Changing impact
Impact measurement in the sustainable clothing industry.

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I dedicate this project to my biggest motivators, my mom and Aaf. For teaching me to be my uncompromising self. And to my dad and sister for always being here.
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Executive summary

In this thesis the inspiration for the main research question “How do sustainable clothing companies measure their impact?” came from the book *The Hidden Impact* by Babette Porcelijn. The scope of this thesis is to view the circular future of the fashion industry with the current state of the fashion industry. The topic impact management will be addressed and analysed through various forms of assessments and asking the following sub-questions. What forms of assessments are being used in the industry now? Eight different types of measurement and commitment forms will be discussed. What are the intentions behind the assessments of (self)proclaimed sustainable clothing brands? The motivation for being sustainable is found in three key factors, the government, consumers and internal motivation from brands. The following question is about the reliability of the measurements. The trust in received data will be questioned with plastic pollution as an example. Seeing impact management translated into strategy. How does usage of assessments in the sustainable clothing companies translate the future forward change towards a circular economy? With this question the discussion opens about the disruptive change necessary for a sustainable future in fashion and raises the bigger question of structural systematic change.
Chapter 1: Introduction of the subject

1.1 Rationale

Nowadays the fashion industry is not known for its fair nor its sustainable practices. It is the second most polluting industry in the world after the oil industry (Sweeny, 2018). However, though some might say it is the fashion industry that is the most polluting, it is actually the textile industry (Friedman, 2018).

The level of impact of the fashion industry can be questioned but it is undeniable that there is an impact on the environment. Research about climate change and misconduct in third world countries, trend forecasters and documentaries like *The True Cost* (Morgan, 2015) show us that it is time for change (De Castro, 2018). The fashion industry and some of its consumers were faced with these topics after seeing images and reading about child labour, pollution, corruption, scarcity of resources and overconsumption being burned and new products turning in to landfills. Slowly, the industry and consumers are acting on these issues. The Anti Fashion (Le Monde, 2018) movement is one of those examples.

Consumers are demanding sustainable solutions for their daily needs and new and established brands have worked to fulfil these demands. It is stated in the Pulse of the Industry report by the Global Fashion Agenda that sustainable practises are on the rise. The year 2017 was a turning point for sustainability. Overall, 75% of fashion companies have improved their score compared to last year – raising the pulse of the industry by six-points. “This is impressive and encouraging. However, more needs to be done” (Lehmann, 2018). The issues brands are facing are often so big that sometimes production facilities do not even know where to start implementing the adjustments needed to handle the future effects of climate change. A lot of times greenwashing happens at this point. Greenwashing is a phenomenon that Investopedia describes as “the use of marketing to portray an organization’s products, activities or policies as environmentally friendly when they are not” (Kenton, 2018). Not because companies necessarily intend to but just because information is scarce and often unreliable due to phenomena like subcontracting for example. Companies often want to be sustainable and believe that they are doing a better job than other competitors. But many are still having a big negative impact on the environment. Do they tend to focus sustainability solely on their products? And what about their whole operation? Are companies more focused-on action as in products instead of process as in strategy? And how do you implement change in all layers of an organisation?

Research shows that the consumption level has never been higher and needs to be lowered drastically to provide a healthy future (Shah, 2005). Resources are becoming scarce and the rainforests that need to take in all our CO² emission are decreasing every year. Over the past 15 years sustainable experts have advised brands and consumers on what to do and how to face these problems of negative impact on the environment. Books like *Talking dress* (Eyskoot, 2014) and *This is a good guide* (Eyskoot, 2017) from Marieke Eyskoot are a good example of such advice. After reading the book about hidden impact from Babette Porcelijn, I was inspired to see how her content would relate to the sustainable fashion industry. As Babette Porcelijn calculates in her book, in 2050 there will be 10 billion people on earth, but we will be consuming like we are on this planet with 20 billion people (Porcelijn, 2017, p.138). There is no way that would fit within planetary boundaries. The book is about how to turn your own environment eco positive by effectively tackling your impact. Being sustainable in the aspects of your life where it has the biggest effect not just a visible effect. She explains how to stay within the capacity of the earth’s resources that are available every year (Porcelijn, 2017, p.206). The *Hidden Impact* describes the factors in people’s
lives that have the most impact on the planet. By calculating the impact that is out of direct sight in one’s own environment, Porcelijn created an impact top 10 to show what is harming the planet and the environment the most. Impact is defined as influence by the Cambridge dictionary (Cambridge Dictionary, 2018). In my research I define impact as the negative influence on people and planet by production, operational practices, marketing and the use of resources of a product, in this case a garment.

Channelling this information back to the fashion industry, the production processes in the fashion industry are not unknown for the brands that operate in it. But it is also not a given that all brands know the exact extent of their impact and how their production fully works. Sometimes companies have never been on factory sites or don’t know what questions to ask the supplier. Problems like subcontracting and lack of control in the production facilities make it hard to map out the total supply chain. Therefore, it is harder to give reliable facts on water consumption, pollution and other factors that need to be calculated when measuring impact. Brands often use tools and methods to measure and analyse their impact. As an example, I would like to explain how the Environmental Profit & Loss system is used by the companies in the Kering Group, which is a global luxury group that used to be the owner of Stella McCartney Inc. Stella McCartney Inc. is now separated from the Kering Group but still uses the E P&L system to analyse the impact of the company. Stella McCartney herself is seen as an influential and sustainable designer so her company policy fits the set framework of a sustainable company (Franklin-Wallis, 2018). They state that “The E P&L is a tool designed to measure and monitor the costs of environmental changes associated with business. It is based on economic analysis that estimates societal costs of environmental impacts” (Kering Group, 2015). In this report a very concrete amount of societal costs is clarified. However, the Kering Group also immediately states in its report that the calculated costs do not translate to an obligation directly to the company to pay for their environmental impact. This tool focuses mainly on environmental impact and the price calculated for those issues. This is an example of a measurement tool and in my research I will elaborate more on the other methods of assessments.

1.2 Relevance of the research

The relevance of this research goes beyond the fashion industry and clothing companies, as it also asks the question if impact can be fully measured. When have you reached the boundaries of your responsibilities when it comes to impact? There might not be a clear answer to these questions in my research and it might even bring up more questions. But without raising questions like these, consumers will not get the answers they are looking for or hold companies and governments accountable for their impact (AD, 2018). The only way consumers can do that is if they have all information on how their products are produced and what is done with their waste. Greenwashing is a common phenomenon these days across all industries. This study will investigate research that can be used as an example for people and professionals who are struggling with sustainability and are looking for steps towards a circular system. It will be interesting for companies who want to go beyond just doing enough to fixing the issue of their impact. I will uncover how assessments are being used and how impact is measured. If this is done correctly, however, is the question.

1.3 Goal of the research

The aim of my graduation project is to research how impact is being measured in the sustainable clothing industry. I want to create insight into the methods of impact management available by comparing the different methods of assessments. Companies that proclaim to be sustainable are
using the methods with their own interpretation. My aim is to seek out the process of impact analysis. The purpose of comparing the methods and guidelines is to see in which stages of the process businesses could still be missing information on their impact. Are they focusing on legal, social and commercial compliance or are they taking steps towards a circular future? In my research I also investigate how reliable the methods of assessments are. By researching the usage of the assessments, I can search for the blind spot and advice a shift to decrease the total impact of the fashion industry. The final product will be a paper to help sustainable companies see and question if they could have a blind spot when it comes to impact and help them understand how to be transparent on an operational level towards the consumer and not just a product level.

1.4 Research question and sub-questions
The main research question for my thesis is as follows: How do sustainable clothing companies measure their impact?
To specify sustainable clothing companies for this research. These are defined as companies that claim to consider and minimize the effects of their business on people and planet.

To answer this question the following sub-questions have to be asked.
- What forms of assessments are being used in the industry now?
- What are the intentions behind the assessments of (self)proclaimed sustainable clothing brands?
- How reliable are the tools sustainable fashion brands use to measure the impact?
- How does usage of assessments in the sustainable clothing companies translate the future forward change towards a circular economy?

1.5 Organization of the report
The structure of the report will be answering the questions by using The Hidden Impact theory as an inspiration and fuse this with the current state of the sustainable clothing industry. In chapter four the hypothesis will be made clear on impact management done in the industry. Various methods of guidelines and assessments will be analysed and debated. The relevance will be identified for companies that are already working with a sustainable strategy in chapter five and the link between measuring impact and being sustainable will be elaborated. After that I will critically assess and compare the methods of assessments to see how reliable the outcome of these assessments is and where progress could be implemented and show if and where the methods are lacking information. Followed by chapter six with recommendations on how to implement changes in to a sustainable company to become more circular in the future. In chapter seven the conclusion of the thesis is made, and the main research question will be answered.

1.6 Limitations of the research
Due to the set timeframe for this thesis I am obligated to restrict myself and limit the amount of information in my research. Instead of going in-depth into the methodology of the available assessment tools I limited myself to naming and explaining them. I did this because I aim to focus most of my interest on the effects of the tools and their outcome in to policy and strategy. Nevertheless, it is very important to understand the techniques of the available variable measurement options. Because the subject is relatively new the sources used are also mainly dated from 2018.
Chapter 2: Literature review/secondary research

In this chapter the literature I used for my research on the topic of sustainability and assessments is described. First, I will state the literature and after that I will show my secondary sources. As mentioned before I have conducted close reading of the book of Babette Porcelijn, *The Hidden Impact*. Where I gained insight on possible hidden impact and used this book as a starting point of my research. The book *Doughnut Economics* by Kate Raworth is a must read when talking about planetary boundaries and circular economy. The book *Route Circulair* co-written by Karen Maas about assessing, changing and becoming a part of the circular movement was a good practical follow up to the book of Kate. Karen is an expert on the topic of assessments and the founder of the executive program for Corporate Social Responsibility and Sustainability at the university of Rotterdam. Another book I used for my thesis was the one from Marieke Eyskoot. She wrote 2 books on the topic of sustainable and fair clothing, I will be using *This is a Good Guide* to research sustainable clothing brands. To research more in-depth on what sustainable companies are doing I used the book *Eco-efficient Value Creation* from Joost Vogtländer. This book is about sustainable strategies fit for the circular economy and measuring eco impacts and costs. Hasmik Matevosyan wrote the book *Paradigm shift in fashion* on rethinking the industry from a design perspective and changing the way the fashion industry works. With the idea of sustainability as a unique selling point, I consulted the book *Blue Ocean Strategy*, a management book about uncontested market space and leaving the competition behind in the what they call red ocean.

Among using literature, I also conducted interviews with experts on the subject. The first interview was with Gwen Cunningham from AMFI. I interviewed Gwen Cunningham because of her expertise on the subject of circular economy, textile recycling and waste management. This interview can be found in my process book pages 7 till 17. The second was Anne Manschot from Enact Sustainable Strategies. She is an expert when it comes to audits and assessments, this interview can be found on pages 17 till 24 in the process book. She recently finished the executive program for Corporate Social Responsibility and Sustainability from Karen Maas. From that same course was connected to Joan den Exter who I interviewed about the intentions of fashion brands for being sustainable, on pages 32 till 42. Joan’s expertise is in production and operational management. I also interviewed Koen van Warmerdam from the relatively new brand Unrobe to see how their new sustainable approach to the retail market is working in practise. The interview is stated in the process book at pages 25 till 32.

At school we had the chance to meet Patsy Perry, A teacher from the university of Manchester, specialized in fashion marketing. She wrote an essay together with Steve Wood on the topic of International Fashion Supply Chain and Corporate Social Responsibility: Cost, Responsiveness and Ethical Implications (Perry & Wood, 2019). This was one of the essays I used in my research. Another way I gained knowledge was by using annual reports from the companies named in my research: Filippa K; Stella McCartney; Houdini Sportswear; Levi’s; Reformation; H&M and Everlane. I did not just look at fashion companies, I also researched companies specialized in measuring impact like: PRé with their Sima Pro LCA software program; Bureau Veritas who specialize in audits; Eco Chain and SIM supply chain information management. Next to this I have also visited events on the topic of sustainability, like the SDG Action day, Circular events at the Impact Hub, Meet up’s at Pakhuis de Zwijger and Beyond Next. These forms of expertise will give me a diverse range of knowledge on measuring impact and reliability of data. AI following a sustainable mindset and different barriers. I want to figure out the reliability of these impact calculations and their effect on the current fashion system.
Chapter 3: Methodology
To validate my project and to guarantee reliability of this research. I will answer my research questions with the following methodology. In order of questions.

1. How do sustainable clothing companies measure their impact?
For the main research question, I will use qualitative research. Looking at what sustainable companies provide as information themselves. Using substance analysis to see what methods of assessments are mainly used. This question is leading in the interviews with industry professionals and experts. These interviews are stated in the included process book. Because this question is the main question it will be answered in chapter seven, the conclusion. But it will be the backbone of this thesis and therefore reappear in all chapters. By using descriptive research and observing the current state of the sustainable fashion industry when it comes to impact management, techniques and progress will be clarified. By observing the methods and clarifying the key elements of assessment.

2. What forms of assessments are being used in the industry now?
In chapter four the different forms of assessments will be discussed. I will elaborate more on the various levels of assessments, sometimes assessments are even combined to cater to individual company needs. The forms shown in this chapter are selected from research and professional’s knowledge gained from the interviews. The statements made will be verified with secondary sources. This question will be using evaluative research as well as descriptive research. Assessments can be guideline based or set in a strict framework. I will explain the distinction between standards and measurement tools and explain how the following most used forms work in practice. These forms are more directional and therefore mentioned as guidelines;
   - The Global Reporting Initiative standards, also mentioned as GRI
   - The 2020 commitment from the Global Fashion Agenda.
   - Sustainable Development Goals
And these forms set and therefore mentioned as tools;
   - Environmental Profit & Loss system, also mentioned as E P&L
   - The HIGG index
   - Life Cycle Assessment
   - ZDHC commitments
   - Planetary Boundaries Assessments

3. What are the intentions behind the assessments of (self)proclaimed sustainable clothing brands?
In chapter five the topic of intentions will be discussed. This question is aimed to seek the motivation of brands to be or become sustainable. The set theoretical framework will contain the intention of the policy makers, the consumer and the company.
   - The government and the industry joint together on the Agreement on sustainable garment and textile after the terrible accident at Rana Plaza in Bangladesh. A form of legislation that gave incentive.
   - Young consumers are reportedly more involved and critical of the products they buy, also gives incentive to become more sustainable.
   - Companies are faced with a moral dilemma of their responsibility on climate change. From these three perspectives a hypothesis will be made on the motivation of brands to be sustainable.

4. How reliable are the tools sustainable fashion brands use to measure the impact?
This question will also be a part of chapter five. This question will mainly be answered with descriptive research. By using various forms of sources and examples, the reliability of assessments is tested.

5. How does usage of assessments in the sustainable clothing companies translate the future forward change towards a circular economy?

Chapter six is about the resolution’s brands make towards the future. With this final question I want to discuss the barriers facing the fashion industry for becoming circular. I will do this by looking at, not just trend forecasting but also with the information the industry professionals gave me in the interviews. I will also use expert opinions from books and news platforms.

Chapter 4 Methods of assessment
4.1 The assessment forms available in the industry
In this chapter the various forms of assessments will be discussed and the first sub-question will be answered. What forms of assessments are now being used in the fashion industry? At the end of this chapter the connection between the sustainable fashion industry and assessments will be made. This in turn will help answer the main question; How do sustainable clothing companies measure their impact? First the importance of transparency, then in 4.2 the various forms of guidelines will be given and in 4.3 the methods of assessments will be analysed.

As mentioned before, sustainability is a hot topic in the industry. Summits and conferences are dedicated to inform and give inspiration to companies who are working with the issues around climate change. AMFI itself works closely together with Circle Economy to create such an event, Beyond Next. This year more than 650 people joined the conversation in a two-day conference (Circle Economy, 2019). Whether a company is using new low water usage dye techniques or recycle waste from the ocean in their apparel, to be regarded as a sustainable fashion brand requires facts to substantiate your product and/or your brand story. Measure Up is an organisation that analyses business by using a top ten for consumers on performance of brands. They measure the level of transparency of brands on the following factors;

1. The company is able to provide evidence of giving the supplier a living wage for their workers, in all aspects of the supply chain.
2. The existence of an ethical code of conduct for workers following the International Labour Organisation (ILO) Standards. “It is a United Nations agency and has developed a set of labour standards covering key issues for workers such as wages, health and safety at work and child labour.”
3. Factory address lists of all suppliers publicly available on the website visible for consumers. Making it possible for journalists and NGO’s to trace the factories employed by brands.
4. Thorough factory checks by using regular social audits conducted by independent organisation
5. Factory audit results are available to the public and published on the company’s website or in the annual/CSR/sustainability reports.
6. Protecting workers with a compliant procedure. It should be possible for the factory workers to confidentially raise issues of concern on unsustainable practices or work environment. Companies should establish a safe space to speak freely about these issues.
7. Companies are checking the suppliers of their own supplier, for example fabric mills and metal factories for trimmings.
8. Companies should provide its consumers with a reuse or recycle scheme for products. Preferably to be implemented back in the supply chain as a new resource.

9. Usage of sustainable cotton in products. “The Environmental Justice Foundation (EJF) has extensively researched and documented some of the disturbing problems with conventional cotton farming.” Conventional cotton uses a lot of water, the impact on the environment of people working and living near cotton farms is massive.

10. Eliminating the usage of toxic chemicals and the release in all stages of the total supply chain. Creating a safe work environment for employees of factories.

The information for these factors can be found on the website of Measure Up (Measure Up, 2018). These ten factors of transparency are seen as important to obtain consumers trust and are also used by companies to transcribe their social and environmental impact.

4.2 Guidelines of Corporate Social Responsibility

There are multiple ways a company can assess their impact on the world and there exist different levels to look at impact. A company could do risk-analyses on factories and write code of conducts with or for their suppliers. Measurements from the conducted inspections and audits are important if companies want to apply for certificates and use them for reporting to the stockholders. Often impact management is seen as a part of supply chain management within a company. Supply chain management can vary with its level of intensity. Some brands keep a strict communication line with all first and second tier suppliers from cottonfield until distribution to stores, while some companies outsource their entire production with agencies.

The organisation Ethical Consumer would like to see companies pay more attention to two key areas of supply chain management. The first factor is transparency, reporting by companies if issues are found within their own supply chain and the second is collaboration with industry partners by joining multi-stakeholder initiatives (Carlile, 2018). Big players like Nike, H&M and Tommy Hilfiger together with the Global Fashion Agenda at the Copenhagen Fashion Summit signed on to the 2020 commitment. At Copenhagen Fashion Summit 2017, Global Fashion Agenda called on the fashion industry to take action on circularity by signing a commitment as a concrete way to turn words into action. The aim was to increase the number of fashion brands and retailers taking action on circularity in order to accelerate the industry’s transition to a circular fashion system (Global Fashion Agenda, 2018). In 2018, 94 companies signed the pledge, making up 12.5% of the total fashion industry together. The pledge is set to improve industry performance, share knowledge, engage with policymakers and create industry alignment by providing a platform.

Another form of committing is using the Global Reporting Initiative standards as a benchmark to report on the CSR practises within companies. GRI standards are divided between universal standards, which contain foundation standards, general disclosure and management approaches. And the topic specific standards, which consist out of economic, social and environmental standards. The set economic standards cover topics such as indirect economic impacts and anti-corruption. There are nineteen set social standards varying from rights of indigenous people, consumer privacy, child labour, occupational health and safety, forced or compulsory labour and human right assessments. Environmental standards are divided in eight categories: materials, energy, water and effluents, biodiversity, emissions, effluents and waste, environmental compliance and supplier environmental assessment. The GRI definitions are all explained in the glossary to help empower sustainable decision-making and create a clear overview of industry terms (Global Reporting, 2018). These standards help brands communicate with industry partners and apply or
get accepted to sustainability indices. The Dow Jones Sustainability Indices is a good example of that. “The indices serve as benchmarks for investors who integrate sustainability considerations into their portfolios and provide an effective engagement platform for investors who wish to encourage companies to improve their corporate sustainability practices” (Robeco Sam, 2019). Measurements do not mean anything if companies do not have a recognizable framework to set them in.

You also have broad set guidelines that cross industry lines, like the Sustainable Development Goals set by the United Nations, abbreviated the SDG’s. These guidelines are set for nations and businesses in the global industry and are broad and high reaching goals like No.1: No Poverty or No. 13: Climate action. The breadth and ambiguity of these goals also makes them a little hard to grasp. The framework the UN set is on the other hand very clear: “the compass of change” they call it and it is all about understanding, setting, integrating and defining your goals (UN, 2019) and is useful for changes in any situation. Integrating these global set goals can be a challenge for companies, measurement tools can help smoothen the implementation of these guidelines.

4.3 Measurement tools
As mentioned before there are multiple ways of assessing products and companies. Impact measurement tools used are for example Environmental Profit and Loss system. The E P&L tool clarifies the relationship between business and natural environment. Kering Group uses the E P&L to measure and monitor the costs of environmental changes associated with business. It is based on economic analysis that estimates societal costs of environmental impacts (Kering Group, 2015). When reading this statement in their annual report it also stated that the societal costs calculated are not liable or financially committing to Kering. They state that it is not intended to represent any forward-looking statement (Kering Group, 2015). This in turn raises the question if society needs to be paid for the environmental impact businesses are costing them. And if environmental impact can be bought off by companies. And to whom are they then indebted, government or society? Environmental organisations are already warning for the fact that civilians are paying for the costs of climate change and urge world leaders to charge big consumption of resources (NRC, 2018). In chapter six I will elaborate more on the responsibilities of impact and consequences. Back to the other forms of impact measurements.

The HIGG index is made by the Sustainable Apparel Coalition. The tool is a combination of both the social impact and the environmental impact measurements. Some say this is the most elaborate way to really measure impact. Gwen Cunningham stated in the conversation we had that the most comprehensive assessment she has seen was using HIGG industry data (Cunningham, 3 April 2018). The HIGG index seems to be the most elaborate way to analyse impact but there are still more options to take into consideration. The combination of three different tools makes the HIGG index one of a kind as it combines the product tool, the brand and retail tool and the facility tool. The assessments are conducted with at least one audit a year, by SAC approved and recognized auditors.

The ZDHC programme is one of the other programs supported by the SAC and stands for Zero Discharge of Hazardous Chemicals, which specializes in chemical management in production processes. They give guidance to companies on how to collect data and connect it to the standing audit protocol for chemical module and waste water. "To maximise industry transparency and collaboration, the ZDHC Programme worked with the Sustainable Apparel Coalition (SAC), OIA and the Global Social Compliance Programme (GSCP) to develop the audit protocol and a number of tools and processes to support it “(ZDHC, 2015).
These audits and factory assessments are either conducted by brands themselves or third parties hired to conduct independent audits. Bureau Veritas is one company that researches product journeys from design to store. It works together with certificates and high-profile brands and conducts audits in all segments of industry. Their established name, expertise, lists of approved factory sights and labels give security to brands who are searching for new facilities (Bureau Veritas, 2019). They conduct audits on factories for brands and publish the results. Audits can also be combined to avoid repetition and extensive numbers of audits at one factory site (Measure Up, 2018).

The next option I would like to introduce is Corporate Planetary Boundaries Assessment used by Houdini Sportswear, a Scandinavian outdoor brand. Their assessment is based on the scientific framework of the Doughnut Economy. It combines nine boundaries that are all interlinked and connected within the framework. “The nine Planetary Boundaries processes identified are: (1) climate change, (2) pollution by novel entities, (3) stratospheric ozone depletion, (4) alteration of atmospheric aerosols, (5) ocean acidification, (6) perturbation of biogeochemical flows (nitrogen and phosphorus inputs to the biosphere), (7) unsustainable freshwater use, (8) land system change and (9) changes in biosphere integrity (or destruction of ecosystems and biodiversity)” (Houdini, 2018, p.40). By using this form of assessment Houdini Sportswear developed clear bullet points about their design process, their business model and other critical points on its future strategy and it has implemented those changes in its future roadmap as well.

A Life Cycle Assessment already hints towards something circular, or “the circle of life”: when things die, new things develop from this death. LCA is a methodology to assess all environmental impacts associated with a product, process or activity by accounting and evaluating the resource consumption and for example the emission. According to ISO (ISO, 1997) LCA is divided into four steps, which are (1) goal and scope definition, (2) inventory analysis, (3) impact assessment, and (4) interpretation (ISO, 1997). This tool seems to be the most extensive tool to measure impact on all levels. Probably also the reason why a lot of companies are using this tool to analyse. Levi’s did an extensive study using the LCA method and even calculated the usage phase of consumer care and end of life (Levi’s, 2015). But without a take back system in place to catch clothing items as new resources, the items will likely end up in landfill. And even if a take back system is in place. The mixing of synthetic and natural resources makes it hard to recycle or upcycle the clothing. (The Guardian, 2011). Another point is that LCA’s take time, which makes them costly. A proper LCA could take 5 months or even longer, while production in the fashion industry has been speeding up at a very fast rate over the past few years. (Fashion United, 2018). I would like to discuss the LCA more extensively in the conclusion.

4.4 Conclusion
As read in this chapter there are a lot of ways to calculate or analyse impact nowadays, whether it is a strict personal commitment or a bigger joint set of goals. By studying the usage of LCA’s I came to the conclusion that an LCA in its core is not the same as the form used by the fashion industry. I started looking at LCA’s from an ecological perspective and if you look at life cycles as a concept in nature you will see that nothing goes to waste. Garbage in nature does not exist because when a tree of an animal dies, it becomes a new resource for other plants to grow. The ecological life cycle is built on cooperation, diversity, interaction and limited resources renewing themselves time and time again (Kapteijn, Kamp, De Hullie, 2018). The whole cradle to grave idea...
does not apply to nature and is in fact man made, which is why it is not surprising that most of our products these days do have an expiration date.

With the exponential rise of fast fashion, the life cycle of products will become shorter and shorter. Some people say that LCA’s are not suited for the fashion industry because the product cycle goes too fast and changes to often. Gwen Cunningham stated in her interview that she agrees that lifecycle assessments are not for everyone. She wonders when is lifecycle assessment necessary? For what type of decision should a brand be leaning on lifecycle assessments? "We are also at the stage where it is quite clear what is not a good decision to make. To a degree where we could all make an agreement on what practices we should ban and move away from. We don’t need an LCA to tell us that." Cunningham says "I mean with lifecycle assessments having limited power in that way, because it is really assessing on a product level. And actually, one of the biggest impact areas I think is also not only the product but the business model. Because that gives it its context" (Cunningham, 2018, p 11).

LCA’s seem to be a good fit for never out of stock collections and basics styles. Trend collections go too fast to properly analyse but are also the most dangerous when it comes to making errors in judgement. Things have to move fast before the hype is over, so the clock is quite literally ticking while designers and production are making the collection. This leads to unhealthy relationships between brands and factories and also confirms Anne Manschot (Manschot, 2018, p21). In her research paper about factory assessments she stated that “Relationships, not audits, influence supplier performance. Factories that are actively engaged with sourcing and production teams, not compliance staff, have better labour conditions at the factory level. This is because closer relationships (and not more control) leads to greater trust and better working conditions” (Manschot, 2018). A bold statement by Anne Manschot who works in the industry to help business with their sustainable journey. So, if professionals are saying that the fashion industry does not have enough time to properly conduct assessments, then maybe this is not the best way of addressing the problem. Manschot states that companies are pushing unrealistic western standards on factories in 3rd world countries making it impossible for factories to live up to the standards. “An audit is just a snapshot of a moment, it is an observation which should not be labelled direct after” (Manschot, 2018, p18). With the current unbalanced relationship between companies and factories, misconducts are bound to happen. With the research of these current forms available, I got curious about the motivation and incentive of companies to participate in the sustainable commitments. Is progress being made? In the next chapter I will look at the relationship between sustainable brands and the data collected about impact.

Chapter 5 The link between sustainable brands and measuring impact.
5.1 Intentions behind sustainable strategy
In this chapter I write about the relationship between sustainable brands and the intentions behind the usage of impact measurement tools. Answers will be given to the following two sub-questions. First; What are the intentions behind the assessments of (self)proclaimed sustainable clothing brands? And second; How reliable are the tools sustainable fashion brands use to measure the impact?
Being sustainable and socially responsible is becoming more and more important for the future consumers, especially millennials (Business of Fashion, 2017). Therefore, the sustainable aspect of brands such as Everlane, Filippa K and Reformation is “in the eye of the consumer” their unique selling point. It is also a possible pitfall if information used for communication and marketing purposes is incorrect. Reformation’s slogan for example is “Being naked is the #1 most sustainable option. We’re #2” (Reformation, 2018). With a slogan like this a company is setting themselves to a pretty high standard. Maybe even to high considering misconducts can happen to everyone. Companies would not want to be responsible or associated with the pollution of rivers in Indonesia for example. Like the Citarum river shown in Stacey Dooley’s documentary, which has been heavily polluted by the garment industry (BBC, 2018). By correctly applying the gathered information of the operations of one’s business, it is possible to avoid miscommunication and prevent greenwashing from happening. Let’s see how that works in practice.

The questions about the intention of companies to measure their impact could be found in three factors. The government, the consumers and the brands itself. Over the past years the question has been raised who is responsible for climate change. The answer is quite simple, everyone (Reuters, 2019). But the question people are more divided on is the one who is responsible for providing a solution. A question many brands and consumers are confronted with. The limits of their responsibility when it comes to their use of products. Paul Dillinger head of global product innovation at Levi’s said to Stacey Dooley from the BBC that. “This is a big industry. It’s so broadly decentralized that affecting change is nearly impossible. Especially when the appetite doesn’t want change (but) there needs to be a regulatory solution.” (Sanghani, 2018). This comment was also supported by Joan den Exter in our interview. She states that people in the industry are stuck in a pattern that is hard to break (den Exter, 2018, p34) This is hinting to the idea that the industry will not change unless the government takes action with legislation.

So, let’s first see what role the government is playing in this transitioning. Governmental interference has worked in the past. In the Netherlands brands and government have signed the Agreement on Sustainable Garment and Textiles (SER, 2016). After the horrible accident at Rana Plaza in Bangladesh they collectively signed an agreement with NGO’s, the Dutch government, labour unions, employers and the SER (Sociaal-Economische Raad). This agreement shows that working with a committee composed by multiple parties works. Lists of production facilities and a sustainable material guide have been published. Companies have had training and covenant partners debated the new policies with unions leaders in the countries of production facilities. Also, it was made possible for the Dutch government to pass motions on transparency and sustainability in the garment sector with participation of the sector (Blaazer, 2017). It seems as if legislation the only option to success, but the covenant in the Netherlands is quite unique. According to Kate Raworth in her book Doughnut Economics. The government is a team player in innovating but is seen as the enemy when it comes to legislation (Raworth, 2017, p 85). She also references to Ha-Joon Chang in her book who says. “If we remain blinded by the free market ideology that tells us only winner-picking by the private sector can succeed, we will end up ignoring a huge range of possibilities for economic development through public leadership or public-private joint efforts” (Raworth, 2017, p 86).

Next up is the consumer, who is also playing a role in the sustainable mindset of companies and therefore in the intentions of companies. As stated, the mindset on sustainability is changing, especially younger consumers. 81% of the global respondents of this survey feel strongly that
companies should help improve the environment (The Nielsen Company, 2018). Which should already give incentive to brands. But that is not the only thing consumer can do to make brands rethink their strategy. The ongoing trend of consumer who stopped buying products and only use second-hand items. Second hand clothing shop owner Maria Chenoweth calls this movement “a huge gesture of activism to buy second-hand”, a necessary choice for those who “do not believe in damaging the environment and perpetuating this consumption and waste” (Cocozza, 2019). Even the consumer who isn’t ready to stop shopping can stay informed and recycle, but unfortunately the recycling of clothing is not incorporated in the infrastructure of the business yet. “A New Textiles Economy states that less than one per cent is recycled into new clothing. Down-cycling into things like industrial rags or furniture stuffing is more likely” (Press, 2019).

So, for now the advice given for consumers is “Buy less, choose well, make it last” (Westwood – The Guardian, 2014). Making a statement towards brands.

Incentive should also come from once self. The motivation for brands to become sustainable can also come from other factors, the rising cost of raw materials or increase of transport (Business of Fashion, 2017). It is becoming a financially interesting decision to be sustainable (Roberts, 2018). Some companies tend to stay at this first level of sustainability. “I get frustrated that 90 per cent of environmental issues mentioned in fashion are marketing” -Stella McCartney (Franklin-Wallis, 2018). Agrees also Koen van Warmerdam, “Every brand has a sustainability department nowadays but there is a big difference between being sustainable for marketing reasons and being sustainable to make the world a better place” (Warmerdam, 2018, p29). Channelling this back to the impact theory of Babette Porcelijn. Are sustainable clothing companies too much focused on action as in products instead of process as in strategy. Is this transition difficult for companies because the measurement tools are unreliable?

5.2 Reliability of measurements
How reliable are the tools sustainable fashion brands use to measure the impact?
All brands that claim to be working sustainable are desirably doing some form of assessment. But can they trust the information that is extracted from these assessments and audits. How are companies tracking the reliability of the collected data? It all comes down to trust and building a partnership with your suppliers, but how do you maintain a personal relationship with 100 different suppliers? Also, you never sure if the data you receive are correct due to incidents with subcontracting and other possible communication errors. So how are you even sure the data you receive from a factory in for example India is correct.

From the interviews I conducted for my thesis came one unanimous answer to this question. You don’t. You can only build a relationship with your producer and try to create an equal partnership where you help each other to make the best product. But this is easier said than done because it takes a lot of mutual trust (Manschot, 2018, p22). The measurable reliability is because of that a hard question to answer. Because it also has a lot to do with how much responsibility a company wants to take. CSR or Sustainability managers are the people who determine together with the strategists and CEO’s how far they go with reporting and analysing their impact. Reporting on the current issues and misconducts sometimes takes more time then looking for solutions, explains Anne Manschot. “To get in to sustainable indices companies sometimes spend months to write reports fitting the most rewarded criteria” (Manschot, 2018, p25). Strategies are long term set goals, so it is sometimes hard to report on them on a daily or monthly bases.
In an interview with Wired, Claire Bergkamp tells about one of her missions as head of sustainability at Stella McCartney Inc., creating verified sustainable viscose. It took her visiting all the factories in the supply chain, collaborating with NGO’s and about three years to secure a traceable and transparent sustainable viscose for the company. Stella McCartney Inc. was the first to secure that as a brand (Franklin-Wallis, 2018). In this case the problem was properly tackled by the root cause of the problem. The unsustainable harvest of viscose but it did take three years to do so.

An example of not using assessments to their capacity is the following case. The information used to substantiate this statement comes from an article in The Correspondent. One of the big issues we are facing nowadays as a society is the plastic soup in the oceans. This soup not only contains out of single use plastics like water bottles and other packaging. Micro fibers contamination has been found around the globe in the oceans and the main cause for this is polyester fabrics shedding in washing machines on a daily basis (35%) (Demkes, 2018). Nobody knows what the effect of micro fiber shedding does to the sea’s and how big the problem actually is. There is no standard yet as a research method which makes it hard to create concrete facts. So, scientists are using their own test methods and don’t hold a pre-set agreement and as long as there is no agreement it can’t be determent how dangerous this shedding is. Because of this the fashion industry uses the fact that there is no benchmark as an excuse to not act against this problem that fabrics are creating. Even leading brands on sustainability and ethics are pulling back on this issue until they are presented more facts. Todd Copeland environmental manager at Patagonia said in 2014 to The Guardian: “I don’t know how much effort we want to put in to look for a solution before we know where the problem is.” This is already 4 years ago and since then research has shown that micro fibre contamination is a real issue and that the main cause is polyester fabrics. Patagonia was again asked what they are doing about this issue and the response from PR manager Louise Brierley-Ingham was a list of (co-)funded researches that are trying to get a clear view of the impact of micro fibres in water. Which means is that after 4 years of research there is still no solution to this problem we are facing. Companies state that they want to make decisions based on facts. But will there still be time to fix the problem when these facts finally come to light or will it be too late.

The priority seems to be towards bigger pieces of plastic floating in the sea. A lot of brands are using recycled plastic from the ocean in their garments today. G-Star and Adidas are companies that work with ocean plastic for example. But it turns out that recycled polyester sheds even more that virgin polyester. So, while taking plastic from the ocean by buying a recycled pants, as a consumer you’re also putting a lot more microfibers back in to the ocean by washing that pants. Which wouldn’t qualify this as a solution to the problem but merely postponing the problem for the future. Recently solutions have been presented in the market. The Guppy Bag and the Cora Ball are supposed to catch the micro fibres in your washing machine. But do these gadgets do the trick? Are the particles not too small to be caught with a nylon cloth or a recycled plastic ball, and doesn’t this cost even more shedding? The critics say that it is also putting the responsibility of the industry on to the consumer (Demkes, 2018). The consumer is paying for an extra product that has not been proven to work, to solve an issue clothing companies should be focusing on fixing.

Legislation seems to be the only solution for this problem. In California, the state is working on a legislation that requires polyester clothing to have information on the label about microfiber pollution. Every garment that consists for 50% or more out of polyester will need information about microfiber release and needs the recommendation to wash it by hand. The state of California has been a frontrunner on environmental legislation in the world. They were the first state in the US to ban microbeads before president Obama signed the microbeads free water act.
and the first to ban single use plastic bags in 2016. Showing that large scale legislation works on environmental impact reduction (Demkes, 2018).

5.3 Conclusion
Coming back to the sub-questions of this chapter. First: what are the intentions behind the assessments of (self)proclaimed sustainable clothing brands? As shown in the research the incentive from companies to be sustainable can come from three factors. Pressure from consumers for sustainable policy and goods. Legislation from policy makers and labour unions and brands knowing it is going to be good business to do so.

And the second sub-question in this chapter: how reliable are the tools sustainable fashion brands use to measure the impact? Trustworthy data is hard to obtain, especially when the relationship between supplier and brand are difficult. Regulation is a possible solution for this problem.
Sustainable clothing companies seem to be too much focused-on action as in products instead of process as in strategy for the future.

Chapter 6 Future forward change
In this chapter the connection between impact assessments and strategy changes is discussed. The final sub question will be answered. How does usage of assessments in the sustainable clothing companies translate the future forward change towards a circular economy?
These assessments and analyses are done for a cause, whether it is to improve efficiency or gain insight. Ultimately it could lead to changes in corporate policy or even in the main strategy. Kate Raworth spoke at Beyond Next on the seventh of February and there she stated that “Being too optimistic makes you lazy and being too pessimistic makes you want to quit, she wanted to be realistic.” Because that is the only way she said you can face the current issues of our time (Circle Economy, Beyond Next, Raworth, 2019).

The development of a circular economy can give resolutions to the big challenges regarding the enormous inequality in distribution and consumption of raw materials between rich and poor, agriculture, the production of waste, climate change and the development of renewable alternative energy sources. “It offers a framework for a broad range of innovative opportunities and new revenue models” (Maas, Braam, Ewen, Ossenblok, 2017, p 9). The fashion industry is urged to implement changes in a new direction and become more vital for a sustainable and possibly circular future. Exploring impact management can help to create insight for the industry on their sustainable practices beyond a product level. Change can only come if you know where it needs to be implemented. During my research one of the key things I had to ask was is what the status is of the sustainable clothing industry and its progress towards a circular future. Maybe a circular system in the fashion industry is a utopic idea and not even possible to accomplish.

By talking to Gwen Cunningham, I realized that companies don’t have the issue of not knowing how to analyze their products and operation. The issue that really surfaced is that the implementation in to strategy and day to day operation. All the goals companies set for themselves are unreachable if you can’t work with them every day (Cunningham, 2018, p16). Systematic changes are difficult to implement in a business. Let alone changing the economic system, states Cunningham in our interview. “The short-term outlook of the fashion industry is
really working against us in that, because we don’t know what the collection is going to look like next month so how are you going to work backwards from the big ambitions in a climate accord, in to your everyday activity” (Cunningham, 2018, p11).

So, is it the consumer who needs to raise their voice, the government who needs to regulate or companies who need to take pre-emptive measures? “The costs of the status quo keep rising; the costs of sustainable alternatives keep declining” (Roberts, 2018). Activist and journalist Naomi Klein is known for her critical point of view toward governmental interference, or lack thereof. She thinks the systematic change should not stop with companies transitioning towards sustainability. Her statement is that the whole capitalist system is not fit anymore. “This very brutal form of capitalism which holds that we need to deregulate our economy, privatize our economy and cut back our public sphere... Is fundamentally at odds with what we need to do to respond to climate change. Because it is the essence of a collective crisis. So, we can’t just respond through individual shopping decisions. We have to respond through bold collective action.” Says Naomi Klein in an interview in 2014 (CBC News, 2014).

6.1 People and planet versus profit
People, Planet, Profit the most common words in any management book these days. Idealistically the books describe a balance between those three. But this balance has been lost for a long time and profit is bulldozing over people and the planet (Grantham on CNBC, 2018). This ongoing phenomenon is not just applicable to fashion. It is rooted in our society.

Earnest Elmo Calkins is a graphic designer who is being called the founder of modern advertising. He stated the following about consumptionism. “There are 2 kind of products in the world. Products that you use like a car or a washing machine. And the things you use up, like cigarettes and soap. Consumptionism is all about getting people to treat the things they use as the things they use up” (True Cost, 2015). And the actual problem is that he was right. We did start using our products as if there is an endless supply waiting for us. So, there is a role to play for consumers as well. Rethinking their habits and if possible, changing them. But as Klein stated, only bold collective action can make this happen. Cunningham says, “Because brands have massive influence on people, they can change consumer mindsets and they are one of the few people who can really do that” (Cunningham, 2018, p11). But is the mindset shift in consumers, government and brands enough or is it a bigger issue we face in our current system?

“A company’s core business model should be designed in the way that your practices are not hurting any 3rd parties, including nature. It needs to be structured in a way that you can exist the next 50 years without being co-dependent on the planet and its resources” (Manschot, 2018, p 21). “We are rewarding unsustainable behavior. We are in a model that facilitates being unsustainable. The cost of which society is paying. Our economic model is short term reward based and there needs to be a shift in that so we can see the value of sustainability for the long term” (Manschot, 2018, p24). A radical mindset from Anne Manschot to take in consideration and to conclude this chapter.

Chapter 7 The Conclusion
In conclusion I want to raise the main question of my thesis. How do sustainable clothing companies measure their impact? As shown in the previous chapters there are numerous ways to measure impact. While some companies are really trying to make a difference, measuring impact
is not the same as understanding impact to its core. It becomes most clear with the usage of the LCA method. The core elements are interpreted wrong when it comes to the execution of the LCA principles.

The first thing is that Life Cycle Assessments are not conducted to its fullest. Most companies stop collecting and reviewing data once goods, products, garments are sold in stores. But a product lifespan doesn’t end when a garment is sold. It is still a product with impact, even when it is in the possession of the consumer and when the consumer parts ways with that product it is still in the life cycle. So, if a garment ends up in landfill and can’t be reused and integrated as a new resource. It makes the product cycle a linear item. The linear system of take, make and dispose vs true circularity. Which is not just reusing and recycling, but really keeping renewing resources in the supply chain. Not prolonging the life of exciting things, recycling or downcycling and eventually letting them end up in landfill.

The second thing I noticed was that a lot of Life Cycle Assessments consist out of production collected data. In my opinion it is not possible for a brand to work without an office, staff, designers, stores, etcetera. So just like the cost price calculation of garments an impact assessment should also contain operational impact, consumer impact and post-consumer impact.

Is doing an LCA necessary to be sustainable. The answer is no but radical disruptive change is necessary. And whether this insight will come from an LCA or another form of assessing a fashion brand it is a necessity we can’t wait around for. All these codes of conducts and goals can only be achieved if they are translated to day to day activities. So, if together as an industry brands want to move towards a circular system, they not only need to work together but also rethink the way we look at impact. Pledges are set for the near and far future but if there are no consequences of neglecting them there is no incentive to fulfil them. You would think that an industry so dependent on natural resources would be more innovative with solutions to sustain itself and its future endeavours. The bigger question is who is responsible for change. Measuring impact is maybe something that should be done by an independent 3rd party instead of a company itself. But it might just be that the problems this industry faces are more fundamental that stepping in to a circular system where they keep better track of their activity.

The government is currently falling short when it comes to regulation. When they could be playing a big part in not just regulation but also in the transparency and control of these agreements. The government can legislate these promises and help companies collect reliable data on their impact.

Observant consumers should take more action; holding brands accountable for the pledges they make; educate themselves on these topics; informing other consumers on the misconducts; and ultimately should stop buying from brands that are unsustainable and unwilling to change. But the consumer can only do so much because the system is working against them. You can recycle and stop consuming all you want but if there is no infrastructure to help you accomplish this. How are we going to downsize our consumption when the economic system isn’t built for us to do so? Maybe the better question to ask is if sustainability and being mindful about using the earth natural resources can fit in to the current capitalist state of society. Capitalism in its fundament is about growth and consuming more and more.

Implementing a sustainable strategy in a company should come from an ideological drive, an urgency perspective about the state of the industry and the world. Sustainability need to be more than surfacing the issues of this time, instead of just reusing and recycling we need to tackle the root of the cause. Of course, recycling should be done but not if it ends up hurting the planet even
more as seen with the recycling of ocean plastic. The best advice I could give to companies in the end might be from the book I started my thesis research from. “Don’t wait for permission, legislation is not a guideline for what you can do it’s a minimum you have to do.” Stated by Babette Porcelijn in The Hidden Impact (Porcelijn, 2017, p 136). This does ask for a very disruptive form of change.
Literature list

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