

Chapter 3

Sustainable Practices in Fast Fashion



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Abstract Fast fashion provides consumers tremendous trendy clothes each season through quick response of the supply chain. Because of the short life cycle of fast fashion product, the pollution becomes more serious. In recent years, many fast fashion brands have tried more to make the brand image to be more environment friendly. In this chapter, we review research works related to sustainable fast fashion and real industry practices in different domains, such as sustainable fashion design, sustainable raw materials and production, sustainable brick and mortar store design, fast fashion sharing platforms, sustainable labels and packaging, sustainable marketing campaigns in fast fashion. We find that research on sustainable supply chain and operations deserve more exploration. Although fast fashion brands have done much on sustainability, consumer education should be put more efforts on. And the scope of sustainability may expand more, not only the environmental impact, but also includes labor conditions and animal welfare.

Keywords Fast fashion · Industry practice · Sustainable design · Operations · Marketing

3.1 Introduction

Fashion and textile industry has overwhelming number of chemical contaminants into the air and water during the production. A large number of chemicals are used in the production of clothing from raw materials, including thousands of chemicals are used in dyeing and finishing. Lots of water is used in the production and finishing process in order to remove these chemicals, and plenty of CO₂ is released at the same time. Fast fashion, which has shorter production cycle and increasing number of product variety, satisfies consumers with more varieties and high-frequency updating, makes

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the environment even worse. The lower price promotes the sales much, but the poor quality of the fast fashion product leads to tremendous wasted products after wearing. Thus, the sought-after fashion products in turn contribute to its under-utilization and waste (Ellen MacArthur Foundation 2017). Some consumers and environmentalists even call fast fashion as disposable fashion.

It is definitely true that the environment pays a high price for cheaper clothes. The high demand for the latest fashion trend has turned the fashion industry into one of the world's worst polluters. According to the World Wildlife Fund, the textile industry annually emits 1.7 billion tons of carbon dioxide that is pumped into the air, 20,000 L of water is needed to produce 1 kg of cotton.¹ Large amount of the fashion products will be discarded after use, especially the fast fashion products, because of the poor quality and low salvage value. The wastes, ends up in land fill most of the time (Phillips et al. 2011), then becomes one of the major concerns in lots of countries. The shortage of landfill sites in urban areas makes the government and academics try to look for an alternative waste management system to reduce the land use and save more energy (Wen et al. 2009). Nayak et al. (2019) proposed that alternative uses of fibers which are extracted from the fashion waste can help to reduce the fashion waste in landfill, for example, the recycled waste clothing can be reused as the filling material in mattresses. However, more and more methods are still on the way to explore. Regarding the effective approaches to solve the problem of fashion waste disposal, scholars propose to reduce, reuse and recycle (Birtwistle and Moore 2007), and even further to redesign and reimagine the production process and supply chain (Pui-Yan Ho and Choi 2012). Durable design can extend the product life physically to reduce waste. Product-service business models like leasing or renting (Gwilt 2014) are conducive to stretch the product life circle. As can be found in fashion industry in recent years, sharing platforms like Rent the runway are popular.

Consequently, the supply chain management in fast fashion faces tremendous challenges as well, and tend to be more and more sustainable. Turker and Altuntas (2014) examine the situation of sustainable supply chain management in the industry by analyzing the reports from fast fashion companies. The findings reveal that the fast fashion companies focus significantly on supplier compliance with their code of conduct. They employ further monitoring and auditing activities to prevent production problems in developing countries, so as to improve overall supply chain performance and lay down sustainability criteria for their suppliers. Nevertheless, the size of the company may also affect the strategy with respect to sustainability. Federico et al. (2012) examine the sustainability in fashion supply chains, and indicate that large companies tend to focus more on products and processes improvement, although the changes are incremental. Whereas small business may reshape the supply chain completely both from inbound and outbound, compared to the big ones.

As can be observed, both academics and industrialists are paying increased attention to the topic as they are facing with the challenge of balance between sustainability and business achievement (Clarke and Clegg 2000). Fast fashion brands have made great efforts to change the image of waste and poisonous to public in response to

¹ <https://www.forbes.com/sites/sap/2019/11/21/can-fast-fashion-be-sustainable/#32dd66e72c9c>.

the environment protection. Therefore, in this chapter, we aim to study both from the literature and real industrial practice, to find a reasonable sustainable way for fast fashion brand. First, we learn from the literature within this scope. After that, we shift our focus to real sustainable practice in fast fashion industry. As observed from the industry, fast fashion brands improve the sustainability levels from different processes of the supply chain, such as design, materials, retailing stores, packaging, and even marketing strategies. In this chapter, we will discuss them in the following sections. The structure of this chapter is indicated as follows. Section 3.2 introduces the sustainable fashion design and Sect. 3.3 presents the sustainable raw materials and production. Section 3.4 indicates the sustainable brick and mortar store design to address the sustainability and Sect. 3.5 describes the fast fashion sharing platforms. Section 3.6 illustrates the sustainable labels and packaging. Section 3.7 shows the sustainable marketing campaigns in fast fashion. Finally, we have discussions and show the benefits and limitations of the current practices in Sect. 3.8. We also highlight opportunities and challenges for researchers and entrepreneurs interested in this topic.

3.2 Sustainable Fashion Design

In fashion industry, sensitive designers were shocked by the huge waste on the earth and serious hurt to the animals, and try to make the fashion waste more useful to protect the living beings. For instance, Claxton and Kent (2020) examine how design in the fashion industry can be successfully managed to contribute to environmental sustainability. Findings show that designers tend to have an influence on the decisions of materials, aesthetics, silhouette, trims, manufacturing quality, and the level of fashionability, which are highly correlated to design. Simple design style can help to reduce waste of fabric and materials that are used, and a simpler silhouette can be made more adaptable for a longer product life. Consequently, designers have influence on the quality and durability of clothes (Corvellec and Stål 2017). More than that, design for upcycling with the existing waste can also maximize the value of the fashion products (Early and Goldsworthy 2018). Durable design enables products to have a second or more lives, such as second hand and vintage clothing and handbags (Gwilt 2014). Extremely, a visionary waste management system named Zero waste has been presented as an alternative solution for waste problems in recent decades (Connett 2013). Zero waste design is one of the fundamental aspects of achieving zero waste goals because it eliminates unnecessary waste creation at the first phase of production through green engineering and production principles (Anastas and Zimmerman 2003). It has become an aspirational goal for tackling waste problems in many industries, and recently much popular in fashion industry. In the following, we will discuss some practical cases in sustainable fashion design from the fast fashion industry.

3.2.1 *Design from the Waste*

Parley Ocean is the world's official marine environmental protection organization, and has been engaged in marine environmental protection for years. Recently, Parley Ocean appeals to artists, fashion designers, architects, and other practitioners in the art field, as well as the product inventors and scientists, to construct alternative business models and ecologically sound products. The models and products are designed to provide consumers more choices to save the environment. In order to reduce the pollution to the ocean and the beach, as well as to response to the appeal, some fashion brands initiate to design and produce clothes and shoes by the trashes, which are collected from the ocean and beach.

In 2015, Adidas began to cooperate with Parley's, and became the global partner of Parley's. In the same year, Adidas launch environmental protection concept shoes, which are almost entirely made of marine plastic waste and fishnet, and named as "Adidas x Parley". Adidas and Parley worked together to adopt Parley Ocean Plastic recycled plastics into the shoes' design. The shoes' collection, inspired by the coral bleaching crisis, aims to make people pay more attention to the threat issues posed by marine ecology, to the issue of threats posed by marine ecology. Additionally, the upper of each pair of shoes needs approximately 11 bottles of plastic materials on average. More than 95% of the upper fabric is made of Parley Ocean plastic recycled plastic, which is from the ocean. The laces, heel laces, heel linings, and insole skins of ultra-boost parley, are all made from recycled materials. Same materials are utilized to make soccer uniforms for famous football teams such as Real Madrid and Bayern Munich.² Follow that, in 2017, Adidas sold more than one million pairs of sneakers which are made of marine plastic trash. From the above design activities, Adidas parley series convey the concept of sustainable environmental protection, and aim to arouse the public's awareness of marine pollution.

Same kinds of design ideas are also applied by other companies, such as Ecoalf. This company was founded as an environmental fashion brand in 2009. Ecoalf not only has advocated the use of marine garbage, but also reached cooperation with coffee shops so as to use coffee dregs as clothing materials. All the products designed by Ecoalf are the materials from waste recycling, so as to minimize the impact on the environment in the process of waste recycling and production.³ Ecoalf has developed biodegradable and environmentally friendly materials from plastic bottles on the Mediterranean Sea floor. Up to now, Ecoalf has recycled more than 20 million plastic bottles for recycling.

² https://www.sohu.com/a/151949890_276493.

³ <https://ecoalf.com/en/p/history-9>.

3.2.2 Zero Waste Design

When making a piece of clothes, no matter it is plane cutting or dropping cutting, it is the truth that the fabric will be cut by irregular curves and the remains are trivial. Usually, the remained cloth cannot be used to cut to small pieces of clothes like collar or pocket, and then only to be wasted. The number can be up to 40% of the whole cloth. Although the compositor will try the best to save cloth, wastes cannot be prevented. To reduce the waste, designers attempt to save cloth by design ideas. Zero waste is then produced. Actually, zero waste fashion is not a new technology or material, instead, a new way of thinking. Oblique cutting, invented by Madeleine Vionette, is to cut fabric by rectangular curves instead of irregular shapes, so as to maintain the integrity cloth as much as possible to reduce the waste. Zero waste is a philosophy that forces designers to challenge the existing techniques to do their best to reduce rubbish, as it wastes money, energy, etc. Generally, there are two ways of strategies for zero waste fashion: creative pattern making that uses 100% of a given material, and upcycling when you generate garments from remnant materials.⁴ In fashion design, one step forming and splicing are two common methods. There is much little fabric waste or even zero waste in one step forming design, because no cutting exists in production.

Nowadays, people are usually pursuing a curvy body shape. In order to fulfill this requirement, fabric is cut by curves. This leads to a waste of fabric scraps, because the remained fabric is difficult for second use. If it is substituted by straight lines, it will be of great help to cloth saving. Although there are a lot of design methods to reduce waste, there will inevitably remain fabric leftovers after cutting and sewing. For those leftovers, they can be dealt physically or chemically. Physical treatment refers to full play to the designer's intelligence and wisdom to reuse the leftovers. Chemical treatment refers to combining or collecting these leftovers material and dissolves it into raw material for reproduction. Recently, 3D clothes design follows this concept of the latter from the very beginning. The materials are hot-melt and shaped directly into the final form of the clothes.

Verloop brings the term "trash to treasure" into the fashion industry. It uses fabric scraps and excess materials to make accessories. The items are all made from knit yarns and have lots of colors and patterns. There are tons of options that make great gifts, such as cold weather accessories, slippers, bags, and even home decor.⁵ It is a kind of real practice of physical treatment. For the cutoff fabrics with irregular shapes, some brands have full use of them. In 2019, British company New Gen and Covent Garden Market jointly produced Christmas stocking by materials scraps. Hence, the materials can be used nearly 100%. Another fashion brand Reformation's design mission is to make effortless silhouettes that celebrate the feminine figure.⁶ All of the industrial practices are trying to reach the milestone of zero waste.

⁴ <https://thelastfashionbible.com/2019/04/18/zero-waste-fashion/>.

⁵ <https://www.goodhousekeeping.com/clothing/g27154605/sustainable-fashion-clothing/>.

⁶ <https://www.thereformation.com/pages/our-stuff>.

3.2.3 *Design with Second Hand and Recycling*

Most of the fast fashion brands has launched recycling program, which is an easier way to proceed sustainable fashion. H&M has partnered with I:Collect to launch a clothing recycling collection. I:Collect is a Swiss reuse and recycling logistics company, which has picked up clothing, shoes, and other fashion products from more than 60 countries. The H&M Garment Collecting program is a global initiative that aims to prevent customers unwanted clothes from going to landfill. Beginning in February 2013, customers have been able to donate used garments at all H&M stores in the chain's 48 markets worldwide. Any brand or any piece of clothing can be collected in the stores. Then I:Collect repurposes the collected clothes, and a voucher for each bag of donated clothes is delivered to customer.⁷ Customers can use the voucher to buy new clothes for a certain discount, and I:Collect can reuse the collected clothes for recycling production. Such kind of practice can be observed in industry and other examples are listed below one by one. Levi's has also partnered with I:CO to collect clothing and footwear for reuse and recycling. I:CO provides the collection bins to sort the items, and then the items that are wearable can be sold for second use, and the remains can be recycled. Patagonia not only collects used clothing in its stores and through the mail, but also offers repair services so its customers can extend the lives of their garments.

Another case is Inditex, the parent firm of Zara and one of the fast fashion giant in the world. CEO of Inditex, Pablo Isla, indicated that, by 2025, Inditex will achieve a thorough sustainability of raw materials. All of the raw materials will be organic, sustainable, or recyclable fibers. Meanwhile, the proportion of renewable energy that is used in group activities will exceed 80% at that time, including the retail stores, logistics centers, headquarter offices, and so on. Inditex's recycling program has covered 24 countries and regions around the whole world, and totally of 1382 recycling bins were filled in by the used clothes. Family collection service has also been provided in several cities in Spain and China. In Spain, with cooperation of Caritas Hong Kong, Inditex has installed 2000 used clothes recycling bins. At present, 34,000 tons of shoes and clothing accessories have been recovered in the old clothes recycling plan. And the number is still growing.

Freitag is a recycling bag brand in Swiss. In Freitag, all of the bags are made from truck tarp. The feature, has become a design icon very soon of Freitag, and each product has a vintage style and is water proofing. The products, actually are made of the wasted tarp. In 2014, the Freitag brothers crossed another hurdle in the "circular" ready-to-wear economy with their F-ABRIC project. The fully biodegradable fabric is made of hemp, beech, and linen, which is a textile known not only for its biodegradability, but also for using far less energy to grow than wool or cotton.⁸ Not only the product is made sustainably, the service is also provided sustainably, which is called S.W.A.P. service for consumers. When customers use the Freitag bag for a while and wants to change another one, then they can log in this service system

⁷ <https://www.environmentalleader.com/2012/12/hm-launches-global-clothing-recycling/>.

⁸ <https://www.livingcircular.veolia.com/en/eco-citizen/its-recycled-bag-freitag-brothers>.

to seek whether there is another Freitag bag that they are fond of. Other customers with same requirement may have uploaded the picture of their bags into the system to wait for swap. If one customer has interested in his bag, they can discuss whether to swap and also the swap method. Through this S.W.A.P. system, bags of Freitag has come true of recycling. Another brand, Raeburn, was found in UK, utilizes used fabrics including kites and vintage parachutes and other military stock and leftover fabrics to make clothes.⁹

Different to the Freitag truck tarp bags, Vera Bradley's ReActive collection is unique because the bags are made out of recycled plastic bottles. Through that, this brand has already diverted millions of water bottles from going to landfills. The products are diverse, backpacks, totes, travel bags, and more can be found in Vera Bradley's. Plastic bottles transformed into the recycled polyester fabric, which is lightweight, durable, and water-repellant.¹⁰ Thus, the products are more suitable for daily use and the product life is extended. Other brands like skate brand Bureo makes skate from recycled fishnets, Pet Lifestyle and You which is a pet products brand, uses recycled plastic bottles to make pet's beds.

Some brands use the chopped fibers from recycling. Sustainable fashion startup, For Days, has set up a closed-loop fashion system, which aims to avoid waste by endlessly recycling materials. A total organic T-shirt, tank top, or sweatshirt from For Days costs \$38 and this contains a lifetime membership for customers. If it ever needs to be replaced, customers have to pay \$8 for substitution. The returned items are then recycled in the firm's manufacturing plant in Los Angeles in the US. Then, each piece of the items is chopped up, pulped and reinforced with virgin material before being spun back into yarn. Then, the yarn is used to make the fabric for new products. The brand offers a points system for customers, that allows members to accumulate credits used in future swaps or products purchase.¹¹ Australian designer brand, ABCH, is sustainable as possible from each process. Every piece they make is 99% compostable. Once the tag, which is made of recycled polyester is removed, the clothes can be cut up and buried or put on a compost heap. A recycling program allows customers to return their used clothes to be re-sold, re-made into a new piece, or have their raw materials recovered via cellulose recycling.¹² In this case, the used recycled product comes to cellulose and then the second life.

Besides that, the design of second hand products are increasingly popular recently. In the past, parents may cut their own clothes to fit for children, this is a kind of home practice of second hand use, which is economically and environment friendly. Many designers try to cut the clothes that people do not wear anymore or that were discarded, and then change them for second hand use. Designers re-examine the clothing and materials, and then bring out breakthrough ideas with modern aesthetic. Nowadays, the style has become a new fashion mode and trend, which a large number of designers bend their efforts for.

⁹ <https://www.raeburndesign.co.uk/>.

¹⁰ <https://www.goodhousekeeping.com/clothing/g27154605/sustainable-fashion-clothing/>.

¹¹ <https://www.dezeen.com/2019/09/24/sustainable-fashion-roundup-for-days-pangaia/>.

¹² <https://www.raeburndesign.co.uk/>.

Mud Jeans is a such kind of brand as well. Each pair of Mud Jeans is composed of 23–40% recycled denim. Its first 100% recycled cotton pair of jeans has been launched in 2020. It shows that denim can be a part of the circular economy. Because one piece of denim may cost more than 3000 L of water, and is deemed to be the one of most polluted fashion items. Moreover, in Mud Jeans, some of the old pairs of jeans are collected and sent to the Recovetrex recycling plant in Spain, where they are broken down, turned into new yarn, and then into fabric.

Asos has its own recycling system ASOS Duddle, in which the used products are collected for second use or redesign. From 2016, customers can recycle last season's unwanted but wearable items in this system and another fashion reuse charity of TRAIID. The charity aims to reduce the social and environmental cost of the textiles industry.¹³ ASOS has many other activities to show the big concerns in fashion sustainability. In 2018, ASOS launched a circular design pilot training program in collaboration with London College of Fashion's Centre for Sustainable Fashion.¹⁴ In March 2019, ASOS participated in the Ellen Macarthur wearnext campaign in New York, joining forces with the fashion industry to tackle waste together.

Some brands started to cooperate with retailer in the procedure of recycling. Reclaim to Wear (founded in 1997), focuses on reducing textile waste by creating a debut upcycled capsule collection made entirely from discarded materials, such as surplus stock or production scraps. The stocks are collected from the retailers and the brand has been part of the retailer's partnership, which means the sustainability has changed the supply chain relationship. In collaboration with Reclaim to Wear, TopShop first began to sell the recycled clothes in 2012. The new styles are made of the old garments and excess material. Such collaboration of brand and retailer can be found more in industry, which can get a win–win situation of the two sides.

3.3 Sustainable Raw Materials and Production

Chemicals are used in every part of the textile production, like fibers, bleaching and dyeing fabrics, etc. Some clothing products still contain a lot of chemicals when showing on the shelf in stores, even for the 100% natural fiber. Human's skin can absorb anything on it, including chemicals remains in the clothes, which is harm to people's health. Some fast fashion brands use colored cotton and other environmentally friendly biodegradable fabrics to avoid the harms. In the dying process of the fabric production, a large number amount of water is needed to dye and wash, this is a huge waste of energy and resource. For example, a simple cotton T-shirt can use up to 2700 L of water for dyeing color. Garment finishing is another procedure that waste huge amount of water. Therefore, chemists are eager to find ways to reduce

¹³ https://www.asos.com/men/fashion-feed/2016_04_25-mon/give-something-back-with-asos-traid-and-duddle/.

¹⁴ <https://www.asosplc.com/corporate-responsibility/our-products/sustainable-sourcing-programme>.

the chemical remains. Pattanaik et al. (2019) focus on possible reuse of both solid and liquid waste generated from the natural indigo dye production process, in order to achieve a possible zero waste in a sustainable process. The use of sustainable technologies such as natural dyeing, super critical carbon dioxide dyeing, air dyeing, plasma technology, laser processing, and digital printing are also gaining popularity to become sustainable in the fashion manufacturing process (Nayak et al. 2020). Such technologies are not rare in industry. In 2011, many fashion brands signed a commitment to phase out hazardous chemicals in textile and leather supply chains by 2020.

ZARA created a new collection of Join Life from September in 2016. In order to meet up “Join Life” theme, the items should be made of organic cotton (conventional cotton requires 90% more water to produce than organic cotton), recycled wool, or tencel (a wood fiber sourced from sustainably managed forests). This allows ZARA to “avoid felling of some 21.840 trees and reduce CO₂ emissions by 1.680 tonnes a year”.

Some of H&M products use organic cotton and organic colored cotton as well. Organic colored cotton is planted and reaped with original colors, which needs no dyeing process, and is friendly to the environment and also less harmful to human body. In order to get the organic cotton for a long period, H&M has reached a long-term agreement with Bangladesh government. The company provides jobs for education and training to the local staffs and invests in infrastructures, to establish their own raw material supply areas, and establish long-term cooperative relationship. The organic cotton has been applied in production. In 2018, H&M releases the brand’s Conscious Exclusive series, which uses sustainable recycled pure silver and 100% recycled polyamide fiber. The recycled fiber can be weaved into transparent chiffon to get a better performance. In 2020, the spring summer season’s Conscious Exclusive collection is made from discarded grape skins, fashion waste, and undyed organic cotton. Other sustainable fiber includes a high-quality recycled polyester, recycled glass beads, and denim made from 100 percent undyed organic cotton.

Reebok invented Cotton + Corn shoes, which focused on its eco-minded fans. The brand uses the sustainable materials as leather alternatives to attract the eco-friendly customers. The upper of the shoes are entirely made of Cotton + Corn based soles, castor bean oil insoles. Especially, the packaging is also 100% recycled. C&A, another Fast fashion retail brand, recognizing the environmental effects of cotton farming, has launched efforts to purchase only organic cotton by 2020.

More efforts on cutting down the waste and pollution during the production are made in industry. One pair of denim jeans usually takes over 2,000 gallons of water from growing the cotton to dyeing and finishing. Levi’s focuses on the finishing processes to remove water wherever possible with its Water < Less collection, which are said save up to 96% water in finishing. As the dominated retailer in the denim industry, steps like this can actually have big impact in the industry.

3.4 Sustainable Brick and Mortar Store Design

As consumers become more and more aware of the impacts of their lifestyles on the environment, visible sustainable strategies are welcome to show the effects in sustainability to consumers. The brick and mortar store, which is the main channel and connection to link brand and consumers, speeded up the visual sustainable steps. In 2019, all stores of Zara have met the energy efficiency standard, and all brand stores of Inditex may achieve it by 2020. Different to others, Gap focuses on handling the waste. The company try to divert 80% of store waste from landfill by 2020.¹⁵

Ecoalf has always insisted in being a 100% sustainable store. The materials used in the building are all from recycled waste, and the walls are made of environmentally friendly mineral pigments. The indoor lighting is also gathered as natural as possible. In order to reduce the emission of CO₂ and waste of resources, there is no air conditioning in stores. A large number of natural plants are also placed inside the store. In order to help consumers understand the efforts made by the enterprise to protect the environment, a special “act now” space is set up in the store to show the measures taken to reduce the impact of fashion clothing industry on the environment. It’s a fully eco-friendly store, for which combines design, architecture, fashion, and technology to better interact with consumers.

Australian fashion retailer Country Road, opened its flagship store in Melbourne in 2019 with sustainable application everywhere in the store. The space is made from recycled materials such as yoghurt containers, fishing nets and recycled paper. The fitting room hooks are made by using ocean plastic and tables from recycled plastic. The sustainable store design continues to expand in the country, and has received a 5-star Green Design review from the Green Building Council of Australia.

Sustainable accessories brand, Bottletop, opened the world’s first 3D printed store, created by robots using upcycled plastic in London. The store is located on Regent Street, which is zero waste and a location show the brand’s sustainable handcrafted collection of leather goods, and also show the company’s core mission of sustainable design and creative culture. The flooring of the store is made from reworked rubber tyres, and the interior is made from upcycled plastic bottles. The store aims to reimagine the future of ecologically responsible construction through zero waste store design.¹⁶

Fashion brand Reformation puts sustainability as the core of company mission, from local manufacturing and sustainable dyeing to green buildings and fabrics. Its Los Angeles stores and headquarters are all made green, implementing strategies to save energy, elevate the water efficiency and reduce CO₂ emissions. Reformation builds its stores by starting with the construction footprint calculation. The materials in store are also sustainable with LED fixtures, recycled fabric insulations, and natural rammed earth materials.

Under Armor relies on LEED to support sustainability and shows the transparency and environmental responsibility to its customers. LEED is short for Leadership in

¹⁵ <https://www.gapincustainability.com/sites/default/files/Gap%20Inc%20Report%202018.pdf>.

¹⁶ <https://thecurrentdaily.com/2019/09/12/9-brands-pushing-sustainable-store-design/>.

Energy and Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices globally and is one of the most popular green building certification programs in the world. New retail stores use LEED elements in construction, including the controlled LED lighting, recycled rubber flooring, VOC (volatile organic compounds) free paints, etc. Along with other sustainability efforts like recycled packaging and reduced environmental influences, the brand further shows its commitment to a cleaner and healthier world.¹⁷

3.5 Fast Fashion Sharing Platforms

As sharing economic spreading all over the world, many kinds of products are emerged in the sharing platform, such as rooms, cars, bicycles, bags, and also fashion products. Todeschini et al. (2017) investigate innovative business models in the fashion industry that take sustainability as their main mission and value. The work shows that renting clothing allows each piece of garment to get the most possible use during its lifecycle, and the platforms accelerate the whole process and provide consumers better services. The sharing platform can get the sustainability because renting clothing allows each garment to get the most possible use during its lifecycle, and it helps customer to buy less to reduce the production from the demand side. Being criticized of wasting, fast fashion brands are found more and more in sharing platform to show the efforts on sustainability.

Rent the Runway, the largest fashion sharing platform in US, was founded in 2010 and provides lots of fashion products for renting. The platform provides single rental service for special occasions and daily rental services with monthly membership, for which customer can get several pieces clothes each time. More recently, a lot of sharing platforms are established, such as Le Tote, Armoire, Haverdash, and Y closet, Ms Paris in China, and the competition is more severe. These fashion sharing platforms provide rental services of multiple fashion brands for customers. The brands include luxury brand, designer's brand, and fast fashion brand. Some fashion retailing giant companies, like Gap, Banana Republic, and Urban Outfitters, have access to this niche market on its own platform as well, by offering the subscription models for everyday fast fashion items. Some cases are listed below.

H&M opened a rental store in 2019 at its flagship store in Stockholm, where H&M members can rent, sew or customize clothes for \$37 membership fee a week. The rental program is limited to a collection of 50 garments, which are offered to company's loyal members.

In July 2019, Urban Outfitters launches a new clothing rental company Nuuly. The platform provides lots of brands for customers, not only its own brand. It carries more than 1,000 items from more than 100 different brands. The members can rent six items at a time for one month at a membership of \$88 per month. Nuuly offers its subscribers the opportunity to rent from the brands included in URBN's portfolio

¹⁷ <https://www.q20lab.com/retail-sustainability>.

such as Free People and Anthropologies, as well as with over 100 third-party labels like Levi's, AYR and Gal Meets Glam. Additionally, subscribers will also be able to choose from a collection of one-of-a-kind vintage pieces. Moreover, the sizing system is also friendly to customers. The available options is ranging in sizes from 00 to 26, even for the petite sizes which have fewer demand than the normal sizes.¹⁸

Banana Republic introduced "Style Passport" subscription from August 2019, that customers can pay \$85 per month for a three-garment plan. The plan includes free priority shipping, unlimited exchanges or returns and complimentary laundering services. The members of this plan can follow the fashion styles of the brands, keep at least eight pieces in the cart, and then the three select pieces from the cart are sent at one time to the members. Members can wear the clothes as long as they want, and thus experience an unlimited rotation of new styles service with free shipping and returns during the membership. Thus, the sharing system increases the sustainability level of Banana Republic.

3.6 Sustainable Labels and Packaging

In recent decades, the number of packaging and related items are growing more and more fast and become a polluted problem, because most of the packages are made of plastics. Plastic takes decades to decompose, and in the decomposing process, it releases harmful chemicals into the earth, the ocean and the air, and make the lives of a wide variety of species in danger. As is often reported, plastic bags are found from the beach and the ocean, in the city and town. Polar bear, whale, and turtle are found dead with full of plastic bags in stomach, etc. As landfills is getting full and occupy a large number of lands, retailers are investing in research of plastic alternatives and encouraging customers to reuse the packaging. Numbers of companies engage to find new materials or recycled waste to produce package bags.

As reported, New York City has 1700 tons of domestic waste every week, which is a very serious environmental pollution. After Hawaii and California, New York formally implemented a plastic ban order to prohibit businesses from providing disposable plastic bags to customers. Actually, lots of cities in different counties have promulgated the plastic ban. In order to solve this problem, a Japanese designer Sho Shibuya who lives in New York, has designed a creative and environmentally friendly shopping bag. The bag is made of a 100% biodegradable bamboo fiber, which is sustainable materials. The design is sustainable too. When it is tiled, it is a piece of common paper with a smiling face painted. When it is loaded and lifted, the paper transforms to a bag. This precut hollowed bag not only helps to make the paper form a bag that can hold things, but also reduces the production materials, and

¹⁸ <https://fashionunited.uk/news/retail/urban-outfitters-launches-clothing-rental-company-nuuly/2019073044488>.

makes the bag easier to decompose after use as well.¹⁹ Multiple purposes can be reached from the special bag.

An eco-friendly end product will also need an eco-friendly label. EE Labels is such a kind company which was found in 1900. The polyester threads of the labels are made from 100% recycled PET bottles, and 12% of thread consumption consists of Newlife threads. The company supplies labels printed on GOTS-certified biological cotton band. These labels are printed with environment-friendly inks that also have the Oekotex-100 certificate, making it the best possible combination. The woven labels are made of biological cotton with threads that are GOTS certified.²⁰ The label is environmental friendly and healthy and comfortable for consumer, preventing allergies on skin.

Inditex brands such as Zara, Zara home, Massimo dutti and uterq ü e have begun to reduce the use of plastic shopping bags. In 2018, the proportion of plastic bags used by Inditex group accounted for only 18% of the total number of shopping bags. All Inditex brands promise to do not use plastic bags any more by 2020. And by 2023, disposable plastic products will be completely eliminated in Inditex. In order to reduce the waste, Zara also began to recycle the containers, with a maximum of six times in the life cycle, which is much higher than currently. Zara reduces the use of disposable plastics in turn to use the recycled plastics. In addition, Zara is developing a recyclable hanger system, all of the items in this system will continue to be used until they are completely broken down and then put them to make the recycled new ones. Thus, the system is a real recycled hanger system and can reduce the majority of the waste.

H&M has this concern of packaging waste as well. H&M has signed The New Plastic Economy—Global Commitment, which is an initiative by the Ellen MacArthur Foundation to prevent plastic pollution. The brand committed to reduce plastic packaging by 25% on the baseline by 2025, and replace single-use plastic packaging with reusable alternatives where possible. In the commitment, the brand also intend to move away all of problematic or unnecessary plastic, and ensure that at least 25% of the plastic is recycled.²¹ H&M uses Kraft paper to make retail bags, which can shift to a clothes hanger by folding with the given lines. The material and the idea make the retail bags sustainable with multiple use.

In February 2020, C&A was phasing out the sale of single-use plastic bags in all of its stores of 18 countries in Europe. Then in March, the fashion retailer launched the durable program “bag-for-life”, which is made of 80% recycled PET and more durable to use. When the bag is worn out, it will be returned to any of the stores and exchanged for a new one free of charge.

Some of the beauty brands take durable bags into consideration. Aether Beauty is a zero waste beauty brand, and in this brand, all of the packaging is recyclable. For example, the package of lipstick is made of 100% recycled plastic. Alima Pure, another fashion beauty brand has been testing soy-based refillable palettes for eye

¹⁹ <https://hypebeast.com/2020/2/sho-shibuya-placeholder-biodegradable-bamboo-bag-design>.

²⁰ <https://www.eelabels.com/en/products/sustainable-labels/>.

²¹ <https://hmgroupp.com/sustainability/circular-and-climate-positive/packaging.html>.

shadow and lip gloss, and the boxes are made from 100% post-consumer recycled paper. The products including the concealer, foundation, and eyeshadow can all be refilled when the product runs out, which is quite different from the current brand in beauty industry. Rather than buying a new one, refilling a product significantly cuts down on plastic and chemical waste by reducing the use of the containers. In practice, the products that are available for refills are usually higher end and come at a higher cost. For Alima Pure, refills tend to cost less than buying the product again. The refill mode is not always manageable or practical for all consumers and retailers, but it's a meaningful trial for brands to consider how they can help shift the mindset of consumers to pay more for sustainable brands. Such kind of practice can also be found in industry other than fashion.

3.7 Sustainable Marketing Campaigns in Fast Fashion

Popularity in consumers leads to much more public attentions in fashion industry. Fashion brands, which are challenged by the sustainability concerns from public, receive emerged discuss and repercussion in the media and public. Awareness of the need for more sustainable strategies and practices has led to the development of a circular model of fashion production and consumption. Slow fashion which opposes the fast fashion paradigm, is a social movement similar to the slow food movement that emerged in Italy aims at fighting against fast food chains (Fletcher 2010). Slow fashion drives innovation in value proposition and customer relationship (Todeschini et al. 2017; Brewer 2019). Firms orient their offering toward increased perceived quality and authenticity and address customer concerns in terms of the environmental and social issues. Like firms may increase the reusing or recycling materials in production and logistics to address the sustainability concern, and can prioritize locally-made products and partners that adopt fair trade principles to show the social responsibility.

In order to promote the sustainable ethic and state the social responsibility of the fashion brand clearly that has taken with respect to global environment, fast fashion brands have initiated many campaigns to consumers. Most of the fast fashion brands have sustainability page online or sustainability report each year. For instance, H&M has sustainability page on its website, including the innovation, cleaning up, and other aspects to show their responsibility. From 2017, Adidas has carried out the “run for the ocean” activity globally for three consecutive years. The aim is to arouse people’s understanding of marine plastic pollution, and encourage more and more people to participate in the positive action of protecting the environment. In 2019, Adidas launched “running out of the blue” running activities in New York, Shanghai, Barcelona and other cities, 2.2 million runners from all over the world joined the activities.²² The activities, promote the firm’s views on sustainability and attract the environmental sensitive customers.

²² https://www.sohu.com/a/403658695_120267334?_f=index_pagefocus_2.

Other practice in industry including C&A, NOAH, and ELLE, etc. In order to help customers more informed on purchasing decisions in the sustainable development of clothing, C&A has launched a global multi-channel sustainable development promotion campaign since 2016, which is named “wear the change green new fashion” in stores around the world. NOAH developed a T-shirt product named as 100% recycled cotton T-shirt. The brand redesign the recycled products and come up with the advertising slogan “The Tee is Garbage”. Not only that, NOAH has produced a series product together with Dover Street Market, for which the aim is protecting the sharks and ocean. The simple application is easier to implemented and can get more attentions from consumers and the society.

A new campaign launched with some help from “the female Banksy” is encouraging people to bin their old clothes—but for recycling, not landfill. In this campaign, recycling banks have been installed around London, decorated by the street artist Bambi.²³ The Love Not Land fill campaign aims to raise awareness of the consumers that the hot fast fashion habit might be having serious damages on the environment and it’s time to change it for a cleaner and better earth. Love Not Landfill, which is funded by the European Clothing Action Plan and London Waste And Recycling Board, proclaim that one-third of the young people aged 16–24 have never used a clothes recycling bank before. The aim of the program is also to promote the idea of “slow down the pace of fast fashion”. Actually, slow fashion is not new in fashion industry. Classic and durable are the keywords, and the feature makes fashion products can be used for many times and last for a long period. In other words, the idea of slow fashion manually improves the fashion industry to be more sustainable. ELLE and Cosmopolitan are partnering with the Comfort Swap Shop to provide consumers the opportunity to trade in the fabulous-but-neglected items and exchange them for something else.²⁴ Some of the clothes are also for sale in the swap shop, with all proceeds going to the Prince’s Trust charity, helping young people to get into jobs, education and training.

3.8 Discussions

In this chapter, we reviewed a large number of sustainable practices in fast fashion industry, from the perspectives of sustainable fashion design, sustainable raw materials and production, sustainable brick and mortar store design, fast fashion sharing platforms, sustainable labels and packaging, sustainable marketing campaigns in fast fashion, etc. Although increasingly firms have joined the force of sustainability, companies should still pay more attentions to consumer expectations with respect to sustainability. Consumer education should be put more efforts on, and this is consistent with Todeschini et al. (2017), as the work points out that potential cause of failure

²³ https://www.huffingtonpost.co.uk/entry/do-you-recycle-your-old-clothes-heres-why-and-how-you-should_uk_5b9a43e8e4b041978dc054f3.

²⁴ <https://www.elle.com/uk/fashion/a28334245/comfort-swap-shop-with-elle/>.

of many sustainable business models is related to consumer education. This means the companies still have a long way to train more sustainable customers. Moreover, the scope of sustainability may expand more, not only the environmental impact, but also includes labor conditions and animal welfare, such as Reebok's sustainability practices focus on. Some of the practices indicate that the sustainability has changed the supply chain relationship, like the program of Reclaim to Wear. It is the evidence that sustainable supply chain management must be put on more research effort and it can be seen that increasingly works within this domain have been published. As technologies may have huge potential impacts in industry and management, to check the new technology's influence (such as the implementation blockchain (Choi and Luo 2019)) on the supply chain sustainability and profitability is very important in the near future.

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