



3. 1. The TEN: A Tool for Narrative Prototypes

Textiles Environment Design TED

The understanding and demonstration of how design can contribute to the future of sustainable textile products.

Textiles Futures Research Centre (TFRC)¹⁸ at the University of the Arts, London (UAL)
2010-ongoing

Disciplines: Textile Design

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The Textiles Environment Design (TED) project at Camberwell, Chelsea and Wimbledon (CCW) is part of the Textile Futures Research Centre (TFRC) at the University of the Arts, London (UAL).¹⁹

Contemporary textile production employs systems for design creation and consumption that were established early in the early 20th Century, while being transformed by new technologies at almost every stage. However, in recent years, there has been a huge growth in worldwide demand for fast fashion, which has had an ecological, economic and social impact upon production. What, how, where and why things are made is gradually becoming central in the minds of designers, manufacturers and citizens, as images of pollution, waste, worker exploitation and landfill are widely available. If the dominance

18. www.tfrc.org.uk

19. www.tedresearch.net

3. I. Textiles Environment Design (TED), The TEN: A Tool for Narrative Prototypes

of consumerism and industrial profit is to be challenged, design innovation needs to be employed to overcome the ever-increasing imperatives.

Since '80% of the environmental impact of a product is determined at the design stage',²⁰ urgent practical action is needed to bring about systemic change, or to achieve even marginal gains. Practice-led research is confronting issues related to the whole lifecycle of textile products, including the non-traditional design areas of consumer use and disposal. The TED group of practice-based researchers has developed a set of TEN strategies for the design of more sustainable textiles, collectively known as The TEN: A Tool for Narrative Prototypes. These employ tactics that enable us to take on a dynamic design role, which includes facilitation, activism and social engagement.

The strategies act as a practical map for designers to act in collaboration with industry, to navigate obstacles to the sustainable production, consumption and regeneration of textiles. Strategies one to five propose radical design ideas for the reduction of materials, energy, water and chemicals in both the production and use phase of the product lifecycle. This requires a change in manufacturing processes, to enable cyclability without compromising the aesthetic value or functional sophistication of textile structures. Technological innovations, systems of distributed or additive manufacture, co-design and consumer engagement are explored for their sustainable credentials. Strategies six and seven take models from natural and historical systems in a bid to facilitate enterprise within social groups. Strategies eight to ten reduce consumption through a design approach to dematerialisation, through services and systems of sharing or leasing. Design activism



20. T.E. Graedel et al. et al., 'Green Product Design', *AT&T Technical Journal*, November/December, 1995, p. 17.

to promote sustainable thinking is central to the production of prototypes, which offer innovation and compelling narratives for energetic communication with industry. It is evident from our work with large and small commercial brands that they are most interested in strategies one to five, but it is in the tough eight to ten where the biggest shift will occur in future.

As a tool for action and reflection, the TEN cards provide a checklist for designers – a lens through which to view issues of concern, cut through the rhetoric and solve apparently intractable problems. In using this as a tool for analysis of conditions, prompts and enablers, the designer contributes to networks of innovation.²¹

In the creation of immersive workshops employing an empirical approach,²² the relevance of the TEN cards to industrial product development has been demonstrated, replicating and accelerating a proposed product supply chain with a design focus. An evaluative framework for the innovation that the workshops encourage is formulated using qualitative research methods in a ‘self-report instrument’, to map the effects of the cards on the design process. A retrospective assessment of workshop participation, observation and description is used to examine the experience and generate theories during the action research process for the evolution of workshop practice.

Innovation for sustainability is central to TED enterprise and research projects. TED is participating as one of eight research groups in a multidisciplinary international research consortium, MISTRA Future Fashion, funded by the Swedish Government. As designers, the TED team is collaborating with social, political and material scientists with the common goal of creating ‘systemic change in the Swedish fashion industry, leading to sustainable development of the industry and wider society, whilst remaining competitive’. The resulting intelligent design innovation could stimulate thoughtful, and even playful, solutions to the prevailing environmental, economic and social questions that are facing society today.

21. C. Bussracumpakorn and J. Wood, *Design Innovation Networks* (Lambert Academic Publishing, 2010).

22. J. Cassim, ‘Designing Effective User Interactions – examples from the Challenge Workshops’, in: *Proceedings of the 3rd Conference of the International Association for Universal Design IAUD* (Hamamatsu, Japan, 2010).