

**Sustainability in Fashion Business,
Commission Company: Case Company X**



Bachelor's thesis

Valkeakoski, International Business

Autumn 2020

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International Business
Valkeakoski

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Title Sustainability in Fashion Business, Commission Company: Case Company X

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TIIVISTELMÄ

Tämä päättötyö keskittyy vastuullisuuteen kohdeyrityksessä. Tavoite on tutkia yrityksen vastuullisuussuunnitelmaa, ja sitä tehdäänkö yrityksessä tarpeeksi työtä vastuullisuuden eteen ja osataanko vastuullisuustyöstä kertoa? Yritykselle tärkeä tekijä lähteä parantamaan vastuullisuus suunnitelmaa on hyvä brändi mielikuva. Asiakkaille on osattava kertoa siitä tärkeästä työstä, jota yritys tekee. Nykyaikana vastuullisuus on mukana jokapäiväisessä elämässämme, ja vastuullisuus suunnitelmaan panostaminen on tärkeää myös tulevaisuuden kannalta. Yritykset eivät voi olla tekemättä mitään. Kuluttajat ovat enenevässä määrin tietoisia ympäristö – ja vastuullisuusasioista, ja tulevaisuudessa avoimuus vastuullisuudesta ja yhteinen päämäärä ilmastonmuutoksen eteen ovat tärkeitä kilpailutekijöitä.

Opinnäytetyössä selvitetään, millaista on suomalainen vastuullinen muoti. Ensin keskitytään yleisesti yritysten vastuullisuuteen, mitä se pitää sisällään, ja toisessa osiossa keskitytään kohdeyrityksen tapoihin ja tuloksiin vastuullisuuden eteen.

Johtopäätöksenä on, että kohdeyritys on yksi vastuullisimpia muotibrändejä Suomessa. Vastuullisuustyötä on tehty mutta siitä ei ole osattu, tai ei ole huomattu kertoa tarpeeksi. Vastuullisuusasiat ovat nousseet trendiksi muutaman viime vuoden aikana ja entistä tärkeämpää onkin osata kertoa yrityksen toimintatavoista asiakaslähtöisesti.

Avainsanat Kestävyys. Muoti. Vastuullisuus. Design. Toimitusketju. Materiaalit.

Sivut 55 sivua, joista liitteitä 4 sivua

International business
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ABSTRACT

This thesis focuses on a sustainability in Fashion Business and Case Company X. The goal is to investigate the company's existing sustainability plan, are they doing enough work towards sustainability, and do they know how to report about the sustainable work they do? An important factor for Case Company X to start improving their plan, is to have a good brand image. For a company, it is beneficial to have a good consumer-oriented sustainability plan. Businesses must act towards a more sustainable future, as important factor will be a common goal for climate change.

The first part focuses on sustainability situations on Finnish fashion brands, for what it entails, and the second section focuses on a company's habits and results for sustainability.

As a conclusion, the case company X is one of the most responsible fashion brands in Finland. Responsible work has been done, but it has gone unnoticed to the public, as the data hasn't been published yet. Responsibility issues have become a trend over the last few years, and it is even more important to be able to tell about the company's operating methods and openly share this information.

Keywords Sustainability. Fashion. Responsibility. Design. Supply chain. Materials.

Pages 55 pages including appendices 4 pages

CONTENTS

1 INTRODUCTION.....	1
2 SUSTAINABLE DEVELOPMENT	3
3 SUSTAINABILITY IN FINNISH FASHION BUSINESS	5
3.1 Corporate social responsibility	6
3.2 Research by Eetti (Registered organization for ethical trade)	7
4 SUSTAINABILITY IN FASHION BUSINESS	9
5 ELEMENTS TO A MORE SUSTAINABLE FUTURE	11
5.1 Concept design	12
5.2 Sustainable design	13
5.3 Materials	14
5.3.1. Cotton	15
5.3.2 Wool.....	16
5.3.3 Bamboo.....	17
5.3.4 Polyester	17
5.4 Greenwashing	18
5.5 Production / supply chain.....	18
5.6 Waste, environment, and carbon footprint	21
5.7 Consumers	22
6 SUSTAINABILITY IN THE CASE COMPANY X	23
6.1 Business model, design, and production.....	24
6.2 Materials.....	25
6.3 Packing and delivery	27
6.4 Waste management	28
6.5 Responsible supply chain.....	29
6.6 Carbon footprint	31
6.7 Corporate social responsibility	32
6.8 Code of conduct.....	33
6.9 Animal rights.....	33
6.9.1 Customer support.....	34
6.9.2 No suspect chemicals	34
6.9.3 Standards	35
6.9.4 Comparison of year 2019 and 2020	37
7 RECOMMENDATIONS	38

8 CONCLUSIONS.....	39
REFERENCES.....	41

Appendices

Appendix 1 Rank a brand -questionnaire.

1 INTRODUCTION

Consumer's interest towards a sustainable lifestyle has increased in the past years. One of the topical areas has been fashion. A couple of years ago, fast fashion was a huge trend. After a terrifying accident, the collapse of a garment factory, Rana Plaza in 2013, the problems of fast fashion became known and public. Consumers and companies have been more aware of the unsustainable issues of the fashion industry. (Clean Clothes Campaign, n.d).

The idea for this thesis came from a company. Author's studies about Corporate Social Responsibility, the global fashion business, and circular economy have provided a good understanding of sustainability in a corporate level. Agreement between the author and the company, this thesis will be kept as a private. Perhaps the first eye-opening lesson in the author's life was a voluntary course in Sustainable leadership. Teacher Johanna Lundán provided an excellent experience for a sustainable life, which roused curiosity. The teacher herself had a strong interest in sustainable development, her enthusiastic teaching style really got student interesting in this important topic. The course gave a lot of actual information about being sustainable and how do it. "Globally, by year 2030 we will need 30% more water, 40% more energy and 50% more food to survive". (Johanna Lundán, 2018.)

The aim is to investigate and develop the sustainability plan in the company. In addition, the research question for this thesis is: How sustainable Case Company X is? Supportive questions have been: What is sustainability in fashion business and what includes in sustainability plan?

The Case Company X is a Finnish fashion brand established less than 10 years ago. The founder of the company is a Finnish woman who created an international fashion brand. At present, the company has stores in Finland, a web shop and almost 300 retailers all over the world.

Sustainability is important for the Case Company X. Clothes are designed in Finland and produced in nearby country. This is a good example of a well-planned supply chain in the fashion industry - when the production is nearby it is easier to manage and ensure the right way to operate.

A good driver for developing a sustainability plan is Eetti's Rank a brand research. Eetti is a Finnish Registered organization for ethical trade. Eetti has researched environmental, climate, and social factors where the points are given for Finnish fashion companies. Case Company X did gain average amount of points, which then develops the question of whether or not the company inform enough of their sustainable actions.

According to the author of the book: Fashion and Sustainability, Design for a change. "Sustainability offers the biggest critique the fashion sector has ever had. Sustainability covers fashion industry from small details all the way to the big picture. Details such as materials, fibers, including processes from designer's table to the production pace. It covers business's values and beliefs, business models to the supply chains. (Fletcher, & Grose, 2012, p. 8).

Problems that the fashion industry is creating, is not a secret anymore. Climate change is real, pollution is real, fashion is in a state that changes need to be accomplished if companies want to survive in the future.

Fashion industry is said to be one of the most polluting industries globally, 2% of all pollution is caused by fashion industry. Emissions are caused by material and actual garment production. Transporting, but also from the use of garments when garments are washed and dried at home. (Suomen Tekstiili ja Muoti, n.d).

Many consumers are interested of the origin of fashion products. In these days, sustainability is a trend. This has brought an interesting phenomenon. Consumers are more interested where their clothes come from, who and how their garments have been manufactured. The problem is, consumers are insecure which brands are sustainable, and what does the whole sustainability mean. (McKinsey & Company, 2020).

First part of this thesis explains what sustainable development is. Second part focuses on sustainability in the fashion business. Later, concentration is on the elements that create sustainability. Material choice plays a big part in creating sustainable production. Last section of this research the focus is on the Case Company X. What a Finnish fashion company is accomplishing when making a sustainable business and whether there is something to improve.

2 SUSTAINABLE DEVELOPMENT

A new approach to development was brought to United Nations commission in 1987, concept called Sustainable Development. This meeting started a continuous work towards a better future for society, environment, and economy.

Sustainable development concerns all, it is a global matter as well as regional. The aim is to create a good life for present and for future. Main point when thinking environmental development is to keep the nature's biodiversity and ecosystem. As the population grows year by year, the earth's capacity of renewing its system is damaged. This matter concerns all, as the earth's system is a prerequisite for human life. The importance of planning future together with helping the environment, not the cause of it.

Planning future should be accomplished together with ensuring economical certainty. Once the financial situation is secured, planning future is easier. Financial stability facilitates in uncertain situations and help go through crises.

Main point for social and cultural aspects is to ensure wellbeing for present life as well as future generations. (Kestävä kehitys, n.d.)

At present, humans have made tremendous development from the beginning of human life. Sadly, sustain thinking was not known back in the days. Human life has contaminated planet so that actions are must now. At present, sustainable actions of humans, companies and countries are in everyday life.

When sustainability becomes part of everyday life it is common goal for all parties. Planning better future is everybody's business, no one can close their eyes from it. In 2020, Finland's Overshoot day was April 5th, which means that Finns have used their capacity from earth only in the first third of the year. (Earth Overshoot Day, 2020). Finns have said to be forerunners when creating a better future but by this information there is still a room for an improvement.

United Nations has planned 17 Sustainable Development goals, together with its member states. These goals give a good insight of the work what should be achieved in the next 15 years. In 2015, 193 countries met in an event where they were adapting new common goals for sustainable development. Sustainability plan is made for people, to achieve a good life, for companies to strive, and for economies to grow. (United Nations, 2015).

The 17 Sustainable development goals are:

1. No Poverty.
2. Zero Hunger.
3. Good health and Well-being.
4. Quality Education.
5. Gender Equality
6. Clean Water and Sanitation.
7. Affordable and Clean Energy.
8. Decent Work and Economic Growth.
9. Industry Innovation and Infrastructure.
10. Reduced Inequalities.
11. Sustainable cities and Communities.
12. Responsible Consumption and Production.
13. Climate Action.
14. Life Below Water.
15. Life on Land.
16. Peace, Justice and Strong Institutions.
17. Partnerships for the Goals.

When reflecting fashion industry into the Sustainable Development goals, there is a lot of concerns. As mentioned in the introduction, fashion is one of the most polluting industries. Production, distribution, and consumption are creating emissions and waste.

Environmental issues are relevant in fashion business. Not only material production phase, but also garment production. Pollution does not stop there, when using clothes and washing clothes, energy and water are needed. Today's consumer wear one garment approximately a couple of times, when garments are no longer in use, they become a waste. Waste is a big problem in this section.

As production should be made appreciating nature, using less water, less natural sources, and with renewable energy, covering SDG's are complex. There is no clear way to develop the whole system easily. Small actions in every phase ends up into a big result.

Concept of a fast fashion created unclear supply chains. When companies started to produce more clothes in fast phase, garment production were shifted to far countries, where production could be made less expensive. This created complex supply chains which came to public when problems started to happen. Collapse of a garment production factory, Rana Plaza, shocked everyone. Consumers started to think where their clothes are really coming from.

This create a question of whether human rights and save working conditions were applied. Collapse was in 2013, and as SDG's were implemented in 2015, hopefully these matters do not happen anymore, as companies also are more aware of these issues.

As SDG's have 17 goals, one crucial matter is collaboration. No one can achieve all these goals alone, and collaborations plays a big part. All companies have their own expertise and putting experts together, and in that way helping each other, a better future is accomplished straightforwardly.

People play significant role when creating fashion, that way good education is important. By having a decent education, people have more possibilities to have a job, and in that way, a decent salary and enough money for food and other necessities. Applying human rights should be involved in every part, from the production to a waste management.

3 SUSTAINABILITY IN FINNISH FASHION BUSINESS

In Finland, the amount of textile consumption yearly is around 70 000 tons. EU has set a rule that by the year 2025, all member states have to provide a textile waste recycling. In Finland, government would like to be ahead, and it will start collecting textile waste a couple of years earlier.

In practice, this mean that cities have to provide textile recycling station/bank for its citizens. The problem might be that this is going to cost more to consumers. According to Yle news, government is going to investigate could this be part of producer's responsibility. The easier the recycling is, the more consumers will be involved with it. (Yle, 2019).

Finnish fashion brands are known for quality clothes. Brands are usually designing timeless and resistant clothes. Rank a brand research does not

take into an account all these facts what Finnish brands are already doing but are not informing. Finnish brands might be small and there might be a lot of sustainable work done from the beginning.

But not all, especially the smaller companies can reach to global sustainability systems what Rank a brand research requires. Hence, Rank a brand research is giving a good overview of the state of Finnish fashion brands' sustainability, but not comprehensive information. (Suomen Tekstiili ja Muoti, n.d).

Usually in fashion business, all operations are placed in different units. Such as the cultivation and production of raw materials, making fabric and string, and then sewing the actual products. The ideal situation would be that companies know every pace of this production. The farther the production is, the harder it is to trace these matters. Crucial is to have well-known, long-term business partners where all parties have created trust and mutual understanding. For Finnish fashion companies, sustainability and responsibility are meaningful themes. Companies are willing to work hard towards these issues.

Sustainability is a part of today's business activity, good management, and risk management. Sustainability is here to stay, it is not competitive edge anymore, it is an ability to compete. (Suomen Tekstiili ja Muoti, n.d)

3.1 Corporate social responsibility

Corporate social responsibility gives a good framework for sustainable development. Corporate social responsibility is a business decision-making process related to ethical values, compliance with legal requirements and respect for people, communities, and the environment. (Aaronson, 2003).

Finnish companies have a great potential to be successful in corporate social responsibility related concerns. In Finland, legislations are strict. Issues as safety, environment, health care, and human rights are very important and hence, respected. (Ministry of economic affairs and employment of Finland, n.d)

For a company to be viable and successful in the long run, it is important to operate in an ecologically, socially, and economically sustainable way. Such a company is profitable and competitive. It continuously improves its resource efficiency and minimizes the negative environmental impact of its operations. (Elinkeinoelämän keskusliitto, n.d).

Responsibility is being examined more and more comprehensively and holistically. For example, environmental impacts are examined over the entire life cycle, from product development to recycling. Supply chain responsibility is also considered for subcontractors.

A responsible company takes care of its own profitability and competitiveness so that it is also viable in the long run. (Elinkeinoelämän keskusliitto, n.d).

Responsibility could be examined by taking care of its stakeholders. Frequent and open discussion between all parties creates open environment to work in, and most likely long term, committed employees. This could help to prevent mistakes and finding out new ideas.

Paying taxes and following laws and legislations, company is taking care of its social responsibility.

3.2 Research by Eetti (Registered organization for ethical trade)

Eettisen kaupan puolesta ry, Eetti, (Registered organization for ethical trade) has conducted a research on the transparency of Finnish fashion companies, considering climate, environment, and work for human rights. The research is aiming to share information to consumers and to determine how openly Finnish fashion companies are on their sustainability work. Eetti is an organization which promotes fair world trade, sustainable production methods and responsible consumption. According to the report, there might be a problem when more and more companies are declaring themselves responsible, the consumer is left with an impossible task: a critical examination and comparison of the promises of responsibility. (Lumme, 2019).

In 2019, 23 Finnish fashion brands were selected to the Rank a brand evaluation. In 2020, there was 35 was selected. The brands were divided into five categories according to the points they received in A-E. None of the Finnish brands rose to the best A-category. Only one brand reached the B-category, 2 brands category C.

These companies are united by the fact that their production takes place only in Finland and / or neighboring countries, where there is a low risk of human rights violations and a high level of environmental legislation and supervision. From the second last category, D can be found the case company X. More than a half of the ranked brands ended up in the lowest E-category. (Lumme, 2019).

A company's weak points may indicate that even if responsible work had been done, companies had not informed those commitments and results. From the consumer's point of view, it is challenging to rely on responsibility. Moreover, critical consumers, who are increasingly present, also know how to demand accurate information instead of circular promises. All the companies involved in the evaluation also still have a lot of room for improvement in terms of responsibility. Particularly for companies producing in high-risk countries, the Rank a Brand criteria require concrete measures and indicators, among other things, to improve working conditions and promote living wages. Responsible work must also be reported as openly as possible so that its reliability can be assessed and monitored. Responsibility promises are easy to make, but as the results of this report show, few Finnish companies currently say enough about their actions to ensure responsibility. (Lumme, 2019).

Answers to the questions were sought from companies' websites and other public sources such as the company's responsibility and annual reports. The answers are scored as follows: the question has a clear and easily found answer company got 1 point. (Lumme, 2019).

The second Rank a brand- report made in 2020, shows the importance of transparency in fashion industry. This is a good way to push companies to express more of their actions, but also, push them for developing and accomplishing their sustainability actions further.

Case company X has improve their sustainability plan 2 levels, from category D to category B. Work towards climate has been noticed. Rank a brand -report is a good force to report more of company's operations. Working towards a more sustainable future requires new ideas how to complete operations the most sustainable way. Working with sustainability plan also demands an innovator to accomplish the announcements what company wants to release. The research questions can be found from the appendix 1.

4 SUSTAINABILITY IN FASHION BUSINESS

Sustainable fashion is frequently introduced as environmentally friendly fashion. But sustainable fashion is more than that, social and economic matters are important themes as well. Subject is wide and not that simple to process. Which then leads to the question, can fashion business ever be truly sustainable?

When thinking the concept of a fashion, changing styles is a part of that. Old styles have to step aside from newer models. The problem is complex. Fashion industry is one of the biggest industries in the world, and unfortunately one the biggest polluters. Each phase of fashion manufacturing pollutes, from cultivation of the raw materials to the shipment of ready-made clothes. And what about when consumers have worn the garments enough, when it is a time to get rid of it. Most of the fashion garments end-up as a landfill, while consumption is increasing, so is disposal in the same line. Fast stage in fashion only makes this issue worse. (Farley Gordon, & Hill, 2015. p. XVI; Niinimäki, 2013, p. 13).

Kirsi Niinimäki is writing on her book *Sustainable Fashion: New approaches that fashion companies are concentrating creating value and, in that way, changing their behavior to a more sustainable way*. Companies are using narrow insight to find ways to deal this “problem”. True sustainability needs wide understanding of the whole concept. (Niinimäki, 2013. p. 16). While fashion companies are doing small steps towards sustainability, producing organic cotton, designing sustainable collection, working with waste management. All these actions are creating a better future. Forerunners have taken sustain aspects as the beginning point for their company’s model. If the main point is sustainability, where to start? From the problem. Problem is that fashion is polluting tremendously, manufacturing phase, raw material creation, to actual manufacture of the garment. Distribution, wearing the garment, washing the garment and in the end of the life cycle, the end use of the garment is creating waste.

What is the thing that could be fixed? The whole fashion production system should be turned into a more viable direction. But the forerunners, they have gripped to the problem they could find solution. Finnish company have realized that existing material is a one problem. They have invented solution to produce the “waste” again to a fiber and then produce new fashion items. Some other company is solving the problem in the production phase, using materials which are less harmful for the environment. (Infited fiber, n.d; Niinimäki, 2013, p. 13).

Slow fashion could be a solution for fashion business to be more environmentally friendly. But here comes the complex problem, today, fashion industry employs over 40 million people. What would happen to these people if fashion production would slow down? A part of sustainability is to think all the aspects of this industry. Fashion cannot be just slowed down quickly. Decision-makers have to have solution for the whole industry to create a better system of working.

In this decade, many companies have provided sustainable, conscious, organic cotton, green, collections. Companies are showing their work towards sustainability. Furthermore, even though organic cotton sounds like a better choice, at the same time cotton is one of the most water consuming plants. Material choice is one of the crucial and complex problems of fashion. Materials have to be affordable, still environmentally sustainable as well as socially save.

Secondhand shopping is sustainable act as garments are getting new life instead of filling landfills, and it minimizes the need of new production. Garment to be sold again it has to be good quality. Unfortunately, a lot of fast fashion garments were made cheap, from poor quality fabrics ending up being as a trash. Humans have learned a lot of these actions and hopefully in the future, humans are making more wise decisions and solutions.

On the next chapter is introduced elements which sustainability requires.

5 ELEMENTS TO A MORE SUSTAINABLE FUTURE

Firstly, doing something new and innovative, requires open way of thinking. Linear model of living, make-use-dispose, has come to an end. New way of thinking is here. (Fletcher, & Grose, 2012. p.11).

Companies have to show their innovativeness, openness, and trustworthiness to be a genuinely sustainable company. Companies need to work in an economical manner operating by respecting humans, environment, and society. By doing that, companies cannot operate in suspicious manners, such as child labor or loading environment. (Könnölä, & Rinne, 2001. p.9)

The beginning points for a future fashion companies, would be to understand their carbon footprint. Many companies have yet to grasp the severity of this information. Carbon neutrality is a common goal for all the people, companies, governments, and countries. It is a part of the Paris agreement towards a climate-neutral economy. (European Commission, n.d).

Measurements for company's carbon footprint could be eye-opening, and results provide a great starting point for making things better for the future.

"Sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs". (United Nations, n.d).

Triple bottom line, 3 P's, people, planet, and profit is helping the design of a new sustainable fashion system. Or in other words society, environment, economic. Company which is concentrating these three elements have a good chance to a succeed. (Könnölä, & Rinne, 2001. p.20)

- People. (Society). Wellbeing of employees and people in the society. Working conditions has to be safe in all departments. Production has to be safe to work in. But not only, also the whole life cycle of products, have to be safe, all the way to the end use of the products. Important is, that products should meet the expectations of consumers, and this way meet the satisfaction level that consumers demand.

- Planet. (Environment). Better for the planet would be having a cleaner production. For a fashion industry that means less industrial production. A better production would lead to a less waste. Fabric surplus should be used to another fashion items, or for new innovations.
- Profit. (Economic). It is possible to make profit even though business model is sustainable. If thinking all the existing / recycled material, there could be a place for innovative sustainable business. (Saari, 2019).

Tribble bottom line / 3 P's can be turned into a deeper, 5 PS of Sustainable development. Comparing these 5 aspects to SDG's gives a great understanding why SDG's are important.

- People deserve to have a healthy environment to live in, enough food for eating. Equal rights to have an education, to succeed in the future.
- Planet has to be protected to future generations to have a good start for their lives.
- Profit. Economic situations have to be kept in the good balance for surviving in the future.
- Peace. Everyone should have the right to have a safe place to live in.
- Partnership. Creates the teamwork and enables possibilities. (Lundán, 2018.)

5.1 Concept design

Concept design is a plan, something that could happen. It means creating new innovative ideas and changing the point of views.

It is also a way to manage with uncertainty. Every part of the company's action matters. All departments and operations can be more sustainable. Innovations, new ideas, and developments are the factors that in the future, operations are done in a different way. (Saari, 2019).

But is it the designer's responsibility to design sustainable clothes, from a sustainable material, design products which can be produced nearby, and design also the end use of the fashion item? (Saari, 2019.)

Concept design for products means developing and implementing products. For innovation it means improvements, ideas how to do

something in the future, determine what are the technological developments that could be used in the future productions. What key

partners company will need in the future. Concept design would advance company's competence by improving problem solving. By that is meant that multiple insights have been taking into an account and by this way, helping company to predict and solve future issues. This would be a great opportunity to learn more about technology and see new market opportunities. Development could also improve team spirit by creating interesting opportunities and teams. (Saari, 2019).

Overall, for the company concept design would increase company's brand image and influence stakeholder's interest level. To achieve all this, a good team is the success factory. A good team needs a leader who organizes everything, a specialist who work with the usability of the designs, expert of products and visual design, expert of storytelling who would also visualize innovations to team members but also outside, domain expert, and moreover, user expert, and that would be the customer. (Saari, 2019).

5.2 Sustainable design

Book Sustainable Fashion: New Approaches introduces an idea of product lifecycle thinking. Already in the planning phase of a new product or model, products' whole lifecycle would be planned. Designers are the professionals of inventing new products. They have the idea which then are brought to consumers. Perfectly sustainable product would be planned as sustainable from the beginning. Material choice, manufacturing, transportation, use of a consumer and in the end of the product's lifecycle, end use of the product.

Everything connects to everything. Design creates the product, product comes from a production, material choice is crucial, packaging choices creates either waste or useful material. The book Sustainable fashion, New approaches tells that sustainable design is a quite new concept. There is a lot of new responsibilities brought to the designers and the task is not simple. If before products where designed thinking vogue, new styles, and colors. Now, designers have to plan the whole lifecycle. (Niinimäki, 2013. p. 137).

Maybe the new approach could be value creation. Creating value for the customer. Slow fashion would go perfectly with this concept, product would have essential material, which would already create a great value for customer.

Materials would be produced with sustainable manners. Maybe coming from a local producer, giving a living for them. Transportation would be planned as the most sustainable way. In the label of the product, would be this whole story of the garments' journey. Consumer would appreciate the product differently, wouldn't they?

5.3 Materials

The use of materials is crucial in the fashion industry. Each company has their unique style, and different materials is one way of encompassing this. It is a crucial choice which materials are used. Most of the materials used in the fashion industry comes from natural sources, which are limited hence planet has limited capacity to renew them. When making new materials, scarce resources such as water is used. One of the key elements of the negative impact of the fashion business is use of materials. It causes climate change, chemical pollution, loss of biodiversity, and waste production. (Fletcher, & Grose, 2012, p. 12-13).

As the book *Sustainable Fashion, Past, Present and Future* tells, "Some companies perceive the use of sustainable materials as quick-fix – relatively simple way to appear more eco-friendly, without necessarily incorporating more sustainable or ethical practices into their business operations as a whole." Maybe the overall assumption is, that natural materials are better materials. As man-made materials need more resources for manufacturing. Use of materials are complicated, as the knowledge has to be from production phase till the decompose. (Farley Gordon, & Hill, 2015, p 61.)

Use of materials is a two-way problem, consumers need to have the right information from the materials used in the garments, and by that, consumers can, and they should make sustainable purchases. From the company side, companies should provide enough and easily access information from the used materials, and by the consumers purchasing data, they will provide more and more sustainable products to the markets.

Overall consumption is increasing, so is production in the same line. Waste creation, chemical use, energy consumption, and hard-working conditions speak for the matter that fashion production needs changes. (Farley Gordon, & Hill, 2015, p. 81).

How to make fabrics in a more sustainable way? Materials are the visible source for the big issues, water scarcity, waste creation and climate change. Furthermore, when thinking producing fashion sustainably, use of materials are essential choice. But to rethink the operation of using materials, and doing that the most sustainable way, is not that simple. There are two preferences. First, to recycle the materials already existing, such as clothes and fibers, and then to reuse the fibers. Secondly, to manufacture materials which are low-impact and renewable. (Fletcher, & Grose, 2012 p. 12-16)

Weecos states in their website, that at the moment, it is almost impossible to set materials in an order which are the most sustainable that all companies should use. All material manufacturing takes resources. Maybe the key point for the companies would be, that they would produce clothes from the best possible available material? (Weecos, n.d).

The book Sustainable Fashion, Past, Present and Future takes a deep insight to diverse materials. Materials can be natural or man-made. There are few materials which have the highlight as being sustainable materials, and those will be opened more in next. (Farley Gordon, & Hill, 2015, p. 61).

5.3.1. Cotton

Cotton is one the oldest fibers, it has been produced over 5,000 years. In the mid-nineteenth century cotton was the most used material in garment industry, holding 70% of all production. One known problem with cotton is the use of pesticides in the production, which helps to prevent pests and other plants to grow. Pesticides were helping cotton to grow faster, but another reason were also that pesticides were used to control soil quality because traditional cotton plants rapidly consume nutrient of soil.

This style of production created problems. Cotton workers catch a life-threatening problem by breathing toxic chemicals. For the environment, it caused a loss of biodiversity, and negative changes in soil fertility. Manufacturing with harmful toxic can cause harmful greenhouse gas emissions.

The use of water is another notorious problem when talking about cotton production. Only 1 kilogram of cotton is needed to manufacture one pair of jeans. That one kilogram needs 7,000 to 29,000 liters of water, and as known water is rather scarce resource.

Mysterious fact in cotton production is that, usually the places which would be ideal for cotton production do not manufacture cotton. And places where production is hard, manufacturing is made. 80% of cotton

production is made in developing countries. At the same time, Uzbekistan is one of the biggest cotton producers, even though their climate is not ideal for the production. (Farley Gordon, & Hill, 2015, p. 63).

The sustainable answer for this issue is organic cotton. Production is planned to be more human and environmentally friendly. Farmers earn 50% more than producing normal cotton. Producing organic cotton, use of chemicals and harmful pesticides are prohibited, this makes it better for human health, and saver for the environment. As 88% less water and 62% less energy is used, organic cotton is a more sustainably produced. Rain waters 80% of the organic cotton which then makes the material more natural. (About Organic Cotton, n.d; Farley Gordon, & Hill, 2015, p. 62-66).

Despite these greater facts that organic cotton has, it is not impeccable fiber. All produced cotton requires cleaning after harvest, cleaning process includes scouring and bleaching with harmful chemicals.

The good news is that the demand for organic cotton has raised 40% per year since 2001. But seems that the production of the organic cotton is 20-50% lower than the production of normal cotton. Hopefully more farmers became interested of the production, so that the productions encounter the demand. (Farley Gordon, & Hill, 2015, p. 64).

5.3.2 Wool

Another natural material, wool, is even older used material than cotton. Wool is used about 6,000 years. Wool is a good material hence its breathable characteristic. Wool keeps one's body warm or cold, as wanted.

It resists water, dirt and stains, and it is very durable. In the history, cotton and wool were the most used materials. The biggest difference between cotton and wool is that wool is animal-based material, and as mentioned cotton comes from plant.

Whether the great qualities wool have, man-made materials might be the biggest companions. Synthetic fibers such as acrylic is cheaper and more washable than wool. But those do not take the fact that wool is very long-lasting and warm material.

Wool is considered as an eco-friendly material, naturally growing and sheep are fertilizing the land they are grazing. (Farley Gordon, & Hill, 2015, p. 68-69).

5.3.3 Bamboo

Bamboo is well-known material in these days. Bamboo came as a replacement for unsustainable cotton, and bamboo fabric has been represented with its good qualities. Bamboo clothes feel nice against skin, and it is an antibacterial fiber.

Bamboo grows fast, upon only in three months. It is cheaper to produce than cotton, and it hardly needs any pesticides. With these good qualities, bamboo sounds very sustainable material. But looking more closely to the production, there might be a problem. Bamboo is mainly growing far countries, where legislations might be less strict. The Book Sustainable Fashion; Past, Present, and Future claims there is evidence of using pesticides growing bamboo plants.

This material is also connected of mixing it to another material, rayon. Which then makes bamboo into a mixed material. With this material, the responsibility of the real bamboo material is on the producer's hands. Company who is producing bamboo fabric, has to be sure what is the material actual including before selling clothes. Here comes the importance of making good partnerships with suppliers.

(Farley Gordon, & Hill, 2015, p. 73).

5.3.4 Polyester

Is one of the mostly used synthetic fibers, taking 50% of all total fiber production, in the year 2011. Polyester is made from mineral oil; manufacturing consumes energy in order it requires high temperatures. Chemicals used in the production phase leads to hazardous waste, which makes this material unfriendly to environment. (Farley Gordon. & Hill, 2015. p.81.).

Polyester is used on its own fiber or mixed with other fibers such as cotton, wool, or other synthetic fibers like acrylic. Polyester is used to change certain qualities of fabric, for instance using with cotton, polyester help to make the fabric less wrinkled. (Weecos, nd).

Positives in this fiber is that its production takes less water comparing to cotton production. As a fabric polyester is strong and careless. It can be

recycled various times, which makes it a good material thinking sustainable matters.

5.4 Greenwashing

Greenwashing means giving a false information on an attempt to promote sustainable products. Information, such as, products could have been made from recycled materials, production could have been more environmentally friendly, energy used could have been only green energy, cotton used could have been only made organic cotton, or any misleading information. Any company can set a label into a garment and promote its sustainable benefits. Reality could be different.

At present, when almost every company has taken into actions towards a better future, some companies are labeling their products, but they are not actually doing actions behind the labels. (Kenton, 2020).

Eco-labels have been developed for ensuring adequate level of social and environmental factors. These help to identify sustainable matters. (Fletcher, & Grose, 2012, p. 36).

Importance of well-known labels and standards, like OEKO-TEX, is a weapon to stop greenwashing. Labeling helps companies by having recognizable label which customers can trust. And customers can trust the actions behind the labels.



Figure 1. OEKO-TEX standard, recognizable label, (Oeko-tex.com).

5.5 Production / supply chain

When consumers enter a clothing store, how many of them think, how the garments have been produced and did the producer made enough money

to support he's or her life. Hopefully, more and more consumers will do that in the future. Now, consumers have to trust that companies will take care of these matters.

Responsible supply chain is meaningful in fashion industry. The concept of Fast fashion changed this matter to a more uncertain level. When companies needed to produce a mass of clothes in a short period of time, the production process started to be unsafe and unclear. A big concern with this was a long and complex supply chains. Companies should provide such a clear supply chain so that they can provide well produced fashion for consumers.

Supply Chain Management (SSCM) requires system thinking, a good strategy, and action. To get a good start for planning sustainable supply chain, first main point would be product design. As mentioned in the last chapter, material choice plays significant role in sustainability. The whole company to work purposefully, designer's responsibility is to design clothes that fits to the company's idea. Design shows the performance of the product, that is where sustainability begins. Along with the right material choice goes safety, product needs to be designed to be safe for manufacturing, but also for the users. Part of sustainable design is to think the products end use, when the garment has reached its end, what would happen. Is it possible to recycle? A responsible way is to prevent the possible risks that might occur in the products last phase. (Sroufe, & Melnyk, 2017. p.7,10,12).

Next phase would be the actual process, how the design will be manufactured and delivered. Sourcing the right suppliers or producers takes time, but when finding valuable partner, supplying in the future is purposeful and straightforward. The most important part of making a sustainable supply chain is to have an open and trustful partnership. How to achieve that? By planning the manufacturing process together with the producer. Making an agreement to set up goals and criteria which both parties require. The aim is to make cost effective and valuable chain. The best way for ensuring a clear supply chain is to visit the possible producer. By paying a visit, company can ensure that worker's rights are not violated, agreements are followed, and the quality of the clothes are the same as the company is seeking for. Company and the producer have a mutual understanding of all the agreements, working conditions are safe, one thing to discuss is that is the capacity of the producer enough for the company. (HAMK, 2019), (Sroufe, & Melnyk, 2017. P.7,10,12).

Sourcing could be challenging if products are manufactured far. But the benefit of producing in development countries is that these deals are very

important for the local society and well-being. Dealing with rather small or local producers usually gives better earnings for the local people.

Other than using a big and complex supply chains, it is better to deal straight with the producer. This will make the process easier, when dealing the matters between two parties.

This can also be cost effective, but where comes the responsibility of the company, is that making rules and creating mutual understandings. Both parties should require responsible way of doing business. Rules and regulations are different in every country, when turning the production to another country company have to familiarize themselves to the other country's requirements. (Könnölä, & Rinne, 2001. p. 81).

Third decisive stage would be planning the packaging, how the products are covered for the delivery and storage. At the design stage, it is good to pay attention to the packaging material and its use in transportation. The packaging must be durable, and the packaging must not take too much space during transportation. The problem is, usually packaging is thrown away after product is taken away and this way it is creating more waste. The most sustainable way would be that the package would be useful for recycling or reusing. (Sroufe, & Melnyk, 2017. p.13).

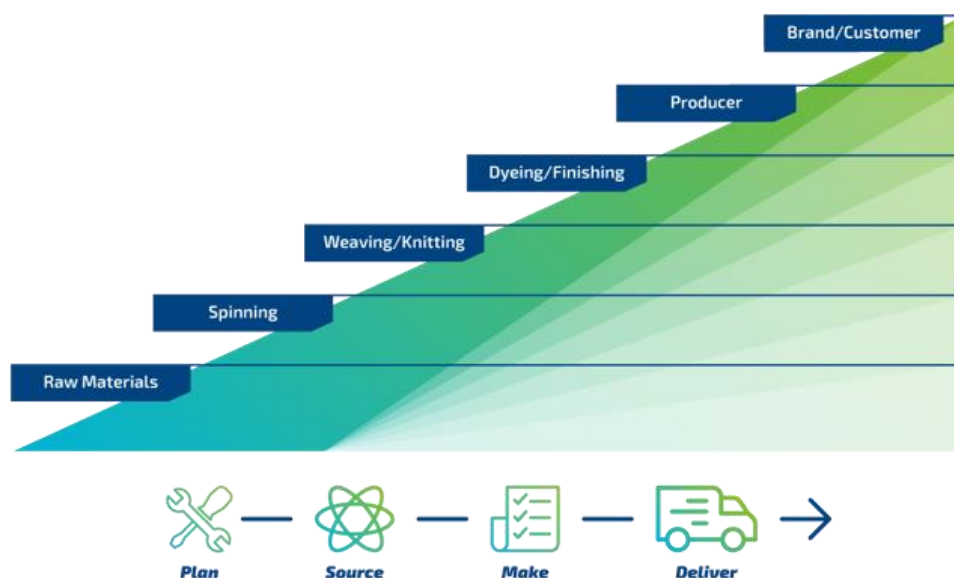


Figure 2. Supply chain in fashion industry. (Techedge, n.d)

5.6 Waste, environment, and carbon footprint

According to a report *The State of Fashion today 2020*, waste management is in an early phase in fashion industry. The global fashion industry is creating plenty of waste, consumes a lot energy and not to mention, polluting. There is a plenty of things to do in this area. Ellen MacArthur foundation has examined that fashion industry produces around 53 million tons of fiber every year, from that, less than 1 percent is used again to make clothes. Most of that, 70% is a waste. (McKinley & Company, 2020).

If materials would be environmentally friendly from the beginning, would it be easier to recycle or reuse garments? If garments are long-lasting, is there a reason to throw it away? Is it better to keep it, or recycle? Would this solve the problem a bit?

The reason why carbon emissions matter, is that emissions have straight affect to a climate change. From the figure 2, is seen the enormous change in the earth's temperature. In recent years global temperature has raised alertly. All in all, temperature change is around 1 degree, which might seem a little. But this change has led to a health, physical and ecological problems. Convert to this is seen extreme weather situations such as droughts, floods, storms, and heatwaves, and rise of a sea level. (Our World in Data, August 2020).

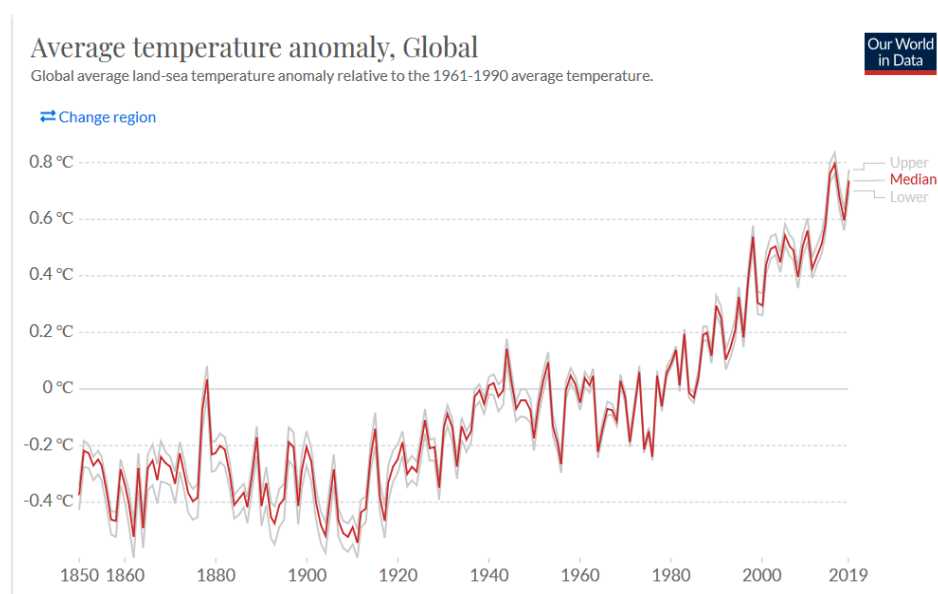


Figure 3. Global average temperatures have increased by more than 1°C since pre-industrial times. (Our World in Data, August 2020).

5.7 Consumers

Today's consumer is a conscious consumer. Consumers are expecting information, good service, and the best possible products. Consumers are the ones who are choosing which companies to support.

In these days, options are unlimited. Newer, better, more developed products are invented daily. Consumers have the choice and the variety to choose from all these alternatives.

As sustainability issues has become a trend, consumers are more interested what companies are doing for the society, and for the environment. Consumers are choosing the companies which have same values as them, and by that giving their support for the chosen company. (Könnölä, & Rinne, 2001. p.11).

According to a survey McKinsey& Company made, more and more consumers are interested buying sustainable clothes, 66% of US respondents and, 75% of millennial respondents were considering sustainability when making fashion purchasing. A good degree of consumers is thinking their purchasing action. But to keep in mind, words and actions do not always go to the same way.

In the same survey respondents answered that only a small amount of people was willing to use more money to get sustainable products. Here is the gap which needs to be filled in the future. Consumers have the interest of making better choices, but how to change the interest for actual buying behavior.

First, target for companies should be nudging these sustainable products, and by this way giving more choices and making a better purchasing behavior easy. Not to mention, giving consumers clear information about sustainable products.

Consumers who want to be sustainable, the best way to do it is making more thoughtful fashion purchasing. Firstly, thinking if the purchase is necessary. Secondly making choices of long-lasting clothes. Consumer is alone with the idea that if wanting the most sustainable fashion purchasing, who to trust? But by choosing the garments under sustainable labels or brand, consumers are turning the shift to a more responsible direction. (Farley Gordon, & Hill, 2015. P 57).

Consumer's buying behavior is driving companies for producing more sustainable products. When consumers are showing their actions by buying sustainable fashion products, companies have to go along with this change. Companies have the lead to show examples and ideas how to be

sustainable, consumers have the power to adapt those actions. Together they are making a more sustainable future.

6 SUSTAINABILITY IN THE CASE COMPANY X

Company who values sustainability concentrates how they are making money, instead of spending money. Sustainable development is the most remarkable phenomenon is business culture in 21st century. (Lundán, 2018.)

For the Case Company X, responsibility is an important success factor. They have understood that ethically sustainable operations are a prerequisite for the growth of the company. Their long-term goal is to be able to operate sustainably and keep company's finances in such a good shape, that they can take care of their company and its responsibilities. Company have defined ethical values and practices, and then developed a corporate responsibility strategy. (Case Company X, 2020).

Company's sustainability strategy covers ethical values and actions, not only in the stores and warehouse, but also between all relationships, including employees, retailers, and suppliers. Plan covers the whole lifecycle of products, from the production all the way to the end use of the product. (Case Company X, 2020).

Sustainability strategy encompasses respect towards animal and human wellbeing, by planning all production so that it is not harmful to animals, or humans. Sustainability is set to an everyday work; all employees work under the company's methods and rules. A good plan needs constant monitoring, at monitoring is important part of the work towards sustainable future. Employer is the key person monitoring that rules are followed. Sustainability plan includes targets which then are measured yearly, and then adjusted to the next years plan. Responsibility helps business to grow in future, it also helps making new connections with retailers and customers, as well as keeping the old customers with long-term relationships. (Case Company X, 2020).

The strategy defines the minimum requirements that is set for company's operations as well as for the subcontractors and partners throughout the whole supply chain. This "360 Sustainability" strategy covers the entire product life cycle from raw materials through production until their disposal after use. The company is following these requirements to select and monitor its subcontractors. (Case Company X, 2020).

6.1 Business model, design, and production

Business model can be introduced as how the company is creating value. Another way of thinking business model is how the company designs its operations to function. For instance, two opposite ways of designing business model in fashion industry.

Fast: business model can be driven by quantity, producing, and selling a plenty of clothes in a short period of time.

Slow: business is driven by quality, producing quality garments, and selling less but more valuable items. Slow model is the sustainable model, as seen, sustainability begins from the early phase of the business plan and it should be taken into an account in all planning. (Bock, & George, 2017 p. 2). Since the Case Company X has been formed, business model has been conducted with choosing natural materials. This is a good example, how the company is built to respect the nature, not the cause of it.

Sustainability is important for the company's owner. Working in an ethical manner, is a long-term commitment to company's growth and future. The goal is to work as sustainably as possible and develop that work constantly. To achieve that, the company's economy has to be kept in such a state to help this plan. The main material is linen, which is the most biodegradable material in the fashion industry. Linen is natural, breathable, antibacterial, and a long-lasting material.

Clothes are designed to be timeless, classic, as well as, durable. In that way, the company is encouraging customers to build wardrobes that last long. Most of the production is made nearby, a partnership with a sewing atelier. Company is buying its own fabrics and then delivering it to an atelier. The company's designer is planning new models and then the designs are sent out to the atelier. The atelier is making a prototype and sending the prototype back to the designer. Afterwards these two parties are discussing changes or other specs needed in the model. When model is approved, production can start.

New models are usually available in advance sales. After the prototype is final, it is set to an advance sale into their web shop. This model is sustainable business model. Company is taking responsibility by not producing too many clothes, clothes are made as ordered and that is helping their designer, production, inventory and furthermore their waste management. Company does not have a problem by dealing unsold clothes as the stock is small. (Case Company X, 2020)

In the stock they have mainly seasonal items, which need to be sent quickly to the customers. The basic clothing line is easy to order from the atelier as the clothes are sold. In this way, the company does not need a massive storage, when considering size and cost. The company is encouraging

customers towards a more sustainable fashion buying, by showing an example that clothes are being made to order and giving a thought that there is a human behind the clothes. If customer's garment is ordered from the atelier, customer will receive a message:

"Dear customer, our warmest thank you for your order! This time the delivery time for the clothing you ordered will be slightly longer than you are probably accustomed to, 2-3 weeks. This is because the garment you ordered was unfortunately not in stock and is being made for you at the moment. We make every effort to minimize the impact our operations have for the environment. This is why most of our items are custom-made to our customers. This allows us to prevent any surplus in the storage and minimize textile waste. We are sorry that you have to wait, but we promise that your garment is sewn with love". (Case Company X, 2020).

6.2 Materials

All products are manufactured using OEKO-TEX Standard 100 class 1 certified materials. This ensures that no harmful chemicals are present in the products and that they are safe to wear directly on the skin.

The main material is linen, which is made inside EU. Flax fibers are European Flax certified. The spinner (of the yarn) belongs to the Masters of Linen organization, which guarantees that flax fiber in the products is GMO-free and has not been subject to irrigation or environmentally harmful compounds and it is completely biodegradable. Linen comes from a flax plant, and it uses fewer resources like water, energy, and pesticides than producing cotton. Flax plant can be produced in fields which cannot be used for food production. For these reasons' linen is a better material than cotton. (Sustainyourstyle.org, n.d).

Flax plant production is cost effective; hence everything is used from the plant, there is no extra waste coming from the production. (Goodonyou, n.d). From the next figure, is seen the comparison between cotton and linen. Cotton takes up to 5 times more energy than linen (flax).

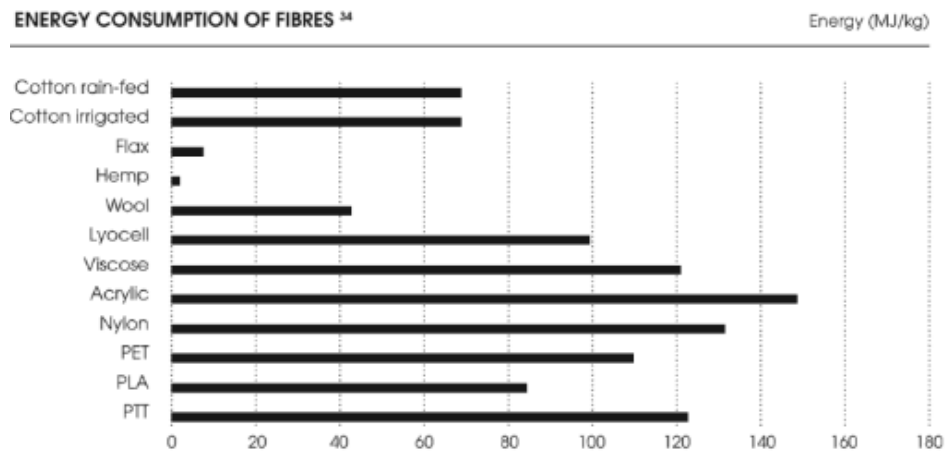


Figure 4. Energy Consumption of fibres. (Fletcher, & Grose, 2012, p. 26).

On the next figure is seen a comparison how much water it takes for each material to be produced. Cotton is said to be one of the most consuming plants when it comes to clothing materials. Figure shows the amount of water what is used between linen (flax) and cotton.

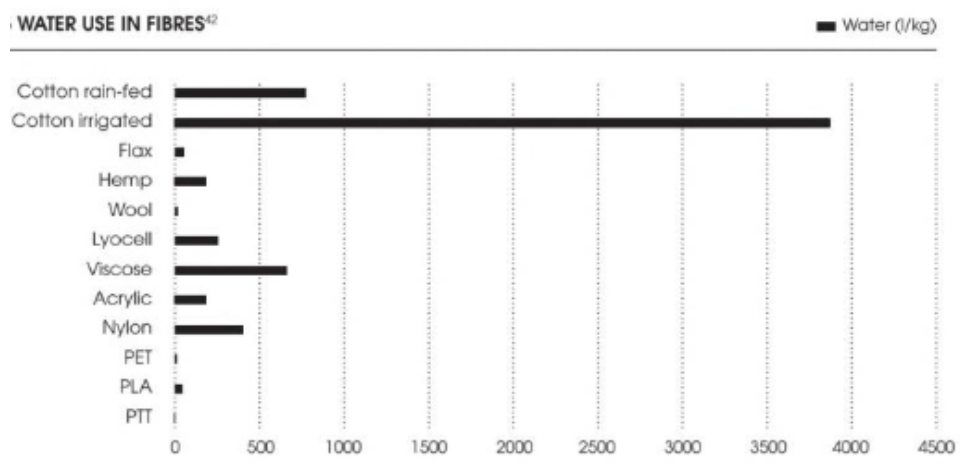


Figure 5. Water use in fibers. (Fletcher, & Grose, 2012, p. 29).

Cotton usually grows in warm and dry areas. Cotton needs a lot water which makes it unsustainable material, 20 000 liters of water is needed for producing only 1 kilograms of cotton. (Sustainyourstyle. org, n.d).

Wool used in the company has a voluntary global standard for ensuring that wool comes from responsible producer. (Control union, n.d).

Recycled wood is a part of the company's style, but it is also a one good way using circular economy. Furnitures in their stores are made from recycled wood or furniture are old and used before.

Printing material, tags and catalogues are made in Finland. Using materials from domestic country, is good for the economy, but also products which come close by areas, are saved from transportation costs.

To not end up in trouble with the leftover material, Case Company X encourages manufacturers to implement a zero-waste cutting technique. In case leftover material is generated, it is recycled uncompensated to craftsmen businesses.

Products are manufactured mainly according to customer orders, avoiding unnecessary storage and removal operations. In addition, the products do need to be sold at discount sales or otherwise disposed of.

6.3 Packing and delivery

Company encourages customers for sustainable actions. When ordering from their web store, customers can choose the delivery to their store. In that case delivery is free of charge for the customer. Operating like this has more benefits to the customer and why not to the company. Customer can try ordered clothes in the store, in case of items wanted to be returned, customer can make that in the store. Customer will save time, money and possible second visit to a post office, which could happen in normal web order. Company is saving time and resources used in the returning process. When customers order from the web store, purchases are packed into a recycled bag. Clothes are packed safely but using as little packaging as possible. Clothes come from atelier in carbon paper boxes, and there is no plastic or other packing material used. When customers make purchases from stores, clothes are set into a paper bag, made from recycled paper. (Case Company X, 2020). In the following picture is shown consumer and transport packages.

Unit is kilograms

Consumer packages	2018	Recycled	Recycled %	2019	Recycled	Recycled %
Plastic bags	172	0	0 %	89	71	80 %*
Paper bags, wrapping paper	930	930	100 %	1234	1234	100 %
Cardboard boxes	296	296	100 %	63	63	100 %
Consumer packages total	1398	1226	88 %	1386	1368	99 %
Transport packages	400	400	100 %	279	279	100 %
Transport and consumer packages total	1798	1626	90 %	1665	1647	99 %

* Plastic bags used in 2019 were made of 80% recycled material.

Figure 6. Consumer and transport packages 2018/2019. (Case Company X, 2020).

The figure shows the improvement of the use and recycling of plastic bags. In the year 2018 172kg of plastic bags were used and 0% recycled. The next year, 2019, reduction of plastic bags were almost half, 82kg. The same year, the Case Company X started to recycle plastic, and recycling level became 80%.

Sustainability work were implemented to transportation packages and planning less packaging ended up to a good result to reduce use of materials 121kg in a year. (Case Company X, 2020).

6.4 Waste management

The aim is to reduce waste and find a new way of recycling, reuse and reduce the coming waste. For economic and environmental reasons, accounting department is working paper-freely. All work is operated online, and, in that way, waste is reduced clearly. (Case Company X, 2020).

In the atelier, possible fabric waste is used to make new items for selling, such as linen scrunchies, which are customers favorite accessories. Some fabric is also donated as a crafting material to day cares and other companies who need small pieces of fabric for their businesses. (Case Company X, 2020).

In the year 2019, company started to sell slightly defective clothes in their Outlet store. Customer can buy usable clothes 50% cheaper. Broken or damaged clothes are recycled appropriately, and nothing goes to a waste. The company is monitoring the upcoming waste by calculating CO2 emissions and money used for waste management.

In the following picture is shown waste footprint in 2018 and 2019. Reduction between 2018 and 2019 is 767 kilos / yearly waste. (Case Company X, 2020).

Waste type	2018 (kg)	2019 (kg)	Way of Disposal
Pahvi	912	720	Kierrätettiin uusiokäyttöön kartongin valmistukseen.
Toimisto- ja keräyspaperi	720	144	Kierrätettiin sanomalehti- ja uusiopaperin valmistuksen raaka-aineeksi.
Biojäte	439	608	Toimitettiin jatkokäsittelyyn kompostoitavaksi.
Muovijäte	192	234	Toimitettiin muoviteollisuuden raaka-aineeksi.
Muu lajiteltu jäte	117	162	Kierrätettiin teollisuuden raaka-aineeksi.
Energiajäte, puujäte, ja tekstiilijäte	542	181	Kierrätettiin hyödynnettäväksi energiatuotannossa.
Sekajäte	270	376	Toimitettiin jätekeräykseen.
Total (kg)	3192	2425	

Figure 7. Waste footprint 2018 / 2019. (Company, 2020).

- Carbon paper is recycled to make new carbon paper.
- Office or other paper were recycled as paper.
- Biowaste were collected.
- Plastic waste was recycled as a material for industry.
- Other waste was recycled as a material for energy.

6.5 Responsible supply chain

Producing in a responsible way is important to the company. Environmental responsibility is acknowledged by using energy, materials, and natural sources efficiently. Energy used comes from renewable sources, solar and wind power. In these days, important is to observe new and more developed models. (Case Company X, 2020).

One of the big issues in fashion business is that the supply chain is unclear. Clothes are made all over the world and it is hard to ensure that human and labor rights are not violated. Workers might work long hours with minimal salary. Solution for this problem is to monitor the whole production process, from the beginning of the production all the way to the garment travel to the stores. Some companies take it to bit more further and think about the end- use of the garment.

Transparency is a key word when thinking the supply chain. Transparency can be defined as clear and honest way of operating. In this company, the supply chain is exemplary. To ensure operating in ethical manner, company knows its suppliers, producers, and sellers. When sourcing manufacturers, producers and suppliers, the importance has been finding partners who work with the same values. Making sure buyers has visited each factory which is a partner with the company. (Case Company X, 2020).

Producing in Europe makes it easy for the company to ensure the good working conditions in factories. They have kept long-term relationships to the factories and visited the suppliers regularly.

Manufacturers are located 99 % in Finland and Estonia in the factories they have been co-operating from the beginning of the business. (Case Company X, 2020).

Linen thread is produced in France which is a low risk country. As the picture shows, France is one of the countries which take care of the labor rights of a garment factory worker and rarely have any violations in workers conditions. (Sewport, 2020).

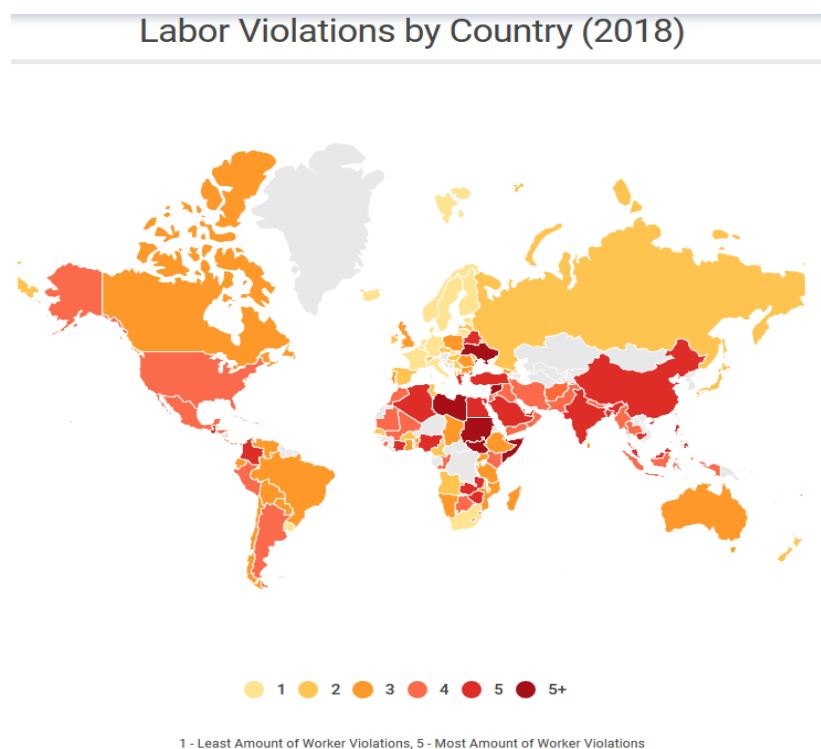


Figure 8. Sewport, (2020).

Linen fiber comes from Europe, and it has European Flex certificate. The manufacturer of the fiber is part of a Masters of linen organization. That guarantees that the fiber is GMO- free, production is free from pesticides or other harmful chemicals.

Linen fiber is manufactured as a fabric close by countries, in Estonia or in Lithuania. The closer the production is, the easier it is to monitor the production process, and address to a possible problem. Buyer from the Case Company X is visiting regularly in the atelier, and in that way providing a good ethical relationship between Case Company X and its producer. (Case Company X, 2020).

98% of the clothing apparel production is made Finland or in Estonia, 2% in Italy.

Producers are following laws and rules in the country they operate under the company's instructions. (Case Company X, 2020).

6.6 Carbon footprint

Scope 1 and 2 Unit is tons of CO₂e

Scope 1	2018	2019	Reduction	Reduction, %
Office electricity	10.085	8.068	2.017	20 %
Office heating, cooling	10.569	8.455	2.114	20 %
Other office	7.249	7.500	-0.251	-3 %
Waste	0.057	0.051	0.006	11 %
Post	0.884	0.500	0.384	43 %
Transport	0.839	0.939	-0.100	-12 %
Public transport	0.240	0.240	0.000	0 %
Travelling by air	19.267	13.487	5.780	30 %
Travelling by land	3.328	2.329	0.999	30 %
Hotel stays	3.072	2.150	0.922	30 %
Scope 1 Total	55.590	43.719	11.871	21 %
Scope 2 Total	4.423	2.411	2.012	45 %
Scope 1 and 2 Total	60.013	46.130	13.883	23 %

Figure 9. Company CO₂ emissions. (Case Company X, 2020).

Last year 78% of all the electricity used, was produced from renewable energy sources; solar, wind, and hydropower and bioenergy. The share of hydropower in renewable energy sources was 95%. The company has a certificate of the energy used in the company. (Case Company X, 2020).

60 % of the electricity consumption was CO₂-free. Goal is to move completely, 100%, to the use of electricity produced from renewable energy sources over the next two years, and at the same time to fully use CO₂-free electricity.

Mainly used electricity is produced from renewable energy sources and that is used with no carbon emission. (Case Company X, 2020).

Implementing environmental sustainability in all operations and use of natural resources, energy, and materials economically and efficiently. The Case Company is monitoring and aiming to reduce their carbon footprint of its operations. Company have managed to reduce it systematically, despite of the 30 % average growth of its operations per year.

Chart, Carbon emissions, metric tons CO₂ e

Year 2017: 434,4 metric tons CO₂ e

Year 2018: 400,2 metric tons CO₂ e

Year 2019: 380,6 metric tons CO₂ e (Case Company X, 2020).

6.7 Corporate social responsibility

As look through previously, CSR reflects company's' ways of doing things. It can be a good driver for the change, or a good driver for a start of a company. In Case Company X, Corporate social responsibility encompasses employees and all parties included in the company's operations. All parties are following same rules and working under company's methods. Company wants its producers and other suppliers to pay enough to workers, so they can have enough money to live. Company is making their manufacturing straight from the supplier, to operate without extra parties. This way supply chain is clear and easy. Choosing producers, company is visiting personally in the new possible manufacturer. To see working situation, and also covering their own plans to work as they wish.

There is a good example when Case Company is buying their one product line straight from a small producer, as a support for local company and in that way their society. This collaboration is creating jobs for the place and increasing their way of living, by paying a fair salary. (Case Company X, 2020).

6.8 Code of conduct

The Code of Conduct sets up the values and principles that strive to implement in the supply chains. The Code of Conduct is based on international conventions and regulations (under which are committed to respecting human rights so that equality of employees is achieved.) such as the Universal Declaration of Human Rights, the Children's Rights and Business Principles, UN Guiding Principles for Business and Human Rights and International Labor Organization (ILO) Conventions. The principles set out in the Code of Conduct represent minimum expectations that the company has for their suppliers and other subcontractors. (Case Company X, 2020).

6.9 Animal rights

The Case Company X is also demanding respect for animal rights. The wool and cashmere fibers of a knitwear come from the fields in New Zealand owned by yarn manufacturer. In New Zealand the legislation on the treatment of all fiber-producing animals, is rigorous and e.g. painful mulesing procedure is prohibited. The Case Company X has made this exemplary supply chain by visiting these New Zealand farms and have been convicted that merino sheep and cashmere goats are being treated in ethical conditions. (Case Company X, 2020).

6.9.1 Customer support

The company is encouraging its customers to reduce their environmental impact. Case Company X wants customers to be satisfied of their fashion purchasing and to have long lasting clothes. From the website is found good instructions how to wash clothes to keep it for years. Customers can order e-commerce deliveries to store, thus reducing the climate footprint caused by product packaging and transportation. (Case Company X, 2020).

The company wants to operate responsibly, and they have opened a Facebook group, where customers can sell their used clothes which they no longer use. August 10, 2020 that Facebook group had 21 511 members. (Facebook, n.d).

Customers are also welcomed to returning all clothes they want to recycle in the stores, and in that way Case Company X is encouraging customers for a thoughtful reuse and responsible discard of their fashion items. During the year 2020 when world was facing a big challenge, Covid-19. Case Company X, like every company in the world, was worried of the situation and future. Case Company X made consumers driven proposal, when customer is ordering products of company's web shop, they will get home delivery free of charge. Of course, this might have been a tactical move to help business to run in the tough situation, but it is also an example how to make customers purchasing easy and safe.

6.9.2 No suspect chemicals

The company's products do not contain suspect chemicals such as Phthalates. All the products have the OEKO-TEX® 100 Class 1 standard ensuring they do not contain phthalates.

The products do not contain any Per fluorinated chemicals (PFCs).

The STANDARD 100 by OEKO-TEX® takes account of:

- Important legal regulations, banned Azo colorants, formaldehyde, pentachlorophenol, cadmium, nickel, etc.
- Numerous harmful chemicals, even those not legally regulated.

- Requirements of Annexes XVII and XIV of the REACH as well as of the ECHA SVHC Candidate List insofar as they are assessed by expert groups of the OEKO-TEX Association to be relevant for fabrics, textiles, garments or accessories.
- Requirements from the US Consumer Product Safety Improvement Act (CPSIA) regarding lead.
- Numerous environmentally relevant substance classes.

In brief: The substances used in the manufacture of the linen as all the products meet the most demanding conditions, including REACH requirements, ensuring that no harmful chemicals have been used at any stage of production. (Case Company X, 2020).

6.9.3 Standards

Manufacturers have the responsibility to assure that the garments they are producing and selling, are meeting the standards and qualities promised. International standards can be used for ensuring product's certain qualities, such as organic cotton, fair trade products or products of origin. Standards are made to helping consumers and companies meet the same expectations from products. Textiles must meet the requirements of product safety legislation and must be hazardous to health.

Case Company X have defined their standards and certificates in their sustainability strategy with following.

- Business Social Compliance Initiative Code of Conduct (BSCI). Which is a membership of non-profit organization, to ensure company is following social conditions set by the BSCI. It is a common social developing system made to protect worker's rights. (International Trade Centre, 2001).
- Carbon Trust Standard. Certification of a responsible company, who is taken the initiative to cut their carbon footprint. (Carbon Trust, n.d).
- Clean Clothes Campaign Code of Labor Practice. Standard which applies minimum labor requirements for workers' rights, such as working conditions, working hours, and company to monitor these matters. (Clean Clothes Campaign, 1998).

- Climate, Community & Biodiversity Standards - CCB Standard. Is given to companies which are taking an effort to cut climate change, shows innovation through its actions of sustainability, and support local communities. (CCBA, n.d).
- Global Organic Textile Standard. GOTS was contributed to ensuring organic textile labeling, standard ensures that raw material is conducted with social and environmental requirements. Standard gives world-wide known label to textiles. (Global Standard, 2016).
- International Wool Textile Organization. Since 1930, IWTO has been creating the standards in wool textile industry. They are providing information about animal welfare, standards, and other wool related matters. This way they are educating consumers and companies with the issues and benefits of a wool material. (IWTO, n.d)
- ISO 14001:2004. This standard sets rules for managing environmental system in an organization. Giving objectives and instructions for a company to improve their environmental-friendly planning. (ISO, n.d).
- OEKO-TEX STANDARD 100. Textiles with this label are safe to human health. Textiles are tested from harmful substances and are safe to use. Any textile can apply this certificate, but all components have to meet the requirements. (OEKO-TEX, n.d).
- OEKO-TEX MADE IN GREEN. As the OEKO-TEX STANDARD 100 is tested from harmful substances, so is this label as well. This label is traceable and ensures that garment is made with sustainable manners. On the web site anyone can trace their labeled garment. (OEKO-TEX, n.d).
- Responsible Wool Standard. Is a standard for supporting animal welfare and the land they graze in. (Textile Exchange, n.d).
- Social Accountability International - SA8000. World leading standard for driving social accountability for a company in any industry. Workers 's rights are valued, and decent work is given. Standard gives guidelines for constant improvement by giving performance to management styles. (SAI, Social Accountability International, n.d).

- ZQ Merino Label. ZQ standard follows five guidelines. Animal welfare, environmental sustainability, quality, traceability, and social responsibility. Animals can graze freely; they have water to drink and grass to eat. Animals are taken care of by ensuring painless and stress-free life. Painful mulesing is strictly forbidden, instead wool is taken carefully shearing from the sheep. (ZQ, n.d).

- Zero Discharge of Hazardous Chemicals Program. Which is observing the use of toxic chemicals in manufacturing processes especially in garment industry. This program is aiming to keep consumers, workers and environment safe. (Case Company X, 2020; Roadmap to zero, n.d).

6.9.4 Comparison of year 2019 and 2020

In the year 2020, Case Company X were improving their sustainability plan. Reason for the improvements are easy to understand. Overall development of sustainability issues is getting better and better daily. New and advanced methods of operating are invented. For companies this is a change but also a threat. Keeping up in the turn is important for company's future and durability, but constant improvement could be demanding. Taking a chance and change used methods, could end up for finding a better way of operating. Today's development could give money saving solutions for companies.

Comparing year 2019 and 2020 and thinking what the issues are where Case Company X has improved. In the previous year, year 2019, Case Company X released information about their carbon footprint. Making a report is a first step, releasing it is a very good step, but where company got feedback, was to clearly indicate the parts from where their carbon footprint originates. In the year 2020, carbon footprint is well clarified. Report shows clearly of what carbon footprint consists of, and moreover, carbon footprint is reduced from 59 424 tons of CO₂e to 41 562 tons of CO₂e. (Lumme, 2019; Lumme, 2020).

According to a Rank a brand- research, Case Company X did not announce enough information of their source of energy. (Lumme, 2019). Energy source is one of the topics when making companies environmentally sustainable. Reducing greenhouse gas emissions and moving away from a fossil fuel-based energy system is key to promoting renewable energy. (Työ- ja Elinkeinoministeriö, n.d).

In these days, energy companies provide sustainable options for consumers. Wind power, waterpower and solar panels are the sustainable options for energy use. Case company made corrective move in 2020 to improve their use of energy. Case Company X has changed its energy source 100% to wind power. (Case Company X, 2020).

7 RECOMMENDATIONS

Considering what actions Case Company X could do in the future, to keep up the good work, and stay in the position of one of the most sustainable fashion companies in Finland. Even though supply chain is clear, monitoring and reporting processes between departments could be one element to concentrate. This way, the Case Company X would have clear information from every process of the manufacturing. And if someday problems occur, it would be easier to apply where the problem is.

If the case company have not already committed to benchmarking living wages for all its parties, that would be important to observe for the future purposes. (Lumme, 2020).

Globally, manufacturing of clothes has doubled in the last 15 years (Suomen Tekstiili ja Muoti, n.d). Sounds like there is already a lot existing material. How to benefit from this? Use of materials is essential for fashion companies, use of sustainable materials is an investment for future. The suggestion is to find new materials for a use alongside with linen.

Finnish company called Spinnova is a company who makes textile fiber from wood. The company announces on their website "Our mission is to provide the textile industry with the most sustainable fiber in the world, produced with minimal harm to the environment, at a reasonable cost". (Spinnova, nd). Another suggestion for a new material is collaborating with another Finnish company, Infinited Fiber. This company makes a new textile fiber from old clothes. Infinited Fiber already collaborates with H&M, which is a huge company in a global Fashion Business. (Infinited Fiber, n.d)

One modern way to use fashion is to rent it. Modern way of thinking is sharing economy, consumers are renting homes, cars, why not a fashion. Suggestion is to have open mind and renting as a possibility for future.

8 CONCLUSIONS

The concept of Sustainable Development started in the United Nation's meeting in 1987. Since then, sustainability has been a common goal, even though in recent years it has become a part of everyday life. Sustainability covers social, environmental, and economical factors. Truly sustainable company applies all these 3 goals.

Sustainability in fashion business should be planned into companies' business plan. Corporate Social Responsibility gives guidelines to follow. The importance of fashion companies is to provide durable and sustain clothes for consumers. Consumer can make the difference by showing sustainable actions by their purchasing behaviour, which is driving companies towards better business actions. Company to survive, has to take this action and turn their way towards sustainability.

In fashion business, material choice is crucial. At present, there is no material which do not leave a mark to environment. But there are still good materials to use. Production is always creating waste, which shows the importance of a good waste management.

Important part in sustainable fashion is making a transparent supply chain. In this sense, transparency means that companies know exactly where their garments are made. Companies should know every step of the way, production of raw material, all the way to the garments journey to the store. Case Company X has done considerably a lot of work towards being a sustainable company. Sustainability, longevity has been the key to build the company, and also a red thread to keep developing the company.

One imperative thing after Rana Plaza building collapsed, has been that fashion companies should provide a factory list. This fact is crucially creating transparency. Companies themselves have to know where their garments are manufactured, not only but also, this information is essential for responsible consumers. Case Company X has published their factory list. What could mark out them from other companies, is a fact that they have visited each factory their clothes are manufactured.

Sustainable business is suitable for the companies who have ambitious, long term goals. Companies who believe that good leading and good partnership are a base for the productivity. They have the desire to work trustworthy and they are commitment to the work they are doing. Company should include their sustainability plan into their business in a way that they are genuinely interested of their own actions, and so that they know the impact they are creating.

As a closer, the book *Elinehtona eettisyys*, gives five guidelines for a company who wants to be sustainable:

1. Be transparent.
2. Think the overall picture.
3. Operate with the principles you have created.
4. Become part of the change.
5. Be ready for constant learning.

(Könnölä, & Rinne, 2001, p. 111-112).

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APPENDIX HEADING

Rank a brand

Climate/ Carbon Emissions

1. "Has the brand (owner) disclosed the annual absolute climate footprint of its 'own operations', and has it accomplished an overall absolute climate footprint reduction compared to the result of the previous reporting year?"
2. "Is at least 50% of the electricity used by the brand (company) generated from renewable resources, such as wind or solar energy?"
3. "Is all the electricity used by the brand (company) generated from renewable resources, such as wind or solar energy."
4. "Has the brand (owner) disclosed the annual absolute climate footprint of its supply chain that is 'beyond own operations.'"
5. "Has the brand (owner) accomplished a reduction of this annual absolute climate footprint 'beyond own operations' compared to the result of the previous reporting year?"
6. "Has the brand (owner) set a target to make at least its own operations fully climate neutral by 2030 and is the brand on track to achieve this target."

Environment

7. "Does the brand (company) use environmentally 'preferred' raw materials for more than 5% of its volume?"
8. "Does the brand (company) use environmentally 'preferred' raw materials for more than 10% of its volume?"
9. "Does the brand (company) use environmentally 'preferred' raw materials for more than 25% of its volume?"
10. "Does the brand (company) use environmentally 'preferred' raw materials for more than 50% of its volume?"

11. "Does the brand (company) use environmentally 'preferred' raw materials for more than 75% of its volume?"
12. "Does the brand (company) use environmentally 'preferred' raw materials for more than 90% of its volume?"
13. "Is there a policy for the brand (company) to eliminate all hazardous chemicals from the whole lifecycle and all production procedures to make the apparel?"
14. "Has the brand (company) eliminated at least one suspect chemical group, such as Phthalates or Per fluorinated chemicals from its entire garment production?"
15. "Has the brand (company) eliminated at least three suspect chemical group, such as Phthalates or Per fluorinated chemicals from its entire garment production?"
16. "Does the brand (owner) report what percentage of its shipping packaging and carrier are renewable or made from recycled materials, and does the brand implement best practices or concrete policies which have reduced the environmental impact of these packaging materials."
17. "Does the brand (owner) publish its absolute waste materials footprint and implement concrete policies to minimize waste, by reducing, re-using and recycling, thereby decreasing its waste footprint compared to the previous reporting year."
18. "Does the brand encourage the return or re-use of garments?"

Labour conditions / Human rights

19. "Does the brand (owner) have a supplier Code of Conduct (CoC) which includes all the basic standards to ensure workers' rights such as no child labour, no bonded labour, a safe workplace and no excessive overwork? And is there at least a progress report once every two years on implementation of this Code of Conduct?"
20. "Does the brand (owner) have a policy to make sure there is a proper grievance mechanism in place for factory workers and are at least 25% of workers informed about their rights regarding this mechanism (e.g. through training)?"

21. "Does the brand (owner) have a published list of direct suppliers, that have collectively contributed to more than 90% of the purchase volume."
22. "Is this supplier list specific? Are e.g. the addresses of direct suppliers included, and/or are the specific products mentioned per factory?"
23. "Is the list of direct suppliers extended with suppliers further down the supply chain, with a mini-mum of 40% more in number compared to the direct suppliers?"
24. "Is the brand (owner) a member of a collective initiative that aims to improve labour conditions, in which civil society organizations like NGOs and labour unions have a decisive voice, or does the brand purchase at least 50% from certified manufacturers with improved labour conditions?"
25. "Does this initiative require clear minimum performance levels for member brands (i.e. are memberships terminated when brands do not meet the minimum requirements)?"
26. "Is at least 25% of the total production volume at direct suppliers verified under monitoring."
27. "Is at least 50% of the total production volume at direct suppliers verified under monitoring."
28. " Is at least 75% of the total production volume at direct suppliers verified under monitoring."
29. "Is at least 95% of the total production volume at direct suppliers verified under monitoring."
30. "Does the brand (owner) annually report on the results of its labour conditions policy for the semi-finished products such as yarns, fabrics and leather, including a reasonable overview of number and region of workplaces covered by the policy in relation to the total production volume?"
31. "Does the brand (owner) publicly commit to a living wage benchmark with defined wages per production region or factory?"
32. "Does the brand (owner) set a target to establish the payment of living wages at its apparel manufacturers, and is the brand on track to achieve this target?"

33. "Has the brand (owner) realised payment of living wages for at least 10% of its production volume?"
34. "Does the brand (owner) adhere to buying practices that enable living wages and good labor conditions, such as long-term relations with factories, and concentrating production at limited number of factories?"