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The Renewal Workshop: Consumer Considerations in a Global Supply Chain

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Abstract	In responding to the international need for a circular economy, The Renewal Workshop (TRW) expanded its operations by opening a second factory in Amsterdam, The Netherlands in 2019. Much of the success of TRW, since its inception in Oregon in 2016, was due to its innovation in supply chain process. TRW incorporated novel solutions of renewing damaged apparel and upcycling overstock products, and consulted brands on ways to design for deconstruction. As the effectiveness of TRW becomes evident and demand grows internationally, it is facing some unexpected challenges. Students will need to reconsider positioning and communication strategy of The Renewal Workshop and decide how to move forward in communicating value to the consumer.
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Case

Learning Outcomes

By the end of this study, students should be able to:

- Consider the importance of sustainability as it influences changing trends in the fashion industry.
- Recognize the crucial role of the self-image in social norms and acceptance.
- Understand the value of innovation in supply chain innovation.

Introduction

In April 2015, the Rainforest Action Network launched a new campaign, *Out-of-Fashion*, calling on 15 well-known global brands to commit to making changes in their supply chains that would eliminate forest loss. On April 24, 2016, the apparel industry and its fashion followers celebrated the second anniversary of Fashion Revolution Day, when people worldwide were to post selfies with the content labels of their clothes as a way of challenging the fashion industry to become more transparent (Singer, 2015). The push toward a more sustainable and environmentally conscious apparel ecosystem had never been more relevant than it was then. Leaders in this space include recognized and established global brands such as Levi Strauss, H&M, and Patagonia.

But there was a larger issue at hand—the scale on which fashion was being produced and the slow pace at which companies were able to initiate and sustain change. Therefore the problem with fashion, vis-à-vis the environment, was not with any one product or any one process; the scale of production was turning out to be a problem. An immense infrastructure was being devised to support a shopping culture in which consumers were encouraged to buy more. Consumers wanted to buy now; buy cheaper; buy constantly (Bassett, n.d.). As a result, apparel

brands and retailers accumulated an unthinkable volume of garments that were returned, damaged, defective, or the dreaded dead weight of overstock.

Popular consumer sentiments included, “Where does excess material eventually go?” Options for brands were limited, with many sending products to landfill. At that point, there were no incentives or resources to develop a circular economy. The Renewal Workshop (TRW) proposed working with partners with best-loved brands to source unusable apparel and closing the loop by responsibly managing garments—renewing and channeling materials to a network of resellers, upcyclers, and recyclers (hence the name: The Renewal Workshop). As the world’s first renewed apparel company, they were motivated to lead by example: perfecting the circular economy.

The Circular Economy

By definition, a circular economy is one that is “restorative and regenerative by design; it aims to keep products, components, and materials at their highest utility and value at all times, distinguishing between technical and biological cycles” (Ellen MacArthur Foundation, n.d.,b). The goal of a circular economy is to save and fully optimize resources, as well as minimize system risk. The concept of a circular economy was conceived nearly 40 years ago, when Walter Stahel and Genevieve Reday presented a research report to the European Commission in Brussels. Their presentation involved a vision for an “economy in loops” and how this circular economy would impact job creation, competitiveness of the economy, preservation of resources, and waste prevention (The Product-Life Institute, n.d.).

Stahel went on to complete further research in this space and continued to make discoveries about the effectiveness of a circular economy (Stahel, 2016). In 1987, his research revealed those involved in a loop economy can achieve higher profitability than their competitors in the linear economy. However, to achieve true success in a loop economy, the current industrial economic framework would need to be restructured. Ultimately, Stahel helped close the loop and change the mindset from “cradle to grave” to “cradle back to cradle” (The Product-Life Institute, n.d.).

Principles of a Circular Economy

The Ellen MacArthur Foundation, established in 2010 with the goal of accelerating the transition to a fully circular economy, defines three main principles of an effective circular economy:

- **Preserve and Enhance Natural Capital:** In order to do this, one must deliver utility virtually when possible. When material resources are necessary, one must use them selectively and only as needed; when resources are used, selecting the most efficient processes is imperative. Additionally, one must carefully select the highest-performing resources when available.
- **Optimize Resource Yields:** This principle involves designing products in a way that best prepares them for refurbishment, recycling, or remanufacturing. Characteristics of this principle include sharing of processes across products, slow loop speed, and effective extraction of bio-based materials for other uses.
- **Foster System Effectiveness:** The last principle focuses on avoiding negative externalities, including damage to all human utility and other natural resources. (Ellen MacArthur Foundation, n.d.,a)

Based on these principles, the overall goal of a circular economy is to constantly rebuild capital and maintain a continuous flow of materials. Key characteristics of a circular economy include designing to exclude waste, using diversity to increase longevity, using renewable energy whenever possible, utilizing systems thinking, and extracting additional value from materials by flowing them through other applications.

Companies Utilizing a Circular Economy

Many companies are transitioning their sustainability efforts towards creating a more circular economy and attempting to keep their apparel out of landfill. Nearly all of a company's apparel items could be collected to be reused or recycled in some way (The North Face, n.d.). The four companies listed below are all making strides with initiatives to keep these items out of landfill and close the loop by reusing old products.

- **Marks and Spencer:** Marks and Spencer is a UK-based clothing store that has recently launched a "shwopping" initiative that encourages customers to return their old M&S items to store to keep them out of landfill. These returned clothes are reused or recycled through a partnership with Oxfam. Clothing items are created from recycled clothing and are resold in M&S stores. This "shwopping" initiative had decent results, bringing in 3.8 million returned clothing items in 2012. However, leadership within M&S believe the consumer mindset needs to be changed toward buying less before initiatives such as these can have a major effect on the world (Rivera, 2013).

- **Patagonia:** Patagonia focuses on making high-quality gear consumers can wear for years and years. When their apparel does get damaged, they encourage customers to return the item for repair and offer alternatives to landfill when items are beyond repair. They encourage customers to participate and share their stories through their Worn Wear program and also allow customers to return all Patagonia items to be repurposed or recycled into new fiber or fabric (Patagonia, n.d.).
- **The North Face:** The North Face’s “Clothes the Loop” program gives customers the opportunity to return unwanted items at all the brand’s retail and outlet stores. These items are sorted and repurposed, recycled, or reused in some way (The North Face, n.d.)
- **Levi Strauss:** Levi Strauss has recently implemented a program to allow customers to return all clothes and shoes to any U.S. store; these items will be collected and recycled, reused, or repurposed by I:CO. I:CO is a company that collects old clothes from brands and recycles them; their goal is to “integrate all collected textiles and shoes into a recycling process by 2020, while completely eliminating waste products” (I:Collect, n.d.). Where Levi’s previously focused all of their sustainability efforts on the processing of cotton, they are now taking it a step further and attempting to close the loop with all of their products.

Ultimately, the fashion industry moving toward a more circular economy will affect more than just sustainability. While one major goal is keeping textiles out of landfills and preserving the environment, circular economies, when executed correctly, positively impact profits. The ultimate goal of a circular economy in fashion is not only to be more sustainable but also to create a massive shift in the way consumers purchase clothing and make shopping decisions.

Raw Materials Used in Product Design

Beyond the quantity of material being sent to landfill, the type of material is also problematic. There are two main fiber classes in production today: natural or cellulosic fibers, and synthetic or non-cellulosic fibers. Each of these fiber types has its own set of pros and cons (see Table 1). Over the past decade there has been a 0.9% decrease in global demand for natural fibers, coupled with an overall increase in demand for synthetic fibers (Food and Agriculture Organization of the United Nations and International Cotton Advisory Committee [FAO and ICAC], 2013). It is estimated that synthetic fibers account for about 65% of world production versus about 35% for natural fibers (O Ecotextiles, 2009).

Table 1. Fiber Type Pros and Cons

Fiber type	Pros	Cons
Natural: cotton, hemp, linen, wool, silk	<ul style="list-style-type: none"> • Degrade faster • Cotton: 1–5 months • Wool: 1–5 years • Provides jobs/incomes globally 	<ul style="list-style-type: none"> • Increased pesticides/water use • More expensive to produce
Synthetic: polyester, nylon, viscose	<ul style="list-style-type: none"> • More durable fibers • Cheaper to manufacture 	<ul style="list-style-type: none"> • Long degradation cycle <ul style="list-style-type: none"> ○ Nylon: 30–40 years ○ Polyester: 20–200 years • Petroleum-based fibers: e.g., 70 million barrels of oil/year used in virgin PET production for textiles

Source: Delaney, 2013

Due to the long degradation cycle and heavy use of petroleum in synthetic fiber creation, as this fiber class becomes more prominent in apparel manufacturing, it will be even more important for an efficient waste stream to exist.

Environmental Impact

In the discussion of stakeholders, one must not leave out the physical environment, although it is not an active entity. Environmental impact can be summarized by looking at three key areas of concern: water, emissions, and landfill.

Each step along the apparel supply and usage chain creates significant environmental impact. Much of this impact (up to 76%, depending on the material) is generated in the raw material

production and processing stages (The Renewal Workshop, n.d.). Using a cotton t-shirt as an example, these stages would include all environmental impact, from spraying pesticides on the cotton fields to powering the ginning machines that prepare the fiber for spinning. In sum, cotton production claims 2.6% of global water usage annually, with each cotton t-shirt requiring about 714 gallons of water to produce. The treatment and dyeing of textiles are also a major source of environmental impact, with roughly 20% of global industrial water pollution resulting from these practices (Institute for Sustainable Communication, n.d.).

The apparel industry and consumer habits generate a significant amount of physical waste that goes to landfill. Recalling that only 2.3 million tons of textiles (roughly 15%) were recovered from landfill, we can equate this recovery in terms of greenhouse gas emissions avoided from the creation of new materials. This amount of recovered textiles translates to taking 1.2 million cars off the road for a year (United States Environmental Protection Agency, 2015). Of the remaining 85% of textile waste that currently goes to landfill, 90% is suitable for recycling. The disconnect here is that these materials are not being properly disposed of by consumers (Desbarats, 2010).

Another significant contributor to the environmental impact problem is consumer usage. Falling back on the cotton t-shirt example, washing and drying this item at high temperatures accounts for 60% of the energy used in the life cycle of the garment (Claudio, 2007). Consumer behavior must shift toward washing and drying less frequently and with the use of energy-efficient machines for this impact to lessen.

As demonstrated, the environmental impact of the apparel industry falls on the shoulders of both manufacturers and consumers. TRW is in the position to reduce this impact by renewing existing apparel rather than creating clothing from raw materials, thus diverting reusable items from landfill, and changing consumer behavior around caring for and discarding soft goods.

Currently, TRW is working with a number of small, medium, and large-volume outdoor apparel brands by renewing their damaged apparel or consulting with them on sustainability practices. Moving forward, TRW should also focus on targeting high-volume apparel brands as new clients. Many prominent, affordable retail brands in the United States not only produce products in large volumes but are constantly trying to keep up with the trends, leading to much higher levels of overstock. Long lead times force these companies to order large quantities of product. If that product does not resonate with consumers, brands are left with thousands of units

of overstock that cannot be sold in stores. Because brands face high inventory holding costs, incineration or simply dumping overstock into landfill have become commonplace “solutions” to the overstock problem, significantly contributing to the millions of tons of textile waste ending up in landfill each year.

External Landscape and Industry Trends

Current textile waste solutions include, but are not limited to, automotive insulation, carpet, mixed rags and shoddy, second-hand donations, recycled fibers, bio-fibers, and incentivized take-back programs. The automotive insulation, carpet, and mixed rags and shoddy solutions all fall under the “downcycled” textile solutions. This means that the resulting product is of lesser value than the original item. Old clothing and textiles are essentially chopped up and turned into anything from cloth wipes to stuffing.

The charitable donation of clothing can be considered reuse or recycling of items. While this initiative has many positive effects, such as providing clothing and jobs for people with low income, it does not necessarily address the overconsumption that is rampant in the fashion industry. Similarly, many of the donations not suitable for resale in North America are shipped to developing countries. This not only disrupts local apparel manufacturing but also results in much of the clothing ending up in roadside ditches, as it is not suitable for warm climates.

The emergence of recycled fibers and bio-fibers by companies such as Jimtex Yarns and Evrnu offers innovative solutions for textile waste. Jimtex Yarns creates new yarns from cutting-floor scraps, essentially cannibalizing other companies’ waste. Evrnu, an emerging bio-fiber company, uses green chemistry to create new fibers out of post-consumer cotton.

Recently, apparel companies including H&M and Eileen Fisher have created incentivized take-back programs in order to give consumers another option for discarding old clothing. While this provides another outlet for consumer textile waste, it is unclear what the motivations are from the brands. They offer small rebates to those who return clothing, which in turn only encourages consumers to buy more.

Interestingly, all of these solutions currently exist independently from one another. However, as the textile recycling industry progresses, it will become increasingly interconnected, and many of the solutions will begin to feed into one another. For example, instead of sending unusable bulk donations overseas, post-consumer cotton can be purchased by Evrnu and become the feedstock for new fibers.

Of the various ways to contribute to a circular economy, the upcycling process is slowly becoming a viable option. Upcycling can be defined as a process that can be repeated in perpetuity of returning materials back to a pliable, usable form without degradation to their latent value (Intercon, 2010). Looptworks, an upcycling company based out of Portland, Oregon, rescues excess fabrics ranging from leather, felt, neoprene, and cotton, and turns materials into new products. Similarly, the eco-fashion dynamo, Reformation, got its start upcycling vintage items into new and unique offerings (Rodulfo, 2015). The upcycling process is difficult to implement because the design process is limited by the availability of raw materials. This creates two constraints which designers have to conform to: the quantity and type of material available.

The renewed apparel TRW aims to produce is in essence an upcycled product. The damaged or “unusable” apparel they receive will increase in value through the renewal process.

Challenging Times

Each year, U.S. consumers throw out an astonishing amount of clothing and other textiles. In 2013, 15.13 million tons of textiles were sent to landfill, or about 68lb per person (United States Environmental Protection Agency, 2015). It is hard to blame consumers for this bad habit, because until now there have been very few options for effective and sustainable disposal. When comparing the textile recycling category to other, more established, recycling categories, we see that only about 2 million tons or just over 15% of clothes are recovered for recycling annually as opposed to 65.6% or 45.90 million tons of paper products, 19.4 million tons of yard trimmings, 3.17 million tons of glass, and 2.65 million tons of plastics (Pepelko, 2013). These unrecovered textiles amount to almost 5% of all landfill space in the United States (Pepelko, 2013). This massive textile waste stream is not currently being addressed, although much of what is discarded could be brought back into the circular economy.

Individual consumers are not the only ones at fault here. One of the bigger issues is that textile-based industries, such as the apparel industry, send unsellable items to landfill and incinerators (M. Guignon, personal communication, December 2015). “Unsellable items” can include, but are not limited to, customer returns under warranty, overstocked apparel, and excess fabric. TRW is interested in partnering with brands in textile-based industries to reduce the amount of textiles going to landfill.

Things to Consider

This section examines the stakeholders in TRW's circular economy: the role each party plays and how the shift from linear to circular and the introduction of TRW affects each.

Upstream Stakeholders

Currently, most apparel manufacturers and their suppliers—all parties involved in creating a garment TRW can renew—are driven by profits and consumer trends. In the past, they have not been required to consider the material content, end-of-use, or reuse potential of their product, but pressure from consumers to be more eco-friendly is growing. Large fast-fashion companies, H&M in particular, are focusing on textile recycling to appease consumers without tackling the real problem: excessive consumption (H &M, n.d.).

As pressure for apparel brands to be more sustainable increases, each level of their supply chain will be affected. Organizations such as the Sustainable Apparel Coalition (SAC) are working to make positive change more prevalent and easier for brands to undertake, or at least measure and communicate their progress. The SAC has developed the Higg Index for the purpose of helping companies self-evaluate their environmental, social, and labor impacts (Sustainable Apparel Coalition, n.d.). The Higg Index has several different modules of measurement, one of which is End of Use. Partnering with TRW earns brands a perfect End of Use score, improving overall score by 15% (The Renewal Workshop, 2016).

An alternative way to improve your End of Use score in the Higg Index is to design for deconstruction. This practice, which involves thoughtful consideration of how a garment is physically assembled, will be a significant issue in the apparel industry as it shifts toward a circular economy. Because this practice is so new, or at least not widely accepted, little is known about the costs designing for deconstruction will place on apparel brands. Thoughtful design may be more costly in terms of material choice and production techniques. Synthetic materials, such as polyester or nylon, are preferred in the textile industry because they are cheaper and easier to manufacture than natural fiber textiles. However, they also generate significantly greater carbon emissions and do not biodegrade like cotton or wool textiles (Bains, 2012). This goes beyond fabric choice and is particularly relevant in the outdoor and sports apparel industries. For example, one design trend involves seam-sealed zippers, an element that uses glue rather than stitching to ensure that a garment stays waterproof (Aether Apparel, 2015). This may increase

the performance of a garment, but it also increases its impact, as the glue may contain environmental toxins.

Design for deconstruction may also help to reduce costs, however, if these techniques are implemented throughout a supply chain. Thoughtful patterning can reduce the total amount of fabric a brand needs to acquire to produce a run of garments, and scraps can be repurposed through the upcycling or recycling industries, resulting in a potential additional revenue stream for each company. By using classic silhouettes, colors, and patterns, brands can also reduce design costs—although for this to become prevalent, consumer behavior will have to shift away from fast fashion toward buying for longevity. Some brands have already grown out of this sustainable, durable, and classic apparel ideal. For example, Appalatch is a new brand utilizing classic designs, natural fibers, and made-to-order techniques to deliver a sustainable apparel product that consumers love (Appalatch, n.d.).

Downstream Stakeholders

Companies downstream of apparel brands—the currently available reuse, upcycling, and recycling businesses—will also be affected by the growth of a circular economy. As focus on waste reduction increases, more and more brands are looking to companies such as I:CO to provide an end-of-use management solution. I:CO, as discussed above, is a global textile recycling company that receives inputs of worn or unsellable apparel and other items from brands and consumers (I:Collect, n.d.). The company emphasizes “recycling” (for use in insulation materials), “rewear” (second-hand clothing sold as is), “reuse” (creation of cleaning cloths), and “upcycling” (creation of a product of equal or greater value). I:CO does not offer to repair or renew items as TRW does, and currently offers only one product that is 100% upcycled (I:Collect, n.d.). While partnership with I:CO is a step in the right direction in diverting apparel “waste” from landfill, ultimately much of the “recycled” or “reused” product could be refurbished through TRW and sold as renewed apparel rather than being downcycled (turned into rags or shredded).

One of the most common current approaches to “waste reduction” in the apparel industry is donating worn or unsellable apparel to second-hand consumer goods companies. These donation-based companies are popular with consumers as both a method of recycling and a method of acquiring new-to-you goods. Consignment and thrift stores have seen sales increases of 5% per annum, and Goodwill Industries alone has experienced a 67% increase, predominantly due to

clothing sales. Overall, 12–15% of Americans shop in second-hand stores (Claudio, 2007), showing that consumers are increasingly receptive to the benefits of buying pre-owned clothing.

Despite consumer enthusiasm—or perhaps because of it—only one-fifth of clothing donations make it to the shelves of U.S. thrift stores. Many charity-based organizations will sell the leftover items to textile recyclers, who then divide the mass into one several categories: wiping rags for industrial use (30%), downcycled fiber for stuffing and insulation (25%), and clothing exports to developing countries (45%) (Claudio, 2007). The biggest problem with these practices is that much of what is downcycled could be salvaged as wearable items.

Many brands are unaware of how unhelpful their current “solutions” to the apparel waste problem truly are, and they are dedicated to continuing these practices. TRW’s challenge, and that of the circular economy, is to educate brands and donation and recycling companies to ensure proper sorting and the extension of the lives of usable apparel items. TRW will not replace these donation and recycling companies, but rather would partner with them. Brands and second-hand shops could use TRW as a filter before passing their goods along to textile recycling companies. This way, second-hand shops still get the first pick of readily wearable apparel, while TRW would take on items able to be renewed, and upcycling and recycling companies would receive the remaining materials (M. Guignon, personal communication, January 2016). In general, integrating TRW into the existing supply chain would benefit the textile waste problem, but may result in reduced revenues for recyclers, as their input volume would decrease. The challenge here is to approach brands and donation companies about TRW’s solution without offending existing partnerships.

Employment

The shift toward a circular economy has implications for domestic job creation as well. TRW and other closed-loop companies will create fair-wage employment opportunities with their needs for sorting, cleaning, deconstructing, and sewing labor. In the next five years, roughly 100,000 new jobs will be created in the consumer goods industry by applying circular economy principles (The Renewal Workshop, 2016).

Consumers

Consumers are both majorly impacted and a major impactor in the circular economy. Overall, the implementation of circular economy practices will benefit consumers, as they will be able to purchase high-quality, renewed items from their favorite brands at a significant

discount (Ellen MacArthur Foundation, n.d.,b). However, unanswered questions remain as to whether consumers will embrace the production trends brought on by the implementation of the circular economy. The answer to each of these questions has significant implications in the short term for TRW and in the long term for the wider apparel industry and the environment.

The foremost question is whether or not consumers will accept renewed apparel as a viable product. Will consumers understand the value behind “renewed” rather than “used” or “unsellable” clothing? Will the reduced cost of renewed apparel influence consumers to view renewed product as a substitute for new garments? The risk here is that consumers will perceive the goods as used or damaged and not want to purchase those items; here lies TRW’s positioning challenge.

If consumers do accept and prefer renewed apparel, manufacturers and brands may experience increased pressure to make the shift to a circular economy. Whether consumers will demand this of their favorite brands remains to be seen. Another shift may occur in the realm of apparel give-back and take-back programs. Consumers may demand a reward for giving worn apparel to TRW or to brand partners, in the same way that they currently receive tax credits for donating used clothing (TurboTax, n.d.). TRW is focused on changing consumer perception of donation programs. Whereas many take-back programs are set up so that a consumer dumps their used items in a trash bin-esque receptacle, often receiving a discount voucher with which they are encouraged to buy more clothes, TRW envisions a process where consumers find value in handing over their well-loved garments to a process that will extend that item’s life and “story” and do not require monetary incentives to do so (M. Guignon, personal communication, January 2016). Being able to shift this perception will play a major role in changing consumer behavior to suit a circular economy.

Crossroads

This case has illustrated the strong need for the fashion industry to find sustainable solutions to keep their products out of landfill. Brands across the country are looking for solutions that allow customers to return products to be recycled, as well as to find ways to reuse, recycle, or upcycle their overstock. While no one company can find a perfect way to resolve this problem, companies in the fashion industry can work together to create innovative solutions such as developing new upcycling processes, providing customers with more options to recycle their

products, and consulting one another on how to design products that are made to be deconstructed.

Ultimately, the eventual demise of the environment and the consequential waste that is produced by every fashion cycle will inevitably leave people with a fruitless world, having consumed all the natural resources and destroyed the earth in the process. The scale at which fashion is being produced is not sustainable; therefore, companies around the world need to collaborate, design, and produce within a circular economy. The push toward a more environmentally conscious apparel ecosystem has to shake global brands into taking corrective action.

Each year, Americans discard a disgusting amount of apparel and footwear, textiles and fibers. Blaming the consumer does not solve this massive waste problem. Now is the time for companies to address this exorbitant textile waste stream and bring products and materials to a renewed life cycle in a circular economy.

TRW's system is designed to move a static industry towards a flowing circular economy by rethinking the value lost in a linear system (Bassett, n.d.). Brands are yearning for the chance to be a global leader in waste reduction, a stellar example of a closed loop economy and, most importantly, to produce a product that is desired and demanded by the consumer. TRW will actively work with brands to create end-of-use solutions for their products while sharing best practices, industry knowledge, and continual material feedback in order to effect change. The end goal is to influence how brands design for end-of-use management and bring awareness to designing with deconstruction in mind. The new consumer product category, renewed apparel, will begin a worldwide conversation on how to support conscious consumerism, the circular economy, and fashion (The Renewal Workshop, n.d.).

Discussion Questions

1. Describe the issue of textile waste in the apparel industry from both a consumer and an industry perspective. What are the current end-of-life options for apparel? Are they effective in reducing textile waste?
2. What will The Renewal Workshop bring to the conversation on sustainability? How is this different from what businesses are doing now?
3. What are some benefits as well as plausible concerns of partnering with companies like The Renewal Workshop, or shifting a company's focus to a circular system?

4. What is the role of the consumer in fast fashion and textile waste? What marketing strategies influence consumers' perception of these topics?

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Teaching Notes

Case Study Summary

Many industries are becoming increasingly aware of their sustainability practices, and in the case of the fashion industry, reducing textile waste needs to go beyond donation. While some companies have taken the initiative to tackle their waste problem, either to appeal to the environmentally conscious consumer trend or as a genuine brand value, there are many more companies who have yet to take a step in that direction. Consumers are still throwing away massive amounts of clothes each and every year, and businesses at the front end are still sending unsellable inventory to the dumps. Current manufacturing practices are also unfavorable, as companies choose cheaper but highly synthetic fibers with longer degradation cycles. The Renewal Workshop (TRW) is a new company looking to reduce textile waste through an innovative circular system that transforms the industry supply chain process to take into account and implement better end-of-life options for discarded textiles. The circular system allows unsellable inventory to be revived and re-enter the market as valuable assets that can generate new revenue. Our current solutions are mainly considered as downcycling, recycling, and reusing, but TRW will hopefully step in to fill in the gap through its process of upcycling.

Teaching Objectives

Instructional objectives of this case include:

- demonstrating the importance of environmental considerations in business and mainstream verticals;
- emphasizing the importance of consumer perceptions of the full supply chain and its impact on consumer decision making;

- highlighting the role of societal values as they influence radical innovation in the supply chain management.

Suggested Answers to Discussion Strategies

1. Describe the issue of textile waste in the apparel industry from both a consumer and an industry perspective. What are the current end-of-life options for apparel? Are they effective in reducing textile waste?

People are buying and throwing away clothes at a much higher rate than before. However, this issue is magnified by companies sending “unsellable items” to landfills and incinerators, creating more than 15 million tons of textiles in the United States alone. This is especially harmful when companies choose to manufacture with cheap synthetic fibers that increase the time to decompose as well as increase oil usage to make certain textiles.

Common end-of-life options for apparel include automotive insulation, carpet, mixed rags and shoddy, second-hand donations, recycled fibers, bio-fibers, and incentivized take-back programs. The first few options decrease the value of a product (downcycling), while donations that promote recycling and reusing, despite helping people who are low-income, do not address the bigger issue of over-consumption and negative effects in developing countries. Take-back programs from companies such as H&M provide consumers with another option, but the overall effect is to encourage people to buy more.

We can look a little deeper behind the business choices of take-back programs. Companies often have an incentive to implement sustainable practices. For H&M, their take-back programs most likely increase customer satisfaction, provide opportunities to buy more, and increase their image and goodwill. Appearing as more environmentally conscious can give companies an edge over their competition, since consumers view eco-friendly brands more positively (Sundar & Kellaris, 2015). However, this means that sustainable campaigns are sometimes ineffective in tackling the bigger issues of reducing textile waste.

2. What will The Renewal Workshop bring to the conversation on sustainability? How is this different from what businesses are doing now?

Instead of downcycling, TRW is focused on upcycling and bringing back value to old garments and textiles so they can re-enter the market.

3. What are some benefits as well as plausible concerns of partnering with companies like The Renewal Workshop, or shifting a company's focus to a circular system?

Students' answers may vary—for example: What steps do we take to go forth with a circular economy? How do you encourage businesses to partner with companies like The Renewal Workshop? Conflict of losing brand identity and control when companies work with TRW.

4. What is the role of the consumer in fast fashion and textile waste? What marketing strategies influence consumers' perception of these topics?

Companies are quick to latch onto new trends and push out new products for consumption, so whenever there is a fleeting consumer desire, it can be met, regardless of whether it is a good purchase in the long run. This can be seen when apparel companies are releasing new styles every week—the same styles that in a few weeks or so will become undesirable and thrown out.

The Target Effect describes the act of going to the store for one thing and leaving with a dozen other things. More basic grocery list items such as milk are placed near the back so shoppers will have to pass through the entire store, leading them to pick up things they had no intention of buying. More specifically, it describes the competitive thrill of finding a good deal and buying something you would have never bought at full price.

It could be argued that thrifting became a more popular sociable activity when the American rapper Macklemore released the hit song “Thrift Shop” in 2013. But thrifting had been around long before then, and it is usually a good alternative to buying new. A concern is that thrifting plays directly into the instant gratification one gets from finding bargain deals, and may backfire by encouraging people to over-consume. This can also negatively impact low-income customers for whom thrift shops are the only affordable option competing for stock with people who thrift for fun, thus reducing the supply of good items.

Consumers can also play a role in decreasing demand for fast fashion by wearing clothes longer and buying less, and putting pressure on companies to adopt green initiatives. It is cool to be sustainable (good and bad social pressure).

Consumers' perceptions of end-of-life options are often limited—people usually know about donating old clothes, but think that when an item reaches the end of its cycle of donation, the only choices left are to throw it away or burn it.

Further Reading

- How consumers feel good about engaging with sustainable fashion:
<http://fashionispsychology.com/6-reasons-why-you-really-buy-sustainable-fashion/>

- Shopping for bargains: <https://www.pymnts.com/news/retail/2018/shopping-discount-stores-bargains-deals-pricing/>
- <https://www.independent.co.uk/voices/fast-fashion-second-hand-september-oxfam-ethical-depop-a9090441.html>
- Target Effect: <https://www.nbcnews.com/better/pop-culture/target-effect-psychologist-explains-why-you-can-t-just-buy-ncna923456>
- Thrifting for the thrill: <https://www.acrwebsite.org/volumes/8818/volumes/v30/NA-30>