design for circularity

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Consider designing with the end in mind, to decide right from the outset whether the product should be part of the technical or biological cycle. Then make sure everything in that design is compatible with the chosen cycle[1].

Consider different ways to enhance the value of a garment at the point when users may think of discarding it [2]. Prolonging the lifetime of a garment by two will decrease its climate impact by 49%[3].

Consider that the impact from production should be weighed against the intended speed and lifetime of the product. We may intend our clothes to be 'slow' but for many reasons they end up being 'fast', and vice versa. Our current materials are essentially all slow; they take time, water, energy, chemicals and valuable resources to make[1].

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textile fiber impact

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Consider that common distinction into "good" and "bad" textile fibers, based on generic classifications of fiber types, is too simplified. A t-shirt made from organic cotton or recycled material does not automatically become a more sustainable t-shirt[4].

Consider that the differences between specific suppliers of textile fibers are often greater than differences between fiber types. Transparency throughout the production chain is right now a more pressing issue than fiber content[5].

Consider that textile fiber production also relies on energy and materials, other than the raw material. Secondary flows, including production of heat, electricity, fertilizers, pesticides, dissolution chemicals, catalysts, and more are often larger on a mass basis than the raw materials used as fiber feedstock[5].

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production impact

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Consider using renewable energy, for both electricity and heat in the production chain. At present, 80% of a garment's climate impact comes from the production phase[3]. Replacing the fossil energy is seven times more important than replacing the materials[6].

Consider that the wet treatment is likely to create 20 times more damage than the cotton cultivation. In total 92% of the toxicity impact stems from the production phase[7].

Consider that the risk of microplastics shedding from garments during production and use is minimized if: brushing is reduced, ultrasound cutting is applied in the cut & sew process and microparticles on fabrics are removed at the production stage[8].

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user

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Consider buying second hand, renting or borrowing when updating your wardrobe. To rent or borrow is particularly important for clothing expected to be used only once or a few times, such as special-occasion dresses and suits.

Consider that females and younger consumers are on average more likely to report having both used and intended to use alternative business models when acquiring clothing[9].

Consider that user transport to and from the store accounts for 11% of a garments total climate impact. Therefore, taking the bike to your local second-hand store is the least harmful choice when updating your wardrobe[3].

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alternative business models

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Consider that at present the most sustainable clothing is the clothing already produced. Businesses prolonging the lifetime of clothing through resale, rent or subscription can contribute to a more sustainable fashion system.

Consider that reselling clothes online and traditional repair services are the most popular businesses used to prolong the lifetime of clothes. To accelerate the change, consumers and companies should be seen as co-producers of new business models, and both need to participate[9].

Consider that selling second hand clothes using a 'first buy experience' setting is a business model with growth potential. Furthermore, the platforms used to sell and buy pre owned apparel have changed from traditional flea markets to online forums, mobile applications and carefully curated stores [10].

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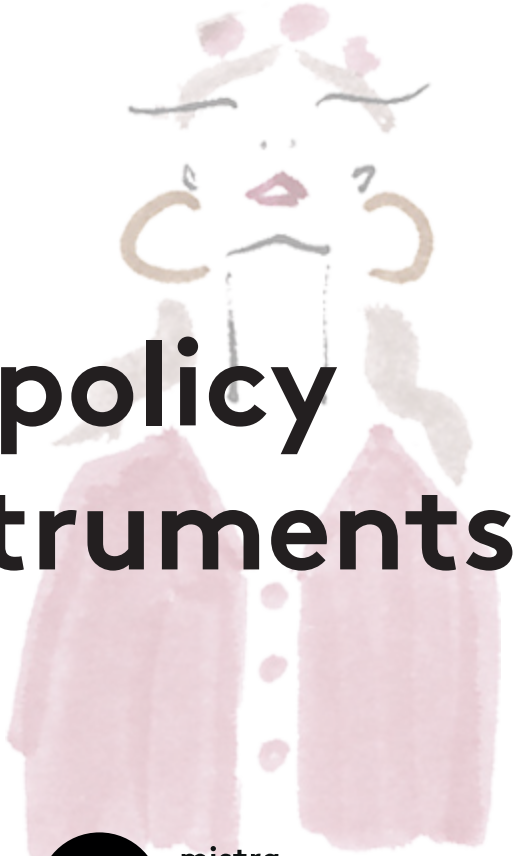

policy instruments

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Consider that mandatory Extended Producer Responsibility (EPR) and a Refunded Virgin Payments system, i.e. a charge on virgin fibers, are shown to have large positive impacts on fiber-to-fiber recycling as well as overall reuse and recycling of textiles[11].

Consider that policy tools such as wage subsidies, tax breaks, start-up funding and knowledge hubs can promote more sustainable business models such as second-hand, repair, sharing and leasing; these give opportunities for more sustainable consumption[12].

Consider how removing administrative barriers and better harmonization of regulation connected to collection, storage and shipment of used textiles, could enable easier collection and treatment within global textile value chains[13].

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end of life

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Consider that recycling, both chemical and mechanical, should be the last step after the point when reuse, repair and resale are no longer feasible.

Consider the end of life already at the drawing table. To ease the chemical recycling process, consider designing using mono-materials[2].

Consider that greater transparency is needed in a circular textile value chain, where tagging could be a solution. Universally accepted tags could be of great value not only in the end of life stage, but throughout the entire life cycle. Apart from accessible information about the exact fiber composition, needed in a sorting line, it could also contain data about the designer, care-instructions and previous owners for future resale[14].

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joint effort

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Consider that measuring 'sustainability' is a complex task. Life Cycle Assessments, the total impact of a garment throughout its entire life, is one way of concretizing garment impact. A Life Cycle Assessment relies on data from all stakeholders throughout the complete lifecycle, from crop cultivation, production, user behaviour and disposal, this is why collaboration and a systemic view is crucial[7].

Consider that bringing experts from different disciplines together takes a lot of effort, from all participants. Between academics, scientists and industry stakeholders co-creation can be possible and highly beneficial after building trust, shared goals and deeper understanding, along with common tools[1].

Consider that a systemic change is needed. It will take collaboration and a coordinated joint effort to make it happen.

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To learn more about the recommendations made and research for sustainable fashion, please visit mistrafuturefashion.com and following references:

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