FUTURE IMPACTS

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The Millennium Project

The Future of Sustainability in the Fashion Industry

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C&A Foundation
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Executive Summary

The Why and the How of the Study

At a time when sustainability is receiving increasing attention – in the public as well as in the business and policy sphere, there is, in spite of the flourishing discourse, still a lot of unclarity on the future perspectives of sustainability (not only) in the fashion sector. C&A Foundation commissioned this study to reflect on these future perspectives specifically in the fashion industry in a Delphi-based approach[1] with a select set of experts.[2] The aim is to use results within their own strategic programming - but also to make them available and usable for the sector as a whole.

Focusing on the perspective of the future of sustainability in the fashion industry, the study asks:

- **How much change does the industry have to undergo to achieve sustainability,** in the sense of net-positive impacts[3] for the restoration of the environment as well as for working conditions and poverty? Or in other words: How far away are we from achieving net-positive sustainability?
- **What are opportunities for strategies aimed at achieving net-positive sustainability**? Which barriers would have to be overcome?
- **What are emerging trajectories or pathways towards achieving net-positive sustainability** across the fashion industry?

Methodology-wise, the answers provided were brought together with and **on the basis of insights from a group of international experts from a variety of backgrounds**. The **key approach was that of a Delphi-study** (in the form of an online survey), one of the key foresight methodologies that aims at developing shared views about possible future developments. In the survey, two cross-cutting questions were posed around the progress towards sustainability, while the rest of the survey focussed on 14 specific future hypotheses (called concepts in the following, to use a more accessible term).[4] This approach was **supplemented by expert interviews as well as a workshop**, which built on and refined the survey results. The workshop especially focussed on the perspectives of opportunities (and on its flipside, barriers to overcome) for achieving sustainability in the fashion industry, as well as emerging pathways.

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[1] Please see the annex for details on methodology and definitions of technical terms used.

[2] The authors would like to thank and express their deep gratitude to the experts who contributed to the study, whether in the form of interviews, contributions to the online Delphi survey or to the workshop.

[3] We follow the definition of net-positive impacts referenced by Hollender 2015 (i.e. "Businesses have impacts on the environment and society. Some are negative, some positive. For a company to be net-positive, the latter need to outweigh the former."). In addition, please refer to Forum for the Future (2018) and Net Positive Project (2019) for the current discourse around this concept.

[4] Please see the annex for details on methodology and definitions of technical terms used.

Of course, there are caveats that come with this study. As with any piece of work that looks into the future, we have to stress that **it is not meant to paint an exact picture of what is to come.** However, it shares a **well-informed view of, on the one hand, what to probably expect if we continue on the path we are on currently**. One the other hand, it also **lines out what is feasible assuming that a variety of measures are taken by actors from across the field**, and lines out the **pathways and actions to take to get to a radically sustainable future for the sector**.

Key Results

Current Efforts are not Enough to Achieve Net-Positive Sustainability

Assuming that current trends continue, the **majority of Delphi experts do not regard a net-positive impact of the fashion industry as achievable: 75% regard this as infeasible for the restoration of the natural environment, and 62% regard this as infeasible for working conditions and poverty**. However, this does not mean that a net-positive impact on either is unachievable as such. Instead, stronger and probably more radical efforts than visible in current trends will be needed to accelerate change and thus make a net-positive impact possible. The actions attributed to the concepts ranked in the Delphi exemplify what such efforts can be.

With Strong Additional Efforts, Concepts Pro Sustainability Can Reach Mainstream within 16 Years

For all of the concepts evaluated in the study, the experts also estimated the so called “ETM” or “earliest time to mainstream”. This refers to when each of these concepts could become a mainstream phenomenon - under the assumptions that strong efforts are taken by the respective actors.

The overall picture of these assessments of when concepts could reach mainstream is striking: **The earliest time to mainstream for all individual concepts is expected to be “within reach”. In fact, all concepts are assessed as being achievable by 2035, i.e. within 16 years at most.** The large majority of the concepts are feasible over the medium-term (in 5 to 15 years), and two thirds could even reach mainstream within the next decade - again, only if the respective efforts are taken. For only one concept (“the majority of clothing is locally produced”), ETM is assessed as being achievable over the long-term, i.e. within 16 years at the earliest.

Top 7 of Concepts Pro Sustainability in the Fashion Industry (Increased Global Awareness; Fibres and Processing Innovation; Highly Detailed Sustainability Reporting; Worker-Driven Initiatives; High Concentration (i.e. increased Cooperation); Extended Producer Responsibility; (Living) Wages in the Fashion Industry)

As with any Delphi, the data and outcomes are not always straightforward "key messages" but have to be analysed and interpreted. On the level of the concepts assessed, we highlight "the top 7" concepts, so to speak the "top half of the field" - those that should in any case be considered in terms of strategic priority.

A clear "top 5" concepts stand out, resulting from looking at concepts that are rated as achievable quite quickly, as well as having a high impact either on the restoration of the natural environment *or* on working conditions and poverty (high impact defined as being ranked in the top 5 for highest impact values). In other words: These concepts can be brought to mainstream within the next decade - and thus should be a strategic focus area. These concepts are:

- Increased Global Awareness
- Fibres and Processing Innovation
- Highly Detailed Sustainability Reporting
- Worker-Driven Initiatives
- High Concentration (i.e. increased cooperation)

However, for a balanced prioritization that does not overly centre on earliest time to mainstream, we also highlight two concepts with the highest impact on the restoration of the natural environment as well as on working conditions and poverty, even though they feature a longer time to mainstream. These two concepts are:

- Extended Producer Responsibility
- (Living) Wages in the Fashion Industry

The resulting "top 7" are lined out in more detail in the study itself, followed by a briefer outline for the remaining concepts. In other words: A balanced strategy will also need to consider (at least) those two concepts with the highest impact, even if they will take longer to implement and diffuse.

Strategies Need to Address Two Timescales

While the experts demand a radical re-envisioning of a fundamentally changed future fashion system and industry, governed by the principles of net-positive impacts, they also clearly see the necessity to deal with the problems caused by the current system during the transition period. As a consequence, strategies towards creating net-positive sustainability in the fashion industry will need to simultaneously pay tribute to:

- Addressing current problems of the existing system (such as the principles of the "race to the bottom", the "fast fashion trap" and the consequences of a highly fragmented value chain, with e.g. persisting problematic and unjust working conditions for many in the fashion industry);
- While working towards creating a fundamentally changed new system - with at its core a fundamentally changed "sustainable consumption culture", and new business models with re-use, recycling and circularity at their center.

Pathways Towards Systemic Change: The Triad of New Narratives / Global Awareness, and an Education and Regulation Push

While looking at the individual concepts from the Delphi highlights what actions can and should be taken to advance sustainability in the fashion industry (regarding specifically these areas of change), the questions of which overall pathways to change are promising, and which fields of action stand out as cutting across the different concepts, also arise. Reflections around this particularly stressed the **need for radical, disruptive long-term change, which could only be enabled with a holistic and systemic approach.** Concerning **fields of action that stood out as cutting across the concepts, three fields can be identified: First of all, there is a focus on "changing the narrative",** as it was often referred to in the workshop discussions, or "Increased Global Awareness", as the original name of the concept says. According to the experts, this approach is not only feasible to implement quite quickly, but also has the advantage of a **current "window of opportunity"**, with a focus in the public discourse on the necessity as well as feasibility of sustainability efforts, as visible e.g. in the Fridays for Future movement. **Focusing on "increased global awareness" is regarded as a prerequisite, major lever and catalyst for making other actions feasible**, and enabling them to be diffused globally and more rapidly than otherwise possible.

Secondly, **respectively changed political frameworks are seen as a major building block to accelerate and enable rapid change towards sustainability,** with actions focusing on changed incentives e.g. via taxes and laws, procurement conditions etc. And finally, **an education focus is regarded as a "bridge" between what is mainly a bottom-up approach of increased global awareness and the top-down approach of changed political priorities**. Not only do elements of an education push play a role for many of the concepts discussed in the study (with respective actions such as mainstreaming Holistic Circular Design Frameworks to Education for Empowering Workers); they are also seen as a **mid-term lever for pushing knowledge as well as skills on sustainability and transformation into not only the current and next generation of citizens and consumers, but also designers and decision-makers**.

However, it is important to understand that this focus was not meant to, as one participant put it, “start at primary school and then wait for 15 years until that generation has influence”, but instead especially start efforts at the level of on-the-job training and tertiary education, building on and scaling up respective existing initiatives.

Outlook

The project results line out what the experts involved think about the future of sustainability in the fashion industry. We hope the results will be usable for many, and that a variety of actors from the field will dive deep into the results, and make use of them as a starting point for e.g. their own dialogues about future perspectives, be it internally for strategy-making, or in open formats with other stakeholders.

The study clearly contains what can be called a wake-up message. I.e. the conclusion that if we rely or rest on current trends continuing, we will not be able to achieve net-positive sustainability. It is thus also an appeal to the industry that much more than what is currently being done, or is in the works, has to be realized to achieve this goal. At the same time, the **results of this study contain many “messages of encouragement”.** Achieving all of the concepts featured in the study is seen as within reach (feasible in a timeline of 16 years at the most), if the necessary measures are taken. On another level, we see the exceptional level and depth of engagement of the experts involved in the study as another pointer towards positive future perspectives. Their commitment in this process, bringing together voices from widely different domains, backgrounds and regions of the world, demonstrated that dialogue and cooperation across the industry is desired as well as needed, fruitful and achievable. The question of what kind of future we aspire to, and what we can do create it, can be a catalyst in creating more of these kinds of much-needed opportunities for cross-cutting dialogue and cooperative strategic thinking.

Introduction and the Project Context and Aims

Sustainability has made it to the front pages of the daily newspapers, into prime slots of major television news shows and is one of *the* topics of debate in any kind of discourse about the future, be it in industry or policy circles, or in the general public realm. In the fashion community the reflection around these issues has recently intensified, and is visible, for example, in reports such as "The Transition to Good Fashion" or "Fashion Futures 2030" or "Circular Production and Consumption in Fashion and Beyond" and various other initiatives and studies.

Still, while the discourse is in full swing and more and more attention is being paid to the issues around sustainability, there is unclarity on the future perspectives of sustainability in the fashion sector. Thus, C&A Foundation commissioned this study to reflect on these future perspectives in a Delphi-based approach with a select set of experts, with the aim to use results within their own strategic programming - but also to make them available and usable for the sector as a whole.

Focused on the perspective of the future of sustainability in the fashion industry, the study asks:

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Methodology-wise, the answers provided were brought together with and **on the basis of insights from a group of international experts**. The **key approach was that of a Delphi-study** (in the form of an online survey), one of the key foresight methodologies that aims at developing shared views about possible future developments. In the survey, two cross-cutting questions were posed around the progress towards sustainability, while the rest of the survey focused on 14 specific future hypotheses (called concepts in the following pages, to use a more accessible term). This approach was **supplemented by expert interviews as well as a workshop**, which built on and refined the survey results. The workshop especially focused on the perspectives of opportunities (and on its flipside, barriers to overcome) for achieving sustainability in the fashion industry, as well as emerging pathways.

Thus, this study rests on the insights from the twenty-five experts who contributed. Some might regard this as a "small" group, and it certainly is not "representative" in the traditional sense. However, in spite of the group size, or even because of it, we regard the views expressed as highly valid, and the results

emerging from the study as solid - for a number of reasons. First of all, recent experiences with smaller groups of Delphi contributors have shown to actually produce higher quality results than often produced by larger groups of contributors (due to e.g. a very strict selection process as well as the limited groups size enabling a deeper conversation process within the group, which is at the core of the Delphi methodology). Therefore, the group size was as it is, intentionally. Secondly, the selection process within this project was extremely thorough, based on criteria-led research, and bringing together a diverse group with high expertise, from a mix of countries in the major world regions, and a variety of backgrounds (such as academia, non-profits, policy and governance, etc.). And finally, the level of engagement from the experts was exceptionally high, both time-wise and concerning the quality and depth of contents provided, but even more noticeably so with respect to the experts openness in the dialogue process. Their commitment to thinking and reflecting together, and as a group come to new insights - was a highly important contributing factor to the strength of the study.

At the same time, there are caveats that come with this study. As with any piece of work that looks into the future, we have to stress that it is not meant to paint an exact picture of what is to come. However, it shares a well-informed view of, on the one hand, what to probably expect if we continue on the path we are on currently. One the other hand, it also lines out what is feasible assuming that a variety of measures are taken by actors from across the field, and lines out the pathways and actions to take to get to a radically sustainable future for the sector. We thus hope these results will be received with a "foresight mindset" - a mindset characterized by the openness to question one's own assumptions, and a focus on the actions needed to create a desirable future.

Key Insights with A View Across the Delphi Concepts

Current Trends Are Not Sufficient to Achieve Net-Positive Impacts: Strong Additional Efforts Needed

How to measure progress towards sustainability can be a matter of debate. Nevertheless, most will agree that the last decades have seen major progress in terms of what can be called a paradigm shift towards sustainability. But is what we are doing today "enough"? Will it get us to achieve net-positive sustainability, in terms of the impact on the restoration of the environment, as well as on working conditions and poverty?

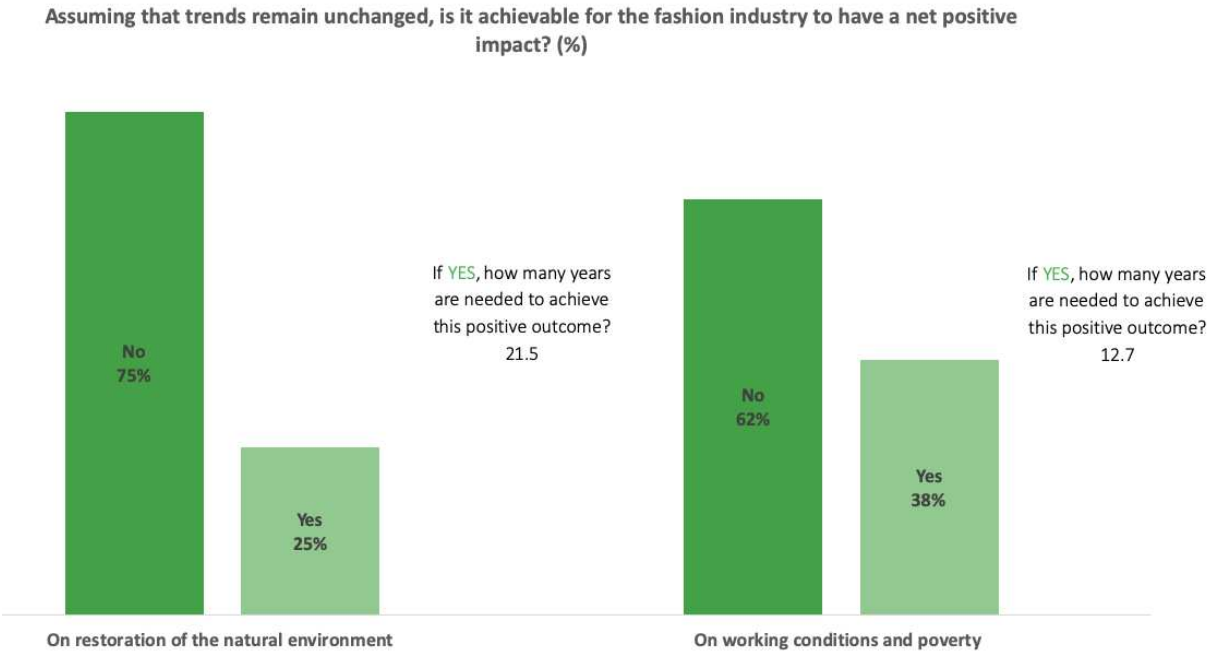


Image: Possibility of the fashion industry having a net positive impact assuming the continuation of current trends

The experts say: It will not. The outcome of the Delphi online-survey[5] thus conveys a clear message: Assuming that current trends continue, the majority of Delphi experts do not regard a net-positive impact of the fashion industry as achievable: 75% regard this as infeasible for the restoration of the natural environment, and 62% regard this as infeasible for working conditions and poverty. However, this does not mean that a net-positive impact on either is unachievable as such. Instead, stronger and probably more radical efforts than visible in current trends will be needed to accelerate change and thus make a net-positive impact possible. The actions attributed to all of the concepts ranked in the Delphi exemplify what such efforts can be.

All Concepts Within Reach: Given Additional Efforts, All Concepts Could Reach Mainstream in 5 to 16 Years

For all of the concepts evaluated in the study, the experts also estimated the so called "ETM" or "earliest time to mainstream". This refers to when each of these concepts could become a mainstream phenomenon - under the assumptions that strong efforts are taken by the respective actors.[6]

The overall picture of these assessments of when concepts could reach mainstream is striking: The earliest time to mainstream for all individual concepts is expected to be "within reach". In fact, all concepts are assessed as being achievable by 2035, i.e. within 16 years at most. The large majority of the concepts are feasible over the medium-term (in 5 to 15 years), and two thirds could even reach mainstream within the next decade - again, only if the respective efforts are taken.[7] For only one concept - the majority of clothing is locally produced -, ETM is assessed as being achievable over the long-term, i.e. within 16 years at the earliest. On the other hand of the spectrum, one concept stood out as being able to become mainstream within a short time-frame, i.e. a mere 5 years - the concept of increased global awareness.

Respectively, the ETM timelines indicate that while the experts see current trends as insufficient for achieving net-positive sustainability, they also regard the change needed (as expressed in the different concepts) as possible – given that the respective *additional* efforts, going beyond what is currently being done, are in fact realised. The question is thus: *How* can this be achieved? We will line this out in more detail in the following.

[5] In addition to assessing the different concepts, the Delphi online survey also asked participants to reflect on general progress towards sustainability in the fashion industry, specifically the timelines for achieving a net positive impact. Experts were asked whether, given the assumption that current trends continue, they would expect a net-positive impact of the fashion industry to be achievable in terms of restoration of the natural environment as well as in terms of working conditions and poverty.

[6] For details on each term, concept definition and question in the study, please see the annex.

[7] However, as the standard deviation for assessments of the ETM was relatively high, outcomes should be treated as an indication only rather than as a precise prediction: They represent only the average expectation of the experts, who have somewhat diverging views concerning the ETM per concept.

Image: Timeline of concepts regarding Earliest Time to Mainstream (ETM), with ranks on flags[8]

[8] Values are rounded, for details of all values please see report annex. Values on "flags" are ranks of the concepts, from the Earliest Time to Mainstream to the latest. "=" indicates that more than one concept takes this rank (with the following rank then being "skipped" in the rank count).

"The Top 7" Concepts Pro Sustainability in the Fashion Industry

In the following results summary, to interpret the experts' insights, we not only show the aggregated responses to individual questions from the Delphi Study, but we also go further in drawing from the participants discourse around the issues as given in over 250 comments in the discussion threads of the Delphi online survey, and the rich reflection in the workshop. As with any Delphi, the data and outcomes are not always straightforward "key messages" but have to be analysed and interpreted. Some messages cut across the individual concepts rated in the online Delphi survey, and are lined out separately. But on the level of the concepts assessed, we highlight "the top 7" concepts, so to speak the "top half of the field" - those that need to be considered in terms of strategic priority.[9]

From the first analysis, a clear "top 5" concepts stood out immediately, resulting from looking at concepts that are rated as achievable quite quickly, as well as having a high impact either on the restoration of the natural environment *or* on working conditions and poverty (high impact being defined as being ranked in the top 5 for highest impact values). In other words: These concepts can be brought to mainstream within the next decade - and thus should be a strategic focus area. These concepts are:

- Increased Global Awareness
- Fibres and Processing Innovation
- Highly Detailed Sustainability Reporting
- Worker-Driven Initiatives
- High Concentration / Cooperation[10]

However, for a balanced prioritization that does not overly center on earliest time to mainstream, we also added the two concepts with the highest impact on the restoration of the natural environment as well as on working conditions and poverty, even though they feature a longer time to mainstream. These "top 7" will be lined out in more detail in the following sections, followed by a briefer outline for the remaining concepts. In other words: A balanced strategy will also need to consider (at least) those two concepts with the highest impact, even if they will take longer to implement and diffuse. These two concepts are:

- Extended Producer Responsibility
- Wages in the Fashion Industry

[9] There are also other reasonable ways to prioritize. For example, an organization focusing only on long-term systemic change (with less of a focus on current problems) could disregard ETM, or give it less weight; an organization focusing especially on working condition would prioritize concepts with high impact in that field. To enable a view at all concepts for such purposes, and possible other ways of prioritization, all assessments are shared in the annex, and all concepts featured in the report as such.

[10] In previous reports, this concept was referred to solely as 'High Concentration'. However, due to reasons of clarity, this concept now has the title 'High Concentration / Cooperation'.

Rank	Earliest Time to Mainstream (years, average, in brackets)	Average impact on restoration of natural environment (average values in brackets, scale -4 to 4)	Average impact on working conditions & poverty (average values in brackets, scale -4 to 4)
1	Global Awareness (5.0)	Extended Producer Responsibility (3.1)	Wages in the Fashion Industry (3.5)
2	Fibres and Processing Innovation (8.3)	Fibres and Processing Innovations (2.9)	Global Awareness (2.3)
3	Highly Detailed Sustainability Reporting (8.6)	Circular Economy (2.8)	High Concentration / Cooperation (2.3)
4	Worker-Driven Initiatives (8.8)	Clothing as a Service (2.8)	Worker-Driven Initiatives (2.1)
5	High Concentration / Cooperation (8.9)	High Concentration / Cooperation (2.6)	Tax Regulations for Increasing Sustainability (1.9)
		Introducing Resale/Second-hand Models (2.6)	Consumer Level Sustainability Index (1.9)
		Tax Regulations for Increasing Sustainability (2.6)	Highly Detailed Sustainability Reporting (1.9)
*8	Extended Producer Responsibility (9.7)		
*12	Wages in the Fashion Industry (12.4)		

Image: Top 7 concepts along the ratings in the Delphi, top 7 highlighted in blue

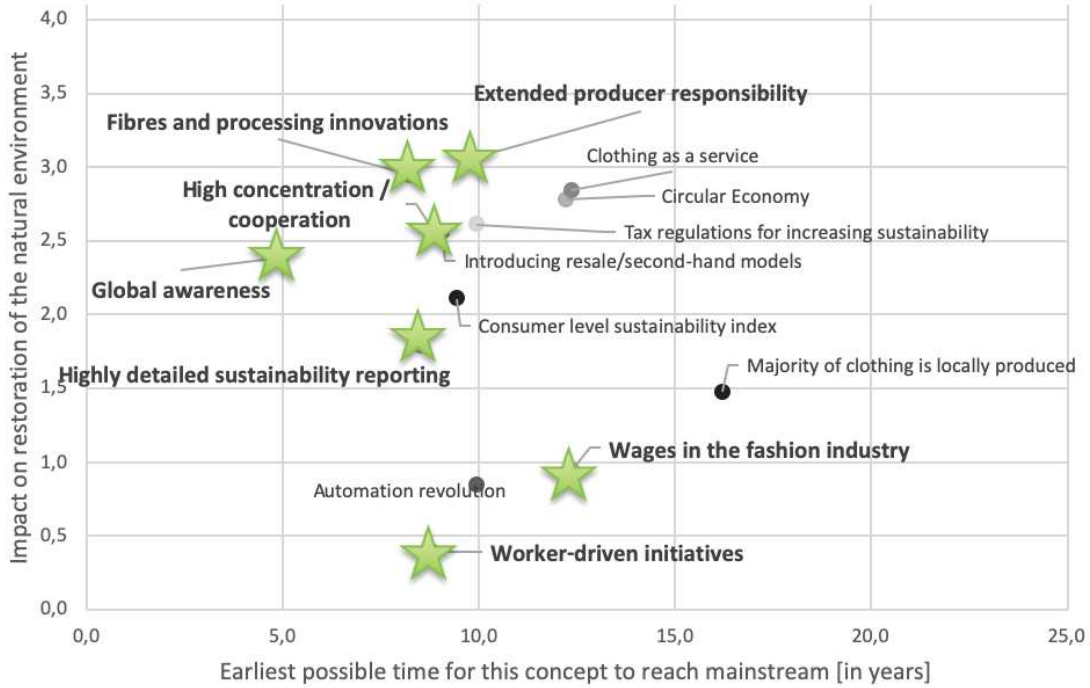


Image: Concepts ETM and impact on restoration of the natural environment

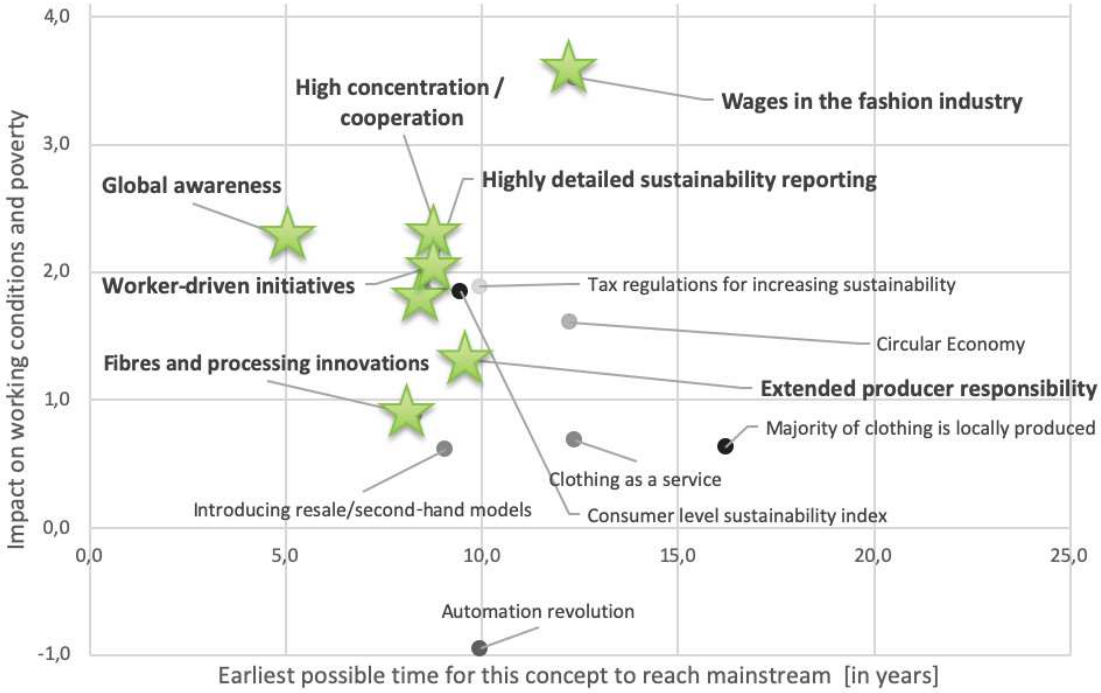


Image: Concepts ETM and impact on working conditions and poverty

Overview of "The Top 7" Concepts


Increased Global Awareness


Fibres and Processing Innovation


Highly Detailed Sustainability Reporting


Worker-Driven Initiatives

High Concentration / Cooperation


Extended Producer Responsibility


Wages in the Fashion Industry

Changing the Narrative via "**Increased Global Awareness**"

Definition: Global sustainability awareness raising strategy is launched.[11]
Global marketing strategy focused on raising awareness and increasing education around sustainability issues is launched. It is a concentrated effort by a major segment of the fashion industry - with key players all speaking in one voice. The strategy covers many different channels, and its messages are adapted and targeted to be meaningful and relevant in every region of the world.

"Extinction Rebellion, Schools for Climate Strikes, Fashion Revolution are examples of this starting to happen. Academic institutions can also teach the long-term thriving of graduates alongside their short-term employment."[12] (Expert quote)

Raising global awareness could become mainstream in **as little as 5 years** according to the experts, and with only a slight variance in their opinions (least standard deviation of all concepts at 2.5 years). While the concept of raising global awareness achieved **high scores both in regards to restoration of the natural environment** (2.4, ranked 8th) **and working conditions and poverty** (2.3, ranked 2nd=).

Lines of action:

As lines of actions (i.e. respective strategic options, for C&A foundation or the industry as a whole), the experts stressed especially:

- **Cooperation:** The cooperation with influencers and social media, as well as overall media and the arts / culture, utilizing storytelling principles
- **Global coalition:** The creation of a global coalition across the industry and the whole value-chain, with coordinated messaging (potentially reaching out beyond the sector and including e.g. "lawyers against workers' and environmental exploitation")
- **Changed narrative:** The critical role of a respectively changed narrative around sustainability as a lever for more radical follow-up changes in the arena of policy and business practices

[11] In this definition, and in those in the following sections, we first show the statement per theses exactly as was assessed in the Delphi, as well as the additional description of the concept, again exactly as it was described in the Delphi.
[12] Here and in the other chapters on individual concepts, we share a selected quote from the experts from the comments and discussion section of the Delphi. In some cases, these quotes have been modified very slightly to correct typographical errors and to improve understanding. In contrast, in the detailed results in the Annex the comments have been presented without any modification.

Fibres and Processing: Strong Positive Impacts on the Environment

Definition: New types of fibres and processing technologies open up new possibilities. A new generation of fibres and processing technologies go mainstream allowing low-energy and/or low-water recycling of clothing and a net-positive impact (on the environment) during processing and maintaining.

"A greater use of technology in general to solve some of our social and environmental challenges would help push the science along."
(Expert quote)

Fibres and processing innovation was assessed as having a **strongly positive impact on the environment** (2.9, ranked 2nd); but less effective with regard to the impact on working conditions and poverty (0.9, ranked 10th). It is expected that the concept could become **mainstream in less than a decade** (8.3 years, with a comparably low standard deviation of 3.77).

Lines of action:

As lines of actions (i.e. respective strategic options, for C&A foundation or the industry as a whole), the experts stressed especially:

- **Existing sustainable practices:** Support for transfer and scaling of existing sustainable practices and (materials) solutions
- **Raising investments** in respective R&D (public and private sector); also utilizing the potential of new funding models, e.g. crowdfunding, for advances in these fields including a push for new business models
- **Education and networking:** Progress here needs to be supported by a respective education and networking push; e.g. via a "qualitative circular holistic design framework" (created by a group of experts on LCA, system design and fashion & textile industry, including roadmaps for a wide range of product types over the next 25 years, utilizing open source principles)

Highly Detailed Sustainability Reporting: Mid-term Feasibility, High to Medium Impacts

Definition: Highly detailed sustainability reporting is mandatory in all lending and investment agreements with major financial institutions. The majority of financing institutions (banks, investment funds, etc.) require companies within the fashion industry to maintain a credible system for documenting data in areas such as purchasing practices, wages, other working conditions, chemical usage and the environmental impact of their products, etc. This is necessary if they wish to obtain financing. Companies within the fashion industry may do this via a certified standard system.

"Define verifiable, credible and comparable standards for social and environmental impact - particularly those aligned with the 2030 SDGs. Start measuring and reporting publicly to stakeholders."
(Expert quote)

The impact of highly detailed sustainability reporting was assessed **particularly favourably in regard to working conditions and poverty** (1.9, ranked 5th=), while slightly less favourably, but still positive, in regard to the environment (1.8, ranked 10th). Experts believe the concept could become **mainstream before 2030** (8.6 years, with a comparably low standard deviation of 3.39).

Lines of action:

As lines of actions (i.e. respective strategic options, for C&A foundation or the industry as a whole), the experts stressed especially:

- **Global standards:** Establishing comparable, ideally global standards (including respective regulation and other policy-led incentives, e.g. via procurement rules); including transparency via data-driven insights
- **Education paradigm shifts** with a respective diffusion of skills and tools to ease implementation, ("10 year plan to raise a (sustainability-focused) generation"), including exchanges between "consumer and producer countries"
- **The lever of investment** and the finance industry, if they were to utilize sustainability reporting (much more than they do today)

Worker-driven Initiatives: Mid-Term Feasibility, High Impact for Working Conditions

Definition: The majority of fashion companies have embedded Worker-Driven Initiatives. Worker-Driven Initiatives are worker-led processes of securing the protection of human rights. They are built on an industry-specific human rights code of conduct, designed by workers and targeted at longstanding abuses that workers in the industry experience first-hand.

"There is a need to create change on various levels simultaneously – from legislation regarding collective bargaining and a range of social and environmental protections, through to recognizing the vital contribution that small, location specific groups of people can achieve in a community."
(Expert quote)

While it is possible worker driven initiatives could become **mainstream in under 10 years** (8.8 years, with a comparably high standard deviation of 5.32), the impact of worker-driven initiatives was assessed as particularly **low-impact with regard to the restoration of the natural environment** (0.4, ranked 14th). However, the concept rated **higher for impact on working conditions and poverty** (2.1, ranked 4th).

Lines of action:

As lines of actions (i.e. respective strategic options, for C&A foundation or the industry as a whole), the experts stressed especially:

- **Training, education and networking:** Empowerment of individuals via training / education and networking
- **Local initiatives:** Support for local initiatives from global networks and partners, e.g. via the global coalition (see "increased global awareness"), increased visibility and reach via social media; facilitation of "tripartite conventions" (workers / unions plus state and employers)
- **Retraining:** The fundamental role of retraining programs for garment workers to deal with the potential effects of automation, enabling transfer into new roles and tasks

High Concentration / Cooperation: Mid-Term Feasibility, Strong Impacts for Environment and Working Conditions

Definition: Key players in the fashion industry work together to enforce industry-wide sustainable solutions. The fashion industry is highly consolidated/concentrated through either asset ownership or formal alliances. Key players are easy to identify and together they are able to enforce sustainable solutions across the whole industry.

"Have a mastermind-like cohort that aids the industry and is comprised of specialists in all the areas of "sustainability" The global players have to go through that one body to deliver messages on what they are actually doing. Imagine Clean Clothes Campaign meets the NRDC yet they work together as one." (Expert quote)

Worldwide industry collaboration, as expressed in this concept, would have a **great impact on the environment** (2.6, ranked 5th=) and a **large impact on working conditions and poverty** (2.3, ranked 2nd=), according to the experts. Furthermore, this could be **achieved within a decade** (8.9 years, with a high standard deviation of 5.21).

Lines of action:

As lines of actions (i.e. respective strategic options, for C&A foundation or the industry as a whole), the experts stressed especially:

- **Open data:** The lever of transparent and open data to increase data availability along the whole value chain
- **Collaboration** specifically of the major big players on the consumption and production side, e.g. via communities of practice, the global coalition envisaged (see "increased global awareness"), agreements on standards, etc.
- **Interdisciplinary, "on-demand-teams":** Collaboration as a key to deal with the current shortcomings within a highly fragmented value chain: Support for networks, creating "sharing systems for successful actions towards sustainability" and global, interdisciplinary "on-demand-support teams" for implementing sustainability measures

Extended Producer Responsibility (EPR): Highest impact on the environment

Definition: Worldwide introduction of extended producer responsibility in the fashion industry. Most nations enforce extended producer responsibility (for post-consumer or unsold goods) requiring fashion companies to reduce their amount of waste.

"Now we do have technologies (such AI and Blockchain) to trace the value chain, implement smart contracts and require accountability and responsibility for all the chain." (Expert quote)

Experts believe that **EPR could become mainstream within a decade** (9.7 years with a medium standard deviation of 5.13 years). While ranking the impact that EPR would have on the restoration of the natural environment as the **highest of all concepts (3.1).** Although placing EPR in the middle of the field for impact on working conditions and poverty (1.3, ranked 9th).

Lines of action:

As lines of actions (i.e. respective strategic options, for C&A foundation or the industry as a whole), the experts stressed especially:

- Garner **widespread public support** for this type of legislation, as consumers increasingly stand behind efforts to recycle and dispose responsibly
- Real gains are at system level, by government and corporations, with **legislation targeting production and packaging standards** before products even enter the consumer-side system
- **Harness already existing technologies** (such as AI and Blockchain) to trace products along the value chain, implement smart contracts and require accountability and responsibility for all (players in) the chain

Wages in the Fashion Industry: Highest impact on working conditions and poverty

Definition: Fair and decent living wage in the fashion industry is a worldwide standard. Every fashion industry worker earns a fair living wage, which is set according to the region's cost of living. Companies compliance in granting this fair living wage to all employees is monitored by local governments and global institutions.

"At a time when the race to the bottom in search of cheaper wages shows little sign of abatement, the idea that all governments will set a realistic minimum wage, let alone a fair living wage, seems inconceivable." (Expert quote)

The impact of fair wages in the fashion industry was assessed **very high for working conditions and poverty** (3.5, ranked 1st), but comparably low with regard to the restoration of the natural environment (0.9, ranked 12th). However, the experts believe this initiative would take a while to get off the ground, with it **not likely to become mainstream before 2030** (ETM of 12.4 years with a high standard deviation of 5.78 years).

Lines of action:

As lines of actions (i.e. respective strategic options, for C&A foundation or the industry as a whole), the experts stressed especially:

- **Self regulation:** Stimulate, push or incentivize that companies disclose their value chain and certify Fair Labour (by using living wage as minimum standard), while also engaging with consumers about such a standard
- **Cooperation** between fashion brands and their full supply chain to change one partner, instead of switching production to a region where production is cheaper
- **Law enforcement and oversight** from the local governments is needed to ensure that fair and decent living wage is ensured

Results for the Remaining 7 Concepts


Clothing as a Service


Automation Revolution

Circular Economy


Consumer Level Sustainability Index


Introducing Resale/Second-hand Models


Majority of Clothing is Locally Produced


Tax Regulations for Increasing Sustainability

Clothing as a Service

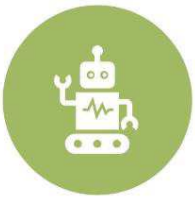
Definition: '*Clothing as a service*' becomes the main business model in the fashion industry. "*Fast fashion*" and "*take-make-waste*" are no longer the preeminent business models in the fashion industry. Leasing clothing, monthly subscriptions, exchanging used clothes for shop discounts and many other service-based models form the core of the fashion industry.

"Clothing as a service could incentivize design of higher quality clothing which could withstand many wears, reducing demand and therefore industry's natural resource dependency." (Expert quote)

Experts assessed that the realization of this concept would have a strong impact on the restoration of the natural environment (2.8), but a rather low impact on working conditions and poverty (0.7). It is the 3rd= highest ranked concept in regard to environmental impact, whereas it is one of the least impactful concepts on working conditions and poverty (11th). Estimated time to mainstream is in the medium-term range at 12.4 years with a highly dispersed standard deviation of 6.51 years.

Regarding future trends, there is consensus that technological innovations and the problem of limited resources will boost the renting business. Also, it is almost unequivocally assumed that the main barriers to achievement are the negative effects of clothing on the environment (which are not expected to change) such as dry cleaning, packaging, shipping and logistics. Only in a few comments was it mentioned that to introduce this innovation, a paradigm shift in consumer's willingness of owning second-hand clothing is required. The majority of respondents also agree that clothing as a service will result in better quality clothes and potentially better jobs which would also require upskilling workers.

Automation Revolution



Definition: Advanced automation technologies replace humans in most production areas of the fashion industry. Advanced automation technologies dramatically reduce labour content of garment production, processing, manufacturing and logistics while at the same time significantly reducing Time to Market.

"The impact of automation depends on the aims of automation - if they are to protect workers and better value nature - then engage in automation possibilities accordingly. If the aim is to increase margins, reduce social responsibility, increase production and throughput, then the results will be detrimental to workers and to nature." (Expert quote)

The impact of an automation revolution on the restoration of the natural environment was assessed rather low (0.8) and judged negatively for working conditions and poverty (-0.9). It is the 2nd lowest graded concept regarding the environment and was graded last in regard to working conditions and poverty. Automation revolution is the least favourably ranked of all the concepts presented. Estimated time to mainstream is in the medium-term range at 9.9 years with a comparably low standard deviation of 4.25 years.

Many respondents stated that the biggest barriers were linked to potential layoffs and as a consequence - declining levels of employment - due to automation. However, participants mostly agreed that universal basic income would be a facilitating solution as well as necessary upskilling and retraining workshops. Notably, respondents mostly disagreed with the comment that full automation might lead to equalization in incomes and a positive impact on the environment.

Circular Economy

Definition: The fashion industry operates according to Circular Economy principles. Circular Economy - a system of interaction and exchange that treats the earth as "one household". This system views working conditions, poverty and restoration of the natural environment as opportunities to create value, including making a net-positive impact: so each purchase, product, place, process and policy enhances the quality of life, to strengthen the integrity of complex systems such as landscapes, cultures and communities.

"Unless there are tariffs, taxes, and extended producer responsibility legislation put into place to support the circularity, it's not going to happen." (Expert quote)

Participants evaluated the impact of introducing a circular economic model highly for the environment (2.8) and positively for workers (1.6). The concept ranked 3rd= regarding the environment and 8th regarding working conditions and poverty. Estimated time to mainstream is in the long-term range at 12.2 years with a medium standard deviation of 5.09 years.

Important to note is that respondents focused more on barriers to change, rather than on solutions. A majority of commenters mentioned profit motives, a lack of smart public policies, globalization and the unwillingness for a culture change within the fashion industry as the main hurdles. Further, participants noted that little consideration is given to the opportunities by companies and governments that would be created with the introduction of a circular economy regarding social injustice and social inequality.

Consumer Level Sustainability Index

Definition: A consumer level sustainability index is widely used by shoppers. A smartphone (or other future mobile device) application or simple point of sale tool informs and educates consumers about purchasing decisions. Similar to (and as common as) food labelling, but instead of nutritional facts it provides credible sustainability facts, such as the amount of water used during production or chemical usage. The other possibility would be to create an aggregated sustainability index.

"I do think that the consumer's choice is a very important key to change the industry's choices." (Expert quote)

The impact of a consumer level sustainability index was assessed in the medium range for both environmental impact (2.1) and impact on working conditions and poverty (1.9). This concept was ranked in 9th place regarding environmental impact and in 5th place regarding impact on workers. Estimated time to mainstream is in the medium-term range at 9.5 years with a medium standard deviation of 5.51 years.

A majority of participants shared the notion that technological tools such as phone applications could be effective instruments in fostering the development of a consumer level sustainability index. Examples mentioned in the comments refer to environmental footprint analysis and environmental profit and loss account calculators. These measures would also be directly aimed at traditional production models and unsustainable supply chains. Especially important in that regard is that the consumer is put in the driving seat as an active participator. Concerning hurdles to change, the experts noted that simplified rating systems, based on average calculations, will not be able to display detailed information and might attract controversy.

Introducing Resale/Second-hand Models

Definition: The majority of clothing companies introduce a resale/second-hand business model to their profile. Resale or second-hand is now a common business model in the fashion industry. Nearly half of all stock in retail stores comes from the second-hand market. Clothing design has changed to fit the needs of this new business model - clothes are now easier to repair and alter.

"Thinking differently about what this means in different cultures, locations, age groups, professions - rather than a one size fits all, the idea of vintage, sharing clothes, re-use - this is a huge creative opportunity - to find distinction that is relevant and appropriate at a particular scale/place or a range of scales. This is about a diverse set of models." (Expert quote)

The idea of introducing resale models achieved a high estimated impact regarding the environment (2.6), and a low estimated impact (0.6) regarding working conditions and poverty. The concept ranked in 5$^{th=}$ position with respect to impact on the environment, whereas it ranked in one of the last positions (12$^{th=}$) regarding the impact on working conditions and poverty. Estimated time to mainstream is in the mid-term range at 9.1 years with a comparably low standard deviation of 4.82 years.

While the concept in general was described as a positive phenomenon and step in the right direction to fight overproduction and quantity of unsold stock, most comments highlighted obstacles with respect to realization and effective implementation. Respondents often reported the risk of selling second-hand clothes to poor Sub-Saharan or Latin American countries, which might in consequence cause not only social but also environmental problems due to large waste stock and dumped prices. Moreover, the ability to reuse clothes requires high-quality products in the first instance and demonstrates the need for industry wide improved quality standards. According to participants, one enabler of introducing resale business models could be companies and brands implementing take-back programs, ideally accompanied by tax reliefs and other tax incentives. Additionally, respondents highlighted the need for innovative solutions aimed at decreasing the quantity of unsold stock by transforming it into saleable clothing. Besides, it was striking to see that most comments made references to already established resale businesses and illustrated the fact that these practices already exist within today's industry.

Majority of Clothing is Locally Produced

Definition: The majority of clothing is locally produced. The fashion industry's value chain is made up of thousands of local chains. This model generates benefits from both the phenomenon of near-shoring of production and the innovative technologies enabling the self-production of clothes by customers (automatic sewing machines, 3D printing, spray-on clothes, etc.). The fashion value chain is no longer a large global chain in which each link is located in different parts of the world.

"Reshoring or near shoring manufacturing would require huge investment in training, alongside higher wages, higher energy bills, etc. Even with greater automation, there would still need to be millions of garment workers working locally to supply the major hubs of consumption." (Expert quote)

The local production of clothing was assessed as having a relatively low impact on the restoration of the natural environment (1.5) and an even lower impact on working conditions and poverty (0.6). The assigned ranks mirror this observation: The concept is ranked in 11th position and 12$^{th=}$ position respectively. Estimated time to mainstream is within the longest range at 16.2 years with a comparably low standard deviation of 4.84 years.

A significant majority of participants highlighted the difficult feasibility and questionable impact of this hypothesis. A common point raised was that producing local does not seem to have a compelling impact on consumers average environmental footprint as the transportation of clothing has a relatively low carbon impact compared to processing procedures. Another noteworthy comment stated that a critical barrier for local production is that not all raw materials are available in specific geographic areas. Respondents agreed that the business world needs to undertake a cultural shift to foster the creation of local industries and vertically integrated supply chains. It was mentioned that governments would need to set sector specific incentives for apprenticeships and skills development. Although specific technologies enabling smart and local production were mentioned in the short description of the hypothesis such as 3D printing, these innovative techniques were not discussed further in the comment section, nor was their potential in enabling smart nearshoring.

Tax Regulations for Increasing Sustainability

Definition: Introduction of tax regulations targeted at increasing sustainability in the fashion industry. Most nations have implemented taxation requiring companies to introduce natural capital accounting as well as targeted tax incentives focused on improving practices and boosting R&D.

"Taxation is important to stimulate agents to internalize their externalities and hence create an impact economy that considers not only the financial bottom line, but also social and environmental net impact." (Expert quote)

According to the respondents, the potential introduction of tax regulations was assessed as having a highly positive impact on the restoration of the natural environment (2.6) and a medium impact on working conditions and poverty (1.9). It is ranked in 5$^{th=}$ position for both the impact on restoration of the natural environment and on workers conditions and poverty. Estimated time to mainstream is in the mid-term range at 9.9 years with a high standard deviation of 6.09 years.

There seems to be overall consensus amongst participants that the idea of introducing tax regulations would be a ground-breaking step towards a more sustainable industry. However, it becomes clear that most respondents are sceptical about the possibilities of realizing such a tax system. Common concerns are the lack of willingness and agreement between individual countries and slow action. Respondents highlight that legislation through international organisations including clear objective regulations, rules and definitions would be a necessity. A working tax system would oblige the business players to internalize externalities without burdening the extra costs onto the shoulders of the workers. A working tax system would also need preventative mechanisms for tax avoidance, fraud and corruption. An interesting proposal was also given by one respondent regarding tax reliefs for companies sharing their new technologies or tools supporting decreased volumes of waste.

Pathways Towards Systemic Change: The Triad of New Narratives / Global Awareness, and an Education and Regulation Push

"I still feel the issue is overconsumption, and we cannot just buy our way out of this." (Expert quote)

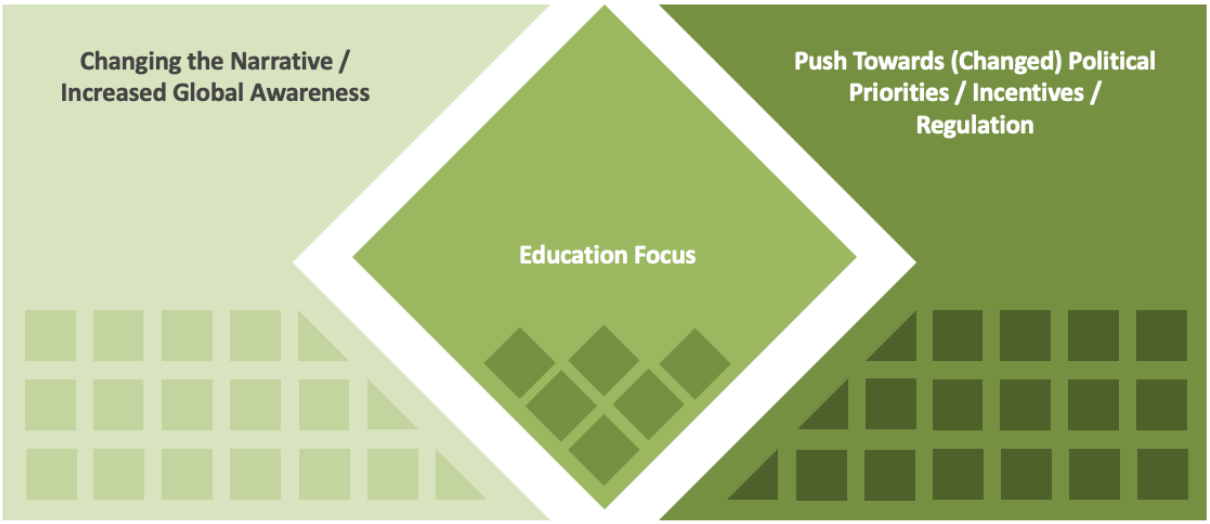
While looking at the individual concepts from the Delphi highlights what actions can and should be taken to advance sustainability in the fashion industry (regarding specifically these areas of change), the questions of which overall pathways to change are promising, and which fields of action stand out as cutting across the different concepts, also arise. The discussion sections in the Delphi online-survey, as well as the reflections in the expert interviews and workshops, especially cast light on this.

These reflections particularly stressed the **need for radical, disruptive long-term change, which could only be enabled with a holistic and systemic approach.**[13] Strong agreement was found concerning the **current system as it is cannot be "tweaked" or incrementally adapted towards sustainability (or that this change will be "too slow") - instead, any pathway aiming at achieving net-positive sustainability implies the need to "create a fundamentally new system"**, thus the need for disruptive change. Such a system would be driven by the paradigm of net-positive impacts with respective political frameworks, and is associated with a **fundamentally changed consumption culture** (e.g. also with the aim of reducing per-capita consumption, especially in high-income countries), as well as new business models (e.g. with concepts such as clothing as a service).

However, these discussions were also driven by an **underlying scepticism towards any discourse that sets technology at the centre of hopes or promises of solutions.** While technological progress is indeed expected to contribute to e.g. reducing industry waste, improving data quality and accessibility etc., the experts stress that we cannot rest on the promise of potential improvements brought about by technologies. Furthermore, **scepticism was high regarding whether "business could fix itself" - and the dominant view was that it probably cannot do so alone, but needs adapted political frameworks and**

[13] It is noteworthy that the experts diverged strongly concerning the underlying, implicit as well as explicit assumptions on levers and "starting points" for change, one could say also concerning underlying implicit "theories of change": Is policy / state or public sector systems intervention the lever for (and leader of) change, or is it to be found in citizen's value change, or technology and business? In contrast, whatever the difference in viewpoints here, agreement along the importance and promise of activities around increasing global awareness was strong, as well as agreement on holistic, systemic approaches being most promising.

regulation as a driver of change - even if sustainability awareness in the fashion industry has increased strongly over recent years.



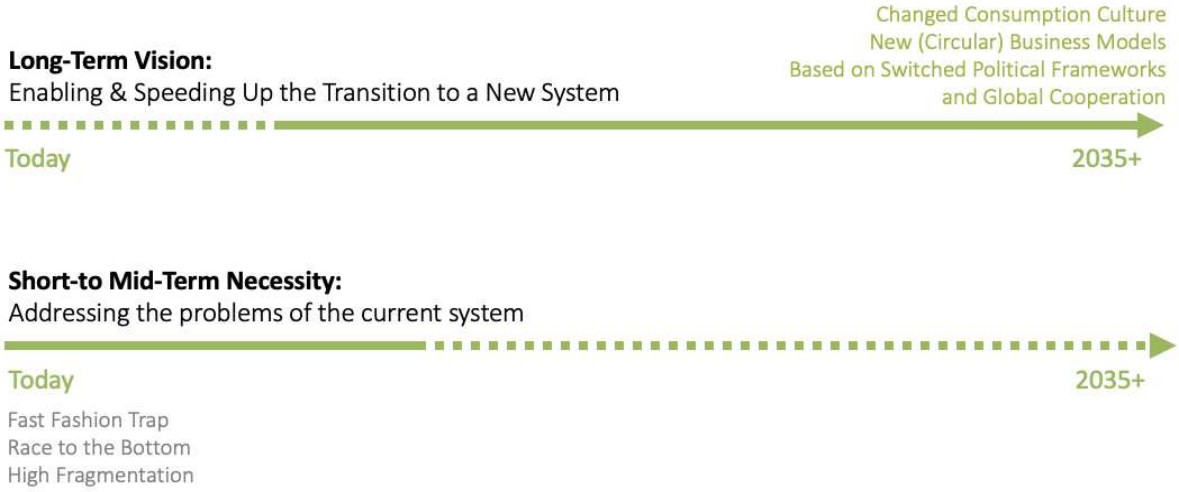
Concerning **fields of action that stood out as cutting across the concepts, three fields can be identified: First of all, this is the focus on "changing the narrative", as it was often referred to in the workshop discussions,** or "Increased Global Awareness", as the original name of the concept says. According to the experts, this approach is not only feasible to implement quite quickly, but also has the advantage of a **current "window of opportunity"**, with a focus in the public discourse on the necessity as well as feasibility of sustainability efforts, as visible e.g. in the Fridays for Future movement. **Focusing on "increased global awareness" is regarded as a prerequisite, major lever and catalyst for making other actions feasible**, and enabling them to be diffused globally and more rapidly than otherwise possible.

Secondly, **respectively changed political frameworks are seen as a major building block to accelerate and enable rapid change towards sustainability,** with actions focusing on changed incentives e.g. via taxes and laws, procurement conditions etc. And finally, **an education focus is regarded as a "bridge" between what is mainly a bottom-up approach of increased global awareness and the top-down approach of changed political priorities**. Not only do elements of an education push play a role for many of the concepts discussed in the study (with respective actions such as mainstreaming Holistic Circular Design Frameworks to Education for Empowering Workers); they are also seen as a **mid-term lever for pushing knowledge as well as skills on sustainability and transformation into not only the current and next generation of citizens and consumers, but also designers and decision-makers**. However, it is important to understand that this focus was not meant to, as one participant put it, "start at primary school and then wait for 15 years until that generation has influence", but instead especially start efforts at the level of on-the-job training and tertiary education, building on and scaling up respective existing initiatives.

The Need to Address Two Timescales:

Current Pressures versus The Vision of Creating a New System

"Right now, we have to deal with the damage done within the system we have at the moment - meaning supporting workers with bad working conditions or doing something about the impacts on the environment that are being caused now."
(Expert quote)



While the experts demand a radical re-envisioning of a fundamentally changed future fashion system and industry, governed by the principles of net-positive impacts, they also clearly see the necessity to deal with the problems caused by the current system during the transition period. As a consequence, strategies towards creating net-positive sustainability in the fashion industry will need to simultaneously pay tribute to:

- Addressing current problems of the existing system (such as the principles of the "race to the bottom", the "fast fashion trap" and the consequences of a highly fragmented value chain, with e.g. persisting problematic and unjust working conditions for many in the fashion industry);
- While working towards creating a fundamentally changed new system - with at its core a fundamentally changed "sustainable consumption culture", and new business models with re-use, recycling and circularity at their centre.

Outlook

The project results line out what the experts involved think about the future of sustainability in the fashion industry. We hope the results will be usable for many, and that a variety of actors from the field will dive deep into the results, and make use of them as a starting point for e.g. their own dialogues about future perspectives, be it internally for strategy-making, or in open formats with other stakeholders.

The study clearly contains what can be called a wake-up message. I.e. the conclusion that if we rely or rest on current trends continuing, we will not be able to achieve net-positive sustainability. It is thus also an appeal to the industry that much more than what is currently being done, or is in the works, has to be realized to achieve this goal. At the same time, the results of this study contain many “messages of encouragement”. Achieving all of the concepts featured in the study is seen as within reach (feasible in a timeline of 16 years at the most), if the necessary measures are taken. A radically sustainable future of the fashion industry driven by the paradigm of net-positivity is thus not only imaginable, but feasible - given strong additional efforts, and implying increased international and cross-sectoral cooperation. The experts recommend targeting three main levers in the pathway painted: Increasing global awareness (or “changing the narrative”, driven by a global alliance cutting across the sector), an education push and respective strong policy-side frameworks, implying radical systemic change on a variety of levels.

On another level, we see the exceptional level and depth of engagement of the experts involved in the study as another pointer towards positive future perspectives. Their commitment in this process, bringing together voices from widely different domains, backgrounds and regions of the world, demonstrated that dialogue and cooperation across the industry is desired as well as needed, fruitful and achievable. The question of what kind of future we aspire to, and what we can do create it, can be a catalyst in creating more of these kinds of much-needed opportunities for cross-cutting dialogue and cooperative strategic thinking.

Annex

Overview of the Project Methodology

The preparation and execution of the Delphi online survey proceeded over two distinct phases. The initial phase consisted of formulating the Delphi hypotheses and comprised:

- Workshop with C&A Foundation experts in Zug
- Rip van Winkle survey with a sample expert group from the C&A Foundation
- Desk-research
- Drafting of initial hypotheses
- Several iterations of feedback and refining of the hypotheses with the C&A Foundation Leadership Team
- Drafting the final list of hypotheses and response formats

The process whereby theses were identified and selected followed the algorithm below:

1. Extracting propositions for theses from 3 sources:
    1. Rip van Winkle exercise
    2. Interviews with experts
    3. Desk research with special consideration of academic papers on sustainable fashion and sustainable fashion reports:
        i. Drift report
        ii. Pulse of the fashion industry report
        iii. Sustainable fashion: New approaches (Aalto University report)
2. Preselecting theses by using 3 filters to ensure relatively equal distribution among:
    1. Fashion industry's value chain links
    2. Five fields of C&A Foundation's current activity
    3. Six pathways of transition from Drift report
3. Final selection based on key points from the interviews with experts

The final list of hypotheses counted 16 items, including two horizontal hypotheses treating sustainability in the fashion industry from a high-level perspective and 14 specific hypotheses, pertaining to a set of potential solutions or "concepts" enabling sustainability in the fashion industry over the long-term. The participants assessed these high-level hypotheses using the following metrics:

Impact on working conditions, poverty and impact on the restoration of the natural environment was measured on a scale from -4 to 4 where -4 means very strong negative impact and 4 means very strong positive impact. We based this metric on the distinction used in C&A Foundation's TOC.

Earliest time to mainstream was measured in years and shows how much time is required for a given thesis to become reality, in the most desirable scenario. If respondents assessed that it was not possible to achieve such a state in the circumstances given above then they would write “1000 years” as their answer.

Commenting on a certain thesis required a participant to select one of the following prefixes:

- A barrier to achieving this could be…
- A solution facilitating achieving this could be...

The theses in Section 1 are meant for the assessment of the present efforts.

The main phase of the study consisted of set-up, running and reporting on the results of Delphi survey. For this study, a Real-time-Delphi (RTD) survey was realized on 4CF HalnyX platform.

The online Delphi was realized with a carefully selected set of 21 top global experts. The experts were invited to participate in the online Delphi as well as the external experts workshop. The criteria for selection included an analysis of topic expertise, geographical spread and the experts’ affiliation, confirmed by the C&A Foundation.

The participants were each paid a gratuity of 700 EUR, to ensure a sense of commitment (and “real” time contributed) as well as the possibility to include high-level experts, who are frequently no longer contributing to “open” (unpaid) Delphi surveys. More than satisfactory levels of involvement were noted for 21 experts (see Annex “Experts who contributed to the Delphi”).

The Delphi survey was realized in a focused time of 26 days. Prompt response to technical requests was individually provided to the participants over email. In one case a participant was given an alternative way of submitting input to the study due to technical problems on expert’s side.
Following the completion of the online Delphi survey, the insights gained were reflected upon and further refined in a workshop with external experts. An additional strategy workshop was then held with the C&A foundation Leadership Team, serving as a bridge from the Delphi results into use of these insights in strategic programming.

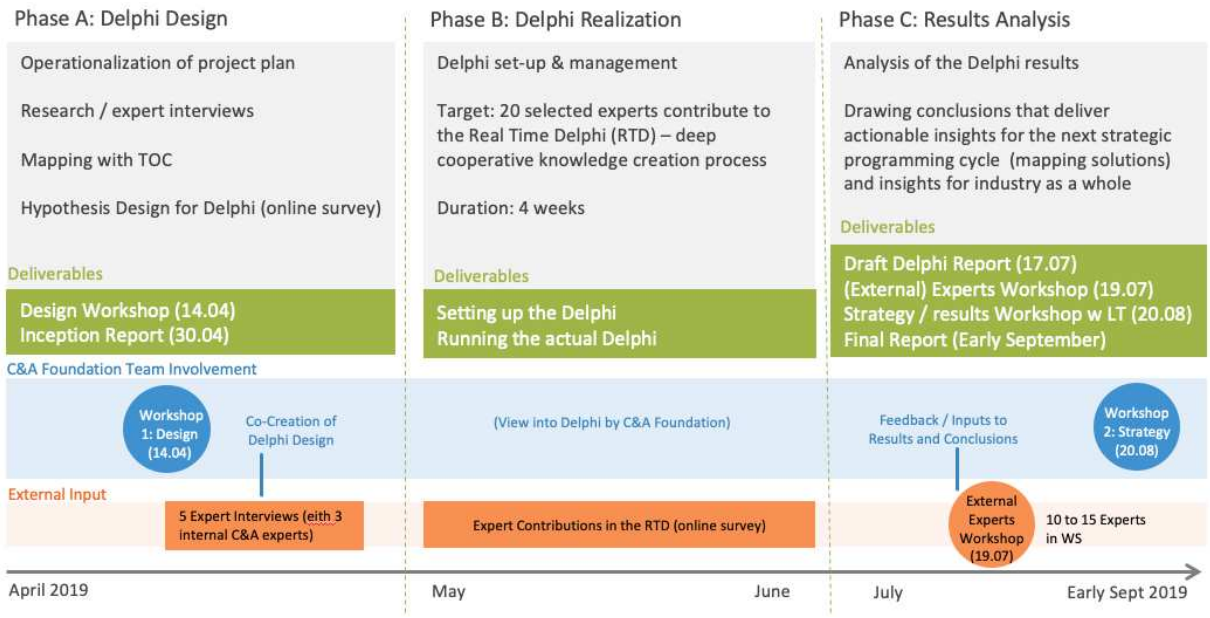


Image: Project overview and approach

Further Details on Delphi Design

Introduction to Delphi Methodology

The Delphi Method was developed in the 1950s and 1960s in the United States by the RAND project as an aid for decision-making and analytical military institutions in assessing the contemporary situation. It is now a key tool in strategic foresight and modern strategic management. It allows expert groups to find a consensus on a given set of issues within a short time. The results of the study are relatively unaffected by psychological, rhetorical or sociological factors, which usually have a negative effect on group discussions. Taking this into consideration, it is not surprising that the Delphi method has been used in classified US Air Force projects to reach a consensus among senior officers, academics, civil experts and decision makers. Since then, it has proven its worth in thousands of civilian projects, in areas such as education, technology development, spatial planning, conservation of natural resources or regional development planning.

A real-time Delphi study is an enhanced version of the method, originally developed for DARPA in 2004 in order to increase the speed and efficiency of multi-expert decision-making. It is a significant time-saver, as it replaces traditional surveys collected in rounds, with ongoing, continuous processing of the participants' responses on the server. Thus, the "discussion" in the online tool is continuous, allowing for a more in-depth analysis of the topic, and resulting in a clearer consensus among experts on more precise answers to research questions known as the Delphi Theses. Participants can access the study as often as they wish, each time receiving information as to the current status of the discussion and rating values. They may add new arguments and change previously stated opinions. Real-time Delphi studies have been well tested over the past decade in prestigious projects on hundreds of topics around the world.

4CF HalnyX is an advanced Delphi platform (smart Delphi, or 4th gen Delphi) developed at 4CF. The platform makes use of the latest advances in web applications and enables fast consensus building and the identification and evaluation of points of dispute in complex issues in real-time. Unlike commonly used qualitative knowledge management and social research tools (such as focus groups, workshops, forums, or surveys), 4CF HalnyX simultaneously gives research teams the advantage of using collective intelligence and a solid discussion structure, which ensures that no essential information is omitted, while minimising cognitive overload.

Approach and Reasoning to Designing the Delphi Study

The Delphi-method-based survey of experts assessed a set of hypotheses (or "concepts") on their impact upon the sustainability of the fashion industry. The 16 individual concepts were developed through an initial "Rip van Winkle"[14] exercise, interviews with experts, and desk research with special consideration of academic papers on sustainable fashion and sustainable fashion reports. Individual concepts were evaluated on two axes against impact on working conditions and poverty, and on the restoration of the natural environment. In addition, the earliest time to mainstream was also rated to appraise how much time is required for a given concept to become reality, in the most desirable scenario. Furthermore, commenting on a certain concept required a participant to comment upon either a barrier to achieving the concept, or a solution facilitation achievement.

Rip van Winkle: The Delphi online survey design started with a "Rip van Winkle" (RvW) type exercise - a method developed by RAND within the "Assumptions Based Planning" methodological framework. The exercise is meant to identify both load-bearing and vulnerable assumptions regarding the future of a given topic. The participants of the RvW exercise were asked to individually list 10 yes/no questions essential to defining "sustainability in the fashion industry in 2035"[15]. The exact task was formulated as follows:

> *"You fell asleep and it seems that you slept for quite some time. Upon waking you realize that the year is 2035. In 2035, for some reason, you are requested to describe the present status of sustainability in the fashion industry – you do not know, however, what has happened in the industry and beyond during the time you were asleep.*
> *You can ask 10 questions to get a better grasp on the current reality of the fashion industry and context in 2035 before you state your answer. Each question has to be a 'yes or no' question and they cannot be contingent on each other."*

Selected experts from 4CF and Future Impacts took part in the exercise as well. As a result, we received many assumptions/uncertainties that were both load-bearing and vulnerable. We then clustered them to become our 'proto-hypotheses'. We also matched them with value chain links to check if coverage was satisfactory (see the annex for an insight into the matching process).

Delphi concepts: As a result of the RvW exercise and our internal desk research, the problem areas which should be addressed became reasonably well defined. At the same time, many of them were "too vague" to be assessed during a Delphi study, we still needed to translate them into specific ideas for solutions. As the results of the Delphi study needed to provide usable insights, the goal was to formulate

[14] A "Rip van Winkle exercise" is an exercise originally developed by RAND, aimed at identifying assumptions about concepts related to the future; for details see this project's internal inception report and James Dewar (2002): Assumption-Based Planning: A Tool for Reducing Avoidable Surprises.
[15] Fashion for Good defines a current view of sustainability in the fashion industry in the "5 points of Good Fashion" document.

the Delphi theses in a way which would mitigate the risk of the discussion becoming too general and broad. Taking the above into account, as well as the fact that we would be using the 4CF Matrix for presenting the results, we reformulated the Delphi theses as specific "solutions" to the challenge of making the fashion industry more sustainable.

We also tried to look at the possible solutions to the industry's sustainability problems through the lens of Value Chains - for example to have two Delphi theses for each link in the value chain. This would, however, make solutions too specific, especially taking into account that e.g. solutions for *guaranteeing just working conditions* would most likely be applicable across processing, manufacturing and retail.

We therefore assessed each of the concepts using the following metrics:

- **"How far are we from achieving it?" or in other words earliest time to mainstream (ETM) (0 - 50 years)**
- **Impact on fair conditions and wages for workers in the fashion industry (-4 to 4)**
- **Impact on the environment (-4 to 4) (or more precisely - impact on restoring natural environments in areas impacted by the industry)**

The first assessment is a complex one - while assessing the earliest time needed for a solution to reach mainstream the study participants needed to take into account not only technological obstacles, but also social, political and economic ones.

The second and third assessments were focused more on problem areas (and thus they are formulated very similarly to the impacts in C&A Foundation's *Theory of Change*). The average of these two became our Average Relative Advantage (one of the axes of 4CF Matrix – although we call it Impact instead of Advantage, because that is what we are looking for here). Prefixes for comments under a thesis were related to barriers stopping a certain change from becoming a reality, and levers or preconditions for this change becoming a reality.

Approach and Design of the Workshops

An external experts workshop was held on the 19th July in Cologne, German. Workshop participants included eight experts who had previously taken part in the online Delphi, and four additional experts who were able to provide fresh perspectives. During the workshop participants worked on refining the results from the online survey, and adding additional insights.

The assessments and comments gathered through the Delphi provided an initial picture of a future sustainable fashion industry, that was used as a basis for the workshop discussions. The introduction of a game - The Stranger Futures Game - was used as a tool to encourage creativity and thinking outside of the box. Enablers were selected to help realize a sustainable fashion industry - stemming from an analysis of the Delphi results realized before the workshop. Experts then developed 'upgraders' which would support the enablers and 'challenges' which would hinder them.

In a further step, experts brought the upgraders into a chronological structure to create consistent pathways for a sustainable fashion industry. To develop more detailed pathways, the upgraders were seconded by promoters, antagonists and actions that could assist their realization.

In a final step, experts identified clusters of actions in the pathways. These so-called action fields were thus a summary of concrete actions with a description of what players need to develop, to do or to consider. The additional insights collected over the day were then fed back and incorporated into the overall project results.

Following the external experts workshop, an internal workshop was held with the C&A Foundation Leadership team which especially focused on options for action for the Foundation and implications of the overall project insights for the Foundation's strategy. Both steps were able to deepen and refine insights towards actionable results for C&A Foundation's strategic programming, as well as the industry as a whole.

Details on Expert Selection and Involvement: Overall Concept of Expert Selection

The realization of the Delphi required a carefully selected group of experts to generate insights on future trends in sustainability for the fashion industry.

The selection of these experts was made via a systematic, criteria-led process, drawing from the C&A Foundation's network of experts as well as those of Future Impacts, 4CF and The Millennium Project, driven by additional research. Experts were identified across a matrix of topic expertise that included experts' affiliation, characteristics (e.g. academia, policy and governance, campaigner/activist etc., gender and age, geographical region…). This ensured that the selection of experts covered all aspects of relevance, as well as cross-cutting issues and perspectives.

Online Delphi: Twenty-one top-experts were selected to partake in the online Delphi. The advantage of this rather limited sample size was that it was small enough to enable a meaningful exchange, which is key for the results of a quality RTD, while large enough to cover the topics that needed to be taken into consideration. These 21 global experts were selected from an initial long-list of up to one hundred experts was identified collaboratively between Future Impacts, 4CF and the C&A Foundation, based upon their networks and complemented by additional research. From this initial long-list, a ranking of the top approx. 20 participants was made ensuring to obtain a balance of the characteristics mentioned above, as well as aligning expertise with the Delphi questions and aiming to obtain a 'radical informed (and partially outside) view' from established and well-known experts with authority in the industry. Priority was given to a second group of approx. 20 experts, to serve as alternatives in case of unavailability.

Expert Interviews: In addition to the 21 external experts chosen to take part in the online Delphi, a subgroup of five experts (two external, and three internal from C&A Foundation) were also asked to take part in semi-structured telephone interviews aimed at informing the design of the Delphi during its development stage. Thus, through the interviews the overall design of the Delphi is informed via a cooperative co-development and reflection process, allowing us to integrate the experts' knowledge into the formulation and design of the questionnaire. Furthermore, the design workshop, realized with the C&A Foundation leadership team, was part of this process and served to further develop the draft questionnaire as well as the list of experts to invite.

External Experts Workshop: The experts selected to join the online Delphi were also invited to take part in the external experts workshop. While a small number of experts (four) who did not partake in the online Delphi were also invited to join the workshop, in order to include fresh assessments and insights into the process.

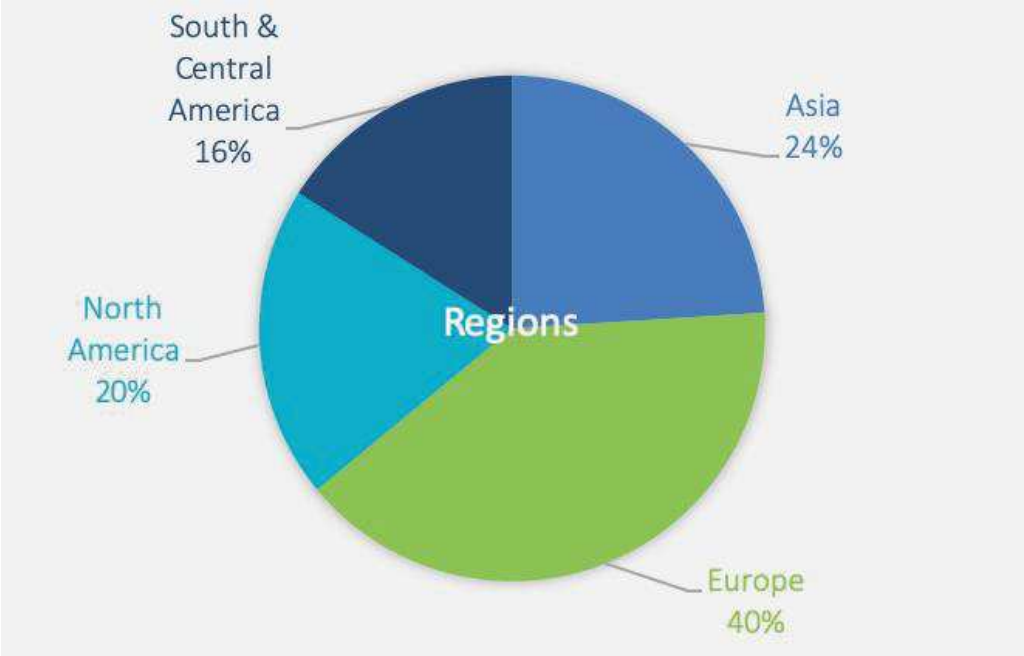


Image: Who contributed to the Delphi? By region (online survey and workshop)

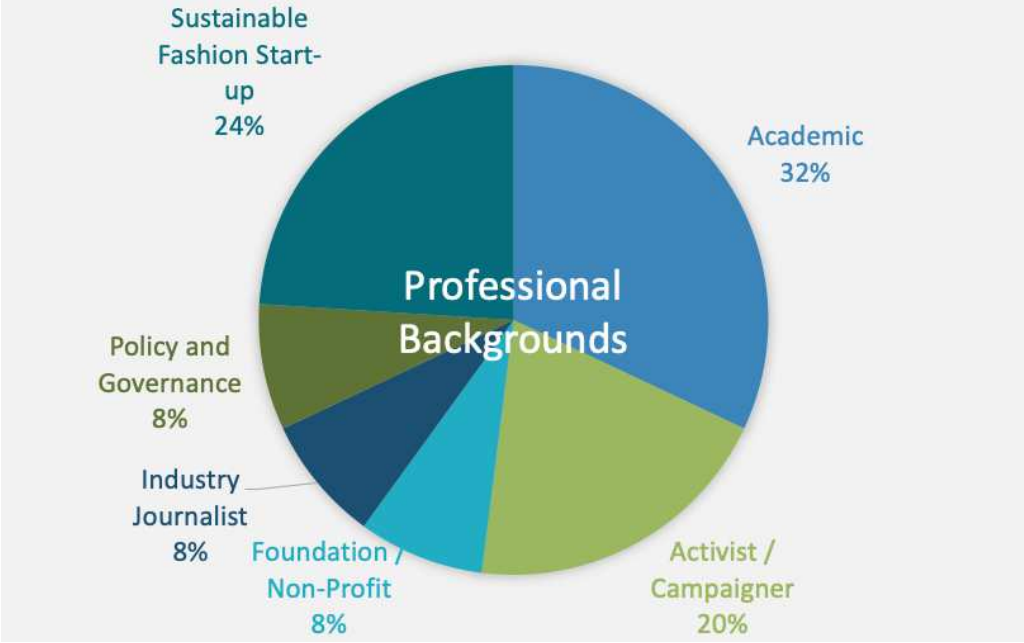


Image: Who contributed to the Delphi? Professional backgrounds (online survey and workshop)

Contributing Experts

Experts Who Contributed to the Online-Survey as well as Workshop

Organization	Type	Region	Gender
Author/journalist; Brooklyn Fashion + Design Accelerator; Botanical Colors	Sustainable Fashion Start-up / Industry Journalist	North America	F
Future Earth	Academic	North America	F
Restore Clothing	Sustainable Fashion Start-up	North America	M
Global Alliance Against Trafficking in Women	Foundation / Non-Profit	Asia	F
Fashion Revolution	Foundation / Non-profit	Europe	F
Eco-Age; Green Carpet Challenge	Activist / Campaigner	Europe	F
Center for Sustainable Fashion	Academic	Europe	F
OECD Garment and Footwear Division	Policy and Governance	Europe	F
Hong Kong Institute of Textile and Apparel	Academic	Asia	M
ABIT - Brazilian Textile and Apparel Industry Association	Policy and Governance	South & Central America	M
DyStar	Sustainable Fashion Start-up	Europe	M
Yale University	Academic	North America	F
Terra do Futuro Consultoria	Activist / Campaigner	South & Central America	M
Reporter Brasil	Industry Journalist	South & Central America	M
Dynamo	Sustainable Fashion Start-up	South & Central America	M

Denim Expert Ltd / Bangladesh Denim Expo	Sustainable Fashion Start-up	Asia	M
Freelance Journalist	Industry Journalist	North America	F
Coalition Against Trafficking in Women		Asia	F
Mayamiko	Sustainable Fashion Start-up	Europe	F
Naripokkho	Activist / Campaigner	Asia	F
ARROW	Activist / Campaigner	Asia	F
School of Foresight Bureau Tijd & Ruimte	Academic	Europe	F
Obuda University Budapest	Academic	Europe	F
Centre for Circular Design	Academic	Europe	F
Portsmouth Business School	Academic	Europe	M

Experts Who Contributed via Interviews

Organization	**Region**
Hong Kong Institute of Textile and Apparel	Asia
Restore Clothing	North America
C&A Foundation	Asia
C&A Foundation	Europe
C&A Foundation	Europe

About the Project Team

The project was realized by a team from **Future Impacts**, in cooperation with **4CF** and **The Millennium Project**. The three partners have cooperated already for many years across various projects, and together bring deep expertise in realizing Delphi studies and breaking them down into actionable results.

FUTURE IMPACTS

Future Impacts is a futures research company, focusing on creating impact on today's actions from envisaging the future.

Having realized projects for a variety of customers internationally (from the private sector, e.g. Alstom, Evonik, Hermes and the South Korean Telecom, and for the public sector such as European Commission and Parliament and German and UK ministries, and for foundations and social sector actors, such as Bertelsmann Foundation and Aktion Mensch), we focus on creating more sustainable and inclusive futures. We bring in expertise from having realized **Delphi studies e.g. on future technologies or the future of work, and from futures studies relevant to this project, such as on the future of agriculture, transport and logistics, waste, gender, work and inclusion**. Future Impacts also leads the German Node of the Millennium Project.

4CF Surf the future

4CF is a strategic foresight consultancy.

Our core expertise lies in long term analysis and strategy - helping businesses, NGOs and governments around the world to reach their goals in a rapidly changing environment. We increase organizations' and teams' capacity to identify, prepare for and utilize opportunities and threats. As the Central-European Node of The Millennium Project, 4CF represents world's leading futures research think-tank, selected among the best foresight organizations by the US Office of Energy. 4CF has also been listed as a leading foresight and strategic planning institution by Foresight Education and Research Network (FERN). 4CF strives to stay on the cutting edge of modern foresight, working with i.e. military strategists, in order to give our clients the advantage of being always one step ahead. In this project, 4CF brings in their **own**

Delphi tool HalnyX for realizing Delphi questionnaires, and realizes the whole project hand in hand with Future Impacts and the C&A Foundation.

The Millennium Project is a global participatory think tank.

Established in 1996 under the auspices of the American Council for the United Nations University that became independent in 2009 and has grown to 63 Nodes around the world (an MP Node is a group of institutions and individuals that connect local and global perspectives). It regularly publishes the "State of the Future Report", and has realized over 50 futures research projects, most of them on the basis of Delphis. Within the context of this project, the senior experts Jerome C. Glenn and Ted Gordon (who is one of the "inventors" of the Delphi method) provided their advice on how to best design the Delphi questionnaire, as well as on the analysis of results.

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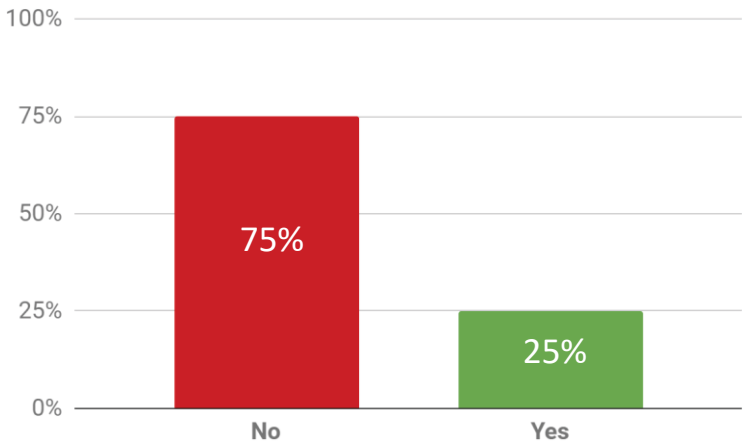
Full Data of Delphi Results

Impact on the restoration of the natural environment

Assuming that all trends in the fashion industry, including sustainability trends, will remain unchanged (i.e. trends continue along the track that they are currently on) **is it achievable for the fashion industry to have a net-positive impact on the restoration of the natural environment**?



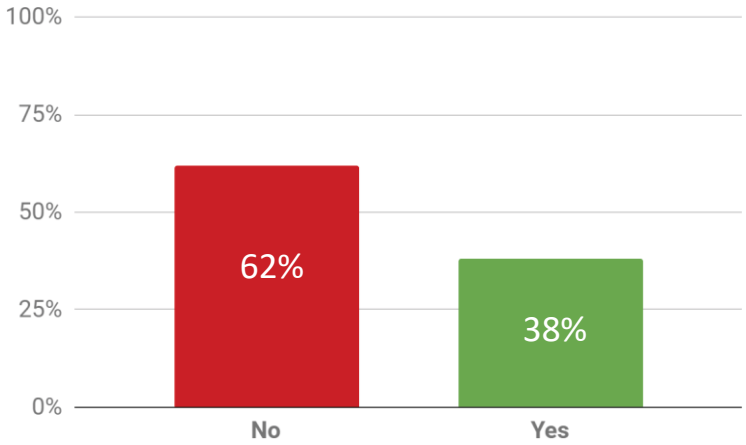
If **YES**, **how many years are needed to achieve this positive outcome?**

21.5

(**average**; based upon 10 assessments with st. dev. =3.37)

Impact on working conditions and poverty

Assuming that all trends in the fashion industry, including sustainability trends, will remain unchanged (i.e. trends continue along the track that they are currently on) **is it achievable for the fashion industry to have a net-positive impact on working conditions and poverty?**



If **YES**, **how many years are needed to achieve this positive outcome?**

12.7

(**average**; based upon 13 assessments with st. dev. =8.81)

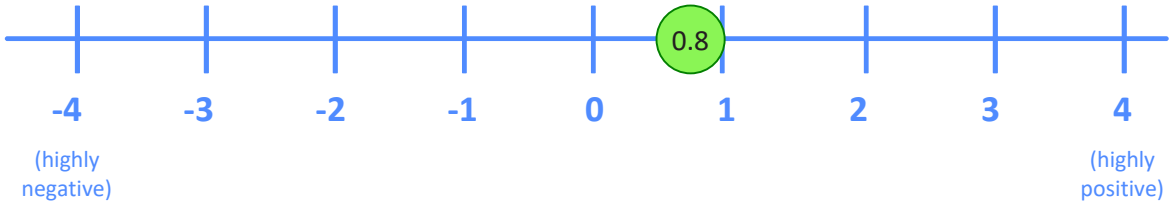
Especially worth noting

According to the respondents, lack of change in trends within the fashion industry, will not lead to net positive impact nor on the restoration of the natural environment, nor on working conditions and poverty. However, for those who judged the net positive impact possible if sustainability trends are constant, what is worth mentioning is that it would take almost twice as long for environmental restoration (21.5 years) as for working conditions (12.7 years). What is crucial, is that respondents are also more congruent according to the ETM regarding potential net positive on the restoration of environment than working conditions and poverty, for which standard deviation value is relatively high (8.81). It might be due to the fact that fast fashion industry degrading natural environment at a fast pace is a concrete, visible fact, with large stocks of unsold clothes generating waste. With this assumption, it might be therefore easier to potentially evaluate the ETM for net-positive impact on the restoration of natural environment. Nevertheless, strong majority agrees that there is a high need for change within the fashion industry and that current sustainable trends are not efficient to achieve sustainable fashion in the future. Three quarters of the respondents decided that the current state of fashion industry does not allow net positive impact on the restoration of natural environment and more than half that the same impact is not possible for working conditions. It could mean that innovations such as fostering low-energy and low-water, efficient production and processing mechanisms as well as introduction of resale, worker-driven initiatives or high concentration strategies, proposed by the study, are highly welcomed.

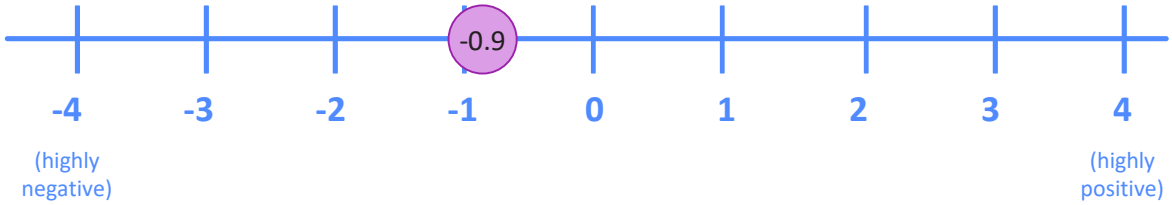
A.1. **AUTOMATION REVOLUTION** - Assessments

Advanced automation technologies dramatically reduce labour content of garment production, processing, manufacturing and logistics while at the same time significantly reducing Time To Market.
PLEASE ASSESS THE FOLLOWING CONCEPT:
"Advanced automation technologies replace humans in most production areas of the fashion industry"

Impact on **restoration of the natural environment**
(**average**; based upon 19 assessments with st. dev. =0.9)



Impact on **working conditions and poverty**
(**average**; based upon 19 assessments with st. dev. =0.91)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 19 assessments with st. dev. =4.25)

Especially worth noting

Basing on the answers, majority of participants agreed that automation revolution would have only slightly positive impact on the restoration of the natural environment and slightly negative on working conditions and poverty. There is no strong dispersion between the responses as the standard deviation for both measures is around 0,9).

Nevertheless, there is less congruence amongst responders when it comes to the ETM. The ETM in average is relatively short and equals circa 10 years from now. However it is observable that answers are less unequivocal and differ more from each other.

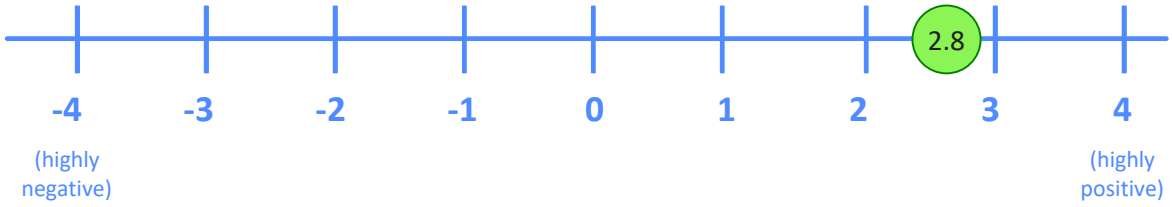
B.1. **CIRCULAR ECONOMY** - Assessments

Circular Economy - a system of interaction and exchange that treats the earth as “one household”. This system views working conditions, poverty and restoration of the natural environment as opportunities to create value, including making a net- positive impact: so each purchase, product, place, process and policy enhances the quality of life, to strengthen the integrity of complex systems such as landscapes, cultures and communities.

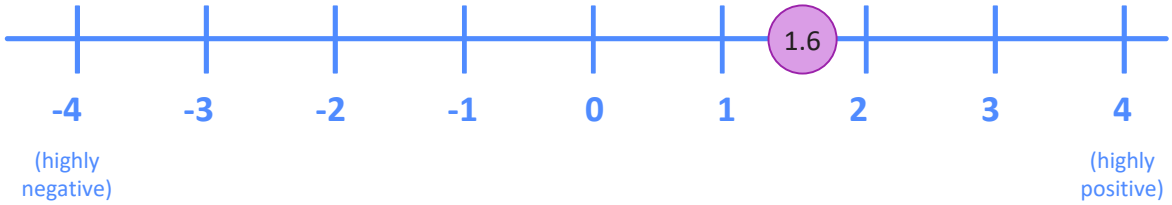
PLEASE ASSESS THE FOLLOWING CONCEPT:

"The fashion industry operates according to Circular Economy principles"

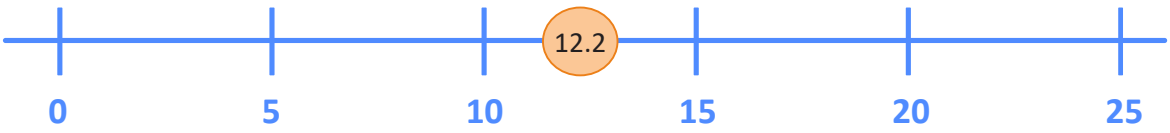
Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. =0.88)



Impact on **working conditions and poverty**
(**average**; based upon 18 assessments with st. dev. = 1.20)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 18 assessments with st. dev. =5.09)



Especially worth noting

According to the results, respondents are quite in accordance regarding the assumption of incorporation of Circular Economy principles to the fashion industry would have relatively highly positive impact on the restoration of the natural environment. There is also a premise that it would result positively on working conditions and poverty, but answers are slightly more spread. When it comes to the ETM, the average remains relatively close (12.2) years, but there is less accordance between respondents regarding this measure.

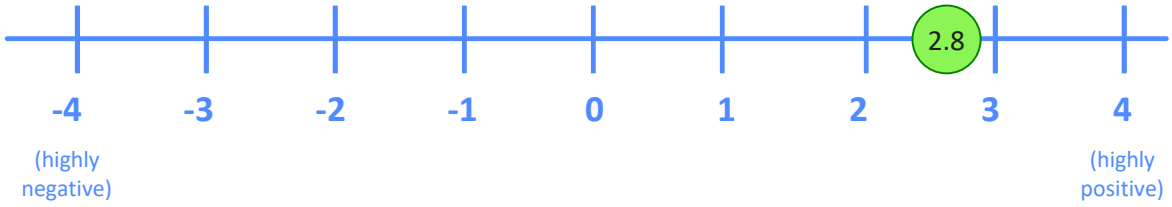
C.1. **CLOTHING AS A SERVICE** - Assessments

"Fast fashion" and "take-make-waste" are no longer the preeminent business models in the fashion industry. Leasing clothing, monthly subscriptions, exchanging used clothes for shop discounts and many other service-based models form the core of the fashion industry.

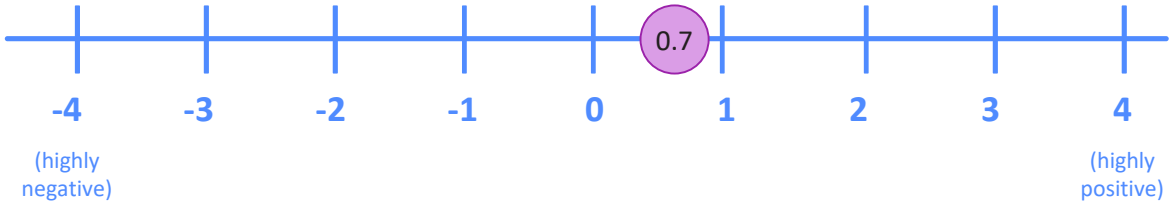
PLEASE ASSESS THE FOLLOWING CONCEPT:

"'Clothing as a service' becomes the main business model in the fashion industry"

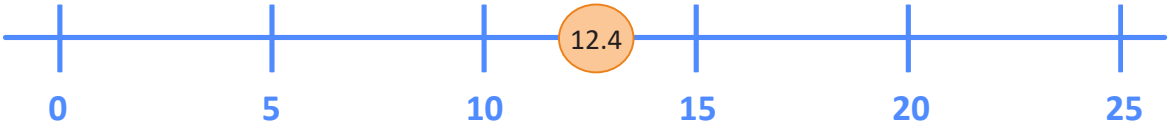
Impact on **restoration of the natural environment**
(**average**; based upon 19 assessments with st. dev. =0.69)



Impact on **working conditions and poverty**
(**average**; based upon 19 assessments with st. dev. = 1)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 19 assessments with st. dev. =6.51)



Especially worth noting

Basing on the results, there is a fairly well congruity that clothing as a service would have strongly positive impact on the restoration of natural environment. On the other hand, respondents did not assume it would impact significantly working conditions and poverty however, relatively positive outcomes are presumed. Eventually, accordance amongst participants regarding the ETM remains highly dispersed with the standard deviation being equivalent to 6.51.

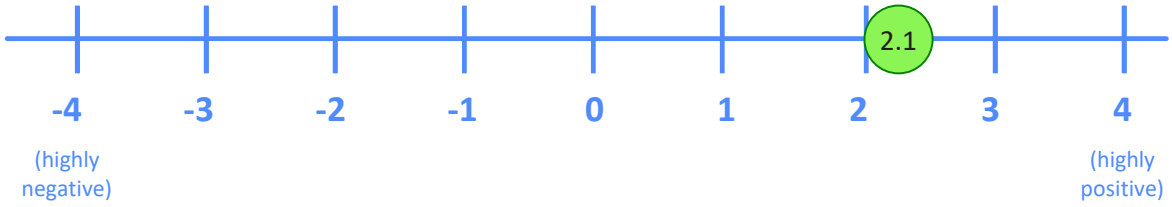
D.1. **CONSUMER LEVEL SUSTAINABILITY INDEX**- Assessments

A smartphone (or other future mobile device) application or simple point of sale tool informs and educates consumers about purchasing decisions. Similar to (and as common as) food labelling, but instead of nutritional facts it provides credible sustainability facts, such as the amount of water used during production or chemical usage. The other possibility would be to create an aggregated sustainability index.

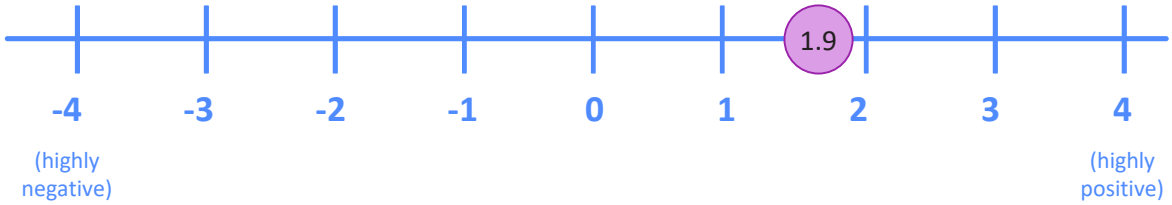
PLEASE ASSESS THE FOLLOWING CONCEPT:

"A consumer level sustainability index is widely used by shoppers"

Impact on **restoration of the natural environment**
(**average**; based upon 19 assessments with st. dev. =1.24)



Impact on **working conditions and poverty**
(**average**; based upon 20 assessments with st. dev. = 1.39)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 20 assessments with st. dev. = 5.51)

Especially worth noting

Respondents valued highly positively the impact on the restoration of natural environment of the index. However, there seems to be more dispersion in answers than in previous questions. A similar trend is visible in the impact on working conditions and poverty. When it comes to the earliest possible time to reach mainstream, the difference amongst participants remain high (with standard deviation = 5.51) and the ETM - comparatively short.

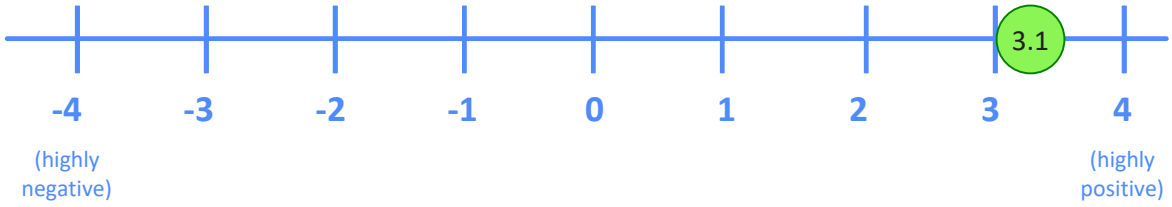
E.1. **EXTENDED PRODUCER RESPONSIBILITY** - Assessments

Most nations enforce extended producer responsibility (for post-consumer or unsold goods) requiring fashion companies to reduce their amount of waste.

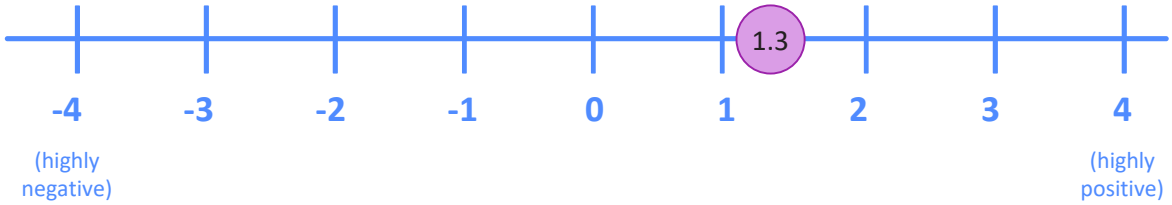
PLEASE ASSESS THE FOLLOWING CONCEPT:

"Worldwide introduction of extended producer responsibility in the fashion industry"

Impact on **restoration of the natural environment**
(**average**; based upon 19 assessments with st. dev. =0.52)



Impact on **working conditions and poverty**
(**average**; based upon 19 assessments with st. dev. =1.2)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 19 assessments with st. dev. = 5.13)

Especially worth noting

Introduction of extended producer responsibility in the fashion industry was evaluated with a high congruence as having strongly positive impact on the restoration of natural environment. There is less accordance regarding the impact on working conditions and poverty as well as less but still relatively strong positive impact on that measure. Dispersion between respondents remain the same as in the case of previous questions and ETM still varies around relatively short term of 10 years.

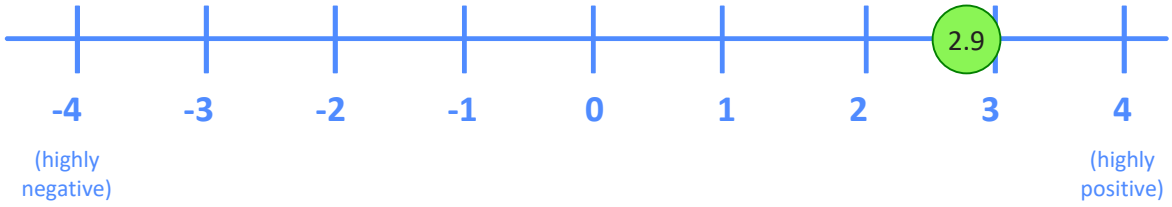
F.1. **FIBERS AND PROCESSING INNOVATION** - Assessments

A new generation of fibres and processing technologies go mainstream allowing low-energy and/or low-water recycling of clothing and a net-positive impact (on the environment) during processing and maintaining.

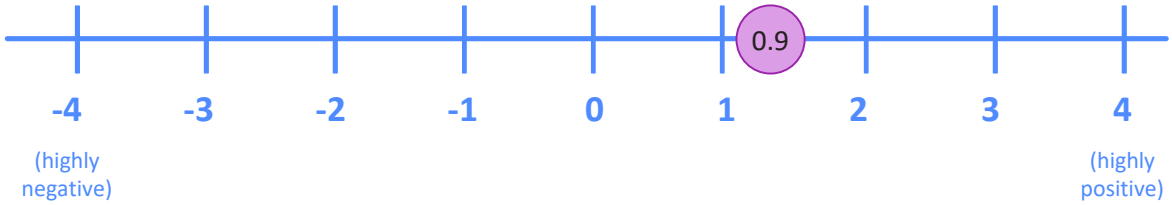
PLEASE ASSESS THE FOLLOWING CONCEPT:

"New types of fibres and processing technologies open up new possibilities"

Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. = 0.73)



Impact on **working conditions and poverty**
(**average**; based upon 17 assessments with st. dev. =1.17)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 18 assessments with st. dev. = 3.77)

Especially worth noting

According to the dataset, respondents assessed also highly positively and with a comparatively strong accordance the concept of new possibilities being opened up by new types of fibers and processing. The impact on working conditions and poverty was also assessed positively nevertheless, with less congruence. Regarding ETM, there is less dispersion amongst respondents than in other questions, but the standard deviation remains relatively high.

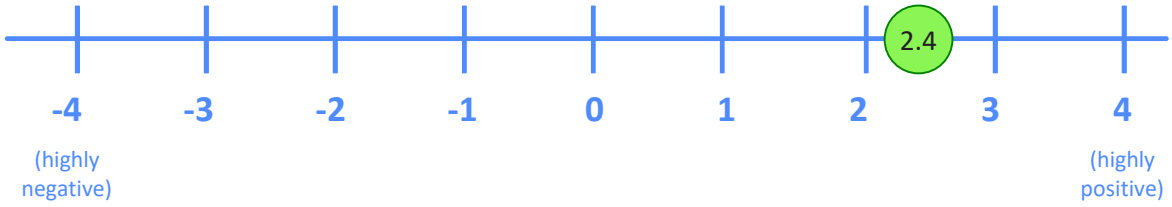
G.1. **GLOBAL AWARENESS**- Assessments

Global marketing strategy focused on raising awareness and increasing education around sustainability issues is launched. It is a concentrated effort by a major segment of the fashion industry - with key players all speaking in one voice. The strategy covers many different channels, and its messages are adapted and targeted to be meaningful and relevant in every region of the world.

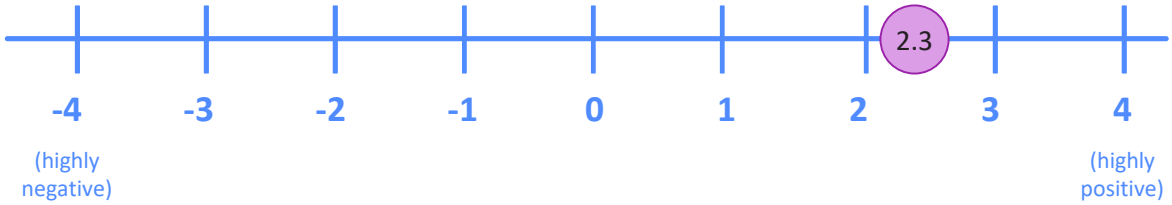
PLEASE ASSESS THE FOLLOWING CONCEPT:

"Global sustainability awareness raising strategy is launched"

Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. = 1.24)



Impact on **working conditions and poverty**
(**average**; based upon 18 assessments with st. dev. = 0.89)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 18 assessments with st. dev. = 2.5)

Especially worth noting

Respondents assessed highly positively, both in terms of impact on the restoration of the natural environment as well as on working conditions and poverty, the possibility of global awareness strategy. However, it seems to be more accordance amongst participants when in comes to impact on working conditions than natural environment. Eventually, the concept was evaluated to reach the mainstream rather quickly - in 5 years - with a relative congruence among respondents. This is the first concept reaching such an accordance regarding the ETM in the study.

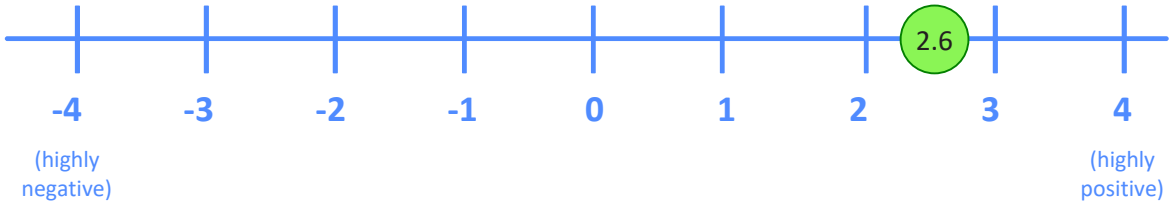
H.1. **HIGH CONCENTRATION** - Assessments

The fashion industry is highly consolidated/concentrated through either asset ownership or formal alliances. Key players are easy to identify and together they are able to enforce sustainable solutions across the whole industry.

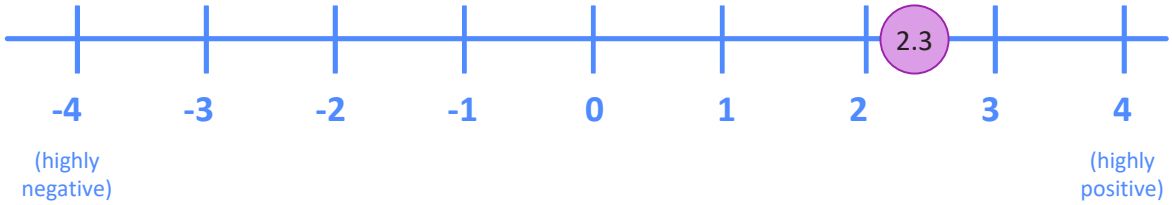
PLEASE ASSESS THE FOLLOWING CONCEPT:

"Key players in the fashion industry work together to enforce industry-wide sustainable solutions"

Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. = 1.15)



Impact on **working conditions and poverty**
(**average**; based upon 18 assessments with st. dev. = 1.13)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 18 assessments with st. dev. = 5.21)

Especially worth noting

Concentration of the fashion industry around formal alliances of key players was evaluated rather positively as well as its impact on working conditions and poverty. However, in comparison with other concepts, results are more spread out and less close to the average than previous ones. ETM still remains rather a measure with the least congruity amongst respondents and the time is still being equivalent to around 9 years.

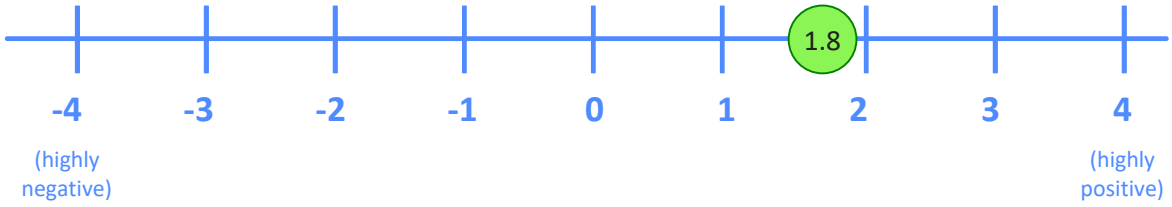
I.1. **HIGHLY DETAILED SUSTAINABILITY REPORTING** - Assessments

The majority of financing institutions (banks, investment funds, etc.) require companies within the fashion industry to maintain a credible system for documenting data in areas such as purchasing practices, wages, other working conditions, chemical usage and the environmental impact of their products, etc. This is necessary if they wish to obtain financing. Companies within the fashion industry may do this via means of a certified standard system.

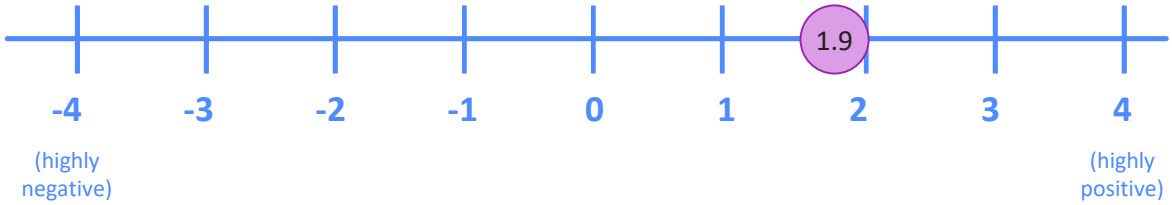
PLEASE ASSESS THE FOLLOWING CONCEPT:

"Highly detailed sustainability reporting is mandatory in all lending and investment agreements with major financial institutions"

Impact on **restoration of the natural environment**
(**average**; based upon 19 assessments with st. dev. = 1.4)



Impact on **working conditions and poverty**
(**average**; based upon 20 assessments with st. dev. = 1.5)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 20 assessments with st. dev. = 3.39)

Especially worth noting

Introduction of a highly detailed sustainability reporting was assessed in average rather positively by the respondents both regarding the impact on the restoration of natural environment as well as working conditions and poverty. However, it is visible that there is less consistency amongst participants and that answers are relatively more spread out. The ETM remains equal to around 8.6 years with relative congruity but still quite dispersed.

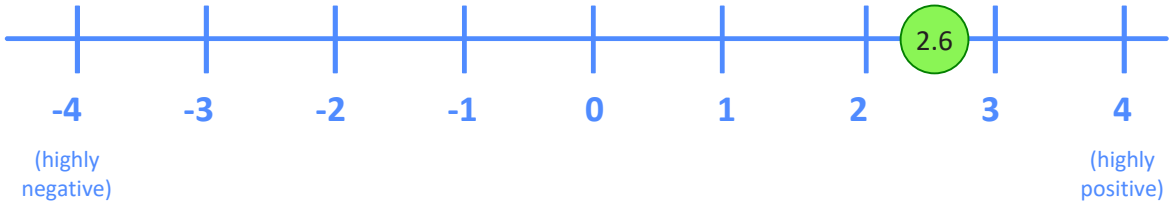
J.1. **INTRODUCING RESALE/SECOND-HAND MODELS** - Assessments

Resale or second-hand is now a common business model in the fashion industry. Nearly half of all stock in retail stores comes from the second-hand market. Clothing design has changed to fit the needs of this new business model - clothes are now easier to repair and alter.

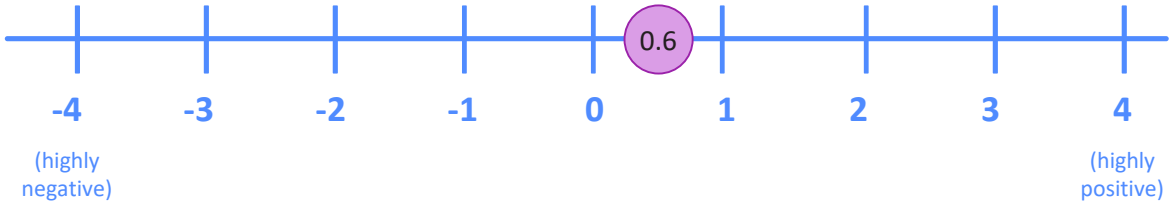
PLEASE ASSESS THE FOLLOWING CONCEPT:

"The majority of clothing companies introduce a resale/second-hand business model to their profile"

Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. = 0.78)



Impact on **working conditions and poverty**
(**average**; based upon 18 assessments with st. dev. = 0.98)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 18 assessments with st. dev. = 4.82)

Especially worth noting

According to the results, a potential introduction of the resale/second-hand models to the fashion industry was assessed strongly positively in terms of impact on the restoration of natural environment. On the other hand, respondents evaluated less but still positively its impact on working conditions and poverty. As in other cases, the ETM remains equivalent to circa 9 years with strong dispersion between answers, relatively to the average.

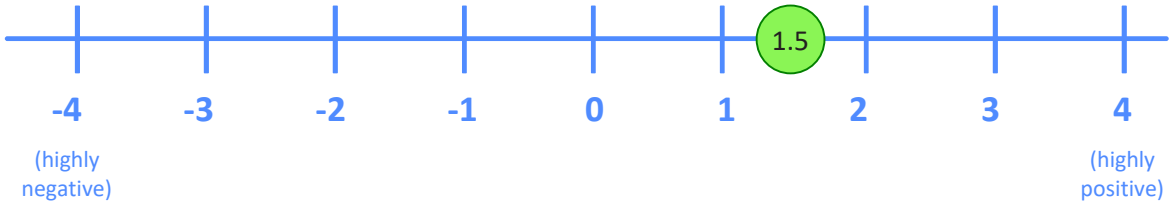
K.1. **MAJORITY OF CLOTHING IS LOCALLY PRODUCED** - Assessments

The fashion industry's value chain is made up of thousands of local chains. This model generates benefits from both the phenomenon of near-shoring of production and the innovative technologies enabling the self-production of clothes by customers (automatic sewing machines, 3D printing, spray-on clothes, etc.). The fashion value chain is no longer a large global chain in which each link is located in different parts of the world.

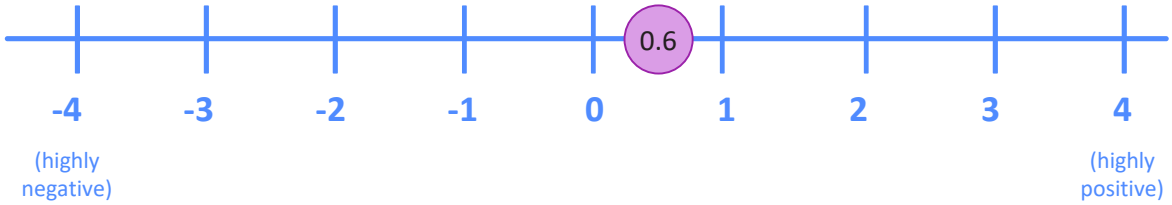
PLEASE ASSESS THE FOLLOWING CONCEPT:

"The majority of clothing is locally produced"

Impact on **restoration of the natural environment**
(**average**; based upon 19 assessments with st. dev. = 0.96)



Impact on **working conditions and poverty**
(**average**; based upon 19 assessments with st. dev. = 1.61)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 19 assessments with st. dev. = 4.84)

Especially worth noting

Basing on the results, local production of clothes was evaluated rather positively by respondents by its impact on the restoration of natural environment with relative congruity amongst them. Locality of production seems to be judged less significant for working conditions and poverty but also the dispersion between answers is higher than in the previous measure. What is interesting, is that the concept was evaluated to reach the mainstream only in 16 years, but this measure still remains the least unequivocal.

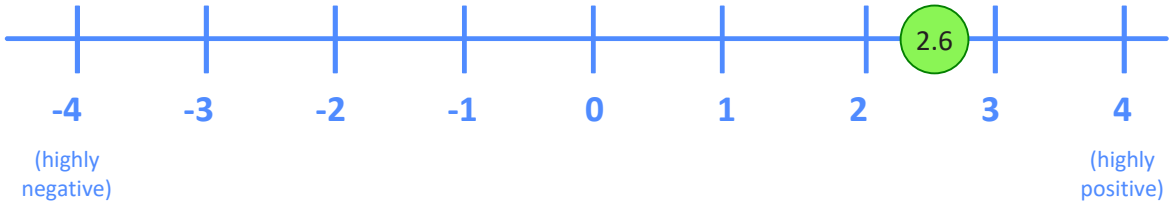
L.1. **TAX REGULATIONS FOR INCREASING SUSTAINABILITY** - Assessments

Most nations have implemented taxation requiring companies to introduce natural capital accounting as well as targeted tax incentives focused on improving practices and boosting R&D.

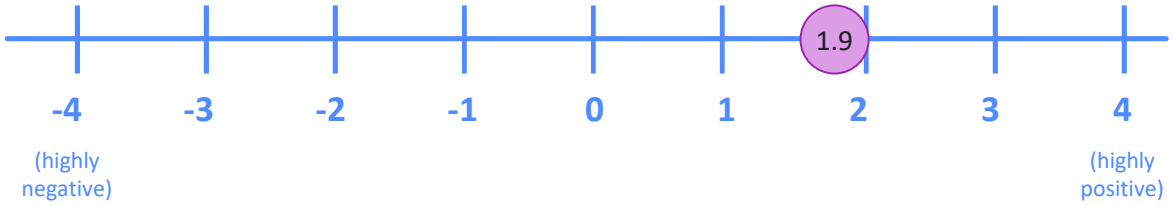
PLEASE ASSESS THE FOLLOWING CONCEPT:

"Introduction of tax regulations targeted at increasing sustainability in the fashion industry"

Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. = 0.78)



Impact on **working conditions and poverty**
(**average**; based upon 18 assessments with st. dev. = 1.08)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 18 assessments with st. dev. = 6.09)

Especially worth noting

According to respondents, introduction of tax regulations for increasing sustainability is assessed concordantly to have a highly positive impact on the restoration of natural environment. Respondents are less congruent, but still judge in accordance relatively positive impact on working conditions and poverty of this innovation as well. Without change, the ETM remains the least congruent measure being in average equal to around 10 years.

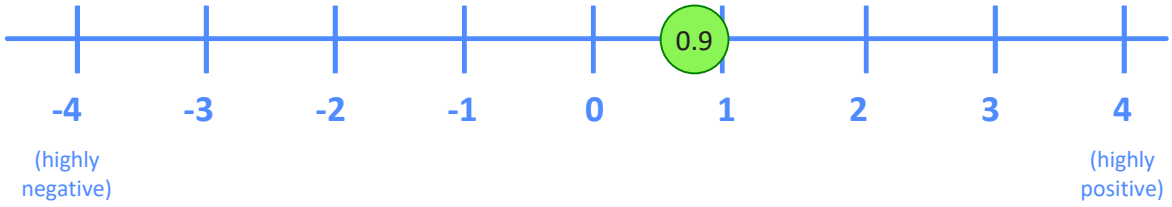
M.1. **WAGES IN THE FASHION INDUSTRY** - Assessments

Every fashion industry worker earns a fair living wage, which is set according to the region's cost of living. Companies compliance in granting this fair living wage to all employees is monitored by local governments and global institutions.

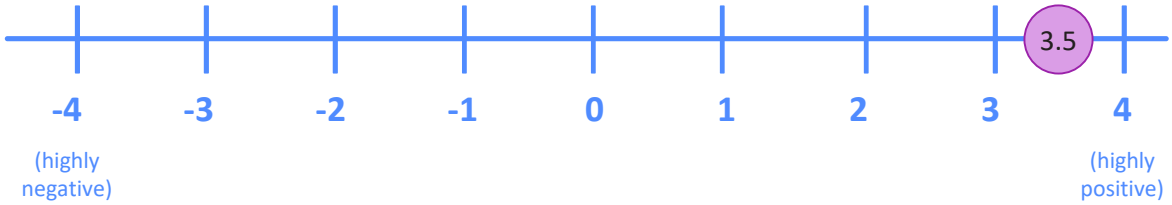
PLEASE ASSESS THE FOLLOWING CONCEPT:

"Fair and decent living wage in the fashion industry is a worldwide standard"

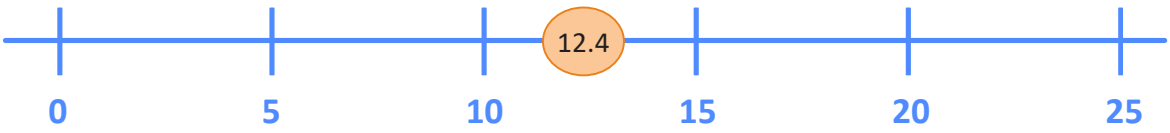
Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. = 0.87)



Impact on **working conditions and poverty**
(**average**; based upon 19 assessments with st. dev. = 0.96)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 19 assessments with st. dev. = 5.78)



Especially worth noting

Concept of fair and decent living wage in the fashion industry was assessed by respondents to have, on one hand, a small positive impact on the restoration of the natural environment but on the other hand a very significant impact on working conditions and poverty. Assessments were made with a similar conformity. Nevertheless, as pointed out a few times previously, participants do not seem to agree regarding the ETM, for this concept to be around 12 years, in which dispersion remains still relatively high.

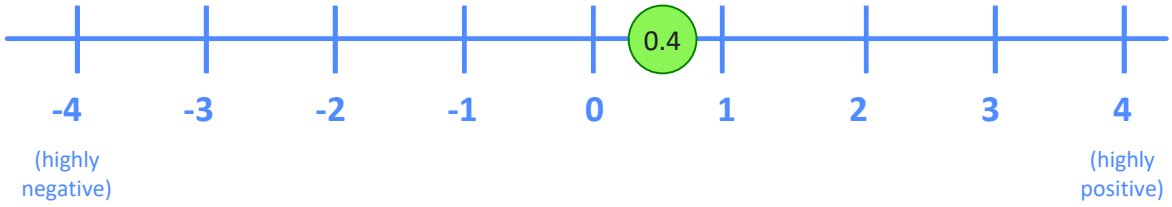
N.1. **WORKER-DRIVEN INITIATIVES**- Assessments

Worker-Driven Initiatives are worker-led processes of securing the protection of human rights. They are built on an industry-specific human rights code of conduct, designed by workers and targeted at longstanding abuses that workers in the industry experience first-hand.

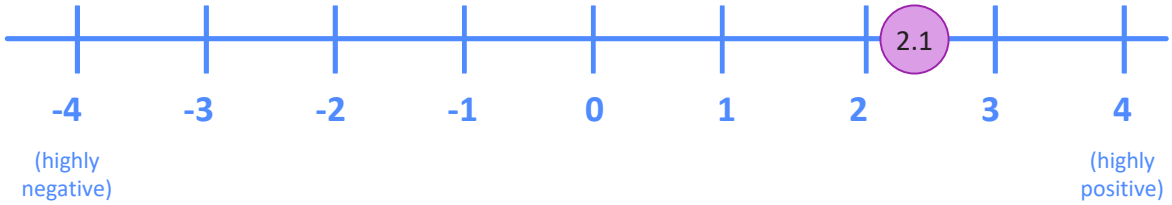
PLEASE ASSESS THE FOLLOWING CONCEPT:

"The majority of fashion companies have embedded Worker-Driven Initiatives"

Impact on **restoration of the natural environment**
(**average**; based upon 18 assessments with st. dev. = 0.85)



Impact on **working conditions and poverty**
(**average**; based upon 19 assessments with st. dev. = 1.22)



ETM - **earliest possible time for this concept to reach mainstream** in years
(**average**; based upon 19 assessments with st. dev. = 5.32)

Especially worth noting

Worker-driven initiatives were seen by respondents as having more potential impact on working conditions and poverty than on the restoration of natural environment. However, for the latter, participants are less accordant and their answers more spread out. When it comes to the ETM, the average time seems rather repetitive, as equivalent to around 9 years the same for dispersion - which still remains relatively high amongst respondents.

A.2. **AUTOMATION REVOLUTION** - Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
Future of work is a topic i feel very passionate about. Of course we all want humans to do high value work and machines repetitive, low skilled work. But this requires retraining, re-skilling millions, particularly women or hidden workers. Perhaps if we introduced a universal basic income that meets basic needs, but how realistic is it?	10	0	*universal basic income and providing displaced workers with alternatives. Higher income given automation should translate to increased wages and benefits to remaining workers.*	11	0
The social and economic cost of mass unemployment.	10	0	*Focusing on human development and productive assets to smallholders producers may mitigate the negative impact of automation.*	9	0
this could result in a large number of job losses so what would happen to these people? additionally increasing speed to market is only going to feed the fast fashion machine which would actually have a detrimental impact on the environment, and would not help change consumer behaviour.	9	0	*The adoption of such automation should come along with actions to trai, recycle and include workers in other activities in this supply chain. Otherwise, the action is socially irresponsible. Companies should take the cost of this, otherwise it will become a case in which technological development has meant an increase in the cost of social assistance*	9	-1
While the jobs created by automation are higher quality, they will lead to the layoff of garment workers, especially women who lack access to education. But the reduction in overages would be huge.	9	0	*It's interesting to see so many comments about how difficult it would be to retrain people who once never made clothing and were trained. I like Shimmy Tech's formula to solve problems by automating manual processes within the product development cycle & to upskill factory workers using video game technology, touchscreen & speech to text*	5	0
the creation of alternatives and standardization of universal basic income for workers might not cope with the fast development in technology for automation.	7	-1	*embracing the Industry 4.0 model for the fashion industry. Make to order rather than make and hope it sells...*	6	-3

[continued on next page]

A.2. **AUTOMATION REVOLUTION** - Comments (continued)

A barrier to achieving this could be...	👍	👎
Answered 0 here on timing.. as we need moreunderstand of the what here tobe able to answer impact and timing. Sorry -- I know that is a theme.	7	-4
I don't think that it is a priority in our society moment. We have a lot of things to do. in order to equalize incomes and respect nature, less workers and more machines is not mthe mainly things to do	5	-4
I don't think the lifecycle complexities of clothing manufacturing easily lend themselves to make- to-order or make-on-demand models of manufacturing except for high end / high value items	4	-6

A solution facilitating achieving this could be...	👍	👎
Technologies end current jobs, but create non-existing others. We just need to be careful with human development to not increase inequality.	3	0
The impact of automation depends on the aims of automation - if they are to protect workers and better value nature - then engage in automation possibilities accordingly. If the aim is to increase margins, reduce social responsibility, increase production and throughput, then the results will be detrimental to workers and to nature.	1	0

Especially worth noting

Respondents assumed quite often that the biggest barriers are linked to potential layoffs and in consequence - lack of employment - due to automation. Whatsoever, participants mostly agreed that universal basic income would be a facilitating solution as well as necessary skilling and re-training workshops. What is important, respondents mostly do not agree with the comment that full automation might lead to equalization in incomes and positive impact on environment.

B.2. **CIRCULAR ECONOMY** - Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
the huge profit motive remains.	10	0	*Design public policies to incentivize and create an institutional environment favorable for circular value chain.*	9	-1
That so many people believe that the circular economy is going to save the planet while utilizing more of it's natural resources to make more stuff is insane. It's great to think about designing for circularity but it's even better to consider making less.	9	0	*Now, we are in paradise... shure thta is a great idea, but the topic is: how? A lot of stakeholders should be ablle to change her mind in the way of the colective and not only private vantages. Are we prepared for that?*	8	-2
Unless there are tariffs, taxes, and extended producer responsibility legislation put into place to support the circularity, it's not going to happen.	9	0	*This is a good description for circularity - alas, it is not the understanding shared by many businesses talking about it. if nature and human equity really are at the centre of the intention of those thinking about this - then we can be hopeful - if the mantra of double growth halve impact is believed, then we are on a hiding to devastation*	1	0
Again.. this is much harder to say for the social side.. that is not captured as directly.. THe timeline here as in all is imly the "concept" not that the full idea is realized. This is a critically different point. On the full idea implemented.. a bit more analysis would be needed.	8	0	*Global commitment of key players of the industry. Eg: post-consumptions packages agreement firmed at the World Economic Forum engaged Coca-Cola, Unilever, Danone, P&G and others to transition to 100% compostable, 100% reusable and 100% recyclable packages by 2030.*	4	-4

[continued on next page]

B.2. **CIRCULAR ECONOMY** - Comments (continued)

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
Circularity is much more impactful when it is implemented locally, but the current fashion industry is extremely globalized. This resource distribution will be extremely difficult to undo.	8	0			
the need for deep and massive cultural change on the part of consumers that could put pressure on the behaviour of big companies.	8	0			
The fashion industry gets a break from looking at the elephant in the room which is its enough to just keep making more stuff and recycling it. Not sustainable when you are making more and pulling more resources even if keeping it in the loop.	6	0			
global cooperation would be required to achieve this, with enhanced chain of custody systems and the development of materials that are suitable for a circular system. At the moment we do not have adequate technology to separate and recycle all fibres. Plus we need to consider the environmental impacts of transportation and processing.	5	0			
This could be huge for environment. Not clear on the social. But the time it takes for implementation vs concpet adoptions could be much longer that 10 years, depending on the other factors at play. This deserves a strategic foresight activity.	7	-2			

Especially worth noting

It is important to underline that respondents focused more on barriers than on solutions in this section. Profit motives are seen by the majority of commentators as the main barrier for this concept. Moreover, behavioural and cultural aspects of fashion industries as well as lack of well-tailored public policies and globalization are considered as main barriers for this concept to achieve mainstream. As one of the top comments underlined, companies and governments do not seem ready to fight against inequality of opportunities and social injustice in the field of fashion industry.

C.2. **CLOTHING AS A SERVICE** - Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
This could incentivise design of higher quality clothing which could withstand many wears, reducing demand and therefore industry's natural resource dependency. However more research is needed taking into account potential environmental trade offs plus social impact, and whether the market would accept it across all clothing categories.	8	0	*I'm excited about the potential of renting for occasions or to experiment, I also love owning my loved clothes that have history & memories, and keeping them for a lifetime. I'm not 100% clear on the net environmental impact of shipping back&forth, dry cleaning, packaging etc. Also in the short term this could affect garment workers eg re-skill/re-deploy*	9	-1
This would be a good solution for the environmental impact of textile production - for example more land could be used to grown food rather than textiles, and less oil could be used for synthetics. But we need to understand the environmental impacts of dry cleaning, shipping and other logistics. it would need development of cleaning technologies to start/	8	0	*On the one hand, this business model could reduce the number of jobs in the industry, particularly in the main fast fashion supplying countries, but equally it would mean that clothing created for rental would need to be better made, which would require upskilling workers and potentially creating better jobs.*	9	-1
could this end up affecting employment opportunities in the poorest countries where we currently source from? it could involve upskilling some workers, but such a large economic shift would need to take into consideration alternative employment as this could significantly reduce job opportunities.	7	-1	*the hard reality for our world in the next 50 years is that there will be tens of millions of new consumers coming up of developing economies like China & India. With limited resources we all have to consume less for enough to go around. Renting is a great solution. Technology is the enabler. Companies will make more $ selling services than goods.*	8	-1
This cultural shift in consumersâ€™ mindset is not definitely a low hang fruit.	6	-3	*more business model experiments in leasing clothes, subscription services, wardrobe in the cloud...*	8	-3
challenging consumer's values of owning and want for uniqueness, bolstered by advertising.	5	-4	*Technology to easily organize, sort, and process the fulfillment of rentals and secondhand clothing will be required to make this cost effective. Think RFID threads that can be scanned that helps AI quickly sort fashion.*	7	-2

[continued on next page]

C.2. **CLOTHING AS A SERVICE**- Comments (continued)

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
The concept is applicable for the wealthy generation that was born after 1995. They already live with meanings produced collectively. But I see a possibility of limited change about older generations and poor countries - who want ownership of clothing and not possession for cultural reasons.	5	-4	*Hoping I'm understanding this one right. If it's a service, say customization on an existing piece of clothing, I see lots of opportunities for brands to tap into everything from tech to regional history to make less clothing & improve what currently exists. People are still employed, maybe even paid more and the environment loves getting to take a breather.*	6	-3
There is no evidence that â€śpay as serviceâ€ť model is fully applicable for non-durable goods as clothes. It also requires a huge cultural shift. Quite difficult to believe it reaches the mainstream.	4	-4	*a mixed model approach would enable different cultures, needs, location capabilities to be better engaged. We should not assume that increasing value, slowing down consumption necessitates reduced employment. If the starting point is to offer fulfilling, fair jobs,value nature's resrouces and ensure viable business models - we can model options*	1	0
			the awareness raising within the fashion industry and also the consumers. If this happens, the demand will be predictable, therefore, workers can expect long-term and more stable employment.	0	-8

Especially worth noting

Environmental costs and trade offs of dry cleaning, packaging, shipping and logistics related to clothing service are assumed quite unequivocally as the most significant barriers for this concept. Comments pointing out that introduction of this innovation requires changes in consumer's willingness of owning new clothes and huge cultural shift are not valued as important by respondents. Respondents in majority also agree that clothing as a service will result in better quality clothes and potentially - better jobs which would require upskilled workers. Moreover, there is a strong congruity that increasing number of consumers in the future and progressively limited resources will boost the renting service in the fashion industry, alongside with technology.

D.2. **CONSUMER LEVEL SUSTAINABILITY INDEX** - Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
Point of sale sustainability tools are only as good as the information that goes into them, so highly detailed sustainability reporting using a common global framework is necessary for the tool to be meaningful. Information needs to be comparable between brands to inform shopping choices, and presumably this would exclude small brands with insufficient data	13	0	*Informational governance is growing with impact. A high profile campaign to elevate this would be crtical.*	11	-1
Not including working condition index, such as observing living wage, and non-exploitative working conditions.	11	0	*Similar to my previous point, and agreeing with others, I think technology in the hands of consumers has a role to play, and i see that has the ability to reconnect consumers with makers - i.e products come from somewhere/one & we have lost that connection. But the more impactful aspect of this would be the data collected by industry to effect systemic change*	9	0
fashion purchasing involves emotional as well as rational choices, whilst useful, this tool is insufficient in isolation in relation to improving working conditions and environmental degradation. culture change, design and business models, legislation and investment criteria all need to simultaneously take place	10	0	*Give consumers point of sale information to help everyone make informed purchasing decisions.*	9	-2

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D.2. **CONSUMER LEVEL SUSTAINABILITY INDEX** - Comments (continued)

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
The complexity and scope of the impacts of the fashion supply chain on people and the natural environment means that is very difficult to summarise such impacts in a single, consumer facing index or score. It would be a huge task for brands to collect all the necessary data on every item made and oversimplification could lead to false choices by consumers.	10	-1	*I like very much this idea, I do think that consumers choice is a very important key to change the industries choices. I mean, ideas like that is part of solution, and, I think, a important part.*	8	-1
Ditto to previosu comments.. these all need to be seen together - consumer awareenss, narrative, building demand for regulation.	9	-1	*Define clear metrics to design environmental-Profit & Loss (e-P&L). Eg: Natura & Co using PWCâ€™s methodology measured consumersâ€™. externalities including waste, logistics and water usage. By doing this, a whole of new instruments and narrative may be built to engage the consumer as a key stakeholder.*	7	-2
This is putting way too much on the shoulders of consumers who are not experts and do not have the time or motivation to try to understand such complex assessments. But a simplified rating system would be controversial and hard to reach a consensus on.	9	-2	*There is a case in Brazil of an app called "Moda Livre" ("Free Fashion"), which analyzes the supply chain, transparency and CSR policies of more than 100 companies and brands about the fight against modern slavery. The results show that more than 150,000 consumers have used the app to pressure companies to adopt new policies. But, it takes time to results.*	6	-1
The are systems similar to this (but small scale) such as the Higg Index or Kering's open source EP&L tool. The problem is that these calculations are based on averages or one example, when in reality every cotton etc. potentially has different impacts depending on where grown / how processed etc.	7	-1	*facts and figures about social and environmental aspects of fashion need to be seen in a relative sense - eg Nike Making app offers comparison between options, for designer to make decisions based on what is of biggest concern. Whole lifecycle analysis on fashion includes wearer practices, which need to be factored into these tools.*	2	0
While a "sustainable consumption" index is great in theory, the real challenge is that the consequences of scare stories or negative attention affects business' bottom lines to a much greater extent. Therefore, translating wide adoption of an index by shoppers into substantive results will be difficult.	7	-2	*Whilst access to verifiable and verified information about products can be very helpful in aiding decision making processes, fashion purchasing decisions are seldom solely rational social acceptability of products/ materials/ fashion habits is essential alongside information.*	2	0

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D.2. **CONSUMER LEVEL SUSTAINABILITY INDEX** - Comments (continued)

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
Because chemical usage in manufacturing countries doesn't affect consumers directly, consumers won't be incentivized to do their research. And if they did, they might not understand it anyway, unless it was distilled down into an incredibly reductive and simple (and controversial) grade.	7	-3	*This could result from mobilizing analysis that is done together with the industry.*	4	-6
Engaje the consumers to analyse the information provided and make a choice based on that. Thinking about the food labelling, which give important information to the consumer (such as the content of sodium, fat, sugar...): how many of them do really leave the produt on the shelf based on the nutrition facts?	6	-3			
It all depends on the ambition of the tools - if the aim is to value nature and labour - then the content needs to reflect this - if its about encouraging people to switch from one kind of consumption to another - ie if consumption is at the centre of this - then the tool is very limited at best - deceptive and green washing at worst	3	0			
These tools often take a reductionist approach, reducing problem, rather than offering new possibilities - if these tools are expanded to talk about stories of lower consumption the joy of keeping, sharing, mending etc as well as talking about purchase, then they could have far greater possibility for positive change.	1	-2			

Especially worth noting

Technological tools such as phone applications associated with production and supply chain information are the most repeated solutions' proposals by respondents. It is also worth mentioning the idea regarding establishing environmental profit and loss account in order to engage also the consumer as a stakeholder and introduce mechanisms of environmental footprint analysis. The most called barrier is related to the collection of the data and, as a result, simplified rating system, based on averaged calculations. Such a system will not display detailed information and might be controversial, according to respondents of the study.

E.2. **EXTENDED PRODUCER RESPONSIBILITY** - Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
If the legislation only applies to the largest companies. Legislation needs a comparatively low turnover threshold.	11	-1	There would be widespread public support for this type of legislation. It should include not just the product, but any associated packaging - particularly relevant to unsold shoes, jewellery etc which can be heavily packaged in bags and boxes.	11	0
The lack of tools to pressure companies to engage in this change without being forced on the part of the States.	10	0	This would be really valuable, as consumers make efforts to recycle and dispose responsibly but the real gains are at system level, by government and corporations. I would go upstream and propose that legislation should target production and packaging standards before they even enter the system.	10	0
The United States has a free market fetish, and powerful lobbying groups that cleverly manage to always put the responsibility for disposing properly of , frankly, unrecyclable materials at the feet of consumers.	10	0	Need to demonstrate the net positive for key actors. I think this could be done.	10	-2
the industries interest. And the commitment of the industrie in assume the costs. But is imprescindible a iniciative like that.	8	-1	The engagement of developed countries to pressure their companies to finance the adaptation of production in poor countries.	8	-2

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E.2. **EXTENDED PRODUCER RESPONSIBILITY**- Comments (continued)

A barrier to achieving this could be...		
Lack of willingness of big producers to shoulder the costs of EPR.	6	0
Effective EPR will most likely require impeccable cross-border communication and incentives. Such policies will be very difficult to coordinate.	6	-3
the complexity of fashion. For instance: there are unsold goods also because of the weather. If during the Winter the weather doesn't get as cold as expected it will be a lot of coats unsold. Of course there is a lot of solutions for that, such as "refresh" the unsold goods to sell them in the next year, but it still too expansive for the brands/industry.	4	-4
a nice idea that is hard to enforce	6	-5

A solution facilitating achieving this could be...		
Now we do have technologies (such AI and BlockChain) to trace the value chain, implement smart contracts and require accountability and responsibility for all the chain.	1	0

Especially worth noting

In this section respondents seem to be quite consistent with their proposals. They often point out that main barriers are associated to lack of incentives from the side of companies but also, if EPR introduced, lack of tools for oversight, control and enforcement of EPR if not respected. What is significant is that comments mentioning difficulties or impossibilities regarding implementation of EPR are negatively evaluated. Most solutions are designed around engagement and support from the part of both society and developed countries to introduce such a measure. Participants also underlined a need for EPR covering not only big companies but also local ones as well as packaging standards.

F.2. **FIBERS AND PROCESSING INNOVATION** - Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
Hard to say timing or impact on this one.. as it depnds on what new fibres and processes are. Smart materials have lots of potential.. but hard to assess with out a bit of more research.	11	0	If there was more investment from governments and fashion brands and retailers. There are some pioneering brands (Levis, H&M, Adidas etc) leading the way, but overall relatively few brands are working on or investing in innovative solutions and new technologies.	10	0
Like my previous answer, this is great for the environment and investment should be made into researching new smart materials and make them mainstream, but we must also consider implications for global garment workers, farmers, growers etc. I still feel the real issue is over-consumption and we cannot just buy our way out of this.	8	0	R & D on sustainable materials that would use the least amount of energy.	7	-2
Not looking at how these new fibers and â€ślab grownâ€ť materials interact with the carbon cycle, the feedstocks grown to fuel synthetic biology, and who is impacted by these landscape pressures is a huge oversight. There ARE great technologies but still lots of chemicals. Pick your poison.	8	0	greater use of technology in general to solve some of our social and environmental challenges would help push the science along.	6	-3
What is the raw material impact involved in the production of these recyclable fibers? The impact could be small at the time of recycling, but high at initial production. In addition the using of materials produced in the laboratory usually exclude workers who work in the production of natural fibers. It's necessary to think how to include them at this chain	8	0	as part of a new fashion system - ie one of the workable possibilities, when balanced with others. the material mix needs to be diversified for sure. different styles, peoples' needs, locations etc require different materials - at the moment, we are too reliant on cotton and on polyester - its about broadening what we use	0	0
even if such technologies become cost-competitive and mainstreamed, they will still require energy and water, or other environmental inputs. It's difficult to understand how their usage will lead to net-positive impact, as opposed to "less bad" (which is certainly possible).	8	-1	Developing new technologies to scale, reduce asymmetric information and gain efficiency may help.	2	-3

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F.2. **FIBERS AND PROCESSING INNOVATION**- Comments (continued)

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
the issue is that this does not help the perception of clothing being disposable - companies like H&M are researching recycling technologies, but so that they can still continue to sell at ridiculous volumes, letting customers believe it is zero impact as the clothes will be recycled when they are finished with them.	7	0			
we also need to consider the implications for natural fibres, farming economies, potential loss of jobs. however if the population keeps growing and consumption keeps going up who know what affect this system would have	7	0			
These technologies are great for the environment, but what happens to the millions of farmers who rely on cotton, hemp, linen, leather, silk, etc. for their livelihood when all of our fabrics become semi-synthetic or synthetic?	7	-1			
the world inequality. I don't see new types of fibres and processing technologies impacting positevely on poverty, because the fibres producers would stay on developed or developing countries, improving the technology and their knowledge, while the undeveloped countries would stay "serving" the other ones (with cheap work force, i.e.).	6	-1			
I don't think that is a matter of technology. Sure, technology can help, but we have a lot of priority decisions, like we are discussing here, before believe that technology will save us!	6	-3			

Especially worth noting

In this section, predominant number of comments regards barriers and not solutions. Participants often point out that new fibers and processing have implications for their natural substitutes - as they are excluding global garment workers, farming economies. Such technologies require also lots of environmental inputs and large number of chemicals. What is also worth mentioning, is a comment underlining that new fibers technology do not reduce the problem of overproduction and waste. The most valued solutions regard need for more investment from governments, fashion brands and retailers to work on new technologies as well as investment in R&D to create materials. Such an approach would be more energy efficient.

G.2. **GLOBAL AWARENESS**- Comments

A barrier to achieving this could be...		
A global marketing strategy is relatively easy to agree upon, it makes business sense as even brands who haven't cared so far now must care, because their consumers do. The problem is greenwashing Vs real change. There is a lack of agreement on vocabulary, numbers, data etc and this murkiness allows some to push messages out without creating real change.	9	0
The interests of industry. I have my doubts if they could and want do that. But, it is a necessary action, if we really wanna to achieve good impacts in sustainability questions AND workers life conditions and incomes.	9	-1
The problem: a marketing campaign showing the real causes of the labour exploitation and the environment damages will have little success because it will point to responsibilities, and a campaign that only touches the problem superficially has a great chance of success.	8	-1
May not be possible for a lot of small brands and start ups	2	-10

A solution facilitating achieving this could be...		
producing also a coherent voice that sustainability includes workers' wages, health and safety; that consumer interests' are necessarily linked to those of the producers' including those in the supply chain. The global awareness strategy should therefore, address systemic problems leading to consumer's critical mass taking action to pressure to companies.	8	0
This strategy needs to be founded on transparency, so that it is owned by consumers and the public, rather than the companies themselves. Radical transparency and adoption of data-driven solutions will help to prevent greenwashing.	8	0
Global awareness must be a business imperative. We need to use the power of business sector as a force for good and embed it in the global agenda of economic system.	7	-1
There is increasing movement towards this, but there is still a lack of education for brands themselves to be able to communicate accurately with consumers, or consistently. The Union of Concerned Researchers aims to address this by developing standard terminology and updating open source resources like Wikipedia (not academic but the 1st place people look)	6	0
Narrow down the idea of "sustainability" to something in common like (ex) a huge industry wide acknowledgement of water scarcity and pollution and work to remedy the problems as a global cohort. Be transparent about what challenges are and steps being taken to remedy. Use progress as message to show complexity.	5	-1

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G.2. **GLOBAL AWARENESS**- Comments (continued)

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
			changing the orientation of the industry to wean away from current model of demanding high quality products at the least possible costs, which induces a race to the bottom in terms of wages of benefits.	5	-4
			Extinction Rebellion, Schools for Climate Strikes, Fashion Revolution are egs of this starting to happen. Academic institutions can also teach long term thriving of graduates alongside their short term employment	1	0
			that everyone - businesses, citizens, educators, politicians etc REALLY want to commit to environmental and social sustainability - not that they want to find ways to reduce risks of current practice. It would be achievable if the aim places nature at its heart - with economy as a constituent part, not vice versa	1	0
			This is in fact already underway with co-operation between e.g. Ellen Macarthur Foundation, Global Fashion Agenda, etc.	4	-5

Especially worth noting

It is worth mentioning that respondents more often focused on seeking for solutions than obstacles for this concept. Participants often note that an enabler for the global awareness strategy are tools ensuring transparency and oversight of a good implementation. Engagement from various sectors; starting from business, through marketing, branding and ending at governments and citizens is also needed to ensure sustainability. The last comment, although only with one thumb up, covers this idea. It is worth noting, that lack of large number of evaluation of this specific comment might be due to the late submission of the comment, e.g. just before closing the study, which does not impact the accuracy of the idea. Main obstacles consist in lack of incentives and interest in the industry sector as well as risk of greenwashing.

H.2. **HIGH CONCENTRATION**- Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
A industry action is fundamental, but will mainly reach the formal and regular market. In addition, there are large companies that have avoided acting in a collective action to improving their supply chains to avoid revealing who their suppliers.	9	0	Collaboration is key - if corporations can look past shareholders' value only. Assuming intent is there, the difficulty is the fragmentation of supply chains. Transparent and open data could help. At the moment many large industry players only have data about top line suppliers. This is a massive issue for any concerted effort.	9	-1
that industry-wide action will only work if the least common denominator companies do not lower the standards for everyone.	9	0	Develop a community of practices to prototype collaborative solutions that may influence system change.	7	-3
Again, the interests of industries, but it will be great, it sounds like a music, the big industries doing efforts to solve the problems that they created.	9	-1	I see the collaboration of big players on consumption and production side is critical. this couple with others in the full ecocsystem of the goods and services around this industry is critical.	6	-2
To date, the industry has been singularly uncollaborative, so achieving this level of collaboration may be harder than anticipated as it will involve a change at every level of a brand for them to work together to enforce sustainable solutions.	8	-1	Have a mastermind like cohort that aids the industry and is comprised of specialists in all the areas of "sustainability." The global players have to go through that one body to message out what they are actually doing. Imagine Clean Clothes Campaign meets the NRDC yet they work together as one. Sounds crazy but...	4	-1
There is currently a lack of collaboration and even consensus on terminology and necessary actions to improve social and environmental conditions in the fashion system. The Paris Agreement is already proving to be difficult to follow / enforce, so it is difficult to imagine how we could reach a global consensus	7	0	if the membership includes representation of all involved in the system, equity in voice and support for those whose involvement may involve risk for them and who they represent.	1	0

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H.2. **HIGH CONCENTRATION** Comments (continued)

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
Although there is consolidation in brand/retail and existing vehicles for pre-competitive co-operation the supply chains are highly fragmented. The big players will find it hard to spread best practice to the 80% of actors who make uo 20% of the industry	7	-1			
ego	4	-5			

Especially worth noting

According to the comments, potential lowering of standards by companies might be a barrier to achieve effective "collective action" within fashion industry as well as fragmentation of supply chains. Moreover, a few participants also underline the fact that industries seem to be intrinsically uncollaborative. Such a situation would be an obstacle towards reaching a consensus in the future, especially between big companies who are big stakeholders and small companies, responsible for small shares. As a solution, a few respondents proposed that gathering and stocking of data as well as transparency would be a remedium for fragmented supply chain. Eventually, creation of group of experts for sustainability might foster collaboration between companies.

I.2. **HIGHLY DETAILED SUSTAINABILITY REPORTING** Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
This is a super important avenue for change. But getting the data to do this effectively, and pressure to enable this.. it would take broader social pressures with ties this to the other items on this list.	13	0	transparency and accountability from farm to store by brands. Easy to understand and acceptable disclosures around social and environmental impact accessible at the point of sale	11	0
AS with many of the items in his survey they cannot be seen in osialation. The cooridnation around key layers, coupled with cosumer awareness can help to facilitate reagulation and taxes. I see these each timeline as critically dependent on the others.	12	0	Building an anlaysis that shows the impact on society/environment and on the industry bottom line. This would have to be done in a high profile manner to galvenize support and attention.	10	0
The action of the banks and the financial system is very important. However, only demanding reports without the financial institutions themselves being forced to investigate their partners' chains is innocuous. Although relevant, US and UK laws are limited to self-declaration. Australia's new law promises to be different, but it's very recent yet	10	0	Ensure that investors look at the long-term performance of companies instead of short-term targets (should not be at the cost of the long term approach). Incentivize best practices and empower employees...Keep sustainability front of mind for leadership, advocate for/support transparency regulation (e.g. Californiaâ€™s Supply Chains Act)...	10	0
Yes, certification could be a tool for that, but so we need much more transparency. The excuse of confidentiality is used to give less information to consumers and we really donÂ´t know if the compromise of the certification services/industry is with the socitety or with their clients.	10	0	We are heavily reliant on certifications and for me they show a very narrow view of the picture. Technology, with the right political backing, can play a significant role in making complex supply chains more transparent, and companies more accountable. Currently it feels like these projects are a little gimmicky as large companies don't want the data exposed	9	0
what would the requirements be? there are many initiatives around which require minimum standards, and so their overall impact is debatable. The ideal would be to have a globally agreed system that different industries and businesses could adhere to in a consistent way - currently we have so many reporting frameworks etc. that there is inconsistency	9	0	Design incentive structure in the financial markets for lenders to embed best social and environmental practices. Eg: BNP Paribas lended 2B EUR to Danone incentivizing them to perform socially and environmentally better.	9	-1
If the development of the certified standard system did not include workers' unions since wage standards especially in countries where the supply chain resides are often below living standards. Slavery conditions also exist in Asian countries, relatively unknown to public but allowed by governments. This was revealed by the Rana Plaza tragedy in Bangladesh.	8	-1	Fully transparent verification mechanisms, with real consequences for those companies that do not fully comply with reporting requirements.	8	0

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I.2. **HIGHLY DETAILED SUSTAINABILITY REPORTING** Comments (continued)

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
have no access to new financings that eventually would improve the technologies in textile production and consequently impact positively the restoration of the natural environment. That's why I think that this scenario can impact working conditions more than impact the restoration of the environment.	3	-5	If the political will is there, this could be brought into law rapidly. It would need to go beyond the French and Swiss examples and the challenge would be extending to smaller brands. Recording purchasing practices, wages, etc is relatively straightforward and already part of many company reports but reporting on supply chain impact is far more challenging.	10	-2
			Define verifiable, credible and comparable standards for social and environmental impact - particularly those aligned with the 2030 SDGs. Start measuring and reporting publicly to stakeholders.	8	-2
			possible, with the right political will. Most likely in Europe first, and only in the U.S. if we have a sea change in our political system in 2020.	8	-3
			There needs to be established a clearer language and understanding among investors about what companies can do to get more investment. Investors/shareholders have so much power over creating a more sustainable apparel sector and to develop a whole new relationship with large brands.	4	0
			According to JP Morgan, ESG (environment, social and governance) investments represent USD 24 trillion (from 280 trillion of assets under management). To grow this flow is important to have verifiable, credible and comparable metrics. This is a key input to measure and report to stakeholders, including investors.	2	0
			Develop a whole new value chain based on fixing and adjusting clothing.	3	-4

Especially worth noting

For this concept, respondents were more keen to comment about solutions than barriers, however both proposals have been done. On one hand, lack of transparency due to confidentiality policy, current lack of concrete requirements for the report as well as potential involvement of financial institutions in investigation of partners' supply chains seem to be the main barriers for highly detailed reporting system. On the other hand, ensuring transparency and accountability on every stage of production within the fashion industry as well as analysis on the impact on environment and society are two best valued solutions for this concept. Moreover, incentive policy and verification mechanisms, according to respondents, would ensure effective functioning of the detailed reporting. Eventually, this idea has been pointed out as a barrier and solution - need for clearer and concrete language what is permitted and prohibited would help fostering sustainable fashion sector.

J.2. **INTRODUCING RESALE/SECOND-HAND MODELS**- Comments

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
Not sure on the social impact side.. this could go eitherway. On the environment side hard to not see this as an overall huge poistive.. but the cultural change to make this happen is singificant.. and is what would take a whiile.	11	-1	better and more convenient take back programs	12	0
I see much more value in second hand than recycling as it currently is. We must encourage it. There are global issues like dumping to poorer countries with all the consequences this has, and there's a real concern about retraining and repurposing millions of garments workers globally. Can't be solved on one side without considering system-level solutions	10	0	This is not just about second-hand, we need to deal with the huge quantity of unsold stock in the industry. Innovative solutions will be needed to turn unsaleable pre-consumer products into saleable ones - both at factory and retail level - coupled with increased consumer awareness of what happens to unsold stock	12	0
The poverty question is a tricky one as it could be argued that cheap second hand clothing being dumped on sub saharan Africa or Latin America is a benefit to many families living in poverty who can't afford new clothing but, long term, preserving national manufacturing and banning second hand clothing imports could provide more and better jobs locally	9	-1	We've seen a huge change on consumer sentiment around secondhand in the past five years, and there's no reason that will stop. Online stores make finding what you want in the secondhand version easy. It will be a huge boon to the environment -- way more than local manufacturing.	10	0
This could have a positive impact on the environment, however with growing populations and a growing middle class around the world, will production of virgin products still continue to increase? We would need to consider the logistics - items would need to be efficiently processed and repaired for resale, and unsellable items would need to be recycled	8	0	From Treehugger: "Secondhand clothing retailer thredUP has just released its annual fashion resale report, and the market is booming. thredUP reports that, over the past three years, resale has grown 21 times faster than apparel retail. The secondhand market, currently worth $24 billion, is expected to reach $51 billion in five years."	9	-1
We currently have a massive problem with overproduction, unsold stock, and low quality garments that are not fit for the secondhand market. We need to start by addressing these issues of overproduction and quality, which would then enable a higher quality second hand market.	8	0	Taxes could incentive that idea. We can have top models using recycle and used clothes, in big campaigns, combine with really atractive prices.	8	-1
if the resale/second-hand portion pales in comparison to the other portion of companies' business, so they still churn out 'virgin' goods because the demand persists.	8	-1			

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J.2. **INTRODUCING RESALE/SECOND-HAND MODELS** Comments (continued)

A barrier to achieving this could be...		
If the rubbish of developed countries is not exported to poor countries, the idea is not bad. The problem is that the experience shows that poor coustries will buy garbage what would create environmental problems and steal manufacturing jobs in the name of bad quality clothing.	8	-1
the huge cultural barrier that refuses second-hand stock, therefore requiring production of durable and quality clothing that will endure resale.	8	-1
the need for workers' alternatives since there will be less demand for manufacturing jobs.	8	-1
We would need to review seriously quality standards as we would be improve products durability.	3	0

A solution facilitating achieving this could be...		
thinking differently about what this means in different cultures, locations, age groups, professions - rather than a one size fits all, the idea of vintage, sharing clothes, re-use - this is a huge creative opportunity - to find distinction that is relevant and appropriate at particular scale/ place or a range of scales. its about a diverse set of models	1	0

Especially worth noting

Respondents often reported an obstacle or even a risk of dumping second hand clothes to poor Sub-Saharian African or Latin American countries, which might in consequence cause not only social but also environmental problem.s (due to large stock of waste) Moreover, resale/second-hand clothing require high-quality products to be reusable, for this reason fashion industry would need improved quality standards, as advised by the last comment in barriers section (to be noted, low score overall does not value the adequacy of the comment, it is necessary to take into account also the time of posting). When it comes to solutions, numerous concrete proposals were given by respondents. For example, the idea of take back programs was the most welcomed amongst all the comments. A few also underlined a need for innovative solutions aimed at decreasing the quantity of unsold stock and turn it into saleable clothes. Whatsoever, an idea of incentives in form of tax reliefs would help foster the trend of promoting used clothes by big companies.

K.2. **MAJORITY OF CLOTHING IS LOCALLY PRODUCED**- Comments

A barrier to achieving this could be...			A solution facilitating achieving this could be...		
This may be big.. but not sure.. some analysis show that transfort in long suply chains in some industry is small relative to other factors. Worth more analysis.	11	-1	...a massive change in cultural behavior.	10	0
This one is not always simple. In carbon footprint analysis, it is often surprising how little the footprint of transport of food contributes relative to other factors. I would say that this may be worth an analysis. along with other factors. Could be that this is big.. but may not be as big as other levers in the end.	11	-1	building vertically integrated local industry, especially since some are used to materials that are not available in their own countries. The impact to working conditions can be ensured if unions are allowed and are existing in all parts of the chain.	9	0
Will everyone, including the poorest, have access to this technology?	9	0	Not sure we have all the data and scenario planning to assess this yet. Echo comments on impact of global transports Vs other fashion processes. There are positives to a global supply chain that allows different countries to contribute their skills and resources. The problem is the abuse by rich countries. Personalised locally made clothing is great but nich	8	-1
The sewing is mainly based where the financial and economic conditions are favorable for the industries/brands. I think it would take a long time to break this logic, but if this happen and the majority of clothing would be locally produced, imagine the impact on carbon footprint! It would be a huge impact on the restoration of the natural environment.	8	-1	Reinvesting in existing infrastructure could enable regions such as the UK to revive traditional manufacturing industries. Governments would need to invest in incentivisation for apprenticeships and skills development which have been declining as younger generations no longer wish to work in these industries.	8	-1
Reshoring or near shoring manufacturing would require huge investment in training, alongside higher wages, higher energy bills, etc. Even with greater automation, there would still need to be millions of garment workers working locally to the major hubs of consumption.	8	-2	Encouraging natural clothes, with local fibers or reusing, customizing or recycling clothes and fibers, and, sure, show t consumers all vantages of these practices	7	-2
Not every raw material is available in a community. Unless a community decides to wear only one type of clothing, derived from just one raw material, it is hard to imagine that the problem of supply chains will be solved.	7	-1	reviewing what we mean by local - to include local markets around the world - locally relevant styles - local is, by definition, different things in different places. to think of locally as networked hetterarchies rather than hierarchies, co-operatives etc as well as the material and production elements of local.	1	0

[continued on next page]

K.2. **MAJORITY OF CLOTHING IS LOCALLY PRODUCED** Comments (continued)

A barrier to achieving this could be...	👍	👎
The majority of raw materials come from countries which are not the main clothing consumers. If 'locally produced' is referring to the whole supply chain, I can't see significant growing and processing of cotton, for example, happening in Europe anytime soon. And suspect a fully automated industry is further away than we think.	7	-2
That when we think of locally produced clothing we are thinking of clothing just made from local materials. If we are talking about creating work locally and using "sustainable" materials sourced globally as well as locally then this makes more sense now. Fibershed created a US network of "Producers" that we can learn from.	5	0
Transportation has a relatively low carbon impact compared to dyeing and processing, so the impact of local production is potentially small	7	-4
I just don't see consumers embracing plastic printed clothing and spray-on clothing anytime soon. Maybe I'm wrong, but these technologies are still quite awkward and unattractive.	5	-3
Achieve scale of local producers and align it with performance standards of larger retailers.	1	-6

A solution facilitating achieving this could be...	👍	👎
This is more about developing communities than net positive environmental impact. A good way good be organize smaller groups to produce in larger scale and uniformed standards.	2	-6

Especially worth noting

For clothes to be locally produced, one should firstly break the logic of producing only at financial and economic conditions. Moreover, locality does not seem to solve the problem of environmental footprint. What also seems important is that the main barrier of the local production is that not every raw material is available in a specific geographic area. A solution to that, as pointed out by one of the last comments, would be to use sustainable materials sourced both globally and locally and building vertically integrated local industry. Whatsoever, a few underlined that change in cultural behaviour is needed for this concept to be achieved as well as a concrete definition what does local exactly means.

L.2. **TAX REGULATIONS FOR INCREASING SUSTAINABILITY**- Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
The concept is good, especially if resources are reverted to workers and small producers. The discussion here involves regulation. Few countries are willing to do this individually, which would require articulation via international bodies. That is, a slow action.	10	0	Environmental taxes and reliefs are commonplace in many countries and targeted taxes i.e polluter pays, or tax breaks for renewables, can help in specific areas such as climate change. Corporation tax needs to be increased across the board to cover external costs, together with a clampdown on tax avoidance and corruption, and anti-avoidance policies.	12	0
lack of agreement between the global communities about what this looks like and how to execute this.	9	-1	I don't know how to answer questions like that... and others... are we talking about a real world? If we are, so it is a great and funcional idea. But, what leve of taxes? 1 or 90%? And... in which countries? Rich or poors? With a weak or stronger state? well... in theory, It is a good idea.	9	0
Tax regulation would be good and it could be designed to incentivize those who make differently. The barriers are metrics to make it objectively.	8	0	If all governments act on their commitment to the Paris Agreement, then prosperity will be measured beyond the blinkered view of GDP. thus tax regulations will be seen as a means to create prosperity in social, environmental, cultural and economic dimensions within countries as well as on a global scale	9	-1
The UK govt recently rejected recommendations to use a tex incentive system to clean up fashion, so this is a challenge. I also agree with the comment that the people lower down the supply chain could actually bear the brunt of this - or the consumer with raised prices. Will businesses actually ever take a hit to their profits for the greater good?	8	0	If we can provide incentives for companies to make more money, we can use some critical thinking and introduce creative tax regulations targeted at increasing sustainability and giving breaks to companies making measurable change.. Ex: sharing new technologies and creating tool kits that help other brands curb waste.	5	0
Tax regulations along the supply chain could mean less money for garment workers, farmers and other areas of production in the supply chain. It's always the bottom of the supply chain that takes the brunt of these certifications and regulations most it seems (in terms of where tax money needs to come from to pay).	7	-3	Let's start with a carbon fee and dividend scheme, and then move on to other environmental areas such as chemical usage, extended producer responsibility, etc.	7	-4

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L.2. **TAX REGULATIONS FOR INCREASING SUSTAINABILITY** Comments (continued)

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
the lack of political will in the UK, US and to some extent even within Europe as well. In China and India, there is a greater awareness of the link between environmental and economic prosperity, but bigger social challenges. in African countries, there are a range of short term challenges that make both short and long term planning more difficult to realise	6	-3	Taxation is important to stimulate agents to internalize their externalities and hence create an impact economy that considers not only the financial bottom line, but also social and environmental net impact. This again requires standards, metrics that are verifiable, comparable and credible. Taxation is not enough assuming State inefficiency to enforce	2	0
Taxes are hard in US.. and of course challenging for trade.	6	-5	a systemic approach of customer awareness raising, business collaboration and taxation could be very effective - the analogy with the tobacco industry is a clear example of this - eg in UK	2	-1

Especially worth noting

Most of the respondents agreed that lack of agreement between the countries but also lack of power and leverage of individual countries might slow down the action. For this reason, legislation through international organisations would be needed and this venture would take time. Also necessity for objective requirements, rules and definition might pose a difficulty for legislation. This is why, as the first comment pointed out, there is a need that such a potential tax shall also cover external costs but also a need for effective preventive mechanisms for tax avoidance and corruption. An interesting proposal was also given by one of the respondent regarding tax reliefs for companies sharing their new technologies or tools fostering decrease in waste.

M.2. **WAGES IN THE FASHION INDUSTRY** - Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
The fashion industry's whole motivation for offshore contract manufacturing is to chase cheap prices. There are still lots of developing economies willing to work for a lower wage.	10	0	A solution might be for large fashion brands to buddy up with their supply chain and invest in making change one partner at a time instead of flip flopping to countries looking for the cheapest fit. As long as the chase for cheap continues, it's all just marketing and greenwash. There won't be any standard.	8	0
Fairer wages would drive more responsible production with a knock-on effect on the use of resources. With fair and living wages the real problem is secondary and tertiary suppliers, subcontracting etc. You might have a factory that is compliant but when pressure comes in from brands to deliver fast & cheap they will engage homeworkers, subcontractors etc	8	0	A report into wages in the global fashion industry was launched by womenâ€™s rights organisation The Circle. Fashion Focus: the fundamental right to a living wage examines the highly remunerative Fast Fashion sector through a legal lens. It concludes that a living wage is a fundamental human right, which all States are obliged to guarantee.	7	0
The problem is that the fashion industry has profited from overexploitation of outsourced work in poor countries and regions. That is, it would be a radical transformation of the industry itself. From this, the shortest way to achieve this would be via industry decision of the transnational companies	7	0	The assessments are there. What we lack is enforcement by local governments. We would have to put an Accord-like system in place in every production country.	6	-3
when the fashion industry keeps demanding highest quality products at the lowest possible costs, this will always be at the expense of workers. Also, the regional cost of living is not the standard for all countries within. Governments also do not efficiently enforce and monitor its own labor standards because of the premium in attracting investments.	7	0	Whilst this aspiration is ambitious -it is vital that we work towards such aims as, when achieved, they create deep change. We need to champion ambitious aims, whilst remaining pragmatic. I do think that there is a positive knock on effect on nature, as when the unvaluing model is broken, companies may start to better value all elements of a garment	1	0
This requires all governments in garment making countries, so almost all countries around the world, to sign up to a fair living wage. At a time when the race to the bottom in search of cheaper wages shows little sign of abatement, the idea that all governments will set a realistic minimum wage, let alone a fair living wage, seems inconceivable.	6	-1	It could be a good idea in order to increase gains of workers. I don't see any impact in environment in this iniciative. Maybe a negative impact, if industries discount in the environment the cost of this iniciative.	4	-4

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M.2. **WAGES IN THE FASHION INDUSTRY** Comments (continued)

A barrier to achieving this could be...		
companies producing in large scale for greater profits and advertising to produce "want", instead of producing according to "needs" of people. The entire chain will be for profit at the mercy of workers.	5	0
Whilst there could be an agreement for global living wages, living costs differ across countries, so brands could still end up in a race for the bottom going to the cheapest countries and putting too much pressure on their workforce.	4	-2
I'm not sure how the statement of a "Fair and decent living wage in the fashion industry is a worldwide standard" applies to "Impact on restoration of the natural environment?"	4	-5

A solution facilitating achieving this could be...		
Self regulation. Stimulate that great buyers disclosure their value chain and certify Fair Labor (by using living wage as minimum standard). Start engaging consumers about such standard.	0	0

Especially worth noting

The most valued comment in the barriers section regards the difficulty to break the willingness of citizens in developing countries to work for lower wages. Moreover, lack of transparency and accountability within the governments to monitor their labor standards is another obstacle for fairer wages to become reality. One of the best solution, according to respondents, regards cooperation between fashion brands and their supply chain to change one partner instead of switching towards cheap countries. In addition, law enforcement and oversight from the local governments is needed to ensure that fair and decent living wage is ensured.

N.2. **WORKER-DRIVEN INITIATIVES**- Comments

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
This depends on organized workers connected to global networks of workers' unions. Many countries do not have freedom of association and workers are threatened. I agree this depends of a lot of social and economical dynamics changings.	9	0	Design a corporate governance that considers stakeholders in short and long term decision making as well as the governance structure includes members of community and workers. Eg: Impact Committee.	8	0
when codes of conduct are voluntary mechanisms on the part of companies. A more effective mechanism is collective bargaining agreement with workers' unions.	9	0	enabling all workers the right to join trade unions is a starting point. it is positive to have internally led worker initiatives, but for systemic change it is important that unions are involved.	8	0
this may require government buy in to be truly effective, which is not currently a possibility in many regions, particularly countries where fast fashion is predominantly produced. Social media and technology could help galvanise workers, and blockchain has been trialled for anonymous employee feedback to reduce fraudulent responses by business	7	0	This is an integral part of improving working conditions and poverty, though it likely would have a negligible effect on the environment unless the workers happen to live downstream from the factory.	8	-1
A lot of systemic change has come from within: workers' rights, women's rights etc. Movements must be listened & responded to at international level as the global economy means that they cannot be solved locally. Social media can help collective bargaining and exposing wrongdoing. But this is not possible in all countries so cannot assume equal footing	6	-3	the lack of awareness on the part of many that human rights codes depend on company buy-in and not binding as collective bargaining agreements are.	7	-1
I put).. in time here. but what I wanted to put is NA or Do not know. It is not clear to me how strong or large the union is to be a force on this one.	6	-3	As outlined in many comments - there is a need to create change on various levels simultaneously - from legislation regarding collective bargaining and a range of social and environmental protections, through to recognising the vital contribution that small, location specific groups of people can achieve in a community. Worker-based action is a vital part	2	0

[continued on next page]

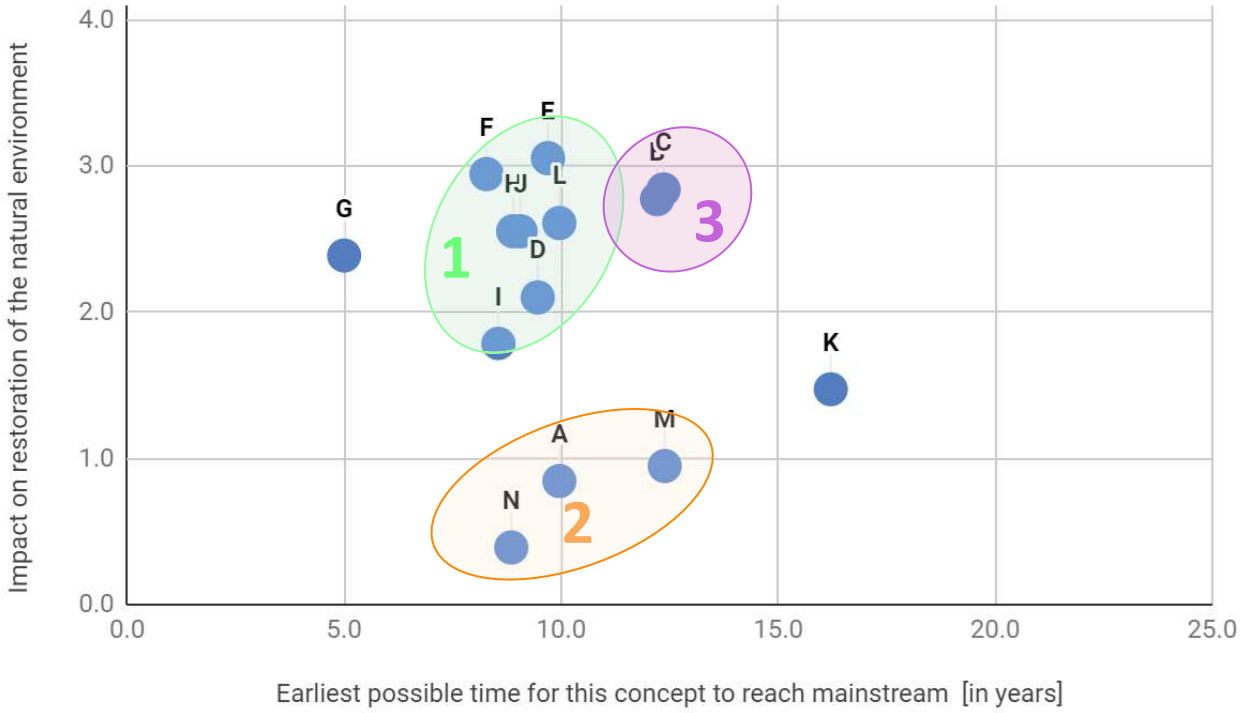
N.2. **WORKER-DRIVEN INITIATIVES** Comments (continued)

A barrier to achieving this could be...	👍	👎	A solution facilitating achieving this could be...	👍	👎
The wave of conservative populist government may implement several deregulations while we need to strengthen institutions and change the rules of the game to raise the bar of companies accountability and transparency.	1	0			

Especially worth noting

Majority of participants agree that main barriers regard system and legislation. Respondents point out lack of freedom of association and not abiding workers rights, especially in regions where most of the fast fashion is produced. Governments have to be involved for the worker driven initiatives to be effective. One of the main solution was to create corporate governance on both short and long term decision making. Other solutions proposed consist in enabling workers to join trade unions, which would in consequence foster systemic change. A few participants also outlined an idea to use social media as a tool for boosting workers' collective bargaining and leverage.

RESULTS MATRIX 1: **Impact on restoration of the natural environment vs ETM** (earliest time to mainstream)

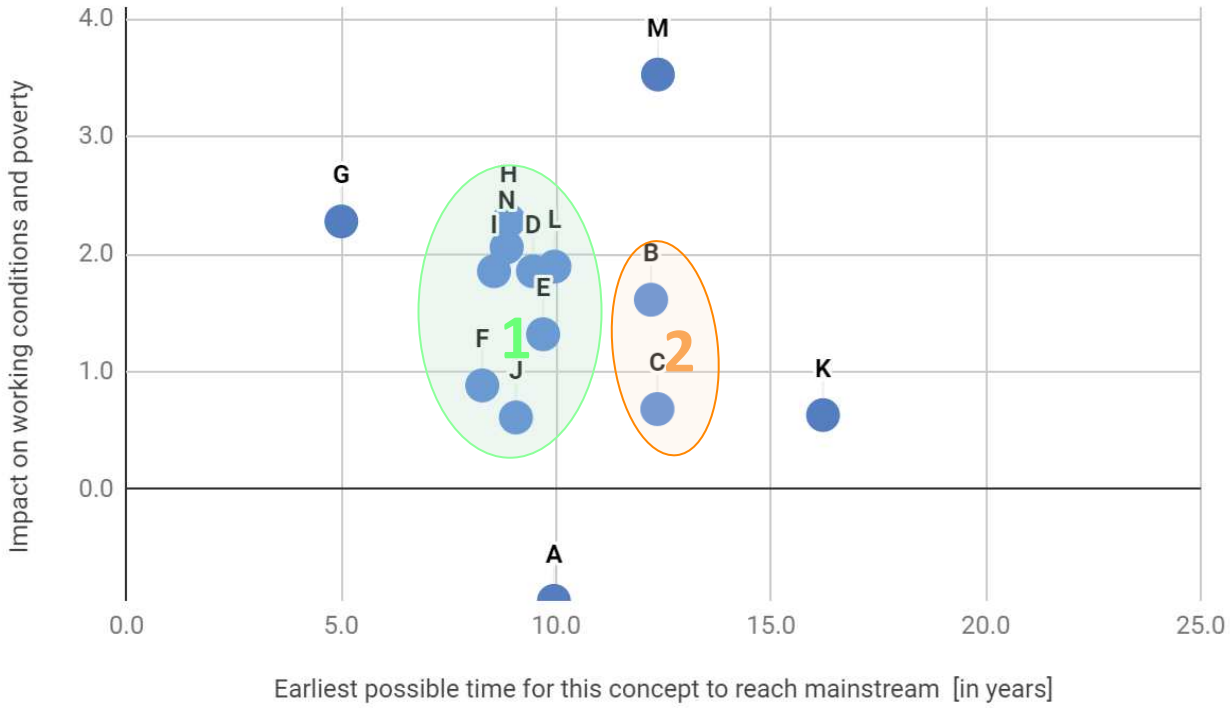


	Concept	Earliest possible time for this concept to reach mainstream	Impact on restoration of the natural environment
A	Automation revolution	9.9	0.8
B	Circular Economy	12.2	2.8
C	Clothing as a service	12.4	2.8
D	Consumer level sustainability index	9.5	2.1
E	Extended producer responsibility	9.7	3.1
F	Fibres and processing innovations	8.3	2.9
G	Global awareness	5.0	2.4
H	High concentration	8.9	2.6
I	Highly detailed sustainability reporting	8.6	1.8
J	Introducing resale/second-hand models	9.1	2.6
K	Majority of clothing is locally produced	16.2	1.5
L	Tax regulations for increasing sustainability	9.9	2.6
M	Wages in the fashion industry	12.4	0.9
N	Worker-Driven Initiatives	8.8	0.4

Especially worth noting

A cluster of the three following concepts: Worker-driven initiatives, automation revolution and wages in the fashion industry seem to have the least impact on the restoration of the natural environment according to the respondents. It might be due to the fact that these innovations are mostly related to workforce and labour standards which result in more directly in socioeconomic outputs and indirectly - therefore with less significance - on environment. Concepts related to sustainable production and recycling of clothing, aimed at creating net positive impact were valuated to be the most significant for the restoration of the environment such as fibers and processing innovations, extended producers responsibility, circular economy and clothing as a service. Fibers and processing innovations are considered as the most important for the restoration of the environment. It could be due to the fact that this is the sole concept in the study based on new technologies aimed at efficient production, processing and low-energy and low-water recycling of clothing. Eventually, two outliers - G and K - are observable. It seems that global awareness strategy is judged as having a significant impact and relatively short time to be achieved. What is worth noting, in the comment section global awareness was given more solutions than barriers to be achieved. Potential explanation is that mental transformation and environmental education of the society might be 'easier' than transformation of the whole industrial sector, i.e. to produce locally, as it requires not only changes in legislation but also behavioural culture of big companies.

RESULTS MATRIX 2: **Impact on working conditions and poverty vs ETM** (earliest time to mainstream)

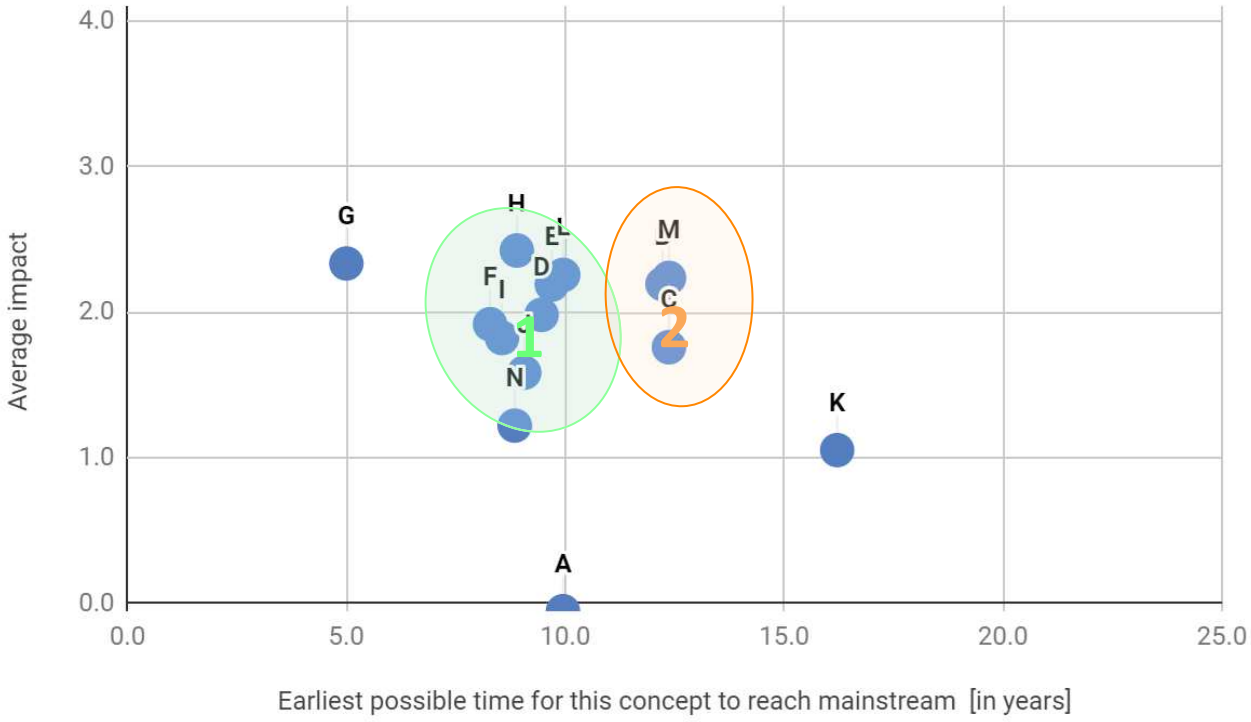


	Concept	Earliest possible time for this concept to reach mainstream	Impact on working conditions and poverty
A	Automation revolution	9.9	-0.9
B	Circular Economy	12.2	1.6
C	Clothing as a service	12.4	0.7
D	Consumer level sustainability index	9.5	1.9
E	Extended producer responsibility	9.7	1.3
F	Fibres and processing innovations	8.3	0.9
G	Global awareness	5.0	2.3
H	High concentration	8.9	2.3
I	Highly detailed sustainability reporting	8.6	1.9
J	Introducing resale/second-hand models	9.1	0.6
K	Majority of clothing is locally produced	16.2	0.6
L	Tax regulations for increasing sustainability	9.9	1.9
M	Wages in the fashion industry	12.4	3.5
N	Worker-Driven Initiatives	8.8	2.1

Especially worth noting

Overall, almost all the concepts have been judged as having positive impact on working conditions and poverty except automation revolution. As seen in the comments section, respondents fear that automation would result in potential layoffs and in consequence - lack of employment (e.g.due to robotic substitutes for human work). On the other hand, wages in the fashion industry were judged as being the most significant for working conditions and poverty. Fair and decent living wage is valued as a fundamental human and worker's right and a necessity for sustainable fashion industry by respondents. However, time to achieve this concept is relatively long, as it requires systemic changes in - for majority - developing countries, where fast fashion is based and usually workers' rights not abided. Moreover, two clusters are observable, having relatively same impact on the measure and being achievable accordingly in c. 9 and 12 years. Those are e.g. sustainability reporting, high concentration and sustainability index. Second cluster, including concepts B and C is relatively important - having an average impact on the measure and being achievable in only 12 years. Circular economy and clothing as a service were judged more significant for the previous measure than for working conditions. What is interesting is that, as in the case of the restoration of the natural environment, global awareness - although not having the biggest impact, is seen as the fastest achievable concept. Therefore, participants judge the potential of raising awareness as an important and rapid tool for cognitive improvements within the society, which might indirectly foster other concepts aiming at improving sustainability within the fashion sector.

RESULTS MATRIX 3: **Average Impact** (on working conditions and poverty & restoration of the natural environment) **vs ETM** (earliest time to mainstream)



	Concept	Earliest possible time for this concept to reach mainstream	Average impact
A	Automation revolution	9.9	-0.1
B	Circular Economy	12.2	2.2
C	Clothing as a service	12.4	1.8
D	Consumer level sustainability index	9.5	2.0
E	Extended producer responsibility	9.7	2.2
F	Fibres and processing innovations	8.3	1.9
G	Global awareness	5.0	2.3
H	High concentration	8.9	2.4
I	Highly detailed sustainability reporting	8.6	1.8
J	Introducing resale/second-hand models	9.1	1.6
K	Majority of clothing is locally produced	16.2	1.1
L	Tax regulations for increasing sustainability	9.9	2.3
M	Wages in the fashion industry	12.4	2.2
N	Worker-Driven Initiatives	8.8	1.2

Especially worth noting

In the average impact matrix, the two clusters that emerged are very similar to the ones in the working conditions and poverty. There are also three outliers - majority of clothing locally produced, automation revolution and global awareness. As in the case of the previous measure, automation revolution is judged as having a negative impact, in opposition to the rest of the concepts. It was lowly evaluated in its impact on the environment and highly negatively on working conditions and poverty. Two other outliers - global awareness seen as being the fastest achievable idea, and local production of clothing the slowest one are also similar to the two previous graphs. Whatsoever, regarding the ETM, in average, is being equivalent to circa 9 years for the most concentrated cluster in the middle of the chart. Nevertheless, it is worth noting that - as in the case of the first data analysis - in the ETM, standard deviation was relatively high, therefore there is a strong dispersion amongst respondents regarding the achievable time. For this reason, ETM shall be actually treated in perspective. Eventually, clothing as a service, sustainability index and fair wages are organised around the second visible cluster, which is judged to be achievable in average in around 12 years and having comparatively positive impact.

RESULTS BREAKDOWN PER PROFESSIONAL BACKGROUND OF THE EXPERTS

Impact on restoration of the natural environment

question_name	profession	AVERAGE of value	MEDIAN of value	STDEV of value	COUNTA of value
Automation revolution	Academic	**0.0**	0.0	0.82	4
	Activist / Campaigner	**0.8**	1.0	1.26	4
	Foundation / Non-Profit	**1.0**	1.0	#DIV/0!	1
	Industry Journalist	**1.0**	1.0	0.00	2
	Policy and Governance	**1.0**	1.0	0.00	2
	Sustainable Fashion Start-up	**1.3**	1.5	0.82	6
Circular Economy	Academic	**2.8**	3.0	1.50	4
	Activist / Campaigner	**2.8**	3.0	0.50	4
	Foundation / Non-Profit	**3.0**	3.0	#DIV/0!	1
	Industry Journalist	**2.5**	2.5	0.71	2
	Policy and Governance	**3.0**	3.0	#DIV/0!	1
	Sustainable Fashion Start-up	**2.8**	2.5	0.98	6
Clothing as a service	Academic	**2.5**	2.5	0.58	4
	Activist / Campaigner	**3.0**	3.0	0.82	4
	Foundation / Non-Profit	**4.0**	4.0	#DIV/0!	1
	Industry Journalist	**2.5**	2.5	0.71	2
	Policy and Governance	**3.0**	3.0	0.00	2
	Sustainable Fashion Start-up	**2.8**	3.0	0.75	6
Consumer level sustainability index	Academic	**2.0**	2.0	0.82	4
	Activist / Campaigner	**2.3**	2.0	0.50	4
	Foundation / Non-Profit	**2.0**	2.0	#DIV/0!	1
	Industry Journalist	**0.5**	0.5	2.12	2
	Policy and Governance	**3.0**	3.0	1.41	2
	Sustainable Fashion Start-up	**2.3**	2.0	1.51	6
Extended producer responsibility	Academic	**3.0**	3.0	0.00	4
	Activist / Campaigner	**3.0**	3.0	0.00	4
	Foundation / Non-Profit	**4.0**	4.0	#DIV/0!	1
	Industry Journalist	**3.0**	3.0	0.00	2
	Policy and Governance	**3.0**	3.0	0.00	2
	Sustainable Fashion Start-up	**3.0**	3.0	0.89	6
Fibres and processing innovations	Academic	**3.0**	3.0	0.82	4
	Activist / Campaigner	**2.5**	3.0	1.00	4
	Foundation / Non-Profit	**3.0**	3.0	#DIV/0!	1
	Industry Journalist	**2.5**	2.5	0.71	2
	Policy and Governance	**3.0**	3.0	#DIV/0!	1
	Sustainable Fashion Start-up	**3.3**	3.0	0.52	6
Global awareness	Academic	**2.5**	2.5	1.29	4
	Activist / Campaigner	**2.5**	2.5	0.58	4
	Foundation / Non-Profit	**3.0**	3.0	#DIV/0!	1
	Industry Journalist	**0.5**	0.5	2.12	2
	Policy and Governance	**1.0**	1.0	#DIV/0!	1
	Sustainable Fashion Start-up	**3.0**	3.0	0.89	6

RESULTS BREAKDOWN PER PROFESSIONAL BACKGROUND OF THE EXPERTS

Impact on restoration of the natural environment (cont.)

question_name	profession	AVERAGE of value	MEDIAN of value	STDEV of value	COUNTA of value
High concentration	Academic	**3.0**	3.0	1.15	4
	Activist / Campaigner	**2.8**	3.0	0.50	4
	Foundation / Non-Profit	**3.0**	3.0	#DIV/0!	1
	Industry Journalist	**0.5**	0.5	2.12	2
	Policy and Governance	**2.0**	2.0	#DIV/0!	1
	Sustainable Fashion Start-up	**2.8**	3.0	0.75	6
Highly detailed sustainability reporting	Academic	**1.8**	1.5	0.96	4
	Activist / Campaigner	**1.8**	2.0	0.50	4
	Foundation / Non-Profit	**3.0**	3.0	#DIV/0!	1
	Industry Journalist	**1.5**	1.5	0.71	2
	Policy and Governance	**-1.0**	-1.0	1.41	2
	Sustainable Fashion Start-up	**2.7**	2.5	1.21	6
Introducing resale/second-hand models	Academic	**3.0**	3.0	0.00	4
	Activist / Campaigner	**2.5**	2.5	0.58	4
	Foundation / Non-Profit	**3.0**	3.0	#DIV/0!	1
	Industry Journalist	**2.5**	2.5	0.71	2
	Policy and Governance	**2.0**	2.0	#DIV/0!	1
	Sustainable Fashion Start-up	**2.3**	3.0	1.21	6
Majority of clothing is locally produced	Academic	**1.5**	1.5	0.58	4
	Activist / Campaigner	**1.5**	1.5	0.58	4
	Foundation / Non-Profit	**1.0**	1.0	#DIV/0!	1
	Industry Journalist	**0.5**	0.5	0.71	2
	Policy and Governance	**3.5**	3.5	0.71	2
	Sustainable Fashion Start-up	**1.2**	1.0	0.75	6
Tax regulations for increasing sustainability	Academic	**2.5**	2.5	0.58	4
	Activist / Campaigner	**1.8**	2.0	0.50	4
	Foundation / Non-Profit	**3.0**	3.0	#DIV/0!	1
	Industry Journalist	**2.5**	2.5	0.71	2
	Policy and Governance	**3.0**	3.0	#DIV/0!	1
	Sustainable Fashion Start-up	**3.2**	3.0	0.75	6
Wages in the fashion industry	Academic	**0.8**	1.0	0.50	4
	Activist / Campaigner	**0.8**	1.0	0.50	4
	Foundation / Non-Profit	**1.0**	1.0	#DIV/0!	1
	Industry Journalist	**1.0**	1.0	0.00	2
	Policy and Governance	**1.0**	1.0	0.00	2
	Sustainable Fashion Start-up	**1.2**	1.0	1.64	5
Worker-Driven Initiatives	Academic	**0.8**	1.0	0.50	4
	Activist / Campaigner	**0.2**	1.0	1.30	5
	Foundation / Non-Profit	**1.0**	1.0	#DIV/0!	1
	Industry Journalist	**0.5**	0.5	0.71	2
	Policy and Governance	**1.0**	1.0	#DIV/0!	1
	Sustainable Fashion Start-up	**0.0**	0.0	0.71	5

RESULTS BREAKDOWN PER PROFESSIONAL BACKGROUND OF THE EXPERTS

Impact on working conditions and poverty

question_name	profession	AVERAGE of value	MEDIAN of value	STDEV of value	COUNTA of value
Automation revolution	Academic	-0.5	**-0.50**	0.58	4
	Activist / Campaigner	-1.0	**-1.00**	1.63	4
	Foundation / Non-Profit	-1.0	**-1.00**	#DIV/0!	1
	Industry Journalist	-0.5	**-0.50**	0.71	2
	Policy and Governance	-1.0	**-1.00**	0.00	2
	Sustainable Fashion Start-up	-1.3	**-1.50**	0.82	6
Circular Economy	Academic	1.3	**1.00**	1.50	4
	Activist / Campaigner	1.5	**1.00**	1.00	4
	Foundation / Non-Profit	3.0	**3.00**	#DIV/0!	1
	Industry Journalist	1.5	**1.50**	0.71	2
	Policy and Governance	1.0	**1.00**	#DIV/0!	1
	Sustainable Fashion Start-up	1.8	**1.50**	1.47	6
Clothing as a service	Academic	0.5	**0.50**	0.58	4
	Activist / Campaigner	1.0	**0.50**	1.41	4
	Foundation / Non-Profit	-1.0	**-1.00**	#DIV/0!	1
	Industry Journalist	1.0	**1.00**	0.00	2
	Policy and Governance	0.5	**0.50**	0.71	2
	Sustainable Fashion Start-up	0.8	**1.00**	1.17	6
Consumer level sustainability index	Academic	1.5	**1.00**	1.00	4
	Activist / Campaigner	1.2	**1.00**	1.48	5
	Foundation / Non-Profit	2.0	**2.00**	#DIV/0!	1
	Industry Journalist	1.0	**1.00**	1.41	2
	Policy and Governance	3.0	**3.00**	1.41	2
	Sustainable Fashion Start-up	2.5	**2.50**	1.52	6
Extended producer responsibility	Academic	1.3	**1.50**	0.96	4
	Activist / Campaigner	0.5	**0.50**	0.58	4
	Foundation / Non-Profit	1.0	**1.00**	#DIV/0!	1
	Industry Journalist	1.5	**1.50**	0.71	2
	Policy and Governance	0.5	**0.50**	0.71	2
	Sustainable Fashion Start-up	2.2	**2.00**	1.60	6
Fibres and processing innovations	Academic	0.8	**0.50**	0.96	4
	Activist / Campaigner	0.5	**0.50**	0.58	4
	Foundation / Non-Profit	1.0	**1.00**	#DIV/0!	1
	Industry Journalist	1.0	**1.00**	0.00	2
	Policy and Governance	-1.0	**-1.00**	#DIV/0!	1
	Sustainable Fashion Start-up	1.6	**2.00**	1.67	5
Global awareness	Academic	2.5	**3.00**	1.00	4
	Activist / Campaigner	1.8	**2.00**	0.50	4
	Foundation / Non-Profit	2.0	**2.00**	#DIV/0!	1
	Industry Journalist	1.5	**1.50**	0.71	2
	Policy and Governance	2.0	**2.00**	#DIV/0!	1
	Sustainable Fashion Start-up	2.8	**2.50**	0.98	6

RESULTS BREAKDOWN PER PROFESSIONAL BACKGROUND OF THE EXPERTS

Impact on working conditions and poverty (cont.)

question_name	profession	AVERAGE of value	MEDIAN of value	STDEV of value	COUNTA of value
High concentration	Academic	2.8	**2.50**	0.96	4
	Activist / Campaigner	2.0	**2.00**	0.82	4
	Foundation / Non-Profit	3.0	**3.00**	#DIV/0!	1
	Industry Journalist	0.5	**0.50**	2.12	2
	Policy and Governance	2.0	**2.00**	#DIV/0!	1
	Sustainable Fashion Start-up	2.7	**2.50**	0.82	6
Highly detailed sustainability reporting	Academic	1.8	**2.00**	0.50	4
	Activist / Campaigner	1.0	**1.00**	1.22	5
	Foundation / Non-Profit	3.0	**3.00**	#DIV/0!	1
	Industry Journalist	2.0	**2.00**	1.41	2
	Policy and Governance	0.0	**0.00**	2.83	2
	Sustainable Fashion Start-up	3.0	**3.00**	1.10	6
Introducing resale/second-hand models	Academic	0.3	**0.50**	0.96	4
	Activist / Campaigner	0.5	**1.00**	1.00	4
	Foundation / Non-Profit	1.0	**1.00**	#DIV/0!	1
	Industry Journalist	0.5	**0.50**	0.71	2
	Policy and Governance	1.0	**1.00**	#DIV/0!	1
	Sustainable Fashion Start-up	0.8	**1.00**	1.33	6
Majority of clothing is locally produced	Academic	0.8	**0.50**	0.96	4
	Activist / Campaigner	1.3	**1.00**	0.50	4
	Foundation / Non-Profit	-1.0	**-1.00**	#DIV/0!	1
	Industry Journalist	-0.5	**-0.50**	0.71	2
	Policy and Governance	0.5	**0.50**	2.12	2
	Sustainable Fashion Start-up	0.8	**1.50**	2.48	6
Tax regulations for increasing sustainability	Academic	1.5	**1.50**	0.58	4
	Activist / Campaigner	1.3	**1.50**	0.96	4
	Foundation / Non-Profit	1.0	**1.00**	#DIV/0!	1
	Industry Journalist	2.0	**2.00**	1.41	2
	Policy and Governance	2.0	**2.00**	#DIV/0!	1
	Sustainable Fashion Start-up	2.7	**2.50**	1.21	6
Wages in the fashion industry	Academic	3.5	**3.50**	0.58	4
	Activist / Campaigner	3.5	**3.50**	0.58	4
	Foundation / Non-Profit	4.0	**4.00**	#DIV/0!	1
	Industry Journalist	3.5	**3.50**	0.71	2
	Policy and Governance	4.0	**4.00**	0.00	2
	Sustainable Fashion Start-up	3.3	**4.00**	1.63	6
Worker-Driven Initiatives	Academic	2.3	**2.50**	0.96	4
	Activist / Campaigner	2.0	**3.00**	1.41	5
	Foundation / Non-Profit	4.0	**4.00**	#DIV/0!	1
	Industry Journalist	1.5	**1.50**	0.71	2
	Policy and Governance	2.0	**2.00**	#DIV/0!	1
	Sustainable Fashion Start-up	1.8	**2.00**	1.47	6

RESULTS BREAKDOWN PER PROFESSIONAL BACKGROUND OF THE EXPERTS

ETM - earliest possible time for this concept to reach mainstream in years

question_name	profession	AVERAGE of value	MEDIAN of value	STDEV of value	COUNTA of value
Automation revolution	Academic	8.3	**10.00**	3.50	4
	Activist / Campaigner	12.3	**10.50**	5.44	4
	Foundation / Non-Profit	12.0	**12.00**	#DIV/0!	1
	Industry Journalist	**10.0**	10.0	0.00	2
	Policy and Governance	**11.5**	11.5	4.95	2
	Sustainable Fashion Start-up	**8.7**	10.0	4.97	6
Circular Economy	Academic	**13.5**	12.0	4.73	4
	Activist / Campaigner	**14.0**	12.5	8.21	4
	Foundation / Non-Profit	**18.0**	18.0	#DIV/0!	1
	Industry Journalist	**12.5**	12.5	3.54	2
	Policy and Governance	**15.0**	15.0	#DIV/0!	1
	Sustainable Fashion Start-up	**8.7**	10.0	2.16	6
Clothing as a service	Academic	**9.3**	10.0	5.38	4
	Activist / Campaigner	**13.3**	12.5	5.38	4
	Foundation / Non-Profit	**20.0**	20.0	#DIV/0!	1
	Industry Journalist	**16.5**	16.5	12.02	2
	Policy and Governance	**16.5**	16.5	12.02	2
	Sustainable Fashion Start-up	**9.8**	8.5	4.31	6
Consumer level sustainability index	Academic	**8.3**	5.5	8.02	4
	Activist / Campaigner	**13.0**	10.0	6.71	5
	Foundation / Non-Profit	**10.0**	10.0	#DIV/0!	1
	Industry Journalist	**6.5**	6.5	4.95	2
	Policy and Governance	**9.0**	9.0	1.41	2
	Sustainable Fashion Start-up	**8.3**	7.5	4.08	6
Extended producer responsibility	Academic	**9.0**	8.5	4.69	4
	Activist / Campaigner	**12.5**	9.5	8.50	4
	Foundation / Non-Profit	**7.0**	7.0	#DIV/0!	1
	Industry Journalist	**10.0**	10.0	0.00	2
	Policy and Governance	**13.5**	13.5	2.12	2
	Sustainable Fashion Start-up	**7.3**	9.5	4.08	6
Fibres and processing innovations	Academic	**8.0**	9.0	4.32	4
	Activist / Campaigner	**8.3**	8.0	1.26	4
	Foundation / Non-Profit	**8.0**	8.0	#DIV/0!	1
	Industry Journalist	**8.5**	8.5	2.12	2
	Policy and Governance	**7.0**	7.0	#DIV/0!	1
	Sustainable Fashion Start-up	**8.7**	8.5	5.89	6
Global awareness	Academic	**4.3**	4.0	1.50	4
	Activist / Campaigner	**7.3**	6.0	3.30	4
	Foundation / Non-Profit	**5.0**	5.0	#DIV/0!	1
	Industry Journalist	**6.5**	6.5	0.71	2
	Policy and Governance	**6.0**	6.0	#DIV/0!	1
	Sustainable Fashion Start-up	**3.3**	4.0	2.07	6

RESULTS BREAKDOWN PER PROFESSIONAL BACKGROUND OF THE EXPERTS

ETM - earliest possible time for this concept to reach mainstream in years

question_name	profession	AVERAGE of value	MEDIAN of value	STDEV of value	COUNTA of value
High concentration	Academic	**7.0**	6.5	2.16	4
	Activist / Campaigner	**13.8**	14.0	7.23	4
	Foundation / Non-Profit	**11.0**	11.0	#DIV/0!	1
	Industry Journalist	**12.5**	12.5	3.54	2
	Policy and Governance	**5.0**	5.0	#DIV/0!	1
	Sustainable Fashion Start-up	**6.0**	6.0	3.85	6
Highly detailed sustainability reporting	Academic	**7.3**	7.0	2.06	4
	Activist / Campaigner	**11.6**	10.0	5.50	5
	Foundation / Non-Profit	**8.0**	8.0	#DIV/0!	1
	Industry Journalist	**7.5**	7.5	0.71	2
	Policy and Governance	**6.5**	6.5	2.12	2
	Sustainable Fashion Start-up	**8.0**	7.5	1.67	6
Introducing resale/second-hand models	Academic	**9.3**	10.0	5.62	4
	Activist / Campaigner	**13.8**	12.5	4.79	4
	Foundation / Non-Profit	**11.0**	11.0	#DIV/0!	1
	Industry Journalist	**6.5**	6.5	2.12	2
	Policy and Governance	**5.0**	5.0	#DIV/0!	1
	Sustainable Fashion Start-up	**7.0**	8.5	4.00	6
Majority of clothing is locally produced	Academic	**13.3**	15.0	3.50	4
	Activist / Campaigner	**17.5**	17.5	6.45	4
	Foundation / Non-Profit	**20.0**	20.0	#DIV/0!	1
	Industry Journalist	**17.5**	17.5	3.54	2
	Policy and Governance	**12.5**	12.5	3.54	2
	Sustainable Fashion Start-up	**17.5**	17.5	5.24	6
Tax regulations for increasing sustainability	Academic	**8.5**	7.0	4.51	4
	Activist / Campaigner	**12.8**	10.0	8.54	4
	Foundation / Non-Profit	**4.0**	4.0	#DIV/0!	1
	Industry Journalist	**9.0**	9.0	1.41	2
	Policy and Governance	**10.0**	10.0	#DIV/0!	1
	Sustainable Fashion Start-up	**10.3**	7.5	7.37	6
Wages in the fashion industry	Academic	**10.3**	11.5	3.77	4
	Activist / Campaigner	**16.3**	15.0	6.29	4
	Foundation / Non-Profit	**25.0**	25.0	#DIV/0!	1
	Industry Journalist	**11.5**	11.5	2.12	2
	Policy and Governance	**13.5**	13.5	2.12	2
	Sustainable Fashion Start-up	**9.0**	10.0	4.90	6
Worker-Driven Initiatives	Academic	**6.3**	7.5	4.50	4
	Activist / Campaigner	**13.2**	10.0	7.19	5
	Foundation / Non-Profit	**10.0**	10.0	#DIV/0!	1
	Industry Journalist	**10.0**	10.0	0.00	2
	Policy and Governance	**10.0**	10.0	#DIV/0!	1
	Sustainable Fashion Start-up	**6.2**	6.0	3.76	6