discussed by individual participants are summarised here.

- Because of scenario planning, there was an appreciation that there were different perspectives and approaches to forward planning, including valuing community input. Scenario planning provided a trial run for this.
- Company One 2010 changed the way people on the organisation talked about the water supply crisis, but not their actions.
- Specific areas where scenario planning assisted in the drought response were in an appreciation of the role of government in the organisation and the encouragement of internal and external networks.
- The outcome of Company One 2010, the focus on core business in Western Australia, helped the organisation cope with the drought because it was easier to concentrate resources on it.
- The value of the participation of younger staff was recognised as a consequence of their participation in Company One 2010.
- Cross-divisional teams were set up to deal with the crises. The change initiative was perceived as a pre-cursor to this, though not a direct cause. Opinion was mixed on their effectiveness in the drought situation, with perceptions that the teams were not set up and co-ordinated early enough despite foresight of the coming difficulties and that the lessons of scenario planning were not put into practice.
- Some participants perceived no effect of scenario planning or Company One 2010 on the way the drought was handled.

A further external factor was a threatened major litigation (*cf. 1.5.1 Description of the organisation*), but this did not affect the work of most participants and was not perceived to have influenced the implementation of change, although it was perceived as the sort of issue that more forward thinking, e.g., using scenarios, could avoid (*cf. 6.5.1.3 Lessons*).

6.8 Before and after comparison

As the second part of Analysis Stage Two, the pre-workshop interviews were analysed with NVivo, using the same concepts and properties as the second interview codes so they could be compared.

Examples of the NVivo sets (*cf. 5.4.2 Before and after coding*) that were created for each individual to allow direct comparison of what he or she said in both interviews appear as tables in *Appendix 4 Coding*. They show:

- *Viewpoint Before*: a summary of the individual's viewpoint or attitude or opinion for the node topic as expressed in the pre-workshop interview
- *Viewpoint After*: a summary of the individual's viewpoint or attitude or opinion for the node topic as expressed in the Research interview
- *Change Assessment*: the researcher's interpretation of whether any change had taken place and, if appropriate, whether the participant linked the change to scenario planning and/or Company One 2010 in any way.

Table 6.8.1 on the next page was created to summarise the individual results.

The assessment of the individuals' *in vivo* responses to ascertain whether the interview data indicated change was a matter of interpretation by the researcher. Two aspects of change were distinguished (*cf. 5.4.2 Before and after coding*): change the participant perceived in the organisation, and apparent change in the participant's viewpoint. Sometimes change had to be inferred from the context of the discussion and the way the change was described, with the researcher referring back to the full interview transcripts.

Table 6.8.1 Before and after comparison summary

Ref	Node	Organisational change			Change of viewpoint			No opinion
		Yes	No/ NDR	SP/2010 related?	Yes	No/ NDR	SP/2010 related?	
1	How govt influences decisions	1,3,33,34	2,4,6,7,8,13,14,15,29,32,35	34	3,33	1,2,4,6,7,8,13,14,29,32,34,35		5,30
2	Relationship with government	9	12	9		9,12		
3	How regulators affect decisions	1,35				1,35		
4	Relationships with regulators	3,9,10,13,29,31	30	9,10	9,10	3,13,29,30,31	9,10	14
5	Customer relationships	1,26,29		29		1,4,26,29		
6	Attitude to community, customers	2,8,10,37	1,4,5,6,9	2,8,10,37		1,2,4,5,6,8,9,10		7,37
7	Increasing customer demands	3,25,33	4,6,7,14	25	3	4,5,6,7,9,14,25,33		2
8	Trust and credibility with customers	31	6	31		6,31		
9	Business model		8,12,33			8,12,33		1,9
10	Business development	1,2,3,4,5,7,8,9,10,13,14,25,26,29,30,31,32,33,34	35	1,2,3,4,5,8,9,10,13,14,26,30,31,33,34	3,4,5,8,9,10,13,14,26,32	1,2,7,25,29,30,31,33,34,35	3,4,8,9,10,13,14,26	12
11	Cost structure	1			1			6
12	Nature of/response to competition	3,5,8,10,14,25,30,34,37	6,13,26,33	3,5,8,25,30,34	3,5,8,10,25,30,34,37	6,13,14,26,33	3,8,25	4,9,12,32,35
13	Environment		12			12,33		2,6,10,25,35
14	Technology/E-business	5	26,34			26,34		2,3,7,10,33,35
15	Access to capital		2,13,35			2,13,35		3,6,8,34
16	Clarity of purpose	2,4,5,8,9,14,25,26,33,34	30,35	2,4,5,8,9,14,26,33,34		2,4,5,8,9,14,25,26,30,33,34,35		13,32
17	Defend and extend policy	34	2	34		2,34		7,25,26
18	Government attitude to competition	3,10			3	10		14
19	Privatisation		30			30		3

20	Structural changes	3,7,25,26,29	8,10,14,33,34,35	26,29		3,7,8,10,14,25,26,33,34,35		9
21	Engineering as cultural influence	5	8,12,30,33		5	8,12,30		
22	Waste water	12,34			34	12		3,13
23	Focus on commercial outcomes	4	5	4		4,5		
24	Adapting culture to change							4
25	Corporate structure/ flexibility		7,37			7,37		5,34
26	Bureaucracy	7	12			12		34,37
27	Risk management/ attitude to risk	8,9,29,37	5,13,14	8,9,29,37		5,8,9,13,14,29,37		10
28	Accessibility							6
29	Partnerships and alliances	8		8		8		6,7,34,35,37
30	Responding to and attitude to planning and change					6		
31	Values in decision making							
32	Implementation of change	33	8,14,37		33	7,8,14,37		
33	Asset management	7,26	9,29	26		7,9,26,29		
34	Sustainability	12	8	12		8,12		
35	Retention of expertise		8			8		9,35
36	Community participation		9			9		
37	Performance recognition		30			30		9
38	Access to water resource			12			12	9
39	Water quality	26,31,34	1	26,31,34	1	26,31,34		9,32,33,35
40	Organisational aims, planning		31			31		10
41	Demand management	12				12		
42	Triple bottom line reporting	12		12		12		
43	Return on investment		12			12		26,32
44	Acceptance of the change		12,33,37		37	33		12
45	Leadership and Board		12,30,32,37			12,30,32,37		14
46	Productivity		13			13		
47	People and expertise	14,29,30		14		14,29,30		25,31,34
48	Employee security							25

49	Cross-divisional understanding	14		14		14		
50	Pricing/tariff reform	26,34	31	26		26,31,34		
51	Empowerment	29	30,37	29		29,30,37		
52	Influence of age of employees	29	33			29,33		
53	Cynicism		30			30		
54	Public relations	31,34				31,34		
55	Extending thinking							33
56	Cross-subsidising regions							34

Key

Numbers on the table are identifiers representing individual participants. For example, the first column of the first node represents four individual “Yes” responses, and they were from interviewees with ID codes 1,3,33 and 34.

Organisational Change:

Yes = the participant saw some change in the organisation with respect to this factor;

No/NDR = the participant did not indicate any change in the organisation with respect to this factor, or the second interview answer bore no direct relationship to the pre-workshop interview answer;

SP/2010 related = the participant saw the change as being at least partly related to scenario planning and/or Company One 2010.

Change of Viewpoint:

Yes = the participant had changed his or her viewpoint with respect to this factor ;

No/NDR = the participant did not indicate any change in his or her viewpoint with respect to this factor, or the Research interview answer bore no direct relationship to the pre-workshop interview answer ;

SP/2010 related = the participant at least partly attributed the change to scenario planning and/or Company One 2010.

No opinion = Factor was discussed in the pre-workshop interview but no meaningful opinion was expressed in the Research interview.

What this chart identifies is the areas where participants discussed a concept at the pre-workshop interview and discussed it again at the second interview. It reveals in how many (and in which) of the interviews there was an indication that the participant discerned a change in the organisation in that area and whether the participant appeared to have a different viewpoint by the second interview.

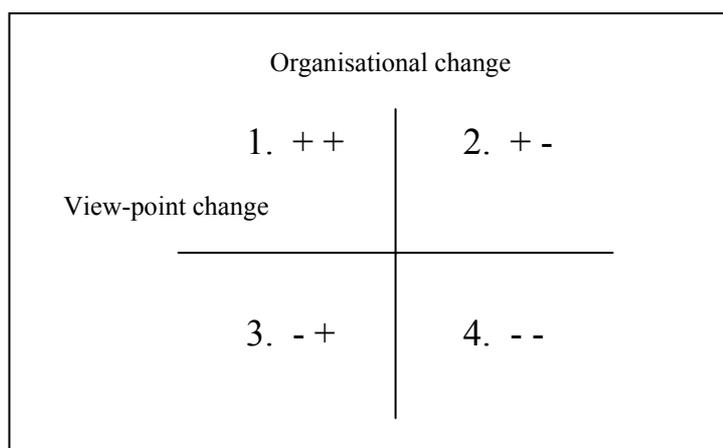
It is not a measure of how many participants discerned organisational change, since only those participants who identified and discussed a particular area in the pre-workshop interview are included. Also, not all issues discussed in the pre-workshop interview were discussed in the Research interview – the discussion was limited to the issues selected for inclusion for the Research interview with that particular participant and any others the participant raised that happened to have also been discussed earlier (*cf. 5.2.1 Data sources*).

What the chart clearly demonstrated was that there were only two areas where both organisational change and change of viewpoint were identified for a significant number of participants. These were *Business development* and *Nature of/response to competition*. In no other case were there more than two cases of change of viewpoint. Because this is a qualitative study and also because of the small size of the sample, actual numbers are not relevant. However, the contrast between the numbers of participants identifying both organisational change and change of viewpoint in these two areas and in the others is a strong argument for the differentiation of these two areas.

A third case was selected for discussion, both because of the number of people who had expressed concern in the pre-workshop interviews and because of the centrality of the issue to the change initiative. This was *Clarity of purpose*, identified by 10 participants as an area where organisational change had occurred.

In this analysis, it was the occurrence of change rather than its substance that was of interest. Change has been identified in two dimensions: organisational change and viewpoint change. This allows for four possibilities, as shown in *Figure 6.8.1*

Figure 6.8.1 Dimensions of change



This shows that organisational change may be accompanied by a change in viewpoint or not. In this study the quadrant 3 (bottom left) line combination did not occur, i.e., in no case did a change of viewpoint occur unaccompanied by discernment of organisational change. There were also a number of instances where neither organisational change nor viewpoint change were identified (Quadrant 4).

The following are the areas where most change was perceived:

6.8.1 Business development

The questions asked of the data were:

- *Is there an indication in the data that the participant saw any change in the organisation with regard to business development focus?*
- *Is there an indication that the participant changed his/her mind or viewpoint with regard to the focus of business development?*

Of 19 people who perceived and discussed a change in the focus of business development, 10 also appeared to have changed their personal point of view on this issue (Quadrant 1 in *Figure 6.8.1*).

These fell into the following categories:

Changed from opinion that organisation should expand beyond WA and/or its core business to agree with new WA focus	IDs 3, 4, 5*, 8, 9, 10, 13, 26, 32
Changed from belief that there was a lack of business direction to agreeing with new focus:	ID 14

* The comparison revealed contradictory statements for this interviewee. The statement that “A lot of us were thinking of it anyway” with reference to the change in business focus to Western Australia contradicted earlier statements, where “Growing international focus” was wanted and a wish was stated that the organisation: “Would be in the overseas markets either as a joint venture, by ourselves or as a subsidiary.”

Of the nine who did not change their viewpoint:

For six, the change was in broad agreement with the views they expressed in the pre-workshop interview: (IDs 1, 2, 30, 32, 33, 34)

Two agreed with the change in short-term, but held to their previous opinion that development should be in a wider field in the long term: (IDs 3, 29)

Only one (ID 25) disagreed with the change.

This was the area where there were the most indications that participants had changed their viewpoints subsequent to scenario planning and/or the 2010 initiative.

All 10 people who changed their viewpoint came to agree with the change in focus. Eight of them attributed their change of view in some part to scenario planning and/or the 2010 process.

Of the nine who did not change their viewpoint, for six the change was compatible with their earlier view, so a change of viewpoint was not necessary for them to accept the change. Two adjusted their viewpoint to agree with the change, but qualified the change by still holding to their former opinion for the longer term. They were deemed to have not changed their opinion. Only one held to a previous opinion (i.e., wider business focus) and expressed disagreement with the change.

6.8.1.1 Emerging concepts – business development

This points to an alignment of views towards the change to a new business focus for the organisation – either the participant's view changed to accept what the organisation had done or, as in most cases where there was no change in viewpoint, the organisational change was in line with what they thought anyway.

6.8.2 *Nature of/Response to Competition*

The questions asked of data were:

- *Did the participant see a change in attitude in the organisation towards competition?*
- *Did the participant change his/her own viewpoint with regard to competition?*

Prior to the Scenario Thinking workshops, there was a concern about competition the organisation might face in the foreseeable future. Competition was the focal issue of the Scenario Thinking project. Competition here means competition for the organisation's business, not the proactive seeking of new markets by the organisation itself.

Four participants (IDs 6,13,26,33) thought there had been no change in the organisational attitude to competition, and none of these changed their viewpoint on the issue. Each felt before the workshops that competition was minimal and localised or that competitive efforts should be focussed locally and did not change that view subsequently.

However, nine thought there had been some change in organisational attitude to competition, and all but one (ID 14) of these demonstrated a change in their own viewpoint on the matter, e.g., they expressed a fear of overseas or private competition pre-workshop, but not in the later interview (IDs 3, 5, 8, 10, 14, 25, 30, 34, 37).

Six of the nine (IDs 3,5,8,25,30,34) felt that the change in organisational attitude to competition was related to scenario planning or the 2010 initiative, but only three attributed their own change of viewpoint to this (IDs 3, 8, 25).

It was noted that from 23 interviewees who participated in both interviews, only 12 responses have been recorded here, even though in the pre-workshop interviews a question specifically about competition was asked. This was because the researcher was unable to find a meaningful interpretation of some participants' comments, which was attributed either to the participants "vaguely out" (*cf. 5.2.2.1 Researcher and participant integrity*) or to foreshortening of the interview in some cases. In other cases, in the context of the interview, the participant interpreted competition to

mean the proactive seeking of business by the Corporation and discussed that, which is not what is being reported on in this section.

6.8.2.1 Emerging concepts – competition

As with the *Business development* finding, there appeared to be a change towards an alignment of individual viewpoints towards compatibility with the revised organisational viewpoint (of less fear from the threat of competition, particularly from overseas) (*cf. 6.6.13 Competition and customer expectations*).

6.8.3 Clarity of purpose

The questions asked of the data were:

- *Did the participant see any greater clarity of purpose in the organisation?*
- *Had he/she changed his/her viewpoint of whether greater clarity of purpose was needed?*

In the pre-workshop interviews, 12 participants, a group that included senior and middle management and non-management people, expressed a view that the organisation needed greater clarity of purpose in pre-workshop interview (IDs 2, 4, 5, 8, 9, 14, 25, 26, 30, 33, 34, and 35). Of these, 10 believed there was greater clarity of purpose in the organisation after the Scenario Thinking project and Company One 2010. All but one (ID 25) attributed the change to the change initiative (IDs 2, 4, 5, 8, 9, 14, 25, 26, 33, 34).

Two felt there had been no greater clarity of purpose in the organisation since the change initiative (IDs 30, 35), and still saw a need for it.

6.8.3.1 Emerging concepts – clarity of purpose

There was no change in viewpoint here. Instead, the organisation was perceived to have changed in a way that, in most cases, aligned with the view of the participants about what needed to be done.

6.9 Methodological note

It should be noted that because the research was designed with the specific intent of directly capturing the perspectives of operatives through interviews, other perspectives such as that of the facilitators and other non-operatives such as external participants in the Scenario Thinking and Board members have been excluded. These may have had different viewpoints to those of the people charged with implementing the change, who were the subject of the research.

6.10 Findings - conclusion

This chapter has described and mapped the emergence of relational concepts from indicative concepts. In the next chapter, the discussion is centred on the emergence of theoretical concepts from these relational concepts.

7 Discussion: from relational to theoretical concepts

In the previous chapter, *6 Findings: from indicative to relational concepts*, the emergence of relational from indicative concepts was explained. Relational concepts emerged from the relations between indicative concepts. In this chapter, the emergence from the relational concepts of theoretical concepts that led to the hypotheses in *8 Conclusion* are discussed. The discussion is grounded in the perceptions of the participants and represents the researcher's interpretation based on the analysis of their perspectives¹.

The research has provided empirical evidence that has demonstrated a need for alignment between the objectives of the change initiative and the conceptual ecologies of the operatives in the organisation. It has indicated that change initiatives were unlikely to penetrate deeply into the culture of the organisation unless both the design of the change and its implementation were adapted to the world views of the operatives. Where the proposed change did not resonate with these people's past experience and aspirations, and individuals did not perceive benefits to themselves and/or the organisation from the change, there was likely to be resistance to it. Resistance could be either active, i.e., refusal or reluctance to participate in the change, or passive, i.e., giving lip service to the change but carrying on as usual.

As evidence for this, there were only two instances where changes in the organisation that had occurred as a result of Company One 2010 were accompanied by changes of opinion about the relevant issue by more than one or two individuals (*cf. 7.13 Implications of the Before and After analysis*). In other cases where an opinion was held, either the change was in alignment with individuals' earlier views or contrary opinions were retained. Consequently, organisational change was in the main not seen to be accompanied by cultural change.

It is argued that unless the issue of conceptual ecologies (*cf. 2.11.5.5 The conceptual ecology*) is addressed, the reaction of the operatives to the proposed change and their influence on the adoption of it remains an uncertainty for the organisation (*cf.*

¹ This chapter contains a revision of the researcher's paper entitled *Cynicism As Barrier To Organisational Change Based On Scenarios* published in the proceedings of the 17th Australian and New Zealand Academy of Management conference at Fremantle ((Nicol, 2003b).

2.11.2.3 *The BOW approach*). Consequently, in the context of the framework developed in 2 *Literature review and scenario planning theory*, it would seem reasonable to expect it to be included in the subject matter of scenarios. However, although it may be a critical uncertainty, conceptual ecology is not an area that is usually considered to be within the scope of scenario planning, which is often focused, at least in theory, on externalities. From the findings, it is suggested that addressing this internal uncertainty would have benefited the change process discussed here.

The findings showed that, in the context of the organisation on which the research was based, the role of scenario planning was not as a change agent, in the sense of a cause or initiator of change (The Macquarie Dictionary, 1997), but as an instrument of change through which change was effected (The Shorter Oxford English Dictionary, 1973).

As an instrument, the outcomes of the Scenario Thinking project largely met the organisation's objectives, as defined in 6.3.4 *Objectives of scenario planning and Company One 2010*, and scenario planning was perceived by most participants to have had a positive effect, or at least no adverse effect, on the change process. However, the Company One 2010 project, for which scenario planning provided a framework, was only partially successful in meeting its objectives in the time frame covered by the research. Although a new purpose and direction statement for the organisation was achieved, the change initiative did not produce the profound change, particularly in organisational culture, that was envisaged and hoped for by some people in the organisation. This chapter discusses the reasons, both internal and external, that the outcomes of the change initiative did not penetrate deeply into the culture of the organisation.

The discussion is structured so that each of the research questions is addressed in turn. However, resolution of the research questions is concurrent with the emergence of theoretical concepts. Theoretical concepts that have emerged during each section are identified at the end of the summary that concludes each section. Theoretical concepts provide explanations of the tendencies that emerged as relational concepts.

In this chapter, the change context is explained and is followed by discussion of specific areas of change that emerged in the findings. Next there is a consideration of less tangible effects, then the objectives of the change initiative are compared with its outcomes, and the participants' views of the role that scenario planning played in Company One 2010 are discussed. Then the implications of the Before and After analysis are examined, and this is followed by emergent concepts from the Strategic Intent and Implementation phases. Throughout, the findings from the data and the emergent theoretical concepts are compared with, and where appropriate placed in, the context of the theory developed in *2 Literature review and scenario planning theory*. The implications for scenario planning are explored in *8 Conclusion*.

The conventions adopted in *6 Findings* are continued in this chapter.

7.1 Context

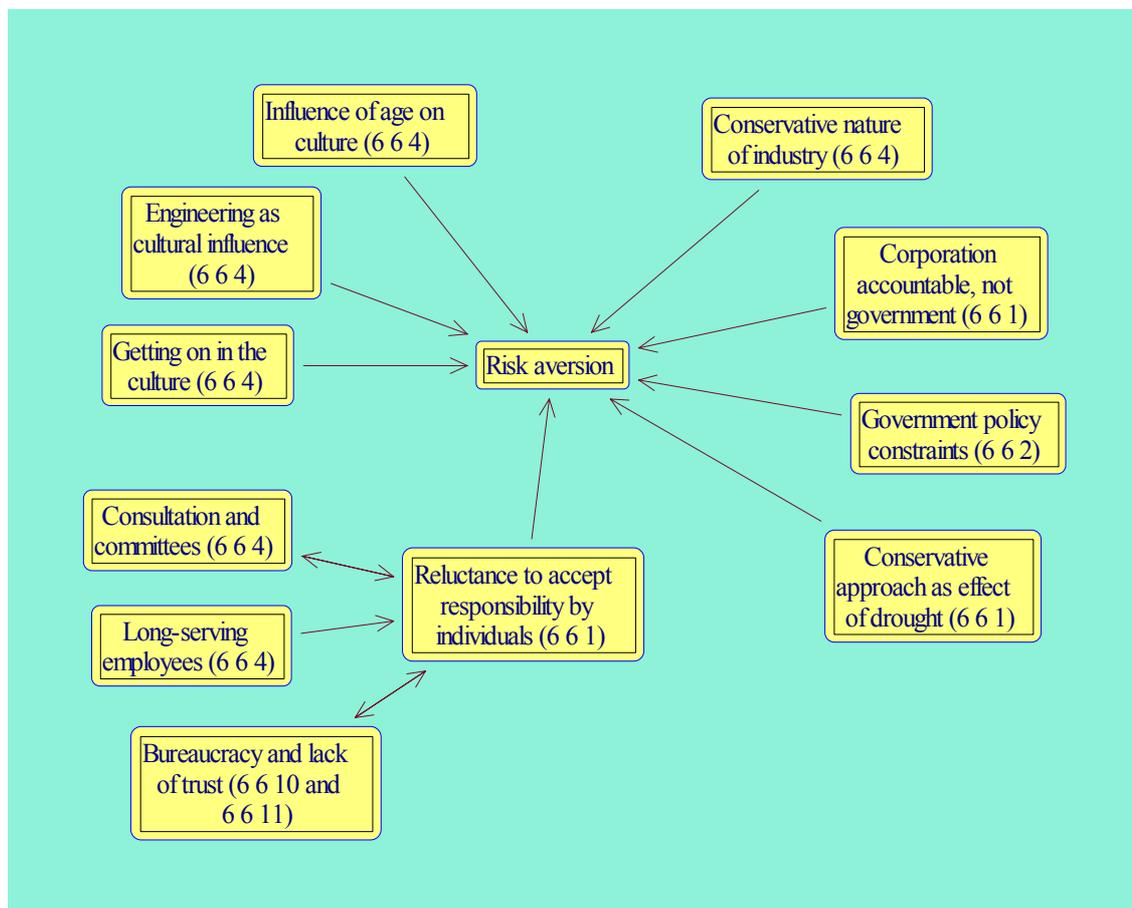
During both sets of interviews (Before and After, and Research), participants discussed their perceptions of aspects of the organisational culture and what areas of it they believed needed to be changed. It is appropriate, prior to discussion of changes resulting from scenario planning and/or Company One 2010, to explore these perceptions for the insights they provide into the background of the changes and the reasons that the change initiative was undertaken. The intent is to increase understanding of the culture of the organisation and the tendencies and conceptual ecologies that underlaid the change initiative and the reactions to it.

There were two sources for this: the descriptions of aspects of the organisational culture provided by the participants, which pervade the data, and the reasons that they perceived the organisation embarked on the project, described in 6.3.2 *Objectives*. Further information on the context of change can be found in 1.5.1 *Description of the organisation* and 1.5.2 *History of the organisation*, but this information was not grounded in the interview data and was used only for triangulation purposes.

7.1.1 Risk aversion

An over-riding theme was the perception that the Water Corporation was a risk-averse organisation (*cf.* 6.6.1 *Attitude to risk*). Factors that led to this interpretation are illustrated in *Figure 7.1.1*.

Figure 7.1.1 Perceptions of a risk averse organisation



(References in brackets indicate the Figure where the concept is sourced)

The figure illustrates the concepts, discussed below, that were interpreted as contributing to the perception of a risk averse culture in the organisation. In *Figure 6.6.4 Culture as barriers to change* it was shown how several of the concepts in *Figure 7.1.1* emerged as barriers to change (see also *7.17 Barriers to change*).

Participants portrayed an embedded culture perpetuated by long-time employees that were comfortable with what an interviewee called “playing the same old games” (*cf. 6.6.4.5 Influence of age on culture*). Although long-serving employees were able to achieve variety during their careers in the organisation, it was perceived that they lacked exposure to, and the will to embrace, alternative approaches to issues (*cf. 6.6.5 Work ethic and loyalty*).

This concept of a conservative culture reluctant to adopt change was accompanied by a perception of a traditional way of thinking associated with what had historically been a predominance of engineers in the workforce, including, it was perceived, in

the senior management group (*cf. 6.6.4.6 Engineering as influence on culture*). Thomas (1994) has remarked on the influence in the workplace of the professional, occupational and social experiences, and values and norms, of what were termed occupational communities. The evidence for the dominance of the engineering approach to strategy and other issues was sourced mainly from what was said to be a growing number of staff members employed from other disciplines and backgrounds expressing their reservations about the influence of the archetype. Fazakerley (2005) in a scenario-based study of the future of urban Australian water utilities made a similar observation: that a wider perspective than the traditional engineering-driven past was needed and that this was resulting in the employment of people from a diversity of backgrounds. The cultural archetype had been deeply embedded over many years. Sathe and Davidson (2000) have commented that there is a correlation between the strength of organisational culture and resistance to change, because in a strong culture there is a multitude of shared axioms.

It was perceived that a characteristic of the engineering archetype was a narrowness of vision and particular approach to dealing with issues: “Engineers don’t look outside the square” (*cf. 6.6.4.6 Engineering as influence on culture*). Although this was seen to be slowly changing – e.g., with demand management being considered as an alternative to, or complementary to, what one participant termed “building stuff” as a strategy for water supply – the archetype was perceived to discourage risk-taking.

One of the archetypal disincentives to risk-taking was the difficulty some people found in advancing their careers and meeting their aspirations in this engineering-based culture. The culture was perceived to institutionalise lack of vision and to discourage innovation. A corollary of this was that people who did not fit the culture lost confidence and their willingness to take risks (*cf. 6.6.4.4 Getting on in the culture*).

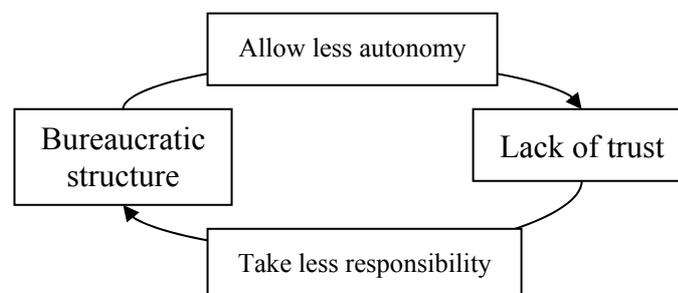
A second disincentive attributed to the engineering dominated culture, was an attitude to risk-taking that was perceived to be based on engineering solutions. These were expected to be what a participant termed “bullet-proof,” with no or minimal risk of failure, although this was perceived to be changing (*cf. 6.6.1 Attitude to risk*).

A third consequence of the influence of the engineering culture, together with the ageing workforce, was a remuneration structure that was perceived to emphasise length of service and seniority over performance. This was seen to discourage initiative and risk taking, because there was apparently no or little remuneratory reward for that type of behaviour (*cf. 6.6.7.1 Performance recognition*).

The notion was discussed that the risk aversion attributed to the influence of the engineering-based culture was reinforced by the bureaucratic structure of the organisation, which was perceived to have had its roots in the public service origins of the organisation. De Bono (1990) has shown how organisational structures such as bureaucracies both emanate from our traditional ways of thinking and themselves create mental habits. The structure here was considered by some participants to be necessary because of its function in mitigating risk, as well as for compliance with regulations. But in mitigating risk it also stifled initiative and encouraged a culture of not taking risks, what one participant colourfully called ‘keeping your backside tin-plated’ (*cf. 6.6.10 Effect of bureaucracy*). It was an attitude that could be difficult to change (*cf. 2.15 Implementation*).

For some, the bureaucratic nature of the structure demonstrated a lack of trust in people in the organisation: “Bureaucracy is just a measure of how you trust your people.” Reducing trust was a disincentive for people to take responsibility. Because they were then perceived to take less responsibility, it could be assumed they were not capable of it, and bureaucracy would be increased accordingly – as shown in *Figure 7.1.2 (cf. 6.6.11 Trust and credibility)*.

Figure 7.1.2 Bureaucratic structure and lack of trust



In the Water Corporation, reluctance on the part of people caught in this bureaucratic loop to take individual responsibility and their disinclination to be personally accountable was reflected in a culture of decision-making by committee. It was believed by many that there was too much consultation and the result was a degree of inertia (*cf. 6.6.4.7 Decision-making (Consultation and committees)*). In this engineering-based culture and bureaucracy could be seen evidence of the availability, anchoring, confirmation and over-confidence biases, as well as decision-avoiding behaviour, that have been identified as targets for scenario planning (*cf. 2.11.5.3 Barriers to change*).

There were also a number of non-cultural and external factors that emerged as contributing to the risk-averse culture. For example, participants stated that the nature of the water industry called for a conservative approach, because of public safety and quality risks and because of the long-term nature and large scale of investments (*cf. 6.6.4.8 Conservative attitude to change and planning*). However, the major external factor that was perceived as influencing the attitude to risk in the organisation was government ownership and policy. This was seen to be a key factor in the development of the bureaucratic structure, and a constraint on long-term planning because political parties and policies were subject to potential change at every election, inhibiting the ability of the Corporation to take strategic risks (*cf. 6.6.2 Attitude to government and regulators*).

It was stated by some that government influence was resulting in even more risk aversion in the organisation than when the Corporation had been a government department (*cf. Corporation accountable, not government in 6.6.1 Attitude to risk*). and that, historically, a consequence of the restrictions of government had been an adversarial attitude towards Government and regulators (*cf. 6.6.2 Attitude to Government and regulators*).

Subsequent to the Scenario Thinking project, but while Company One 2010 was still in progress, Western Australia experienced its lowest winter rainfall for nearly a century (*cf. 6.7.8 External factors*). A consequence of the resultant imposition of increased restrictions on water usage was perceived to have been an even more cautious attitude on the part of Water Corporation as it engaged in a public relations campaign to retain public trust and to gain support for the restrictions (*Conservative approach as effect of drought in 6.6.1 Attitude to risk*).

7.1.2 Diversity of culture

However, as alluded to above, the descriptions of the risk averse, engineering-based organisational culture emanated to a large extent from people who were not engineers and/or from people comparatively new to the organisation. That there were some people making these comments - usually in a spirit of constructive criticism - attested to a diversity in the organisational culture that the description provided above does not encompass. Morgan (1997) has observed how the world views of various professional groups can result in different and competing value systems, each with its own concepts for formulating business priorities, within an organisation.

It was perceived that there had been attempts by management to introduce a broader base of talent and experience that would achieve a diversity of perspective.

It's probably worth while saying that there was a period of time, two, three to five years ago, when we had a deliberate .. policy perhaps not, but intent, to import people from the private sector to act as catalysts and change agents for the sort of shift that we were trying to achieve.

However, it appeared that this diversity had not been encouraged in the informal organisational culture. There was a perception that there had been a tendency for new people, employed to introduce fresh ideas and approaches, to either become frustrated by their inability to break down entrenched procedures and attitudes and leave, or to be absorbed into the embedded culture rather than introduce change (*cf. 6.6.4.4 Getting on in the culture*). The result was perceived to be an organisation that lacked diversity in age, gender and culture. However at the time of the research, the need to encourage diversity was gaining higher recognition in the organisation, evidenced by the inclusion of the multiplicity of perspectives, with people from different parts and levels of the organisation, in scenario planning and the subsequent parts of Company One 2010.

7.1.3 Company One

The recognition of the need for diversity appeared to be at least in part a consequence of the Company One cultural change campaign initiated by the managing director in 1998 (*cf. 1.5.1 Description of the organisation*). Company One was concerned with establishing and maintaining good relationships between the Water Corporation and its customers, against a background of a concern about

potential increased competition, with establishing and increasing individual accountability within a risk averse organisation as it evolved from a public service culture, and with the structural problem of organisational silos. The Company One mission statement and values are described in *7.2.1 Replacing the vision*.

There was no intention of changing the Company One values in Company One 2010, but from the outset the mission statement was open to revision. A reason for this given by some participants was that the stated aim of “being the leading water company” was considered as inadequate and too vague as a mission statement. One participant described Company One this way:

The Company One bit was about being firstly a company rather than public service organisation. So a corporation, in fact a company, the One. It was about being the leading water company in our market. We still didn't define what that market was, but being the leading one, in wherever we were. And then the inverse that was often driven to, that being one company, so it was addressing some of the silos and some of the desegregation within the organisation. So the managing director made that point about it was Company One, one company.

A commitment to good customer service was a tenet of Company One, so that, through good relationships, customer needs could be well understood and catered for and potential competition thwarted. The managing director had, several years previously, underpinned the need for improved service by publicising internally a scenario of overseas water companies capturing some of the Water Corporation's business through a strategy of getting to know the customers' needs better than the local supplier. According to the participants, a commitment to good service appeared to be widespread in the organisation as a result of Company One. The progress of the Company One cultural change campaign is recorded in *1.5.2 History of the organisation for 1998-1999 through to 2000-2001*.

Company One 2010 was perceived to be compatible with Company One, and an extension of it rather than a completely new initiative, evidenced not only by some statements by participants but also by the decision not to reassess the organisation's values.

7.1.4 Leadership characteristics

The participants' views of the leadership of the organisation varied considerably, as would be expected in a wide sample ranging from senior management themselves to non-managerial operatives. The perceptions of a risk averse, homogenous and conservative culture that have already been discussed were applicable to senior management as well as others in the organisation. However, it is pertinent to note that perceptions of risk aversion seemed to be in contrast to the choice by the corporate executive, the management team decision-making body prior to Company One 2010, to embark on what by the time of the research was considered by some to have been a risky venture into overseas and out-of-State expansion.

Pertinent comments by participants about influences on senior and middle management decision-making and attitudes to change were presented in 6.6.6.5 *Leadership characteristics*. They included their age profile and communication skills, and training issues.

7.1.5 Organisational structure

There were also issues with accountability, with senior managers holding a different perspective on this to other participants. Senior managers mostly considered that the lines of accountability in the organisation were clear. Some others perceived that people, including managers, were often not called on to account for their actions and that the structure of the organisation made it difficult to establish clear lines of accountability and responsibility. Evidence was presented in 6.6.4.3 *Accountability and discipline* of an attitude of independence and even non-co-operation – termed “disobedience” by one participant. In keeping with the conservative nature of the organisational culture, this tended to be manifested in resistance to change.

The independent attitude may have been in part due to the regional structure that had been initiated some years before. Participants said the geographic regional offices had been operated with a considerable degree of autonomy. (This would have been compatible with the Company One philosophy of individual accountability).

Another aspect of independence was a perception that divisions of the organisation had tended to operate in what were termed silos, without considering other parts of the organisation in their decision-making and day-to-day activities. An example was customer service, which had been considered to be a function of the customer service

division rather than the responsibility of all staff (*cf. 6.6.4.2 Attitude to community, customers (Engagement and consultation reinforced)*).

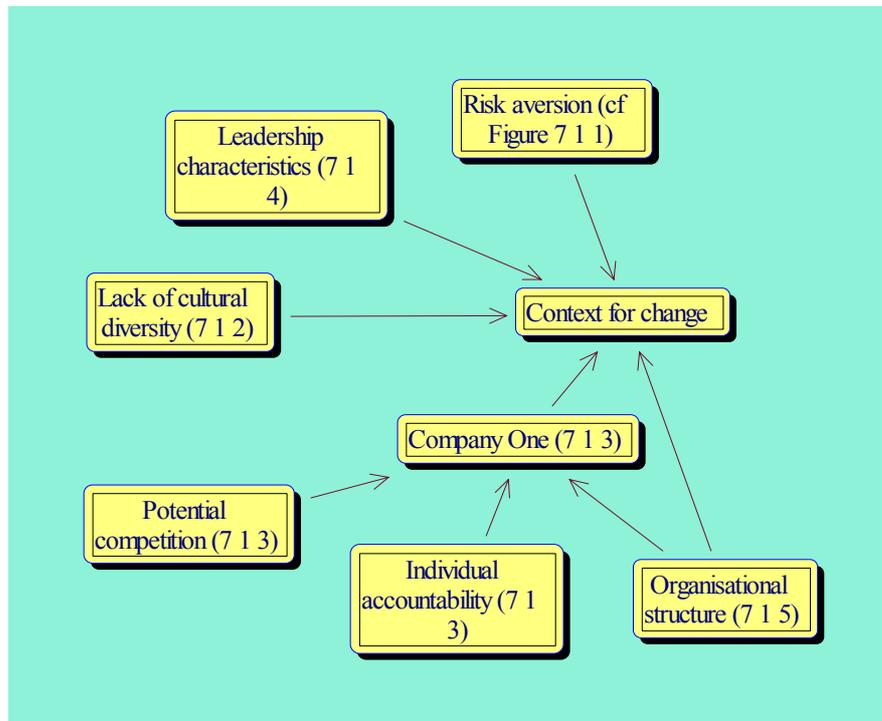
The idea of a culture of independence appeared to be in contrast to the perception of a culture delineated by a strong bureaucracy (*cf. 6.6.10 Bureaucracy*), a conservative homogenous workforce and a reluctance to assume individual responsibility (*cf. Figure 7.1.1*). Clearly there were unwritten ground rules (Simpson, 2001) that encouraged this independence, a spirit which nevertheless seemed to be usually in alignment with what operatives perceived were the broader objectives and purpose of the organisation. However, a deeper investigation of this issue was something that was beyond the scope of this study. Geertz (1999), in the context of anthropological study, has suggested that there are limits to the study of culture, that the researcher cannot see things from another's perspective or culture in its entirety, so the goal of the research should be interpretations that other people can consult. This limited approach was considered to be appropriate to apply in the context of this cultural aspect of the research, because from the data it was not possible to effect exploration beyond the level of espoused values to basic assumptions (Schein, 1992) (*cf. 2.11.5.2 Changing basic assumptions*).

The phenomenon of individuals holding apparently contradictory ideas and opinions concurrently (such as loyalty and disobedience) was noted in the description of learning in *2.11.5.5 The conceptual ecology*.

7.1.6 Summary of context

Figure 7.1.3 shows the relationships of the factors interpreted in this section as pertinent to the context for the change initiative.

Figure 7.1.3 Context of change initiative

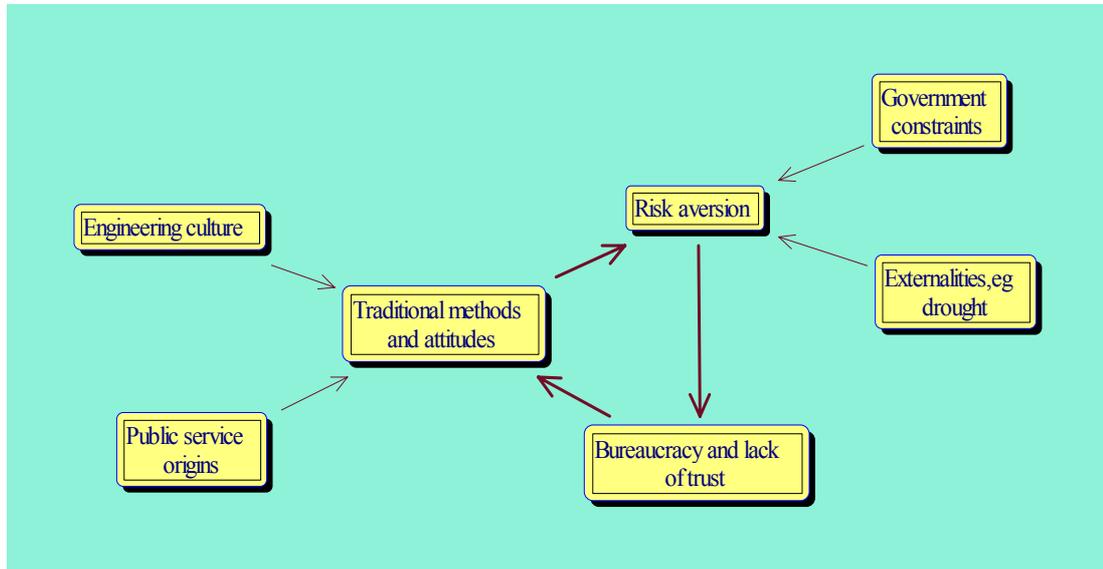


(References in brackets indicate the subsection where the concept is discussed)

Within this context, there appeared to be an orthodoxy that was self-reinforcing. Shotton (1993) has shown how shared understanding and cultural background can give rise to linguistic customs, which in turn influence the culture, reinforcing orthodoxies and locking them in as a success formula or accepted way of doing things. The traditional methods and attitudes that were grounded in the Water Corporation's public service origins and its engineering culture were the basis of risk aversion discussed 7.1.1 *Risk aversion*, a consequence of which was a bureaucratic structure that enabled minimisation of risk, including a perceived risk of trusting employees. The bureaucracy, in turn, by institutionalising the risk aversion, reinforced the traditional conservative methods and attitudes. Other inputs to this loop were the constraints of government policy and, for the Company One 2010 initiative, externalities like the drought and litigation.

This feedback loop is shown in *Figure 7.1.4 Self-reinforcing orthodoxy*. What Morgan (1997) called the enormity of the task involved in a challenge to an extant corporate culture was explained in 2.11.4 *Effect of scenarios*. The task of a change initiative is to break such a self-reinforcing feedback loop.

Figure 7.1.4 Self-reinforcing orthodoxy



This section has described how the researcher interpreted the context of the organisation in which the change initiative occurred, based on the perceptions of the participants. The discussion of the organisational culture provides a basis for understanding the outcomes of the change initiative. The next section addresses the main tangible outcome of the Company One 2010 process.

7.2 The change in organisational purpose and direction

This section addresses Research Question 1: What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?

7.2.1 Replacing the vision

The main tangible outcome of the Company One 2010 change initiative was the replacement of the organisation's old vision with a new purpose and direction statement, providing a new framework for planning, strategy and operations. The findings where this emerged were recorded in 6.6.3 *Organisational focus and direction*.

Prior to Company One 2010, according to the Corporation's annual report for 2000 (Water Corporation annual reports, 1997-2002), the Water Corporation's vision was "to be Australia's leading water company and create substantial new business." Its values were:

- Viewing customers' needs through their eyes
- People as our greatest strength
- Caring for our business
- Investing in our society
- Taking charge of our destiny.

Organisational objectives and priorities were ordered along structural lines, in eight Key Result Areas that largely corresponded to the divisions within the Corporation:

- Customers: be a market-driven organisation that delivers value to customers
- Finance: be profitable and maximise long-term value
- Business development: aggressively pursue sustainable growth in domestic and international utility markets
- Environment: be recognised as a leader in environmental performance
- Assets: plan, create, operate and manage assets efficiently and effectively
- People: a high performance culture
- Information: positioning for competitive advantage through strong, adaptable and cost effective information management

- Stakeholders: comply with regulation and maximise the support of stakeholders for business direction.

The old values and Key Result Areas demonstrated an emphasis in the espoused culture towards marketing and economic performance.

The Company One 2010 change initiative resulted in the replacement of the rather static vision with the more kinetic idea of a “purpose and direction.” The new purpose was: “Sustainable management of water services to make WA a great place to live and invest.” Instead of a singular (and potentially achievable) goal of being the “best”, however that might be defined, the organisation identified an ongoing purpose for its existence. Grant (2002) stated that a purpose of a vision, by defining what the organisation could become, was to set aspirations that would provide motivation for performance. The purpose here allowed the organisation to set a direction that allowed for the changing aspirations and perceptions of its stakeholders and that, unlike its predecessor, was not constrained by a goal that was relative only to other water utilities and of little direct relevance to its stakeholders. But it also contained elements of a mission statement, defined by Grant (*ibid.*) as a statement of purpose. Together with the direction statement, it defined what business the Water Corporation was in. The two statements combined the aspirations of a vision with the organisation’s business idea, and together with an understanding of the environment (through scenarios), provided the basis for an ongoing strategic conversation (*cf. 2.13 Where scenarios fit*).

The new direction (*cf. Appendix 6 New purpose and direction diagram*) was: “As a successful business, we will fulfil customer, community and government needs; innovate to deliver quality, trusted water services; invest in empowered people, well managed assets and growth.”

Key Result Areas were superseded by five Areas for Action. These were:

- People and culture: develop a high performance culture
- Core business: efficient and effective asset management and service delivery
- Customers and community: be a market driven organisation that delivers value to customers

- Trust and credibility: maximise the support of stakeholders for business direction
- Access to resources: secure resources required to deliver business outcomes.

There were two particularly significant differences between the old vision and the new purpose and direction. Firstly, the emphasis of the new purpose and direction was on sustainability and serving the needs of stakeholders: there was a change in concept from marketing to market-driven. Instead of the goal being Corporation-centred (i.e., we will be the best), the stakeholders became the focus of the organisational direction. It was tempting to see this as a retreat from the entrepreneurial spirit of the previous years and an evolution of the Company One service ethos back towards the original public service *raison d'être* for the organisation, though with a modified structure, strategy and culture.

Secondly, the Areas for Action were designed not on a structural but on a holistic basis, to be applicable across all divisions and parts of the organisation. This seemed to be a response to the structural problem of organisational silos (*cf.* 6.5.1.1 *Intra-organisational understanding*), as well as an evolution of the Company One concepts of individual accountability towards a wider responsibility of considering the effect of actions on the whole organisation rather than just one's own division or area.

7.2.2 *How scenario planning affected organisational focus and direction*

The Company One 2010 process was initiated against a background of changing business development considerations (*cf.* next sub-section) and because it was considered that it was time for the organisation to decide whether the path it was following needed reassessment. Scenario planning was part of that process. For those who perceived it had had an effect, scenario planning was seen as an aid in focussing and providing a framework for the direction of organisational change rather than initiating it, i.e., scenario planning was perceived here as an instrument rather than an agent of change (*cf.* 7.11 *Role of scenario planning*). In terms of the theory that emerged in 2.11.2 *Substance of scenarios*, it provided a vehicle (or framework) for people to make sense of the multiplicity of future possibilities. The new purpose and direction outlined in the previous sub-section was the outcome of the Scenario Thinking and Strategic Intent phases of the change initiative (*cf.* 6.6.3.4

Framework) and provided a structure for the ongoing formulation and implementation of strategy and policy. The role of scenario planning in the change initiative is discussed further in *7.11 Role of scenario planning*.

7.2.3 Business development

Practically everyone agreed that there had been substantial change in the strategic direction of business development and that this was compatible with the focus on Western Australia and the service and sustainability emphasis of the new purpose and direction statement.

Business development was the area where the Before and After analysis indicated that there had been the most individual changes of mindset, and all but one of the participants were in agreement with the new direction, at least in the short term. However, although the Before and After analysis showed that most of those who had altered their view attributed both the change of business direction and their change of viewpoint about it to scenario planning and/or Company One 2010, the analysis of the Research interviews revealed a reluctance by participants to attribute the change of policy and strategy itself to the planning process (*cf. 6.6.3.2 Business Development*). The dichotomy was due to a different emphasis in the analyses. Pre-workshop interviews had been recorded as notes rather than transcripts, so in the Before and After analysis there was often only sufficient data to establish no more than that there was perceived to be a relationship between the organisational change and the change initiative. This relationship was established in the emergent concept that scenario planning formed a framework that focussed the strategic conversation that led to the changes (see previous sub-section). In the Research interviews, on the other hand, the issue was discussed more specifically in the terms of the tendencies that led to change. There was a view that the need for change may have been apparent beforehand (*cf. 7.5.3 Affirmation*), so Company One 2010, with scenario planning as an input, had been the vehicle for crystallising the purpose and direction framework and new strategy, rather than the source of the change. This reinforced the concept that scenario planning, by providing a focus, was an instrument rather than an agent of change.

The change in business development direction may most meaningfully be viewed from a political perspective, as a reduction in influence on strategy of a faction with an entrepreneurial bent. There was also a group that perceived that in some parts of

the organisation the core functions of water and waste water services had been undervalued when resources were being diverted to overseas marketing efforts. This was a different way of viewing the change, and considered within these boundaries, the decision to refocus on these core functions in the home State represented a shift in dominant strategic thinking from one community in the organisation to another (*cf. 7.2.5 Summary of the change in organisational purpose and direction*).

7.2.4 Clarity of purpose

In the Before and After analysis, all the participants had felt before the Scenario Thinking workshops that there was a need for greater clarity of purpose. Nearly all felt this was achieved, at least in some degree, by the new purpose and direction, and there was no change in viewpoint evident (*cf. 6.8.3 Clarity of purpose*).

In contrast to the Before and After analysis, in the Research interviews considerable disagreement emerged about whether the organisation had more clarity of purpose than before (*cf. 6.6.6.3 Clarity of purpose and direction*). However, the participants in the Before and After analysis had all attended the scenario planning workshops, whereas the Research interviews included a proportion of people whose participation had been limited to focus groups. This suggested that the people who participated in the Scenario Thinking workshops were more likely to believe that the organisation's new purpose and direction provided a greater clarity of purpose than the old. Two factors suggested in the interviews that were perceived to have contributed to this were less understanding of the terminology of the new purpose and direction by people not attending the workshops, due to what was perceived as ineffective articulation of the new purpose and direction by management, and a perception of a lack of continuity between the old vision and new purpose (*cf. 6.6.6.3 Clarity of purpose and direction*), which fits the theory in *2.11.5.6 Change and identity*.

7.2.5 Summary of the change in organisational purpose and direction

The new statement was perceived by most participants as having greater clarity than the old vision, with attendance at the Scenario Thinking workshops tending to be a factor leading to perception of greater clarity. This suggested an effect of participation in the workshops had increased understanding of the outcomes of the change initiative. How scenario planning aided learning is discussed in *7.11 Role of scenario planning*.

However, it was apparent that the need for a reassessment of business direction had emerged before the start of the Scenario Thinking project (although it was not clear how many participants were aware of this), so the agent for change was the need for reform resulting from this and scenario planning was an instrument in the reform process. The outcome was a new purpose and direction statement that provided the framework for business direction. This may be better understood using a political metaphor, through what Morgan (1997) called control of decision processes, with a view supporting the primacy of core functions becoming a dominant premise for the organisation's strategy. This suggested that an effect of the scenarios was, at least in some cases, to reinforce extant beliefs or mind-sets rather than change them, with the organisation reverting to a West Australian focus that was more in keeping with its traditional culture (*see also 7.5.3 Affirmation*). However, the Before and After analysis demonstrated that participants who had backed the entrepreneurial viewpoint professed in many cases to have been persuaded to change their minds on this issue, so that there could be seen to have been a learning outcome of Company One 2010 here, and, by inference, from scenario planning as a framework-setter for the change initiative.

7.3 The focal issue

This section addresses Research Question 1: What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?

The focal issue of the Scenario Thinking project was “What will be the impact of competition and customer expectations on the Water Corporation in the year 2010?” This section discusses how scenario planning and Company One 2010 affected participants’ mindsets on the issues of competition and customer expectations.

7.3.1 Competition

Concerns about a competitive threat, especially from overseas, appeared to have largely evaporated between the choice of focal issue and the end of the first Scenario Thinking workshop. The driving forces for the scenarios were chosen after discussion of the key factors emerging from the pre-workshop interviews and a STEEP analysis of driving forces, using criteria of degree of uncertainty and degree of importance to the organisation (*cf. 1.5.3.1 Scenario Thinking* for a description of the process). They did not include competition.

The term competition can be taken in an aggressive sense, to mean acts of seeking new business, or in a protective sense, the organisation defending its market from others. Both senses appeared in the Research interviews.

The former sense was reflected in the business direction, which was discussed in *7.2.3 Business development*. In the latter sense, the Scenario Thinking project was considered to have been a factor in the development of a perception that the threat of competition, especially from overseas suppliers, was being over-emphasised. While a few participants were still afraid that there was a degree of complacency about competition, the extent to which concern had reduced was demonstrated when only a single participant included it in his/her recollection of the objectives for Company One 2010 (*cf. 6.6.13 Competition and customer expectations*).

Whether participants felt the threat of competition had been over-emphasised, underemphasised or neither, it was generally believed that the way of meeting it was through knowing and meeting customer expectations, a continuation of the organisation’s Defend and Extend policy that was associated with Company One (*cf. 6.6.13 Competition*). The change in attitude to competition was one of the most

clearly identified examples of learning (*cf. 2.11.5.4 Learning for theory*) that was able to be directly attributed to participants' scenario planning experience.

In 7.2.2 *How scenario planning affected the organisational focus and direction*, the emergent concept that scenario planning was an instrument rather than an agent, i.e., an initiator, of change was discussed. However, the issue of competition was an area where scenario planning could, from one perspective, be considered to have acted as an agent of change, because the change of mindset about the threat of competition appeared to have had its foundation in the first Scenario Thinking workshop. The perception that the threat of competition from overseas had been over-emphasised had a direct effect on the business direction that was an outcome of Company One 2010.

7.3.2 Customer expectations

Participants perceived customer demands on the organisation were changing in nature and increasing, a concept that is compatible with recognition of the multiplicity of potential futures that participants had understood to be the basis of scenario planning (*cf. 6.3.1 Understanding scenario planning*). However few said they believed that this was anything new, perhaps because the importance of taking account of customer expectations and demands, and of maintaining good customer relationships, had been a central part of the Company One cultural change campaign (*cf. 7.1.3 Company One*), as demonstrated by, e.g., the establishment of what was perceived as an effective customer service centre, and establishing closer relationships with customers (*cf. 1.5.2 History of the organisation, 1997-1998*).

Although the notion of the importance of customer relationships was not new, the change of emphasis resulting from Company One 2010 that was discussed in 7.2.3 *Business development* became the dominating factor for the future business direction of the organisation. As part of the change, scenario planning was perceived to have reinforced the idea that customer service was the responsibility of everyone, not just the customer service division, and providing a service to customers became the *raison d'être* of the organisation (*cf. 6.6.4.2 Attitude to community, customers*). The tangible outcome of this was to be found in the new purpose and direction, where "Trust and Credibility", and "Customers and Community" formed two of the five Areas for Action (*cf. 7.2.1 Replacing the vision*).

The recognition of the need to listen to customers and respond to their expectations was also perceived as taking new forms, with the organisation said to be liaising with community groups for their views on new developments. At the industrial level, participants pointed to a perceived improvement in response to customer requirements for aspects such as water quality. Improved customer relations and response to customer expectations were seen as integral to the organisation's ability to respond to competition (*cf. 6.6.13 Competition and customer expectations*).

Because customer expectations were so central to the newly defined purpose and direction, it seemed surprising that in the Before and After analysis, *Increasing customer demands*, which was the only direct expression of customers' expectations, did not feature very strongly, and showed little unity of viewpoint on whether change had occurred. Part of the reason for this could have been that customer service was also a key issue of Company One, so that due to its very familiarity it was not included in discussion about change.

However, if a different perspective were taken and the organisational response to customer expectations (*Customer relationships and Attitude to community, customers* in *Table 6.8.1 Before and After comparison summary*) were also included in the analysis, another picture would emerge. The number of participants discerning change would become comparable to the number seeing change in the competition area (although there was also a greater contingent perceiving no change), indicating more widespread interest or recognition. Nevertheless, few of these indicated a change of mindset in this area and the number who said that scenario planning or Company One 2010 had anything to do with the change was minimal. The sole exception to this was in *Attitude to community, customers*, where all (four) attributed organisational change to the change initiative. This provides some evidence, though rather weak, of learning provided by the change initiative, but changes in perceptions of customer expectations are more likely explained by reference to the ongoing Company One campaign. There was no "aha" (Wack, 1985b) here.

7.3.3 Summary of the focal issue

The change in attitude to a perception that the fear of competition from overseas was what one participant called a “furphy” was interpreted as having a direct link to the Scenario Thinking workshops. On this interpretation, the scenario planning project had a significant influence on the organisation’s ongoing competition strategy.

However, while reinforcing what, through the ongoing influence of Company One, was becoming an orthodoxy on the question of customer service, the Scenario Thinking workshops and Company One 2010 created no significant change in either perceptions of customer expectations, or the way the organisation should respond to those expectations. In this case scenario planning, rather than initiate change, was seen to underpin extant views.

The outcome of the Scenario Thinking workshops demonstrated that the focal issue is not necessarily the same thing as the objectives or purpose of a change process. Rather the focal issue is a vehicle or context for a strategic conversation about change to occur, as illustrated by the relegation of competition from a matter of prime concern, and the outcomes of the change initiative, which bore little apparent direct relationship to the focal issue.

7.4 Other change areas

This section addresses Research Question 1: What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?

By providing a new framework for the future, the new purpose and direction statement was a challenge to the traditional methods and attitudes in *Figure 7.1.4 Self-reinforcing orthodoxy*, so it was appropriate to consider to what extent the challenge had resulted in organisational change. This section examines a number of specific areas where participants discussed whether scenario planning and Company One 2010 had affected change in the organisation. Sometimes there was little agreement on whether change had occurred in the area, and, if it was perceived to have happened, what form it took. The nature of specific changes is less important for this thesis than whether they occurred and the part the change initiative had to play in it. Therefore these areas, the findings for which were recorded in *6.6 Specific change areas*, are discussed only briefly.

7.4.1 Attitude to risk

(cf. 6.6.1 Attitude to risk)

In *7.1.1 Risk aversion*, the factors that were perceived to have led to a risk-averse culture were discussed. For some participants, an outcome of the scenario planning project was an increased awareness of the nature of the risks that the organisation needed to take in its operations. This indicated the possibility of change at a personal level, but whether change had occurred was doubtful, and is further discussed in *7.5.2 Personal effects*. There was also little evidence of a sharpened awareness of the risk-averse nature of the organisation that was perceived as an outcome of scenario planning translating into change in action. The Before and After analysis indicated a few people thought the organisational attitude to risk had changed in some aspects as a result of Company One 2010, but none changed their own viewpoints in it and there was little other indication of any change in attitude to risk in the organisation. The researcher concluded that the change initiative had had little effect if any on the entrenched attitudes to risk.

7.4.2 Attitude to government and regulators

(cf. 6.6.2 Attitude to government and regulators)

Scenario planning was perceived to have reaffirmed and reinforced the concept of the centrality of government influence and the importance of regulators to the

organisation. However, there was disagreement about the extent to which the change initiative had affected attitudes towards either government or regulators. In the Before and After analysis, where a perception of a change in relationships with regulators was evident, the only two participants that had changed their own attitude did attribute the change to scenario planning and/or Company One 2010. However, in the analysis of the Research interviews, a perceived reason for the change in attitude to regulators that emerged was the influence of new people appointed to positions where liaison with regulators was required, and this seemed to be of more import than any changed attitudes as a result of Company One 2010.

7.4.3 Organisational culture

(cf. 6.6.4 *Organisational culture*)

There was a pervasive perception among participants that the Scenario Thinking intervention had provided a jolt to the organisational culture, but there was little agreement on its nature and effect. Because discussion of the effect of scenario planning and Company One 2010 seemed to be affected by what the participants understood by the term “culture”, particular aspects of organisational culture that they identified were described in 6.6.4 *Organisational Culture*. Of these, a recognition of the ageing demographic of the work force, and some limitations associated with that, was the catalyst for the inclusion for what was said to be the first time of a significant number of young people and/or people new to the organisation in a planning project. However, rather than an outcome of Scenario Thinking and the subsequent phases of Company One 2010, this was perceived as a characteristic that distinguished it from earlier planning projects.

From the Research interviews, it emerged that there was also a belief among some that the pervasiveness of the engineering-based culture was gradually being replaced by a more service-oriented approach, although this was perceived to be an ongoing process not directly attributable to Company One 2010. However, in the Before and After analysis, only one participant identified a change in the influence of engineering as a cultural influence. It seemed that the change towards a more service-oriented culture was more in alignment with Company One, and Company One 2010, rather than create change, had reinforced the trend. There was also a perception that engineering mindsets were a barrier to the Company One 2010 process, particularly in the Scenario Thinking phase, because of a perceived

tendency that engineers required tangible results with pre-determined goals, so that the emergent nature of scenario planning was difficult for them. The other aspects mentioned in 6.6.4 *Organisational culture*, which like the engineering-based culture, were discussed in 7.1 *Context*, were also seen as areas where there had been no change and, indeed, some were seen as characteristics of the organisation that were barriers to change (cf. *Figure 6.6.4 Culture as barriers to change* and 7.17 *Barriers to change*).

7.4.4 Leadership and structure

(cf. 6.6.6 *Leadership and structure*)

There was split opinion on the effect of scenario planning and Company One 2010 on the structure and leadership of the organisation, the extent to which management adopted the new purpose and direction and what support they gave the change initiative. It was perceived that the management adopted some of the output of the change initiative process - e.g., the adoption of the new People and Culture framework in decision-making and revised monthly management report structures that aligned with the new purpose and direction, together with the “committee-cide” reallocation of accountability that coincided with it and some other minor structural changes - but not other suggestions, e.g., a management restructure and most of the efficiency measures recommended by Changemaker teams (cf. 6.7.1 and 7.16.1.5 *Changemaker teams*). There were, of course, several perspectives of the reasons for the non-adoption of these recommended organisational changes, but in 6.6.6 *Leadership and structure*, it was suggested that the apparently mixed effect of scenario planning and Company One 2010 on management raised questions about the effectiveness of learning that resulted from the Scenario Thinking project. As well, barriers to change were identified that were applicable to senior management as well as other operatives (cf. 7.17 *Barriers to change*).

While there was a recognition that there had been a change in the thinking of the management that was evidenced by the introduction of the new purpose and direction and managers accepted the change as a team, at a personal level it seemed that some were less enthusiastic about adapting practice to the new framework. The Before and After analysis indicated no perceptions of change in the leadership, and, although there was weak evidence that that some structural change was perceived, there was no change of mindset identified for this issue.

7.4.5 Workforce issues

(cf. 6.6.7 Workforce issues)

Although scenario planning was perceived to have portrayed a vision of the future that showed the nature of the workforce would be different, there was little or no actual change identified in workforce policy, including the issue of performance recognition, as a consequence of Company One 2010, and there were few discussions on this issue recorded in the Before and After analysis. A Workforce of the Future initiative was perceived to be progressing very slowly. There was not seen to have been any significant change in performance recognition and little with regard to empowerment as a consequence of the change initiative, the latter also reflected in the perception of minimal change in bureaucracy (*cf. 6.6.10 Effect of bureaucracy*) and consequently of empowerment and trust. The involvement of young and/or new people in Company One 2010 was seen as a departure from the practice of earlier years, but, in one of the few quantitative measures referred to in gauging cultural change, it was reported that the retention of graduates had not improved since Company One 2020 (*cf. 6.6.7.2 Retention of new recruits*).

7.4.6 Water quality

(cf. 6.6.8 Water quality)

Scenario planning was perceived to have reinforced awareness of the importance of water quality issues, both from the point of view of safety and of aesthetics and quality. The latter was linked to the need to meet customer expectations. However, there was no evidence of any changes in water quality issues directly as a result of the change initiative. The few discussions on this issue indicated that the participants believed that scenario planning, by heightening awareness of water quality and how demands were changing, influenced the attitudes of others in the organisation. But they did not attribute direct change to Company One 2010, nor did they change their own viewpoints.

7.4.7 Technology

(cf. 6.6.9 Technology)

The importance of new technology and of the employment of technologically competent people had been stressed by some interviewees in the pre-workshop interviews. Much of that comment was centred on e-business. However, in the

Research interviews few people commented on technology and it barely featured in the Before and After analysis, even though technology had emerged as the second most important driver for the future during the Scenario Thinking workshops. This may have been attributable to a difference of emphasis between the Scenario Thinking workshops and the research for this thesis. The outcomes of Company One 2010 were mainly concerned with organisational culture, and the Research interviews reflected this. The Scenario Thinking workshops had no such constraint, so technology, not seen as cultural element, could emerge as a driving force. It would be less likely to be seen as relevant in a cultural context. There was perceived to have been little change in this area, and none that could be attributed to any part of the change initiative.

7.4.8 Sustainability

(cf. 6.6.12 Sustainability)

An increased focus on sustainability and a triple bottom line approach were seen as major changes that had occurred since the Company One 2010 initiative. By inclusion of these aspects in monthly management reporting, the new focus was perceived to be becoming embedded in the organisation. While this framework was seen as an outcome of the change initiative, there was some comment that it may have occurred anyway. Sustainability is a wider concept than environment, which was the third ranked driving force identified in the Scenario Thinking workshops. However, sustainability was another factor that barely featured in the Before and After analysis. This was not because of a lack of change but because the issue received little mention in the pre-workshop interviews, where participants were more likely to discuss just one aspect of sustainability, the environment, and this was interpreted as a different concept. Consequently the Before and After analysis did not capture change in this area.

7.4.9 Summary of specific change areas

Apart from some change in the thinking of management, which sanctioned and endorsed the emergence of the new purpose and direction, participants perceived there had been little change that they were prepared to attribute to scenario planning and/or Company One 2010 in any of the specific areas. Rather, any change was more likely to be seen as ongoing, sometimes due to Company One. This brought into question the effectiveness of the learning from scenario planning and the depth

to which the implications of the new purpose and direction had penetrated the culture of the organisation.

There were some clear instances of learning that were directly attributable to scenario planning, e.g., the change in attitude to competition (*cf. 7.3.1 Competition*) and the acceptance of the change in business direction (*cf. 7.2.3 Business development*) which was partially related to it.

However, that there were no significant departures from changes already occurring in the organisation suggested that the impact of scenario planning was limited, and this in turn suggested that the scenarios themselves might not have been sufficiently challenging as discussed in *7.7 Adequacy of scenarios*. As well, the possibility also emerged that the limited impact may have been due not, or not only, to the scenario planning process but to the Strategic Intent and/or Implementation phases and/or in a failure to surmount organisational barriers to change. This is discussed further in *7.6 Ineffectiveness of the change initiative*.

During the Strategic Intent phase the organisation identified what it called “strategic elephants” (*cf. 6.7 Strategic Intent and Implementation phases*). That the analysis showed there was little or no perceived change in any of these areas considered to have such a powerful influence on the organisation tended to reinforce the ideas that the change process failed to penetrate deeply into the culture of the organisation and that it may have raised awareness about ongoing change in these areas without directly affecting them much. Indeed, an emergent relational concept was the interpretation that aspects of the organisational culture, including its bureaucracy, acted as barriers to change (*cf. Figure 6.6.4 Culture as barriers to change*). This aspect is discussed further in *7.17 Barriers to change*.

The perception by participants that change tended to be a continuous process rather than a direct consequence of the change initiative raised the question of the intent of the Scenario Thinking project: was it seen as providing a framework for initiating organisational change by developing a new purpose and direction or was it perceived as a framework to accommodate the implementation and acceptance of inevitable change? This is discussed in *7.5.3 Affirmation*.

7.4.10 Triangulation of change areas

In November 2001, the human resources division of the Water Corporation conducted a Cultural Definition workshop as part of its ongoing Workforce of the Future initiative. It was attended by approximately 30 people, including the managing director and general managers, representatives of the Changemaker teams and others. The output of the workshop was a series of Likert scales comparing desired and current states of the series of organisational cultural factors. The report of the workshop, including definitions of the cultural factors, appears in *Appendix 5 Documentation*.

Many of the categories in the Cultural Definition workshop report were comparable to the change concepts that emerged from the data for the research for the thesis. There was no comparable earlier data for the workshop output, so it could not denote change, but some of the categories were similar enough to the concepts from the research data to provide some indication of how closely the workshop participants perceived the organisational culture matched their aspirations for them. As will be seen, this allowed an interpretation that suggested and reinforced the emergent concept that cultural change had not become embedded in the organisation.

The following table illustrates the output of the workshop in the categories that was comparable with the emergent concepts in the thesis.

Table 7.4.1 Triangulation of change areas.

Workshop category	Comparable concept	Discrepancy
Decision making	<i>6.6.10 Bureaucracy</i>	Wide
Leadership	<i>7.4.4 Leadership</i>	Very wide
Technology	<i>7.4.7 Technology</i>	Small
Sustainability	<i>7.4.8 Sustainability</i>	Very wide
Customer orientation	<i>7.3.2 Customer expectations</i>	Very wide/small
Commercial orientation	<i>7.2.3 Business development</i>	Small
Power	<i>7.4.5 Workforce issues</i>	Very wide
Achievement	<i>6.5.1.1 Intra-organisational understanding</i>	Fairly small
Compliance	<i>7.4.2 Attitude to government and regulators</i>	Small
Change	<i>7.1.1 Risk aversion</i>	Fairly small
Organisational design	<i>6.6.10 Bureaucracy</i>	Fairly wide
Formality	<i>6.6.10 Bureaucracy</i>	Wide
Motivation	<i>7.1.1 Risk aversion</i>	Wide
Reward	<i>7.4.5 Workforce issues (performance management)</i>	Wide
Empowerment	<i>7.4.5 Workforce issues (empowerment)</i>	Wide
Communication	<i>7.16.11 Decision-making (the black box)</i>	Fairly wide

Note: Discrepancy = the gap between the desired state and the current state in the Cultural Definition workshop

The wide discrepancy between the current and desired states for sustainability occurred despite the centrality of sustainability in the outcome of Company One 2010, providing a strong indication that the new purpose and direction had not become embedded in the culture. There were also very wide discrepancies in the workforce issues, suggesting that people and culture as an outcome was not embedded, and leadership, structural and communication matters, indicating that these concerns had not been satisfied.

On the other hand, the business development direction appeared to be accepted, an outcome that is compatible with the findings from the two data analyses in this thesis.

On the issue of technology, there was little discrepancy, perhaps providing one indication why technology was a non-issue in the Research interviews, with little change seeming to signify satisfaction with the current state of affairs. Similarly,

there was little discrepancy on the question of customer expectations, reinforcing the concept that change in this area had already been occurring by the time of Company One 2010 and customer service had become an organisational orthodoxy.

The small discrepancy in the concept of compliance with regulators (not interpreted as an outcome of Company One 2010) was congruent with the Scenario Thinking outcome of the importance of Government and regulators to the organisation and indicated acceptance of this concept.

There were two areas where the survey outcomes lacked congruence with the thesis findings.

The concept of a risk averse organisation from the thesis research appeared to be at odds with the change outcome of the change category in the survey, which indicated a neutral perception towards embracing change, although the concepts in the two were not directly analogous.

However, the issues of achievement and intra-organisational understanding were closely analogous, and the survey findings, which suggested a tendency towards a holistic rather than a silo approach, were at odds with the thesis finding that silo thinking still tended to be prevalent. The findings appeared to be in contrast, but the survey finding was only slightly more positive than neutral and the research finding was a tendency, an interpretation that allowed that there were divergent perceptions on the issue. The lack of compatibility did not amount to a clear-cut contradiction and, because the research populations were small and different in each case, it seemed the two interpretations could co-exist.

Overall, the survey outcomes provided some corroboration for the findings of the thesis research.

7.5 Effects of scenario planning

This section addresses Research Question 1: What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?

In the previous section, perceptions about change in specific parts of the organisation or its strategy were discussed. This section concerns the effects on the thinking and attitudes of participants and their perceptions of the effect on others on the organisation. It discusses the findings recorded in 6.5 *Effect*.

7.5.1 Learning

In 6.5.1 *Learning*, it was explained that learning was interpreted to be a consequence of 6.4.1 *Change of mindset* with three emergent indicative concepts: the core concept, *Extending thinking*, from which it was expected that there should be *Lessons*, and *Intra-organisational understanding*. Figure 6.5.1 *Learning* illustrated the factors from which this interpretation emerged.

However, it was noticeable that much of the comment about intra-organisational learning by participants was couched in the past tense. Although a few said they did more networking as a consequence of what they had learned and the channels of communication they had opened during Scenario Thinking, most talked about learning from scenario planning as being in the past - it was an opportunity to talk to management and others.

Scenario Thinking tended to be seen as an event in which *Vertical communication* and *Cross-divisional communication* had taken place, especially through the inclusion of young people and people relatively new to the organisation in a planning project for what was said to be first time. The practice did continue in the later phases of the change initiative as well as in subsequent planning projects. This was the strategic conversation at a formal level and its continuation may be considered an outcome of its perceived success during the Company One 2010 process.

But on the question of the breakdown of organisational silos, perceptions were divided between those who thought people were taking a more *Holistic view of the organisation* and those who believed silo thinking was still dominant. The inhibiting nature of the silo mentality was realised, but it was perceived that the realisation was only patchily being carried through into action for change (*cf.* 6.5.1.1 *Intra-*

organisational understanding). This suggested that much of the cross-divisional informal conversation said to have begun in the Scenario Thinking workshops had not continued.

While there was little disagreement from participants that Scenario Thinking had extended thinking (*cf. 6.5.1.2 Extending thinking*), there were some people who thought that the change of purpose and direction would have happened anyway, casting doubt on the need for the change initiative and whether the project outcomes had indeed demonstrated *Extending thinking*, a perception that is discussed further in *7.5.3 Affirmation*. But it was noticeable that participants' comments about both *Extending thinking* and the lessons to be drawn from scenario planning (*cf. 6.5.1.3 Lessons*) were mostly about other people learning, rather than themselves. As well, lessons perceived to be drawn from the scenario process were reported in a normative fashion – they had not been put into practice, but the participant thought it would be have been good if they had.

These observations reinforced a tentative conclusion that, although the organisation had achieved a new strategic framework, the profound cultural change hoped for by some in the organisation had not eventuated, with most learning limited to a conceptual rather than an actionable level. Some participants claimed an increase in open-mindedness, and that they had a different way of looking at the future. But there was little evidence that this had penetrated beyond the level of espoused theories and espoused values discussed in *2.11.4.5 Changing basic assumptions*.

7.5.2 Personal effects

Further evidence for the conclusion that the change initiative had failed to produce profound cultural change emerged from analysis of participants' discussions of how the scenario planning project had influenced the way they personally approached their work. In *Figure 6.5.3 Personal effects – emerging concepts*, it was illustrated that although it had affected the way some took part in the strategic conversation by extending their networks and wider knowledge of the organisation, it appeared in many cases to have had little if any effect on their work practices, from which the concept *Cultural change not embedded* emerged. Several reasons emerged for this perceived limitation of change from Company One 2010.

In *6.5.2 Personal effects* it emerged that, for some participants, Scenario Thinking was not perceived as challenging to mindsets, because they claimed that they already

approached planning and other issues using a scenario approach of some kind. For these people, the contemplation of multiple possibilities for the future was not a change of mindset. Van der Heijden (1996) opined in his introductory remarks that scenario thinking should come naturally because people normally think about the future in terms of contingencies, an idea which is congruent with the statements of these people.

Others who did not change their work practice fell into three groups: people who said that the new purpose and direction was easy to accept because it aligned with their own values, a concept that is congruent with the continuity theme in *2.11.4.9 Change and identity*; people who said they could not understand how the effects of scenario planning could be distinguished from all the other influences on the organisation and their work in the period under study, a concept that was introduced in *2.14 Evaluation of scenario planning practices (cf. 6.5.2.6 No change in work practice)*; and people who perceived there was a change in the way they thought about issues and framed decisions, though this did not necessarily translate into a change in their personal actions, even, in some cases, where they accepted the change of framework, and consequently new practices that were introduced, at an organisational level (*cf. 6.5.2 Personal effects*).

The lack of effect on personal work practices contrasted with the enthusiasm for the change process that had been demonstrated in the early stages of Company One 2010 (*cf. 6.4.2.7 Scenario planning as motivator*). As demonstrated by the willingness to participate in Changemaker teams (*cf. 6.7.1 Changemaker teams*), commitment, as defined by Senge (1992) (*cf. 2.11.4.4 Organisational world views and mental models*), to the change process was achieved, yet this did not translate in the outcomes to what Argyris termed theory-in-use (*cf. 2.11.4.5 Changing basic assumptions*).

It was concluded that, at a personal level, participating in the Scenario Thinking project exposed participants to a way of thinking to which many responded keenly, often because it resonated with their own values, world-view and experience (*cf. 6.5.3 Affirmation*). However, despite this, there was resistance to the implementation of potential changes to operational practice, even amongst the people who had been committed to the change process, which reinforced the suggestion in *7.4.9 Summary*

of specific change areas that resistance emerged not from Scenario Thinking but from the later stages of Company One 2010.

7.5.3 Affirmation

There was some evidence to support the view of some participants that the objective of the change initiative was to crystallise and gain acceptance for an already decided direction (*cf. 6.5.3 Affirmation*), i.e., that the decision to withdraw from what was termed “overseas adventurism” by one senior manager appeared to have been made prior to scenario planning (see also *7.9.2.3 Vision change needed*). However, while it was self-evident that if it was not practicable to market beyond the State boundaries the organisation should concentrate on serving the home market, the form and strategic direction of how that was to be done was perceived to have emerged during Company One 2010.

This aspect of the concept of *Affirmation* was important, because it called into question the purpose of the Scenario Thinking project in changing mindset. If the direction had already been decided, the purpose of exploring assumptions and mindsets through scenario planning would have been to persuade people to acquiesce to the change rather than participate in its creation – a propaganda exercise which would have been a cynical way of approaching scenario planning. It was a perception that reflected a cynical attitude and encouraged resistance to the process by some participants who held this belief. However, the researcher could find no evidence in the research data that participation in the change process was not genuinely supported by the executive, even if they had differing degrees of enthusiasm about the project. An indication that there was no collusion of this nature was an agreement among the executive to listen and say little, so allowing full participation by others, during the Scenario Thinking workshops (*cf. 6.5.1.3 Lessons*).

Another aspect of *Affirmation* that was of import for the purposes of this thesis was the concept that was listed in the previous sub-section that there was little change of mindset because organisational changes that occurred were in alignment with the way many participants already thought (*cf. 7.5.2 Personal effects*). This was interpreted as a factor leading to resistance to change, because operatives holding this view could believe no change was necessary, even if their perceived alignment was only partial or imaginary.

Further, it reinforced the concept in 7.2.5 *Summary of the change in organisational purpose and direction* that the changes that resulted from the change initiative were due less to change of mindset than to a realignment where the extant views of one group sub-culture in the organisation gained influence at the expense of another, perceived more meaningfully as a political than as a cultural shift. For example, the change in purpose and direction could have been seen as a shift away from a predominating entrepreneurial sub-culture towards a group with a more service-oriented philosophy. The concept of *Affirmation* had important implications for scenario planning, because it indicated that when change seemed to be resulting from a change in mindset, it was possible that all that had occurred was a shift in influence from one school of thinking to another.

Figure 6.5.4 Affirmation and resistance to change, which illustrated the interpretation of how the two aspects of *Affirmation* engendered cynicism and resistance to change, reinforced doubts about the effectiveness of the scenarios in changing mindsets: if the change process was perceived as an affirmation, or a continuity of previous ideas, it would suggest that sufficient change of organisational mindset was not achieved in this project to bring about profound cultural change.

In this research, there were some participants who were enthusiastic or acquiescent about the change in organisational purpose and direction as a result of having their ideas confirmed by it and there were others where there was evidence of changes of viewpoint and mindset translating to an acceptance of the new framework, at least at the espoused level and even if they often lacked a behavioural aspect. However, the concept that the change initiative had resulted in changes in conceptual awareness but not changed operational practice indicated that in some cases apparent acquiescence was merely lip service to the new purpose and direction, in accordance with how well particular parts of the change resonated with the participants' past experience and beliefs and/or aspirations. This was confirmed by the data where a perception emerged that some people in the organisation used the Company One 2010 outcomes either selectively for their own purposes (*cf. 6.6.4.4 Getting on in the culture*) or to promote changes that they had previously believed beneficial for the organisation (*cf. 6.5.2.1 Decision framing*), further evidence for a lack of profound cultural change.

It can be difficult to distinguish political and cultural aspects of an organisation without confusing the metaphors. However, the political perspective introduced the concept that scenarios may engender a political shift rather than a cultural change and that the outcomes of the change initiative may have been used by some people for other purposes than organisational change, such as personal empowerment and advancement.

7.5.4 Use and content

Emerging from the findings in this category were two of the ways in which participants perceived the scenarios could be used in decision-making. The first was what might be termed the negative normative. At least one of the scenarios revealed a vision of the future to which many of the participants felt a strong aversion. A few stated that their fear – their “memories of the future” (*cf.* 2.11.4.7 *Learning*) – of this scenario eventuating still had some bearing on the decisions that they made and the direction they thought the organisation should take.

The second was the notion of preparedness, which may be considered as another version of memories of the future. The scenarios were a way of looking ahead and considering strategy to prepare for multiple possibilities. However, there was little evidence that the scenarios were continuing to be used in this way, and many could not recall much of the content of the scenario narratives. More common was the assertion that managers used scenario thinking in their decision-making, although this was seen by some as a normal way of approaching management decisions rather than something that had been introduced during the change initiative (*cf.* 7.5.2 *Personal effects*).

This category also revealed that a few of the participants still were unable to rid themselves of the idea that the scenarios in some way were meant to have predictive power, even though at the same time they knew that this was not the case. This was another example of the propensity to hold conflicting views simultaneously that was discussed in 2.11.4.8 *The conceptual ecology*.

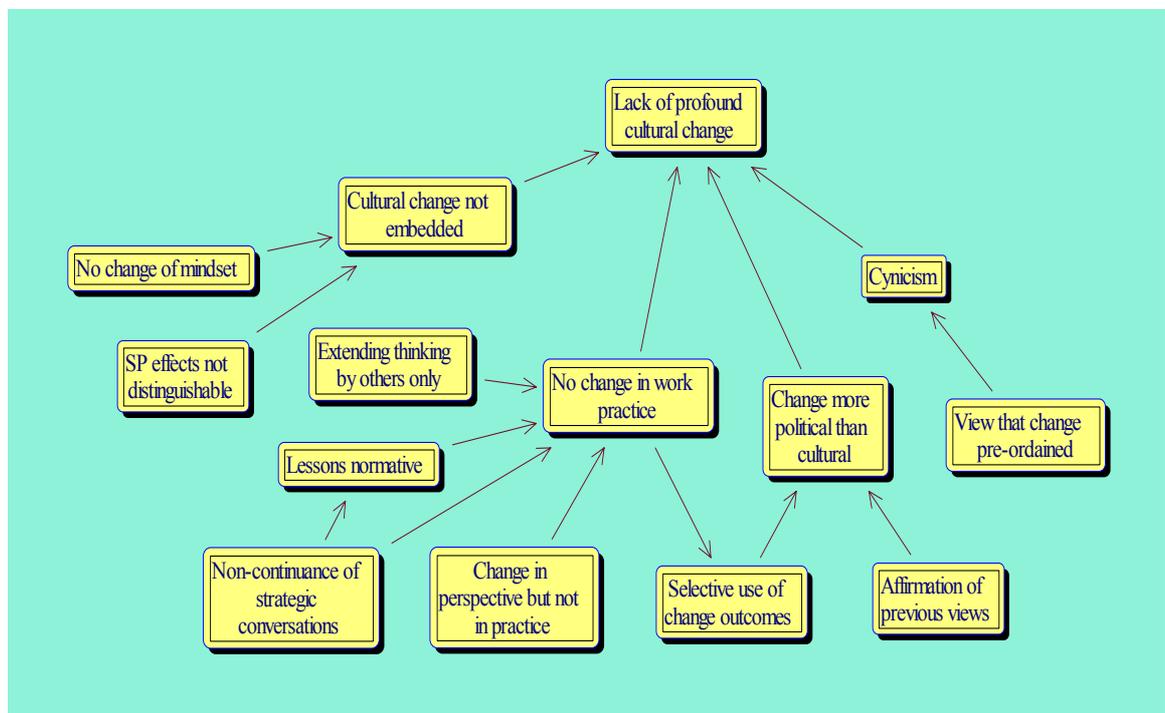
7.5.5 Summary of effects of scenario planning

The effects that have been discussed in this section are summarised in two maps, showing the emergence of two perspectives on the effect of scenario planning. The first, *Figure 7.5.1 Effect of scenario planning 1*, shows the relationships between the

concepts from this section that led to the emergence of the concept *Lack of profound change*.

Other concepts that were of particular interest but are not shown on the map were the strong commitment to scenario planning and the change initiative during the scenario planning and the initial part of the Strategic Intent phases, followed by resistance to change at a later stage. This was not the view of all participants, of course, but was widespread enough to invite further enquiry (cf. 7.16.1 *Strategic Intent* and 7.16.2 *Implementation*).

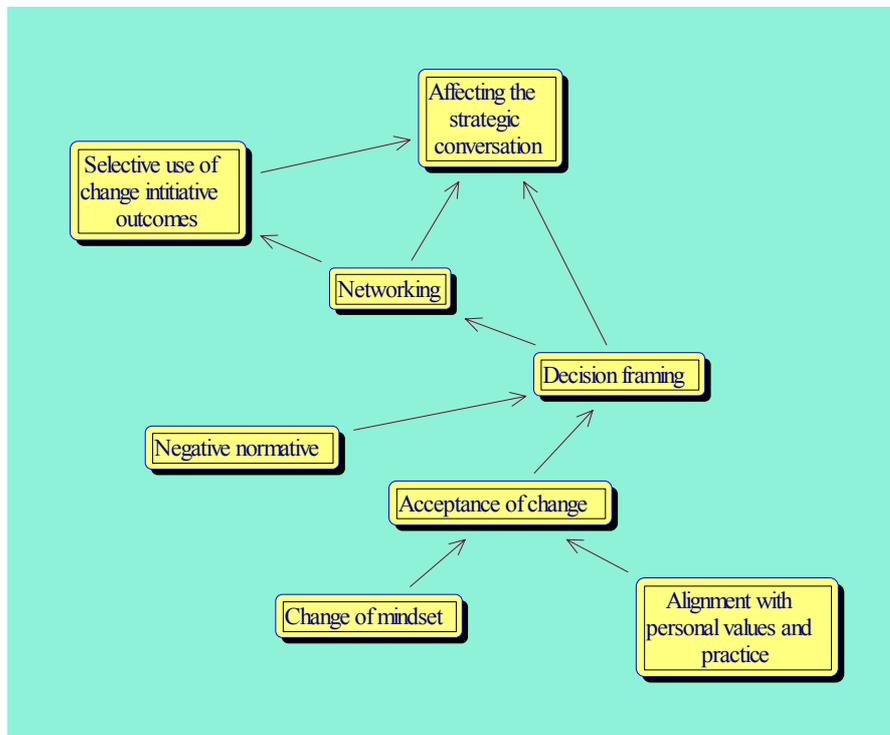
Figure 7.5.1 Effect of scenario planning 1



The second map, *Figure 7.5.2 Effect of scenario planning 2*, illustrates how, for some participants, scenario planning acted to affect the way they frame decisions, with its consequent effect on the organisational strategic conversation. Although this may seem to contradict the *Non-continuance of strategic conversations* in *Figure 7.5.1*, *Figure 7.5.2* concerns the ongoing strategic conversation, on which the change initiative inevitably had an effect, and *Figure 7.5.1* concerns particular conversations begun during the Scenario Thinking workshops that were perceived by some participants to largely die out after Company One 2010.

Figure 7.5.2 also illustrates factors such as networking and selective use that may be thought of as political as well as cultural (cf. 7.2.5 Summary of the change in organisational purpose and direction).

Figure 7.5.2 Effect of scenario planning 2



7.6 Ineffectiveness of the change initiative

This section addresses Research Question 1: What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?

The tentative conclusion in the previous section that the change initiative did not result in profound cultural change was reinforced by the emergence of a significant number of participants who identified areas where they perceived there had been no change or who commented on ineffectiveness of the change initiative. This invited an examination of the reasons that there should be such widespread perceptions that the change initiative had been ineffective, either in total or in part.

In *Figure 6.5.5.1 Emerging concepts – lack of change*, it was suggested that a lack of commitment to the change outcomes, as well as a cultural element, contributed to the *Lack of effectiveness*. Lack of commitment was demonstrated by resistance to the change in the form of retaining use of the old KRAs; a perception that there had been a mental shift unaccompanied by action; a lack of follow-through by managers; and other issues diverting attention and resources from the change initiative. A cultural element was the difficulty that emerged in *7.4.3 Organisational culture* that some people had with the perceived intangibility of outcomes during the Scenario Thinking workshops and with accepting the outcomes of the change initiative, interpreted as emanating from the embedded cultural base of engineering training and thinking. This was the phenomenon described in *2.11.4.9 Change and identity*, where participants in a change process would have difficulty if there was a lack of continuity between the old and the new and was consistent with the importance of past experience and understanding explained in *3.3 Epistemological implications*.

Participants who perceived that the scenario planning project could have been more effective were mostly people who did not define a clear objective, whether for scenario planning or Company One 2010. This appeared to reinforce van der Heijden's (1996) contention that a lack of purposefulness can lead to ineffective scenarios. It has been argued the evaluation of scenarios is a subjective matter (*cf. 2.14 Evaluation of scenario planning projects*), so as well as some participants' perceived inadequacy of the content of the scenarios, another factor in perceptions of effectiveness may have been participants not understanding or having unfocused

perceptions of the goals of the project, with a vague sense of purpose matching a vague sense of dissatisfaction.

This called for an examination of objectives, as perceived by the participants, and their perceptions of whether the objectives were met, and this is discussed in 7.9 *Objectives and outcomes*.

Perceptions that there had been a lack of change in at least some areas led to the emergence of the relational concepts mapped in *Figure 6.5.7 Lack of change – emerging concepts*: *Disillusionment* with the process; *Need for persistence* (in implementation); *Government as a major influence and constraint*; *Resistance to change*; and *Cultural basis for expectations*, each of which was a factor in the emergence of the central concept that *Cultural change was not embedded*. This concept reinforced the finding of a lack of profound change that was illustrated in *Figure 7.5.5 Summary of effects of scenario planning 1* above.

Moreover, participants were unable to identify any adverse effects of scenario planning (*cf. 6.5.6 Unexpected and adverse effects of scenario planning*). The data were convincing that the causes of the lack of effectiveness lay largely in the final two phases of the Company One 2010 process, where, as suggested in 7.5.2 *Personal effects* and 7.16.2 *Implementation*, several adverse effects were perceived to have eventuated.

However, although no adverse effects from it were identified, there was an indication that Scenario Thinking, too, was considered by some to have been less effective than it might have been (*cf. 6.5.6 Unexpected and adverse effects of scenario planning*).

The scenarios and the ideas they contained were perceived by some to be insufficiently challenging or different from conventional wisdom within the organisation. This called for consideration of whether the adequacy of the scenarios themselves was one of the factors that led some people to this view.

7.6.1 Summary of ineffectiveness of the change initiative

Because participants perceived practically no adverse effects of scenario planning, it was concluded that the reasons for the received ineffectiveness of Company One 2010 in bringing about profound cultural change were most likely to be found in the other two phases of the change initiative. However, there were suggestions that the change process involved a discontinuity that could have provoked resistance, and

that the scenarios themselves might have been more effective. The former suggestion is discussed further in *7.11 Role of scenario planning* and *7.16.2.1 Managerial follow-through, 7.17.2.4 Entrenched and engineering-based culture*. The latter suggestion invites examination of the adequacy of the scenarios, which follows in the next section.

7.7 Adequacy of scenarios

This section addresses Research Question 1: What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?

One of the unexpected effects that emerged in *6.5.6.1 Unexpected effects* was a perception by some participants that the scenarios could have been more challenging and more radical. Scenarios need to maintain a balance between two of their important and defining characteristics that were listed in *Table 2.1 Elements in definitions of scenarios*, plausibility and challenge. Schoemaker (1998) has described how both scenarios that lack surprises and merely confirm conventional wisdom and those that seem “off the wall” and implausible are useless. In the perception of some participants here, it would appear that the balance was not achieved.

It is not appropriate for the content of the scenarios to be revealed in this thesis, because they remain confidential to the Water Corporation. Also, because the research is grounded in the perceptions of the participants only, interpretations by the researcher of any other source of data, including the scenarios themselves, is excluded by the methodology, and can only be considered for limited triangulation purposes (*cf. 4.5.1 Triangulation*). However, some allusions to the scenarios are made in this section to illustrate this part of the discussion.

There was comment, for example, that only one of the scenario narratives included the effects of a water shortage due to lack of rain (*cf. 1.5.2 History of the organisation – 2001-2202*), and then only minimally. In light of the severe winter drought that followed the Scenario Thinking project, and with the advantage of hindsight, a few participants thought this was a defect of the scenarios and an example of a deficiency of boldness on the part of the participants. However, it seems just as likely that fears about the effects of low rainfall were so familiar that

they were no longer seen as potential surprises. Concern about continuing low rainfall had been expressed in the Corporation's annual report as long before as 1996-1997 and several times since (*cf. 1.5.2 History of the organisation*). A graph showing the diminished inflows to dams in Western Australia appears in *Appendix 7*. In the months following the Scenario Thinking workshops, there was little doubt that a principal driving force for the organisation became the effects of the low rainfall. In this situation, participants perceived that two of the driving forces identified in the Scenario Thinking workshops, *Government expectations* and *Customer and community expectations*, came to dominate much of the organisation's short-term thinking, as increased water supply restrictions were introduced and public and media pressure and criticism mounted in reaction. The effect of this on the implementation of the outcomes of Company One 2010 is discussed in *7.17.2.3 Drought and litigation*.

Of the six key driving forces that emerged in the Scenario Thinking workshops, four – *Technology, Environment, Business models* and *Health of the West Australian economy* – received little mention in the Research interviews (though environment may be considered to be part of the concept of sustainability that was important in the new purpose and direction). This was interpreted to demonstrate a potential limitation of scenarios: in this case, they were devised from a view of the organisation at a particular time, and perceptions of what are principal driving forces can change, in this case quite quickly. It also demonstrated that the evaluation of the effectiveness of scenarios and scenario planning projects was necessarily subjective and interpretive, since not only driving forces but also perceptions of the objectives, as described in *6.3.6 Reliability of objectives data*, and of the outcomes of the project could change over time (*cf. 2.14 Evaluation of scenario planning projects*). In this case, the perception that competition from overseas or interstate, which was the basis of the focal issue for the Scenario Thinking workshops, was less of a threat than had previously been believed (*cf. 6.6.13 Competition and customer expectations*) was evidence that suggested the Scenario Thinking workshops themselves had had the effect of changing perceptions of what was important and uncertain to the organisation. It also suggested a case for frequent appraisal and revision of scenarios if they were to be used as a reference for planning over a period of time.

A further limitation emerged. In the scenario methodology used, the principal driving forces of the scenarios were external. While the scenarios were perceived to have challenged mental models of how the organisation might respond to possible external events, and some aspects of structure were included in them, only limited parts of the conceptual ecologies of individuals were addressed by this. The second workshop, where opportunities, threats, options and strategies that arose from the scenarios were discussed, included a consideration of competencies the organisation had or needed to address the elements (trends and events) emerging from the scenarios. This included skills and expertise, as well as some attitudinal changes, which may be considered to be part of the world views of the individuals. However, the scenarios did not explore in depth the conceptual ecologies of the operatives, which, as illustrated in 2.11.4.8 *The conceptual ecology*, would be a source of uncertainty. In particular, it was clear from the discussion in both sets of interviews that some of elements of the organisation that were considered to be barriers of change and injected uncertainty into the change process and the future, including cynicism, communication constraints, bureaucratic structure, demographics, the effects of the engineering-based culture and the risk aversion that led to reluctance to adopt change (cf. 7.17 *Barriers of change*), were part of the ongoing tacit knowledge in the organisation.

Although the driving forces were external, the Water Corporation scenarios were systems scenarios (cf. 2.11.2.2 *Should scenarios have an external focus?*). For example, one scenario (“Cautious Chameleon”) began with a reflection on changes in organisational structure and included discussion of internal events such as retirements and formation of partnerships. In another (“The World is our Oyster”) organisational culture and business opportunity strategy were discussed. Throughout the scenarios there was a pattern of external event and internal response to it, and, in some cases, organisational initiative as a change-creating force.

This was partly encouraged by the way the focal issue was worded: “*What will be the impact of competition and customer expectations on the Water Corporation in the year 2010?*” The phrasing incorporated both the external environment and its relationship with the organisation, inviting inclusion of organisational reaction. Customer expectations and reactions were an influence in organisational policy and operations in all scenarios.

As the scenarios were system scenarios, it might have been expected that the uncertainties due to conceptual ecologies would have been explored in them, but this did not occur. For example, the perceived independent bent of some managers was said to be a continuation of a historical phenomenon, with both cultural and structural foundations (*cf.* 6.6.4.3 *Accountability and discipline*), but was an issue that remained unaddressed and consequently an uncertainty about the implementation of change was not identified, i.e., the perceived reluctance of some managers to implement Company One 2010 outcomes.

In 2.11.2.3 *The BOW approach*, it was argued that uncertainties identified as driving forces could include all aspects beyond the influence of the organisation, including uncertainties arising in the internal or transactional domains. This would have allowed the organisation to fix boundaries that may have been more appropriate to the purpose of the scenarios. Scenarios for other organisations with different purposes, such as Royal Dutch/Shell with its global scope (Shell, 2002), or HBF, who sought views of possible external futures for Western Australia rather than focussing on their own industry (Smith, 2000), produce scenarios that describe only an external world. But in this case, the focal issue concerned matters, i.e., competitors and customers that were to some extent in what van der Heijden called the transactional level (van der Heijden, 1996) (*cf.* 2.11.2.3 *The BOW approach*). Porter (1985) identified this industrial level, as he called it, as the proper domain for scenarios. He was of the view that scenario variables have internal as well as external causes and the findings of this research were in accordance with that view - for this particular case. As was argued in 2.9 *What is scenario planning?* the purpose of the scenarios should have dictated the approach taken, which in this case could have included internal organisational uncertainties as major driving forces.

In 2.11.2.1 *Making sense of the future*, van der Heijden et al's (2002) contention that including the organisation in the scenarios carried the risk that scenarios would fail to stretch participants' conceptual ecologies was cited. The findings in this research suggested that one reason why some people found the scenarios less than challenging was not so much that the organisation was included but that internal organisational uncertainties were not taken sufficiently into account. In the few instances where it did occur (e.g., as a lowering of skill levels due to recruitment difficulties imagined

in one scenario), the issues identified were not emergent, but were already concerns of the organisation (*cf.* 6.6.7.2 *Retention of new recruits*) and not surprising. There was no recognition in the scenarios of such possibilities as selective management intransigence or new structures for accountability (that emerged in the Research interviews) in response to internal problems, precisely the sort of elements that were unthinkable to some operatives and that it was argued in 2.11.2.2 *Should scenarios have an external focus?* that scenarios could address.

A further possible reason suggested for the scenarios lacking challenge was an allegation that management made alterations to them before they were finally published. As there was no way of ascertaining the substance of any such changes, this line of thought was not pursued.

However, the lack of challenge in the scenarios was only one viewpoint. There were others for whom one or more of the scenarios stretched their credence, although comment tended to be mild and none to the point of derision. It was generally recognised that extending boundaries was the purpose of the scenarios. A plausible interpretation in this context was that rejection of the scenario narratives reflected an underlying resistance to the change process on the part of the individuals (*cf.* 7.17.3 *Cynicism*).

However, it should be noted that this section so far has addressed only the perceptions that the scenarios could have been more challenging or more credible. There were many participants who perceived that that the scenarios had effectively challenged participants, including senior management, to reassess the future (*cf.* 6.5.1.2 *Extending thinking*). The gusto with which many of them appeared to have entered into the second phase of the change initiative testified to this. There was also a perception that they had reduced the area of the unknowables, as described in 2.11.3.2 *Reducing the unknowables*, e.g., the narration in 6.5.1.2 *Extending thinking* of the realisation that a water-borne pandemic was a possibility.

7.7.1 Summary of adequacy of scenarios

Evaluation of the effectiveness of scenario planning is necessarily subjective and interpretive. However, the theory was advanced that one reason some participants perceived the scenarios were less challenging than they might have been was that the scenarios did not sufficiently address conceptual ecologies. Consequently they did not include sufficient internal organisational uncertainty and this resulted in

additional uncertainties that affected the implementation of the change initiative. A further observation was that participants who were vague about the objectives of the change initiative tended to be less satisfied than others with the outcomes.

Rather than external scenarios, the scenarios that were developed were systems scenarios, which should have been more suited to the nature and purposes of the organisation and its purpose.

7.8 Resolution of Research Question 1

What changes, if any, did participants in the study perceive as resulting from the scenario-based planning process?

The main change resulting from the Company One 2010 initiative, for which scenario planning formed an integral part, was a new purpose and direction statement. This provided a new framework that was put into operation in the form of new management reporting requirements and a revised focus for strategy and operations. Major learning outcomes were a change of viewpoint about competitive threat and emergence of a stronger recognition of the nature of the organisation's relationship with government. However, there was little evidence of consequential significant enduring change of mindset or viewpoint in other aspects of the organisation that participants attributed to either scenario planning or the rest of Company One 2010. This was an aspect that needed further explanation and is addressed in the next sections.

Learning from the scenarios appeared to be largely at what Argyris (1993) called the applicable rather than the actionable level. From the scenarios, participants gained an increased awareness of uncertainty and a framework for a strategic conversation about the future. But this was rarely translated into actionable knowledge through changes in work practice or personal decision-making. It was concluded that an important shift in the direction of organisational strategy had occurred, but this was not accompanied by profound mind-set or cultural change. One of the possible reasons for this was that the scenarios did not address the uncertainty of conceptual ecologies as a driving force, but other, stronger influences on the outcomes, especially in the post-Scenario Thinking phases, are discussed in the following sections.

7.8.1 Theoretical concepts from Research Question 1

Theoretical concepts that emerged during the resolution of Research Question 1 were:

- The purpose of the change initiative was to explore and if necessary break self reinforcing feedback loops of organisational orthodoxies (*cf. 7.1.6 Summary of context*).
- The focal issue of a scenario planning project need not be the same as its objectives or purpose (*cf. 7.3.3 Summary of the focal issue*).
- Scenario planning was perceived as an instrument rather than an agent of change (*cf. 7.2.5 Summary of the change in organisational purpose and direction*).
- The effect of the scenarios was, for some participants, to reinforce extant beliefs or mind-sets rather than change them (*cf. 7.2.5 Summary of the change in organisational purpose and direction; 7.5.3 Affirmation*).
- Most learning outcomes from Scenario Thinking were ephemeral and did not penetrate beyond the conceptual or applicable to the actionable level. Although the scenario planning project was perceived to have changed some mindsets, enduring change appeared to be rare and was not translated into behavioural changes at a personal level (*cf. 7.5 Effects of scenario planning*).
- Of the few learning outcomes from Scenario Thinking, the most clearly identified was the change in attitude to competition, which had a significant effect on the strategy of the organisation. Another was the acceptance of the new purpose and direction, which was perceived to be to some extent due to the scenario planning framework (*cf. 7.4.9 Summary of specific change areas*).
- The power of the negative normative can be significant. One enduring effect was its influence on decision-making for some participants. In portraying a world they wished to avoid, the scenarios were seen to have

supplied a sufficient mental jolt to effect some change of mental model (*cf. 7.5.4 Use and content*).

- Aspects of the entrenched culture (bureaucratic and engineering-based) were perceived as barriers to change (*cf. 7.4.9 Summary of specific change areas*).
- Scenario planning was perceived both as a structure for initiating change and as a framework to accommodate the implementation of and gain acceptance for change (*cf. 7.4.9 Summary of specific change areas*).
- Evaluation of the effectiveness of scenario planning is necessarily subjective and interpretive (*cf. 7.7.1 Summary of adequacy of scenarios*). For some participants, the effects of scenario planning could not be distinguished from other influences that affected organisational change (*cf. 7.5.2 Personal effects*).
- Clarity about purpose affects evaluation. Participants who were felt the scenario planning project had been less effective than it might have been tended to be people who were not clear about its objectives (*cf. 7.7.1 Summary of adequacy of scenarios*).
- Whether change may be considered to have occurred may depend on perspective. From a cultural perspective, profound change was not considered to have become embedded as a consequence of Company One 2010. However, from a political perspective, a shift in influence from a group with an entrepreneurial outlook to a faction with a more sustainability and service-oriented world view was discernable (*cf. 7.5.3 Affirmation and 7.9.3 Summary of objectives and outcomes*). Change can seem to be resulting from a change of mindset when all that was occurring was a shift in dominance of one way of thinking over another.
- Rather than profound cultural change, a change in organisational direction may be characterised by individuals paying lip service to the change and selectively using the outcomes for their own purposes (*cf. 7.7.1 Summary of adequacy of scenarios*).
- Because the scenarios did not embrace the conceptual ecologies of participants and operatives, the internal organisational uncertainties that affected the implementation of change were perpetuated (*cf. 7.7.1 Summary of adequacy of scenarios*).

- Resistance to change tended to emerge subsequent to the Scenario Thinking phase (*cf. 7.5.2 Personal effects and 7.6 Ineffectiveness of the change initiative*)
- Attendance at the scenario planning workshops enhanced understanding of the main outcome of the change initiative, the new purpose and direction (*cf. 7.2.5 Summary of the change in organisational purpose and direction*).
- There appeared to be a lack of continuity between the entrenched culture and the proposed change (*cf. 7.6.1 Summary of ineffectiveness of the change initiative*).

7.9 Objectives and outcomes

This section addresses Research Question 2: What were the objectives of the organisation in undertaking scenario planning and to what extent were the objectives met?

In 1.5.3 *Description of the change process*, the three stages of the Company One 2010 change initiative were described. They were: Scenario Thinking (scenario development and options for strategy and action); Strategic Intent (setting purpose and direction); and Implementation (strategy development and implementation of the changes).

Throughout the interviews, many participants tended to use the term “scenario planning” loosely. Sometimes it was used to refer to the Scenario Thinking phase, particularly scenario development. In other cases it was used as a synonym for the Company One 2010 process. It became a matter of interpretation by the researcher to ascertain what was being referred to in each instance (*cf. 6.3.4 Objectives of scenario planning and Company One 2010*).

This loose use of terminology appeared to be a contributory factor in the phenomenon of many participants’ failure to distinguish between scenario planning and Company One 2010 when participants were discussing the objectives of scenario planning, even though at the beginning of the interview, nearly all participants had demonstrated an understanding of scenario planning (*cf. 6.3.1 Understanding of scenario planning*). But the distinction of scenario planning as a discrete activity almost disappeared when participants discussed objectives (*cf. Lack of distinction between SP & 2010 in 6.3.2 Objectives*).

It was concluded that part of the explanation for the apparently contradictory evidence may be found in the terminology “scenario planning.” An indication of this was given when participants were asked a different question: “Why do you think scenario planning in particular was chosen as a method.” This introduced a different perspective to the discussion – in the context of this question, scenario planning was viewed as a instrument or tool, rather than as a purposive or strategic change process.

When viewed from a strategic perspective, the objectives of scenario planning were usually not distinguished from those of Company One 2010. This suggested that scenario planning was perceived to be either identical to the overall change initiative, or a significant part of it, sharing its goals. The ability that participants had demonstrated earlier to clearly define scenario planning as a discrete process suggested the latter alternative, with scenario planning seen as an input to the rest of the change initiative.

From the methodological viewpoint (*cf. 6.3.3 Choice of scenario planning as a method*), on the other hand, scenario planning was compatible with participants' definitions of scenario planning as a process or method for considering the future, with a view to developing strategy and was interpreted to be congruent with the definition in 2.9 *What is scenario planning?* By taking into account the different perspectives, the two concepts from the evidence can be seen to be complementary rather than contradictory, as discussed in 3.4 *Limits of knowledge*.

For the researcher, the outcome of this was two sets of objectives (*cf. Table 6.3.1 Objectives of scenario planning and Company One 2010*). The role of scenario planning in the change process is discussed further in 7.11 *Role of scenario planning*. In this section, the outcomes of the process are compared with the perceived objectives from 6.3.2 *Objectives*.

7.9.1 Methodological objectives and outcomes

The outcomes relating to the methodological objectives of scenario planning (*cf. 6.3.3 Choice of scenario planning as a method*) are discussed in the next four subsections:

7.9.1.1 Participation of senior managers

It was perceived by some participants that planning projects were not considered to be a top priority by some of the corporate executive. However, all senior managers did participate in the Scenario Thinking project. They were also involved in the subsequent phases of the change initiative. Based on both their own reactions to the project, as expressed in the Research interviews, and the perceptions of other participants of managerial involvement, managers' attitudes to the change initiative varied from enthusiasm, both expressed and demonstrated, to reluctance. While it can be said that the objective of ensuring all senior managers participated was achieved, and nearly all of them said they saw value in the Scenario Thinking

project, there was a perception among some participants that several managers were less than enthusiastic about the process and/or its outcomes (*cf. 6.6.6 CEO and general managers' support for scenario planning*). This was perceived as evident both in their demonstrated behaviour (*cf. 6.6.6.5 Leadership characteristics*) and in their disinclination to accept or implement some of the changes that were suggested during the Strategic Intent phase (*cf. 7.16.2.1 Managerial follow-through*).

7.9.1.2 Broad view of business

Scenario planning was seen as a way to gain a broad view of the business that included, *inter alia*, cultural and commercial aspects and the operating environment for the future.

As discussed in *7.5.1 Learning*, there was a widespread perception that the scenario planning project had resulted in increased cross-divisional understanding. Thirteen participants – more than a third – said they discerned this in others, while nine discussed it with reference to themselves. However, although the change was perceived to have encouraged a more holistic approach to planning and operations than before, with people considering the effects of decisions on other parts of the organisation rather than just their own section or division, the learning tended to be more conceptual than actioned (*cf. 6.5.1.1 Intra-organisational understanding*). The holistic approach was reflected in the cross divisional nature of the new purpose and direction statements that were a product of Company One 2010.

Scenario planning also encouraged participants to consider the effect of the wider environment, and particularly the uncertainty of the future, on the organisation (*cf. 6.5.1.2 Extending thinking*), during the change initiative, but any enduring effects appeared to have remained at the espoused level.

7.9.1.3 Non-threatening forum

Scenario planning was expected to provide a non-threatening environment in which a wide diversity of people's different views could be freely voiced. There was little comment on this aspect of the Scenario Thinking workshops. Senior management agreed before the workshops that they would take a low profile (*cf. 6.5.1.3 Lessons*), but there was no comment from them or others on how well this was adhered to. There was some mention of the influence of dominating personalities in the workshops held during the Strategic Intent phase, from which it may have been inferred that this may also have been felt during the scenario workshops. However,

there was no data to support such an inference, and the scenario workshops appeared to have largely achieved their purpose here.

7.9.1.4 Structured uncertainty tool

Scenario planning was chosen as a method because it was considered to be a well developed and structured method for developing a manageable framework for planning in an uncertain future.

Evidence for the acceptance of the scenarios as a framework for the change initiative was found in some participants' descriptions of how they perceived scenarios as a basis for decision-making (*cf. 6.5.4 Use and content of scenarios*). Scenarios were seen as a future memory, a way of increasing preparedness for future change, or as a vision of the future that could be aspired to or to avoid.

As well as a framework for future thinking, the scenarios were perceived to have been the foundation upon which the Company One 2010 initiative was based. In *Figure 6.4.1 Fit* it was shown how scenario planning was seen as an input for the rest of the change initiative. Some participants had a contrary perspective, that there was little or no relationship between the scenarios and the outcomes of Company One 2010, but this tended to be less a viewpoint about the scenarios as a framework than about the decision-making processes after the Scenario Thinking phase (*cf. 6.5.6.3 Adverse effects and 6.4 Fit*).

7.9.2 Strategic objectives and outcomes

Each of the objectives that emerged in *6.3.2 Objectives* is discussed in this subsection. The main one was for the organisation to control its own destiny.

7.9.2.1 Control own destiny

The reasons for undertaking the change process led to a concern that the organisation needed to find ways to ensure it controlled its own destiny (*cf. 6.3.2 Objectives*).

The major driver for the future of the organisation that emerged from the scenario planning workshops was the influence of government,. Although the Before and After analysis demonstrated that few participants thought that there had been any change in the area of government influence, the scenarios were seen as a contributory factor in alerting people to the possibility that the organisation could lose some control to government. Everyone who spoke of it rejected one scenario that narrated an imaginary return to operation as a government department. *Figure 6.3.4 Objectives – emerging concepts and categories* shows how from this awareness

emerged the objective of a need for *Cultural change* and the concept *Vision change needed*. These were perceived to be linked to, *inter alia*, a need to ensure that the organisation's purpose and direction were compatible with Government guidelines and so remove a reason for potential government intervention in the Corporation.

The concept of loss of control to the Government emerged partly from perceptions that, unless there was a refocusing of the marketing effort back to the home State, the Government could step in and take over more control or direction of the Corporation. So the decision to abandon the overseas ventures was perceived to have been influenced not only by commercial considerations but also by the Government. It could be seen as a strategic retreat in order to preserve and maximise the organisation's ability to continue to be in control of its own destiny in future. Scenario planning was seen as a vehicle for recognising this and providing a framework to develop strategy in this context.

The four aspects of the concept *Control own destiny* that also became goals of the change initiative are discussed in the next four subsections.

7.9.2.2 *Cultural change*

Some participants nurtured a hope that Company One 2010 would result in deep and widespread organisational cultural change. This is discussed elsewhere. However, in discussions about objectives during the Research interviews, participants identified two specific aspects of culture that they believed needed change. These related to sustainability and bureaucracy (*cf. 6.3.2 Objectives*).

However, it needs to be remembered that these were retrospective views of the objectives of Company One 2010 and subject to reliability doubts (*cf. 6.3.6 Reliability of objectives data*). In the opportunities, threats, options and strategies that were identified during the second Scenario Thinking workshop, bureaucratic culture and structural matters were directly identified in only one scenario, which indicated that they were perceived to be of less import at that earlier time. Consequently it seemed that, rather than gain prominence during the Scenario Thinking project, these two facets of the concept of the need for cultural change evolved as major concerns during the two later stages of the change initiative. Sustainability became the focus of the new purpose statement and "*Challenge*

bureaucracy” became one of the central issues identified to be addressed by Changemaker teams (*cf. 6.7.1 Changemaker teams*).

In contrast to the focus on sustainability in the new purpose and direction, the challenge to bureaucracy proved less effective than many people had hoped. Despite the innovations that were suggested, and in some cases implemented during the change initiative, by the time of the Research interviews it was perceived that there had been little change in the entrenched bureaucratic culture and structure of the organisation as a result of Company One 2010 (*cf. 6.6.10 Effect of bureaucracy*).

The apparent evolution of these cultural issues to central issues of concern suggested a degree of retrospective interpretation by participants. Recall can be affected by, *inter alia*, duration since the recalled event, the effect of subsequent events and influences on memory and how personal expectations were realised by outcomes (*cf. 5.2.2.2 Retrospective data*). There must be some doubt about whether the aspects of bureaucracy and sustainability were initially among the change objectives of Company One 2010.

7.9.2.3 Vision change needed

The old vision (*cf. 7.2.1 Replacing the vision*), emphasising chasing new business and being Australia’s leading water utility (without defining “leading”), was considered by some to be inadequate, because they perceived it did not embody the values and business idea (*cf. 2.13 Where scenarios fit*) of the organisation. The new purpose and direction statements that were the tangible outcome of the change initiative were considered by most to be more satisfactory (*cf. 6.6.3.3 Clarity of purpose and direction*). Although initially there had been some questioning whether it was part of the organisation’s purpose to “make Western Australia a great place to live and work,” this came to be accepted as embodying service as part of the organisation’s reasons for existence.

While the new purpose and direction statements were an outcome of Company One 2010, and therefore affected by the Scenario Thinking project which set the framework for their development, there were questions raised whether they reflected a policy direction that had already been decided or contemplated (*cf. 7.5.3 Affirmation*). Some evidence for this was contained in the organisation’s 1999-2000 annual report, which contained a commitment from the managing director to serve Western Australia first. In this statement, the phrase “helping to make WA an

attractive place to live and invest” appeared – similar wording to that in the purpose statement that emerged from Company One 2010. In 7.5.3 *Affirmation* and 6.3.2 *Objectives* it was suggested that Company One 2010 provided a framework to implement changes that at least some people in the organisation had considered were necessary prior to the start of the change initiative. This included – but was not restricted to – a group who felt undervalued by the entrepreneurial focus of the commercial division years (*cf.* 6.6.3.2 *Business development*). The echo in the new purpose statement of the 1999-2000 annual report reinforced the suggestion that the changes that did occur did not reflect new ideas and could be considered more as a movement in political influence than as a cultural shift (*cf.* 7.5.3 *Affirmation*).

7.9.2.4 *Reassess business framework*

An evaluation and revision of the organisation’s core business and the suitability of the business framework for it, as a consequence of the need for control over the future of the Corporation discussed in 7.9.2.1 *Control own destiny* and the factors discussed in 7.1 *Context*, was an objective that was achieved with the new purpose and direction statements. However, while the statements provided a mental framework, there was a belief among some participants that the change was not embedded because it should have been followed with structural change, particularly in a restructuring of senior management and in lines of accountability (*cf.* 6.6.6.1 *Structure* and 6.6.4.3 *Accountability and discipline*).

7.9.2.5 *Consistency of approach*

It was perceived that regions and different divisions had lacked a consistent approach to marketing and organisational matters (*cf.* 6.6.4.3 *Accountability and discipline*). While from the change initiative some cross-divisional understanding was said to be achieved and a new common purpose and direction was established, it was perceived that the change initiative was responsible for few specific changes in strategy in the regions by the time of Research interviews, although dissemination of the implications of the new purpose and direction was underway (*cf.* 6.7.2 *Managerial follow-through*). As well, there was inconsistency in perceptions of whether or not such changes as had occurred, e.g., greater centralisation, had occurred independently of Company One 2010 (*cf.* 6.6.6.1 *Structure*). Senior management were more likely than other groups to attribute the changes to Company One 2010. There seemed to be no lack of awareness of the Company One 2010 or scenario

planning projects, but it seemed that the implications and implementation of the outcomes of the change initiative had not penetrated far into the culture or been widely translated into action by the time of the research.

There was a contrast between this perception of lack of change in divisional and regional silos and the perception of improved cross-divisional understanding awareness that was discussed in 7.9.1.2 *Broad view of business*. This further suggested a lack of profound change, with awareness of an issue not translated into action.

purpose and direction, that the change resulting from the scenario planning process may be seen as a shift in political empowerment, with a previously held rather than a new perspective becoming the dominant influence in strategy.

That two complementary perspectives about the objectives – strategic or methodological – had emerged led to questions about the role of scenario planning in the change process, which is the subject of the next section.

7.10 Resolution of Research Question 2

What were the objectives of the organisation in undertaking scenario planning and to what extent were the objectives realised?

In this section the strategic objectives of Company One 2010 and the methodological objectives of scenario planning identified in 6.33 *Objectives* have been discussed. The methodical objectives of scenario planning were perceived to have been largely realised, but the strategic objectives of the change initiative were perceived to have been only partially achieved.

7.10.1 Theoretical concepts from Research Question 2

Theoretical concepts that emerged during the resolution of Research Question 2 were:

- Evaluation of the scenario planning project may be at a methodological or at a strategic level (*cf. 7.9.3 Summary of objectives and outcomes*).
- Retrospective perceptions of the objectives of a change initiative may be affected by outcomes and events since (*cf. 7.9.2.2 Cultural change*), so that evaluation of the outcomes of scenario planning may not be against the original objectives.
- Scenario Thinking was a vehicle for recognising important driving forces and provided a framework in which strategy could be developed (*cf. 7.9.2.1 Control own destiny*)

7.11 Role of scenario planning

This section addresses Research Question 3: How did participants perceive the role of scenario planning in the overall change process?

One of the emergent concepts illustrated in *Figure 6.4.2 Scenario planning as a part of Company One 2010* was that the role of scenario planning was as an input to the rest of the change initiative, setting a framework for the strategic conversation about change and planning. In the theory of scenario planning illustrated in *Figure 2.10. The two pillars of scenario planning theory*, this is the Pillar One aspect of scenario planning.

The concept accords with the contention of Leemhuis (*cf. 2.9 What is scenario planning?*) that scenario planning is a misnomer and that it is a stand-alone process rather than planning *per se*. In this case the process was perceived as a precursor to the development and implementation of strategy, a discrete part of the change process.

If scenario planning was a part of the change process, how could its role as an agent of change be defined? An agent is “an active or efficient cause” (The Macquarie Dictionary, 1997), i.e., “an initiator” of change (The Shorter Oxford English Dictionary, 1973). By contrast, an instrument is a means of pursuing an aim (*ibid.*). In this sense, scenario planning here was an instrument of change, through which change was effected, rather than an agent of change. As has been discussed (*cf. 7.4.9 Summary of specific change areas*), with only a few exceptions (e.g., *cf. 7.3.1 Competition*) there was a widespread reticence by participants to attribute specific organisational changes to scenario planning and there was also little evidence that less tangible changes were perceived as directly attributable to it. The change catalyst was to be found not in the Scenario Thinking project but in the reasons that Company One 2010 was undertaken (*cf. the emergent concept Foreseeing change in 6.3.2 Objectives*). As has been discussed, the scenario planning project was seen as an instrument providing a structured method and framework for the rest of the change initiative.

A consequence of the view that scenario planning was part of a toolkit that brought about change was that the scenario planner’s job was considered to be completed

once the scenarios had been developed. The functions of the scenario planning facilitator were gathering information, facilitating the two scenario workshops and overseeing the writing of the scenarios: it was largely exploratory. The task was considered finished once the scenarios were developed and explored for implications in the second workshop, although in this case the facilitators did report back to focus groups to assist with the second phase (J. Barker, personal communication, October 5, 2005). However, it was not perceived to be part of the scenario planning process for the scenario planner to answer the vexing “So what?” question that often follows the completion of the scenarios (*cf. 2.1.3 Where scenarios fit*). The Water Corporation mainly used its own resources and other external consultancy in the next two phases of the change initiative. Perceptions of the function of the scenarios in these phases were that the scenario planning process had prepared people to be receptive to change by affecting mindsets and that the scenario planning project had acted as a tool, an input for Company One 2010 (*cf. Figure 6.4.2 Scenario planning as part of Company One 2010*). As well, a third group could not see much connection between the scenarios and the phases of the change initiative that followed – the “black box” concept.

There was a wide diversity of comment about the nature or subject of change of mindset (*cf. Figure 6.4.1 Fit*), but in *7.5.1 Learning*, it was shown how perceptions of change of mindset contrasted with a perceived lack of actioned change and the concept that lessons should have been, rather than were, learned.

This suggested that changes of mindset from Scenario Thinking affected the strategic conversation of the Strategic Intent phase, but were not sustained much beyond what was seen as a discrete planning event. Further evidence for this was comment by some participants that the scenarios were consigned to “the bottom drawer” and not used after the Scenario Thinking or Strategic Intent phases. From this perspective, the scenario planning project was, in retrospect, seen as an instrument for one-off problem solving to open up and make sense of issues (although some participants would have liked to have seen them used for ongoing learning to improve anticipation and/or promotion of adaptive organisational learning based on the scenarios) (van der Heijden et al., 2002) (*cf. 2.9 What is scenario planning?*). Part of its value had been as an icebreaker to begin and set a framework for the strategic

conversation in the Strategic Intent and Implementation phases (cf. 6.4.2.6 *Facilitation*).

The notion that how outcomes of the change initiative were arrived at was a “black box” (cf. 7.16.1.1 *Decision-making (the black box)*) raised the question of whether it was beneficial for all operatives to be engaged with or cognisant of the contents of the scenarios for the change process to be effective, a concept that also emerged in the Research interviews. Analysis of the group of people who saw no or little connection between the scenarios and the rest of the change initiative, showed approximately equal numbers who had attended one, both or none of the scenario planning workshop, which suggested non-participation in Scenario Thinking did not contribute to the lack of understanding. However, this lack of understanding related not to Scenario Thinking but to the Strategic Intent phase where other factors affected the communication of the change (cf. 7.2.4 *Clarity of purpose*). Its effect was to encourage a feeling of alienation in some participants (cf. 7.16.1.1 *Decision-making (the black box)*).

However, participation in the scenario development process is not the same as exposure to the scenarios. In 2.11.1 *Communicating scenarios* it was theorised that the need for and extent of communication of the scenarios depended on the purpose of the scenarios. As has been discussed above, the scenarios here became a tool for one-off problem solving, to open up and make sense of issues, for which wide dissemination of the scenarios theoretically would not be necessary (cf. 2.11.1.2 *Participation and purpose*).

It was considered to be important that operatives who had not been participants understood the framework that had resulted from the change initiative, so the need and reasons for change were to be communicated to them initially by the participants in the change process who understood the outcomes (cf. *Roll-out and managerial follow-through*). But the question of whether this should have included reference to the scenarios would depend on whether the scenarios were likely to resonate with the conceptual ecologies of the operatives.

Scenarios were perceived to have provided the proxy experience, the shock to stimulate learning (cf. 2.11.4.7 *Learning*). However, for the purpose of one-off problem solving, it would have been necessary for only a core group and the

champions of change to experience this. For operatives beyond that group, without understanding of the scenario building process, the scenarios could have seemed little more than fantasy, especially to the cynics in the organisation (*cf.* 7.17.3 *Cynicism*), which could prove counter-productive to the implementation of change, and the researcher received anecdotal verbal indications (though outside the interviews) that this had occurred. The organisation's strategy was for communication of the change outcomes and their implementation to be the responsibility of the line managers, so that the message and its language could be adapted by them to suit the different parts of the organisational culture. The effectiveness of this is further discussed in 7.16.2.1 *Managerial follow-through*.

The other role of scenario planning in the theory developed in 2 *Literature review and scenario planning theory* was in exploring the conceptual ecology of individuals (*cf.* Figure 2.10 *The two pillars of scenario planning*), to reveal not only the different perspectives of people about the organisation, but also the assumptions and identity which would need to be taken into account if change were to be consistent with what had gone before (*cf.* 2.11.4.9 *Change and identity*). This was discussed in 7.7 *Adequacy of scenarios*.

7.11.1 Summary of role of scenario planning

Because the scenario planning project was considered to be an instrument, rather than an agent or initiator, of change, it was considered to have been largely completed once the scenarios had been written and their implications considered. Although some participants would have liked to see ongoing learning and/or promotion of adaptive organisational learning based on the scenarios, it was not perceived that this had occurred. This is in agreement with the conclusion of Petersen (2001) that a one-time scenario planning activity was insufficient to change deep-set mental models (*cf.* 2.15 *Implementation*). Rather, the scenario planning project was perceived as setting a framework for the strategic conversation about change that continued into the next two phases of the change initiative (i.e., performing the function of Pillar One of scenario planning theory).

As an input to the rest of Company One 2010, the scenario planning project was perceived as a sense-making platform that affected some mindset changes, but such changes were rarely translated into behavioural changes in the long term. The

finding was a further reinforcement for the interpretation that the change initiative had not induced profound cultural change.

The organisation had taken the approach of disseminating the new purpose and direction through line managers, with the intent that it would be communicated in language and concepts that resonated with relevant operatives who had not been participants in the change process. In this situation, it may not have been necessary for the scenarios to be part of the communication of the new policy, depending on whether it was felt the scenarios would resonate with the operatives' world views.

This suggested a recognition of the importance of continuity and resonance with past experience in the implementation of change (*cf. 2.11.4.9 Change and identity*). The operatives would not have been likely to respond to anything discontinuous with or alien to their long-held beliefs and assumptions, but would need to perceive that there were reasons for change that resonated with their own world views. This was best done in their own terminology and context.

The interpretation here was dependent partly on the theory developed in *2 Literature review and scenario planning theory* and partly grounded in the data. It is congruent with the strategy used by the Water Corporation in communicating the new purpose and direction statement and its implications (*cf. 7.16.2.1 Managerial follow-through*).

7.12 Resolution of Research Question 3

How did participants perceive the role of scenario planning in the overall change process?

The scenario planning project was perceived as a sense-making discrete process that was an input to the rest of the Company One 2010 change initiative. It provided a framework for the strategic conversation in the latter two phases to proceed and opened world views and mindsets to scenario thinking. It was not an agent of change, in the sense of initiating, but an instrument of change, a tool that assisted the change process, which acted as a jolt to the assumptions of participants, especially managers, about the future. By providing a framework for questioning assumptions, it acted as a vehicle for bridging the gaps between the past experience of the participants and a new purpose and direction for the organisation. Whether the

scenarios should have had an ongoing role in the communication of change to operatives was seen to depend on an assessment of whether the scenarios resonated with the past experience and identity of the operatives.

7.12.1 Theoretical concepts from Research Question 3

Theoretical concepts that emerged during the resolution of Research Question 3 were:

- Scenario planning was seen as a discrete one-off process, to open up and make sense of issues, but was not used for on-going adaptive learning (*cf. 7.11.1 Summary of role of scenario planning*).
- Scenario planning was perceived as an input to the rest of the change initiative, setting a framework for the strategic conversation. Mindset changes that occurred in the course of scenario planning tended to be ephemeral (*cf. 7.11.1 Summary of role of scenario planning*).
- The need to maintain identity through continuity and resonance with the cognitive ecologies of the operatives was recognised, as evidenced by the roll-out strategy (*cf. 7.11.1 Summary of role of scenario planning*).
- Communication of the scenarios to operatives when they are used for one-off problem solving should only be undertaken if it will resonate with their cognitive ecologies and so assist with the implementation of change (*cf. 7.11.1 Summary of role of scenario planning*).

7.13 Implications of the Before and After comparison

This section addresses Research Question 4: How did any changes that participants perceived or believed had occurred compare with the changes revealed by a comparative analysis of their opinions and ideas early in, and later in, the change process?

The comparison of participants' viewpoints before and after the scenario planning project revealed three areas where participants considered organisational change was to some extent attributable to scenario planning and/or Company One 2010. These have been discussed in 7.2.3 *Business development*, 7.3.1 *Competition* and 7.2.4 *Clarity of purpose*. However, the comparison also provided a strong indication that there had been few changes of viewpoint as a result of the change initiative. There were only two areas of change where change of viewpoint was considered to be significant. These were where the organisation should be focussing its business

development (*cf. 6.8.1 Business development*) and the nature of and response to competition (*cf. 6.8.2 Nature of/response to competition*). In both cases, the revised viewpoints involved an adjustment by some individuals to align with the new organisational stance, e.g., from an opinion that the organisation should aim to expand beyond Western Australia and/or beyond its core business to an alignment with the post-Company One 2010 near-total focus on supply and service for Western Australia.

The finding that there was a tendency for individuals to align themselves with the revised organisational position in these two areas (*cf. 6.8.1.1 Emerging concepts – business development*) was reinforced by analysis of the attitudes of participants who did not change their viewpoint. In all but one case of unchanged viewpoints, the participants' previous views were in alignment with the organisational changes that occurred, so no alteration of viewpoint was necessary to accommodate the change. There was also no change of viewpoint discerned in the other case where a significant number of participants thought that there had been a change in the organisation, which was clarity of purpose (*cf. 7.5.1.2 Clarity of purpose*).

7.13.1 Summary of implications of the Before and After comparison

The findings indicated that enduring changes of mindset resulting from the organisational change initiative, and scenario planning as part of it, were rare. However, this conclusion needs to be qualified because the ability to make a comparison was limited to areas where participants discussed issues in both the pre-workshop and main research interviews. There may have been other areas where individual participants changed their point of view in the comparison period. But no evidence for this emerged from the data and the concept that, overall, change at a personal level was minimal (*cf. 6.5.2 Personal effects*) was reinforced by the Before and After comparison.

7.14 Comparison of change from both analyses

This section addresses Research Question 4: How did any changes that participants perceived or believed had occurred compare with the changes revealed by a comparative analysis of their opinions and ideas early in, and later in, the change process?

In Table 6.8.1 Before and After comparison summary, specific areas from 7.2 The change in organisational focus and direction, 7.3 The focal issue and 7.4 Other change areas, where change in the organisation and its culture were discussed during the Research interviews, are compared with the same areas in the Before and After analysis (cf. Table 6.8.1 Before and after comparison summary). The organisational change column is the interpretation of the relevant parts of 7.2 The change in organisational purpose and direction and 7.3 The focal issue and 7.4 Other change areas. The table also includes the viewpoint changes that emerged in the Before and After analysis.

Table 7.14.1 Comparison of change from both analyses

Change aspect	Organisational change		Viewpoint change	SP/2010 related?		Ref.	Responses
	B&A	Research	B&A	B&A	Research		
Business development	Yes	Yes	Mixed	Yes	Yes	10	
Clarity of purpose	Yes	Mixed	No	Yes	Mixed	16	
Nature of & response to competition	Mixed	Yes	Mixed	Yes/No	Yes	12	
Customer expectations/attitude to customers etc	Mixed	Mixed	No	No	Mixed	5-8	
Attitude to risk	Mixed	No	No	Yes	N/A	27	
Attitude to government & regulators	Mixed	Mixed	No	No	Mixed	1-4	
Organisational culture - engineering	No	No	No	N/A	N/A	21	Few
Leadership	No	Mixed	No	N/A	Mixed	45	Few
Structure	Mixed	Mixed	No	No	Mixed	20	
Workforce issues	Mixed	No	No	No	N/A	47,48, 51,52	Few
Water quality	Yes	No	No	Yes	N/A	39	Few
Technology	Mixed	No	No	No	N/A	14	Few
Sustainability	~	Mixed	~	~	Mixed	N/A	

Key:

Organisational change	= Did the participants perceive there had been any change in this aspect of the organisation?
Viewpoint change	= Was there a change of viewpoint by participants with regard to this aspect?
SP/2010 related	= Did the participant perceive that any organisational changes were related to scenario planning or Company One 2010?
B & A, Research	= Reference to the two analyses, Before and After, and the main Research interviews.
Ref.	= Reference number in <i>Table 6.8.1 Before and After comparison summary</i>
Yes, No, Mixed	= Researcher's interpretation of participants' alignment with the concept, overall. There are usually some exceptions. "Yes/No" records different perspectives on the questions of the nature of and response to competition respectively.
Responses	= Indicates where there were few responses and the evidence for the interpretation is weak.

The table illustrates that there was only one aspect, the direction of business development, where both analyses showed participants broadly agreed both that organisational change had occurred and that the change was related to scenario planning and/or Company One 2010. This, together with the viewpoint change, indicated that there was both an understanding and acceptance of the decision for the organisation to focus its operations and aspirations more on its home State, with emphasis on sustainability and its customers' needs, an outcome that was in alignment with the new purpose and direction.

There was also partial agreement between the two sets of data that participants perceived there was more clarity in the new purpose and direction than in the old vision, but there was no viewpoint change on this issue. In *7.2.4 Clarity of purpose* it was observed that the data supported the hypothesis that people who attended the scenario planning workshops were more likely to perceive a greater clarity in the new purpose and direction than others.

In the discussion about the nature of, and organisational response to, competition (*cf. 7.3.1 Competition*), it was indicated that there had been a shift in organisational approach and that participants had changed their viewpoints on this matter. In both analyses, the organisational change in this area was related to scenario planning and Company One 2010, but only two participants were interpreted to have attributed their change in viewpoint to this in the Before and After analysis. However, it was observed in the Research interviews that competition, by the end of the scenario planning workshops, was no longer considered as important as previously (*cf. 7.3.1*

Competition) and that most participants who had changed their view attributed the change to scenario planning/Company One 2010. There was an apparent contradiction here – why was the Before and After analysis indicating the change of viewpoint was not due to the change initiative while the Research interviews suggested the attitudes had changed during the scenario planning phase?

The contradiction was unable to be definitively reconciled. However, there was a possible reason for it: the Research interview discussions related mainly to the nature of competition, rather than the response to it (which was able to be categorised as *Business Direction*). But the distinction between the nature of competition and response to it (uncategorised) was often unable to be discerned from the Before and After data, i.e., the pre-workshop interview notes, because the data was not comprehensive enough to make clear distinctions and comparisons may have been between different categories of data.

Because the Research interview data had greater authenticity due to the recording of full transcripts, the analysis of this data was preferred.

In all other aspects shown in *Table 7.14.1*, perceptions of whether organisational change had occurred were mixed or negative, except in the Before and After analysis of water quality, where the evidence was too weak to be meaningful because of the low number of people who discussed it. Using a convention that a mixed classification did not contradict a yes or no, it was concluded that, except for the competition issue, the data in the table were considered to be consistent

7.14.1 Summary of comparison of change from both analyses

Table 7.14.1 suggested coherence between the two analyses that the change initiative had been successful in introducing a new framework for business development, and some change of mindset had emerged in both this area and the related issue competition. However, there was perceived to have been little change in other aspects of the organisation that the change of focus and direction might have been expected to affect, and viewpoints or mindsets had not changed much. The comparison reinforced the tentative conclusion reached in *7.13.1 Summary of implications of the Before and After Comparison*, that enduring changes of mindset resulting from the organisational change initiative were rare.

7.15 Resolution of Research Question 4

How did any changes that participants perceived or believed had occurred compare with the changes revealed by a comparative analysis of their opinions and ideas early in, and later in, the change process?

The only areas where it was clearly shown in both the Research interview analysis and the Before and After analysis that major specific organisational change was a consequence of scenario planning and/or Company One 2010 were business development and, to a lesser extent, clarity of purpose, and only in the area of business development was change of viewpoint attributed to the change initiative.

7.15.1 Theoretical concepts from Research Question 4

Theoretical concepts that emerged during the resolution of Research Question 4 were:

- There was a coherence in the outcomes of the two analyses, with the comparison of perspectives before and after scenario planning mostly in agreement with participants' accounts of the change.
- Enduring changes of mindset did not emerge from scenario planning and Company One 2010 except in rare instances.

7.16 Strategic Intent and Implementation phases

This section addresses Research Question 5: What were the factors that influenced the acceptance or otherwise and implementation of proposed changes?

That many management teams are perplexed by the challenge of developing and implementing strategy based on scenarios is well documented (van der Heijden, 1996, Schoemaker, 2002). If the answer to the “So what?” question that follows the completion of the scenarios is not convincing, the whole change process can be vulnerable (*cf.* 2.13 *Where scenarios fit*). This section discusses aspects of the Strategic Intent and Implementation phases of Company One 2010 that emerged from the data.

7.16.1 Strategic Intent

An explanation of this phase can be found at 1.5.3.2 *Strategic intent (implications)*.

In 7.6 *Ineffectiveness of the change initiative* it was indicated that the reasons for the lack of profound change as a result of scenario planning and/or Company One 2010 were most likely to be found in the Strategic Intent and Implementation phases. This subsection explores the Strategic Intent phase, which lasted about six weeks, with a view to establishing how actions in what was intended to be a participatory process affected the outcome.

Although changes of mind-set from scenario planning were mostly short-lived and rarely translated into active change of work practice or ongoing decision-making (*cf.* 7.11 *Role of scenario planning*), the Scenario Thinking project itself was widely regarded as worthwhile (*cf.* 7.5.4 *Use and content*). This suggested that the tendencies that had led to the interpretation that there was a lack of profound change from the change initiative would emerge from a study of the subsequent phases of Company One 2010.

In setting a framework for this strategic conversation, the Scenario Thinking project was seen as an instrument that helped increase participants’ receptiveness to change and initiated the strategic conversation for the Company One 2010 initiative (*cf.* 7.11 *Role of scenario planning*). However, there were mixed perceptions about the use of the scenarios as a framework on which to base the Strategic Intent discussions (*cf.* 6.4.3 *Inability to distinguish scenario planning*). There was little doubt that scenario

thinking influenced the Strategic Intent phase, at the least by having opened mind-sets to multiple and previously unconsidered possibilities, and so affecting the world-views that participants contributed to the conversation (*cf. 2.11 Changing mental models*).

The outcome of the Strategic Intent phase was the new purpose and direction statement, which heralded a distinct shift in the organisation's espoused strategic direction and priorities. The scenarios influenced the thinking that led to the change, due at least in part to their negative normative effect (*cf. 7.5.4 Use and content*), as well as the shifts of opinion on competition (*cf. 7.3.1 Competition*).

However, although the new priorities were put into effect in the formal organisational structure (*cf. 6.7.4 Roll-out and managerial follow-through*), the learning that might have occurred from the scenario planning project appeared to have largely remained at the espoused level. So what were the factors in the Strategic Intent phase that influenced the acceptance or otherwise of change? Participants' perceptions of this are interpreted in the rest of this subsection.

7.16.1.1 Decision-making (the black box)

Lack of understanding of how the new purpose and reaction statement emerged from the Strategic Intent phase, due to a perceived lack of transparency, tended to raise suspicions that participants' inputs to the process had not been fully taken into account or taken sufficiently seriously, so that participation became perceived to have been illusory. These participants intimated that they no longer felt the change belonged to them and had become disillusioned, if not cynical, about it (*cf. 6.7.3 Decision-making*).

That some people felt alienated from the change process after participating in it suggested a flaw in communication of its outcomes. This may be interpreted to be in contrast to the comments in *6.5.1.3 Lessons* about managers needing to listen more, an activity necessary for such sources of dissatisfaction to be identified and remedied.

7.16.1.2 Affirmation

As discussed in *7.5.3 Affirmation* and illustrated in *Figure 6.5.4 Affirmation and resistance to change*, both the idea that the change initiative was merely to confirm a predetermined change direction and the belief that the change was compatible with

their existing views could lead to resistance to change, where participants felt their participation in the change process had been undervalued or was illusory.

7.16.1.3 *Strategic conversation*

The effectiveness of scenario planning as a mechanism for structured conversations was widely perceived. However, there were some reservations about the subsequent Strategic Intent workshops, where there was a perception among some participants that some people, including managers, were able to have more influence than others due their dominating personalities, and that this had affected the outcomes (*cf. 6.7.7 Strategic conversation*).

There was little direct comment about informal strategic conversations. However, in 6.5.2.5 *Confidence and caution*, participants expressed contrasting viewpoints about how the change initiative had affected their confidence in participating in informal strategic conversations. This was interpreted to reflect the attitudes of people who felt they had gained knowledge and improved networks as a consequence of the change initiative and those who felt their ideas had not been heeded or properly taken into account. One effect of this was perceived to have been reflected in attitudes to risk (*cf. 7.1.1 Risk aversion*), where a lessening of confidence about participation in the strategic conversation could reinforce risk averse outlooks.

7.16.1.4 *Duration*

A few participants criticised the duration of and resources devoted to the Scenario Thinking and the Strategic Intent phases, and it appeared that this had negatively affected their attitude to the change process and its outcome (*cf. 6.5.6.3 Adverse effects*). Others were dismissive of their criticism, believing that long-term planning was an important function, especially of senior management.

7.16.1.5 *Changemaker teams*

Van der Heijden (1996) has commented that organisational knowledge is less the sum of the knowledge of individuals in it, and that the contributions of individuals are not always listened to. Changemaker teams (*cf. 6.7.1 Changemaker teams*) were an opportunity for individuals to contribute to the Strategic Intent process and participation was said to be fervent. However, the strongest negative comments about the change process were reserved for the Changemaker team experience. The enthusiasm of the Changemaker team members for their task was demonstrated when they volunteered to undertake the research and reporting required in addition to

their normal workload. That so few of their recommendations were implemented after their active input in the change process had been sought was perceived as a betrayal of the participatory ethos of the change initiative and was a source of disillusionment and even bitterness for many of them, resulting in a reluctance to participate in future change initiatives and a disinclination to pro-activity in their work. Their unhappiness was communicated to their colleagues and spread through the organisation, an example of how the informal strategic conversation can spread negative perceptions when these are people's underlying rather than espoused beliefs (*cf. Figure 2.3 The shadow culture*).

Some participants drew parallels with a survey that had taken place several years earlier, where the senior management had asked for views from the rest of the staff. It was perceived that the results of that survey had not been to the liking of management and had been ignored. The rejection of a considerable number of the Changemaker recommendations reinforced the disillusion that had emanated from the earlier experience.

Senge (1992) commented on how when ideals became expectations and are failed to be realised, the outcome was often cynicism, and that cynicism was the most daunting form of resistance to change. He noted (*ibid.*, p146) that “to empower people in an unaligned organisation can be counterproductive.” It is an observation that appears to be applicable to the experience described here, where there appeared to be a lack of alignment between the raised expectations of the participants in the change process and what senior management were prepared to perform. Although there were factors that mitigated against implementation, these did not appear to have been communicated well enough for the participants to have accepted them. It is, of course, a risk of participatory involvement that the results may not be to the liking of management. In this case, the disillusionment was felt deeply by some people.

7.16.1.6 Summary of Strategic Intent phase

Although the effect of scenario planning on mental models with respect to the former was largely transitory, the scenarios were perceived to have opened mind-sets as a preparation for the development of the new purpose and direction statement, although the learning from this, too, had not translated into enduring changes in work practices or penetrated deeply into the organisational culture.

The factors that emerged from the data from the Strategic Intent phase that were perceived to have influenced the acceptance of the change were:

- Insufficient transparency in decision-making, which led to a feeling of alienation from the change
- The concept of *Affirmation* both in the sense of a predetermined outcome, which led some participants to perceive that their contribution had been undervalued, and in the sense of compatibility with extant views
- The influence of dominating personalities in workshops, and contrasting perceptions of the strategic conversations, with consequent loss of confidence and increased risk aversion by some people and increased networking and participation by others.
- The Changemaker teams experience, in which participants who perceived their efforts were under-valued became disillusioned and cynical about change processes.

7.16.2 Implementation

This section addresses Research Question 5: What were the factors that influenced the acceptance or otherwise and implementation of proposed changes?

An explanation of this phase can be found at 1.5.3.3 *Strategy development and implementation*. This section documents the factors that were perceived to have influenced the development of strategy to align with the purpose and direction statement and its implementation.

7.16.2.1 Managerial follow-through

In 2.11.1 *Communicating scenarios* it was suggested that if the purpose of the scenarios was one-off problem solving, communication of the scenarios themselves in the implementation of change was not always necessary. In 7.11 *Role of scenario planning* it emerged that the Water Corporation's scenario planning had been perceived as such a discrete process, an input to the rest of the change initiative, and it appeared that the scenarios were not often referred to after the scenario planning phase.

In 2.11.4.9 *Change and identity*, the concepts of the consistency of change with mental integrity and recombination rather than discontinuity were introduced. Although the scenarios were not used as what Burt (2003) called a transitional object in this phase, there was a tacit recognition of these ideas of continuity and the need to resonate with the experience of operatives in the organisation's strategy for communicating the new purpose and direction and its implications to operatives (*cf.* 6.7.4 *Rollout and managerial follow-through*). By leaving what was termed the roll-out to line managers, the Company One 2010 team intended to ensure that the implementation was progressive, and the change would become embedded over a period of time rather than be introduced with what they called a "big fanfare". To achieve this, the intention was that the staged implementation, with one level of the organisation being trained before the operatives at that level introduced it to the next, would enable the new policies to be introduced in the type of language and in a framework that operatives in all parts of the organisation would relate to. The policy was in alignment with the recommendations of Schoemaker (1998).

The success of the strategy appeared to be partial, because it depended on the acceptance and enthusiasm of the line managers for the change. As has been discussed (*cf. 7.6 Ineffectiveness of the change initiative*), implementation of the change by managers was variable. In *6.7.4 Roll-out and managerial follow-through*, the enthusiasm of some managers for the change and the lack of interest of others were documented. It was evident that some of them were reluctant compliers (*cf. 2.11.5.2 Changing basic assumptions*). Reasons perceived by participants for the reticence included the culture of independence, time pressures that resulted from the drought and a lack of communications skills on the part of some managers. These reasons are discussed further in *7.17 Barriers to change*.

7.16.2.2 Participation

The participative nature of scenario planning (*cf. 2.11.1.2 Participation and purpose*) was a feature not only of the Water Corporation's scenario planning project but also of the Strategic Intent phase, through workshops, focus groups and the Changemaker teams, and the implementation, as demonstrated by, e.g., the roll-out strategy discussed in the previous sub-section. The value of participation in the change process was seen in the strong commitment of some participants to it, including young people in the organisation whose input was being sought for the first time in this manner (*cf. 7.4.5 Workforces issues*). But others perceived that an element of the participatory process should have been the inclusion into strategy of participants' suggestions and recommendations from the process and that this had not occurred sufficiently (*cf. 6.7.2 Participation*) during the Strategic Intent phase. A consequence of this was the disillusionment that, combined with underlying cynicism (*cf. 7.17.3 Cynicism*), was one of the reasons that the effort at participation was perceived as less effective in the later phases than during the scenario planning project.

7.16.2.3 Change leadership and persistence

The difficulties of intervening in world views to effect changes in mental models were related in *2.11.4 Effect of scenarios*. Pettigrew and Whipp (1991) advocated the employment of champions of change to redress a tendency for change initiatives to be accorded lower priority than more pressing day-to-day issues. Black and Gregersen (2002) suggested that champions were needed to assist with behavioural change in day-to-day operations, although resources may limit their deployment.

(For Black and Gregersen it was assumed that executives supported the change, but they were not available to provide assistance to operatives when needed. As has been seen, managerial support was not perceived as assumed at the Water Corporation).

There was widespread appreciation of the effectiveness of the Company One 2010 team, who were not part of the senior executive, in driving through the change initiative and the early stages of implementation. However, there was a perception that the team was disbanded too early in the implementation phase, and that the removal of their guidance and motivation, combined with the reluctance of some managers at all levels to promote the change, was a factor in the flagging of the implementation effort (*cf. 6.7.5 Change leadership*).

This perceived lack of perseverance was attributed to a number of factors, including the pressing issues of the drought response, litigation threats and coping with redundancies (*cf. 7.17.2.3 Drought and litigation*) and a perceived lack of specific or tangible targets (*cf. 7.4.3 Organisational culture*), as well as, for some participants, a view that it was another example in a long history of not following through with change initiatives (*cf. 6.7.6 Persistence*). The last was interpreted as an example of cynicism (*cf. 7.17.3 Cynicism*), since it was contrary to the evidence of the enduring effects of Company One.

However, underlying the expressed reasons for the lack of persistence were the entrenched culture and what was emerging as a cynical attitude to both Company One 2010 and change initiatives generally (*cf. 7.17.2.4 Entrenched and engineering-based culture and 7.17.3 Cynicism*). Some participants perceived a sense of relief amongst their colleagues when the Company One 2010 team disbanded (*cf. 6.7.6 Persistence*).

7.16.2.4 *Less effect than expected*

Figure 6.5.8 Unexpected effects – emerging concepts illustrated how the perception that the change initiative had not had as much effect as some participants expected led to disillusionment with the process. This was also reflected in the disappointment of some participants with its outcomes (*cf. 6.5.6 Unexpected and adverse effects of scenario planning*).

7.16.2.5 *Selective use of outcomes*

In 6.6.4.4 *Getting on in the culture* the selective use of the outcomes was described. This was a phenomenon also encountered by Vallas (2003) who observed (though not in a scenario-based context) that operatives used selective features of new work practices to expand their authority in new ways. It suggested a cynical attitude to the new purpose and direction and was further evidence that it had not become embedded in the organisational culture, but in some cases was being used politically to gain influence.

7.16.2.6 *Summary of Implementation phase*

Implementation was to be guided by the Company One 2010 team, but line managers were responsible for the rollout, with the intent that operatives could be introduced to the change and what it meant for them in language and concepts that they could identify with. The attempt at presenting the change in terms that resonated with the experience and aspirations of the operatives was perceived to be only partially successful, with insufficient communication skills and lack of enthusiasm or commitment on the part of the managers cited as reasons for ineffectiveness.

However, there were perceived to be other factors in the resistance to the change.

These included:

- Perceptions that participation in the Strategic Intent phase not been sufficiently valued led to disillusionment and cynicism for some participants, with a consequent reluctance to take part in change initiatives.
- Change leadership was seen as effective, but it was perceived that the guidance of the change champions was withdrawn too soon. This was considered by some to demonstrate a continuation of an organisational history of a lack of persistence with change initiatives, a perception that, whether justified or not, could be attributed to some extent to an underlying cynicism about change.
- Disappointment with the outcomes of the change initiative contributed to some participants' reluctance, but this was interpreted as a minor factor.
- Selective use of the outcomes of the change initiative by some individuals indicated that the new purpose and direction, rather than becoming embedded in the organisational culture, was being adapted by some to their own ends or practice.

7.17 Barriers to change

This section addresses Research Question 5: What were the factors that influenced the acceptance or otherwise and implementation of proposed changes?

From the discussion so far in this chapter, a number of barriers to the successful implementation of the outcomes of Company One 2010 have emerged. While these did not prevent the replacement of the old vision and mission with a new purpose and direction, they were perceived as continuing barriers that not only would have affected the initiation of a more profound cultural change from Company One 2010, but also – in some cases – would affect future change initiatives as well. Some have already been discussed, so to avoid repetition these are only summarised in this subsection, with brief notes and reference to where they have appeared previously.

7.17.1 Procedural barriers

7.17.1.1 Communication

In 7.16.2.1 *Managerial follow-through*, one of the perceived difficulties in the roll-out of Company One 2010 was that some of the managers did not have adequate communication skills for the task. Reasons for this were beyond the ambit of the research, but suggestions made by participants were lack of training and insufficient commitment, even to the extent of what one participant termed “white-anting” (*cf.* 6.7.4 *Roll-out and managerial follow-through*), to the change process. Reliance on people who lacked the skills or commitment to introduce change introduced an element of uncertainty into the implementation phase that may have been identified if the scenarios had included the conceptual ecology element (*cf.* 7.7 *Adequacy of scenarios*).

7.17.1.2 Dominant personalities

The need for a good facilitator to prevent dominant personalities or senior participants from having an undue influence on scenario development is widely advised (*cf.* 2.10.1 *Intuitive logics*). However, the experience perceived by some participants in this case pointed to a need for effective facilitation in the stages of the change process subsequent to scenario planning as well. There was a political

element to this, with some participants citing extensive preparation for workshops to make sure their viewpoint was to the fore (*cf. 6.7.7 Strategic conversation*).

7.17.2 External Barriers

7.17.2.1 Drought and litigation

The external event that had most effect on the implementation of Company One 2010 was the drought (*cf. 6.7.8 External factors*). Managers and others became focussed on short-term concerns, including coping with staff reductions. This was exacerbated when the change initiative lost its champions, the Company One 2010 team, along with their encouragement and guiding influence, before much of the change initiative had been implemented (*cf. 7.16.2.3 Change leadership and persistence*).

The litigation issue, while potentially important financially, did not affect the work of most operatives.

7.17.3 Structural and cultural barriers

7.17.3.1 Age, demographics, homogenous culture, retention of expertise

The perception of an ageing, conservative male-dominated work force, together with a lack of diversity of culture (*cf. 7.1.2 Diversity of culture*), had been seen as an influence on the risk averse nature of the organisation (*cf. 7.1.1 Risk aversion*). This had been recognised in the organisation and was a major factor in the decision to ensure wide participation in both the Scenario Thinking and Strategic Intent phases of the change initiative. But that the profound cultural change that would have been necessary for change in work practices did not result from Company One 2010 illustrated the difficulties of changing entrenched cultural norms and assumptions described in *2.11.4.5 Changing basic assumptions*. As has been seen, even though these aspects of the conceptual ecology were tacit knowledge in the organisation, the uncertainty of their effects on the future of the organisation was another aspect that did not appear in the scenarios, which as systems scenarios could have included uncertainties beyond the contextual as driving forces (*cf. 7.7 Adequacy of scenarios*). The change initiative did not succeed in penetrating the culture beyond the espoused acceptance of the new purpose and direction (*cf. 7.4.9 Summary of specific change areas*) and the change in attitude towards competition (*cf. 7.3.1 Competition*).

7.17.3.2 *Structural barriers and trust*

The scenario planning and Company One 2010 outcome, the new purpose and direction, with its cross-divisional focus, was interpreted to reflect a realisation that organisational silos and the prevailing bureaucracy were constraints that inhibited both innovation and operations. Although Company One 2010 introduced a new structural element by encouraging operatives to think across divisional and regional boundaries and consider the effects of their decisions on other parts of the organisation (*cf. 6.5.1.1 Intra-organisational understanding*, many participants perceived that at the time of the Research interviews such changes as had been made had had little effect and the organisation was as bureaucratic as ever. In addition, the culture of independence (*cf. 6.7.4 Roll-out and managerial follow-through and 6.6.4.3 Accountability and discipline*), with its underlying cynicism towards change, had not been affected. In other areas such as performance recognition and managerial structure, it was perceived that barriers had not been removed (*cf. 6.6.6.1 Structure and 6.6.7.1 Performance recognition*).

Conflicting logics were evident between the trust aspects of the new purpose and direction (“People and Culture”) and “Trust and credibility”) (*cf. Appendix 5 New purpose and direction diagram*) and the bureaucratic nature of the organisational structure that perpetuated lack of trust and reluctance to take responsibility (*cf. 7.1.1 Risk aversion*)

7.17.3.3 *Entrenched and engineering-based culture*

The ways in which the engineering-based culture was perceived to be a barrier to change were discussed in *7.1.1 Risk aversion*. The concept of it as a barrier was, of course, not the only perspective on the culture, and participants holding this view did not express opinions on why the culture was a barrier, beyond expressions of perceived broad characteristics such as “Engineers don’t think beyond the square” and “We like building stuff” (*cf. 6.6.4.6 Engineering as influence on the culture*). However, a symptom of the cultural difficulty was a perception that some participants in Scenario Thinking had difficulty with the process because the process did not have unambiguous goals at the outset. That the learning outcomes were not deeply embedded indicated that the learning experience provided by Scenario Thinking and Company One 2010 in some way lacked effectiveness, an

interpretation that was reinforced by the perceptions of the some of the participants (cf. 7.6 *Ineffectiveness of the change initiative*).

Kolb (1976) identified four learning types. These were:

- *Convergers*: Focus on specific problems through hypothetical-deductive reasoning and do best where there is a single answer or solution to an issue. They tend to specialise in physical sciences and the type is characteristic of many engineers.
- *Divergers*: Imaginative, viewing situations from many perspectives. They tend to be interested in people and have humanities or liberal arts backgrounds. Human resources managers are characterised by this style.
- *Assimilators*: Create theoretical models using inductive reasoning, interested in abstract concepts. The type is characteristic of research and development people.
- *Accommodators*: Like performance, carrying out plans and experiments, and will adapt to specific circumstances, discarding plans or theory if necessary. People characterised by this style are often found in sales or marketing.

Wyrick (2003), in advising that recognition of the different learning styles could assist engineers in developing themselves and their organisations, reinforced Kolb's findings that engineers tended to be predominantly of the converger type. Vallas (2003) found that that a process engineering domination of production concepts that was heavily rationalist and quantitatively based constrained learning and was a factor in the introduction of new conflicting logics when new work practices were implemented.

The concept of the implications for learning of a dominant culture is congruent with the situation faced by the Water Corporation, with its perceived dominance of converger learner types. Scenario planning, on the other hand, through use of imagination and learning through the assemblage of many perspectives, would appear to be an approach best suited to divergent learners.

However, despite perceptions of difficulties with the process at the outset, there were few adverse comments about the process afterwards. This indicated that there was little if any difficulty in accommodating learning types and that scenario planning

had been adapted to the learning types of the participants and/or that as a process it was suited to bridge the gap.

It also suggested that the concept of scenarios as transitional objects that provide continuity and mental integrity between the past, with its embedded culture, traditions and experiences, and emerging proposed change (*cf. 2.11.4.9 Change and identity*) was applicable in this situation. The scenarios provided a forum for a strategic conversation that enabled a diversity of perspectives to be considered. For most, the scenarios were plausible and, although this was not a universal view, they were perceived to be adequate for the purposes of the change initiative. This suggested that the scenario planning method was successful in providing a learning process that was within Vygotsky's zone of proximal development, i.e., appropriate to the capabilities of the participants (*cf. 2.11.4.7 Learning*).

However, the recognition of learning types had implications for the practice of scenario planning. Firstly, the adaptation of the process to accommodate the learning types of the participants would assist the smooth functioning of the workshops, e.g., for convergers by setting out clear goals and pathways at the outset. This reinforced the conclusion in *7.11.1 Summary of role of scenario planning* that operatives would be unlikely to respond to change, or in this case learning, that they did not identify with through their past experience and the beliefs and assumptions they held. This theme of continuity emerged as a major influence in the acceptance of change, a theme that is congruent with the theory explained in *2.11.4.9 Change and identity*. Second, scenario planning facilitators should be aware of and able to embrace all forms of learning, a rare type that Wyrick (2003) identified as a hub learner.

The concept of continuity provided a different perspective on the idea of an engineering-based culture as a barrier. The idea of the culture as a barrier tended to be the view of an alternative cultural paradigm within the organisation that sought to do things in a different way, from a different set of assumptions. The evidence of the data was that learning outcomes were not enduring and did not become entrenched in the culture and that the new purpose and direction was interpreted more meaningfully as a political shift of influence towards an extant paradigm than a profound cultural change. That the new purpose and direction was accepted, or in some cases at least not rejected, as better meeting the needs of the organisation and

the aspirations of the operatives by participants with both with engineering and non-engineering backgrounds suggested that the political shift was not within that duality. Rather, it was from an entrepreneurial or market-driven framework to more emphasis on service and sustainability, a realignment that could take place irrespective of whether the participants or operatives were from an engineering background or not.

From a political perspective, it was concluded that it was not a useful interpretation to hold the engineering-based culture as a barrier to the specific change outcome of Company One 2010. However, from a cultural perspective, the established paradigm proved too much of a barrier for the change initiative to have effected profound cultural change. But not only engineers were doubtful about change and a feature of the culture that emerged strongly from the data was cynicism that was widespread in the organisation.

7.17.4 Cynicism

For more richness of data and context for this section, see Appendix 2.6

Wilson (1998b) observed that cultural predispositions can detrimentally affect the outcome of the change process during the vulnerable post-scenario development phase and evidence for this has been presented in the thesis. Aspects of the corporate culture have been identified as factors in the difficulty of making the journey from scenarios to organisational change. However, underlying many of these factors was what appeared to be a cultural predisposition to cynicism which was exacerbated by some aspects of the change process, especially the Changemaker teams' experience (*cf. 7.16.1.5 Changemaker teams*). Cynicism was not only an emergent concept but was also identified as a tendency that affected the change process (*cf. 6.5.3.1 Emergent concepts – affirmation; 6.6.4.1 How scenario planning affected culture; 6.7.1.1 Emerging concept – Changemaker teams; 6.6.5 Work ethic and loyalty; 7.16.2.3 Change leadership and persistence*). Although no specific questions were asked about it, 47 per cent of the participants – and 54 percent who

were not senior managers – discussed cynicism during the interviews, which indicated the strength of the concept¹.

In the context of this research cynicism was defined as an attitude of scornful or jaded negativity, especially a general distrust of the integrity or professed motives of others (The American Heritage Dictionary of the English Language, 2000).

Cynicism should be distinguished both from scepticism, where alongside doubt there is hope for a positive outcome, and from resistance to change, which may or may not accompany cynicism (Reichers et al., 1997). Cynicism about change can be the result of a loss of faith in the change process after previous change initiatives have been perceived as less than fully successful (ibid.), an example of which was the negative attitude of some participants following an earlier survey conducted by the organisation (cf. 7.16.1.5 *Changemaker teams*).

Dean et al. (1998) identified targets for cynicism in the organisational context. These included one's occupation, other people, societal institutions, managers and organisational change initiatives. Although it would appear unlikely that any category would occur in isolation, the focus in this research was on the last of these. Dean (ibid.) defined organisational cynicism as a negative attitude to the organisation and posited three dimensions to it: a belief that the organisation lacked integrity, negative feelings toward the organisation and disparagement and criticism of the organisation.

However, the concepts that emerged from the data analysis suggested qualification to these dimensions. Some participants expressed doubts about the integrity of the change process and about some individuals, but not about the organisation. Others expressed cynicism about the organisation while simultaneously demonstrating both loyalty and concern for its future. It was the researcher's interpretation that most critical comments were intended to be constructive rather than disparaging, with the concept emerging from this that cynicism need not be a negative attitude to the organisation, particularly in the context of scenario planning. Negative feelings, and even disparagement and criticism, towards the change process did not necessarily translate into negative feelings towards and disparagement of the organisation as a

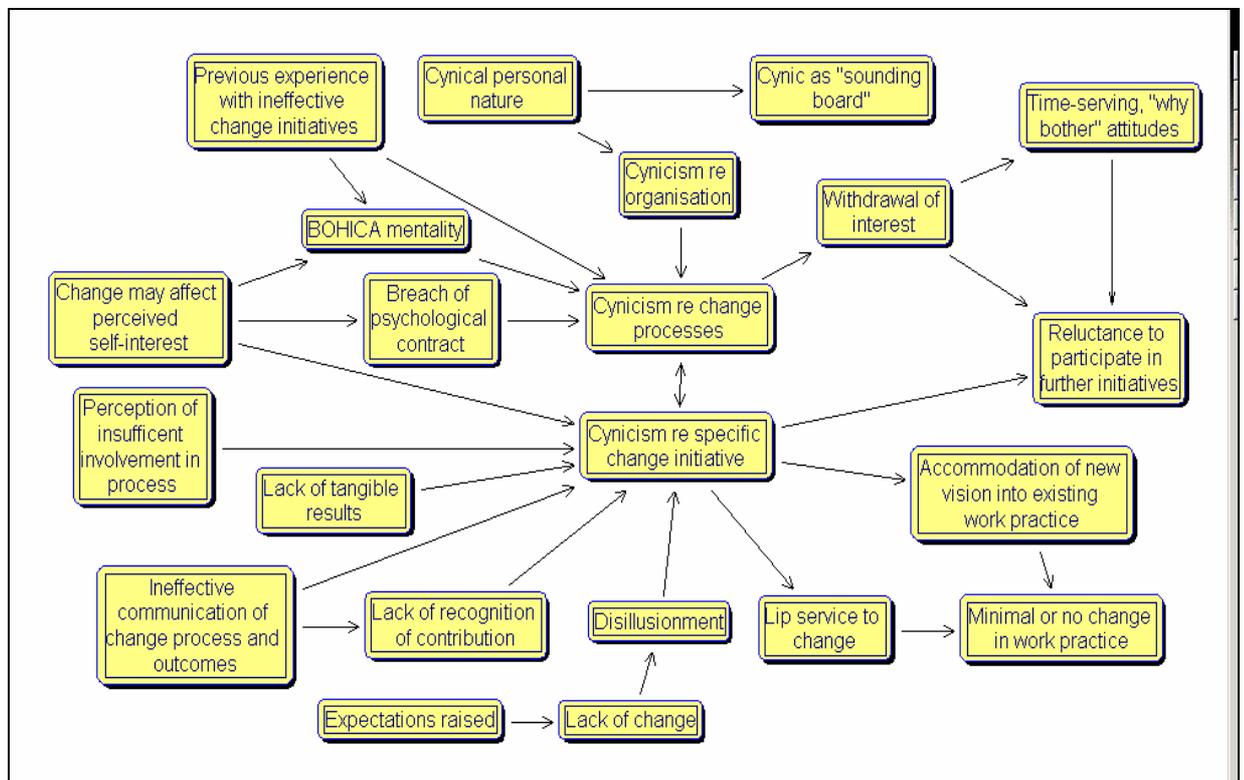
¹ This subsection is a revision of the researcher's paper entitled *Cynicism As Barrier To Organisational Change Based On Scenarios* published in the proceedings of the 17th Australian and New Zealand Academy of Management conference at Fremantle (2003) (Nicol, 2003b).

whole and participants, while critical or cynical, evinced their loyalty to the organisation (*cf.* 6.6.5 *Work ethic and loyalty*).

To some extent, remarks made by the participants could be interpreted as reflecting the cynical nature of the speaker, but they were often observations about the behaviour of others and appeared to be based on the participant's past experiences.

How cynicism was perceived to affect the change process is modelled in *Figure 7.17.1*. Links are drawn between the perceived tendencies (on the left) from which emerged the three central aspects of cynicism, and the perceived effects of cynicism (on the right). Each of the tendencies is explained in the following text.

Figure 7.17.1 Effects of cynicism on organisational change



Source: (Nicol, 2003b)

7.17.4.1 Tendencies to cynicism

The tendencies that led to the emergence of the concept of cynicism were:

Cynical personal nature: A perception of cynicism as an outlook on human nature that was based on personality has been discussed by Dean et al (1998) and Reichers et al. (1997) and has been interpreted as a reflection of a widespread disillusionment in society (Kanter and Mirvis, 1989, Eckersley, 1998). Participants in this research perceived a cynical personal outlook as a contributing factor that led to cynicism

about organisational change. It emerged as comments by participants about the nature of their own attitudes and in the interpretation by the researcher of some participants' reported behaviour, as well as in comments about the behaviour of others. However, in each case it was possible to attribute the cynical outlook expressed to other facets and tendencies of the organisation, which demonstrated that the cynical trait was due in some degree to past experience with organisational change, so the evidence for personality trait as a major factor in organisational change cynicism was considered to be weak.

Previous experience with ineffective change initiatives: A cynical attitude can stem from perceptions of a lack of tangible results from previous organisational change initiatives. Reichers et al (1997) have commented that cynicism in these sorts of cases may be a way of avoiding unpleasant thoughts about work or the organisation, but in this case, the cynical attitude was interpreted as trying to deter perceived threats to the individual's comfort and security (*cf. 2.11.4.1 The power of the cage*). There were several aspects underlying the cynicism:

- *Lack of tangible results:* The effectiveness of the organisation's previous change initiatives was beyond the scope of this research, but this was one reaction:

There's a great deal of cynicism about this kind of planning process, a huge amount of cynicism, especially with people who have been there before, because they see these things as not really changing the organisation much.

- *Change may affect perceived self-interest:* Older people in the organisation, including some in the managerial group were perceived by some participants to have little interest in embracing change. So too did some of the older employees themselves:

I've been around too long to have too many in the way of expectations.

By contrast, younger people tended to see change, e.g., in performance management, where seniority was perceived as more important than performance (*cf. 7.4.5 Workforce issues*), as beneficial to them.

- *The BOHICA mentality:* The perception of the ineffectiveness of previous change initiatives, together with perceived self-interest, were contributing

factors to a version of cynicism that in the organisation was called the BOHICA mentality. To a somewhat bemused researcher, it was explained that the acronym stood for Bend Over, Here It Comes Again, which was described as:

There have been waves of apparent change, and certainly change in rhetoric, that have washed over large parts of the organisation who have sort of kept their heads down below the parapet, and seen it pass and float back again.

Many of the people with this attitude were seen as long-time employees, surviving through what was called “camouflage”, i.e., their ability to do nothing noteworthy. Cynicism as a form of denial was part of their self defence armoury and change (*cf. 2.11.4.1 The power of the cage*).

- *Change initiatives as a fad:* Allied to this mentality was the attitude of some participants that organisational change initiatives were fads. The scenario planning project was seen as “Just another exercise we went through”, part of a succession of initiatives that meant little.

There are groups of people who want to or are used to embracing change in culture every time the wind changes, versus other groups of people who are perhaps more set in their ways and more cynical, and sort of think this is a fad which will pass by.

People run around and panic and get some documentation out to show that something has happened, and then next year, we do it all again. And that initiative's finished, and we start a new one.

- Combined with this was an apparent jadedness with reforms.
We're all work-shopped out. We've met too much. So I wonder my cynical observations on some of these things aren't shared more broadly. And people are thinking, well, what really did come out of all those meetings?

Pate et al. (2000) have advanced a case that too much change may be seen as a breach of what they called the employee's “psychological contract” with the organisation, a violation that can result in increasing cynicism.

Raised expectations and disillusionment: Vallas (2003) suggested that one factor in resistance to change was the cynicism resulting from conflicting logics in the change process, e.g., a combination of participation and standardisation. A similar conflict was evident in Company One 2010: participation in the change process was encouraged, but participants perceived that, contrary to the participatory ethos, few of the recommendations were acted on, especially from the Strategic Intent phase (cf. 7.16.2.2 *Participation*). As discussed in 7.16.1.5 *Changemaker teams*, the effect was disillusionment, reluctance to participate in future change initiatives and a disinclination to proactivity, with the cynicism as reflected in this quote about Changemaker teams:

Many of these people have made comments to me since then that it was just a load of garbage.

Conflicting logics was also evident in the difference between the longer-term outlook of people involved in the strategic planning process and the pragmatic view of others in the day-to-day operations of the organisation:

There were a few cynics round saying, you know, why are you spending all this {expletive} time doing this stuff, what are we going to get out of it at the end of the day?

While the disillusionment described by the participants was partly a result of their own philosophies to work and frustrated enthusiasm, some participants also commented about the raising of expectations prior to the commencement of the scenario planning project, and the ensuing disappointment and cynicism that followed when tangible results were not perceived to emerge afterwards (cf. 7.16.1.5 *Changemaker teams*).

People get ever so enthusiastic that it's going to be a really nice outcome... There's going to be this overwhelming understanding of what's going on and what our future holds. Enlightenment, you know .. And so people go through these processes with that view, time after time, and time after time they come out of it feeling {expletive} depressed, you know.

Involvement in the process: Cynical attitudes were attributed by some participants to insufficient involvement in the process and a consequent lack of understanding,

together with a perceived lack of transparency about the course of the process where the participant was not involved in it (*cf.* 7.16.1.1 *Decision-making (the black box)*). Reichers et al. (1997) were of the opinion that, in the absence of information, people may surmise that things have not gone well or that the change process was ineffective, and so reinforce their cynicism. Participants held varying opinions on the communication process in this research (*cf.* 7.16.2.1 *Managerial follow-through*), but all that was needed to reinforce or sow the seeds of cynicism was for some of them to have perceived that communication had been inadequate and have injected this into the strategic conversation.

7.17.4.2 *Outcome of cynicism*

The cynicism resulting from disillusionment with organisational change initiatives was evident in some participants' withdrawal of interest in change, characterised by a reversion to focus on operational day-to-day activities and concerns. This was evident in their reluctance to participate in further change initiatives, because they were perceived to be a waste of time and resources. The effect of past experience with change initiatives was also evident in the cynical attitudes of people in the organisation perceived to be "time servers", i.e., doing what they had to, but not prepared to bother with the discomfort of change. Clark (1999) has cited research that indicated managers may pay lip service to change while adapting new policies to suit themselves and this was evident here (*cf.* 7.16.2.5 *Selective use of outcomes*). Evidence for lip service was also found in the perceptions that some managers did not fully support the outcomes of the change initiative (*cf.* 7.4.4 *Leadership and structure*).

7.17.4.3 *Value of cynicism in scenario planning context*

The significance of cynicism at the vulnerable stage of implementation in a scenario-based change initiative should not be underestimated. Wilson (1998b) stressed the importance of communication for a change in culture. However, his top-down approach avoided the issue of addressing the cynicism barrier. Van der Heijden (1996) stressed the importance of the strategic conversation in the change process. Informal conversations dominated by negative cynicism can have a powerfully detrimental influence on change initiatives, and this was evident in, for example, the stated reluctance of some participants in this research to participate in further change initiatives.

However, Cutler (2000) has argued that cynicism, particularly in managers, need not be a negative trait. Rather, it could provide a vehicle for questioning clichés and unquestioned models and assumptions that substitute for organisational thinking. Dean et al. (1998) also discussed the possible functionality of the cynic, in revealing naiveté in others in the organisation and providing a check on the temptation to put expediency before principle. The result could be novel ideas and new solutions or the avoidance of costly mistakes.

Although some of the participants exhibited cynicism, and others spoke about it, there were none who spoke of the organisation as a whole disparagingly and there was little evidence of disloyalty. Aspects of organisational practice certainly exasperated them and cynicism appeared to be what Cutler (2000, p310) called a “safety valve.” However, in expressing their cynicism about the organisational change process, some participants exhibited a presumption that it could have been done better (*cf. 6.5.5 Lack of change*); others doubted that it was necessary and that change could take place without the need for a formal process (*cf. 6.5.1.2 Extending thinking*). Few could fairly be described as derogatory.

At least since Pierre Wack wrote his seminal papers in 1985 (Wack, 1985a, Wack, 1985b), change of mind set has been one of the stated objectives of scenario planning projects (*cf. 2.11.4.2 Sense-making and mental models*). This, of course, is what some cynics attempt, even if expressed negatively.

The high proportion of participants that discussed cynicism was evidence that cynicism was an important trait in the Water Corporation’s organisational conceptual ecology and a factor that would need to be addressed in future cultural change initiatives, whether scenario-based or not. It was arguable that the cynic’s ideas, if listened to positively, could be of value in scenario planning, in seeing beyond the accepted values and norms of an organisational culture, and setting them up for critical assessment. The assumptions and reasons for a cynical reaction – as opposed to blinkered disparagement – to an idea or initiative may be worth exploring.

Similarly, the cynic, in mocking change initiatives that he or she sees as misdirected or unnecessary, could provide a valuable sounding board in the scenario planning process. The reasons for cynicism may be purely self-seeking or merely blinkered disparagement. But they may also be based on a genuine concern that the

organisation may be going about things the wrong way, and this was evident to the researcher in the Research interviews. The conceptual ecology of the cynic may harbour the weak signals that scenario planning seeks to uncover and should not be ignored.

7.18 Resolution of Research Question 5

What were the factors that influenced the acceptance or otherwise and implementation of proposed changes?

Because scenario planning was perceived to be an instrument that provided input to the change initiative, its role was in sense-making and setting a framework for the strategic conversation in the later two phases (*cf. 7.11.1 Summary of the role of scenario planning*). Apart from its influence on those conversations, its role was completed at the end of the workshops.

It was events in the later two phases, combined with identified barriers to change, that largely shaped the degree of acceptance and the implementation of Company One 2010. Specific factors that affected it were summarised in *7.16.1.6 Summary of Strategic Intent phase* and *7.16.2.6 Summary of Implementation phase*. Underlying those factors were constraints of an entrenched conservative culture, widespread cynicism and a perceived lack of communication skills and commitment to the change on the part of some of those entrusted with implementation, which combined with external influences, particularly the drought, mitigated against a profound cultural change emerging from the change initiative.

However, viewed from a political perspective, a change in organisational purpose and direction was nevertheless achieved. Factors influencing this included the effectiveness of the champions of change, the central organising group, and most of their strategies, the enthusiasm of many of the participants for change and the support, though sometimes qualified, of the executive.

7.18.1 Theoretical concepts from Research Question 5

Theoretical concepts that emerged during the resolution of Research Question 5 were:

- Three factors emerged during the Strategic Intent phase that were interpreted to have had a major influence on the acceptance of the change

initiative outcomes: transparency of process; perceived affirmation of extant practices; and perceptions that contributions to the change process had been undervalued.

In the Implementation phase, additional factors emerged: commitment and communication skills for introducing the change; the importance of champions of change; perseverance; selective use of outcomes of individuals' own ends.

- Barriers to change that emerged were the dominance of some personalities; entrenched dominant culture; structural barriers; external events.
- Whether entrenched culture is perceived as a barrier can depend on the perspective adopted (in this case cultural or political).
- Underlying the organisational culture was widespread cynicism, resulting from previous experience with change initiatives, conflicting logics and perceived lack of involvement in the change process. Its consequence was resistance to change.

8 Conclusion

8.1 Theory for scenario planning

The intent of the thesis was to increase understanding about scenario planning and about organisational change that occurred as a consequence of a scenario planning project, including the effects on organisational process and culture. This has been undertaken at both a theoretical and an empirical level.

In response to claims in the literature of a scarcity of scenario planning theory, a theoretical base for the study of scenario planning was developed. Drawing on a review of literature on scenario planning, organisational change and educational psychology, 20 axioms (basic assumptions) of scenario planning were identified. From them a theory was built that defined scenario planning and identified its essential elements and assumptions, and the theory behind them. The theoretical outcome was what were termed the “Two Pillars of Scenario Planning.” These were:

- Scenario development: a framework for understanding the external world
- Scenario thinking: a method for revealing the conceptual ecology of individuals.

It was argued that the commonly used concept of basing scenarios on an external focus, or what has been termed the contextual environment, as a proxy for factors that are beyond the control of the organisation was not compatible with the processual paradigm adopted by van der Heijden (1996) as part of an integrative model for scenario planning as organisational learning. Much that was not in the contextual environment was beyond the control of the organisation. It was postulated that the concept of influence as a driver of scenarios was more compatible with the theory than control and that its use would overcome certain practical difficulties that had been observed to arise during scenario planning workshops. In the workshops, factors would be classified as Beyond our influence; Open to influence or Within our influence. This was termed the BOW system.

From an examination of the meaning of mental models, their context within world views and the problems of changing the conceptual ecology into which they fitted, the theory emerged that change, to be implemented successfully, must be compatible

with the conceptual ecologies of individuals involved in it. Conceptual ecologies were an uncertainty that was the subject of Pillar Two of scenario planning theory.

The theory and the axioms were situated in a world view based on critical realism combined with some of the hermeneutic philosophy of Gadamer, which allowed for sharing of perspectives to broaden understanding and the recognition that tendencies (as opposed to causes) could play out in multiple futures. Perspectives were seen to be grounded in experience and traditions, which provided a context for a theory that continuity and preservation of identity were elements of successful change initiatives.

The theory and theoretical perspective provided a framework and reference for the theoretical concepts that had emerged from the empirical research.

8.2 Resolution of research questions

The following is a brief summation of the resolution of the research questions that appeared in more detail in *7 Discussion*:

Research question 1: The main change resulting from the Company One 2010 initiative, of which scenario planning formed an integral part, was a new statement of purpose and direction for the organisation and a strategy for implementing consequent changes. However, there was little evidence of consequential changes in other aspects of the organisation that participants attributed to scenario planning, or of much changed mindset or viewpoint. Learning from the scenarios was rarely translated into actionable knowledge through changes in work practice or personal decision-making.

Research question 2: It was perceived that the methodological objectives of scenario planning had largely been realised, but the strategic objectives were only partially achieved.

Research question 3: The scenario planning project was not an agent of change, in the sense of initiating, but an instrument of change. It was perceived as a sense-making discrete process, with a role as an input to the Company One 2010 change initiative that provided a framework for the strategic conversation in the initiative's subsequent phases. The assumptions of participants, especially managers, about the future were questioned and in this sense Scenario Thinking provided a transitional

object to span the past experience of the participants and a new purpose and direction for the organisation.

Research question 4: The only areas where major specific organisational change was clearly identified to be a consequence of scenario planning and/or Company One 2010 in both the Research interview analysis and the Before and After analysis were business development and, to a lesser extent, clarity of purpose. Change of viewpoint was attributed to the change initiative in both analyses only in the area of business development.

Research question 5: Underlying the events in the later two phases of the change initiative, the identified cultural barriers to change that shaped the acceptance and the implementation of Company One 2010 were constraints of an entrenched conservative culture, widespread cynicism and a perceived lack of communication skills and commitment to the change on the part of some of those entrusted with implementation. As well, there were external pressures. However, counterbalancing these were the effectiveness of the champions of change and most of their strategies, the enthusiasm of many of the participants for change and the support, though sometimes qualified, of the executive.

8.3 Outcomes of the change initiative and hypotheses

In this section, hypotheses are developed from the theoretical concepts that emerged in *7 Discussion*. The end product of grounded theory, according to Glaser (2003), is theory that accounts for behaviour and can be applied or tested by others (*cf. 4.5.5.1 Sidestepping the issue of rigour*). Because the propositions presented here have not been applied or tested for applicability elsewhere, it seems presumptuous to call them theories, so they have been termed hypotheses in the context of the thesis, but the term is used as a synonym for Glaser's "theory".

The outcomes of the adapted grounded theory methodology used for the research were theoretical concepts that emerged during the analysis of the data. The constructs were grounded in the data and, following grounded theory principles, were compared with the theory developed from the literature only after they had emerged, although the comparisons are reported concurrently with the emergence of the constructs in *7 Discussion*.

The theoretical concepts that were recorded in 7 *Discussion* after the resolution of each research question were collected and categorised under several headings. The collection appears as *Appendix 3*. In this section, the emergence of hypotheses from the theoretical concepts for each of the categories appears.

8.3.1 Role

In the case that was researched here, the scenario planning project was perceived as a discrete activity within the Company One 2010 change initiative, an input to the other phases of the change initiative and not a change agent in its own right. Its main function was in sense-making, challenging assumptions and recognising driving forces, to set a framework for the ensuing strategic conversation from which the new strategic direction of the organisation emerged. Once the implications of the scenarios had been considered, its role was largely completed. It was neither an initiator of change, except perhaps on the issue of competition where it had a role in setting the new business direction, nor an ongoing change agent, even though some participants would have liked the scenarios to have had more enduring use.

This led to the first hypothesis.

Hypothesis 1:

The role of scenario planning was largely as an instrument of change, a discrete process within a wider change initiative that provided a framework for the strategic conversation that led to the change outcome.

8.3.2 Objectives and purpose

In challenging assumptions, scenario planning was a vehicle for exploring and challenging the self-reinforcing orthodoxies of the organisational culture and belief. However, the focal issue of the Scenario Thinking project was more specific than, and bore little apparent relationship to, the objectives that emerged from the data. It was concluded that, although it was an important issue to the organisation in its own right, the focal issue had a role in providing a context for the emergence and discussion of wider issues.

Hypothesis 2:

As a discrete process within the wider change initiative, the purpose of scenario planning was to explore and challenge organisational

orthodoxies. The purpose was not the same as the focus of the project, a function of which was to provide a context in which orthodoxies could be challenged.

8.3.3 Effect

There was a significant change in the espoused purpose and direction of the organisation, accompanied by changes in reporting procedures and policy that reflected it, but by the time of the research this had not translated into widespread profound cultural change or theory-in-use.

From a viewpoint of scenario planning as a methodological tool, it was perceived to have met its objectives, as expressed by the team that led the change initiative. As an instrument of change, scenario planning was perceived to have stimulated extended thinking and learning and challenged assumptions about the organisational operating environment. As well, for a few participants, scenario planning had affected the way they made decisions and how they participated in the continuing strategic conversation. One influence on decision-making was the power of the negative normative, the desire to avoid the future portrayed by one or more of the scenarios. Another was a realisation of how decisions affected the whole organisation and not just the operatives' own part of it. Learning outcomes that had an enduring effect concerned the threat of competition and the acceptance, at least at the espoused level, of the new purpose and direction.

However, participants usually attributed changes of mindset to others rather than themselves. Lessons that were perceived to have emerged from the Scenario Thinking project were described in a normative rather than performative context and changes of mindset were usually perceived as not enduring.

Mindset changes from the whole change initiative also tended to be perceived as ephemeral and were rarely translated from conceptual to actionable at a personal level. While most people in the organisation accepted – or at least did not take issue with – the organisational change at a strategic level, i.e., the new purpose and direction, few had made changes to adapt to it in their operational practice. In some cases, they simply said the new focus was what they were already doing anyway. In others, they created an interpretation of it that suited and even reinforced what they were already doing. In both cases, individuals were interpreting the change to suit existing practice rather than adapting to it. A manifestation of this was the selective

use of parts of the new purpose and direction policies for the advancement of objectives the individual had previously believed beneficial for the organisation or for personal advancement.

In this context, change was most meaningfully viewed from a political perspective. The change was interpreted as a transference from an entrepreneurial outlook, the view that was perceived to have been dominant in the organisation, to one based on sustainability and service to the home State. Both points of view had existed before the change initiative, so the change was interpreted to be a shift of influence rather than deep-seated cultural change.

When viewed from a cultural perspective, it did not appear that the profound cultural change that some participants had hoped for had occurred and there was little change in the way individuals personally approached their work. It was not apparent that world views had been significantly affected and changes of mental model perceived to have been achieved during the scenario planning process were not perceived to have endured.

Hypothesis 3

From perceptions that particular scenarios were undesirable, the concept of the negative normative emerged as a powerful influence on mindsets.

Hypothesis 4

The effect of the challenge to mindsets from scenarios can be reinforcement of extant beliefs rather than change. Change may therefore emerge from a shift of balance between competing viewpoints in an organisation. Political change of this nature may not be accompanied by profound cultural change.

8.3.4 Acceptance and implementation

The lack of profound cultural change consequential to the change initiative was perceived to be due mainly not to scenario planning but to factors in the other two phases of the change initiative.

In the Strategic Intent phase, expectations of change had been raised as individuals participated enthusiastically in the change conversations and work groups. There were conflicting logics here, between what participants expected and what

management were prepared to perform, and when much of the anticipated change did not occur, the outcome was disillusionment and cynicism.

In the Implementation phase, three major problems to be overcome were identified: entrenched values; communication of the change; and cynicism. While there were some external events that mitigated against implementation, these internal factors were the most potent barriers for the change initiative in achieving profound cultural change. Each was an uncertainty, a source of unpredictability, that emerged as a major driving force, in this case in opposing change. Each was identifiable in the conceptual ecologies of the operatives, grounded in the previous experience of individuals and the traditions and culture of the organisation and part of the tacit knowledge that existed in it.

Inherent in any change initiative that did not take into account that entrenched values and cynicism were parts of the conceptual ecologies of a significant proportion of the operatives was the difficulty of resonance with their past experience. In a tacit recognition of the difficulty, there was an attempt to adapt the change outcomes to preserve identity with operatives' world views, by rolling out the new purpose and direction policy through line managers, who, it was expected, would present it in terms that operatives in their area or division would identify with. The success of this was erratic, perceived to be affected by lack of commitment by some managers themselves and inadequate communication skills, as well as to what was perceived as a lack of guidance due to the premature disbanding of the champions of change, the Company One 2010 team.

However, conceptual ecologies with an internal focus were not part of the scenarios. Although the scenarios that were produced were systems (rather than external) scenarios, the Pillar Two aspects of scenario planning were aimed at revealing the assumptions of the participants only about the external environment. Consequently the scenarios did not address the uncertainties arising from the conceptual ecologies themselves and a major source of uncertainty was overlooked and perpetuated. This provided support for the theory that influence was a more apt concept than control as a driver of scenarios (*cf. 2.11.2.3 The BOW approach*).

The scenarios were an instrument that helped some participants to make a transition of mental models through challenging their assumptions, at least about the world

external to the organisation, in a non-threatening environment. Acceptance of the new purpose and direction was widespread, with some participants demonstrating change of mindset over the issue, which suggested they were able to discern a continuity between the old and the new and preserve their mental integrity through participating in the change

The concept of a need for change to identify with operatives' conceptual ecologies was reinforced by some participants who were of the opinion that many operatives, in order to support the change initiative, would have had to be able to relate to some benefit from it. This was summed up by one participant in the phrase: "What's in it for me?" It was a phrase that resonated with the findings of Kanter et al. (Kanter et al., 1992) (*cf.* 2.11.5.7 *Effect axioms*) and could be interpreted with many shades of meaning, including *inter alia* what difference it would make to day-to-day operations and workloads, changed working conditions or remuneration, how it would improve the organisation to which the individual felt a strong sense of belonging and how it would affect ambitions or social relationships or other personal concerns within or outside the organisation.

That the barriers to change proved too strong for cultural change to become embedded suggested that the scenarios had not provided a solid enough pillar to bridge the gap between the entrenched culture and the proposed change.

This introduced the hypothesis that rather than trying to influence operatives to abandon their entrenched cultural influences, the proposed change itself should be adapted to provide continuity and identity. The alternative may be resistance and distortion of the proposed change to fit existing practice.

Hypothesis 5

Unless the outcomes of a change initiative resonate with the conceptual ecologies of the operatives, they will not become embedded in the organisational culture. To become fully accepted, the processes and outcomes of the change initiative need to be adapted to achieve resonance with the world-views and mental models of the operatives, including managers, so they can identify with them and perceive benefits, whether personal or organisational, in their own terms.

In this case, learning outcomes from scenario planning were ephemeral and, as stated above, in some cases changes that were the outcome of the scenario-based change initiative were interpreted by operatives to fit existing practice, rather than adapt practice to effect the change.

Hypothesis 6

If change is not congruent with the conceptual ecologies of operatives, there is a tendency for them to either resist it or adapt the change so it can be accommodated in their extant practices and world-views.

Hypothesis 7

The conceptual ecologies of the operatives are a source of uncertainty that is not identified by the type of intuitive logics scenario planning methodology employed in this case.

8.3.5 Evaluation

Although from a methodological perspective scenario planning was perceived to have met its objectives, from a strategic perspective the interpretation was that it was less successful. Participants were often unable to distinguish the objectives of scenario planning from those of the wider change initiative and, retrospectively, their perceptions of them were varied and sometimes unclearly defined expectations. Vague concepts of purpose tended to be accompanied by a vague sense that expectations had not been realised, which indicated that purposiveness was more a factor in evaluation of success than achieving it. It has been argued that a clear focal issue for the scenarios is essential, but, as demonstrated in this case, the focal issue and the objectives are not necessarily the same and perceptions of objectives may change over time.

The implications of this were that a scenario planning project is considered a success if its owners assess that it has achieved its objectives in each particular situation. If this is the case, there can be no broad or objective measure of “success” in scenario planning, since the criteria for evaluation will differ. In this research, even within a single organisation, opinions on the degree of success of scenario planning varied.

At another level of perception, there were considerable differences between the way individuals from different parts of or communities within the organisation viewed the scenario planning project and the outcomes of the change initiative. In addition

to these differences was the difficulty of distinguishing the effects of the scenario planning project from other influences on the organisation.

Interpretation of the outcomes of the scenario planning project in the thesis has varied with the perspective adopted. Using a political metaphor, a transition was seen to have occurred. Using a cultural metaphor for the same process and outcomes, the interpretation was that little change had occurred. There also different outcomes for evaluation from methodological and strategic viewpoints.

There was strong coherence between the Before and After and the Research analyses in reaching these conclusions.

Hypothesis 8:

Evaluation of organisational change based on scenario planning is a matter of interpretation that depends on the perspective adopted by the individual. Both the occurrence of the change and its effect - and consequently the success of a change initiative - should be evaluated qualitatively.

With the exception of the first, the hypotheses are situated in Pillar Two of the scenario planning model developed in the literature and theory chapter of the thesis (*cf. Figure 2.9 The axioms of scenario planning – simplified version and Figure 2.10 The two pillars of scenario planning*). The direction was led by the data and is indicative that this is an area where further research may be beneficial for scenario planning. The hypotheses constitute the final outcomes of the grounded theory method used in the research for the thesis, what Glaser preferred to call “theory” (*cf. 4.5.5 Issues of rigour in grounded theory*). Each is potentially transferable to other situations, possibly with modification, and their usefulness will be in their applicability both in future planning within the Water Corporation and elsewhere.

8.4 Usefulness

In *4.5.5.1 Side-stepping the issue of rigour*, Glaser’s (1998) criteria for good grounded theory were listed. These included work, i.e., pragmatic usefulness. This was adjudged to be better considered by others with an interest rather than the researcher. Accordingly, the thesis was submitted to the Water Corporation for their comments on usefulness.

The Corporation's response appears as *Appendix 5.8 Water Corporation response on usefulness*. The letter explains how the research has reinforced the organisation's understanding of the value of scenario planning and how it affected strategic thinking and change. It includes an invitation for the researcher to make a presentations to the Corporation to explore how the research could assist in its future planning.

The letter includes the Corporation's response to the eight hypotheses presented in the thesis. The broad agreement expressed, while not necessary for the evaluation of grounded theory (*cf. 4.5.3 Participant checking*), demonstrates that the fit and relevance of the research can be discerned from people with a different perspective to the researcher and reinforces an interpretation that these criteria have been met.

8.5 Implications and future directions for scenario planning

The research has indicated that the scenarios in the study did not sufficiently provide the insights required to for operatives to identify beyond an espoused level with the outcomes of the change initiative. This section explores the implications of this for scenario planning practice, based on this case. Whether the conclusions presented are transferable to other cases will depend on their context and the perspectives of the participants.

The indication was that externally based scenarios alone were not sufficient to provide an adequate framework for the ongoing strategic conversation if the conversation was considered to include implementation of change as well as strategy development. A mechanism for identifying the uncertainties due to conceptual ecologies was needed. This needed to be more than a revelation of the assumptions underlying views of driving forces in the external environment. Although the environment is in a constant state of flux, in scenario planning practice assumptions are explored at a particular time, and so what emerges has the potential to be static. By contrast conceptual ecologies are dynamic, changing not only with external and operational circumstances, but with factors like emotions and social interactions (*cf. Figure 2.3 The shadow culture*)

Can scenario planning do this? In this research, Pillar Two scenario planning theory, the exploration of conceptual ecology was limited largely to perceptions of externalities, as would be expected in a methodology that was explicitly based on

driving forces in the external environment. However, the organisation was comparatively small, with a central planning facility, and it seemed the scenario writers were not able to perceive an external future world without including the reactions and initiatives of the organisation in it, albeit under a proxy name. But because the uncertainties of conceptual ecologies were not included, the actions of the organisation portrayed in the scenarios appeared somewhat mechanistic and a rational basis tended to be assumed for decisions in the narratives.

It may be asking too much for conceptual ecology to be included in scenarios, because of the added complexity it would introduce, and because it may be difficult for workshop participants to admit to personal characteristics, such as cynicism, that introduce added uncertainty to the future and can affect the outcomes of change initiatives. Argyris (1993) has stated that defensive routines in an organisation are not discussable, and neither is the fact that the routines are undiscussable.

However, the retention of identity and congruence with world views of operatives has been seen to be of importance to the acceptance of change in this research. The distinction between the concepts that emerged in the research of *Affirmation*, in the sense of change as confirmation of what operatives perceive they do anyway, and identity, where change resonates with their world views and is adopted, can be a fine one. The proposition has been advanced that exploring conceptual ecology to identify uncertainties through scenario planning or a complementary method could improve the robustness of the change process.

If scenario planning is viewed as an instrument of change, as in this case, it would be reasonable for it to be a part of a process for change initiatives that included a consideration of the internal uncertainty of conceptual ecologies. In such cases it may also act as an agent of change if new ideas emerge from the scenario planning workshops, although there was little evidence that this had occurred in this research. Such creativity is not essential for its success.

Consideration of alternative ways of achieving this is not grounded in the data that was the basis of this research and therefore is beyond the scope of the thesis.

However, a brief explanation of some ongoing work that the researcher is familiar with that has been undertaken in this area may be found in *Appendix 1 Soft systems and scenario planning*, with a view to further research.

From the research undertaken here, a new perspective on learning from scenario planning has emerged, that of the conceptual ecology as both as an important driving force for the organisation and as an aid to the understanding of the learning experience that is an integral part of change. The concept has framed the interpretation of the outcomes of the change initiative of which scenario planning was a part. It has demonstrated that change consequential to a scenario-based planning initiative may sometimes result less from changes of mindset than from a shift in the balance of influence of extant beliefs in the organisation, a political rather than a cultural change. For profound cultural change to occur, there must be resonance with – and consequently exploration of – the conceptual ecologies of operatives. While this has added to the understanding of scenario planning and the organisational change associated with it, it is also a challenge for the scenario planning process and an area for continuing research: how may it be augmented to take into account this new understanding?

Appendices

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Appendix 1 Soft systems methodology and scenario planning

An organisational change agent or instrument that explicitly integrates world views (*weltanschauung*) is soft systems methodology (SSM) (1989, Checkland, 1993).

The relationships between SSM and scenario thinking were the subject matter of a Deep Conversation held at Curtin Business School in November 2003 (*cf. Appendix 8 Attendees at Deep Conversation*). The following record of the conversation is sourced from the author's own notes and *Generative organisations* (Curtin Business School, 2003).

It was mooted during the discussions that scenario planning did not explore the world views of participants in the explicit and methodical way that SSM did.

Scenario planning was seen as exploratory, concerned with the external environment, and a way of framing the strategic conversation, and less concerned with individuals or with the implementation of change. It was considered to be a knowledge-creating process, because information was explicitly sought from external sources. SSM, on the other hand, was limited by the existing knowledge of the participants for the generation of increased understanding.

There was considered to be considerable convergence between the two methodologies. For example, both recognised the importance of world views and mental models in decision-making and both were concerned with sense-making and challenging mental models. In both, the emphasis is on diversity of perspective to promote learning and enhance understanding, and the participation.

A major difference was in focus. Scenario thinking looked to the future. SSM was concerned with problem situations in the present.

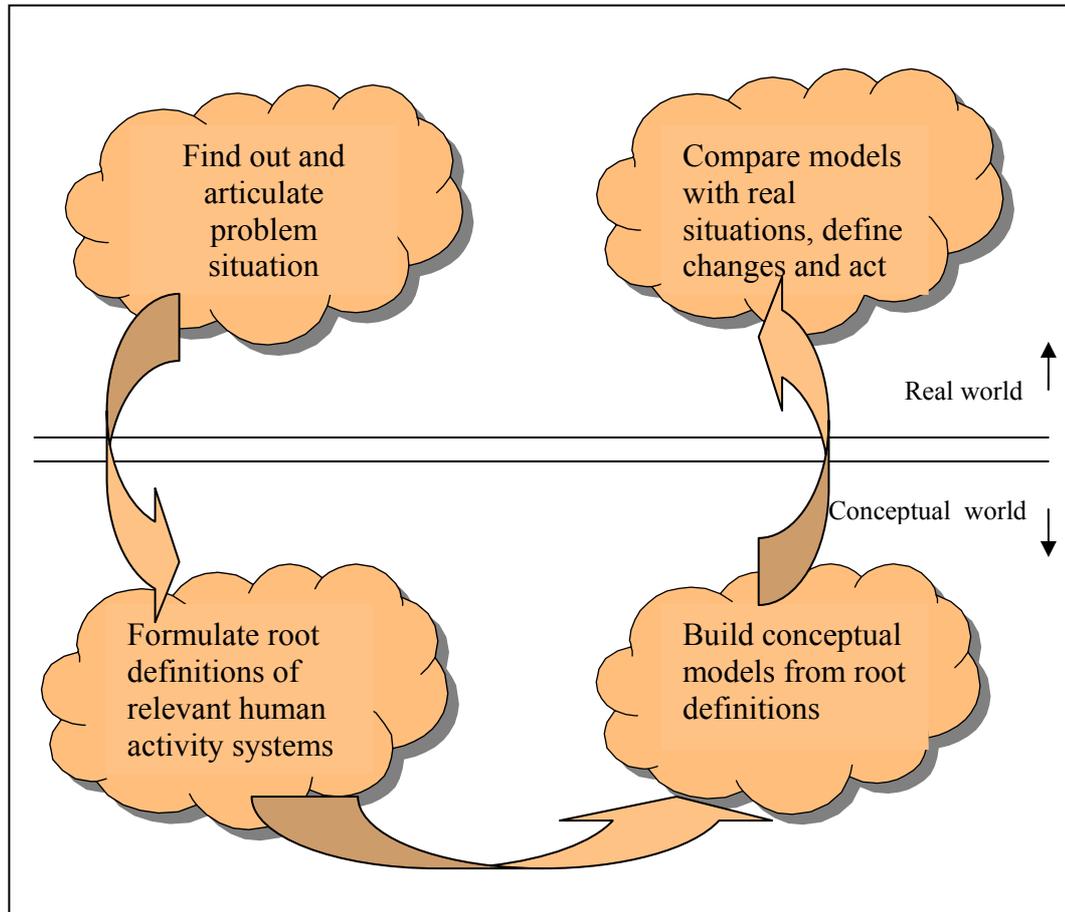
A further difference was that SSM was intended for problems that had no clear outcome, or specified goal, what Checkland called "fuzzy ill-defined situations involving human beings and cultural considerations" (Checkland, 1993, p A10). On the other hand, the literature stated that for scenario planning to be successful, it needed a clear purpose.

However, the research for this thesis has shown that the focal question of a scenario planning project may mask its underlying purpose, if indeed this has been made explicit. The purpose and objectives of the Water Corporation in undertaking a scenario planning project bore little apparent relationship to the concern that was the

focal issue for scenario planning. Purpose and objectives were not clearly defined and, at least in part, were emergent as the change initiative progressed, which would appear to be congruent with the SSM philosophy.

A simplified map of SSM appears as *Figure A1*.

Figure A1 Soft systems methodology



Adapted from (Checkland, 1989, Checkland, 1993)

Discussion in the Deep Conversation tended to be based around an integration of scenario planning techniques into SSM. The possibility of using SSM techniques within scenario planning was not considered, i.e., expanding the scope of scenario planning using SSM techniques to explore conceptual ecologies as a potential driving force in the broad operating environment of the organisation, which would include internal matters where appropriate for context and purpose of the scenarios. This would, however, require a major redesign of scenario planning methods.

From the outcomes of the research for this thesis, there appear to be several areas in SSM where scenario planning techniques could enhance it, or through a combination of the two methodologies a new approach could emerge.

As already discussed, SSM is reliant on the extant knowledge of participants. Scenario planning methodology increases knowledge and challenges orthodoxies through analysis of external driving forces and the use of people from outside the organisation in the process. It has been shown in this thesis that scenario planning does not take into account internal uncertainties in depth, but it can help surface some assumptions about the organisational environment and context that form part of *Weltanschauung* (world views). Scenarios therefore have the potential to enhance the exploration of the problem situation by broadening understanding of the problem context and the mindsets of participants, as well as setting the framework for a strategic conversation.

At the heart of the SSM methodology is the formulation of root definitions of systems relevant to a problem situation using the CATWOE elements: **C**ustomers (victims or beneficiaries); **A**ctors (who would perform the transformation); **T**ransformation (of input to output); **W**eltanschauung (world view that gives meaning in this context); **O**wners (who could stop the transformation;) and **E**nvironmental constraints (elements external to the system, taken as given) (Checkland and Scholes, 1990). In the context of the theory and research outcomes of this thesis, the principal elements where the development of scenarios may enhance understanding of a problem situation and so assist in formulating root definitions are *Weltanschauung* and *Environmental constraints*, areas where it was mooted that SSM was restricted to reliance on internal perspectives and knowledge. Specifically, this could be achieved by the injection of external perspectives and knowledge of the organisational environment and the revelation of assumptions about these.

A further area where scenarios could form a useful framework for an SSM strategic conversation is in the stage of comparison of conceptual models with the real world. If the problem relates to the future, the use of multiple possible futures, in alignment with the scenario planning theory in *2 Literature review and scenario planning theory*, is likely to increase the robustness of the comparison. One example of this was the negative normative aspect of scenarios that emerged from the research for

this thesis, where the future that was portrayed was culturally unacceptable to many of the participants.

With its methodology of suspending the real world concerns and examining an imaginative world, SSM provides an opportunity for world views and the uncertainty associated with them to be surfaced. Scenario planning is similar, but provides a framework for assumptions about the organisational environment rather than internal traits and culture to be examined.

A methodology amalgamating the two would appear to be beneficial and there is work being undertaken towards it at Curtin University of Technology (L. Allen and T. Lang, personal communication, July 20, 2005). However, this is a subject for further research and beyond the outcomes of the research grounded in the data that was available for this case.

Appendix 2.1 Evidentiary quotes for findings

To aid transparency, the evidentiary quotes are presented in a common format, which shows the context and illustrates how interpretations have been made.

The following conventions have been followed in the construction of the tables in this Appendix:

Context

Data interrogation is the question that was being asked of the data at this stage of the analysis.

Source interview question is the question that was asked in the interview that was likely to have given rise to the discussion reported here, although in some cases the interview may have followed a different course or the comments may have been made as part of discussion of another issue. It was decided there was little point in noting these differences, unless it was apparent that the different context would have a bearing on meanings.

Intention is the intention of the question as noted in *Figure 5.2 Interview Guide*.

Code

Codes are name of NVivo nodes, which are followed by their description.

Examples are *in vivo* selections from the interviews, chosen because they are representative of the perceptions or viewpoints grouped in each node. They show the richness and variety of the discussion as comprehensively as possible within manageable space, and have been ordered to provide a narrative flow to the concepts.

Notes

Notes are factors that may affect the reader's understanding of the interpretation.

Conventions

- In some cases, parts of the verbatim quotations have been omitted, to remove irrelevancies and to simplify or clarify the presentation. This is shown by a three dots (...). Pauses or hesitations by the participant are shown with two dots (..).

- Numerical data are provided where it was felt appropriate to understanding of a concept, using the convention N=xx where xx is the number of participants who discussed that concept.
- Codes that emerged but do not have a separate heading appear in the text of this Appendix in italics and in brackets, and may be included in concept maps in *6 Findings*.
- Names of people have been replaced with a description in brackets to preserve anonymity where necessary.

Appendix 2.2 Intentions

Appendix 2.2.1 Understanding scenario planning

(Refers to *Findings 6.3.1*)

Context

Data Interrogation

What did the participant understand by the concept of scenario planning?

Source Interview Question

What in your view is meant by the term scenario planning? (N=33)

Intention

This was the first question asked of participants. Its purpose was to qualify the participant's understanding of the scenario planning process and to obtain a brief description of his or her perception of what the process was.

Code

Futurescape

Scenario planning was seen as a way of looking at and describing multiple futures, often with reference to the organisation's external environment or issues from outside the organisation. It was also seen as a way to try to forecast the nature of the organisation in the future.

Examples

- My understanding of scenario planning is a process of, it's looking into the future, setting up a number of likely scenarios, and then preparing to meet those. Yeah, I guess that's it, in a nutshell.
- And I believe that four scenarios were created to, sort of, help employees and staff and senior managers think that these situations are possible, and that we can't control the environment that we're in, and that they may all happen.
- I understood scenario planning mean to look forward to the future, the specific time-frame was 2010, to see what the Water Corporation might look like in 10 years, by providing some options, to try and provide some clarity to that... and my understanding also was that, you know, whilst a number of scenarios were developed, none of those was necessarily seen as the total scenario.

Code

Alternative Strategies

A way to plan strategies for different scenario frameworks (proactive) or a way of testing how the organisation might react to different circumstances (reactive).

Examples

- So, by sensitising through the process of scenario planning, by sensitising the Corporation to a range of scenarios, it helps us plot our future, and a path, and give us greater confidence in the planning assumptions we might make.
- I see scenario planning as looking over the horizon, and trying to predict what might be lurking over there, so that you can make some kind of a judgement, and be ready for it if circumstances change, to have some different strategies in place to follow.
- ...it's about putting yourself into some possible futures, reflecting on what might have been.. what might be the pressures that you're under in that possible future, and then using that to identify a range of strategies or reactions that might be appropriate, given those possible futures. I guess it's about dreaming about the future without being there.

Code

As a play

An imaginary rehearsal of the future.

Examples

- A short play about a potential possible future.

Code

Back-casting

Looking back from an envisioned state to see how to get there.

Examples

- My perception of what it is, is that it's looking at a position of where we want to be in a certain time frame, so somewhere in the future. Getting an idea as an organisation what we will look like at that time. What sort of things we'll be wanting to be doing, and then working back from that point to plan how we will get to that particular point.

Appendix 2.2.2 Objectives

(Refers to Findings 6.3.2)

Context

Data Interrogation

What did the participants perceive to be the objectives of scenario planning and/or the organisational change initiative?

Source Interview Question

What in your opinion were the organisation's objectives in undertaking scenario planning? (N=25) (See Notes below)

Intention

To identify the interviewee's current perception of the objectives of the scenario planning project (See Notes below).

Code

Rethink commercial adventurism

The commercial division and the venture into marketing overseas had not been a success. (NB. Participants' views of the reasons for this can be found in 6.6.3 *Organisational focus and direction*). There was a need to reassess the direction of business development.

Examples

- I think this was just a bit of an opportunity to have a fresh look, reconsider where we were going. We had gone into - pretty aggressively - into trying to grow business through business development prior to that. That was looking as though it was waning a bit.
- We'd had an experiment with a thing we called the commercial division, and for a whole bunch of reasons that succeeded and then failed. And it was pretty important, especially after the failure of it, it was important to pick things up, and say, well, we're not scrapping this entirely, but we urgently need to redefine it.

Code

Plan in good times

The organisation was perceived to be doing well financially and facing no apparent major difficulties. The view expressed was that the most opportune time to look at long term change was when the organisation was "travelling well."

Examples

- And it's actually not only the most important time to change, but the toughest time to change. I mean, if you've just had a train wreck, it's obvious what you've got to do. If you're going well, the most obvious thing to do is actually keep going well, keep doing what you do.
- There comes a point when things are going well, when you have to recreate yourselves.

Code

Take stock

The organisation had been corporatised for five years and it was time to take stock of the direction it had taken and plan forward.

Examples

- And it was more a kind of a.. okay, we're a couple of years down the track on the Company One, let's take stock. We've learned a few things, like just how far our risk mandate doesn't extend, how far our skill set can actually take us. We've brought some people in from outside, and with some successes and some failures. So it was really a bit of a stock take, and a redefinition.

Code

Take a long term view

There was a need to take a longer term approach to organisational planning (as

opposed to water resource planning).

Examples

- People tend to be inwardly and narrowly focused on, you know efficiency and, you know, maximizing returns for services and so-on, which to me is actually unhealthy, um, preoccupation for any organisation, and I guess my view more is that if you're innovative and long-sighted and do what you do best, those activities will pay for themselves.
- It was a good opportunity just to take a bit of a step back, and review where things might be likely to lead. We'd been so focussed on current and the past, really.

Code

Government pressures

There was uncertainty as to the direction the organisation should take, resulting from the reluctance of Government to back commercial ventures overseas, pressure to cut costs, and the possibility of a change of government, with an election due shortly before the first scenario planning workshop.

Examples

- Also at that stage there was a recent change of government, there was some uncertainty about the future...
- Recognition that there was mounting pressure, I guess, from the board level, but also from government about, you know, wanting to see some change and wanting to see the business positioning itself.
- Possibly some other people, key-people, brought in were given brave new world type of agenda. And in reality it was never going to be that way, due to our links and ownership with the government.
- And also, we were being squeezed by government to cut costs, and, you know, there was, I guess, conjecture about whether some of the funding that we were used to, like community service obligations, would continue, and what sort of effect that would have on the Corporation.

Code

Redefine boundaries

There was a lack of clarity as to what the core business of the organisation was, due at least partly to the commercial adventurism factor. (NB. Further findings in this area can be found at 6.6.3 *Organisational focus and direction*).

Examples

- ... they weren't clear on those boundaries of what businesses we are in and what we're not in.
- We'd been down certain paths, like business development and growth-motivated paths, and then retracted a bit. We were getting to getting used to the new world, new water industry arrangements over a few years. So it was a good opportunity, good timing to say, well, really, it's pretty open, the future. And community expectations are changing, government and owner expectations are changing. So, as I would see it, a scenario planning approach seemed to fit the timing for the organisation. It could afford to kind of free-wheel a bit as to what our possible directions might be. So it made a bit of sense, and I think that's why I understand we did it.
- ... well, from a Corporation perspective, they were getting a lot of signals back that it was unclear about what business we were actually in, and the boundaries of our business, moving forward. Since corporatisation in '96, there's been a very strong commercial focus. There's been a fair bit of blurring around the edges in relation to what business we're going to get involved in, and how we're going to grow the business.

Code

Consistency of approach

Regions were not consistent in their approach to marketing and organisational matters.

Examples

- And also there was a fair amount of regional enthusiasm, which you cannot stifle, but you've got to direct in a particular way, without the necessary corporate framework involved in certain areas to make sure there was consistency in approach in some very important areas.

Code*Leadership image*

A perspective that leaders of the organisation were going through the motions of a change initiative because they felt they were expected to.

Examples

- I suppose my cynical views about change are that, you know, they're up there, they will still be. . they've still got two to three years to go, and they probably want to be seen to do something, so they carry out a strategic planning exercise, which has a positive reputation and stuff.

Code*Company One continuity*

The Company One 2010 process was seen as a continuation of, or a part of, the changes introduced under the Company One philosophy.

Examples

- Company One was really a philosophy, a vehicle that the managing director was using to try and engender a change in our values, and essentially it was all about corporate culture and a corporate way of thinking. And the 2010 exercise was really moving to position ourselves for the 10 years that was coming at that stage.
- The Company One bit was about being firstly a company rather than public service organization. So a corporation, in fact a company, the One. It was about being the leading water company in our market. We still didn't define what that market was, but being the leading one, in wherever we were. And then the inverse that was often driven to, that being one company, so it was addressing some of the silos and some of the desegregation within the organization. So the managing director made that point about it was Company One, one company. And then the 2010 giving a focus out there to look at that.

Code*Foreseeing change*

People in the organisation thought there was some uncertainty about the future and foresaw change in circumstances. There was a need to try to get a better focus on possible change.

Examples

- At the same time, there was a whole raft of pressures coming on the organisation, if I use the word changing environment you'll probably understand what I mean, in that we had a new government, there were greater regulatory pressures coming on the organisation because of changes in the regulator framework, there were greater pressures coming on the organisation in that there were higher standards to be met for drinking water quality and things of this nature. And all of those things put together suggested that that we really needed to have a look at the organisation and potentially.. oh sorry, and the other thing was greater financial pressures coming on the organisation, with demands from government - all of those things put together led us to the view that we needed to have a look at just where the organisation might be going, where we can take it to in future sensibly. And scenario planning from that perspective looked like a good way to do that.

Code*Change (reassess) business framework*

The intention was to change the business framework (*but note that this seemed to be treating an outcome as an intention, so was recoded as Reassess business framework*)

Examples

- We were looking at changing our business framework from what we had, we had key result areas and key support areas, and we were changing those areas for action.

Code*Vision change needed*

A change was needed because there was a lack of commitment to the current vision.

Examples

- There was a lack of vision or a lack of commitment to the ... current vision.

Code

Control own destiny

The organisation needed to make sure it controlled its own destiny. This was linked to a fear of government taking control of the organisation and dictating to it.

Examples

- So it was felt that was a good time to do it, but it was also a time to provide some leadership and try and control our own destiny by proposing and working through some strategic plans and objectives of our own, rather than waiting for those to be imposed on us.
- And we have to demonstrate that we are delivering to our stakeholder, or, I'm sorry, our shareholder, being the Government. And if we don't show that we.. if we don't define a strong future, and show how we're going to get to that, it will be done for us.

Code

Affirmation

The organisation's direction was already known and the objective of the scenario planning project and Company One 2010 was to crystallise and confirm it.

Examples

- We knew where we wanted to go, but it needed to be crystallised through a planning process. And the scenario planning provided a good way of doing it.
- My view was that there was already something that was in the mind of the managing director ... And I just felt that things were pretty ordained ... That was a complete bull shit exercise, because all the actions were already known. You know, there was nothing that came out of those workshops that couldn't have been decided six months before we started.

Code

Cultural change

A cultural change to sustainability and less bureaucracy was the objective (*but note that this is an outcome, that, although it appears to have been in some people's minds at the outset, was developed during the 2010 process*).

Examples

- ... an organisation that was going to be relevant to West Australia to delivering much more sustainable solutions in the future than they have in the past. And looking at the whole range of possibilities, and, I guess, really becoming less of a monolith and a bureaucracy, and more of a group of people who were prepared to work with the community to deliver their.. work with them, to deliver their needs..

Code

Overseas competition threat

Fear of competition from large overseas private water companies was the reason for the planning.

Examples

- I guess at that time we were looking at competition as a real threat to the organisation. We were looking at competition from overseas water companies, particularly the big French and British companies.

Notes

- The data interrogation question differs from the interview question because participants in some cases did not distinguish scenario planning from other parts of the Company One 2010 initiative (*cf. 6.3.4 Objectives of scenario planning and Company One 2010*).
- In some cases, individual participants identified more than one objective.
- One concept – *Leadership image*, was not included as an objective in the model,

because the concept involved the attribution of a personal motivation to people – in this case leaders - by an individual without any substantiating evidence.

Appendix 2.2.3 Choice of scenario planning as a method

(Refers to *Findings 6.6.3*)

<p>Context</p> <p><i>Data Interrogation</i></p> <p>What did the participant perceive were the reasons for the choice of scenario planning as a appropriate planning method?</p> <p><i>Source Interview Question</i></p> <p>What in your opinion were the reasons the organisation chose scenario planning as a method?</p> <p><i>Intention</i></p> <p>To identify the interviewee's current perception of why the organisation chose scenario planning as a planning method.</p>
<p>Code</p> <p><i>Out of the box thinking</i></p> <p>Scenario planning was seen as a way of getting people to think beyond their day-to-day job, forcing them to consider things more broadly, but without particularly challenging thoughts or ideas.</p> <p>Code</p> <p><i>Participation</i></p> <p>The method was seen as a way for people, especially managers, to participate in a learning process.</p> <p>Code</p> <p><i>Fad</i></p> <p>Management chose scenario planning because it was fashionable at the time.</p> <p>Code</p> <p><i>SPARU promotion</i></p> <p>Discussions with and promotions by SPARU influenced the choice of method.</p> <p>Code</p> <p><i>Previous experience</i></p> <p>Scenario planning was chosen on the recommendation of some people in the organisation who had had previous experience of it.</p> <p>Code</p> <p><i>Options</i></p> <p>The process crystallised four potential futures, to give a wider perspective for the organisation to position itself for the longer term.</p> <p>Code</p> <p><i>Long-term view</i></p> <p>There was a need for longer term planning view and scenario planning was a tool for this.</p> <p>Code</p> <p><i>Structured way of addressing uncertainty</i></p> <p>Scenario planning was seen as a structured methodology and an appropriate tool for putting uncertainty into some sort of a framework..</p> <p>Code</p> <p><i>External scan</i></p>

Scenario planning provided a scan of the wider world in which the organisation operated and of broader community or societal-type trends. It also provided a broader view of the business than just the product that was being sold.

Code

Non threatening

The process provided a non-threatening environment for people's different views to be voiced.

Code

Don't know

Some people, who were not involved with the choice of method, simply admitted they did not know the reason for the choice.

Notes

- Where interviewees made it clear, e.g., by their words or their demeanour, that their discussion of this was purely speculative or that they did not know, their responses were not included, on the grounds that they were not in a position to answer (*cf. 6.3.3 Choice of scenario planning as a method*). However, if a response was given in a confident manner it was included for coding, even if the content indicated that it may be speculative, on the basis that the analysis rather than the coding was the time to consider the authenticity of the response.
- Evidentiary quotes have not been provided for this section, because, as much of the information was not used due to the participants being unable discuss the matter meaningfully, the data was not relevant. Only the discussions with the three members of the Company One 2010 team were included in the analysis and to provide quotes from so few would have a high potential to breach confidentiality.

Appendix 2.3 Fit

(Refers to *Findings 6.4*)

Appendix 2.3.1 How scenario planning fitted into the change process

Context

Data Interrogation

How did participants perceive the part that scenario planning played in the overall organisational change process?

Source Interview Question

What changes of any kind have taken place in the organisation that are attributable in any way to scenario planning?

Intention

The interview question was intended to focus on interviewee's perceptions or recollections of change that had occurred since the scenario planning workshops and to explore how – if at all - scenario planning contributed to those changes.

Code

Mindset (N=16)

Scenario planning played a part in the organisational change process by encouraging a *change of mindset* that helped provide a framework for the process to proceed the way it did. This was the view of 16 of the participants. However, there was a wide diversity in the concepts of what changes had actually taken place. The concepts were:

Cultural: Recognition, particularly by senior managers, of cultural issues

- *Example:* I guess that, that's certainly helped in the minds of executive, recognise some of the underlying cultural issues that the organisation has. Whether or not that's delivered a change, I'm not sure, but it's certainly delivered a change in mindset, and a better understanding of the fact that some things were pretty backwards.

Challenge beliefs: People were able to challenge long-held organisational beliefs

- *Examples:* I guess my view is the actual specific action didn't come from the scenario planning exercise, but probably the shift in mind set which enabled that action to take place was born from scenario planning. And it was born from the discussions which took place in workshops, the ability for the younger people and new people in the organisation to challenge some of those beliefs which have been strongly held or strongly guarded, that actually led to those actions taking place.
- ... through the scenario planning, we had a select group of people across the organisation, and we had also outsiders external to the organisation that really were able to I guess obviously present a different view of us and our role, and how they saw our role within the context of the State and the State's development and so forth. And that I guess was quite valuable import in terms of our thinking and challenging our group thinking. I think that's really, I guess, the strength of scenario planning in a sense is to challenge our group thinking, starting from away out and working our way back to where we are now.

External environment: Changed assumptions about the political and resource availability environments and better appreciation of the nature of that environment

- *Examples:* ...scenarios really helped us to realise that the world had changed and was changing, and it was changing rapidly.
- ...certainly scenario planning gave us insights into the way thinking was changing, the way the community's expectations were changing.

Respect for viewpoints: Greater respect for the perspectives and inputs of different people, although it was queried whether this may have been an organisational

characteristic beforehand

▪ **Example:** I think the organisation has actually responded very well to the drought, and there's been, I guess, good respect for people's inputs from all angles, and the scenario planning environment sort of sets that up. It's hard to know if the organisation had it or didn't have it. I saw it during the scenario planning, and it got reflected again when we were dealing with some real contingencies. So either we had it as an organisation attribute, or we retained it after the scenario planning, I can't tell which.

Operational focus: The change of focus and direction changed mind set with regard to the way operational actions were approached. (*However, this is a subsequent change that needs to be seen as an outcome of the Company One 2010 process as a whole, not just scenario planning*)

▪ **Examples:** I guess that's changed people's mind sets a little bit. That's probably the biggest change, if you like, of mind set. Because, before that, there was a lot of talk about things we were doing externally, and trying to win these things in South Africa and try things in.. and maybe it was, it was probably misdirecting people.

▪ I'm sure we would have had them (water symposiums and water forums) anyway, whether our senior managers, whether our people would have been as open to having them and as receptive to it - don't know. But hopefully we're more cognitive of the need to have a richer and different level of engagement with the customer and community.

Multiple futures: A realisation that there is not a simple clear future but that there are multiple possibilities for which to plan

▪ **Example:** So, I think the major change to me was really to sensitise the executive, and others associated with it, in the fact that there was not just a simple clear future; that it wasn't just necessarily business as usual. ... I think you ended up with an executive that had a much greater common understanding of the fact that there are varieties of futures, and we're gonna need to be alert to some, because some of the scenarios that we painted were not exactly ones we were that keen on.

Confidence boost: Scenario planning was a tool that galvanised thought and created confidence

▪ **Example:** I regard the scenario planning as, you know, a tool that helped galvanise everyone's thought, and give confidence that, yes, we are on the right track here. And that's what came out of the plan.

Public service mentality: Helping the organisation leave behind a public service mentality

▪ **Example:** It gives people a vision of the future, and that's been.. People see the future, they see what sort of organisation, they see we have really moved away from PWD, and Water Authority, and that we are, really, we're into a lot more serious planning, in terms of business planning, rather than just asset planning. So we're looking at our whole overall business, and they can see how that change is happening.

Long term vision: Recognition of a need to look further into the future

▪ **Example:** I think one of the things we have done is, our planning horizons have pushed out a little bit.

Appetite for change: Scenario planning's role in encouraging an enthusiasm for change.

▪ **Example:** I think when we got to the latter parts of the scenario planning, and it was recognised that this was going to go further, I think people were looking at it, going, jeez, that's been successful, and this might actually deliver something. So I think that's.. you know, it did what it needed to do, in that it created an appetite for change and some sort of a response that perhaps wasn't there before.

Sustainability: Change of mindset to a recognition of the legitimacy of sustainability. This needs to be seen as a change that was an outcome of the Company One 2010 process as a whole, rather scenario planning in particular.

▪ **Example:** I mean, there were lots of agendas that have been running about sustainability. But I think, again, scenario planning and the 2010 project gave some legitimacy to it, and gave an environment in which debate about sustainability legitimately happened, and in fact caught it up into

our purpose statement. So that's a significant mindset change for the business. Would it have happened anyway? It might have done. But that was important.

No change of mindset: Scenario planning seen as just a way of gathering information and getting people to think

- **Examples:** I didn't really see anything that I thought, well, gee, I wouldn't have thought that would've ever happened ... I didn't see anything that really surprised me. I mean, I didn't sort of sit back and say ooh, wow, that's really interesting, that's a different way of looking at the world, you know.
- I read the scenarios as useful in gathering information, different views, from people ... It was documents that go to the bottom of the drawer, to be reverted, you know, in a couple of years time, and I'm sure we will, but to me the benefit was getting people to think.

Code

Trial run

Scenario planning was seen a way of trialling strategic responses by playing them out through the scenarios.

Example

- It does really allow you to at least conceptually go through some of the responses that you need to put in place.

Code

Tool kit

Scenario planning seen as part of toolkit of procedures in the planning process

Example

- ... we did a planning process, and it used scenario planning as the toolkit, so whether we can attribute it (change) specifically to the fact that we used scenario planning or not, I mean, that's the hypothesis.
- I wouldn't draw a direct link between what's going on necessarily in scenario planning (and 2010) other than it being a pretty valuable input ... I think it's (scenario planning) a tool within the (overall change) process.

Code

Facilitation

Scenario planning seen as helping facilitate change rather than as a change agent

Example

- It wasn't really so much of a surprise that the direction, in actual fact, was to do just that. To a degree it was my expectation that that is the way that can go ... It was only facilitated through scenario planning pictures.
- ... it was a sort of an icebreaker, in terms of, it uncovered a number of opportunities, explored a whole bunch of things, got people thinking in the right directions, and I think that enabled us to, sort of, reach the conclusions that we reached with all the other inputs as well.

Code

Scenario planning as motivator

Scenario planning seen as a motivation agent

Examples

- ... it certainly means that you get a whole bunch of people around with their tails up, they're all enthused, they've all got the mission and the same handbook, and away they go. That's a remarkable thing. They just self-propel from that point onwards.

Code

Content

Participants' views about the content of the scenarios.

Examples

- I guess when we did the four scenarios, if you like, it appeared at the time that maybe only one of them was even vaguely realistic, and the other three might not have been as realistic.

- Now I don't believe that some of the scenarios were really seen to be real ... not something that I think people really believed would happen. But it was valuable to get the framework around which that may occur, to clarify people's understanding.
- I guess it is, that you know, one of the big things about the scenarios, the four different scenarios were basically almost different shareholder attitudes, different attitudes of the government, privatisation versus the government department, or what point in between, how strong are the regulators, how involved does the government get in the business? They were really, a, fundamental differentiators between the four scenarios. And just thinking about, getting us thinking about those, was extremely important.
- I think surprisingly as we look back about a year down the track that the scenarios do seem to have an element of truth about them. But the actual scenarios that were written up, I see as less important than the process of understanding the environment and the drivers etc, etc. ... I think others had perhaps placed greater stead in the actual result document, but I suspect we'll probably never read the document ever again. But I think it's more about the more structured approach, to systematically construct a future around four different scenarios meant that we had to look at the problem from many different dimensions and that provided rigour in terms of what we were doing.

Code

Developing strategy

How scenario planning helps in setting strategy

Examples

- ... it provided a fairly robust framework for thinking forward and formulating strategy.
- Scenario planning is designed to look at a range of different, possible options for your strategic planning process within the Corporation, and to flesh out the actual issues involved, to make sure you are capturing what are the possible alternatives of moving forward, so you understand the implications of that.
- Well, actually, the scenarios themselves have been de-emphasised. They were a means to an end, and the end is the revised new strategic framework ... I saw them as being, one, instrumental to an intelligent review of strategy, based on, well, data, based on something, something of substance, rather than just fantasy.
- ... it probably helps us to guide our planning process into preparing for things that may happen, but also making us aware of what the implications are of things that may never happen.
- So I see that what 2010 has done so far, and what it has the capability of doing if we keep a focus on it, is at least it provides that consistency year after year.
- ... as an input to planning process, I think if that that's what it was set out to do, it did the job.

Code

Gathering information

Scenarios were seen principally as a way of gathering information or viewpoints.

Examples

- I read the scenarios as useful in gathering information, different views, from people ... It was documents that go to the bottom of the drawer, to be reverted, you know, in a couple of years time, and I'm sure we will, but to me the benefit was getting people to think.

Code

Monitoring

The use of scenarios to monitor trends and shifts

Examples

- I guess we could use them, they were structured this way, I don't know whether we'll ever use them this way, but there were sort of triggers to say, if this is the way the future is emerging, what are the key triggers you'd see in scenario A, B or C as coming up?
- ... there's been no monitoring. In the sense it's dropped a little bit back into history, because, you know, we've a lot of pressure upon ourselves at the moment. But we don't want to forget it.
- Probably what we need now is perhaps just a few check points along the way, to sort of say, well, we're actually moving in the direction that we plotted, things are panning out pretty well as we thought they would, or not.

Code

Linkage scenario planning and 2010

How participants perceived the relationship between scenario planning and Company One 2010.

Examples

- It really was the foundation for a lot of the changes, or a lot of the change in mindset that took place in the latter part of the project. (*SP preceded 2010*)
- I mean, the scenario planning ran on into the 2010 ... I think we could have done a lot of the 2010 things purely from a organisational change perspective. (*SP preceded 2010*)
- ... they hit me as two separate initiatives, but that doesn't mean there wasn't a link somewhere. . (*SP and 2010 separate*)
- I don't know whether the scenario planning directly linked to the outcomes of, right, this is going to be our business direction and our purpose, and this is where we're going to focus. But the scenario planning process, from my perspective, provided the opportunity to discuss and look at a number of opportunities, and consider some outcomes, and I think through that and a whole bunch of other things that were occurring at the same time through the 2010 process. I think the scenario planning just formed another important link in evolving our thinking to look at and explore possibilities. (*SP and 2010 separate*)
- Well, it's always a bit grey in terms of where do the linkages start and stop? I guess my view is the actual specific action didn't come from the scenario planning exercise, but probably the shift in mind set which enabled that action to take place was born from scenario planning. When we started the next round of the 2010 discussions, there was very little feedback between the scenario planning and the 2010 discussions. You know, they weren't so woven in with each other. (*SP and 2010 separate*)
- Well, once again, I'm probably confusing 2010 with scenario planning.
- I'm not quite clear if the restructuring was driven by the scenario planning, Company 2010, or whether it was the result of other things. But I presume it was as a result of discussions amongst the general managers and the M/D about what the implications of the Company One 2010, which flowed on from the scenario planning, or was part of it, which was part of that, that certain things needed to change. (*Black box*)
- ... the scenario planning itself, I'm not entirely how it fed into the remaining work afterwards ... I'm sure it actually had the effect of making a lot of the people who were at those workshops, and some of the senior managers, actually more aware of some of the issues. So maybe an intangible sort of impact. (*Black box*)
- You know, was what we've got a direct result of scenario planning, or was it the result of a couple of people hearing the advice of the scenario planning people and saying, oh, that's all very nice, but actually what we really want to do is this. (*Black box*)
- I mean, how many of those people would go, ha, ha, yeah, this has come from scenario planning thing, yeah I can see [it]. I guess not many people probably will see the links through there. (*Black box*)
- I don't know what happened in the black box, what was in that box. (*Black box*)

Code

Can't distinguish processes

Participants indicated difficulty on distinguishing the scenario planning process from Company One 2010, and indicated that people who had not participated in scenario planning project might not understand it.

Examples

- In a lot of cases, it's difficult to see what was part of the 2010, sort of scenario planning 2010, process, and what was part of the corporate planning process and our evolution of that.

I don't think anyone that wasn't directly involved in the process would really know very much about the scenario planning and the part that it played. And that's perhaps one of the.. I don't know whether that's a shortfall of the process, that you know, there's probably little understanding in the organisation generally about the process.

Appendix 2.4 Effect

Appendix 2.4.1 Learning

(Refers to *Findings 6.5.1*)

Context

Data Interrogation

What were participants' perceptions of the outcomes of scenario planning and the Company One 2010 process with regard to organisational and personal learning?

Source Interview Question

In your opinion, what changes -of any kind – have taken place in the organisation that are attributable in any way to scenario planning?

Intention

To explore the participant's perceptions and recollections of changes in the organisation and to ascertain whether they believed there was any causal link with scenario planning. This section explores participants' views of the effect of scenarios on organisational and personal learning.

Code

Intra-organisational understanding

Perceptions of increased understanding across the divisions – or silos - and between vertical levels of the organisation as result of scenario planning.

Examples

- And scenario planning, I mean one of the good things about that exercise, was that it was cross-divisional. It was not respecting of divisional boundaries at all. So I think that was a plus. And therefore it probably led to a different sort of empowerment, sharing of information, and individual accountability. (*Cross-divisional communication*)
- I guess - the fact that by the time you got to the end, everybody had a.. well, a lot of people had a better understanding of the way the business was working. (*Cross-divisional communication*)
- I don't know if you've seen our previous key result areas and things. But it had things like customers, stakeholders, finance, environment, assets, stuff like that. And people found that quite neat to pigeon-hole stuff in, and say, Ok, well, if I'm a manager, assets, I'll look for assets, and that's all I have to think about, you know. If I'm a finance manager, it must be about finance. Whereas people found.. people's comments in response to this was, I find it hard to find exactly which bubble, which area for action I fit into. And that to me that was quite a powerful comment, quite an endorsement, in fact of the model, in that we were trying to have people see that everybody needed to encompass something in all areas for action, and they were indeed interlinked, and you couldn't just focus on your little bit of the business. So that was quite, I guess, enlightening. (*Holistic view of the organisation*)
- Well, I think every scenario had sustainability embedded within it, and I think the good discipline that it gave is that, say, people who only had normally a financial interest in their job, or an engineering interest, suddenly realised that you couldn't make the business bits fit and work unless everything was considered holistically. (*Holistic view of the organisation*)
- The core business, I guess, there's elements that people pick out of the core business, but they still only look at their core business. (*Holistic view of the organisation*)
- I guess it's probably helped me to look at things in a more strategic view than I probably would have before. Some of the questions in the original interview, the telephone interview, were probably not questions that I'd sort of, you know, as a matter of course, considered ... I got to interact with some relatively senior people in the organisation, and people from around the organisation, you know, that have different perspectives and different experiences. So that was really good; I liked that. (*Vertical communication*)
- I guess some of those things, in terms of the process difficulties which existed, the lack of

accountability across the organisation, and the challenges that people face every day in order to in trying to achieve the tasks that were being asked to achieve, were allowed to come out, because it was a different group sitting at the table. And I guess the normal group is the normal senior managers who have a different perspective. (*Vertical communication*)

- It helped disperse the knowledge that was being gained out in the field, to get it back to the more senior levels of management in the organisation. Because, you know, with a large organisation like this, it's sometimes communication is very hard to take from third level back up to.. it gets watered down by the time it gets to the top. (*Vertical communication*)

Code

Extending thinking

The perception that scenario planning resulted in out of the box thinking, thinking away from the status quo, change of mindset, change of perspective. Or not.

Examples

- Scenario planning played that very important part of getting people to think about, to think out of the box, out of the norm. (*Out of box thinking*)
- I think that the best thing scenario planning did was open the eyes of some of the more conservative elements of the Water Corporation to the fact that there are possibilities out there that are different. You know, that you can view the world differently. (*Appreciating different perspectives*)
- Examples are, when you get branch managers who have been branch managers in this organisation, who have had fixed views on what our role is as a water authority, 'cause they're back from Authority days, and they've been in senior positions since then, and before then - when you see them changing their outlook and recognizing that, by jeez, we do have to do things differently, and, by jeez, yeah, we do have to go and talk to that group out in wherever, because they have a valid viewpoint; and actually implementing some of the outcomes of those discussions - I think that's the change you can see. (*Managers communicating*)
- I think we've sort of rocked the boat a bit with the top managers, like, because.. the scenario planning process has made them, you know, contemplate the future, and think about the different possibilities, and whether they think one was ludicrous, which I know that some people did, and, you know, it's still in the back of their minds now. It's not business as usual, it's more anything could happen ... it made us contemplate the current culture, the way things are communicated, how we treat our customers. (*Awareness of uncertainty*)
- I guess the scenario planning ... really highlighted the possibilities for both the global water industry as well as multi-utilities. So, for the first time, we had to really seriously evaluate that. But at the same time, it told us there were way more wild cards, and the wild cards. . after the first workshop, you know, they (the executive) said {unclear} that's never gonna happen, you know, there's never gonna be a pandemic, has never gonna be terrorism, there's never gonna be, you know, collapse in the insurance industry, we're never gonna have a chlorine leak., etc. So, partly what we did as part of our internal research, is we just did some research on terms of, well let's have a look at some of.. and that's not to say executive are completely blind, but until you are presented with something that says, well, let's have a look at all water-borne pandemics in industrialised Western nations water systems over the last ten years, and you go, oh my God! But have a look at the leaks, have a look at the system failures, both within our organisation, and nationally, and internationally. So partly it was taking some of those things that seemed like such remote impossibilities, and really coming to grips with the fact that they were very possible - as well as, I think, it's very easy when we've got a fairly homogenous executive in terms of age and educational background and, you know, ethnic mix and whatever, to think that everybody in the community thinks like you do. And so much of the research, particularly from the external research, has highlighted the fact that, no, you know we're out on a limb, on the way that we're not engaging the customers, that we're not open in sharing information, and so forth. And realised that that was a very finite strategy. So scenarios really helped us to realise that the world had changed and was changing, and it was changing rapidly. (*Awareness of uncertainty*)
- Now, I guess now we've been told all the scenario planning and the way things have emerged have shown, you know, it was a sort of a bit of a learning exercise we had to go through. Maybe it's the learning exercise the organisation had to go through. Many of us don't believe it was a learning exercise we needed to go through ... Maybe scenario planning gave us the opportunity to test the boundaries, and really see whether, do we think that's achievable and what are the constraints?

Again I don't think you needed to do scenario planning to do that. You could have done that on the back of a cigarette packet in half a day. (*Extending thinking unnecessary*)

Code

Lessons

Lessons that have been or should have been learned from scenario planning.

Examples

- ... major litigation with the University of Western Australia over odour impingement on land owned by the university right next to the Subiaco Wastewater Treatment Plant ... it's been, you know, 50 years of adverse outcomes with buffers that nobody in the organisation's ever done something about, and it really took a supreme law suit to get the organisation serious about it. Now I just hope we learn from the scenario planning, and that experience, to sit back and consider a strategic.. organise strategic consideration of our position on other issues of that sort of nature - and there are quite few of them, about five or ten that I can think of. (*Long-term thinking*)
- You're not sitting there as an add-on or island or, you know, something, tick a box, we've got one of them. You're actually part of the organisation, and perceived to be someone who contributes to the whole business, not just this little patch on the side. And I think that's good for my team, as well, to recognise to see that, because I don't think they've seen that before. (*Holistic view of the organisation*)
- Actually, one thing, the GMs, we did agree to before we went into the workshop, to make sure we didn't speak too much, really. You know, we purposely tried to stay quiet, and hear everyone else speak. Which was a good lesson, I think. We need to do that a bit more often. (*Listening to others*)
- I've had to change, and it's been very good for me, in terms of being less controlling and more empowering of people. (*Delegating responsibility*)

Appendix 2.4.2 Personal effects

(Refers to *Findings 6.5.2*)

Context

Data Interrogation

What were participants' perceptions of the outcomes of scenario planning and the Company One 2010 process with regard to the effect on their personal work practices and viewpoints?

Source Interview Question

What difference has participating in scenario planning made to the way you personally approach your work?

Intention

To indicate whether any change of mindset that was claimed has resulted in action by the participant.

Code

Decision framing

How the effect on the thinking of participants from scenario planning and/or the output of Company One 2010 influenced the way they made decisions.

Examples

- ... every time there is another request from government, or further information required by government, or to rope us into some of into their systems, again, which are going to be a significant cost. I always go back to the scenario planning, and think what would it be like in the Back to the Future scenario ... The effect of that is to further reaffirm that we determined that we weren't going to be this particular one, for some reasons that were fleshed out. (*Reminder of negative consequences*)
- Well, I had the scenarios up on my board for about six months. And I thought they were good. And it just makes you think that you can't really expect anything. You can't sort of be complacent. (*Uncertainties and what-ifs*)
- I'm more inclined to think outside the box ... the biggest strength of it is, it allows you to challenge different futures, and that's not something that automatically happens. (*Uncertainties and what-ifs*)
- I guess it's given me some insights into the power of that unconstrained thinking, and the power of putting yourself into the future, and thinking about the kind of things you might need to do to optimise the outcomes... The idea of testing some scenarios, I think, is something I'd do more now than I used to do before, the what-ifs about, you know, the possible outcomes. (*Uncertainties and what-ifs*)
- But I suppose what it's helped me to do is to latch on to a crystallised view of the future, which has made it easier for me to build a case around some of the initiatives that I want to progress ... Because I can link it forward to 2010, and it gives me a little greater leverage. So it has value in that respect. But participating in the process probably hasn't changed the way that I work. (*Building case for strategic initiatives*)
- You know, sometimes you're faced with a situation, and you think, well, how should I respond? I know how I'd like to respond to this. But you think, hang on, I'm employed by the organisation to respond in a certain way. And the triangle is very easy to do. I mean, we've had some.. one particular person issue.. thinking of the right way that I should respond to that, and how I should treat that person, and how we should accommodate that particular person. And we recognise that our people are one of our greatest assets, so it was a case of being reasonable, and trying to accommodate that person under that sort of scenario. So, I mean, that's only one example. But, yeah, I think that's great, because that's clearly defines our vision, and things we want to do. It gives direction when you're making decisions about things you do around the place. (*Decision framing*)
- Well, any person who manages anything, you do scenario planning in your head. You don't, not necessarily put on a piece of paper, but you actually need to say, hey, if I do this this way, what is the effect of doing it, particularly if you are confronted with issues which you haven't been confronted

with before. ... each time that we do something, we examine, hey does that fit with where we want to head to. And if it doesn't, we re-examine it, and we adjust as we go along on. So scenario planning is part of my daily management. (*Decision framing*)

Code

Wider organisational knowledge

How scenario planning and Company One 2010 affected the participant's personal understanding of the way the organisation works and of the perspectives of others.

Examples

- I've learned a lot about how this organisation really works, and how to really get things done.
- I mean I'm a [vocation given]* by background, so it's very much broadened my view of the [other areas mentioned]* elements to making a successful business. So from that point of view it's been an extremely useful learning experience to me. (* = vocation withheld to protect confidentiality)
- But the 2010 process after that (scenario planning) was very interesting. ... So all these sort of intangibles about the way different parts of business worked, and what they saw as their priorities. You know, I think that's been very helpful. I couldn't say, you know, I've done this or that because of it. As I said, a lot of people have a good idea of how it all works, and what people do, but to actually know what their priorities are, and where their motivations are, and why they're doing what they're doing - it's easy to just dismiss it, you know, if you don't have that conversation with them, it's easy to just say, oh, you know, the lunatics over in the customer centre who just want to spend money all the time.
- I mean the whole 2010 project gave me a bigger, much bigger view of the organisation. There were so many things that I didn't understand previously that now I understand, in terms of how and why the organisation makes certain decisions and undertakes certain things, that have enabled me to better operate within the Water Corp system, if you like..... It's given me a much better picture of some of the constraints that the organisation faces, and therefore I'm perhaps less critical of certain decisions which are made, because I perhaps more fully understand why they're made. I'm probably less critical of certain members of the senior management group.. probably a lot less critical of some and a darn sight more critical of others.

Code

Networking

How scenario planning affected the relationships between people in different parts of the organisation.

Examples

- I think the way that my networks have operated in the organisation are much broader, which is good. You know, you actually learn quite a lot about people by going through the exercise, and it makes people easier to approach if you didn't have a, if you like, you know, a day-to-day work reason for doing it before. And particularly linking the Corporation's environmental performance and triple bottom line type approaches with the finance division, because it's a very important accounting exercise to get TBL stuff going properly.
- Well, I guess that it is quite an empowering thing to be involved in the process, rubbing shoulders with people across the organisation. I mean it's refreshing to be able to go vertically, but it's, more importantly, it's much more useful to go horizontally ... it's really the horizontal processes which are really the key ones, where we're very silo mentality like in all large organisations, and to break down those silos ... so that's why the processes are more important than the outcomes, because it gets people from different walks of life in the organisation, with different values and different day-to-day things, together in the one room, talking about one topic, and then it's just a net-working exercise really ... the informal network within the organisation is the only really efficient method of getting things done, especially in a short sort of time frame..

Code

Alignment with personal values

How the participant perceived the effect of the Company One 2010 outcomes when they aligned with his or her personal values.

Examples

- It rings true with my values, so therefore I espouse the values that are there, because that meets my

personal sort of value set. And so that, for me, is sort of logical. Which is why I do it, but if it didn't, then I guess..

- I mean, surprisingly enough, we do sort of relate to it (new purpose and direction) , I guess. I mean, to me, I like that. I like it a lot more than the previous one. From a water quality point of view, I guess, being a great place to live implies that you can turn the tap on and get a decent drink, so that's.. I mean, I guess I can see some relevance in there.

Code

Confidence and caution

How the interviewee's attitude to work had changed.

Examples

- ... there're a couple of things there, in terms of it's given me more confidence, in terms of what we're doing in my particular role with key customers ... I know that back in the organisation at least we've got some resources now looking at doing something about this, rather than just holding the line.
- I guess I saw 2010 as something that would help me in bringing about some of the changes I wanted to make. Because 2010 was echoing a lot of things I was trying to do anyway. And it just made sense So I actually gained, I guess, a lot of benefit from that, in being able to make changes..
- ...it's even made me more cautious. I'm probably the most cautious I've ever been ... here. And I think that's to the detriment of the organization. I see things going on, that I feel I should really say something, and I don't. I very rarely actually poke my head up now, except when I really think there's something really bad going on. And I do get pinged for it, I still get pinged for it. And the organization doesn't want to hear that, that the democracy in the place has gone missing. We've become driven by this cautiousness. ... And did it happen because of scenario planning? Well, no, but I think that was quite a major step downwards, was the end result of that.

Code

No change in work practice (N=17)

Participants' perceptions that scenario planning and Company One 2010 had had no effect on their work practice.

Examples

- I can't be very discrete about it, and say that, because I was involved, this has changed this, but I think when you're involved in something, it naturally it changes your perspective on things, and you sort of take all that onboard as you move forward. (*Change in perspective but not practice*)
- It's one of those things come and go, and, I suppose, there is some impact, but not a great deal. (*SP had little or no effect*)
- So I don't think that the way I work has changed at all, but it just made me think I'm glad that other people have been thinking this way. (*Alignment with personal values*)
- I'd say it's perhaps made me a little more open minded, and so on, but I would find it difficult to put my finger on any one thing I must say. (*Change in perspective but not practice*)
- I don't think scenario planning has made a difference to the way I personally approach my work. But it certainly validated the way I approach my work, in that I do try and look ahead and do the 'what-ifs', you know, what if this happened or that. (*Change in perspective but not practice*)
- I always look at the alternatives when I make a decision anyway. (*Alignment with personal values*)
- So I found it very useful in terms of my personal development, but it would be hard ... for me to say, well, you know, and this is the part that scenario planning has played in that, other than saying that it's just one of the many things that have been useful to me in developing my sort of.. and broadening my thinking. (*Change in perspective but not practice*)
- I think the outcomes have, because it's given a vision of where we want to go, and what we want to be, and what we want to do. But the actual act of scenario planning hasn't really changed how I operate. (*Change in perspective but not practice*)
- I mean what's the effect of 18 months water under the bridge versus going through a particular exercise? Obviously the scenario planning exercise had a beneficial effect, it was a significant contribution, but I don't think it's necessarily left me as a changed person. (*SP effects not distinguishable*)
- Zip. (laughter). (*No change*)

Appendix 2.4.3 Affirmation

(Refers to *Findings 6.5.3*)

Context

Data Interrogation

In what ways did participants perceive scenario planning and Company One 2010 as an affirmation of extant beliefs and practices rather than a change agent?

Source Interview Question

In your opinion, what changes of any kind have taken place in the organisation that are attributable in any way to scenario planning?

Intention

To explore the participant's perceptions and recollections of changes in the organisation and to ascertain whether they believed there was any causal link with scenario planning. This section explores a participant view that the change process affirmed existing organisational direction or personal beliefs and/or practices.

Code

Affirm organisational direction

Rather than initiate change, SP and 2010 was perceived to affirm existing organisational direction and strategy.

Examples

- I think what it did.. was probably reinforce that we were in pretty good control of our own destiny.
- So, we were a very customer oriented organisation before. We are still. 2010's reinforced it. I think scenario planning probably re-iterated that it was the right track.

Code

Affirm own views

Compatibility of the change process outcome with participant's previous views and ideas.

Examples

- ... it sort of agrees with my philosophy anyway, so that's fine.
- So really what it did in a sense was confirm to me that I guess my personal approach was the pretty close to the mark.

Code

Affirm own practice

Compatibility of the outcome of the change process with the participant's existing practices.

Examples

- I guess I saw 2010 as something that would help me in bringing about some of the changes I wanted to make. Because 2010 was echoing a lot of things I was trying to do anyway. And it just made sense.

Code

Affirm preconceived change

The concept that the organisational direction had been previously decided and SP was intended to gain support through apparent participation rather than actually initiate change.

Examples

- ... this scenario planning exercise was started with the outcome already known ... the people that were driving the process had the direction that we wanted to go in ...okay, the managing director had a view as to where we should go. And all he really did was, when we went through the process was,

well, I wonder if I'm going to hear anything that will change my mind? ... That was a complete bull shit exercise, because all the actions were already known. You know, there was nothing that came out of those workshops that couldn't have been decided six months before we started.

- And it was like, well, this commercial division's not doing too well, and we actually decided not to do a whole lot of overseas stuff. Which the Board had decided prior to scenario planning. So actually, although it was all wrapped up as a part of the 2010 outcomes, that decision had actually been made the December prior to scenario planning starting.

Appendix 2.4.4 Use and content of scenarios

(Refers to *Findings 6.5.4*)

Context

Data Interrogation

What were participants' perceptions of the outcomes of the scenario planning part of the organisational change process, in terms of how they were used?

Source Interview Question

In your opinion, what changes – of any kind – have taken place in the organisation that are attributable in any way to scenario planning?

Intention

To explore the participant's perceptions and recollections of changes in the organisation and to ascertain whether they believed there was any causal link with scenario planning. This section explores participants' views of the ways scenarios were used and the effect of the content of the scenarios.

Code

Choosing a scenario

The concept that one or more of the scenarios could be chosen for the organisation to aim towards or avoid.

Examples

- I didn't necessarily agree that the scenario that was chosen was the right one. But, I guess it didn't surprise me at all, at the end of the day.
- The effect of that is to further reaffirm that we determined that we weren't going to be this particular one, for some reasons that were fleshed out. And that would be probably be part of my discussion on a particular issue, that we've decided that we don't want to go Back to the Future, because of X, Y. You know, some of the key reasons would come into my mind. So I think it's very good in relation to steering a path forward. (*Avoiding a scenario*)
- My understanding also was that, you know, whilst a number of scenarios were developed, none of those was necessarily seen as the total scenario. It was always recognised that it would be more likely that there would be a mix of various elements from them, but I guess it took a number of extremes to try and test possible scenarios.
- So, I guess, you know, in looking at four different tracks we could have followed, we chose none of them. But thinking through the alternatives and the possible outcomes, really helps you set strategy.
- Q =You said earlier on that people had expectations that they would get a scenario for the future out of the scenario planning process. Did you share that expectation? A =I guess I had that hope. So rather than expectation, I guess we had that hope, and most of us thought if that's not going to be the outcome, then why are we doing it? It was made clear fairly early in the piece, and repeated all the way through, that that wasn't going to be an outcome. So I suppose hopes were dashed early in the piece. And we continued to hope that at least it would give some clarity.

Code

Preparedness

The concept that scenario planning was to help prepare for or pre-empt change.

Examples

- So it's about, it's about recognising what might happen, and looking at the opportunities to position the business to perhaps be able to cope with changes in the future, and preparedness for whichever direction it might go.
- I hope to find is that scenario planning will continue to be useful and a good reference document that, you know, when we get to a decision point or a situation in next week or next year, that we

should be able to flick through the scenario planning and say well, hey, yes, this was identified as a possible scenario within one of the scenarios, or a possible situation within one of the scenarios, and this is how we thought we might deal with it through that scenario. And that could become a very important starting point to dealing with that issue at that time in the future.

Appendix 2.4.5 Lack of change

(Refers to Findings 6.5.5)

Context

Data Interrogation

Explore the meanings of the interview conversations of participants who said they saw no change outcomes from scenario planning and/or Company One 2010.

Source Interview Question

In your opinion, what changes of any kind have taken place in the organisation that are attributable in any way to scenario planning? (N=21)

Intention

To explore the participant's perceptions and recollections of changes in the organisation and to ascertain whether they believed there was any causal link with scenario planning. This section explores a participant view that the change process affirmed existing organisational direction or personal beliefs and/or practices.

Code

Areas of non-change

Areas specifically mentioned by participants where there was lack of change after scenario planning/Company One 2010.

Examples

- To think of any initiatives that have been carried through that have made a big difference to the Corporation as a result of that, it's kind of hard to pin something on that. I think the change-maker teams came up with some very good ideas, but I don't see them being implemented. (*Changemaker teams*)
- (Q = Examples of the initiatives that were started, but not really taken up) - I guess things like, things like the accountability review, things like changes to the process model and how that worked, the workforce of the future or the future initiative, which was to look at, you know, cultural change. I mean, the classic was the change-maker teams... (*Accountability review; Workforce of the future; Culture*)
- ... in terms of the organisational structure, that I see, there's been absolutely no change within my division and branch and section. (*Structure*)
- We didn't change the structure. We didn't change the executive team. They didn't even change roles. You know they didn't even swap roles. (*Structure*)
- But what's changed? Well, certainly from the challenging bureaucracy stuff, stuff all. (*Bureaucracy*)
- Culture-wise there is no change in culture, I have not managed to see it. We are more bureaucratic than we have ever been. (*Culture*)
- I mean, it said, the planning found we are really need to be slick with technology and, you know, with e-business and all this sort of stuff. But I can tell you from where I'm coming it hasn't happened. I'm pretty disappointed actually. (*Technology*)
- I mean the value statements prior, well prior, to the scenario planning was, you know, taking charge of our destiny, and behaviours about. . . . a whole bunch of behaviours associated with doing that. And that was driving a lot of things we were doing anyway.... I don't think it's been strengthened much by the scenario planning. (*Values*)
- ... the ability of the Corporation to really shape its future 10 years out wasn't changed by scenario planning. That's more to do with, you know, government as our share holder, their timeframe for looking out at things, and they drive to, I guess, view the length, the life of the government, rather than to really look longer term. (*Government constraints*)
- So, although we might have this vision of where we want to be, one of the things that maybe prevents us from achieving that is the fact that our shareholder doesn't want us to, or puts constraints on us, that doesn't allow us to achieve that. (*Government constraints*)
- ... specifically, with different areas, like, with different areas of our business, whether it's

environment or people, being any closer to knowing, say from a people perspective, what kinds of skill-sets will we require in ten years' time, you know. You know, where are we, what's the profile of our people now? What profile will we need in ten years' time, in terms of the kind of business we're going to be in, kinds of technologies we'll be in, etc, etc, etc. How are we going to close the gap on that? (*Specific vision*)

- We've just reshaped, and we still see that we've got our one key area, only one area for action called customers and community, and CSD still saying it's the area driving that, and the only area that they're driving. (*Focus on key areas*)

Code

Lack of effectiveness

Participants' perceptions that scenario planning and Company One 2010 have not been effective as a change agent.

Examples

- I guess my perception, sort of that, to be perfectly honest is, I don't really think it's that had that much of an impact.
- I think the Company One 2010 was really just as a result, after scenario planning, I mean, you know, it was sort of more just a slight adjustment in course ... I don't see any fundamental shifts in the way we approach things. It's more how we go about planning.
- A lot of people could tell you that Company 2010 was happening. But I don't think they could really tell you many, or any, discrete outcomes, and specifically what we gained by going through it. (*Intangible outcomes*)
- I think if you walked round here and said, 2010, what does it mean to you, you wouldn't get a lot. I mean, I'm battling to articulate clearly what is. I mean, I've done all the stuff, and I've read it all, I understand it, I guess, and just absorbed it, and it just becomes part of what we're doing. But it's not like it's a beacon out there guiding us to where we're going to be next year or in five years time. It might well be, but I think there's a lot of things in the way, that you can't see the beacon. So, I mean, I guess that's the way I see it. (*Intangible outcomes*)
- I think people didn't see the outputs as being tangible enough, I don't think. They were unashamedly about cultural, rather than structural, change. They weren't about building new buildings; they were about changing the culture and the way that we work, the way we interact with the community. And for many of our people that was hard to engage with. (*Intangible outcomes*)
- It's not business as usual, it's more anything could happen. And I'm not to sure whether.. I think scenario planning was effective, but I'm not too sure whether, I'm not sure whether it was something that we did and we've now forgotten about it. ... Because a lot was done as a result instantly after the process and the workshops. But it's not all.. I don't know, I mean, everything is now changed according to this new strategic framework, so that's a positive. But, I'm not sure. I don't know. I don't sort of.. I'm not sure whether the senior managers are.. I don't know what they thought about the process, and we don't talk about it in team meetings or anything like that. [Note: reluctance and uncertainty here]. (*Lack of follow-through*)
- I actually see it as just being business as usual. I think there's probably a greater awareness that change may come upon us. But I think the pressure's gone off. I think there's a bit of complacency that things are going to be OK in this government regime, and it's business as usual, to some degree. And I think we've been really captured by a couple of key issues that have probably distracted senior management ... a major court case litigation and a drought. (*Other issues as diversion*)
- I feel that we put people and culture at the centre, so I think that the mental shift was made, but I think very little as happened on the ground in that respect. Almost nothing. I think graduates are leaving as quickly as they were before 2010, and that was the major, was probably the major impetus was how to harness that talent. And I think the organisation has completely failed, by and large, to do that. (*Mental shift, no action*)
- So I see its results in a lot of work, and it's a new framework, it's a new way of slicing the orange, but is it a better way? Not for our business, not for this division anyway, because we still manage by those eight pre-scenario planning areas (laughs). (*Use of old planning areas continuing*)

Code

Talk, no action

Perceptions that discussion and planning in SP and 2010 involved a lot of interesting discussion and communication, but did not lead to effective action or change.

Examples

- It seemed to be very strong commitment coming through all of those discussions last year, but.. Everyone would welcome it, like truly, they would welcome it. But, recognising the fact that we're having to manage a whole lot of risks, I can't say I've seen any. But I know there's a.. people are willing to have a conversation about it, but maybe it just seems like [unclear] things in the too-hard basket.
- But it was a giant gab fest, you know. The process was fascinating, it was terrific, you know. We got external people in, and we talked about all these things. But nothing fell out. At the end of it, we had these scenarios, very thoroughly researched. You know, we did an awful lot of work ... But out of it, we didn't get anything that we could walk away from and say, right, now we can go down this path and do this.

Appendix 2.4.6 Unexpected effects

(Refers to *Findings 6.5.6*)

Context

Data Interrogation

What effects of the organisational change process, and especially scenario planning, did participants identify as unexpected?

Source Interview Questions

Were there any effects you did not expect? If so, what were they?

Most discussion arose from questions 3, 4 and 5, regarding changes, unexpected effects and adverse effects.

Intention

Participants were asked about unexpected effects with the idea that the logic that if an effect was unexpected it may also have triggered a change in mindset. (The question did not achieve this purpose).

The questions were aimed at exploring the participant's perceptions or recollections of the change process between the scenario planning workshops and the interview.

There was also a specific enquiry about any adverse effects in an attempt to ensure the interviewee did not try to emphasise only beneficial effects because of a fear of offending the interviewer, who was employed by SPARU and therefore indirectly associated with the scenario planning project.

Code

Degree of acceptance of SP

Success of scenario planning part of the process

Examples

- I think the fact that we went to phase two was something I didn't expect, and I think that was, in my mind, that was endorsement of the process, an endorsement of the fact that the scenario planning part of the Company One 2010 was successful. There was ringing endorsement across the organisation for it, you know, which was good. I didn't expect that.

Code

Duration of 2010

Keeping the organising group together longer would have assisted implementation.

Examples

- Maybe I didn't expect the Company One 2010 group to stop as soon as (it did) ... it was good having them as a team working on it. It gave the whole thing credibility ... And when they sort of disbanded or whatever, I guess the whole concept wasn't so widely..
- I think the only surprise is that it's been allowed to fall into a hole. I really did think that there was a enough momentum to carry through ... I do have this vision of the torch being dropped and no-one picking it up.

Code

Less effect than expected (N=8)

The change outcomes of the scenario planning and/or Company One 2010 process were less than expected.

Examples

- I had expected there to be much more pushing of our mental boundaries, and hard questions being asked.
- I guess, from my personal point of view, I was hoping scenario planning would provide a much less of the predictable outcome than we achieved. That sounds funny, I guess, but we didn't seem to

end up with any significant way-out ideas. And I was hoping to see some more lateral ideas come out of the process.

- That first workshop that I went to that was run by the Curtin group, it was done so well. The lady who managed.. it was very, the questions she asked, the whole, it was, I was really very hopeful at the beginning and thinking.. and from meeting with them beforehand, and I suppose I was interested in how this was going to translate into practical things, practical change, in the workplace. And I suppose from that respect I have been disappointed. And I don't know if it's got to do with scenario planning or disorganisation.
- I, in my dreams, did not suppose that anyone would put all that time, money and effort into something, to just say, gee, that was fun, put that in the cupboard over there, and let's move on. You know, that's probably the biggest surprise to me out of it ... There may well be lots of positive things that came out of it, but I haven't seen them.

Code

No unexpected effect (N=12)

Participants did not recall any unexpected effect. This question seemed to the researcher to catch some participants by surprise, with the result that they responded with "vaguely out" replies. (*cf. 5.2.2.1 Researcher and participant integrity*)

Examples

- Not that I can recall specifically.

Appendix 2.4.7 Adverse effects of scenario planning

(Refers to *Findings 6.5.6*)

<p>Context</p> <p><i>Data Interrogation</i></p> <p>What if any adverse effects of scenario planning were perceived by the participants? The coding for this questions has been restricted to scenario planning, excluding broader discussion of Company One 2010, the effects of which are analysed elsewhere.</p> <p><i>Source Interview Question</i></p> <p>Were there any adverse effects you have not mentioned yet? If so, what were they?</p> <p><i>Intention</i></p> <p>To ensure participants who may have been reticent about voicing negative views about scenario planning did not overlook them).</p>
<p>Code</p> <p><i>Length of process</i></p> <p>The time commitment to scenario planning and Company One 2010 on the part of management and some other people was considered a burden by a few.</p> <p><i>Examples</i></p> <ul style="list-style-type: none">▪ ... it's got to be looked at, scenario planning and 2010, the time consuming nature of it needed to be considered, re working out what its implications are for senior executives off line, for some long period of time, and what do you think is going to be the implications of that? What's the answer? <p>Code</p> <p><i>Implementation</i></p> <p>It is not the scenarios that have adverse effects but the implementation of the planning. This is further developed in <i>6.7 Implementation</i>.</p> <p><i>Examples</i></p> <ul style="list-style-type: none">▪ I don't think I've really seen adverse effects of scenario planning. But, I think, some adverse effects of the way it was implemented in the Water Corp.▪ I don't think that the scenario plan once adopted - and you have to have good reasons to do so - really can have adverse effects. It is the way you implement it which can have adverse effects. But scenario planning itself, I doubt whether that really affects corporate behaviour. It only affects corporate behaviour if you do it wrongly. And that is not the fault of the scenario planning, that is the adaptation of it. <p>Code</p> <p><i>No adverse effects (N=20)</i></p> <p>Participants stated they did not think there had been any adverse effects from scenario planning.</p> <p><i>Examples</i></p> <ul style="list-style-type: none">▪ I don't believe there were any adverse effects.▪ I guess that's the tragedy of it, that there weren't any adverse effects. There were so few effects, at all.
<p>Notes</p> <p>The question asked for any adverse effects of scenario planning that had not already been discussed to that stage of the interview. Therefore the data are not comprehensive. Coding did include adverse effects mentioned at other parts of the interviews, but it was a matter of interpretation whether the participant considered an</p>

effect to be adverse. Comments about the effects of the Company One 2010 process tended to be voiced in other parts of the discussion and have been recorded under the specific change codes

Appendix 2.4.8 Specific changes

(Refers to Findings 6.6)

Context

Data Interrogation

What were seen as the outcomes of the process, in terms of its effect on organisational culture and attitudes?

Source Interview Questions

1. In your opinion, what changes – of any kind – have taken place in the organisation that are attributable in any way to scenario planning?

Intention: To ascertain participant's perceptions or recollections of change in the period since the scenario planning project was completed.

2. I have here a list of specific areas. Can you tell me as I read them out about any changes that have taken place in the area in the last 12-15 months? (Each item of the list discussed separately, together with, for the later interviews, "your particular area.").

Intention: For participants who had been pre-workshop interviewees, to focus on areas (up to four) that the interviewee discussed at the pre-workshop interview, to ensure that some common areas of perceptions of change were discussed in both interviews in order that comparisons could be made for all participants. For focus group participants, to focus on four broad areas that had been frequently mentioned in the pre-workshop interviews, to provide comparison with other groups if required, but not for use in the comparison between the pre-workshop and later interviews.

Code

Attitude to risk

Perceptions of attitude to risk, including risk aversion, in the organisation, and how it had changed.

Examples

- I think people are reluctant to make key decisions that may well be within their area of accountability, because they're not prepared to accept the consequence of that decision not going right. And, more is the point, they're probably not prepared to face the - well not face, but to deal with the consequence of their manager being relatively unhappy about that. (*Individual reluctance to accept responsibility*)
- The Corporation, and I've heard it said by many people, the Corporation as it stands is a much more risk-adverse [sic] creature than the Water Authority was. So government as the owner has to decide what they want the balance to be.. So we don't have our destiny in our own hands, we're a constrained organization, and it tends to make us very risk averse. (*Corporation more risk averse than Water Authority*)
- I think just our whole change, our changing attitude towards risk, I think, is probably something that comes out of the kind of discussions that we had under the various scenarios, you know, that we do need to understand the risks that the business is exposed to. (*Understanding of risk through SP*)
- I think we maybe even have, since 2010, become a little bit more cautious, because, you know, people - there's this perception there that we don't really do a lot of business development any more. (*New business direction less risky*)
- Oh, I think the reduction of the broader outlook of the Corporation in terms of commercialisation, in other words, it is perceived that the Corporation, by not wanting to be as commercial as they previously thought they wanted to be, that therefore the risk-taking was a different picture, and because of that there's a retraction in all of these things. And I think that part of that is that bureaucracy increased, however subtle that might be, and therefore trust diminished and so on. (*New business direction less risky*); (*Bureaucracy and lack of trust*)
- We're on a very tight trust and credibility line at the moment, you know, with a very strong likelihood that we're going into drought again, and restrictions, in the coming summer. So, yeah, I think we've

become, we still remain very conservative. But not necessarily conservative in our thinking within the business. I think we're outwardly very conservative, when we deal outwardly with customers and stakeholders and our regulators and that sort of stuff. (*Conservative approach as effect of drought*)

- The innovative thinking has really been driven quite hard, and, even for those people who try to ignore it, you can't help but get caught up in it. And I think the scenario planning was just another one of those things that helped to broaden people's thinking about directions. (*Innovation encouraged*)

- ...we used to sort of have this approach before that we had to be 100 percent right 100 percent of the time. You know, we talked about that a lot. And the feeling after this was, well, you know, the world is changing, science is changing, you know, not all the answers to a lot of these things are known. So I think there's, in some ways, more acceptance that risk is a big part of our responsibility. So rather than trying to bullet-proof against it, because we can't afford to do that, we've no funds to do that, it is more about making those risks known to people, making those trade-offs known. (*Need to accept risk and trade-offs*)

Code

Attitude to Government and regulators

Perceptions of whether or how scenario planning affected attitudes towards Government and /or regulators. This section also contains perceptions of ways in which government and regulators affect the organisation.

Examples

Nature of relationship with Government

- ...we're independent of government as a Corporation, but we're not independent of government. What I would say is, we work independently with government. And that's our attitude. The minute we try to be independent of government, they'll gun for us. But if we're seen as adding value, you know, then that's fine. (*Independent – with government*)

- But I think we're a ... a bit too compliant, and, I guess, responsive to political ministerial issues, rather than, I guess, a more independent view. (*Independent – with government*)

- And, I mean, you don't necessarily operate in a commercial manner in the same sense as I would have seen it when we put the legislation together which governs how the Corporation is supposed to operate. It's never really worked that way in my view. It's always been as much political as commercial, notwithstanding, you know, as the Corporation has sort of moved ahead quite a lot in terms of its commercial approach and performance. (*Political influence*)

- I suppose one of the big constraints is the amount of money that we can get to implement what we want to do. And I suppose that comes back to our ability to negotiate with government to get what we require to achieve those particular things. (*Government as shareholder*)

- ...as a shareholder, I guess they have quite a strong influence, as the only shareholder. They can, if they choose to, dictate what you do and don't do. I guess at some point you need to be politically conscious, and the board in particular need to be, and make decisions so that.. the last thing you really want to get to is a point where you're directed by Government to do something. (*Government as shareholder*)

How Government affects planning and decision-making

- Oh, we think we understand customer's expectations enormously. That again is a confusion in our industry, because you have "the customer", the mum and dad, who have varying views, as is clearly evident in the papers of recent times, you have industry who have different views, and you have government who theoretically represent the customer as well, who may well have, argumentative, different views to what the customers believe they have. (*Customer vs government demands*)

- And we're also very mindful of not becoming, not getting offside with government. So in that there is a level of bureaucracy and risk mitigation, which does stifle some of our activity. It's not necessarily an unhealthy thing, provided that we can convince ourselves and others that it is the way that we need to act to stay in business. (*Bureaucracy*).

- But in reality, being a corporation, is sort of, you know, we're no longer a government department, so we don't enjoy some of the, you know, we're not under the petticoat of government. But we're not a private company either. So we're sort of in between. And that's been a point of frustration for many in the business, that corporatisation hasn't really delivered what we thought it would. And also what it's done is brought another layer of management, in that the board of the Corporation, and that board requires and demands a whole bunch of different things from us that we didn't have to deliver before, in terms of information they require ...to make sure ... the risks are covered.. (*Bureaucracy*)

▪ The major, perhaps, drive was to look at, and get a clearer vision, of what 10 years or further out, rather than five. I'm not sure whether that was achieved, mainly because of the lack of.. but the ability of the Corporation to really shape its future 10 years out wasn't changed by scenario planning. That's more to do with, you know, government as our share holder, their timeframe for looking out at things, and they drive to, I guess, view the length, the life of the government, rather than to really look longer term. (*Electoral cycle time frames for planning*)

▪ And where we want to see our business down the future, maybe that, that will.. one thing that can change that dramatically is, once again, a change in government. And the government might say, well, their perception of the Water Corporation in ten or fifteen years' time is an organisation that returns 'x' dividend to us, and we don't pay them back any money in CSOs. So, we want a completely stand-alone operation. And everything they do has to be financially viable. So, if they came up with that, that would change the whole where we want to be, because the government, our shareholder, said we want you to go a different direction. So, I suppose that's the thing that blows it out of the water, at the end of the day, isn't it, you know? (*Electoral cycle time frames for planning*)

Effect of scenario planning on attitude to Government

▪ The thing that emerged most out of scenario planning for me was that the key driver of the four different scenarios, the one thing that differed substantially, was government's expectations, and government's behaviour. ... I don't think that that was a surprise to us. (*Recognition of importance of govt influence through SP*).

▪ I think there was a recognition through.. that came from interviews, that came from the workshops, that we needed to.. that that was an area that was changing, that there was this threat of an economic regulator that was going to force us to change our views. And I think the learning that was done, and the different pictures which were painted, in terms of how government and regulators can influence our future, probably had a significant impact in terms of shaping the outcomes, which we're sort of now seeing. So it was, as much as anything, about learning and seeing that, Jeez, these guys do play an important role with respect to where we end up in the future. We need to be perhaps taking a different line. (*Recognition of importance of govt influence through SP*)

▪ I mean, the organisation is certainly a lot closer to government than it was, perhaps, previously. Now we're part of a whole of government issue on drought response, and things of that nature. I personally don't believe that's a result of 2010. That's a result of drought, and government needing to appear to take a bigger role with respect to water supply within the State ... I guess the reality of all this is that, just as the 2010 project started, we had a change in government. I think with any change in government you'll see a change in relationship with government, because they'll have different expectations. (*Drought and attitude to govt*)

▪ ...there's far more notice of making sure we manage our stakeholders and shareholder, but I don't think that's a result of scenario planning, I think that's just something that was emerging anyway, and patently obvious. (*Importance of govt obvious*)

Nature of relationship with regulators

▪ When it comes to prices again, which is the reflection of this, there's still the influence of the political decisions. So I think that's a bit of an issue for us, that regulatory standards and community expectations are going up steeply, government wants more money from us, we're spending more capital to meet those standards and expectations, as well as just the day-to-day growth in activities and so on. And that creates a bit of a crunch financially for the Corporation, in terms of how we deal with that. (*Effect of regulations on pricing*)

▪ And my view is that we will need to be stronger with regulators, in terms of having them justify the economic impacts of what they're doing, and making clear to them and everybody else, politicians and community included, what the cost of some of those things are. Inevitably, the fact that it's going to impact on the price. At the moment, what it costs, and what the price is, are two separate issues, pretty much. (*Effect of regulations on pricing*)

▪ An escalating regulatory regime, which puts much greater scrutiny on parts of the business that we may have been able to keep hidden in dark rooms before. Particularly, the advent of the economic regulator in January, we trust, of next year will mean there's much greater scrutiny of efficiency, the cost structures and the cost price ratios. (*Escalating regulatory regime*)

▪ The economic regulator's coming in. Suddenly there's another whole universe of forms, and {expletive for nonsense}, that we've got to do, that, again, is not tied in to anything else, and it doesn't fit with our planning cycle, and doesn't fit with our bureaucracy, and the parts of the organisation where budgeting actually happens. (*Escalating regulatory regime*)

▪ I think we're hoping that, when the economic regulator comes in, to play a part in actually getting

some rational debate and discussion into price setting and setting standards and the like. (*Need for good relationship with regulators*)

Effect of scenario planning on attitude to regulators

- ...our relationship with regulators is changing. I think that's probably more driven by the regulatory environment we find ourselves in. ... I think what came out of 2010 was the recognition of the need to view our relationship with regulators as an opportunity for a positive engagement with regulators, not to view those things as adversarial relationships, where they were out to screw us and trip us up.

(*Recognition of positive relationship with regulators from SP*)

- I think there's probably been a shift with respect to the way we view regulators, which I think is probably more closely attributed to the scenario planning exercise. I think there's greater respect for the role that regulators play, recognition of the fact that, you know, you don't have to argue with the regulators to have a healthy relationship, and in fact that arguing with regulators is not necessarily a healthy relationship at all. (*Recognition of importance of relationship with regulators from SP*)

- If an economic regulator came into our business now, with enough knowledge of the business, and started asking us to prove if we're efficient in various areas of our business, we would be absolutely wide open to criticism. And we know that. And that knowledge is good. But rather than wait for it to happen, we're actually making some preparations. So whether that's a kind of fall out from 2010, it may well be. But I think, I've got confidence that, with that sort of thing happening, we will respond well to the future. (*Changing attitude to regulators*)

- The ways that we have dealt with the regulators in the past has been, you know, largely governed by some of the personalities involved. And with some changes in those personalities, it's quite changed the way that we've interacted with them (*Better regulator relationship from new personnel*)

- I don't notice any difference in the way we deal with our regulators, not specific to the scenario planning, no (*Change not noticed*)

Code

Organisational focus and direction

The effect of scenario planning and Company One 2010 on the organisational purpose and direction.

Examples

Effect of scenario planning on focus

- Well, certainly, this whole new purpose and direction was born out of that, those discussions and that debate, and quite active debate. I think, certainly, there's a clearer direction of how we're going to grow the business, now that we've made some decisions and the board have supported those decisions. (*SP discussion genesis of new purpose and direction*)

- But I know that 2010, and as a result of scenario planning, we've decided that we're focusing on core business, so we've got a strategic sort of direction. (*SP and 2010 guided the review of focus*)

- I think the scenario planning, as it were, managed to review and to restate the values of the company, the core business of the company, and to focus - the triangle is just a tool - to focus on key elements, and each individual within the Corporation fits in one of many of these areas and actually can identify with it. And the scenario planning brought this to the fore, so that is what the scenario planning actually did.

The scenario planning did help to focus on what we should concentrate on for the future, and the direction we have taken is to, in actual fact, be less commercially minded and more concentrate on our existing businesses, our core business, if that is the word to use. (*SP and 2010 guided the review of focus*)

- The focus is different. I think the change in focus was in part going to happen anyway, and was in part the result of the scenario planning. I think... I don't think that decision had been made prior to the exercise, but I think that certainly the decision to review it had been made. But I don't think it was cut and dry that it would be that result. So I think the scenario planning and 2010 project in general led to the chosen outcome, but I think it was inevitable that something would've been done with the commercial division ... But, in general, I think it's fair to say that everyone was pretty happy with the outcomes of the scenario planning exercise. I think everybody could recognise the value of the scenarios, of the four scenarios. I think everybody thought that, and believed that, it was ... it had enabled the executive team and the organisation as a whole to get a better focus. (*SP and 2010 guided the review of focus*)

- I think the main adverse effect is focus, or lack of focus, and discontinuity in direction and inconsistency in people's direction. You know, to suddenly make a big about-face, and change in a different direction, and without bringing the people on for the ride, is a big problem. You know, you

can't just do that. You can certainly swing around and change direction, but you've got to have some pretty solid reasons for doing it, and you've got to bring everyone along with you, given the fact it costs a lot of money. And they seem to have invested a lot of money in the whole Company 2010, scenario planning business, but not adequately enough. (*New focus a discontinuity*)

- But where you actually want to be as a branch, or as an organisation, you don't expect it to be swinging 90 or 180 degrees every twelve months. And I think that's what, you know, the organisation sort of did for a while. That {expletive} compass was spinning fairly wildly, in terms of what we were trying to do, and where we were trying to go. Now, I guess, the scenario planning, I think, has ended up sort of saying, well, I think we want to be on this course, and we want to be there, you know, in ten years' time. I think most people were sort of comfortable that that course was a reasonable course. (*Aid in acceptance of change*)

- There's more, probably more focus, more expectation, to some extent, than there was before. The Company One 2010 process might have given that a bit of a boost along, which was probably timely. And to the extent that we went through the scenario planning exercise, maybe that helped in there. So, yeah, it's hard to know what we would have achieved without it, because we did it (laughter). (*Aid in acceptance of change*)

- When I looked at the four scenarios, and then when I looked at the change in . . . because I was actually at the workshop where we came up with that new statement and the business direction and corporate purpose and that. And we weren't even looking at the scenarios. It was just more like, and so what do you think? (*Scenarios not used in deciding purpose and direction*)

- Q organisational focus and direction. Any changes that you personally have seen in that?
Answer. Ah, no. (*No change*)

Business development

- We'd had an experiment with a thing we called the commercial division, and for a whole bunch of reasons that succeeded and then failed. And it was pretty important, especially after the failure of it, it was important to pick things up, and say, well, we're not scrapping this entirely, but we urgently need to redefine it . . . I guess it was always going to go, and I guess it had become fairly obvious that had to go, in its then form. But it was important to get a consensus amongst the top 50 people as to how it went and what arose in its stead . . . in the scenario planning, the way we had been approaching business development was consistent with the more extremely entrepreneurial or independent scenario, the most extreme of those. And then you looked at the other scenarios, and our political and other circumstances, and it was quite obvious that that, the most extreme of the entrepreneurial scenarios, wasn't the one that was going to wash. (*Failure of commercial division*)

- I guess it really did highlight that the Corporation needed to . . . get some focus back on the WA issues and WA water services, and the real objective in terms of what we're actually here to do. Prior to that, there'd been this notion that we would compete internationally, compete nationally, and I think that was basically nonsense. And I think that scenario planning helped to formulate the view - start people thinking about the fact that, hey, we need to focus our activities a little bit . . . the commercial division was removed . . . I'm not convinced that that was an outcome . . . I think the focus was a result of the 2010 thing, and the changes to the division, I suspect, would have taken place regardless. . . . (*Failure of commercial division*) (*SP identified key elements and fit*)

- The number one key driver, which came out of the scenario planning process, was government expectations. We'd just been through a change in government. There was a recognition, a very clear recognition, that this government had - and the previous government in many respects - we'd never had a mandate, and had never been able to get a mandate, from our board or from the government, to go and pursue business, business internationally. . . . not only that, but we had we had demonstrated no ability to achieve or to compete nationally or internationally . . . And I think, given that, it was then logical that, if this expectation of government was our primary driver, we needed to be a bit proactive in that. And I think, given that, the decision was a reasonably good one (*Failure of commercial division*)

- I think it was sort of happening anyway, because any time we got near to wanting to commit to put a bid in for something overseas, the rug got pulled out from under anyway, because of the perceived risks and, you know, public funds being used, and WA Inc. and God knows what else. . . . you know, there was talk previously about, yes, we want to do it, but when it came to the crunch, we didn't. And this is just {expletive} reconciling, in my view, the difference between what we're saying and what we're actually doing, and lining the two up. So I wasn't entirely surprised. (*Failure of commercial division*); (*SP not needed to decide direction*)

- So, it is a very long-term prospect, and I think we were a bit eager to see immediate results, which was a little bit short-sighted, I think. (*Failure of commercial division*)

- I think it was probably a retrospective hindsight recognition that we'd gone into things a little bit blinkered, a little bit naively, and we didn't want to do that again. (*Failure of commercial division*)
- And I think there was a general feeling in the organisation that we had to back off from some of those things we were doing, on the basis that it wouldn't look good if we were, say, looking after the water in Johannesburg if we were in the current situation we're in, in Perth at the moment. So, you know, look these guys can't even look after their own patch, and here they are managing something like that. (*Failure of commercial division*)
- It's given a lot of validation to parts of the business who had felt somewhat disenfranchised by that phase of commercial adventurism, where the kudos and the bright lights attached to the more esoteric activities of commercial division, in particular, but really didn't give a lot of credit to the strong operational on-the-ground work that we do in our own backyard. The new strategic framework very clearly recognizes that; pegs back the ambitions; makes it clear that WA is our primary focus of growth; and that operational and customer service excellence are two of our fundamental priorities. So, it's provided a lot of validation for core parts of our business. (*Acceptance of new framework?*)
- In terms of the focus in Western Australia. I guess that's changed people's mind sets a little bit. That's probably the biggest change, if you like, of mind set. Because, before that, there was a lot of talk about things we were doing externally ... and it was probably misdirecting people ... because in all effect, it was probably only like a one percenter and it was distracting people, really ... people say, well, that's a one percenter, and it's taking 20 percent of your sort of thought capacity worrying about those sorts of things. So it's a wasted effort. Let's make sure we tell everyone that we're really focussing on Western Australia, and to do that properly. So that changes your mindset a little bit. So that's got immediate sort of operational sort of benefit. (*Failure of commercial division*); (*Acceptance of new framework?*)
- ... there was a bit of disillusionment, if that's a word, through a lot of people who work in the Corporation, because there was a feeling that that was no longer valued as strongly and not seen as being as important as they believed it was. So 2010 very clearly said, right, our business is water and waste water. It's about sustainable management of water services in WA. That's where we're focusing. We're going to cut the out all the other {expletive for nonsense} and just focus on what we do well. (*Acceptance of new framework?*)
- Now, the cynics among us believe ... that you didn't need to do a many thousands of dollars scenario planning exercise to draw that conclusion. We, many of us, saw the jobs in Johannesburg as a distraction, and not the logical way to grow the business, something in an area where we weren't going to be able to compete anyway - and even if we could, the barriers of getting government to agree to the Water Corporation in Western Australia doing something like that, we would never achieve. It's not sort of wisdom of hindsight, we were saying it at the time - what the hell are we doing over there doing that? This is crazy. (*SP not needed to decide direction*)
- Now it was the managing director's view that this government was going to want us to contract back, stick to our knitting, just do what we're supposed to do, and concentrate on Western Australia. Okay. And there's absolutely nothing wrong with that. But to use the scenario planning exercise as a means of getting to that end, I think was just {expletive for nonsense}. (*SP not needed to decide direction*)
- And it was like, well, this commercial division's not doing too well, and we actually decided not to do a whole lot of overseas stuff. Which the Board had decided prior to scenario planning. So actually, although it was all wrapped up as a part of the 2010 outcomes, that decision had actually been made the December prior to scenario planning starting. (*SP not needed to decide direction*)
- I think, I mean, it's hard to be definitive about what was and what wasn't, but I think that change was largely attributable to the insight and the impetus that people got from Company One 2010. Now some of that probably reinforced views that the managing director and others had anyway. It might have happened in any case, given the political changes and the.. but I think certainly the scenario planning and the 2010 project gave a framework for those discussions to happen. Forced people to confront and debate. Yes, I think it was fundamental in that change. (*SP not needed to decide direction*); (*SP and 2010 guided the review of focus*)
- An organisation with the resources that we have, and the skills that we have, should be marketing and utilising those skills in a lot wider area. And the revenues that we could earn by doing that would allow us to provide benefits to all Western Australians, in that they, at the end of the day, end up with a cheaper water service. (*Acceptance of new framework?*)

Clarity of purpose

- But, yeah, I think that's great, because that's clearly defines our vision, and things we want to do. It gives direction when you're making decisions about things you do around the place.
- But I know that 2010, and as a result of scenario planning, we've decided that we're focusing on core

business, so we've got a strategic sort of direction. As I mentioned before, we've got a very well communicated new strategic framework, which, I think, is probably a result of scenario planning.

- I mean, you know, there was some clarification of some things we would do and would not do as a result of that. But I don't see any fundamental shifts in the way we approach things. It's more how we go about planning.
- So we've got a direction, which is more important than a confused state of kind of pretending to do two things at once. So a clear direction is a much better outcome than a confused state, even if that confused state did include some of where I might have wanted to sort of go with the organisation.
- ... it relies a lot on, to some extent, on senior management being able to clearly, more clearly, articulate what those things are, and what it means, and so on. So I'm not clear how other people have dealt with that, or whether they've got a more clarity of purpose and direction, and a clearer picture of what is that it will look like when we get where we're trying to go.
- What emerged out of our stuff was just the fact it showed just how much more complicated our environment is. And nothing really emerged to uncomplicate it ...
- We don't really bottom line what it is we're chasing. We're chasing a bit of everything, according to that triangle.
- Yes, there's a vision statement, but specifically, like specifically, with different areas, like, with different areas of our business, whether it's environment or people, being any closer to knowing, say from a people perspective, what kinds of skill-sets will we require in ten years' time, you know. ... Just some specifics, in terms of our business, specifically having a vision of what kind of business we'll be in, who we are and how we will be. I think it's still ... it is, it is very grey.
- And when you come up with general statements like, you know, we going to change the people and culture. We had a workshop on people and culture, and we talked about shift statements ... But it's very hard to then follow-up in the absence of hard targets being developed, do you know what I mean?
- This is our new purpose statement; vision is you know like vision and corporate mission. They've used slightly different terminology this year. Even the terminology maybe is confusing people a little.

Framework

- I think, well, one of the things that has definitely flowed out of the scenario planning is that, having done that, and having then revisited our vision and primary objectives, one of the outputs from the Company One 2010 exercise was a new strategic framework, new purpose, new business direction, and a new visual and substantive set of strategic areas for action - strategic outcomes.
- I guess the change to the Corporation's planning framework probably.. is certainly an outcome, and was.. and has seen a different approach taken to the way we plan, I guess. You know, I guess you can argue that it's just a different way of slicing the pie, but I think it, it creates a different thought process, which has been beneficial.
- This is our latest corporate monthly report. But we actually report against the areas for action, and so it's actually been built quite strongly into our business planning framework, into our business management approach, and then into our business reporting.
- The strategic framework is used as the driver for everything. So, if you say the strategic framework was an outcome of scenario planning, then the way the Corporation's leadership is leading has changed, because they are very much driving things through that new strategic framework, through the areas for action, through that sustainability model, the triangle, those elements. So, yeah, certainly it has changed since scenario planning. ... there's no doubt scenario planning resulted in that framework. I believe other processes could have done so.
- But I think because the scenario planning formed part of the process which led us towards our purpose and direction, and, in particular, the development of our five areas for action ... and (the managing director) uses that triangle extensively when he's talking, particularly in talking about the relationship between our customers and our business, and then how that translates. And it's not until you engage our customers and know what you're doing with your business that you can gain their trust and credibility. And it is not until you do all that, that we're going to be able to access the resources that we need to improve our capability of withstanding the drought. And the key all that is us in the middle as people and culture. So I think that the whole 2010 process, of which scenario planning was a very important part, was very important in allowing people first of all to articulate how it all hangs together, but also allowing people to understand, yeah, I can see where I fit with all that, and I can understand how we have to gain trust and credibility, and how important it is.
- It's provided no insight, we have no clearer picture of, you know.. if I was to compare us, now compared to the pre- scenario planning exercise, the concrete stuff we've got from this is a new corporate

planning framework ... it's a new way of slicing the orange, but is it a better way? Not for our business, not for this division anyway ...

- We used to have seven or eight key result areas, which were environment, business development, finance, customers, stakeholders, information, assets and people. So all of the things we were doing could be categorised in those areas, and we had objectives against each of those key result areas. We've now moved to this sort of model, a triple bottom line focus, with sustainability, and the areas for action which replace the KRAs are core business, customer and community, access to resources, trust and credibility and people and culture. So for things like environmental initiatives, where we used to be able to very much leave them with our environment manager, we could say that's where they sit, these are the objectives. Now, environment - some of it fits there, some of it fits there, some of it fits there, and a lot of it fits there, and that's just one example. So things don't necessarily fit as neatly into this model. My first impression is that's not compromising us in actually doing them. It's just making it a little more difficult for people to understand.

- Well, I know it's just a framework, but the framework in our purpose statement has changed. That's it there. And it does drive things - it drives the way that we plan at a corporate level in the organisation. By comparison, our old list used to say something like, um, customers, just customers, so it didn't recognise community, for starters. It didn't recognise any sense of engagement and customers were at the back end of the strategic framework, not the front of it. It talked specifically about competition and growth as being a major objective, and I think we have put that into perspective, and said, yes, it would be nice to grow, but our main objective is to service existing customers, and the natural organic growth first.

Code

Organisational culture

Perceptions of changes in organisational culture since Company One 2010.

Examples

How scenario planning affected culture

- I haven't seen any (cultural change) , as a direct result of 2010 or not, to tell you the truth. You know the way people behave is more to do with our values. The values weren't under review under the 2010.

- I think throughout the scenario planning there was a great deal of information brought in, in terms of how society is changing, what the expectations of the community are, how the community expects to be involved in decision making, how the community or individuals expect to take greater control for their own water supply or energy supply, I guess the things that they do and the impacts that they have personally. And I think in the past this organisation didn't respect that change.

- And so much of the research, particularly from the external research, has highlighted the fact that, no, you know we're out on a limb, in the way that we're not engaging the customers, that we're not open in sharing information, and so forth. And realised that that was a very finite strategy. So scenarios really helped us to realise that the world had changed and was changing, and it was changing rapidly.

- In terms of the scenario planning and culture, no, I don't know that I would see a strong link, to be honest. But I do see a strong link with the 2010. And that's both by reinforcing those things in our workplace and in meetings, and then also in trying to model those behaviours as much as we can, whether you be a section leader or a member of the team or a general manager.

- And they see the future. And people are looking to see how they see themselves as part of that future as well. And that's why some of these people are struggling to see how they fit into that future picture. And therefore it's encouraging them to maybe pull finger out a little bit (laughter) .

- Well, it became very clear through the scenario planning process, and the strategic review that followed, that a lot of the work that had to be done was around what we've since termed the people and culture area for action ... one of the things that came through very clearly was that the nature of our future workforce was likely to be very different from the nature and mix in our current workforce, in terms of academic disciplines, skill sets, pure numbers, and the mindsets that those people brought to the organisation. So a number of initiatives grew out of that, including the three change-maker teams, all of whom had a very strong people and cultural dimension to them. And, subsequent to that, the cultural blueprint workshop, and the work that was done prior to that, to establish some fundamental dimensions of culture which we needed to establish our current position on, and our likely future or desired future state, and as a result, get a sense of the size of the task ahead. It was pretty big.

- Culture-wise there is no change in culture, I have not managed to see it. We are more bureaucratic than we have ever been.

- And there will be some people who will say, ah well, there's been some good come out of it, but I

think the shock to the culture, and the cynicism that has come about as a result of that, has far outweighed any benefits that might come out of thinking about these scenarios. [Unclear] all those scenarios, all that thinking is still in people's minds in the place, but that's all functional technical stuff, but what about the culture, the emotions of people, that's what has been disturbed.

Attitude to community, customers (Engagement and consultation reinforced)

- I think we reaffirmed that customers are essential, vital, central to everything we do, but that wasn't a miraculous vision on top of a mountain. But we did clarify, reaffirm that the customers demand better value for money continuously, and that's not going to stop.
- So I think, when you look around the place, the way we approach things is perhaps slightly different to the way we would have approached things had we not been through the scenario planning exercise, and particularly with respect to the way we look to engage and bring on board groups within the community, and our willingness to see that engagement as meaningful. I think in the past, it was probably a very authoritarian type organisation, where we do what's right for the community, and we know what's right.
- ... from a water quality point of view, I think we're, when we do have issues, whereas before we might have been inclined to sort of tough it out, maybe they won't notice, maybe we won't have to say anything, there's much more preparedness now to sort of say, right, this has come up, you know, we need to let customers know quickly that this is what's going on. And I think that's been good. ... I don't believe it's our job to say, you know, we know what's best for you, which is what we've tended to do ... We need to recognise what's required, work out what's the best and most effective way of delivering it, and then either work in consultation with the community, and in consultation with the Government, we've got to work out how we deliver those services.
- Yeah. I mean, I'd like to think that, you know, we now have a much better awareness of the need to engage with the customer and the community in a much richer way than we historically have. I like to think our openness to things like the water symposiums and water forums are in some way a recognition of that. Now whether.. I'm sure we would have had them anyway, whether our senior managers, whether our people would have been as open to having them and as receptive to it - don't know.
- Our customer charter is more than just rhetoric. And we out-perform, certainly, a lot of utilities, and do pretty well against all industry benchmarks in our customer response criteria. So, our performance is not bad in that area. And, you know, we recognize it as being fundamental. We no longer have a monopoly mindset; and that was the first brick in the wall that had to go.
- Yeah. I guess we've been very focused on our primary objective, which is to supply quality water services to a number of people across this State. And we've always seen where the boundary sat, in terms of what was their responsibility and what was our responsibility. We had that as a clear line. That changing expectation I was talking about before, where those customers are now going to be expecting us to help them, we're going to have to blur that line. And we get a little uncomfortable when we blur lines. We like them to be very sharp and thick. So that's what's going to test us a little. But I think that earlier strength that talked about, where we have been a free thinking, very professional, technically correct group, will allow us to do that. But it's going to be a little uncomfortable.
- I think previously there were probably parts of the business that did (customer service) that very well, and parts of the business where every now and again we dropped the ball, and we didn't do it very well. But this provides us with a framework that people need to follow and can follow in all instances, so it should provide a consistency in our approach to the way we do our business.

Accountability and discipline

- I think one of the significant changes has been that notion of accountability and single point accountability, and trying to drive towards clarity of accountability. And recognising that people are accountable for decisions, not committees. And it's been quite an interesting change, of it being accepted and acknowledged that it's quite reasonable to get input from a range of people, and if you want to call a meeting to get input, that's fine, but you don't water down your accountability by sharing it with a committee. At the end of the day you're still accountable.
- One of the things we found out is we needed to empower people, and Jim basically said, well, there's no more decision-making by this inanimate body called corporation executive. Decisions are made by people, not committees, and he called it "committing committee-cide" (laughs). So there's considerably less effort gone in terms of writing internal papers and getting internal approval for things. It basically is, if it falls in your ambit within the organisation, it is your responsibility to consult with whoever you need to in the organisation to make the best decision. At the end of the day, you make the decision. I think most middle managers feel more empowered than they did..
- In terms of accountability though, I don't think it's changed all that much. See, I think what we are

lacking with people side is accountability, clear accountabilities. We're still not there with that.

- I think there was a massive change in that as a result of Company One, where accountability was brought down to regional manager level, and branch manager level. And that was something that a lot of people in the organisation struggled with, that people who are managing business units have full accountability for what happens in there. I don't think as a result of 2010, we've made any progress in that area, and I think we need to. I think we need to get that accountability down a lot, to a lot lower level ... But I don't think it has happened. But definitely out of Company One, it did.
- There is a very strong culture of independence in the Water Corporation. And civil disobedience is tolerated, to an extent that is worrying, in my view. So that people can, even in senior line management positions, can say, well, this is what's come out of this exercise, basically, I think it's a crock ... it isn't necessarily normal practice in this place for line management to line up in solid support of the corporate.
- My personal view is that there's a lack of discipline in this organisation, with respect to taking instruction from the people that sit above you, and acting out on that. It's a culture which supports pet projects, people doing what they choose to do, and not necessarily doing what the company line is. And there's a certain inherent lack of discipline in terms of delivering on things that you've been asked to deliver.
- I'm not good at hiding my views, and you come back from (activity deleted for confidentiality) and they go, well, what do you reckon? And I say, guys I'm not going to lie to you. It's {expletive for valueless}. But we'll carry on doing our thing. And that's what happens. People do their thing. In the universe that you can change, you do your best.

Getting on in the culture

- The organisation has a large number of good people, and I honestly believe that. It has its fair share of below-average performers as well, but any large organisation, or largish organisation, will. I think that the trouble with that is they can only do so much, and often too much is left to too few. And there's an inherent difficulty in people outside that group that know how to behave and know how to get things done in the system; it's inherently difficult for the others that really want to try and do the job, and do things well, to actually be able to do anything at all. And I think that's a real weakness in the organisation, is that it doesn't harness the capabilities of its people well enough. I mean, I've known people come into this place, spend eighteen months, and come in with an impeccable work history and record of performance in other organisations and in other places, and leave the organisation wondering whether or not they are capable of tying up their shoes. And that's a real problem. And it's a weakness, because we're not harnessing the skills and capabilities of those people. (*Needing to belong*)
- Oh, I think that all the things I've described to you, the bureaucracy, the lack of vision, and putting your heart and soul into something, to see it disappear into a puddle of water, never to be seen again. I think all of things accumulate for people, especially if they've come from the private sector. They don't have a level of patience. They have an expectation that if something is going to be done, it'll be done. (*Needing to belong*)
- I think what I see often in organisations, and I've see it here, is that the man at the top will come out with an idea, and say this is it, and this is the vision. And everyone else will say 'isn't it great, isn't it grand', even if they don't think so, because it can be career limiting to say otherwise. And so people will go along with it, but not in their hearts and minds. And that's fine, as long as there is a focus on it. As soon as the focus is taken away, people will get back to business as usual. (*Needing to belong*)
- But I guess the thing is sometimes that's used as a bit of a crutch, not a crutch, but people will, it's like, I guess, quoting things out of, misquoting things out of the bible, you might, for your own purposes, you'll say, well, it suits me at the moment to say, I'll use this part of the Company One set of tools, and to push my business case or something like that. (*Selective culture*)
- I think that in any change organisation there are people who use that as a weapon, in a sense, to try and push their own agendas, you know, in the sense that they get on the bandwagon, this is a Company One thing and so if you attach Company One to everything, whether it should or shouldn't fit, and that's a sort of a mantra, that you attack it with your peril, I'm on the side of right and you're on the side of wrong. So some of that sort of behaviour happens. ... Whatever the managing director says, you know black is good, so anyone who's white is not working. That happens in all organisations. You know there are some people who will try any brace, whichever way the wind is blowing, and use that to try and change. (*Selective culture*)
- So what you find is some people in the organisation have taken the message and run with it. I mean it has still shifted the organisation considerably, but it's been very easy for them to be selective about the parts they're listening to and the parts they're not. (*Selective culture*)

Absorption into the culture

▪ ... with a lot of these people that were not successful, these business development manager types, there's a relatively strong culture within the Water Corporation. And the Water Corporation tends to absorb people into its culture, even though they might have been employed because they have a different culture, cultural experience. So these people were trying to achieve certain outcomes and goals and states, but the Water Corporation itself as a whole was consuming them, and not allowing them to achieve that ... You've got particular experience in change management, in business development, in working in a private company, that the main objective is profit. So we employ you because you've got those particular skills and that background. But then you come into this room, into this organisation. And everyone else in the room is, you know, they're used to working, you know, they're public employees, they're government type employees. And they're not used to having to make a profit, or even having to justify every second of their day, every dollar that they spend. And instead of you dragging us into the bright new world, the tendency is for us to try and drag you back down to our mentality. And the organisation lets that happen, even though we've appointed you because you've got that particular experience.

Influence of age on culture

- Well, it's a very old organisation and I'm afraid you're not going to change it overnight. And while there is still largely the management of the old guard, and that is so, most of the managers here have been here a long time. ... They came up from the bottom and became what they are. Good luck to them. ... And so culture wise, I think they're playing the same old games as they have done as long as I've been here, which is not all that long I'm one of the newcomers. And I've been here (more than a decade). (Time changed to protect confidentiality).
- A demographic gap. The previous Water Authority stopped recruiting graduates. And you can't pick those sort of people up off the streets, sort of 40-year olds, it doesn't make sense, they don't exist.
- I think there are some extremely competent managers and people in our planning areas. But there are a number of managers approaching close to retirement, and how we cope with our transition to successors, or keeping momentum up, and staying in the game - and that applies, you know, like, in all facets of the business.
- What commitment do you.. you know, like, really challenging the nature of.. So we're trying to come up with a ten-year vision here, and you guys are likely going to retire in the next, you know, most of you are probably, you know, most of them are over 55. And, yeah, it's a very fundamental question to ask, in terms of organisational change, and the people you've got at the top making the decisions about what to change and what not to change. And if you're in your last couple of years at the top before you retire, what, you know, why would you want to go out on a limb a bit and make some fairly radical decisions to change, when you know for 28-32 years of your career you've done an excellent job just doing things a particular way. ... what motivation have you got at this point in your career to really look at doing anything in a very different way? ... it's the ageing workforce is a critical issue for this organisation.
- People should be valued based on the contribution that they can make, not on how many years of service they've got, or what level they are in the organisation. ... And I know I've had more than one occasion where I've been quite strongly advised to go and do my time in the core business, and sit and hide underneath someone, sit under a rock and hide away.
- The Corporation has a problem with retaining young talent. ... So, yeah, I think a very good thing that came out of it was overt recognition of the value of young people, and several of the people who, particularly, who were involved with the scenario planning are continuing in, important whole of Corporation things, like drought management and so on, you know. So that they've been given important roles within that, it's not just sort of retreated back to the old guard. So I think that they've made both positive contributions and we've had a much better blend of age mixed teams on things, which I just think enhanced the outcome.
- Well, I think in terms of strengths - and this is a limitation - the Water Corporation is a very stable workforce and a very capable workforce. But it tends to be one that is getting older, one that doesn't turn over as fast as many others. And the aspirations of younger people are difficult to accommodate in an area where you're not having very rapid growth.

Engineering as influence on culture

▪ ... we still are very engineering focused, even though, granted, it's an engineering corporation, but I think maybe less commercial minds, and more engineering minds. ... engineers take non-engineering management roles, in general. ... Our business development managers are engineers. ... I think it would be good to bring in a really driven business sort of, general business or economics or something other

than engineering, because I think sometimes engineers don't look outside the square. I'm not, yeah, well that's the general perception anyway.

- I guess there was a recognition of some of the frustrations of the younger members of the Corporation and the Corporation's workforce - all the new people coming into the Corporation and the frustration around, you know, how they progress within the organisation, some of ... the traditional approaches to progression, you know, requirements placed on engineers, the CPNs, the different approaches taken with other professions, and some of these things. ... And I think it.... there's some other things which, you know, in terms of professional elitism, and things of that nature, with engineers being the high and mighty, and I mean, that can work to your advantage, and it can work to your disadvantage. And those sorts of things, in my mind, are a weakness, because it sometimes limits our thinking and limits our response.
- ... the culture of the Corporation is that we have a big bells and whistles approach to things, like the values when the values came out a few years ago.
- We like big sexy projects in this place. Woodman Point, \$140 million. We could have done that for half the money, but we really wanted a big sexy project, so we did it. Which meant everyone else was strapped for cash. Strange. ... As a project-based organisation, we do extremely well.
- And we get a little uncomfortable when we blur lines. We like them to be very sharp and thick.
- However, now, I think that very slowly we're starting to learn that instead of an engineering organisation we are a service organisation. So the emphasis of engineering is sort of shifting a little bit. But then again we are also building assets which should last, so we still have to have that as well.
- We're an engineering organisation, mainly, and we like building stuff. So there is quite a valid argument that's, again, starting to be tested, and sort of looking at demand management techniques. ... You know, sponsoring, supporting water saving devices, and so on. ... We have people skilled up, who've been employed to, you know, engineers, to build things, rather than to think, maybe inevitably, in other solutions to a problem.
- And I think, from memory, it took quite a while for most people to get their heads around what scenario planning was, and what it wasn't, what value was it going to give us? So that same question kept coming up. So it meant it was never really answered to the satisfaction, or anyway, got into people's head, why are we doing this, what's the benefit of it? And the answer that normally came back was, well, let's keep going, let's do it and you'll see. And that's not how engineers think. They want to know, and you could see that in the guys. Very much so. You know, if I'm going to spend time on it, you need to.. how does it work? Why are we doing it? Let's not be subjective. And I think scenario planning is about, you know, getting thoughts together different alternative views, which was interesting.
- I think people didn't see the outputs as being tangible enough, I don't think. They were unashamedly about cultural, rather than structural, change. They weren't about building new buildings, they were about changing the culture and the way that we work, the way we interact with the community. And for many of our people that was hard to engage with. I guess we're probably an organisation characterised by an engineering mentality, building things, operating things, spending money on hard physical assets. We celebrate a new dam, we celebrate a new pump station. But we don't necessarily have some of those softer skills, I guess, some of those other cultural skills aren't ones that necessarily come.. that probably don't characterise us, as a group of individuals, I suppose.

Decision-making

- Well, that (engineering-type culture)'s where decision-making is being focussed. You know, big capital solutions to things, to problems, you know. Whether I'm right or not doesn't matter, but the, you know, the water crisis that we face now, you know, one might say ten years ago, if we'd placed more emphasis on demand management, having water restrictions earlier, every year, we would have the dams full by now. But we didn't think like that. It was, let's build another dam, in Stirling, Harvey, or a pipeline, Stirling trunk main, or desalination plant, or dig more bores in South Yarragadee.
- I think we're getting actually better decision-making, which is what it's all about, is being [unclear] done a more commercial approach. Which doesn't mean we're doing it for a more profit motive, but we've doing it more acknowledge of the financial impacts, the social and environmental impacts, which is great.
- ... the Corporation is not that good at crisp decision-making some of the time. It tends to have the public works engineering decision - well non-decision by a committee ... I guess that's one of my frustrations with the culture in the place. I don't know how quickly it'll change. But basically, interestingly enough, the drought and the odour buffer issue have caused changes in culture on that, because small compact groups have been given the authority to move ahead, have basically just been formed and done it. And actually tackled what are potentially very long term problems for the

organisation, so I think we'll learn from that.

- Well, now decisions aren't made as a top sort of six or seven managers together. They're made on a divisional level. So a decision, say, in customer service division ... would be made ... in consultation with customer service division managers, as opposed to, in consultation with the bulk water/waste water, which may not be aware of the issues in customer ser.. you know. So I think that's been a huge improvement.
- I think, again, if you're talking organisational change, you've always got the culture of an organisation. Of course, you've got to test is that culture good or is it bad? There's no doubt there is... this place tends to have too many, too much consultation. But then you've got to work your way out of that. And it's not necessarily, no longer any consultation. Because it still happens, but now it happens after the decision not before the decision (laugh).
- The other is the meeting culture, particularly in the Leederville office, but throughout the place. And people come to work to go to meetings, and that's all they do. A lot of people just do that. And then, when you look at the outcomes of those meetings, and say what actually happened as a result of that? If you actually follow through, it is scary that, you know, nothing actually happens with a lot of them. It's almost like a game, the meeting and the minutes of the meeting are the end in itself, why we did that.
- I think, my experience has been, that there are some people, a lot of people, senior management positions in this organisation, who are scared to take responsibility. They [don't?] have the confidence to make decisions, and their reaction to that is to have a committee. And, although they chair the committee and the decision is ultimately theirs, if the decision back-fires on them, they've got the ability to say, I had all these people on my committee that advised me.

Attitude to change and planning (Conservative nature of industry)

- ... this is an extremely conservative high inertia utility that's got certain fundamental characteristics that there's almost nothing you can do about, because no matter how much you try to change the fundamentals of it in a process in a short time frame, it never happens. Changes in here take years, and they have to happen very gradually. It's like leading a mammoth with a ring in his nose, you know, guiding it very gently through the obstacles. ... honestly, I don't really see that you need to change the timeframe over which you make your decisions. Because, we are a hundred-year, we're a two-hundred-year business. We're not electronics, communication or medical supplies. We're in this very long timeframe business, that you have to get it right, and the impacts are very slow to come down. ... it's a very slow plodding conservative business. And so the people reflect that, they are not flashy, sparky, fast-reacting; you know, we're ponderous, you know, we consider things deeply and all that stuff, and that's just the culture of the business we're in. I am sure if you picked up the people and put them in the electronics industry, they'd behave differently
- The other reason is pure and simply we're a stable organisation, stable industry, water utility, boring. ... So, if we don't already know what the issues that face us in terms of competition and pricing, environmental concerns, our regulators and so on, and so on, and so on, and those issues aren't always factored into the way we do business, there's something wrong. Things don't change in three months here. If something's going to occur into the future, it's already started. So we're already been building a lot of these things. So, if something was to change us, we would have to say, shit, we didn't think of that, that's off our radar screen. But nothing ever does.
- I mean, one of the risks we've got is that we're seen to be bureaucratic, we're very resistant to change, and all of that's for good reason. I mean, you deal with things like wastewater re-use, and there are public health implications. I mean, get it wrong and you can kill people. You know, disease and that kind of stuff. So, yes, we are very conservative. We don't rush in to changes willy-nilly for the sake of having a change.
- I know that in here we had one of our (people) (Changed for confidentiality) who could see the change in the organisation - and I don't think it was to do with the Company 2010 process in particular, but that's just a symptom, I guess, of a broader corporatisation sort of direction-changing sort of exercise. And he didn't like the focus, he preferred the public utility hat, and for him that was the important thing to do, is to provide a gold-plated solution that was going to last forever. And he didn't like the focus of having to have, we want you to have an outcome by next week, and we expect that. You're not going to be able to maybe complete it by next week, but we still want you to have an answer. He didn't feel comfortable in not giving a hundred percent answer. He wanted to have gone through, and spent two weeks, four weeks doing it, and making sure. He wasn't happy getting to 80 percent. And so, I guess, that he sort of said, well, I can see this organisation changing, and so I don't feel bad about leaving it at the moment.
- I think we need to really.. what we need to change people, I believe, and, you know, and it's hard to

know how to do this, because the organisation doesn't want a leading cutting edge, let's change things now. It just - what's the word with flesh wounds - heals itself over, over and over again. And that's endemic through all levels.

- There is quite a push for cultural change in the organisation, a sort of can-do attitude, and that sort of thing. But being such a large organisation, bureaucracy is enormous. That very much stifles any initiative or any streamlining approaches.
- And we are really good, our business has always been good at dealing with crises. You know, we end up with.. you know, the classic, and it was done so well by the organisation in 99 or 98 or something or other, there was a big fire at Exmouth. And all our bore mains at Exmouth are all laid on the, they're all black polythene laid on the ground, because of sensitive environmentally, so we didn't excavate them. Meanwhile the fire came through and all the pipes disappeared. So Exmouth was without water. And we responded fantastically. There was a huge response. We had, you know, guys at Perth airport coordinating Air Force Hercules, you know sitting (?) gen sets up their bum, and sending them off to Exmouth. We are fantastic in a crisis, because we have planners and we have engineers and we have all sorts of people that love doing that sort of thing. But, you know, stick people in a room and say ,well think about what we might doing in ten years' time, and we struggle.
- I think the organisation's got a very loyal and capable staff. It is very professional. It's good at accepting change. So we're forever changing this organisation, and transforming it on a regular basis. For instance, the downsizing of 120-130 people over the last number of months, it's gone without any major issues at all.

Work ethic and loyalty

- Oh, look, I honestly think the organisation has a good record in terms of how it deals with its people. It therefore engenders and fosters a high degree of loyalty. It doesn't mean to say there isn't a healthy dose of cynicism floating round from place to place. But we do have a fairly loyal workforce. You only have to look at how many people have been with us for a long period of time have been with us for a long period of time to see that. ... Despite the fact that there's 2000 people, probably lots of private agendas running, I think it's a fairly homogenous workforce.
- The strengths in the Corporation, that I see, are that there is such a diverse range of talent here. And the other thing I think is really important is that there's a huge loyalty to the Corporation here. It's almost nauseating, in fact, that there are so many people who don't envisage ever working anywhere else in their life. But, when I talk to them, they explain to me that they've actually done 20 different jobs in their time in the Corporation. So there's a massive loyalty to the Corporation. There is a huge amount of talent here, unbelievably large amount of talent and vision and strategy and planning and coordinating. But there's also, I guess, the downside is, that there's also a large core of people who have never been anywhere else, never seen anything else, whose vision is circumscribed by the Water Corporation, and they don't recognize that things might be done differently somewhere else, and that that has a some potential.
- I mean, I found.. you kind of expect there to be a fair bit of dead wood in the place, and that to be a kind of a.. and there is, there are people with different attitudes to you, and some of them aren't quite as, kind of, focussed on work, in terms of doing the extra yard. But it's all.. everyone's a bit different, but most people have got best intentions I think. I don't think there's many people out there who are maliciously slack or anything like that. So that's good, because that means you've got a bit of, ah, everyone's working together sort of feel about things.
- I think there's an attempt to give people more choices in terms of how they work, where they work, when they work, you know and all that sort of stuff. But the organisation's always been pretty good with that. It's always been a good place to work from that point of view, and for developing yourself. I mean, yeah, there's good opportunities now if you want to go off and study and all that, people get paid, get help with the financials on that, but that's improved, but it was always there. I don't see any sort of huge change, sea change, there.
- I think there were beneficial effects in that the organisation determined a direction as a result of scenario planning. And those people involved in the scenario planning became much more advocates of that direction as a result of that, than maybe had that not occurred. I think that was valuable. I mean there's a lot of people were very keen, very gung-ho, about getting into much more external business. And actually saying, hold on, we're not going to go there now could have had quite a debilitating effect on the business. And I think scenario planning probably helped us through that, to some degree.

Code

Leadership and structure

Perceptions of the effects of leadership and structure on the change process, and comments on changes that have taken place or should take place in leadership and structure that are related to the change process.

Examples

Structural changes

- Well the changes that have taken place, well, as I mentioned, we got rid of the commercial division, we stripped, we became more efficient, we had some efficiency improvements. We stripped some functions out of the regions, for example, and consolidated them in the middle. (*Centralisation and changes of some functions*)
- Well certainly there were some changes to structure. And the scenario planning may have played a part in that. We only have five divisions. One division was abolished, which was the commercial division. ... I can think of maybe probably four or five other small reorganisations that have occurred. ... Reshaping the finance division, a little bit of reshaping ... joining together some branches or taking out a branch, and moving some people from here to combine into another branch. And partly that's been because our business has to move with the times, and it's dynamic and we've got to move with it. So the way we were set up this year mightn't suit us next year. So, structurally, I would think both 2010 and scenarios played a significant part. (*Centralisation and changes of some functions*)
- We probably have done more internal accounting changes to back off some of the high cost accounting process that we had for internal recharging and things of that nature. I'm not sure if that's directly attributable to that, or just getting a better understanding of the cost structures in the organisation, and where things are costing us money. (*Centralisation and changes of some functions*)
- ... regionalisation is an organisational change issue ... It was to break down a functional organisation, shake it to pieces, and then establish regions, and allow them to go for it. And were given enormous power you were a mini water company organisation. ... I think the term is called strategic disobedience. It has changed incredibly. And we've now got a lot of central support, but not without pain.
- ... The branch managers are forced to deal with, and represent management across, the organisation. And I think there was a feeling that there needed to be some changes. There needed to be some new thinking amongst that group. And basically there was an unlimited amount of discussion about what could be done. And I think the outcome, it's fair to say, has been no change. ... And the reason why it hasn't was because there was one or two general managers who were not in favour of it, I think it's fair to say. (*Management structure rejected*)
- Well I think it was mentioned there, special project teams, because our project team was just getting off the ground at the time. And I think that's a way of cutting across the divisions, to better place the organisation in the future, because we're too slow to respond sometimes in our traditional structure, Paul. So it gives us a lot of flexibility, to basically have a separate vehicle that can run almost unintended, you know, it's not going to be hindered by the bureaucratic process. So I think that's a positive, something bureaucracy can kill.
- IT and the approach, we spent a lot of time when we were doing the environmental scanning, the impact of IT on the organisation, and really how it props it up, and the link with the systems back to the processes that we're talking about. All those things were pretty well understood. And the latest trends and developments and so on, it just suggested that you didn't want to put it in an area that was probably overworked. And it was more linked with the financial side than the planning side. ... But as a result of this planning exercise, and as a result of other pressures, we switched it. You know, that was an outcome. (*Centralisation and changes of some functions*)
- I mean, we had the four scenarios. There were certain things in there that said if you're going to deal with that, surely you've got to have to have an organisation that's structured differently. That exercise was never done. (*Management structure rejected*)
- We didn't change the structure. We didn't change the executive team. They didn't even change roles. You know they didn't even swap roles. ... we probably spent ... three or four hundred hours on looking at a structural options and ... how we would align that to 2010, as a way of creating new management opportunities for some of the more junior talented people in the organisation, as well as recognising that some people who were in management that should be what we called corporate treasures. You know, they have a wealth of technical expertise that needs to be tapped in to ... We weren't tapping into the technical expertise sufficiently well ... and they weren't necessarily particularly good managers. So ... in terms of moving them into the corporate treasure category, and leaving people to come up we worked

out how that would be funded, and what would happen, you know. So we went quite a long way down the road. Anyway, that didn't happen. (*Management structure rejected*)

- I think a constraint is our structure. I really believe that. I think it's just a mess. ... It's not intuitive. The things that you think should fit in certain places that don't. There's no clear lines of responsibilities. There's no clear accountabilities. I mean, it really is a proverbial dog's breakfast. It's organisational silos, without the clear silos. (*Organisational structure effectiveness issues not addressed*)

- ... changing old structures is a fairly costly exercise, in terms of time, not money. It usually represents.. it usually means about nine to 12 months suspended progress on all sorts of other things. So therefore it's very costly. And if you look at the organisational structure, it actually performs quite well. (*Organisational structure effectiveness issues not addressed*)

Corporate executive meetings

- Just one of the things that did change was, as a result of this, and that was partly, it's kind of an odd thing, but (the managing director) sort of cut out a fairly senior decision-making body, it was called corporate executive, which is when the general managers all got together. One of the things we found out is we needed to empower people, and (the managing director) basically said, well, there's no more decision-making by this inanimate body called corporation executive. Decisions are made by people, not committees, and he called it "committing committee-cide." (*Committing committee-cide*)

- I think one of the significant changes has been that notion of accountability and single point accountability, and trying to drive towards clarity of accountability. And recognising that people are accountable for decisions, not committees. And it's been quite an interesting change, of it being accepted and acknowledged that it's quite reasonable to get input from a range of people, and if you want to call a meeting to get input, that's fine, but you don't water down your accountability by sharing it with a committee. At the end of the day you're still accountable. ... And I think we will have to work hard at making sure we don't drift away from that, back to joint decision-making and shared accountability... (*Committing committee-cide*)

- ...before they used to take a whole lot of information there to make decisions about things. As a group they would try and make decisions. ... I mean, I personally believe that the changes made at the executive level were beneficial, in terms of the use of what was the old corporate executive as a decision-making group. I think the elimination of that has had benefits in terms of ... people now at least feel empowered that their general manager, or that they, can make decisions, and that things don't always have to go to CE for decisions. I mean, some of the stuff that was going up there was just ridiculous. It was, you know, can I use my mobile phone on a Sunday? (*Committing committee-cide*)

- I guess, it was something we toyed with throughout the process. But then suddenly something snapped this year, and we decided, oh {expletive} it, we'll reinforce individual accountability. Yeah, so I guess that was an outcome of Company One 2010, but I don't think I was a product of scenario planning necessarily. (*Committing committee-cide*)

- I don't believe that was anything in the scenario planning ... that's out of Jim's dislike of committees.

Effect of scenario planning on leadership

- I think we've sort of rocked the boat a bit with the top managers, like, because ... the scenario planning process has made them, you know, contemplate the future, and think about the different possibilities, and whether they think one was ludicrous, which I know that some people did, and, you know, it's still in the back of their minds now. It's not business as usual, it's more anything could happen. (*Mindset change in senior managers*)

- The strategic framework is used as the driver for everything. So, if you say the strategic framework was an outcome of scenario planning, then the way the Corporation's leadership is leading has changed, because they are very much driving things through that new strategic framework, through the areas for action, through that sustainability model, the triangle, those elements. So, yeah, certainly it has changed since scenario planning. Whether it's changed as a result of scenario planning.. it more or less changed as a result of the development of that framework. And I don't believe scenario planning.. there's no doubt scenario planning resulted in that framework. (*Use of new framework in decision-making*)

- I think, I'm not quite clear if the restructuring was driven by the scenario planning, Company 2010, or whether it was the result of other things. But I presume it was as a result of discussions amongst the general managers and the M/D about what the implications of the Company One 2010, which flowed on from the scenario planning, or was part of it, which was part of that, that certain things needed to change.

- Well, I think at the end of the day, part of the problem is that I think the general managers.. [unclear] the change to the organisation was potentially so profound and so could affect almost everything the organisation does. The scenario thinking process wasn't confined to a product or a specific issue. It was

about who we are, you know, the meaning of life for the Water Corporation. (*No mindset change in senior managers*); (*Proposed changes profound*)

Relationship with Board

- I wouldn't be surprised if some members of our board would say it was a big, just sort of, exercise in self-indulgence. But if you pick those, then they would be the ones on the board whose own backgrounds were in consulting, or politics, who'd never actually run an organisation and had to motivate people, you know what I mean? ... I don't think they (the Board) really necessarily understood the scenario planning process, and what its role was.
- And the areas that (the managing director) selected, he did select some key areas that coincided with the interests of the board, didn't coincide with the interests of the organisation as a whole. They didn't think they were the best and highest priority.
- ... although the board were asked, you know, is this where you want to go, it was a message that was somewhat foreign to them. They were brought in because they were directors of private, you know, public companies and so forth. You know, to honour that very strong commercial focus which is in our legislation. And the new message is about sustainability, it's about engagement, it's about, you know what I mean, getting back to the knitting, not doing the fancy deal in Zambia and so forth.. I feel the organisation like moved forward more than the board did. The board stuck in sort of that 1996 - you know we're gonna to go out, we're gonna win business, and we're gonna make a billion dollars, and that's why we here. Whereas I think the organisation matured and said, no, we're actually here to do all these other things, as well.

Leadership characteristics

- I think the leadership of the Corporation is good; I've never had a problem with it in the Corporation.
- I'm grateful that we have got leadership and that people will make decisions, because that course is the most important thing. That's what they're there for, that's what decision makers are for.
- If you're talking about leadership style, probably haven't seen much change in the style
- So we're trying to come up with a ten-year vision here, and you guys are likely going to retire in the next, you know, most of you are probably, you know, most of them are over 55. And, yeah, it's a very fundamental question to ask, in terms of organisational change, and the people you've got at the top making the decisions about what to change and what not to change.
- I think we could have done more to embrace some of those (Changemaker team recommendations), and drive harder off the things that they presented. I think that goes back to that leadership stuff; it goes back to probably a number of ... senior management feeling a degree of comfort with status quo, and the motivation to embrace some of this change stuff. Why would you?
- I think we've still got some challenges with certain managers in relation to how they motivate and instil enthusiasm in their staff.
- Because some of the things that we recommended were things like, you need to train managers. A lot of managers have just ended up in management. You know, a lot of them are engineers and they've just ended up in management. And unless you actually teach them, a lot of them don't know how to deal with poor performance, and that sort of thing.
- I guess my view is those sorts of things start at the top and work their way down. And if there's no accountability, or if the people at the very top are not held accountable for the things that they do or don't do, then nobody will be held accountable. There's a case of needing to have examples where people are called up on where they've blatantly gone against what the agreed position or decision was. And there's very little of that in the Water Corporation. People choose to take a different path, and they're never actually called to account for why they've chosen that path.
- And our GMs are very clear on the performance requirements and the accountabilities. We've got to a point where there's very little question now or misunderstanding about what is expected when, and who is accountable.
- I'd like believe (the new purpose and direction) now, but I see so many demonstrated behaviours from very senior people in this organisation that don't reflect that.
- So then there is a huge technological gap between the people who actually do the work and people that manage. Whether this is good or bad, I'm not sure. ... It can lead to the wrong decisions, because, from the point of view that the equipment suppliers or the people that actually supply particular technology, OK, they can influence senior management quite easily, just from normal sales puff. And if that's not balanced by listening to the experts that are within the organisation, it can lead to wrong technology decisions, yes.
- You get two types of managers in here. ... You get the good guys and the arrogant guys, you know.

CEO's and general managers' support for scenario planning

- (The managing director)'s always had a very... a bit restrained, in relation to corporate planning processes. He used to avoid them. He used to call them love-ins, and didn't like them at all. And yet he took real leadership in this. And that was very, very important. (*Management support for Company One 2010*)
- I could see that our managing director ... and also the general managers were deeply involved with the process. So ... it was good to see and good to know that, for instance, that the managing director was ... was having a significant influence in knowing what was going on, and charting the course of the Corporation. So, for me, that was very reassuring ... (*Management support for Company One 2010*); . (*Encouragement for change initiative*)
- ... what the good things were is that people thought, wow, the general managers and the M/D are obviously, they care about the organisation. If they're prepared to spend that much time, that shows commitment. (*Management support for Company One 2010*); (*Encouragement for change initiative*)
- I think they (the general managers) were honestly, in hindsight, quite reluctant participants. They didn't really want the world to change. I think, though, they have recognised some change from it, but they've been able to be quite selective about that. (*Lack of management support for Company One 2010*)
- I guess I'd be disappointed with senior management not being able to find the few hours a week that was required of them to engage and be part of the process. If you're one of the top half dozen managers in the Water Corporation, and you can't set aside, if you can't break out of your busy week, enough time to do some strategic thinking about the way the business needs to go, then I think that's a bit of a sad indictment on the place. Yeah. It was a big drain on their time, but I would have thought that was an appropriate level of engagement for people to be, at that level, to be thinking about the strategic direction of the business. (*Lack of management support for Company One 2010*)
- I think, from memory, a lot of them, again, were cultural things, where people would like the leadership of the organisation to be out more, and communicate more, and so on. And it's great to say it, but that sort of thing needs to be said by the leader. If it needs to be said by the staff, it's not going to happen. Because the leader's not like that anyway. ... So something with cultural change, value shifts, and whatever, needs to come from the M/Ds mind, or the CEO's mind, and actually he needs to drive and push it. He can't delegate it to some project. ... the M/D buy-in may not have been as strong as it maybe should have been. (*Lack of management support for Company One 2010*)

Code

Workforce issues

Perceptions of changes relating to HR, performance management and other workforce issues.

Examples

Performance recognition

- I guess there was a recognition of some of the frustrations of the younger members of the Corporation and the Corporation's workforce - all the new people coming into the Corporation and the frustration around, you know, how they progress within the organisation, some of the old.. the traditional approaches to progression, you know, requirements placed on engineers, the CPNs, the different approaches taken with other professions, and some of these things. ... I think you've got a classic case of a very strong hierarchy, built on years of experience, as opposed to competence, built on levels, and God knows what else. And, to my mind, that's extremely unhealthy. People should be valued based on the contribution that they can make, not on how many years of service they've got, or what level they are in the organisation. (*Increased involvement of young and new employees*)
- The enterprise agreement was renegotiated after, it was sort of in negotiations over the period from scenario planning through to the intent. ... It had embedded all the old problems, and almost sort of made them worse... (*Little change in performance management*)
- Performance management system, the new system's been bedded down just over three years now. ... I think the maturity of performance management within the organisation is still, it's patchy. (*Little change in performance management*)
- But not really before have they (graduates) been elevated to, almost to equal status, with other opinion leaders in the organisation. This time, through the scenario planning exercise, they were. And they had a lot of very intelligent things to say, as I would expect. And their views attracted attention, and, you know, recognition for their quality, a depth, and so and so forth. Now, because of that, I think that, when project groups, task forces were established, to work on the drought, again there was a

deliberate 'pulling in' of our graduate - it's a broad tag - talent to help populate those working groups. So I think that's been a positive flow-on. ... previously, we would have probably gone for the established, the establishment, in creating working groups. Oh, well, we need old and wise heads to think about this. So I think that paradigm has been broken. (*Increased involvement of young and new employees*)

Retention of new recruits

- One of the things that we've been doing is getting a whole bunch of young people into the organisation, graduates and so on, because we got a preponderance of baby boomers around the joint. ... And there's some {expletive} good people in the baby-boom cohort, but how much longer are they going to be here? And bringing some of the younger people into the scenario planning process was a great way of sort of achieving depth in the organisation. (*Increased involvement of young and new employees*)
- So, yeah, I think a very good thing that came out of it was overt recognition of the value of young people, and several of the people who, particularly, who were involved with the scenario planning are continuing in important whole of Corporation things, like drought management and so on, you know. So that they've been given important roles within that, it's not just sort of retreated back to the old guard. So I think that they've made both positive contributions and we've had a much better blend of age mixed teams on things, which I just think enhanced the outcome. (*Increased involvement of young and new employees*)
- One of the good things that 2010 did is involved a lot of the younger people. It was interesting. It wasn't just young in age, but young in thinking. And that's often people who be new in the organisation as well. We have a problem in that we lose people after two or three years in the organisation. And often they get disillusioned in some way, or go on to other things. (*Increased involvement of young and new employees*)
- And one of the things we've found is that the turnover rate for people who have been here a short time is very, very high. ... the bureaucracy, the lack of vision, and putting your heart and soul into something, to see it disappear into a puddle of water, never to be seen again.
- I can think of very few promotions. I think graduates are still leaving the organisation. The graduate recruitment process has slowed. There's been some people put on special task forces, but that was always happening anyway. (*Retention rate of graduates unaffected by Company One 2010*)
- And one of the things we've done, also, is with the graduates, is that we've now got a central graduate pool that we're going to bring in. What was happening, certain graduates were being held in particular branches because they were branch funded, because they needed that resource. But the person wasn't getting the rotation required, and not the meaningful experiences required. So we've changed all that.

Organisational demographic

- ... our workforce demographics are rather unusual, and we have a lot of people in the thirty-year club. Our average tenure is very high, from memory, eighteen years. Across an organisation our size, which is, sort of, trying to refresh itself through the corporatisation, and subsequently, we've got a lot of long-timers here. (*Importance of retention of expertise*)
- A demographic gap. The previous Water Authority stopped recruiting graduates. And you can't pick those sort of people up off the streets, sort of 40-year olds, it doesn't make sense, they don't exist. And they're [unclear] people up, young people, to stretch them. And at the moment, in the meantime, we're stretching at a senior level. (*Importance of retention of expertise*)
- One of the things that we've been doing is getting a whole bunch of young people into the organisation, graduates and so on, because we got a preponderance of baby boomers around the joint
- I haven't seen much change in the age profile. We've just run a redundancy scheme that might address that a bit. But we've still got the people that are in senior positions are basically the same suits that have been there for years and years. And I can't see much changing in the short term.

Empowerment

- I feel more empowered than I did before. It is more like that. Now, what it feels like for anyone else, I think might be different. I think most middle managers feel more empowered than they did. ... For people out on the field? [unclear] you've got the same managers who weren't particularly good at communicating in the past, the fact they can now make decisions doesn't necessarily mean that they're involving their teams in making those decisions.
- I think there was a massive change in that (empowerment) as a result of Company One, where accountability was brought down to regional manager level, and branch manager level. And that was something that a lot of people in the organisation struggled with, that people who are managing business

units have full accountability for what happens in there. I don't think as a result of 2010, we've made any progress in that area, and I think we need to. (*Little change re empowerment and accountability*)

- FTE freezes, retrenchment or redundancy-type things. Which is not about investing in empowered people and well managed assets and growth. It's about doing something that's politically required.

Cost reduction

- ... because of the water restrictions, the Corporation's income was down about \$40 million.

Fortunately, we were not required to pay the full pre-negotiated dividend. But as a direct result of that reduction in income last financial year, we've got a \$12 million and 120 people budget cut this year.

- But the voluntary redundancies and the cost reduction initiative have obviously caused a wave of disruption, and not only that, the first incarnation of that was, um, targeted redundancies, involuntary ones. And that was leaked very broadly throughout the staff, so that there was widespread fear and loathing. And several managers, including myself, got very angry at that proposal, and also the fact that it had been leaked, and agitated that it was very poor for business.

- You know, there's the sort of degree of unhappiness that you would expect. But that people are coping and they're finding.. they're particularly unhappy, though, with things like FTE rules, you know, how many FTE, you know, how many full time equivalent employees do you have on those sorts of high level targets, which have obviously been set for, you know, keeping the, you know, giving targets to the Corporation. But then when you actually look at the dollar target, you know, they're two separate targets there's the dollar target and a number of bodies target. ... And that is an exact problem that we're facing here, for example, where [unclear] has the budget to pay for certain people, but because he's got this FTE target.. yeah, they're not aligned, and he has to not put them on, and put a contractor on instead, just so that they don't mess this target up. So.. which isn't necessarily the most efficient way of doing it. But.. yeah.

- The cost reduction was, I believe, managed very well, but it wasn't born out of the scenario planning.

- ... the recent [unclear] cost reduction initiative, which by the way I do believe was a direct outcome from the scenario planning. ... In what way? Because in all of the scenarios, there was one abundantly clear feature. It is you've got to show to your shareholder that you are really efficient, and you've got to be ahead of the others. It came through, blindingly, and so that was a very important outcome - and certainly for (the managing director) , it really made him feel, you know, he had to do another something else, and show where he'd begun, and particularly when you're, suddenly we were \$36 million down, dividend was reduced. The scenario prepared us, if it needed to, and I think it helped. So that's all my organisational theories.

- What tended to happen, actually, was that successive rounds of cost discipline were imposed on the organisation, regardless of scenario planning. And sometimes, actually, people started to say, well, hang on, hang on, aren't we supposed to be doing this planning thing? What are you doing cutting costs? Shouldn't that be an outcome, rather than something that happens in parallel? So, yeah, I think that was a bit of a problem.

- As soon as the focus is taken away, people will get back to business as usual. And there's been an imperative for that, because of almost the same time as 2010 finished, the Corporation was subjected to severe cost cutting. And so people are under quite a bit of pressure to even do what they are meant to do, just to fulfil their accountabilities right now. Never mind trying to do things towards a brave new future.

- And it doesn't matter how you arrange the chairs on the sinking ship, if there's not enough people there, there's not enough people there. And people start getting really crappy, and poaching, you know, it's just awful, what's been going on around here.

- Quite clearly, the ones that the organisation seems to want to make redundant are the ones that aren't close to retirement, because they going to go anyway. It's not going to be the younger ones, because, well, they've only just joined the organisation. So it's going to be the middle management ones, the ones that have got maybe 20-25 years in, and that's an awful lot of {expletive} experience. You'd think that those would be the ones that get pinged. But no they weren't. It was weird. We got rid of a whole pile of close to retiree type guys, which had enormous knowledge, you know, enormous history, enormous understanding of what the business is, and who were actually far up in their careers to not really worry about what they said.

Workforce of the Future

- ... one of the things that came through very clearly was that the nature of our future workforce was likely to be very different from the nature and mix in our current workforce, in terms of academic disciplines, skill sets, pure numbers, and the mindsets that those people brought to the organisation.

(*Workforce issues identified*)

- If anything we're going to be shrinking or staying the same size for the foreseeable future, so new positions are not going to be created by sort of the natural growth in taking on more people in new areas. And we're not going to be spinning off subsidiaries and new entities all over the place. So we are going to have to live with the constraints of growth and at the same time renew and reinvigorate the organisation and also to meet the reasonable expectations of people joining the organisation, of those that perform well will be rewarded through rapid promotion. (*Workforce issues identified*)
- ... certainly one of the key priorities in the people and culture area in the current corporate performance contract is developing a sustainable remuneration framework. And the key word is sustainable. And also other key areas that come out of the people and cultural area is workforce planning, a more corporate model for workforce planning. They were all issues that came out of the 2010 process. (*Workforce of the Future progress slow*)
- I mean, the workforce of the future stuff, which was supposed to incorporate all of the changes from the.. or all recommendations from the change-maker teams, is still bubbling away in HR. But probably is not getting the follow-through that it deserves. You know, it's probably not getting the supervision from the senior executive and the M/D that it perhaps requires in order to be truly successful, or I guess, to deliver change in a reasonable time-frame. I mean, I'm sure that HR will continue to progress things as quickly as they can, but that'll take 15 years. I guess that was designed to pick up, you know, the training issues and the skills-based issues that had come from the scenario planning exercise, and then later in 2010, that were identified, the accountability issues which were identified, the empowerment issues which were identified, the rotation of progression-type issues which were identified, which I think have probably been lost as opposed to incorporated, the issues of the aging workforce, what were we going to do about knowledge capture and retention, some of those things. (*Workforce of the Future progress slow*)

Code

Water quality

Comments about water management and quality, which links closely with *Customer expectations (Expectations of water quality)*.

Examples

- So water quality has really been a planning issue number one, anyway, certainly at a business unit level, and progressively higher profile corporately. And I think it was up there in lights, number one or whatever, leading into the planning. So, again, I'd see that the scenario planning reinforced it. I don't think it.. I can't recall the planning focussing too much on that issue, or contributing a lot on it. But it certainly survived through the process, and came out pretty strongly in the 2010 framework. (*Effect of scenario planning*)
- Again, I'm not sure that it's come out of scenario planning, but, I guess, there's a lot more emphasis, I guess, on understanding water quality, the fact that water quality isn't just about taking samples out of taps and looking at the results; that it's actually, you know, a complete, sort of, process that starts in our catchments, and goes right the way through. And that it's all about identifying hazards and managing the hazards, and those sorts of things. So it really has had a fundamental impact, I guess, on our attitude and culture. (*Risk management*)
- I guess we identified a few areas of weakness. ...one, was a new focus on drinking water quality, because we saw that.. this is all based, normal strategic planning type stuff. So we got a new focus on drinking water quality. (*Water quality focus*)
- ... the aesthetic water quality issues are, you know, top of mind to our key customers - really critical for them, water quality for their processes, rather than just for drinking - well not just for drinking, it's important that it's safe for drinking anyway, but, I mean, the aesthetic water quality means a lot to commercial customers, because in their process they have to do things on their site to accommodate the water quality, the changing water quality that comes through. So I am encouraged to see that we now invest in addressing those aesthetic water quality issues. It's been a struggle over the years to get investment. All the investment seems to have gone into ensuring the water is safe to drink, so healthy, rather than addressing the aesthetic issues. (*Water quality focus*)
- ...we are still not focusing on the other water management areas, and that is irrigation and waste water. And I really think that we're missing the mark if we are not going, heavily going into that, because that should be part of the water management thing. (*No change on waste water*)

Code

Technology

Changes in technology related to scenario planning and/or Company One 2010.

Examples

- Haven't seen much change. I mean, it said, the planning found we really need to be slick with technology and, you know, with e-business and all this sort of stuff. But I can tell you from where I'm coming it hasn't happened. I'm pretty disappointed actually.
- You need to have the right people, who are willing to.. who can actually carry out the function fully, and are willing to learn and adapt to new technology. So that's the challenge.
- We've seen a change in e-business. Again I don't think it's a result of 2010 or scenario planning at all. I think it was natural progression, and getting the right people in those roles

Code

Effect of bureaucracy

Perceptions of the bureaucratic nature of the organisation's structure and its effect on decision-making.

Examples

- There is quite a push for cultural change in the organisation, a sort of can-do attitude, and that sort of thing. But being such a large organisation, bureaucracy is enormous. That very much stifles any initiative or any streamlining approaches. (*Barrier to change*)
- High-risk profile is very hard in managing water services, things that you have to do things pretty safe, you have to do things pretty conservatively, you have to. . . . And that was what the scenarios really emphasised for us. So from a change perspective, again, do you really want to mess around with the formula too much, because of the risks involved? What are the cost benefits of that? So being adverse (sic) to change is definitely one of the facts of this place. And the bureaucratic nature of how things are done, and the way decisions are made as well, don't really help that much. I think that's a great way of people resisting change - oh let's get a committee together, let's develop a process about that, let's get. . . you know, you might as well just call it dead before you even start. (*Risk mitigation; Barrier to change*)
- . . . it continues to frustrate many people in the organisation, because with conservatism often read bureaucracy. And so there's, again it's all about risk mitigation. So I think that those things combined do provide frustration in terms of people's accountabilities and the need to . . . well, the second-guessing that occurs within the organisation. (*Risk mitigation*)
- The most, well, whinges you hear in the place about risk aversion, we're too risk averse, and it slows down decision making, which leads to bureaucracy. I've thought about that long and hard and I don't think it is the case. There are bureaucratic branches in the organisation, which are a direct result of the individual managing the group, and you can pick them. But, as a whole, our organisational structure has to be like it is, is structured like it is, because of the nature of our business, which is heavily subject to regulation and compliance. (*Risk mitigation*)
- Culture-wise there is no change in culture, I have not managed to see it. We are more bureaucratic than we have ever been. . . . Because bureaucracy to a degree is a measure of risk management. And when you talk about risk management you, in actual fact, are capable of taking a risk in bureaucracy. And we do the opposite. (*Risk mitigation*)
- We looked at things like delegation and we found that our delegated authority was extremely high. When general managers can give approvals up to a million dollars of capital, compared to other organisations, we were way ahead. (*Delegation issues*)
- There's been a few changes in the way you access money from the capital improvement projects, and those changes have been made to actually slow down the rate of expenditure. . . . The business cases are getting longer, more requirements in terms of approvals, more signatures, more processes in place, and really, at the end of the day, to my way of thinking, that doesn't add any value, or there's very little value for the effort that goes into it, justifying and re-justifying. (*Delegation issues*)
- I guess some of the things which came out were things around the empowerment of staff, and perhaps not so much the people at the front line, but people sitting in the middle of the business, the technical specialists who felt they didn't have the ability or capability to make change within their area, to do things differently, to challenge the status quo. . . . And I guess the fact that to make things different, and I

know one of the examples which was brought out was one of the discussions that took place between a graduate and one of the general managers, and the general manager's response to an issue, it was the conversion of vehicles to LPG or something of that nature, was 'Well it's easy, all it needs is one signature and that's mine. It's an easy thing to do'. And the graduate's response was 'You have a completely different perspective of the organisation and the bureaucracy which exists before it gets to you, and the reality is for me to get it to you takes who knows how many signatures'. (*Delegation issues*)

- ... the Corporation is not that good at crisp decision-making some of the time. It tends to have the public works engineering decision - well non-decision by a committee - including formulation of positions ... (*Committee based decision-making*)
- ... another initiative was streamlining, making more efficient... or just getting people to acknowledge that meetings take a lot of time and a lot of money. ... you get ten people in a {expletive} room, you want to get some value out of that. Here we sit and talk for hours, and no-one takes any minutes, just [unclear] to the actions and you walk out the end of it, and two hours have happened, and the meeting ends. And then what? ... if you're not going to make a contribution, don't come. But here, as long as you show up, and you sit there, it's fine. You can be there for five.. I've sat through five-hour meetings where someone hasn't said a {expletive} word. I mean, what a waste of time. You know, they just represented. (*Committee based decision-making*)
- I mean the bureaucracy one is a classic. (The managing director) went through a process of committee-cide, he called it, where he was slashing committees across the organisation. He personally ridded the place of two or three of the big ones, and then said, 'right-o, I want everybody else to go and do the same'. And I guess an example of where, you know, a personal example where quite clearly that hasn't occurred, was involvement in a (with-held for confidentiality) project. ... they've got a whole process ... which duplicates many of the aspects of the corporate ... system. And part of that is that you have to create a steering committee. Now the project that I ... was involved in ... had no requirement for a steering committee ... So, I guess, that, to me, is a classic example of bureaucracy gone mad. It served very little purpose, was quite clearly against some of the objectives that had come out of the 2010 exercise and really didn't.. delivered no benefit to the organisation. Yet they still exist. And I guess that's pretty soon after all of this, you know, the big committee-cide drive took place. (*Committee based decision-making*)
- Oh, you know, I see things like board reports and memos and things that go up and down seven and eight times. Someone changes a word here, and a sentence there, or a capital letter here. I mean, that's an absolute nonsense. (*Paperwork*)
- Just... we went through a whole stage of, you know, fight bureaucracy, and, you know, use your [unclear] and be innovative, and, you know. You know, with project management and all that, we go through quite an extensive process of all these signatures. You know, to get a project through, you have to have so many signatures, and so many bits of paper, and so many documentation. And they went through a process of sort of being more smart about that, and, you know, who has to sign off and all that kind of stuff. But it just seems that we're back to where we were again. (*Paperwork*)
- One of the parts of the culture is keeping your backside tin-plated. ... those people, particularly those who have built up their super, and they've been here for 20-30 years, a big focus is making sure you don't mess up. And that means not taking risks, and following the bureaucratic processes, because that's another way that you play it safe. (*Protecting personal interests*)

Code

Trust and credibility

Trust and credibility as a factor in relationships with stakeholders, as well as internal relationships.

Examples

- The use of use of trust and credibility as one of our areas for action has been quite powerful in having people recognise the importance of alignment, or the importance of being aware of stakeholder expectations, stakeholder requirements, and the need to deliver on those, so as to build the trust and credibility. (*Trust and credibility with stakeholders*)
- Jim uses it to demonstrate that, he uses this aspect of the triangle a lot, the relationship between our customers and our core business and our trust and credibility. (*Trust and credibility with stakeholders*)
- I mean, the surveys that we've done have shown that we still do have the trust of our customers, as regards drinking water quality. ... if you lose that trust, it's very hard to regain, as Sydney Water found. And that, you know, we need to be mindful about it, I guess, when we're talking about (a) the way that we deal with customers, and (b) I guess, the importance of safe drinking water, in that, I guess, we're

only one incident away from basically destroying people's trust, and it's something we never want to do. (*Trust and credibility with stakeholders*)

- ... bureaucracy is just a measure of how you trust your people. So the more bureaucracy, the less trust there is in the organisation. Now there is the certain level of bureaucracy required. Any large organisation must have a type of bureaucracy. We seem to be overplaying this, very, very much so. ... I mean anybody within the organisation, no matter where you are placed, is allowed to manage its own affairs to a certain degree. And within that degree, there is a certain amount of risk taking, much lower at lower levels, much higher at higher levels. But you know when you take that all away you become just dummies... (*Internal trust and credibility*)

Code

Sustainability

Sustainability as an outcome, rather than a focus, including comments on environment and triple bottom line.

Examples

- I think actually this is something you can peg back to scenario planning. The next round of corporate planning after the scenario stuff had finished - and this is really before we got into any of the trouble I've mentioned - the senior management were involved and there was unanimous adoption of sustainability as the key business driver for the Corporation. And I mean that in the broad sense, you know, social, environmental and financial. ... I think every scenario had sustainability embedded within it, and I think the good discipline that it gave is that, say, people who only had normally a financial interest in their job, or an engineering interest, suddenly realised that you couldn't make the business bits fit and work unless everything was considered holistically.

- I think it strengthened our environmental commitment, which was already there and quite strong. But it certainly strengthened, because the sustainability, the status of sustainability, in our planning framework gives greater credence to the treatment of the environment. And we've certainly excelled in that area. ... I think the sustainability ethos is coming in ... because the projects that will win the funds are the ones that can demonstrate sustainability, and demonstrate all aspects have been considered, and you've done your work very well. And that's what sustainability is, I think.

- I mean we've incorporated sustainable management into our purpose statement. I mean, there were lots of agendas that have been running about sustainability. But I think, again, scenario planning and the 2010 project gave some legitimacy to it, and gave an environment in which debate about sustainability legitimately happened, and in fact caught it up into our purpose statement. So that's a significant mindset change for the business. Would it have happened anyway? It might have done. But that was important. Things like the creation of the energy management unit might not have been a direct outcome, but is a recognition of, you know, needing to have that sustainable focus.

- I think the concept of sustainability is probably one of the main changes in the organisation. Probably getting more serious about triple bottom line, and what it means for us. Now would that have occurred with or without 2010? I think it would have occurred anyway, so I can't link it as a direct result of 2010 or scenario planning.

- ... linking the Corporation's environmental performance and triple bottom line type approaches with the finance division, because it's a very important accounting exercise to get TBL stuff going properly. You need data streams on energy usage and chemical usage and human resources that are of the same level of rigour as the dollars. And it's that interaction that's led to some, I think, beneficial culture shift. It's not fully played out yet, but it's definitely changed the way they look at the world too, that there's more than just dollars in the overall business health of the organisation, which I think is good. ... It means that we've got triple bottom line thinking growing in the organisation and being considered by people who wouldn't have had any stimulus to do so.

- I think the triple bottom line concept of sustainability is embraced well. It, I think, it's part of our society expectation now, and staff reflects the same. And it is in place. As a business unit, we've worked extremely hard to develop our commitment to environment. We've ensured our business unit is accredited in environment performance, as well as safety performance, as well as business performance. So we've been embracing sustainability in that context, because we.. you know, the economic business bottom-line performance we've been focused for ever. But we've brought in the environment. The third leg of, you know, basically, the community and society, is interesting. You know, I think the Corporation has a good presence out there.

- There is significant debates going to occur imminently on reusable energy, on things of this nature. ... There's a continuing debate about, you know, every time we build a new system now, it requires more

energy to run, because you've got pump things and so on and so forth, you've got treatment plants. You need to be able to get into renewable energies, renewable energies at the moment cost you more than conventional energy, how much do you go into that?

- We're also driving on energy efficiency. We've established an energy management unit, or the EMU. And they're looking broadly at the Water Corporation's energy management. And, for example, they've found that the apparently simple question of, you know, how much energy did we use in a particular calendar month is nearly impossible to find out, because there were 2200 electricity accounts, and people weren't even loading up the actual power usage. They were simply putting the dollars related to that usage into our accounting system, so you couldn't even find out if we were getting efficiency snags in various parts of the system, so all of that's gradually being fixed.

- And now the whole 2010 exercise, it was is more about a commitment to WA, a commitment to being sustainable, to provide sustainable services and being sustainable as an organisation, and a commitment back to the community. So they were all very good things. But as I said, would you say that's scenario planning?

- You know, things are not as they were earlier on in the century, but we need to be much smarter about the way we manage and harvest the water resource. And that brings into play new technologies, and associated with that in part is the ratcheting up of the sustainability agenda, which we've embraced wholeheartedly, and very much forms the bedrock of our part of our strategic world view. But that has implications and consequences for the organisation. And it doesn't sit well with a 1950's style bureaucracy, which says, well, 'we've got deep pockets, we'll throw whatever big utility solutions at the problem as are necessary'. That's not the game anymore. So plenty of imperative to change, let alone all of the wider contextual, societal, and technological advances.

- ... when I ask for my monthly report, I ask for an environmental assessment, and so forth. So that works very well, and I think that's a big change.

- I think it goes to sustainability of the business. ... Basically, if your customers aren't your advocates, then your business is pretty vulnerable. And I think that's appreciated in a lot more quarters now than perhaps it was two or three years ago. I'm sure that came out of the.. that was something that came, I won't say it originally came out of the scenario planning, but it was picked up in the scenario planning as being something that we could no longer afford to ignore, and that we needed to make a start, which we've attempted to do.

Appendix 2.4.9 Competition

(Refers to *Findings 6.6.13*)

Context

Data Interrogation

What was the participant's viewpoint on competition the Water Corporation faced or would face and how it would compete now and in the future?

Source Interview Question

How do you envisage the Water Corporation responding over the next nine years to changes in competition and customer expectations?

Intention

To provide data for comparison with the same question that was asked in the pre-workshop interviews.

Code

Competition overemphasised

Perceptions that the threat of competition had been overemphasised.

Examples

- I think the competition one was always a bit of a furphy. I don't think there was that much in that. I still don't believe we. . . I think it'd be great if we operated in a much more competitive environment. It would drive better behaviour within the organisation, but we don't, and that's unfortunate. And I really don't see that changing in the next eight years. . . . I don't think that competition will be a major issue while we've got this current government.
- And I remember in the scenario planning and then 2010, everybody was mortified and terrified about competition, and it's just not happening.
- It's still very much quite a monopoly, and I think it will stay there for another eight years for sure.
- I mean, we really try to focus on the fact that competition is going to grow, but there is no serious competition. It's a figment of our imagination to say there is competition. The things that in fact you might call competition are self supply ... But it's always been there, you know, we have always dealt with that.

Code

Competition underemphasised

Perceptions that the threat of competition had been underemphasised.

Examples

- I don't really believe that the Corporation really believes that there's any competition. I don't think that's changed. And I think that's one thing that is going to be very hard to change in this organisation: the perception that there is real competition. I don't think people perceive that we'll be privatised, which is the obvious point of competition, if we got privatised. . . . No matter how much we say it, I just don't believe that we think it. At a sub-conscious level, I really don't think we believe it.
- And they're a very large organisation, in a lot of different industries, who are quite capable in five years time of saying to the government, hey, we'll operate your water for you. I'm not saying they would, this is highly confidential, of course. But to think that we couldn't have competition that it actually thunders up your driveway, is a bit of a narrow minded view.

Code

Customer relationships

The importance of knowing the customers in order to defend against competitors.

Examples

- In terms of competition, because we're looking at and focusing clearly on our market here, I guess our strategy is that we will become strong, and, through trust and credibility, presumably still be the company of first choice in WA. And our best defence to competition is by being well-

regarded by your customers and your stakeholders, like government.

- It's very important that we continue to listen to what the customers want...we didn't actually know our {expletive} customers. We knew where their water meter was, but we didn't know what their names were, what their business, what they did with the water, stuff like that, you know. We had no idea what happened behind the fence. That was the beginning of the Company One thing.

Code

Fear of overseas competition

The threat of competition from overseas.

Examples

- I guess at that time we were looking at competition as a real threat to the organisation. We were looking at competition from overseas water companies, particularly the big French and British companies. We had a view that they might wish to use Australia as a platform to launch into Asia, and to get a foot hold here. And so that was one external threat.
- I don't think the international companies are particularly interested in us. I don't think anyone in their right mind would want to take on our country operations.

Code

Being prepared or not

Preparedness for competition

Examples

- We have responded fairly well to date, but to the level of competition that we've encountered, in our own terms. We haven't, obviously, been prepared to take competition to, take it to the competition in other areas. When we tried that, I think we were likely to be reasonably successful, but that particular agenda is being curtailed.
- I can't see them reacting to competition in any way other than a reactive way. I can't see them proactively anticipating.
- There is nothing I can see, nothing I can measure in my own mind, if there is say a takeover bid for a certain area, we are prepared for it. However, I must also say that I think that the Corporation, benchmarked with other areas, other utilities, if that's the word to use, has got an excellent chance to, in actual fact, not be having to be afraid of competition.

Code

Benchmarking

Measuring organisation against others.

Examples

- We are a monopoly, and that's probably the most efficient model for us in WA. But how we respond to it will be, as always, you know, just ensuring that... probably the only, obviously the only way is to make sure that our customer service is up to scratch, and benchmarks extremely well for service, for the value, the money. But as well as just ensuring our cost base is, again, leading, in terms of the efficiency frontier with our peers in the rest of the world. It's the only way we can meet competition, really, is that. Again, full frontal competition quite unlikely here. So our competition is really comparing benchmarking with others, independently.

Code

Defend and extend

The policy with regard to competition

Examples

- ...we've developed a defend and extend concept, if you like. And I think you defend the organisation against newcomers and competition by running the business very well and just being very good at doing, you know, running your business. And that will keep competitors out in any event.

Code

Government attitude to competition

Perceptions of how the government views competition in the water industry.

Examples

- I don't think that competition will be a major issue while we've got this current government.
- The apparent need on the part of some of our regulators, Office of Water in particular, to introduce competition into the WA marketplace.. Now, it does exist, to some extent, but they have a very clear and explicit agenda of increasing the level of competition. So that has forced us to be more commercially minded, and to think in terms of competitive bidding, competitive tendering - and we have been quite successful, where that's been required of us.
- I think the current review of the Water Services Coordination Act, which has just been announced, is recognition that water, of all the utilities, has to be regulated as a monopoly, because it always will be a monopoly. So I think, even at the highest level of government, they're realising that the legislative framework that was set up probably overstated the role of competition.
- If the Government perception is that we're not able to deliver the services, then I think we're leaving ourselves open.
- ... there's a risk that, uh, you know, the government could ... sort of privatise the retail end of our business, and sort of keep the wholesaling side government-owned, and at least partially privatise the retail end. ... I don't think it's going to happen in the short term, that's very much dependant on what happens with power, and it might be ten years off. So there's a prospect of competition there, if you put the retail end out, you privatise it basically, I mean, it'd be fairly competitive.

Code

Servicing regions

The effect of the regional structure on competition.

Examples

- The fact we retained the regional structure means there are senior people, particularly regional business managers, but regional business managers and their executives, and their workforces, closely connected to the communities. And that's across the State, so it's not just country, it's Perth as well. So by being well integrated, and having a very good presence, then the Corporation can respond very quickly to the signals, as they hear the signals. They're not remote from them.

Code

Effect internally

How competition (or lack of it) affects the organisation internally.

Examples

- I think it'd be great if we operated in a much more competitive environment. It would drive better behaviour within the organisation, but we don't, and that's unfortunate.

Code

Effect of scenario planning on attitude to competition

How scenario planning affected the organisation's attitude to competition.

Examples

- And the scenario planning talked about competitors, and people coming in, and our market breaking up, and all sorts of good things that probably could easily happen. And yet I still feel sometimes that people. . . I mean, people still say we don't have competitors. We don't have to worry about our customers, because they've only got us. All sorts of bad comments. I'm not sure if it's a result of this. But I would have thought that this would reduce those kind of things. But it hasn't, because what this has done has almost made us focus even more on core business.
- I believe as part of scenario planning we did look at some competition (from overseas), and that was part of what we thought. As we thought it through, we probably saw I, it emerged as less of a threat than we initially thought. And yes, I think that was good clarification.
- ... we've become less paranoid about trying to meet every single competitor head-on in every single dimension. So we've become a bit more realistic, we've become a bit more focused in that area. So I think it was important to understand who our true competitors are, and where they may want to take us on.

Code

Nature of competition now

How competition (or lack of it) affects the organisation internally.

Examples

- With regard to competition, I think we're still struggling with quite where our competition will come from, and what shape it will take. I think it's more likely to be an insidious substitute for things, rather than head on competition. And I guess that's the sort of thing that to me didn't really emerge through the scenario planning. It was more of a big bang type competition. So, in terms of responding, I guess we're doing a lot of work with regard to trying to understand our markets better, so that we can then understand what competitors might have that would be attractive to them, so that we can get in front of that game.
- The maturity that's come, I think, is a realisation that competition isn't going to be overt. It isn't going to be people setting up a water business in direct competition to yourself. So we've had to come to that reality.
- ... this part of the State is a very high-growth, dynamic area. And we've also got competitors, which don't exist in other regions. There are water companies who we compete with, butt up against with them, and fight for contracts. ... So, in the southwest we were attuned to real competition, and a competitive industry, the realities of it, leading in to the formation of the Water Corporation. So right from day one, we were on the front foot.
- Yeah, well, yeah, a lot of mining companies doing their own thing. A lot of... some companies looking at doing on behalf of those companies. You know, if we really wanted to get out there, and really increase our revenue, and our profit margin, we could be out there doing a lot of the planning work for water supplies, etc., to mines and stuff as well. But we haven't said that we want to do that, because we see that as only a marginal... You know, all we're doing is acting as a contractor, to some extent, and that's not really the role that we want to play. We want the total added project all the way through. And sometimes we will go out and do that, that initial engineering work, on the basis that it leads to something else. So we don't really see those other engineering firms as competitors. It's more, I suppose, an example of a competitive thing is the Goldfields water supply, which, you know, there is a number of bigger organisations, and overseas organisations, very interested in doing that. And that is a very competitive environment, that one. And it will be interesting to see what the end results there are, at the end of the day.
- I don't think that a private company could come in and, without losing heavily, say, take over a certain area. Unless you pick the most profitable areas and neglect the others, I mean that would not be a sustainable way of doing business, and any political party who would even allow that to happen would in actual fact commit absolute suicide. So I don't think that competition is really a direct threat in many an area. However there are other areas where competition, you know, might be faced by the Corporation, if the corporation wants to still do some of the commercial work it is doing. And that is putting in the bid for the Pilbara areas and that sort of stuff, which they seem to be reasonably successful in obtaining some work there, and managing certain waterworks, if that is the word to use. Yeah, we have to make sure that that is delivered to those clients and very competitive levels, and I think that we're doing a reasonable job there.
- ... you do get people like Alinta and Western Power who are becoming, well, they're [unclear] visible competitors now, particularly Alinta. And they're out there doing things, you know, innovative type things, for customer service delivery, personalised customer service to large customers, and so there's competition there, because the customers then turn around and think well why isn't the Water Corp doing the same thing?
- Well, a year ago I would have said the globals, and they're still quite active and they still lobby governments quite hard. We've created solutions, particularly with respect to funding major infrastructures developments. I would think we'd still see a lot of activity in that area, but it's starting to... there's not as much of it, but it'll continue, and the two or three really dominant globals will still be there. And that's not necessarily a bad thing, because it has helped us to focus and lift our game in certain areas as well and it's also helping to keep prices down. It's one of the things that drives us to be lean and mean and as efficient as we can. We've just talked about, you know, cutting numbers and really competition is one of the drivers for that. The other smaller players in the WA water services market might pick up a few things here or there, but I don't see them becoming dominant. I think there's about nine players at the moment in the market...
- Simply a matter of access, you know, a new entrant wants to come in to provide water to Mandurah, or to Sorrento, what are they going to do? What's their competitive advantage-customer service? OK, maybe. Price? So they need to have access to our assets, just the logistical nightmare of it. And they'd have to have access to our pipes. But they have to get their own water source. So there'd be a desalination plant in Hillarys. It's just not the type of industry that lends itself to competition per se, at the moment. The real competition will be, in about 20 years' time or

so, you know, portable desalination plants in homes. That's for us, and for me, that's great. That's perfect sustainability, it's fantastic. Whether it will happen one day, I don't know. Collect the rainwater from your roof, put it into a tank, recycle it, drink it. You know, all your waste gets cycled back in, perfectly sustainable.

- We focused much more on our backyard. So we understand that what are the major areas when those companies do become more active. And they are here now. But until [unclear] we have a better appreciation of how they're mobilising themselves, and where they're lining up, to meet those competition. The other thing that we learnt, I think, out of the process which we perhaps had a bit more of a blind spot to, that our subdivision growth, I mean our biggest growth engine is new customers in new subdivisions who build houses etc, etc. So we'd probably taken that bit for granted, and saw our business growth more in the sexier end of the business rather than the new houses, new sewers, new water mains.

- I think it's only a question of time before, if a business development opportunity arises, say in Melbourne or in Sydney or in Queensland, where there's no risk, there's no capital involvement, but there's a return to the Corporation, that we wouldn't be doing our business, our board wouldn't be operating in a commercial way, if we didn't take advantage of it. You know, it would just be {expletive} business.

- In terms of competition, I think that the Water Corporation will become less vulnerable to competition, because I think that it's more clearly seen as having natural monopoly characteristics. I don't think the organisation will be particularly active in external markets. I think if anything they might be looking for some non-regulated solutions for customers in West Australia. But I think that will be fairly marginal. There's not the capital to fund it, and I think there's enough issues to occupiers without that. No mandate, really, for going outside the State.

Appendix 2.4.10 Customer expectations

(Refers to *Findings 6.6.13*)

<p>Context</p> <p><i>Data Interrogation</i></p> <p>What was the participant's viewpoint on customer expectations from the Water Corporation and how did/would it respond?</p> <p><i>Source Interview Question</i></p> <p>How do you envisage the Water Corporation responding over the next nine years to changes in competition and customer expectations?</p> <p><i>Intention</i></p> <p>To provide data for comparison with the same question that was asked in the pre-workshop interviews.</p>
<p>Code</p> <p><i>Customer expectations</i></p> <p>Perceptions of customer expectations and how they may change, and how the Corporation deals with its customers, its customer relationships and customer focus.</p> <p><i>Examples</i></p> <ul style="list-style-type: none">▪ We'll be called into question about our ability to plan. Because people just get indignant, even though we have spent half a billion dollars on the last five years developing new sources, you know. I mean, I think that's been pretty good, but people are going to say, why haven't done this, why haven't you got grey water happening in a big way for normal domestic, why haven't you done this that and the other? And so we're really under a major threat, and I really don't know whether the scenario planning recognised that strongly enough. It is mentioned in there, I've read it in the papers and stuff, but it's a major, major threat to us. (<i>Forward planning for resource</i>)▪ But I think our weakness is our ability to engage the public and involve them in those sorts of, you know, very strategic long term sort of things. (<i>Community participation</i>)▪ Say, for example, in Mandurah or Geraldton, where we continue to sewer more development, we're helping those towns to grow and thrive. The community should be loving us for being there and serving them They shouldn't be attacking us and asking for compensation. So I think that, you know, we're way behind in our sort of our consultative processes. I think we need to improve in that area. (<i>Community participation</i>)▪ I think throughout the scenario planning there was a great deal of information brought in, in terms of how society is changing, what the expectations of the community are, how the community expects to be involved in decision making, how the community or individuals expect to take greater control for their own water supply or energy supply, I guess the things that they do and the impacts that they have personally. And I think in the past this organisation didn't respect that change. (<i>Community participation</i>)▪ In the future, you know, there'll be a lot more focus on actually finding out what the customer wants, rather than our thoughts on what the customer wants. (<i>Community participation</i>)▪ I think we're also really improving the way that we deal with our customers and community. Our consultation and the way that we involve the community in our decision-making is much better than it has been previously. ... I think we're tending to consult much earlier, and I think we're also really listening to what the community and key stakeholders are saying, and we're paying attention to how that affects the decisions that we make. Which I think is a good outcome. (<i>Community participation</i>)▪ So, we are very customer oriented organisation before. We are still. 2010's reinforced it. I think scenario planning probably re-iterated that it was the right track. (<i>Community participation</i>)▪ I think the organisation needs to listen more to what the customers are saying. and not to say we can't afford to do things. Because customers want them done I don't believe it's our job to say, you know, we know what's best for you, which is what we've tended to do. (<i>Community participation</i>)▪ I mean, we've probably been reasonably good at listening to some of the large industrial customers and things of that nature. But it's probably more about the broad community, in terms of

them having some sort of influence over how we go about providing water services within WA. (*Community participation*)

- And also the Corporation, I think, is seriously looking at water quality and effective odour, on people's comfort and social surroundings, again, they're not directly rising out of the scenario planning, but I think genuine regard for customers' real needs, as distinct from their wants, has probably become a stronger focus if anything. (*Expectations of water quality*)

- So water quality has really been a planning issue number one, anyway, certainly at a business unit level, and progressively higher profile corporately. And I think it was up there in lights, number one or whatever, leading into the planning. So, again, I'd see that the scenario planning reinforced it. I don't think it... I can't recall the planning focussing too much on that issue, or contributing a lot on it. But it certainly survived through the process, and came out pretty strongly in the 2010 framework. And with the regulators increasing standards, with the droughts bringing in new water quality challenges in the last two years, it has all combined to escalate the issue very substantially. (*Expectations of water quality*)

- ...I mean, to me that was a major breakthrough: that there was a recognition that, you know, that we couldn't continue on the way that we had been, and basically fobbing people off, and telling them that it's safe to drink; even though you can't drink it, it's safe to drink, so stop complaining. (*Expectations of water quality*)

- I think that the Water Corporation has to grow with the customer expectations. And has to prepare itself for those customer expectations, which will be packed higher and higher and higher, that will definitely not go lower. (*Increasing demands*)

Appendix 2.5 Strategic Intent and Implementation

(Refers to *Findings 6.7*)

Context

Data Interrogation

What were the factors that affected the implementation of the outcomes of scenario planning and the Company One 2010 process?

Source Interview Question

N/A

Intention

N/A

Code

Changemaker teams

The effects of the Changemaker teams on the change process

Examples

- The three Changemaker teams were challenge bureaucracy, empowerment and performance management.
- Eighteen or twenty people, or how many it was, spent six weeks of their lives doing two jobs, came up with good outcomes that were never really enacted. I was personally a bit disappointed by that, by that process. I think it was, it was a negative, it was negative result across the organisation. I think all of those people have made. . . many of those people have made comments to me since then that it was just a load of garbage. And, you know, what sort of organisation gets already busy people and asks them to take on more work, and then does nothing with it.
- I think there was a high expectation on the part of team members, and others around them, and around the organisation, that this would bring about some breakthroughs. The outcome has been far less than that.
- . . . if you get these people on board and you ask them to give you recommendations, then you really need to act on them. And they have {expletive for greatly disappointed} a lot of people by just putting that stuff on the shelf. A lot of nice things, a lot of nice stuff happened, but the hard stuff all got left on the shelf.
- I think that's the problem when you do that sort of thing, you get people involved like that, you create an expectation that what they're doing is going to make a difference. And if it doesn't, and it's not taken seriously, you would have been better not doing it in the first place.
- And they took all these motivated people, put them through this process, and now, for a large part, we're somewhat demotivated, because nothing's happened. . . . So I guess my experience, apart from the first phone interview, which I can't really comment on what sort of happened with that information, is that, my input has been useless. It hasn't really achieved anything. Which is very demotivating. And it just seems like such a waste.
- My understanding was they (the recommendations) were allocated to general managers to drive and pursue and follow through. And most have been allowed to wither on the vine. That's not only frustrating, it's probably, you know, disempowering, and creates dysfunction for the future as people are encouraged and invited to be part of change initiatives that they were. . . why would I bother? So that's a bit frustrating.
- . . .they (the managers) thought they (the recommendations) were good. It's just that they didn't do anything with them. There's a big difference between thinking something's good and actually implementing it. And to be fair, if you look at what happened after that, I mean we're in the middle of a drought year, we'd just had a change of government, there were some very significant impacts on the organisation at that time. We then launched into a cost reduction initiative that drew an enormous amount of energy. So there may well be explanations for it, but I'm viewing it from purely

a selfish point of view. If I put a lot of energy into something, I expect to at least see, in a ten-month period, some outcome from it.

- Substantial. They presented to the general managers, in the first instance, and the M/D, and then had a block of time, a full afternoon, with the M/D, where he talked through his response and his reaction to the recommendations. And they also had subsequent de-briefs with the Company One 2010 team. but I don't think they necessarily accepted the reasons why. But, no, they did get a fairly thorough de-brief, fairly substantial feedback on the work that they'd done. And, certainly, there was recognition for the amount of effort. But the greatest recognition for a group of that sort is to see their recommendations driven through, and in the main that hasn't happened. I mean, probably, I would suggest that less than ten percent of the possible effect has been realised.
- The managing director met with our individual change maker groups personally. And we weren't happy with the feedback that he gave us So he was going to go away and come back. And he's never come back. And that was sort of Christmas last year. So there's certainly a feeling of despondency, because we put a fair bit of effort into these things.
- They made their recommendations, and they were presented. And I think it needed a driver's skill to make sure that they were being successful or they were being resourced, or they were having the ability to make changes and make things happen. I think there should have been an ongoing support.
- (The managing director) was looking for more, like, tangible, you know ... 80/20 - 80 percent quick fixes, to get some momentum happening and show people what's possible, and whatever, in the organisation, and about 20 percent institutional. They (one of the Changemaker teams) sort of went for the other, and it was rejected.
- I think that's a great way of people resisting change - oh let's get a committee together, let's develop a process about that, let's get. . . you know, you might as well just call it dead before you even start. That's what happened with the change-maker teams, they became bureaucratized. One, I felt that in at least one, and probably two instances, the change-maker teams deliberately bit off a little bit more than they could realistically chew. And, if you look at the outputs and the recommendations, it's several pages long, rather than focussing in on the critical few that would make the significant difference.
- I think ... in more than a couple of instances, the recommendations were quite challenging, for the managing director, in particular, to accept. One of the team's recommendations, the challenging bureaucracy change-maker team, recommended the establishment of, I think it was called, Business Improvement Group, BIG, as a satellite entity, which would go into business units, and shake things about, and break down bureaucratic process, create short-circuits, focus on efficiency, and do away with non-value adding processes. And that, sort of, if you like, mirrored a similar intervention in Western Power. The idea didn't germinate with the managing director in particular. And I think, I mean, there are good reasons for that.

Code

Managerial follow-through

Perceptions of the role and involvement of management in the Implementation phase of the change initiative.

Examples

- So firstly, we participated at the division level to translating the 2010 vision into a relevant division document, or documentation, to make it more relevant to our division and our regions. So, certainly myself, and some others in the region contributed to the products that were produced at the division level. Which were quite useful, because they really sort of brought it back to exactly our part of the business. And then, we've then since translated that into the regional context, and our regional business plan, and planning framework, and planning approach, 100 percent completely in line with the new model. So it's fully embraced, and it means all of our initiatives, or our strategies, are all combined with the framework, and they're tested against the objectives of the framework, and prioritisation occurs around that. Very much we've moved... we're very, very top down.
- ... we've been able to use the model and it's worked OK for us. But I lead our branches in doing their planning with that, and in doing that I know that they were struggling at first with that concept. But we've passed the point of struggling, but we're not entirely all the way there.
- The decision was made that the implementation of a lot of those strategies or decisions should be the responsibility of the people in the organisation who were responsible for those areas. And whether or not that was the best decision is, you know, remains to be seen. some of the things that

we talked about, discussed, were agreed areas for change - and I think agreed at the very senior levels - certainly have not been carried out by branch managers and people given that responsibility further in the organisation. I think that's been a failing of the whole process, is that has been not enough follow-through.

- Managers, due to a whole range of reasons, they'd just been through the cost reduction initiative, there's certainly significant impacts in the business due to the drought and the challenges that we were facing. The longer term view was sort of dropping off the agenda a bit, and people were more focussing on the 2002 and 2003 priorities. ... I think you're relying on a range of managers to communicate the message, and they're going to have varying skills in how they communicate that. And some managers may or may not believe it themselves. There hasn't been sufficient analysis or feedback, you know, objective feedback, on whether that message is instilled.

- I guess what everyone keeps looking for, and maybe it's not that easy to achieve, is, you know, more clarity in, okay, if this is a scenario, what does it actually mean? How do you translate it into something that I can talk to the people who work for me about, and say, this is what it means for the Corporation, and more importantly, this is what it means for us ... I mean, the Company 2010 says, you know, this is what we're trying to achieve, and, when we get there, this is sort of what its look like. I think it's difficult to translate that down through the organisation clearly and accurately, so everyone understands what it's working towards, you know.

- ... at the moment we've only rolled it down to that team leader level, with the idea that once they've got a level of comfort and feel empowered with it, they'll then have that discussion in a team environment By which stage, it'll be in quite a different language.

- Again one of the things that... there is a very strong culture of independence in the Water Corporation. And civil disobedience is tolerated, to an extent that is worrying, in my view. So that people can, even in senior line management positions, can say, well, this is what's come out of this exercise, basically, I think it's a crock. ... And so I think a little bit of the message was occasionally white-anted, as it progressed across the organisation

- With this stuff, it struck me that, once it got back in to being allocated to line managers to do and deliver, there was almost a sigh of relief that, well, you know, we're back in control again, the pressure's off, thank God the buggers have gone away and all those silly {expletive} ideas and the workshops that we had to think and. . .

- These things (the sustainability and triple bottom line focus) work well, because, when I go for a review with my boss he looks for them. it won't have any effect at all unless you are being measured by them in some way, and rewarded.... And that's happening, yeah. And it flows right the way down. So when I ask for my monthly report, I ask for an environmental assessment, and so forth. So that works very well, and I think that's a big change. And I think it's flowing on to the community too. People are actually seeing that we're doing those sort of things. ...

Code

Participation

Perceptions of the effect of participating in scenario planning and Company One 2010 had on the implementation of the new purpose and directions.

Examples

- And I think the main thing that the 2010, and the scenario planning did, is it brought the Corporation together to pursue a vision of 2010.

- ...the value of scenario planning was that it actually got a hell of a lot of people around the place, including key people, thinking ahead, thinking of these different possibilities, and casting their strategies accordingly. And actually, when we came up with strategies, they would all understand it. It didn't have to be explained to anyone. They all had buy-in.

- ...it was important, therefore, to get a whole bunch of people involved systematically to come up with the definition, because we'd come up with a better one that way. And once we'd come up with it, it was really important for those people to own it, by the time it had been formulated.

- And by getting a wide range of key staff from an organisation involved in planning, and getting them in workshops, and work-shopping scenarios, and comparing notes, and getting everyone thinking the same way, is hugely powerful. And, from a management point of view, I think any planning exercise which achieves that is very, very valuable. And then, by everybody having worked together like that, and yielded a planning product which everyone can embrace and get on with, puts you in a much better position to respond to a crisis than if you're a bit disaggregated, or your planning efforts have been pretty scrappy, and maybe it was an old planning framework and out of

date.

- So, in the end of the day, I was happy that everyone had thought about it, and that I'd been involved in the process, and I thought it was a thorough sort of process.... I mean, as I said, there were some of the outcomes feeling a little bit, not let down, but thinking that's not quite what I had in mind, but feeling still, as I had been involved in it, I didn't feel ripped off at all. So a slight negative, but not to outweigh the positive of feeling that I had been involved, and it was a reasonable outcome.
- I think there was, generally in the organisation there was uncertainty about what all this scenario planning was about. And I don't necessarily think everybody in the business had to fully understand it. It was a process that we went through to explore, sort of, opportunities and potentials, and to identify through that some possible outcomes and some strategies that we might use to achieve those outcomes.
- ...how do you get the participation? You only get that if you get feedback, and you listen. Okay, you've got to listen. If you don't listen, then you're not going to get any feedback. And participation by people at lower levels in that kind of exercise has got to be done genuinely. It's not even being done genuinely at our level.
- Yeah I guess there was the usual things whenever you're targeting or whenever you're selecting a group of people to be involved in stuff, inevitably by the process of selection, not everyone is involved, so there were a few people whose nose went out of joint and they weren't selected in one of the groups.

Code

Change leadership

Perceptions of the effect the central organising group had on the change process.

Examples

- ...it was good having them as a team working on it. It gave the whole thing credibility. And they were senior people, and good people, and good communicators and all that ... And when they sort of disbanded or whatever, I guess the whole concept wasn't so widely. . . . it would have been probably good had those things been really bedded down, and a good package of activities been established, with short term initiatives, longer term initiatives, who would be responsible, who would oversee it, and all that sort of stuff, done before the team was split up. Because I think what happened was we ended up with a number of ad-hoc type actions, quick wins, which the managing director focused on, with the effect of starting to build momentum. And I think that had a place, but because that momentum was never really capitalised on, because the well thought out plan, initiatives and actions wasn't there.
- So there's no one really pushing it forward. And it's something that happens in the Corporation I see, too, is that - often I see it even in meetings - and things happen, and reports are produced, and PowerPoint presentations are made, and it's almost like that's an end in itself. And there's not enough effort goes into actually implementing things. So that is a real shame, and I think what it really needs now is probably a champion for 2010, and probably several champions of key initiatives, particularly around the change maker teams, perhaps.
- It strikes me that you don't end up with a champion, or with somebody pursuing it with passion, or taking some time - I guess it would be best if it was the managing director. Yeah, then these kind of things are going to wither away, you know, because I guess just the pressures of day-to-day stuff become so great.

Code

Persistence

Perceptions of the importance of persistence as a factor in implementing change.

Examples

- With this stuff, it struck me that, once it got back in to being allocated to line managers to do and deliver, there was almost a sigh of relief that, well, you know, we're back in control again, the pressure's off, thank God the buggers have gone away and all those silly {expletive} ideas and the workshops that we had to think and. . . .
- ... the fact that we're now having this interview and I'm struggling to actually remember much about it, you know, possibly means that it would be perceived by some people, again, as just being another exercise we went through in 2000 or 2001.
- I think there should have been an ongoing support. I think they (the Company One 2010 team) were disbanded a bit too quickly after what had been quite a significant change. I think the things

like the change-maker teams, and Company One 2010 in general, needed the ongoing resource to keep the fires burning and bed it down for at least twelve months.

- Well, what I see has happened with 2010 is that, you know, there's a huge amount of ra-ra and a lot of focus, and then it just seemed to die. And it died because the people were redirected, and there was no-one to carry it forward. The torch was dropped. I don't know where it's lying at the moment, but no-one's picking it up and running with it.
- There's no capacity to follow through, and do the real hard yards which will make the changes. And I guess that's the biggest thing I see, that there's absolutely no capacity to follow through with anything to the end.
- So you're really simply embracing a framework and applying it. And, as much as possible, the priorities, and where the resources are to go, is almost dictated top down. Obviously, through the year, we're influencing on many, many fronts as to what the priorities ought to be, but, at the end of the day, the corporate framework and planning framework is such that there is only so much money to go round, and so much energy available, and the priorities are determined there, and that's what we embrace.
- We had a workshop on people and culture, and we talked about shift statements. We'd have shift from centralised decision-making, for example, to decentralised, and we had scales where we said, well where are we now, where do we want to be, and what are we going to have to do, and they were all involved in it and so on and so forth. But it's very hard to then follow-up in the absence of hard targets being developed, do you know what I mean?

Code

Decision-making

Perceptions of how the decisions were made about the new focus and direction of the organisation, including comments on not understanding the decision making process.

Examples

- ... it was relatively inclusive, the process about how we went through developing the scenarios, and the pros and cons of them all, and then there was some executive decisions essentially.
- one of the things that I would have liked to have seen is a much clearer line drawn between the input that occurred at interview focus group stage, and the output in terms of the four scenarios. It seemed to me that there was a lot that happened in between, and when I saw the scenarios come out, ... back to us in the focus group, I didn't see a sort of a linear straight line between input and output.
- ... towards the end of the scenario planning process, after the scenarios themselves had been completed started to crack the whip and say, right it's time to get out the indelible pencil on the white board. These are the ones we're not going to rub off. And so we actually started making decisions. And it became quite obvious by that time, especially with the benefit of all the scenario planning thinking, that there were certain things that we shouldn't do any more. And that there were certain things that we weren't giving enough attention to, and we better {expletive} well focus on them. And so that's what we wrote indelibly on the white board. So that became the new direction.
- And the divisional planners, the people who do the strategic management in this organisation were never, never given that new framework to critique, to provide feed back on. It was just, we declare this to be the way. Now, so when it was just pushed down from above, it was, oh well, that's nice, actually, but it doesn't align with our business. ... I was at the point of thinking, what's the purpose of it? Was it just so we could feel that were involved we have ownership? But actually, I don't see any of what was agreed by this group in that. So who made the decision over there? It's the big black box, the whole thing's a big black box for me.

Code

Strategic conversation

Dialogue and conversations in the organisation about strategy and issues concerning the organisation.

Examples

- And so therefore you get very disparate views within the organisation, and I guess that scenario planning is a very good mechanism of forcing those sorts of issues to be thought through, and at the high-level corporate position and direction, at the very least being developed. And also just having sufficient time with the senior executives, because that's the other thing that's in very short supply.

- Yes, the workshop (looking at scenario implications) was just a good way for us, a group of people to really brainstorm. And also network between and managers and young people.
- I think a very important step following the 2010 process was the workshops that were run on each particular area of action to capture the key priorities moving forward. My branch, we did a lot of work on making sure that we could influence at those workshops to get some key issues not falling off the agenda ... you had to make sure, that from your professional perspective, that things that were strategically important were argued and debated, and didn't drop off because someone else had viewed something else is more important.
- They were very structured, these workshops, as I remember it, and you were almost guided in a direction by the group leaders the process was good, I think, but ... whether the considerations that went into those outcomes were really, truly open, I perhaps think they were a bit stiff and stunted. only the strong vocal personalities end up being the spokespersons for the groups (laughs).
- We have regular meetings every week, a stand up meeting every week, for communication purposes. We have quarterly branch meetings, where we go off-site and actually go to a facility, one of the Water Corp facilities, and talk about the strategic direction of the branch and other issues I think they were further reaffirmed by, you know, the whole process. I would have done them anyway.
- Some people have a similar view to me; yes, I know, talking in the corridor, that some people sort of said, yeah, well it would have been nice if we had have gone a bit further, and a few people had come to the organisation, some of the undergraduates, thinking that that's the sort of place that they're going to be in.

Findings 2.6 Barriers to implementation

(Refers to *Discussion 7.17*)

Context

Data Interrogation

What was the effect of Company One 2010 on the response to the drought and what was the effect of the drought on the implementation of Company One 2010?

Source Interview Question

N/A. However, participants were asked when the interviewer felt it was appropriate in the course of the discussion about effect they thought scenario planning had had on the drought response.

Intention

N/A

Code

Drought

The effect of Company One 2010 on the response to the drought and the effect of the drought on the implementation of Company One 2010.

Examples

- Managers, due to a whole range of reasons, they'd just been through the cost reduction initiative, there's certainly significant impacts in the business due to the drought and the challenges that we were facing. The longer term view was sort of dropping off the agenda a bit, and people were more focussing on the 2002 and 2003 priorities. With everything else on their plate that's come from left field, because of cost reduction initiative and drought etc. So I think there was a fair amount of stress within the Corporation, and people were struggling to achieve their shorter term outcomes. And some managers weren't focussing, I believe, on the longer term. (*Effect of drought on 2010*)
- I think when you see the individual behaviour of, the group behaviour of, branches like infrastructure planning.... in the past, I think we would have seen big pipes for ever, we're the authority, we know what to do, go away and leave us alone. I think even those groups recognised the value of the community's input and so on. And, I think, that's, you know, that's put in a direct result. (*Effect of 2010 on drought response*)
- I think culturally, it has helped with the drought response, quite frankly, but it's a bit hard to put my finger on exactly how. I guess how it's helped is that people went through the discipline of effectively doing it as a trial run, and then we had a real event. And so I think the organisation has actually responded very well to the drought, and there's been, I guess, good respect for people's inputs from all angles, and the scenario planning environment sort of sets that up. (*Effect of 2010 on drought response*)
- Well, as I say, the way of the response, the outcomes, you know. . we expressed it in different terms. We talked about maintaining trust and credibility and those things, whereas under the old thing, we would have said, it's, you know, be supportive of your stakeholders we've got to address. Just really changed the way you talked about it, not changing any action. (*Effect of 2010 on drought response*)
- So I think the understanding of the role of the government in what we do, how we're going to grow the business, and what's important, I think, were some of the outcomes, certainly from the scenario planning, that have been in people's minds dealing with these issues, yeah. But it varied. (*Effect of 2010 on drought response*)
- It probably had created though, as I said, as an exercise, it had gone through and made a number of networks, and a number of internal sort of improvements in communication that were beneficial. I mean in this situation it was all about finding key people to do the right job at the right time. And so in that regard, it did have some benefit, I'm sure. (*Effect of 2010 on drought response*)
- I think, well, I think core business is a big part of the focus, I think, building relationships with others and partnerships with others, and I think that has changed a lot in terms of partnerships with

regulators, partnerships with the community, partnerships with, you know, NGOs and just another community interests. So I think that has changed significantly. I think the water crisis has helped that to come about, but I think 2010 made us more ready for that than we would have been otherwise. (*Effect of 2010 on drought response*)

- ... we were focusing back on the core business. Now, at the end of the day, that was probably very important, as a result of running into this drought, that we were actually positioned well to handle it. ... It would have been somewhat more difficult, because you would have had an organisation, I mean, had we been running, continue to run down the track we were, we were putting quite significant effort both in actual resources, but more so in senior executive focused resource, if you like, into these external activities. And to have to take that senior executive focus resource back to really focus on a home issue could have ended up the worst of all kinds of outcomes. (*Effect of 2010 on drought response*)

- Deliberately, the scenario planning exercise took a broad cross-sectional swathe, diagonal swathe, of the organisation, to talk to, and consult with, and to get views from. And probably, it was the first time, really, that the capacity, capability, intelligence of our Young Turks, to use Jim Gill's words, was really put to the test, and brought to the fore. ... And their views attracted attention, and, you know, recognition for their quality, a depth, and so and so forth. Now, because of that, I think that, when project groups, task forces were established, to work on the drought, again there was a deliberate 'pulling in' of our graduate - it's a broad tag - talent to help populate those working groups. So I think that's been a positive flow-on. ... I think also that ... 2010 helped to just embed the principle of cross-functionalism, and that has certainly been pursued further during the water shortage crisis. (*Effect of 2010 on drought response*)

- I think there were some things which I still find perplexing, in terms of how we responded to the drought thing. I guess the first thing was, one of the big issues which went round and round and round in 2010 was the use of multi-disciplinary teams, the establishment of project teams to oversee projects of key importance and so on and so forth, the use of younger people in the organisation on those projects. ... But the thing that I found amazing was that, we'd just been through this big exercise, you know, how we should respond to these sort of out-of-the-box type scenarios and out-of-the-ordinary type issues, and yet we didn't do it. We established six different project teams, we had people running this bit and that bit, nothing was coordinated, and it really did take five or six months before any of that changed. Which I personally think was disappointing, because that was a ... and certainly we didn't get a good cross-discipline, multidisciplinary sort of approach initially. And it took. ... it basically took the community yelling at us before we did it. And the writing was on the wall in September. We had the opportunity to be proactive and establish that sort of a team, and really front-foot the whole issue, and we didn't do it. And I guess that was. . . to me that was the first sign that you know, perhaps we didn't learn. But then, I guess, I think the learnings were there. We just didn't have the courage to implement them. And I think that's perhaps an issue in many things that this organisation does. It quite often knows what it needs to do, but doesn't have the courage to do it before it really is forced to do it, which is a shame. (*Effect of 2010 on drought response*)

- So the approach to drought, I thought we tackled in a way we'd normally tackle incidents, which is pretty methodical and clinical. To the extent that you can say that mimicked or mirrored scenario planning principles and processes, I can't comment. (*Effect of 2010 on drought response*)

- ... whether we would have done anything differently if we hadn't have been through the scenario planning process. I'm not convinced of that, that there was any real net change in our behaviour. (*Effect of 2010 on drought response*)

- ... because of the water restrictions, the Corporation's income was down about \$40 million. Fortunately, we were not required to pay the full pre-negotiated dividend. But as a direct result of that reduction in income last financial year, we've got a \$12 million and 120 people budget cut this year (*Cost reduction*).

Code

Cynicism

Comments regarding cynicism in the organisation.

- People were very... there's a lot of... there's a great deal of cynicism about these kind of planning processes, a huge amount of cynicism, especially with people who have been there before, because they see these things as not really changing the organisation much. So they get very, very sceptical. (*Previous experience with ineffective change initiatives*)

- I've been around too long to have too many in the way of expectations. (*Previous experience*)

with ineffective change initiatives)

- And we've actually sort of, we've got this dichotomy, and we've got those that will toe the corporate line, you know, absolutely {expletive} strongly, and not say a bad thing about the outcomes, and then you've got the other mob who is as cynical as hell. (*Cynical personal nature*)
- ... one of the things that was very different about that, was that in the centre of the diagram is people and culture, you know, and a recognition that none of the other things, none of the other areas for action, actually can get progressed without people. Whilst we have as one of our core values, people are our greatest strengths, I think there was a little bit of cynicism - and I think it's still there in part - around the organisation, that it's all very well mouthing the rhetoric, but what does that mean in practice for us? (*Change may affect perceived self-interest*)
- So I guess there were a few cynics around saying, you know, why are you spending all this {expletive} time doing this stuff, what are we going to get out of it at the end of the day? So it was a bit of that. (*Change may affect perceived self-interest*)
- ... there will be some people who will say, ah well, there's been some good come out of it, but I think the shock to the culture, and the cynicism that has come about as a result of that, has far outweighed any benefits that might come out of thinking about these scenarios. (*Breach of psychological contract*)
- ... some of the people were, from my perspective, that weren't involved were perhaps a bit cynical about it. The people who were involved, I think, largely came away with a better understanding of what all the other parts of the business were, you know, what was motivating them all, and what a lot of the priorities were of the whole business. (*Perception of insufficient involvement in the process*)
- I think there's a little bit of a BOHICA mentality around the place. (Q = A what, sorry?) Bend over here it comes again. (Laughs). Which is.... I think, there have been waves of apparent change, and certainly change in rhetoric, that have washed over large parts of the organisation, who have sort of kept their heads down below the parapet, and seen it pass and float back again. ... if you keep your head down, and you don't get noticed, then you'll survive, you'll just keep on plodding, and you'll gradually over the years incrementally rise up the ranks until you hit your natural ceilings. And that's fine, we'll retire on the job, in sort of fifteen years ... (*BOHICA mentality*)
- I guess there was a resistance to 2010 ... I was out there fired up and enthusiastic. But the sort of responses I was getting ... was, it's a very much a bend over here it comes again. It's called something different, but it's the same old thing. And there is that general apathy, because it seems like every couple of years there's a new thing, and it's called something different. (*BOHICA mentality*) (*Cynicism re change processes*)
- Ah - I guess it's easy to be cynical about something when you're sat in a room, and even some people asked for their opinions, and then sort of disappear, and, you know, maybe hundreds of other people are asked the same questions. And by the time it finally comes out as a result ... they look nothing like, you know, they look like high level words and phrases, which have, you know, no. ... when the people read that who've had their input, and had their say, they feel like they hadn't been heard. ... Because the actual tangibles that come out of it are so murky and conceptual that, you know, your points haven't been heard, or actually nothing's been done about them. (*Lack of recognition of contribution*)
- Well there were all these workshops held and all this bottom-up input, right, and I went to a series of them. And it was, like, well, we've taken all that into consideration, and this is what's been decided. And what was decided reflected nothing from the input provided. So I used to, I was at the point of thinking, what's the purpose of it? Was it just so we could feel that were involved we have ownership? But actually, I don't see any of what was agreed by this group in that. (*Lack of recognition of contribution*)
- Q = Were there any effects out of scenario planning that you did not expect? A = The degree of cynicism that came out of it. It's very sad. I think the organisation, in terms of positive culture attitude, in my view, has I see gone backwards. Because you take 20 people that want to kick arse, and you put them in together for three months, and then you do {expletive} all about it at the end of it, it's not good. (*Expectations raised*) (*Lack of change*)
- I think that's the problem when you do that sort of thing, you get people involved like that, you create an expectation that what they're doing is going to make a difference. And if it doesn't, and it's not taken seriously, you would have been better not doing it in the first place.

(Expectations raised)

- I guess the issue at the end of the day is that, when you build up the process like this to be significant and guiding the Corporation for the next ten years, you build up expectations about clarity of purpose, where we're going to be, how we're going to get there. ... So I think, you know, the sort of expectations that it would lead to a significant change in the way we're doing things may have been there, but, in reality, whilst there were some changes which were seen as significant, depending where you sat, and who you were working for, and what you were doing, I think, over all, I don't think it's at the front of people's mind that Company 2010 is really driving us towards a specific goal, and that it's in any way significantly different than what we had before *(Expectations raised) (Lack of change)*
- I don't know, I mean, everything is now changed according to this new strategic framework, so that's a positive. But, I'm not sure. I don't know. I don't sort of . . . I'm not sure whether the senior managers are . . . I don't know what they thought about the process, and we don't talk about it in team meetings or anything like that. [Memo: reluctance and uncertainty here]. *(Lack of change)*
- We're all work-shopped out. We've met too much. So I wonder my cynical observations on some of these things aren't shared more broadly. And people are thinking, well, what really did come out of all those meetings? *(Lack of change) (Cynicism re change processes)*
- Disillusionment for the ones that're wanting, who really do want to change things, and, ah, here we go again, from the people that have been here for 20 years and been proved to be right again. *(Disillusionment)*
- I've seen the same thing happen before ... and all of those things fail in the implementation. ... they would get nowhere, and soon people would become disillusioned. *(Disillusionment)*
- I mean, we've had innumerable corporate initiatives, to achieve this and achieve that. Most of them wither and die, which, I guess, makes people, to some extent, a bit sort of sceptical and cynical. So I guess this one's come and gone. *(Cynicism re change processes)*
- Oh, well, I mean, these things come in {expletive} cycles. *(Cynicism re change processes)*
- There are groups of people who want to or are used to embracing change in culture and behaviour every time the wind changes, versus other groups of people who are perhaps more set in their ways, more cynical, and sort of think this is a fad [unclear] which will pass us by. *(Change initiatives as a fad) (Cynicism re change processes)*
- There's a lot of, what's the word, change fatigue, and initiative fatigue, in this organisation... *(Cynicism re change processes)*
- ... we've had innumerable corporate initiatives, to achieve this and achieve that. Most of them wither and die, which, I guess, makes people, to some extent, a bit sort of sceptical and cynical. So I guess this one's come and gone. *(Cynicism re change processes)*
- When the process was happening, because they were young and new to the organisation, I guess a lot of those people hadn't become cynical of 'well, here's another one of these things to do'. *(Cynicism re change processes)*
- Oh, I'm a bit cynical about that (laughs). You know, changes, change for change sake from senior management's perspective, it's always good to be seen to be, you know, don't people equate change with leadership? (laughs). If you're not changing, you know, what are you doing up there? (Laughs). So why? Well, that's an extreme cynical view. *(Cynicism re change processes)*
- One thing you won't be aware of, that's something that we did in '96, we went out on the basis of let's do a complete personnel survey of our people. And it was done professionally ... And we got an amazing {expletive} response from people, in terms of that kind of survey, you know, a response we'd never had before. It all came back, and it said senior management are a bunch of wankers. ... But there was a lot of good stuff in there as well. So how do you think we dealt with it? Now, the way we dealt with it was, the managing director said, oh, we've asked all the wrong questions. ... This isn't going anywhere. Now imagine the cynicism and scepticism that generates in the {expletive} field. ... It was a terrible {expletive} thing to do. Because the answers weren't what.. But instead of getting hold of that and saying, right, that's what they're saying now. What do we need to do to address that, to deal with that? And let's do another survey in two years to see if we've improved. Which is what you would do. That wasn't the action was taken. So in that environment, our people don't think much of senior management. So when they're wanking away on scenario planning, which is how they see it, they're not the slightest bit interested. They'll sit back and wait, So a lot of the time when this was happening,

was. . I mean the various naming of the scenarios, and the format of the communications and so on, I think there was a fair degree of scepticism throughout the organisation. What are those buggers up to now? (*Cynicism re change processes*)

- I honestly think the organisation has a good record in terms of how it deals with its people. It therefore engenders and fosters a high degree of loyalty. It doesn't mean to say there isn't a healthy dose of cynicism floating round from place to place. But we do have a fairly loyal workforce. You only have to look at how many people have been with us for a long period of time have been with us for a long period of time to see that. (*Cynicism re organisation*)
- I guess it fed some of the cynicism around the place. . . . it was seen as a time wasting and money wasting exercise to reached conclusions which appeared to be fairly obvious before you started. (*Cynicism re specific change initiative*)
- Oh people are a bit cynical. Everybody looks at that [unclear] (points at poster) the triangle and bubbles, and it's a bit of a smirk and a laugh. (*Cynicism re specific change initiative*)
- My understanding was they were allocated to general managers to drive and pursue and follow through. And most have been allowed to wither on the vine. That's not only frustrating, it's probably, you know, disempowering, and creates dysfunction for the future as people are encouraged and invited to be part of change initiatives that they were. . . why would I bother? So that's a bit frustrating. (*Withdrawal of interest*)
- And people watch this stuff go by. It's a fact. And it doesn't change, really, the fundamental way they look at things. And when the guys that are the shakers and movers - because two of the people on that change-maker team were kick-arse, let's get something done. And we meet occasionally, and go bah, you know. That's not good, it's very bad, because we end up like the guys waiting their super. I mean, I won't, but I might have to leave this organisation to not get like that. (*Time-serving "why bother" attitudes*)
- I think what I see often in organisations, and I've see it here, is that the man at the top will come out with an idea, and say this is it, and this is the vision. And everyone else will say 'isn't it great, isn't it grand', even if they don't think so, because it can be career limiting to say otherwise. And so people will go along with it, but not in their hearts and minds. And that's fine, as long as there is a focus on it. A soon as the focus is taken away, people will get back to business as usual. (*Lip service to change*)
- Which is, you know, probably why I'm not so interested in being on this [working party], because it's getting, what's the point, quite frankly. (*Reluctance to participate in further initiatives*)
- Now, so when it was just pushed down from above, it was, oh well, that's nice, actually, but it doesn't align with our business. So, cool, we'll manage that; but we'll have to still keep managing our business processes, as we always have done, from year dot. The business processes fit into those five areas quite well. (*Accommodation of new vision into existing work practice*)
- Q = It doesn't sound like you're cynical about the change of focus, because it doesn't seem to have made much difference (laughs). A = Yeah, that's right. As I say, it sort of agrees with my philosophy anyway, so that's fine. (*Minimal or no change in work practice*)

Notes

Barriers to change were emergent concepts. They were not part of the original NVivo analysis, but emerged during Analysis Part Two as relational concepts. Most appear in this Appendix in the codes where they first emerged, which are the references used in 7 Discussion.

Appendix 3 Theoretical concepts

The theoretical concepts that were listed in 7 *Discussion* with the resolution of each research question are categorised here.

Objectives and purpose

- The purpose of change initiatives is to break self reinforcing feedback loops of organisational orthodoxies (*RQ1*).
- The focal issue of a scenario planning project need not be the same as its objectives or purpose (*RQ1*).

Role

- Scenario planning was perceived as an instrument rather than an agent of change (*RQ1*).
- Scenario planning was perceived both as structure for initiating change and as a framework to accommodate the implementation of and gain acceptance for change (*RQ1*).
- Scenario Thinking was a vehicle for recognising important driving forces and provided a framework in which strategy could be developed (*RQ2*).
- Scenario planning was seen as a discrete one-off process, to open up and make sense of issues, but was not used for on-going adaptive learning (*RQ3*).
- Scenario planning was perceived as an input to the rest of the change initiative, setting a framework for the strategic conversation. Mindset changes that occurred in the course of scenario planning tended to be ephemeral (*RQ3*).

Effect

- The effect of the scenarios was, for some participants, to reinforce extant beliefs or mind-sets rather than change them (*RQ1*).
- Most learning outcomes from Scenario Thinking were ephemeral and did not penetrate beyond the conceptual or applicable to the actionable level. Although the scenario planning project was perceived to have changed some mindsets, this appeared to be rare and was not translated into behavioural changes at a personal level in the long term (*RQ1*).
- Of the few learning outcomes from Scenario Thinking, the most clearly identified was the change in attitude to competition, which had a significant

effect on the strategy of the organisation. Another was the acceptance of the new purpose and direction, which was perceived to be to some extent due to the scenario planning framework (*RQ1*).

- The power of the negative normative can be significant. One enduring effect was its influence on decision-making for some participants. In portraying a world they wished to avoid, the scenarios were seen to have supplied a sufficient mental jolt to effect some change of mental model (*RQ1*).
- There was a coherence in the outcomes of the two analyses, with the comparison of perspectives before and after scenario planning mostly in agreement with participants' accounts of the change (*RQ4*).
- Changes of mindset did not emerge from scenario planning and Company One 2010 except in rare instances (*RQ4*).

Acceptance and implementation

- Aspects of the entrenched culture (bureaucratic and engineering-based) were perceived as barriers to change (*cf. 7.4.9 Summary of specific change areas*).
- Rather than profound cultural change, a change in organisational direction may be characterised by individuals paying lip service to the change and selectively using the outcomes for their own purposes (*RQ1*).
- Because the scenarios did not embrace the conceptual ecologies of participants and operatives, the internal organisational uncertainties that affected the implementation of change were perpetuated (*RQ1*).
- Resistance to change tended to emerge subsequent to the Scenario Thinking phase (*RQ1*).
- Attendance at the scenario planning workshops enhanced understanding of the main outcome of the change initiative, the new purpose and direction (*RQ1n*).
- There appeared to be a lack of continuity between the entrenched culture and the proposed change (*RQ1*).
- The need to maintain identity through continuity and resonance with the cognitive ecologies of the operatives was recognised, as evidenced by the roll-out strategy (*RQ3*).

- Communication of the scenarios to operatives when they are used for one-off problem solving should only be undertaken if it will resonate with their cognitive ecologies and so assist with the implementation of change (RQ3).
- Three factors emerged during the Strategic Intent phase that were interpreted to have had a major influence on the acceptance of the change initiative outcomes: transparency of process; perceived affirmation of extant practices; and perceptions that contributions to the change process had been undervalued (RQ5).
- In the Implementation phase, additional factors emerged: commitment and communication skills for introducing the change; the importance of champions of change; perseverance; selective use of outcomes of individuals' own ends (RQ5).
- Barriers to change that emerged were the dominance of some personalities; entrenched dominant culture; structural barriers; external events (RQ5).
- Whether entrenched culture is perceived as a barrier can depend on the perspective adopted (in this case cultural or political) (RQ5).
- Underlying the organisational culture was widespread cynicism, resulting from previous experience with change initiatives, conflicting logics and perceived lack of involvement in the change process. Its consequence was resistance to change (RQ5).

Evaluation

- Evaluation of the effectiveness of scenario planning is necessarily subjective and interpretive (cf. 7.7.1 *Summary of adequacy of scenarios*). For some participants, the effects of scenario planning could not be distinguished from other influences that affected organisational change (RQ1).
- Clarity about purpose affects evaluation. Participants who were felt the scenario planning project had been less effective than it might have been tended to be people who were not clear about its objectives (RQ1).
- Whether change may be considered to have occurred may depend on perspective. From a cultural perspective, profound change was not considered to have become embedded as a consequence of Company One 2010. However, from a political perspective, a shift in influence from a group with an entrepreneurial outlook to a faction with a more

sustainability and service-oriented world view was discernable (*cf.* 7.5.3 *Affirmation* and 7.9.3 *Summary of objectives and outcomes*) . Change can seem to be resulting from a change of mindset when all that was occurring was a shift in dominance of one way of thinking over another. (*RQ1*).

- Evaluation of scenario planning may be at a methodological or at a strategic level (*RQ2*).
- Retrospective perceptions of the objectives of a change initiative may be affected by outcomes and events since (*cf.* 7.9.2.2 *Cultural change*), so that evaluation of the outcomes of scenario planning may not be against the original objectives (*RQ2*).

Appendix 4 Analysis Stage One Coding

Refer 5.3. Analysis Stage 1

4.1 Bucket node listings

- (1) /What is SP
- (2) /Reasons or objectives
- (2 1) /Reasons or objectives/Planning objectives
- (2 2) /Reasons or objectives/Why SP
- (3) /Changes
- (3 1) /Changes/Attitude to risk
- (3 2) /Changes/Business development
- (3 3) /Changes/Govt & regulators
- (3 4) /Changes/Focus
- (3 5) /Changes/Culture
- (3 6) /Changes/Leadership and structure
- (3 7) /Changes/Workforce issues
- (3 8) /Changes/Water management
- (3 9) /Changes/Technology
- (3 12) /Changes/Bureaucracy
- (3 13) /Changes/Trust & credibility
- (3 14) /Changes/Sustainability
- (4) /SPs part in planning
- (5) /Outcomes of SP
- (7) /Personal effects
- (8) /Competition
- (9) /Customer expectations
- (10) /Strengths and constraints
- (11) /Drought
- (12) /Pricing
- (13) /Lack of change
- (14) /Miscellaneous

These initial nodes were recoded through several iterations, as described in 5 *Research design*, until saturation, which was reached with 331 nodes coded. An example of the indicative coding appears on the next page.

4.2 Example of indicative coding

189 (5 6 3) /Outcomes of SP/Process/Cynicism

Description:

Cynical attitudes about planning processes and how they affected SP. Includes disillusion and apathy. Also includes scepticism.

190 (5 6 3 1) /Outcomes of SP/Process/Cynicism/Involvement

Description:

Comments about involvement or lack of in the process, with regard to cynicism

191 (5 6 3 2) /Outcomes of SP/Process/Cynicism/Disillusionment

Description:

Expectations and disillusionment leading to cynicism

192 (5 6 3 3) /Outcomes of SP/Process/Cynicism/Lack of recognition

Description:

Lack of recognition of contribution leading to cynicism

193 (5 6 3 4) /Outcomes of SP/Process/Cynicism/Lack of tangible results

Description:

Lack of results of past experience of change or of this initiative as a factor in cynicism

194 (5 6 3 5) /Outcomes of SP/Process/Cynicism/Self-interest

Description:

One's comfort, habits or long-standing way of doing things or other self-interest as a factor in cynical attitude. This is not just selfishness, but also what it means in terms of how my job is to be done.

195 (5 6 3 6) /Outcomes of SP/Process/Cynicism/BOHICA

Description:

The BOHICA mentality

196 (5 6 3 7) /Outcomes of SP/Process/Cynicism/Personal cynicism

Description:

Cynicism seen as a personal attribute. Includes comments on types of people

197 (5 6 3 8) /Outcomes of SP/Process/Cynicism/Transparency

Description:

Ineffective communication of change process, reasons for decisions and outcomes leading to cynicism

198 (5 6 3 9) /Outcomes of SP/Process/Cynicism/Change processes

Description:

Cynicism re change processes

199 (5 6 3 9 1) /Outcomes of SP/Process/Cynicism/Change processes/Change generally

Description:

Cynicism re change processes generally

200 (5 6 3 9 2) /Outcomes of SP/Process/Cynicism/Change processes/2010 change

Description:

Cynicism re the 2010 change process specifically

201 (5 6 3 10) /Outcomes of SP/Process/Cynicism/Implementation process

Description:

Comments about implementation, communication of outcomes, demonstrating cynicism

202 (5 6 3 11) /Outcomes of SP/Process/Cynicism/Too much change

Description:

Too much change as a factor in cynical attitudes.

203 (5 6 3 12) /Outcomes of SP/Process/Cynicism/Time-serving, reluctance

Description:

Time-serving, reluctance to participate in future change initiatives, effect on previously motivated.

204 (5 6 3 13) /Outcomes of SP/Process/Cynicism/Reverse adaptation

Description:

Adapting change outcomes to practice rather than the converse

205 (5 6 3 14) /Outcomes of SP/Process/Cynicism/Fads

Description:

Change processes seen as fads

The conjunction of loyalty and cynicism in individuals

4.3 Before and After analysis sets

Samples of the summaries of the NVivo sets used in comparisons of individual participants in the pre-workshop and research interviews.

Set 5

	Node	Viewpoint Before	Viewpoint After	Change Assessment
1	How govt influences decisions	Shareholder is risk averse	Not mentioned	
2	Attitude to community, customers	Customer service is good – not an issue	Can meet higher expectations, at a cost	No change
3	Increasing customer demands	Need to balance finance with rising customer expectations	Costs of increased service will have to be passed on	No change
4	Corporate structure	No internal change from corporatisation	Not mentioned	
5	Business development	Envisions international expansion	Was already thinking of WA focus	[Contradicts himself.] Change inevitable – 2010 the excuse
6	E-business	Lack direction and strong on-line presence	Integrating e-business into business units	Natural progression, not due to 2010
7	Sources of competition	Water Corp doesn't understand sources of competition	Full frontal competition unlikely	Change fits theory that competition focus was a furphy
8	Engineering influence	Decisions are process- rather than outcome-driven	Big capital solutions, rather than demand management	Sees some change, perhaps due to water symposiums
9	Focus on commercial outcomes	Culture needs to be more commercial	No significant changes in commercial outlook	No change
11	Risk management	Water Corp trapped by own capabilities – risk averse.	Risk aversion is due to regulations	No change in risk aversion, but attributed to different cause
10	Clarity of purpose	Vision is not really a vision	New vision is good	Change of vision was outcome of 2010

Summary: Changes in view of competition; new vision (but not attitude to it); degree of engineering influence. Major change is reversal of previous attitude to business development.

Set 9

	Node	Viewpoint Before	Viewpoint After	Change Assessment
1	Relationship with government	Need to know govt requirements	Regulators seen and allies in relationship with govt	Change partly attributed to 2010
2	Relationship with regulators	Concerns about effect of regulators	Recognises need to work with not against regulators	Change of attitude attributed to 2010.
3	Customer expectations	Specific, e.g., effluent re-use; water quality	Need for understanding and dialogue	No reason given for change
4	Attitude to community, customers	Customers need to understand issues	Dialogue with customers needed	No change
5	Business model	Disaggregation, multi-utility, partnering	Not mentioned	
6	Structural changes	Rationalise infrastructure	Not mentioned	
7	Framework	Need for clear vision and to be communicated	Communicating new strategic framework to people	Outcome of 2010
8	Business development	Use expertise to grow offshore	More prudent to concentrate on WA	Change largely due to 2010
9	Attitude to risk	Ability to take risks is needed	Language but not behaviour changed	Comes out of scenario discussions
10	Retention of expertise	Retaining people is challenging	Not mentioned	
11	Performance recognition	Appropriate remuneration	Not mentioned	
12	Access to water resource	Desalinisation	Not mentioned	
13	Water quality	Need for high quality State-wide	Not mentioned	Also a focus outcome of 2010?
14	Asset management	Concern re maintenance spending	Asset base is sound	No evidence of change from data

Summary: Changes attributed to 2010 are relationships with government and regulators, business development focus, attitude to risk, strategic framework .

Set 13

	Node	Viewpoint Before	Viewpoint After	Change Assessment
1	How Government influences decisions	Limits international development	Government constraints vs customer demands	Not directly comparable
2	Relationship with regulators	Need to have a say in new regulations	More collaborative relationship	Change due to new people, not SP
3	Technology	Need to keep up with new technology	Not mentioned	
4	Customer expectations	Need to respond to increasing expectations	Customers prepared to pay more for some things	Change due to surveys, not SP
5	Customer relationships	Work closely with land developers to beat competition	Strong interface with land developers to win customers	No change
6	Water quality	Change in water quality expectations	Not discussed	
7	Business development	Must benefit business as a whole	Development wasn't producing benefit	SP helped make the change smoother
8	Alternative sources of revenue	Need for independent revenue sources	WA focus constrains revenue to core business	Consequence of change in business directions
9	Accessing capital	Will have to generate capital internally	Government limits capital availability	No change
10	Clarity of purpose	Need for clarity of purpose	Not discussed	
11	Productivity	Productivity has been declining	Productivity has been declining	SP and 2010 not relevant factors
12	Nature of competition	Small nibbles at land developments	Fear of competition - hasn't eventuated	No personal change – points to others' change
13	Risk aversion	Potential liability with water quality	Corp. is more risk averse	No change

Summary: Participant did not directly attribute and changes to SP or 2010, but spoke of intangible nature of outcomes and felt that SP helped smooth the transition to a WA business development focus.

Set 25

	Node	Viewpoint Before	Viewpoint After	Change Assessment
1	How government influences decisions	Uncertainty re continuation of govt funding	Only mentioned historically	
2	Environment	Greenhouse effect	Not mentioned	
3	Increasing demands	Demands driven by similar organisations and will increase	SP helped see how what others do affects customers	SP helped in ongoing change
4	Competition underemphasised	Lack of corporate recognition or understanding	Not discussed	(See also change re fear of overseas competition)
5	Fear of overseas competition	Overseas companies gaining foothold	Fear of overseas competition receded	SP clarified the issue
6	Internal effect of competition	Reactive	Becoming more proactive	Not attributed to SP or 2010
7	Defend and extend	Leave no room for competitors	Not discussed	Iteration of Defend and Extend from Company One
8	Business development	Export expertise	Can market expertise internationally	No change
9	Clarity of purpose	Sales and marketing unfocussed	Restructured and some progress	Not attributed to SP or 2010
10	Risk aversion	Rewards for not making mistakes	Still risk averse	No significant change
11	People and expertise	Tremendous, but internally focussed	Not discussed	
12	Employee security	Security from own ability, not external	Not discussed	
13	Cross-divisional understanding	Silos disagree	SP brought org together, but resulted in no initiatives	Greater understanding but no practical change
14	Structural changes	Alignment needed	Changes due to cost cutting	Not attributed to SP or 2010

Summary: SP clarified the threat from overseas competition and helped in appreciating customer expectations. No practical initiatives from greater cross-divisional understanding.

Set 30

	Node	Viewpoint Before	Viewpoint After	Change Assessment
1	How government influences decisions	Government ownership a factor	Not mentioned	
2	Relationship with regulators	Getting better at relationships	Trying to keep tabs on regulators	No change identified
3	Business development	Find core competencies	WA focus	Attributed to SP
4	Fear of overseas competition	French slipped into Australian market	Not mentioned	
5	Competition underemphasised	No direction re competition	Organisation doesn't believe there is real competition	Change is in line with SP outcome but not attributed.
6	People and expertise	Hard for commercial people to change culture	Commercial people dragged into public service mentality	Not an SP change
7	Empowerment	Too much hierarchical control	Still too many signatures	2010 stage of fighting bureaucracy ended
8	Engineering as influence	Engineers need training as managers	Training recommended but not happened	No change
9	Performance recognition	Should be paid for performance, not equity	Managers not good at performance appraisal	No change
10	Performance recognition	Movement sideways, upwards difficult	Not promoted	No change
11	Cynicism	Cynicism about process based on past	Disillusion with change-maker outcomes	No change
12	Leadership characteristics	Leaders dismiss suggestions without giving reasons	Reasons not given for change-maker rejections	No change
13	Structural changes	Could partly privatised	Organisation doesn't believe it will be privatised.	Not in context of 2010 or SP
14	Clarity of purpose	Clearer direction, needs to be communicated	New vision imprecise and not communicated	No change, despite 2010

Summary: Need for focus and WA business direction attributed to SP. No other change in attitudes or ideas.

Appendix 5 Documentation

5.1 Request to conduct research

Ms Meredith Blais
Water Corporation
John Tonkin Water Centre
629 Newcastle St
Leederville 6007

Dear Meredith

Thank you for agreeing to see me today. The purpose of my visit is seek the permission of the Water Corporation to conduct research into the effects of the scenario planning project that was carried by the corporation. I am conducting the research for the degree of Doctor of Philosophy at the Graduate School of Business at Curtin University.

The broad objectives of the research are to develop understanding about how organisations are changed by the scenario planning process and to define guidelines on when it appropriate for organisations to use scenario planning.

Most literature in this area is based on the experiences and perspectives of scenario planning practitioners. There is little published that reflects the perspective of scenario planning project participants, and this research is designed to start to redress that imbalance.

I believe that the Water Corporation experience offers a unique opportunity to explore the effects of scenario planning from this perspective. This is because the scenario building project is still recent enough to be well recalled by participants and because the pre-workshop interview material is still obtainable to enable comparisons to be made before and after the project.

The benefit to the corporation will be in obtaining a rigorously researched review of from the point of view of the participants that will enable it to gauge the effectiveness of its scenario planning, at no cost.

The research would involve interviewing each of the internal participants in the Water Corporation scenario planning project plus any others who were interviewed prior to the workshop, together with any external people who participated or were interviewed that were deemed appropriate by agreement between us, and any other people who may have been affected by the process as seems appropriate.

Permission would be sought from each of the people previously interviewed for the researcher to use the notes from that interview, which, of course, was given in confidence. Confidentiality would be preserved as previously.

The researcher understands the Water Corporation's need for commercial confidentiality. The research is aimed at the process and attitudinal/cultural effects of scenario planning and broad strategic approaches, rather than the specific details of future planning that may be wished to be kept confidential. The corporation need not be named in the research, although it is recognised that it may be difficult to keep it completely anonymous in an environment the size of Western Australia. The researcher is prepared to come to an agreement over any concerns you have in this area.

I look forward to your response and answering any questions you may have as to how the research may progress.

Yours sincerely

Paul Nicol

5.2 Water Corporation request to participants

WATER CORPORATION

MEMORANDUM

DATE: 2 JULY 2002

TO: MANAGING DIRECTOR
GENERAL MANAGER CUSTOMER SERVICES
GENERAL MANAGER PLANNING & DEVELOPMENT
GENERAL MANAGER ENGINEERING & CONTRACTS
GENERAL MANAGER BULKWATER AND WASTEWATER

FROM: GENERAL MANAGER FINANCE

SUBJECT: **SCENARIO PLANNING RESEARCH**

The Scenario Planning exercise with Curtin University was an important step in the Company One 2010 project. Mr Paul Nicol from Curtin University was involved in this project. Paul is currently completing a Doctor of Philosophy degree at Curtin Business School and has approached the Corporation asking if he could undertake research into the effects of scenario planning on the Corporation. The benefit for the Corporation will be to gain a thorough review of our scenario planning exercise.

His approach will be to conduct interviews with those people within the Corporation who were interviewed or involved in the scenario planning workshops last year. A list of proposed interviewees is attached for your information. During the interview he will look to investigate the degree to which the Corporation's formal strategic framework and attitudes of employees has changed as a result of scenario planning. He will at no point look to critique favourably or otherwise the strategies adopted as a result and we will have an opportunity to review and comment on the final report.

This is an ideal opportunity to review the impact of scenario planning and also look back and consider what we learnt from the initiative. I have given my approval for this research to go ahead and ask that you are supportive of this work and make some time available to be interviewed by Paul. He is looking to commence interviews in the next two to three weeks and will contact you directly to arrange a time.

If you have any questions regarding the timing or nature of this research or do not wish to be interviewed please contact John Janssen, Manager Strategic & Business Performance Branch on extension 2653.

Regards

Malcolm Peacock

5.3 Request to participants

19 July 2002

42 Kersey Way
Carine WA 6020

{Name}
{Title}
{Address}

Dear {Name}

You should by now have received a memorandum from Mr Malcolm Peacock explaining that I will be contacting you to seek your assistance with research into the scenario planning that was undertaken as part of the Company One 2010 project. This letter is to explain the research and what will be asked of you. I will contact you by telephone to answer any questions you may have and to discuss a time for an interview.

I am conducting research into the effect of scenario planning on organisational change for the degree of Doctor of Philosophy at the Graduate School of Business at Curtin University.

The objectives of the research are to develop understanding about how organisations are changed by the scenario planning process and to define guidelines on when it appropriate for organisations to use scenario planning. For the Water Corporation, the benefit will be a rigorously researched review of its scenario planning process.

A comprehensive review of scenario planning is being undertaken, together with interviews to explore the perspectives of people who have participated in the scenario planning process at the Water Corporation. Emphasis will be placed on evaluating the effects of scenario planning on change in the organisation and how the scenario development process is integrated into strategic planning.

All information gained during the interview will be kept confidential and anonymous. No names or individuals or organisations will be quoted in written transcripts, the final thesis or future publications, or made available in any way to anyone other than the researcher. All interviews will be conducted under the guidelines of Curtin University's Human Research Ethics Committee. You are asked to agree to have the interview recorded, in order to meet the completeness and accuracy requirements of the subsequent analysis, and that consent will be confirmed at the start of the interview.

Your consent is also sought for the researcher to view the notes from the interview or focus group that was conducted with you by the Scenario Planning and Research Unit at Curtin University prior to the scenario planning workshops for the Water Corporation last year. This is a vital part of the research, as it will enable the researcher to compare current with previous interviews to gain an appreciation of how the perspectives of participants may have changed. This type of comparison has not been done before in Australia. The original interview was given in confidence and that confidence will be respected as before, with no information or results attributable to any individual, or able to be recognised as originating from an individual, being released by the researcher in any form.

A consent form for your permission to view the interview notes and for the interview to be recorded is attached to this letter. I would appreciate it if you could sign it and return it to me at the above address or by fax to 9266 4071.

The chairperson for the research is Professor Margaret Nowak, director of the Graduate School of Business. My supervisor is Associate Professor Mohammed Quaddus (tel 9266 2852) . Associate Professor Des Klass is co-supervisor (tel. 9266 7057) and Ms Janferie Williams is associate supervisor (tel 9266 4235). All are at the Graduate School of Business.

I should also inform you that I am currently employed on a part-time basis at the Scenario Planning and Research Unit at the Graduate School of Business. However, this research is being conducted independently of the Unit, who will receive no more of the research findings than is generally published.

Please telephone me on 9266 1172 or e-mail me at nicolp@gsb.curtin.edu.au if you have any questions or concerns regarding the research.

Yours sincerely

Paul Nicol

5.4 Consent form

**Scenario Planning Research Project 2002
Consent Form**

I consent to allow Paul Nicol of the Graduate School of Business at Curtin University of Technology to view and use for research purposes the notes taken when I was interviewed prior to the first scenario planning workshop for the Water Corporation in 2001. This consent is given on condition that the same confidentiality conditions will apply as when the interview was originally given. The conditions are that no information or results from the interview that can be recognised as originating from or attributable to any individual will be used in written transcripts, final theses or future publications or be released by the researcher in any form or made available in any way to anyone other than the researcher.

I also acknowledge that I have agreed to be interviewed by Mr Nicol, subject to the same conditions, as part of the research process and that I have agreed that the interview be recorded on tape. I understand that the tapes will carry no marks that will identify me and that they will be kept in a place where they are inaccessible to anyone other than the researcher.

Name

Position

Signature Date/...../.....

5.5 Pre-workshop interview questions

The questions used by SPARU for telephone interview prior to the first Scenario Thinking workshop were:

1. How do you envisage the Water Corporation responding over the next nine years to changes in competition and customer expectations?
2. What are your concerns and uncertainties regarding the Water Corporation's response to these changes?
3. Consider the future and imagine that all goes well for the Water Corporation. Under these conditions, what would you hope the Corporation achieves over the next nine years in response to competition and customer expectations?
4. What pivotal events from the past, either positive or negative, should be remembered as the Corporation adapts to future changes in competition and customer expectations?
5. What major decisions must be made immediately by the Water Corporation if it is to adapt successfully to changes in competition and customer expectations?
6. What constraints and limitations might restrict the Corporation's response to these changes?
7. What would you like to be remembered for in contributing to the successful future of the Water Corporation?

5.6 Transcription validation

The secretary to the director was asked to choose four transcripts at random and check parts of them against the audio tapes for accuracy. This is her report.

E-mail re transcripts 24/01/03

Paul

I have done three of them for you and they are all perfect. I listened for 10 minutes each and it was word for word. The only one that was not good was No. 4 you only sent me the questions not the interview.

J

Mrs Judy Gaebler
Secretary to the Director
Graduate School of Business
78 Murray Street
Perth WA 6000

CRICOS provider Code: 00301J

Appendix 5.7 Cultural definition workshops

Workforce of the Future Cultural Definition Workshop Outputs©

What is culture?

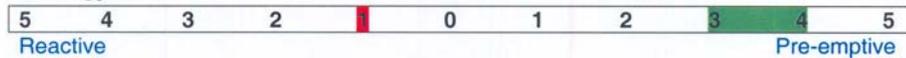
- The way things are done around here.
- The reason people stay or leave.
- The unwritten rules.
- Expected behaviour.
- Traditions / history.
- Values.

Indicators, signals and red flags

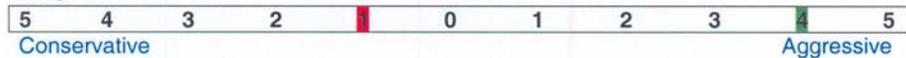
- Some functional sub-cultures, but also...
- Some dysfunctional sub-cultures.
- Actual and potential clashes of culture.
- Marked differentiation.
- Questionable capacity to empower.
- Exhaustive consultation.
- Need for focus and clarity.
- Changes in the external environment – perhaps greater than we acknowledge.
- Rising customer / stakeholder expectations.
- Monopoly mindset > arrogance.
- People and Culture now at the heart of things.
- Need for higher level of risk tolerance.
- Do we nuke or progress incrementally?
- Need for diversity, with common threads woven through the fabric of the organisation.

Desired vs. current cultural state¹

Strategy



Targets



Decision making



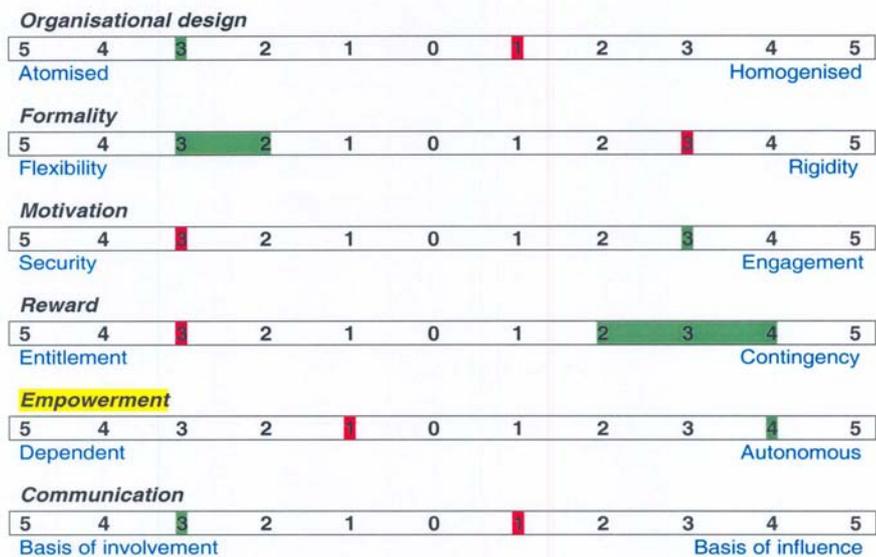
Leadership



¹ Legend: ■ = desired state; ■ = current state; **Example** = defining dimension.



² Ratings split along market segment lines.



Workforce of the Future: Dimensions of Organisational Culture (DOC) Definitions©

Strategy

This organisation:

- has its strategic agenda set for it by external events and forces; vs.
- steers its own strategic course.

Targets

We:

- are cautious in setting targets, ensuring that they are achievable; vs.
- set real stretch targets on a few key levers and accept the possibility of failure.

Decision making

Decisions are made:

- at the point of impact, by those closest to the issue; vs.
- by designated decision makers in the top ranks of the hierarchy.

Leadership

The relationship between leaders and his/her followers is:

- characterised by extrinsic reward and disciplinary responses to followers' work performance; vs.
- one of engaging hearts and minds in pursuit of organisational goals.

Consequence management

Our approach to under-performers is to:

- manage them out of the business quickly (but legally); vs.
- work around them, compensating for their deficiencies through process bypasses and other people's efforts.

Technology

New technologies are:

- only adopted once they have been proven elsewhere; vs.
- embraced in their infancy; we operate at the leading edge.

Sustainability orientation

Our focus is:

- simply and unashamedly on financial returns to the shareholder; vs.
- simultaneously and equally on the triumvirate of economic, social and environmental outcomes.

Customer orientation

Through our relationship with our customers we:

- seek to partner with them, so as to achieve mutually rewarding outcomes; vs.
- use our technical expertise and economies of scale to provide them with excellent services.

Commercial orientation

Our business exists to:

- provide a valuable service to the community; vs.
- aggressively create and profit from new opportunities in the marketplace.

Innovation

In our organisation, innovation is:

- built into our organisational structures, processes and practices; vs.
- seized upon whenever, wherever and however it occurs.

Values

Fundamentally, we act, take decisions and operate in a manner:

- tightly controlled by rules, procedures and protocols; vs.
- guided by a series of overarching values and beliefs.

Power

The degree of 'distance' within hierarchical relationships is:

- minimal, with the emphasis very much on flattened structures and processes, and easy access to power centres; vs.
- high and visible, with symbols of status (office size etc.) evident.

Achievement

This organisation achieves its outcomes through:

- a whole-of-business approach, cross-Divisional integration and open systems transparency; vs.
- inciting competitive behaviour, so as to promote excellence and 'personal bests'.

Compliance

In our relationships with regulators, we typically:

- strive to comply with minimum legal standards; vs.
- set new, benchmark-busting, standards for performance.

Change

Our approach to external pressures is to:

- maintain stability, as far as possible, and emphasise the continuity of things; vs.
- embrace or initiate change, and emphasise the dynamism of our business.

Organisational design

This organisation is structured so that:

- business units manage their own business, and divide into separate 'cells' once they outgrow their capacity to self-manage; vs.

- the business is single-celled, with all significant strategy and policy decisions made at an aggregated level.

Formality

Internal business is conducted:

- in whatever way achieves the best result in the most efficient manner; vs.
- according to strictly regulated protocols and channels.

Motivation

People in the organisation are motivated primarily by:

- stability (of tenure, role, relationships etc.), and a psychological contract based on loyalty; vs.
- the opportunity to really make a difference, and to contribute to the success of worthwhile enterprise goals.

Reward

The mindset commonly held by people is that:

- benefits are a right, and salary progression should relate to seniority / length of service; vs.
- reward is contingent on the extent and intensity of contribution to the business, with a significant proportion at risk.

Empowerment

Individual employees are:

- conditioned to seeking management approval prior to taking action; vs.
- permitted and encouraged to act with a high degree of autonomy within their zone of accountability.

Communication

Internal communication between leader/managers and followers:

- involves them in decisions and places information in the public domain; vs.
- is used as a mechanism for maintaining power distance and for highly selective sharing of information.

Appendix 5.8 Water Corporation response on usefulness



John Janssen
9420 2653

7 November 2005

Mr Paul Nicol
Graduate School of Business
Curtin University of Technology
PO Box U1987
PERTH WA 6845

629 Newcastle Street
Leederville 6007
Western Australia
PO Box 100
Leederville WA 6902
Tel (08) 9420 2420
Fax (08) 9420 3200

Dear Paul

Congratulations of completing the draft of your thesis on *Scenario Planning as an Organisational Change Agent*. Thank you for giving the Water Corporation the opportunity to comment on the usefulness in your research in understanding the change process we undertook.

I believe that the use of Scenario Planning as an organisational change agent in the Water Corporation can be summarised from section 7.12 (resolution of Research question 3) of your thesis:

"The scenario planning project was perceived (*by participants*) as a sense-making discrete process that was an input to the rest of the Company One 2010 change initiative. It provided a framework for the strategic conversation in the latter two phases to proceed and opened world views and mindsets to scenario thinking. It was not an agent of change, in the sense of initiating, but an instrument of change, a tool that assisted the change process, which acted as a jolt to the assumptions of participants, especially managers, about the future."

Your thesis reinforces the value in the use of scenario planning, and scenario thinking in the development of our Purpose statement *Sustainable management of water services to make WA a great place to live and invest*. By far, this has been the most robust and enduring outcome from the Company One 2010 project. The use of the term *sustainable* in our purpose legitimised this concept as a way of thinking and doing business. We are still striving to embed sustainability into our decision making, and this is one area where we are seeing a change of consciousness at an organisational and personal level.

In summary, the Corporation used scenario planning as a means of shifting the normal mode of thinking. It was successful in developing strategic thinking, but not necessarily change. This is a failing of the organisation – rather than scenario planning.

I have included specific comments relating to your hypotheses at Attachment 1.

As discussed, I believe that it would be valuable for you to present the findings of your research to the Corporation. Through this presentation we could explore how your research could assist the Corporation in its future planning. Perhaps early in the new year would suit us both.

Good luck with the final phase of your doctoral thesis.

Yours sincerely

A handwritten signature in blue ink that reads "John Janssen".

John Janssen
Manager, Corporate Planning

MMR 8096

Comments on Hypotheses**Hypothesis 1**

Agree

“Change” in this sense was more about mental models rather than tangible, structural change.

Hypothesis 2

Agree

Scenario Planning was to challenge the orthodoxies and that Project goals were to allow for the formal translation of these changes into “strategic framework”. The Water Corporation change was really about adaptation and survival, particularly in the light of our drying climate and increasing expectations of our customers and the community.

Hypothesis 3

Agree

Hypothesis 4

Agree

Changing needs / beliefs is at a deeper level than changing actions / thoughts . These changes tend to last and can transform an organization over time. An example of this in the Corporation is Sustainability.

Scenario Planning was a very powerful tool in fostering change in individual and Corporation belief systems and/or giving permission for people’s personal beliefs to be more congruent with stated organisational values.

From a Water Corporation perspective, this type of change is unlikely to be achieved with other more “direct” forms of change / strategy initiatives.

Hypothesis 5

Agree

This is seen as a major weakness of Company One - 2010 deployment.

Hypothesis 6

Agree

Hypothesis 7

Agree

Hard to measure how much these may have “transitioned” over course of project. Anecdotally, organisation is more aligned now.

Hypothesis 8

Agree – but would add, most importantly, over time. It does however become difficult to trace antecedents.

Strategies 2003-07

- Public consultation for planning projects
- Community involvement in key projects
- Investment in growth areas
- Customer relationship management
- Understand and market customer electricity usage, supply needs

Customer & Community

Shift Statements

- From**
- Community involvement in key projects
 - Clearly defined market sectors for business growth
 - We believe we are "trustworthy" and "reliable"
 - Limited information available on Corporation's performance
- To**
- Stakeholder engagement in our plans for the future
 - Information provides us with understanding of customer needs across all market sectors
 - Customers & community believe we are "trustworthy" and "reliable"
 - Comprehensive reporting of our progress towards customer & community environment and economic targets and priorities

Strategies 2003-07

- 19th Australian Drinking Water Guidelines
- Research & Innovation
- Asset replacement & management
- Benchmarking - measure, report and understand and act

Core Business

Shift Statements

- From**
- Incomplete use of system control and data acquisition (SCADA)
 - We have an information website
 - Water consumption per capita (WPC)
 - We benchmark our costs nationally & internationally
- To**
- SCADA capability and data fully utilised to monitor and optimise asset operations
 - We use our website to engage with stakeholders and get people about our future and achievements
 - Water consumption per capita (WPC)
 - We understand our cost drivers and use this knowledge to manage our business

People & Culture

Strategies 2003-07

- Equity & diversity
- Knowledge management
- Visible leadership
- Occupational Safety & Health

Shift Statements

- From**
- Consideration of equity and diversity opportunities
 - Employees use their skills and knowledge with the opportunity to learn & grow
 - Performance management is linked to Corporate and team objectives
 - Accountability for OSH
- To**
- Business benefits of Equity & Diversity demonstrated
 - Employees find personal fulfillment through their work
 - Performance management is viewed by the employee as a critical tool for accountability and development
 - Clearly understand our OSH risks and have treatment plans in place

Trust & Credibility

Strategies 2003-07

- "Aussie of Excellence" recognition
- Regulatory responsibility management
- Stakeholder & NGO relations by management
- Integrate sustainability principles

Shift Statements

- From**
- Awareness of sustainability principles as a management approach
 - We have a good handle on the compliance aspects of our business
 - Our stakeholders have a varying knowledge of our capabilities
 - We use a number of communication tools to keep staff informed
- To**
- Environmental, social, economic impacts are integrated into our decision making
 - The Economic Regulator fulfils us as a professional, open utility
 - We are regularly asked to present on our areas of excellence locally and nationally
 - Sharing of knowledge has propagated a sense of trust across the whole Corporation

Access to Resources

Strategies 2003-07

- Sound scientific approach to sustainability
- Drought management
- Wastewater reuse
- Long term pricing strategy

Shift Statements

- From**
- Recognition that a corporate position on energy is required to meet its broader sustainability
 - Our short term planning is well developed and understood
 - Industrial wastewater re-use projects accepted based on commercial considerations
 - Ad hoc agreements, projects by project, with stakeholders and regulator
- To**
- Our energy decisions form part of our business decision
 - We have developed robust long-term projections of resource requirements
 - Wastewater re-use projects are assessed based on the broader principles of sustainability
 - Broad based agreements with stakeholders and regulators

Strategic Directions 2003-2007

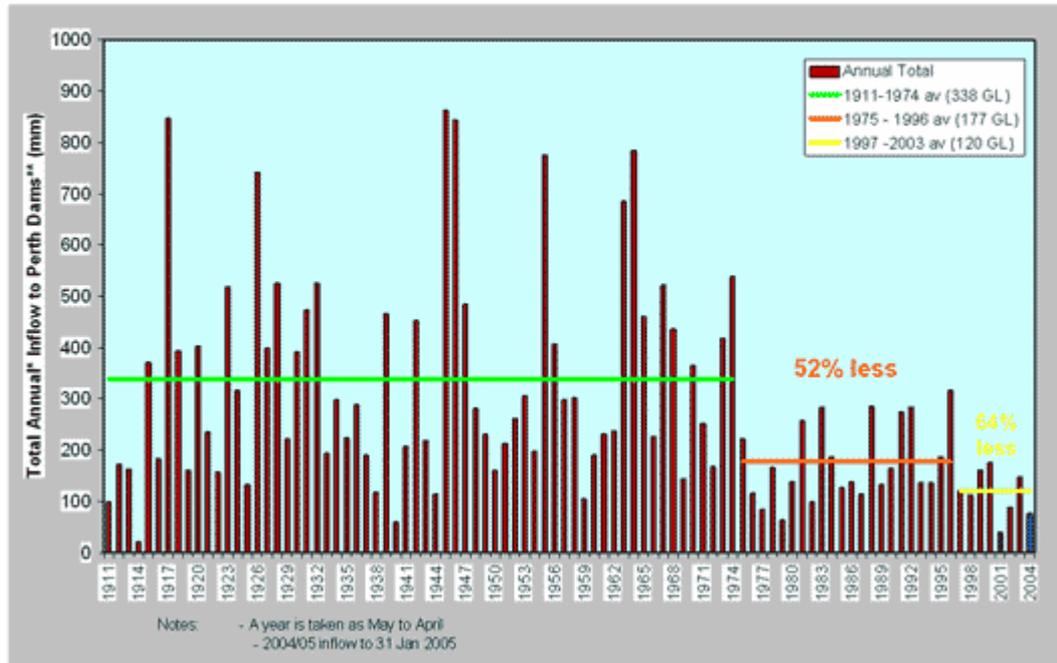


ISBN 0 755 000 000

For a complete list of strategies refer to Watercourse documents on Strategic Business Performance home page

Appendix 7 Inflows to West Australian Dams

Impact on Water Availability - WA Reduced Inflows to Dams



Source: http://www.watercorporation.com.au/dams/dams_streamflow.cfm

(August 16, 2005)

Appendix 8 Attendees at Deep Conversation

Visiting fellows

Professor Peter Checkland, Lancaster University

Professor Kees van der Heijden, University of Strathclyde

Mr Jaap Leemhuis, Global Business Network

Curtin University of Technology faculty members

Professor Lyn Allen

Professor Alma Whiteley

Professor Nimal Jayaratna

Emeritus Professor Jo Barker

Ms Trudi Lang

Ms Anita Kelleher

Mr Paul Nicol

Guests

Ms Annemie McAuliffe

Dr Liz Patterson

Research Assistant

Ms Sally Edwards

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