



# Re-Modelling Fashion through Scenario Planning

Conceptual scenarios informing design practices and business models for circularity and sustainability

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## Abstract

This research explores methodologies for transformation design as a means to extend the value of fashion encompassing social, economic, environmental and cultural dimension. This is realised through ideation, design and business model development for fashion products, services and systems. Foresight and scenario planning are proposed as valuable tools for imagining models that are relevant in a contemporary context. The initial results of the study presented here is based on a broad review of literature and practice exemplifying plausible trajectories for fashion. This review identified four critical uncertainties as key to co-creating the future of fashion. Using Schwartz's (1991) scenario planning matrix approach, we construct eight scenarios based on these themes. In turn, these scenarios will be used as tools in collaborative workshops involving a range of stakeholders in the field of fashion to imagine and prototype concepts for new fashion practices and business models. This study is part of a wider program: The Business of Fashion, Textiles and Technology (BFTT). It is a five-year UKRI funded, industry-led project, which focusses on delivering sustainable innovation within the entire fashion and textile supply chain. This short paper reports on initial findings specifically from the BFTT Challenge 3: Re-Modelling Fashion: design practices and business models for sustainability bringing together researchers from University of the Arts London's Centre for Sustainable Fashion, and from the Centre for Industrial Sustainability at the Institute for Manufacturing of the University of Cambridge.



## Keywords

New business models in fashion, Circular business models, Transformation design, Scenario planning in fashion, Fashion futures.

## Main text

### INTRODUCTION

This paper reports on initial findings from the Business of Fashion Textiles and Technology (BFTT) Challenge 3: Re-Modelling Fashion: design practices and business models for sustainability.

The BFTT is a five-year, UKRI Creative Clusters funded, industry-led project, which focusses on delivering sustainable innovation within the entire fashion and textile supply chain. Work package 3, one of the seven challenges of the programme, focuses on developing design practices and business models for sustainability. It brings together researchers from University of the Arts London's Centre for Sustainable Fashion, and from the Centre for Industrial Sustainability at the Institute for Manufacturing of the University of Cambridge.

The challenges and opportunities of sustainability have been set as a priority for the fashion agenda. The responsibility of the industry over several key planetary boundaries are clearly highlighted in several recent reports (Ellen MacArthur Foundation, 2017; Global Fashion Agenda, 2017). We acknowledge as a starting point for this research that fashion is a major contributor to the pressure on planetary boundaries, and that a radical change is needed for the positive aspects of fashion to be sustained without contributing to increasing environmental challenges.

The work draws on expertise covering both design and business models and offers the opportunity to deeply influence the development of transformed fashion practices with businesses involved in the project operating at a range of scales. Transformation is described as a process of change-making in the Design Council RED report, 'Because organisations now operate in an environment of constant change, the challenge is not how to design a response to a current issue, but how to design a means of continually responding, adapting and innovating. Transformation design seeks to leave behind not only the shape of a new solution, but the tools, skills and organisational capacity for ongoing change' (Burns *et al.*, 2006:21). The research explores methodologies for transformation design as a means to extend the value of fashion, in this sense it is realised through the development of tools for ideation, design and business model development for fashion products, services and systems. We emphasise the need to consider design concept development simultaneously to the systems and values involved in business models innovation as part of a transformative process. In this sense we suggest that business model development can benefit from a design-led approach for a radical shift to sustainable



practices. This paper elaborates on the value of scenario building processes in supporting such transformation.

## METHODOLOGY

Foresight and scenario planning are valuable tools in pre-conceptualising transformation and opening a perspective into new paradigms. They are also instrumental in developing concrete strategies for change with higher chances of implementation (Hebinck *et al.*, 2018). Foresight and horizon scanning encompass the process of looking for early signs of change and interpreting their possible development in the future. The method requires a form of openness to weak signals and to challenge accepted ways of 'searching' for what is known or wanted (Carney, 2018). The process involves gathering information about emerging trends, exploring how these might evolve and combine and what impact they might have on the future. This relies on multiple sources of information, mixing desk-based research and workshop discussions (Government Office for Science, 2017).

Contemporary scenario-based planning was pioneered by Pierre Wack in Royal Dutch/Shell in the late 1960s and early 1970s in an attempt to forecast the future of the U.S. oil industry amidst several oil crises. The two seminal papers that emerged from this work - Wack (1985a) and Wack (1985b) - were published in the Harvard Business Review and outlined the fundamental principles of scenario planning. The problem, however, was that they offered very little practical advice, and readers had to connect the dots on their own. This was indeed the case until the "Art of the Long View: Planning for the Future in an Uncertain World" was published by Peter Schwartz (1991). The famous scenario planning 2x2 matrix approach for developing foresight could be seen on the back of the book (Figure 1). Schwartz (1991) suggests that the significance of scenario thinking lies in its ability to overcome thinking limitations by developing multiple scenarios for the future. He suggests that broadly scenarios are "stories", "maps of the future", "mental maps", "narratives", "indicators" or "tools"; and that scenario planning is an art rather than science, whereby "critical uncertainties" are a core component and represent the factors that are most likely to shape future directions (Schwartz, 1991). In recent years with the acceleration of events signalling possibly radical shifts in future trajectories (Forum for the Future, 2020), foresight and scenario planning have been used widely to try and prepare for uncertainty and shift the balance towards regenerative and circular systems (Shallowe *et al.*, 2020). In particular the context of fashion lends itself well to looking far ahead into the future and using a tacit understanding of trend to envision desirable futures (Roubelat *et al.*, 2015). In this work, we use the 2x2 matrix approach to scenario building as a step to developing scenarios with fashion systems stakeholders:

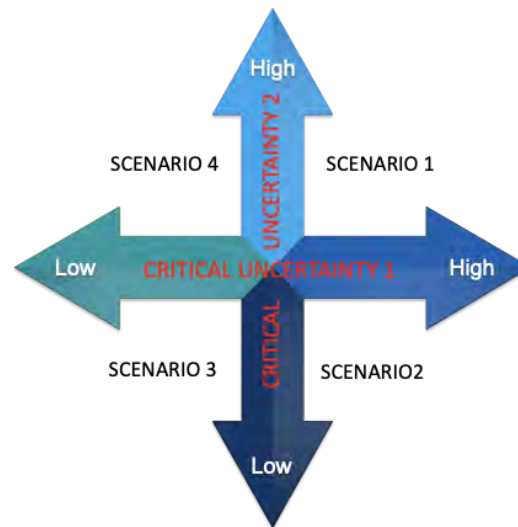


Figure 1 - Scenario Planning 2x2 Matrix

(Schwartz, 1991)

1. Identify evidence-based critical uncertainties based on horizon scanning.
  - X = Critical uncertainty 1
  - Y = Critical uncertainty 2
2. Identify what “Low” and “High” mean for each critical uncertainty.
  - Critical uncertainty 1:
    - X Low
    - X High
  - Critical uncertainty 2:
    - Y Low
    - Y High
3. Map the critical uncertainties on the X and Y axes of the scenario planning 2X2 matrix
4. Develop 4 scenarios in each quadrant.

## Critical Uncertainties

Based on an extensive review of exemplars of key innovation or system changes in the field of fashion, a series of questions relating to the trajectory of the industry were extracted and reviewed in collaborative sessions amongst the research team to yield four key themes, or critical uncertainties, for the future of fashion.

These critical uncertainties form the basis of the scenario building exercise. Each theme is polarised on both ends with a radically different outcome. This can be a high/low contrast such as with the case of regeneration in which we consider either full proactive regenerative practices on one side, and on the other a weaker approach to solving climate issues which might take on more reactive measures to correct damage. In other cases, there is no value judgement between the extremes, as in the case of geographies where global and local systems might represent equal opportunities for positive change. The themes thus emerged from the combination of case study research and conversations carried out



following a horizon scanning approach by the research team in the first three months of the project to draw forwards the most promising weak signals.

#### Critical uncertainty 1: Regeneration

Mang and Reed (2012) define regenerative design as “a system of technologies and strategies, based on an understanding of the inner working of ecosystems that generates designs to regenerate rather than deplete underlying life support systems and resources within socio-ecological wholes.”

In the context of this work, we consider businesses that thrive while contributing to life-affirming futures. The approach to regeneration is inspired by regenerative agricultural practices which leverage the power of natural systems to sustain and repair themselves to support the livelihood of farmers and regain the nutrient density of food (The Sustainable Angle, 2020). Regenerative design as it is understood here, reaches beyond into regenerating other systems - economic, social and cultural. It considers human health and wellbeing as part of holistic practices, and conversely suggests a return to thinking about how health can impact the fashion system.

Critical uncertainty 1 Low: Proactive regeneration

Critical uncertainty 1 High: Damage mitigation

#### Critical uncertainty 2: Trust

This theme explores cultures and systems of sharing information and goods. We acknowledge that fashion is a set of relationships across scales, from the personal to the organisational, with trust as a part of healthy interactions at all levels. On the one hand we consider openness and full disclosure of information as part of a trust led system. This can be enhanced by the ubiquitous use of transparency tools such as various digital technologies or blockchain, leading to fair and self-regulating systems with multiple points of control and action. These can act as one of many tools for control and engagement by citizens. This vision offers a redress to observed confusion from customers and lack of accountability when sporadic and incomplete information is disclosed in response to minimums set by legislation (The Transparency Pledge, 2020).

Critical uncertainty 2 Low: Trust based system

Critical uncertainty 2 High: Sceptic system

#### Critical uncertainty 3: Geography

Here we take into account the distribution of fashion systems over the globe, both in terms of physical location and of cultural sense of place. This includes the emergence of new regional identities in response to Western hegemony in modern history. The theme ranges across two extremes: On one side we observe hyper-local, place-based approaches where materials are sourced and used where they grow (Daly, 2020) and people and places are connected in collaborative communities (Real, Earley and Goldsworthy, 2018). Reversely, ultra-global world visions evolve, enabled by cheap and easy travel and online technologies.



Community relations across cultures and borders are enabled by increased digital communications, represented by the formation of influential online communities and movements. These two extremes offer visions that are independent from any value judgement for a sustainable future.

Critical uncertainty 3 Low: Local

Critical uncertainty 3 High: Global

#### Critical uncertainty 4: Power

Asking where power lies in a given system offers key insights regarding the means to effect change. Distributed power is materialised through equal representation and equity of all stakeholders, including society and nature. In this context we can imagine brands advocating for equal and respectful working conditions. It can also involve the distributed ownership of means of manufacturing and of materials. This may also mean distributed leadership and self-organising teams forming equitable fashion systems where co-design and open-source methods proliferate. This offers a contrast to centralised power where executive decisions are taken by the few for the many. Similarly to the previous theme, the two extremes of this scale in power distribution can be dissociated from a judgement of good or bad approaches when considering the environmental efficacy of either system.

Critical uncertainty 4 Low: Centralised

Critical uncertainty 4 High: Distributed

These four themes represent critical uncertainties with the potential to tilt the future of fashion systems in very different directions. Understanding the nature of the forces which influence decisions today and the resilience of systems in the future is crucial in the context of transformation design practices. These themes are then used in combination to frame plausible futures as contexts for this transformation.

## **Development of scenarios concepts**

As described in the methods, the scenarios are built by combining two axes of uncertainty, creating a cross matrix which defines four areas delineated by the extremes on each axis. These quadrants in the matrix become the canvas for development of new ideas considering the challenges and opportunities within each future scenario.

In this case the four themes were split into two matrices: one which combines Regeneration and Power, and another combining Trust and Geography. The association of the themes into these two duos was based on the most promising and balanced possibilities for the combination of the different themes. While other combinations could have been possible, at the time, these were selected by the researchers as offering an optimal breadth of ideas to explore in the subsequent workshops. These combinations produce 8 distinct plausible futures in which transformative design practices and business models can evolve. They each represent a different set of challenges for stakeholders in this area. The titles and key

phrases distributed in the matrix serve as additional support to imagine the future this could be, and facilitate discussion and further co-development of the scenarios with relevant stakeholders. Each scenario contains a range of elements which may be construed as negative and positive, there is no utopian or dystopian scenario, and 'good' will be interpreted in different ways by different audiences.

As can be seen in figure 2, the matrix combining Regeneration and Power shows the interactions between either distributed and localised power systems, and either a proactive approach to regenerating natural and social capital, or an approach which is limited to damage mitigation. For example, combining a proactively regenerative approach with distributed power produces the scenario titled “One for all and all for one” in which we can envisage grass roots movements leading the restoration to healthy land and communities, and expect the use of biofabrication in communities to thrive. In the opposite quadrant reverse extremes combine to form a scenario titled “Good guys win”, in which a damage mitigation approach to environmental and social challenges is adopted in a centralised power system. In this case we can imagine strong legislation to prevent harm from chemicals and other toxic compounds, as well as consider a form of protectionisms of endangered assets.

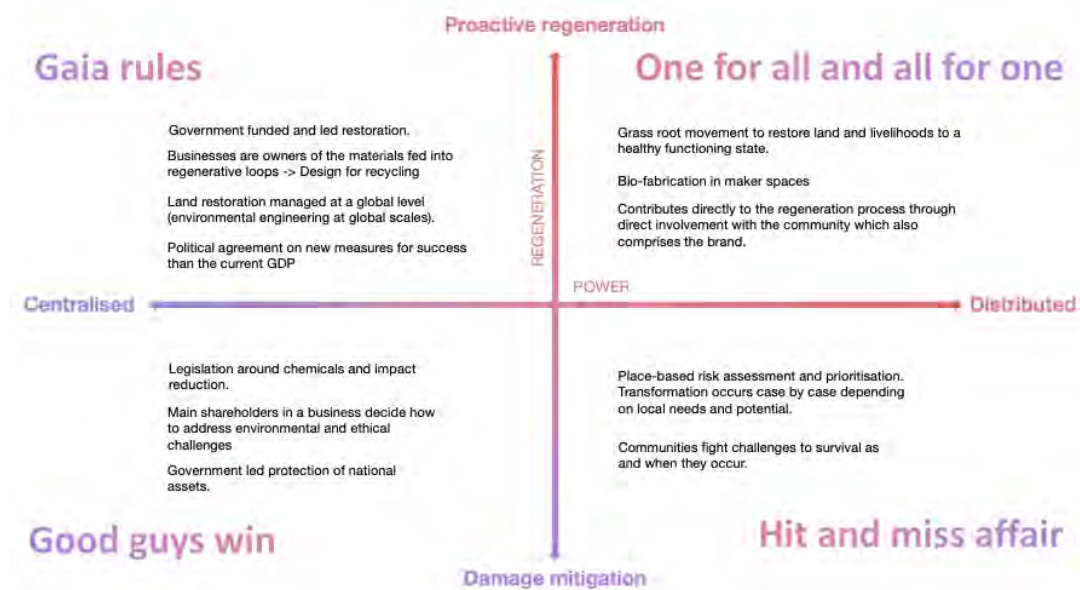


Figure 2. Scenario matrix: Regeneration and Power

Figure 3 shows the combination of uncertainties relating to Trust and to Geographies. In this matrix, the one extreme on the scale of geography is “global”, combined with a trust-based system in the scenario titled “Information superhighway”. It describes a world in which information is readily available to all across the world in open-source forms or enabled by blockchain technology. In the opposite quadrant, a local sceptic system is titled “Under our eye” to represent a world which could include smaller and more closely surveyed social and professional communities where all action is scrutinised by neighbours and collaborators.

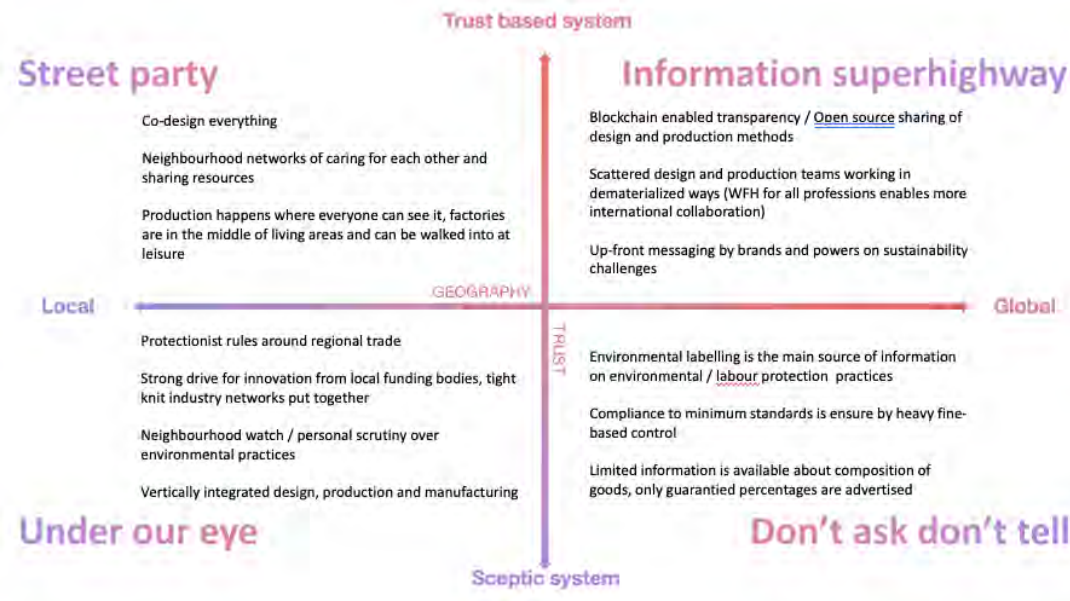


Figure 3. Scenario matrix: Trust and Geography

These scenarios can be used to imagine how multiple variables in fashion systems might evolve and shift under the influence of different futures, and how fashion practices can, in turn, have an active role in shaping these futures. The scenarios are helpful both as a framework for ideation and as a way of checking the resilience of a design or business concept in worlds which are not yet clearly defined. As part of this project, we will use a combination of both these applications of the scenarios. Indeed, the scenario matrices themselves are a means rather than an end. They serve as a canvas to support the innovation process in product, services and business models with the various participants involved in the BFTT project. We follow a tradition of futures thinkers in using the scenario method to bring together the relevant stakeholders and facilitate conversations for transformation (Doughnut Economics Action Lab *et al.*, 2020; Royal Society of Arts, 2020). Moreover, following the co-enquiry approach taken in this research, we expect the framework to evolve under the influence of the stakeholders' thinking. This approach will lead to an iterated vision for the scenarios and their conversion into tools that can be applied with a range of participants.

## CONCLUSIONS

This paper lays out the foundations for the development of the transformation design methodology which will be collaboratively developed in the next phases of the research. It shows how the 2 x 2 matrix approach has been adapted to the thinking specific to this study, demonstrating the value of the method to envision future scenarios. The initial findings from the review of key innovation in fashion practices and business models and the collaborative discussion amongst the research team take the form of four critical uncertainties and the eight scenarios which they structure.





As a key proposition of this research, which is due for completion in June 2022, we argue that transformation must occur within businesses in a way that challenges values and systems at their core. We suggest that future thinking using future scenarios, can be a driver in such radical change for sustainability.

In the next phases of the work, the methods produced as a key contribution of this project to the fashion and textiles sector will be co-developed with fashion designers. These participants take on a role more complete than simple case studies as their input helps steer the direction in which the research proceeds. They will bring complementary perspectives to the challenge of transforming the industry, whether this is the speculative vision of emerging designers, studying fashion, that of micro and small businesses or that of designers in multi-national brands.

The scenario matrices will be deployed as part of workshop tools. This will enable a reflective analysis of the effects of future thinking on fashion practices and help to better understand mechanisms for transformation. Few tools are currently available that offer means to assess positive change beyond technical and mainly incremental improvements. This research proposes that a new analysis of products and services designed with transformation in mind can help acknowledge the deeper changes needed for effective transitions to sustainable and circular fashion practices and business models.

## References

- Burns, C. et al. (2006) Design Council RED PAPER 02: Transformation Design. Available at: <https://www.designcouncil.org.uk/sites/default/files/asset/document/red-paper-transformation-design.pdf> (Accessed: 11 February 2021).
- Carney, J. (2018) The Ten Commandments of Horizon Scanning - Futures, Foresight and Horizon Scanning. Available at: <https://foresightprojects.blog.gov.uk/2018/03/08/the-ten-commandments-of-horizon-scanning/> (Accessed: 29 July 2020).
- Doughnut Economics Action Lab et al. (2020) Creating City Portraits: A methodological guide from The Thriving Cities Initiative. Available at: <https://doughnuteconomics.org/Creating-City-Portraits-Methodology.pdf> (Accessed: 15 March 2021).
- Ellen MacArthur Foundation (2017) A New Textiles Economy: Redesigning fashion's future. Available at: <http://www.ellenmacarthurfoundation.org/publications> (Accessed: 19 March 2019).
- Forum for the Future (2020) From System Shock to System Change - Time to Transform. Available at: [https://www.thefuturescentre.org/wp-content/uploads/2020/11/Future-of-Sustainability-2020\\_Time-to-transform.pdf](https://www.thefuturescentre.org/wp-content/uploads/2020/11/Future-of-Sustainability-2020_Time-to-transform.pdf) (Accessed: 7 April 2021).
- Global Fashion Agenda (2017) Pulse of the Fashion Industry 2017.
- Government Office for Science (2017) 'The Futures Toolkit: Tools for Futures Thinking and Foresight across UK Government', p. 116.



- Hebinck, A. et al. (2018) 'Imagining transformative futures: participatory foresight for food systems change', *Ecology and Society*, 23(2). doi: 10.5751/ES-10054-230216.
- Mang, P. and Reed, B. (2012) 'Regenerative Development and Design', *Encyclopedia Sustainability Science & Technology*, 1, p. 8855. doi: 10.1007/978-1-4614-5828-9\_303.
- Real, M., Earley, R. and Goldsworthy, K. (2018) 'Practices Places Projects: Enrolling Stakeholders for Circular Fashion', in *Proceeding of the Global fashion Conference 2018. What's Going On?*, London. Available at: [http://gfc-conference.eu/wp-content/uploads/2019/02/REAL-ET-AL\\_Practices-Places-Projects-Enrolling-Stakeholders-for-Circular-Fashion.pdf](http://gfc-conference.eu/wp-content/uploads/2019/02/REAL-ET-AL_Practices-Places-Projects-Enrolling-Stakeholders-for-Circular-Fashion.pdf) (Accessed: 10 April 2019).
- Roubelat, F. et al. (2015) 'Probing ephemeral futures: Scenarios as fashion design', *Futures*, 74, pp. 27–36. doi: 10.1016/j.futures.2015.05.004.
- Royal Society of Arts (2020) Future Change Framework. Available at: <https://www.thersa.org/approach/future-change-framework> (Accessed: 7 April 2021).
- Shallowe, A. et al. (2020) A stitch in time: realising the value of futures and foresight. Royal Society of Arts. Available at: <https://www.thersa.org/reports/futures-thinking-foresight> (Accessed: 8 March 2021).
- The Sustainable Angle (2020) Regenerative Agriculture, Future Fabric Expo. Available at: <https://cdn.futurefabricsvirtualexpo.com/uploads/2020-06/REGENERATIVE-AGRICULTURE.pdf> (Accessed: 10 August 2020).