

# Digital Twin Exhibition

## *An Exploration of Garment Circularity*

**Digital Twin Exhibition - An Exploration of Garment Circularity** examines the provenance and structure of a set of garments with data used to predict their potential for circularity. Utilising visualisation techniques to create an immersive digital twin mapping the real-world exhibition of garments on level 3 of the TL Robertson Library, pop-ups in the digital tour provide access to available garment data along with a description of potential circularity based on garment data analytics. The visualisation offers access to a high-resolution interactive online platform mapping garment characteristics impacting on circular activity in the fashion and textile industry. Selected examples in this exhibition are photogrammetrically 3D reconstructed to create digital twins that are annotated with detailed information regarding the potential for circularity. It is proposed to use infographics, images, text and video within the virtual tour and digital twin exhibition as a communication tool to disseminate the garment mapping data.

The exhibition links with the ongoing research project “Closing the Loop on Clothing Textile Waste locally.” An interdisciplinary industry collaboration research project which positions design as the central focus of practice-led research. The focus of this research is on developing local collaborative systems that are circular, agile and can provide the flexibility needed in small and/or physically isolated communities such as those found in Western Australia. It will also investigate the potential for global uptake and application of these local systems. The Closing the Loop project extends the pilot survey of WA fashion circularity conducted in 2022/23 and responds to recommendations of “The State of Fashion & Textile Circularity in WA” report launched in September 2023.



**Digital Twin: An Exploration of Garment Circularity** is a collaboration between Curtin School of Design & the Built Environment and Curtin HIVE through their 2023 Internship program.

It results from the work of a dedicated team:

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