

GREEN IS THE NEW BLACK:
A CASE STUDY OF STEELCASE

by

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Abstract

This paper explores the role of sustainability practices in changing the business environment of contemporary American manufacturing, in particular by focusing on the global company Steelcase, based in Grand Rapids, Michigan. As the leading U.S. manufacturer of furniture for offices, hospitals, and classrooms, Steelcase is recognized as a global leader in implementing sustainable manufacturing and distribution methods to increase its commitment to protecting the planet while saving money and creating greater environmental awareness and greater profits. Several published articles and journals are analyzed to determine the main reasons why companies are switching to environmentally friendly practices. Specifically, analyzing marketing and supply chain techniques.

Keywords: sustainability, environment, Steelcase, marketing, operations

Sustainability within the Business Environment

Throughout the 20th and 21st Century so far, the views on sustainability in business have changed drastically. The Earth's environment is shifting, and humans must also change with it. One way commercial businesses are starting to change is through the use of "green marketing," which is a combination of product modification, changes in production, and modifying packaging and advertising (<https://www.thebalance.com/green-marketing>). Green marketing is not just a sales ploy; rather it is an entire company effort including supply chain management, with changes in production and transportation methods. These new marketing and supply chain tactics are helping to sustain the business world and the Earth's environment by creating new ways of thinking about sustainability. This paper investigates green marketing and operations worldwide through the lens of one innovative company, Steelcase, a business that is re-inventing "going green."

Why The United States Needs Sustainability

Many people are unaware of how much humans create, waste, and throw out. In the textile industry alone in 2016, 10.46 million tons of textile waste were sent to landfills (Leblanc, 2017). Synthetic fibers do not break-down in landfills, which is a major reason why landfills are over-flowing. Natural fibers such as cotton, linen, and silk buried in a landfill act like food waste, producing potent greenhouse gases and methane. Old clothes cannot be composted either, even if they are made of natural materials. This is because natural fibers go through a lot of unnatural processing to become clothing. The clothes have been bleached, dyed, printed on, and placed in chemical baths. In landfills, the chemicals can leach from the textiles into groundwater. Burning

unwanted clothing in incinerators can release these toxins into the air (Wicker, 2016). So, keeping textile waste out of landfills is one important step in reducing landfill waste overall.

The waste crisis in America is also being overlooked and ignored. The United States generates 1.3 billion tons of waste each year, and this number is increasing (Simmons, 2016). Each person in the United States creates about 4.6 pounds of waste each day and less than one quarter of it is recycled. The other three quarters of solid waste is put into landfills or burned. According to the U.S. Environmental Protection Agency, many American landfills are closed because they are full or contaminating groundwater

(<https://www.learner.org/exhibits/garbage/solidwaste.html>).

Polluted rainwater from landfills runs into rivers and seeps into the ground-water. Another problem caused by landfills is flooding caused by garbage clogging drains. Meanwhile, the atmosphere can be poisoned by the toxic discharge from trash (Simmons, 2016). These are a few important reasons why businesses are changing their methods and implementing more sustainable practices.

The Importance of Green Marketing

According to thebalance.com (2016), green marketing is the process of selling products and/or services based on their environmental benefits. The product can be environmentally friendly by itself, or the process of making it can be environmentally friendly, or both. Examples of this process include: manufacturing in a sustainable fashion, eliminating toxic products, recycling materials, and using renewable resources, less packaging, and/or repairable designs (<https://www.thebalance.com/green-marketing-2948347>).

As the president of a New York-based marketing consulting firm that specializes in helping companies create competitive advantages from eco-innovation and green marketing,

Jacquelyn Ottman (2014) describes five strategies that companies can utilize to gain consumers' trust with the use of sustainable methods. The first strategy is to "walk your talk." A company needs to have a visibly committed CEO with a clear vision on environmental concerns. The CEO must empower employees, be proactive, communicate core values, and turn toward sustainable marketing practices. The second strategy is transparency. A company should provide access to the details of its products and corporate practices, while reporting on tangible environmental progress. In this way, customers see how the company is progressing toward greener practices. Additionally, a company should not hide bad news because consumers are hesitant to buy products when they suspect that companies have hidden information (Ottman, 2014). The third strategy is to enlist the support of third parties. Credible forms of third-party support include eco-labels, environmental product declarations, and cause-marketing. Environmental product declarations are independently verified and registered documents that communicate transparent and comparable information about the life-cycle environmental impact of products (<http://www.environdec.com/en/What-is-an-EPD/>). Cause-marketing is the marketing of a for-profit product or business that benefits a nonprofit charity or supports a social cause in some way (<https://causegood.com/blog/what-is-cause-marketing-definition/>). Eco-labels will be discussed later in this paper. The fourth strategy is to promote responsible consumption throughout the life cycle. This means making the product's life longer and having a recycling plan for the old or unused products. The final strategy is to focus on primary benefits of the product regarding sustainability (Ottman, 2014).

Using these five strategies, companies are changing their methods and marketing to consumers' new ways of thinking. Consumers are more aware of the environment, which has changed their purchasing decisions (Diglel, 2014). Because purchasers are now concerned over

the fate of the world's environment and favor eco-friendly products, organizations have begun to structure their marketing strategies to expand environmental awareness. These strategies include changes in advertisements, manufacturing processes, and market prices. Diglel (2014) describes "green" practices as processes that create minimum environmental effect, avoid water pollution and area contamination, preserve natural resources, utilize recycling, and are locally manufactured. Green marketing is more than a catch-phrase: it is a marketing strategy that managers can utilize to help gain more clients and profit (Diglel, 2014).

What is considered a sustainable product? Strictly speaking, there is no such thing as a totally sustainable or green item, as all items purchased, owned, used, and disposed of could have potentially negative environmental effects at some stage of its product life cycle. If the product has a naturally low effect on the environment, then it is viewed as sustainable (Diglel, 2014). As technology improves, so do the beliefs of consumers about the environment, so companies need to shift their practices toward sustainability (Diglel, 2014). The advantage companies realize when switching to greener methods is that employees are prouder and happier to work with companies that are more environmentally friendly (Diglel, 2014). Initially, the expenses for adding sustainable methods are more, but sustainability saves money in the long-term and helps companies gain new markets and create new products and services. Lastly, it fosters supported long-term development and profitability.

Diglel (2014) maintains that green marketing should be applied to the marketing strategy of the four P's: product, place, price, and promotion. The first "p" in the marketing mix relates to the products. Green marketing has resulted in shifting products to become more sustainable because consumers tend to be concerned about the environment. For this reason, companies need to innovate and change their marketing strategy. Because environmentally-friendly products

usually save money, water, and other natural resources, companies should change their manufacturing processes (Diglel, 2014). The marketer's role in product management is to provide the product designers with customer requests for green product attributes, such as energy conservation, organic materials, green chemicals, and local sourcing (Diglel, 2014). Another author, Eneizan (2016), also discusses the marketing mix in context with sustainability in regard to price, product, promotion, and distribution. Eneizan (2016) states that the cost of going green is expensive in terms of installing new technology and equipment, but eliminating key functions can save the company money. For instance, packaging costs are a major factor in the price of products, so removing packaging in the production process can lead to savings and profit (Eneizan, 2016).

Price is considered to be the most critical factor in the green marketing mix because many consumers are sensitive to price changes, which can easily affect consumers' purchasing decisions (Diglel, 2014). Eneizan (2016) demonstrates how companies can attract customers to higher priced products that are sustainable by offering rebates for returned recyclable packaging and charging higher prices for environmentally unfriendly products. Using such strategies, companies can make a profit.

The next "p" is place, which is related to distribution centers and retailers (Diglel, 2014). There are two distinct viewpoints within distribution centers and retailers. These are referred to as the inn and outer viewpoints. The inner viewpoint refers to the internal environment of the company, which mainly includes the workforce and culture of the company. The outer viewpoint refers to the location where the sustainable products are placed for sale, like a retail establishment. Distribution centers need to be aware of who their retailers are and how to build lasting and trustworthy relationships with those retailers. This ensures the products will sell.

During the distribution phase of the marketing strategy, it is important to utilize the correct channels that minimize environmental impact (Eneizan,2016). This is directly related to the company's supply chain management. Eneizan (2016) mentions "green distribution programs," which are activities that are focused on monitoring and improving environmental performance. These activities refer to how the products are made and distributed to retailers and end-users. By working with channel partners to create product reuse or disposal arrangements, companies can limit the amount of materials they require and eliminate waste. Also, companies can create a program to ensure consumers can recycle materials easily. An example of this is when Hewlett-Packard formed a partnership with Staples in its "authorized recycling location" program for printer ink cartridges (Eneizan, 2016).

The final "P" is green promotion. Companies need to be careful not to mislead customers when advertising green products. The three main attributes of green promotion include advertising environmental claims, publicizing environmental efforts, and integrating sustainability claims into the product's packaging (Eneizan, 2016). Publicizing green products and rationalizing their features and prices are major goals that green promotions must aim to achieve (Eneizan, 2016). For instance, marketers could use recycled paper when distributing paper flyers and limited packaging with sample products. Companies should list the functions, designs, or uses of their products before advertising them (Diglel, 2014). One attribute of going green is to connect the business with its community, so public relations and building trust with consumers is important.

Potentially, green advertising can have positive or negative consequences on a company's image. Many buyers are influenced by advertisements that reflect a company's commitment to the environment. Green advertisements can be categorized into three types: those that push a

green way of life by highlighting either a service or product, those that present a relationship between two variables (i.e., goods and environment), and those that address a corporate image of environmental obligation (Diglel, 2014). However, many green advertisements can mislead consumers and create negative perceptions on a company. One common misleading advertisement is the use of a green leaf on a water bottle. Water bottles are not sustainable and end up in landfills where they never decompose. Only one out of five water bottles is recycled and it takes 3 times the amount of water to create a plastic water bottle than the water that goes inside of it. By placing a green leaf on the label, companies are trying to gain consumers' attention by insinuating this is a sustainable product, but this is not true (<https://www.banthebottle.net/articles/10-startling-facts-about-bottled-water/>, 2015).

The Green Consumer

A green consumer is someone who embraces environmentally-friendly practices and is willing to buy green products over traditional options (Diglel, 2014). It is someone who is mindful of environment-related issues and supports sustainable causes to the extent of switching allegiance from one brand or supplier to another, even if it is at a higher cost (<http://www.businessdictionary.com/definition/green-consumer.html>). Companies need to know such consumer traits, lifestyles, and intentions for purchasing natural products. Also, research shows that green consumers tend to be more receptive to direct marketing techniques, such as direct mail and personalized e-mails (Eneizan, 2016).

The generation that is currently most concerned with business's impact on the environment is millennials, born between 1981 and 1996. Millennials are on the verge of being the largest living generation in the United States (Fry, 2016). According to a recent Nielson global study, millennials continue to be the most willing to pay extra for sustainable products.

The study also found that brands that establish a reputation for environmental stewardship among today's youngest consumers have a great opportunity to grow their market share and build relationships with power-spending millennials ("Green generation," 2015). Knowing millennials prefer sustainable companies is key for all types of businesses. The attributes that most millennials look for in a company are whether the company is known for its commitment to social value and whether the products are made fresh with organic ingredients. Younger generations are not the only ones who care about the environment. Fifty-one percent of boomers (born between 1946 and 1964) stated that they are also willing to pay extra for green products (Fry, 2016). Marketing statements about price-driving product attributes, such as coupons, no longer have the same power over consumers as they once did ("Green Generation," 2015).

Eco Labels

Eco-labels give privilege to products and services that are proven to be more environmentally friendly than traditional products and services, because this allows consumers to differentiate eco-friendly products from non-eco-friendly products (<https://www.globalecolabelling.net/what-is-eco-labelling/>). The Global Ecolabeling Network states that, "The roots of ecolabeling are found in the growing global concern for environment protection on the part of governments, businesses, and the public" (para. 1). According to the International Institute for Sustainable Development (2013), ecolabeling has six major benefits: informing the customer, promoting economic efficiency, stimulating market development, encouraging market improvement, promoting certification, and assisting in monitoring companies' claims.

The first benefit is that eco-labeling is an effective way of informing customers about the environmental impacts of selected products and the choices available. Labeling empowers people

to discriminate between products that are harmful to the environment and those that are more compatible with environmental objectives

(https://www.iisd.org/business/markets/eco_label_benefits.aspx). An eco-label also makes customers more aware of the benefits of the products they are buying, such as, recycled paper.

Economic efficiency is the second benefit since eco-labeling is generally cheaper than typical labeling and advertising. By empowering customers and manufacturers to make environmentally-friendly choices, the need for regulation is kept to a minimum. This is beneficial to both the government and businesses.

The third benefit of labeling is that it stimulates market developments. When customers choose eco-labeled products, they have a direct impact on supply and demand in the marketplace. The growing demand for sustainable products shows companies that consumers want sustainable products, which guides the market towards greater environmental awareness.

The next benefit of labeling is continuous improvement of production by encouraging corporate commitment to ongoing environmental concerns. If customers see that certain brands are making efforts to continuously do better, they will be more likely to support that brand. By continuously improving production, companies can grow its product's awareness and sales.

The fifth benefit pertains to promoting certification by creating competition between many companies. It works well for the market overall when companies compete to be the most efficient and work to gain as many sustainability certifications as possible. By using eco-labels, a company is claiming to be sustainable, so the final benefit is that eco-labeling helps in monitoring companies and validating their sustainability claims

(https://www.iisd.org/business/markets/eco_label_benefits.aspx).

How Operations are Changing to meet Environmental Needs

Supply chain is key to creating sustainable products. Pressures from stakeholders, customers, and nonprofits push companies to integrate sustainability into the supply chain. A main principle of operations is the “triple bottom line,” which is focusing on people, planet, and profit. By managing and improving environmental, social, and economic performance throughout supply chains, companies can conserve resources, optimize processes, save costs, increase productivity, and promote corporate values.

These are six steps necessary for creating a more sustainable supply chain (“6 steps for a more sustainable supply chain,” 2014). The first step is to map the organization’s supply chain. Mapping includes: surveying suppliers, identifying their most significant environmental and social challenges, and prioritizing efforts among the company and its suppliers (“6 steps for a more sustainable supply chain,” 2014). The second step is to communicate company expectations. Focusing on sustainability within a supply chain is a great way to communicate corporate values to employees and consumers. Establishing and communicating expectations through a supplier code of conduct is an important step to involving suppliers in sustainability efforts. These two efforts are related because if employees know the environmental expectations of their company, they can promote sustainability within and outside of the workplace. Also, having a supplier code of conduct is great because employees can refer to it, as well as customers. The third step is to define supplier performance expectations. The “6 steps for a more sustainable supply chain” article argues that companies must collect data from suppliers through a survey. This survey will give the company a baseline of performance and an understanding of a supplier’s starting point or benchmark. The fourth step is to develop a training program for employees and suppliers. Such training is an important step in driving behavioral changes

throughout the supply chain because it allows everyone involved to be aware of the changes needed to meet sustainability goals. The fifth step is to drive performance improvement through an audit program. An audit program can measure performance improvement. The last step is to join industry collaborations. Many supply chain challenges cannot be solved by individual efforts and require industry-wide collaboration (6 steps for a more sustainable supply chain, 2014).

Environmental impacts from supply chains can include: toxic waste, water pollution, loss of biodiversity, deforestation, long-term damage to eco-systems, hazardous air emissions, and energy use (Huang, 2015). The costs of many supply chains impact the environment; therefore, a company can reduce its carbon footprint on the environment if it delivers products more efficiently. Many businesses are now implementing sustainability programs to help save money and the planet by reducing miles, production costs, product waste, and unplanned activities (Huang, 2015). One way to evaluate a company's supply chain is to use calculated data and questionnaires to assess its greenhouse gas emissions, energy and water usage, and overall waste generation. This data can help identify the necessary improvements that a company should make to better its supply chain. By adopting these responsibilities, a company can better manage its business risks, improve efficiency, and aid in keeping up with the changing trends in the market and in technological advancements (Huang, 2015). The company can also influence its suppliers to practice better strategies, and this cycle will eventually impact society and the earth on a much larger scale (p.15).

Many companies are interested in managing corporate social responsibility (CSR), as well as sustainability in their everyday operations management (OM) practices (Walker, 2011). This response is due to climate change, the wellbeing of workers and communities, and other

broad social demands placed on corporate companies. This statement ties into the “triple bottom line,” the pursuit of social, economic, and environmental objectives. Several particular aspects of OM are considered sustainable. According to Walker (2011), these aspects encompass product and eco-design, adoption of environment and social standards, lean operations, purchasing, recycling and closed-loop systems, and risk management. In the 1990’s, there was a focus on resource productivity, and the need to reduce the consumption of natural resources. Also, an interest in resource productivity was typified by the desire to be green and competitive (Walker, 2011). Basically, the 1990’s was all about reducing waste and CO2 emissions, recycling, and reverse logistics. Reverse logistics is related to the reuse of products and materials throughout the supply chain (Walker, 2011). Also, companies are examining the ethics behind their production processes and products. Studies of ethical products and fair trade reflect increasing consumer interest in how products are sourced (Walker, 2011). Consumers are looking for companies that have strong ethical standards and treat their employees with respect. This includes foreign operations and foreign employees.

Switching Practices Saves Money

Many companies are revising their marketing and operational methods to save the planet and money. Pacific Home Remodeling is one example of a business that is saving money and creating value for customers through sustainable business actions. The CEO, Noam Moar (2015), believes that homes can be beautiful and energy-efficient. Pacific Home Remodeling is the leading provider of energy solutions, including solar energy, insulation, and energy-efficient windows and doors, to help homeowners in Southern California create comfortable living environments while also saving money on energy bills (Moar, 2015). The company provides sustainable options through in-home solar panel installation and insulation methods that lower

the home's R-rating and overall energy bill. Saving energy also helps save water usage throughout California. Since California is experiencing a prolonged drought, it is even more important to use sustainable methods to help conserve water resources. Moar (2015) makes this statement about his company:

Obviously home-generated solar power is cheaper for the consumer with electricity bills but using solar also brings down the amount of water used to power the house. With solar power, the energy isn't coming from a fossil fuel powered plant which requires extreme amounts of water to turn into steam for spinning the turbines. Additionally, we source our solar panels and parts within the U.S., so there is an added level of sustainability inherent within our business practices. The use of quality insulation and techniques also helps reduce the water use of a home by reducing the amount of heat required to keep it warm, thus requiring less energy from sources that use water.

Pacific Home Remodeling is just one of many examples of companies that are saving money by helping the planet at the same time.

Steelcase: The Case for Sustainability

The Reputation of Steelcase

Steelcase is the leading U.S. manufacturer of furniture for offices, hospitals, and classrooms. Founded in 1912 and based in Grand Rapids, Michigan, Steelcase produces office furniture, and architectural and technology products for office environments and the education, health care and retail industries. Steelcase designs and manufactures products, comes up with design solutions for customers, and also works with and creates many different types of textiles (<https://www.steelcase.com/>). There are currently 11,000 employees working for Steelcase worldwide. Steelcase has nine manufacturing plants in The United States and two in Mexico. It

also has offices in Germany, Romania, England, Spain, France, and Switzerland. One-way Steelcase is becoming more sustainable and environmentally friendly is by eliminating hazardous chemicals and plastics from its production and shipping processes. For example, Steelcase has eliminated the use of antimony in its products. Antimony is a heavy-based metal used to make a wide range of products, including glass, engines, and children's toys (<https://www.globalhealingcenter.com/natural-health/health-dangers-of-antimony/>). This metal is known to cause birth defects and kidney damage (<https://www.globalhealingcenter.com/natural-health/health-dangers-of-antimony/>). Steelcase has also created fire retardant-free textiles. Fire retardants used in commercial and consumer products are known to have the potential to cause cancer (<http://greensciencepolicy.org/topics/flame-retardants/>). Steelcase has also eliminated the use of polyvinyl chloride (PVC). PVC is a plastic that can cause heart disease and has its worst effects on children. The dust from the plastic is the most hazardous part of PVC (U.S. Department of Health and Human Resources, 2011).

Steelcase has also switched many of its materials and replaced them with natural materials. For instance, it now uses formaldehyde-free wood in its production. Formaldehyde is a toxic gas known to cause cancer (U.S. Department of Health and Human Resources, 2011). All of Steelcase's work surfaces are created with formaldehyde-free wood. Steelcase has also switched its packaging materials. Steelcase now uses natural fibers such as wool in its textile products and grows packaging materials from mushrooms and flaxseed to replace Styrofoam (<https://www.steelcase.com/>). Steelcase is one of the only U.S.-based companies utilizing "mushroom packaging." Packaging materials made of mushrooms is climate friendly and biodegradable. The process involves zero petroleum-based chemicals and helps reduce waste. The mushrooms and other agricultural waste are placed into a mold and grown to optimal size

and shape. Then, the molds are dried to stop the growth process (<https://www.alternet.org/are-mushrooms-future-zero-waste-packaging>). This is important because Styrofoam does not break down in landfills and can release harmful chemicals into the air (Nikitenko, 2011).

The design of Steelcase's products has also changed to help sustain the physical environment in which consumer's use its products. For example, Steelcase's office chairs can now be taken apart with a single screwdriver, so at the end of its life, they can be recycled without a problem. By making its furniture easy to take apart and assemble so parts can ship in a more compact way, Steelcase is reducing the number of trailers needed to ship products (<https://www.steelcase.com/>). In another move to make consumer's use of Steelcase products more sustainable, Steelcase has a process called "remarketing," in which it assists customers who want to resell their products so that they do not end up in landfills. Steelcase even works with nonprofits to suggest what products would be the best for their work space (<https://www.steelcase.com/>).

With regard to its own office work environment, Steelcase considered the natural environment when building its headquarters, building with many large glass windows to maximize natural light, so less electricity is needed. This lighting is helpful for the design team because it is natural, not artificial. Inside the building is an open work space, rather than individual offices. A strategy that helps create connection and collaboration among its employees (<https://www.steelcase.com/>).

All these actions and more have lowered Steelcase's overall operating costs, which are explained in its Corporate Sustainability Report in 2015. Major changes in its packaging and transportation methods have saved Steelcase significant money while helping the environment. Steelcase's packaging team has created a methodological approach to creating sustainable and

reliable packaging. Steelcase tests many models by dropping boxes, vibrating tables, conducting crush tests, and changing ambient temperatures. Moves such as protecting the furniture during the shipping process, save money and eliminate unnecessary waste. Steelcase also uses recyclable materials in its packaging and is constantly trying to minimize its use of synthetic materials. In the manufacturing plants, Steelcase uses a machine to custom cut corrugated materials, which leads to less waste and potential savings. In its European operations, Steelcase has added hybrid cars to its plants and headquarters in France and Germany and biodiesel fuel buses in North America (<https://www.steelcase.com/content/uploads/2015/11/2015-Steelcase-CSR1.pdf>).

Water usage is another major aspect within sustainability, and Steelcase has innovated ways to reduce water consumption, too. Steelcase has a new process in its Stribro, Czech Republic plant that applies a powered-coat paint that has significantly reduced waste water discharge. By using this system, water waste has lowered from two tanker trucks a day to one cubic meter of water waste per week.

Personal Experience and Interviews

I was fortunate to do an internship with Steelcase during the summer of 2017, during which I conducted interviews with two employees. One interview was with Andrew Roman, 33-years-old, who has been with Steelcase for 5 years. The other interview was with Patric Rabe, who was with Steelcase for 40 years and who is my father.

Patric Rabe has been a member of many teams throughout Steelcase and has seen, firsthand, the changes Steelcase has made over the last 40 years. Rabe stated, “I started in manufacturing as a factory laborer, then I became a manufacturing supervisor, after which I moved to the Quality Department to become a Corporate Quality Manager. From Quality, I

moved to Project Management in the Product Development Department. I ended my career at Steelcase as Operations Manager in Surface Materials. This position encompassed Product Development, Marketing, and Supply Chain.”

When asked how activities have evolved at Steelcase, Rabe responded, “Many aspects have changed regarding sustainability. Our waterborne finishes for wood materials, powder coat paints, wood stains, and clear coats are now water-based, as opposed to solvent-based. These water-based finishes help to reduce toxic emissions into the air. Steelcase has also undertaken initiatives to reduce water, paper, and plastic waste.”

Regarding the evolution of Steelcase’s products, Rabe said:

In our products, we use waste powder coat to finish things like drawers and parts you may not see. Steelcase was the first to introduce a color of powder coat paint using 80% scrap or waste powder to make the color, which was called basalt. We were the first to introduce fabric that uses scrap yarn. We have also changed to more environmentally friendly dye to make the colors of our fabrics. Steelcase uses plastics that can be easily recycled. Our chairs can be taken apart with a single screwdriver at the end of usable life. Therefore, our chairs can be easily recycled at the end of its product life. Another example of sustainability is that we use foam packing corners that are made from growing fungus like mushrooms, which is a renewable and reusable resource. (Personal communication, 2017)

Asked what else Steelcase could improve upon regarding sustainability, Rabe responded, “What more could we do? Hm . . . just keep on lowering our emissions using materials that are environmentally friendly. We have a cross-functional team in place that is always looking

for new materials.” It was fascinating to get the perspective of someone who had been with Steelcase for so long, compared to the fresh perspective of my next interviewee.

The second interview I conducted was with Andrew Roman. Roman has been with Steelcase for five years. At the time of the interviews he was a project manager for the Surface Materials team. I asked him about the overall sustainability at Steelcase:

In 2010, Steelcase spent \$120,000 on paper towels only in North America. This one product is a huge sustainability issue for global companies all around the world. Since 2010, Steelcase has lowered this amount and added hand-dryers to all the manufacturing plants. The corporate offices still use paper towels to accommodate to customers but buys paper towels that are used with recycled materials. From a product development standpoint, we need to balance savings, value, and sustainability. How can we cut back on waste while producing a high-quality product? Steelcase tries to tell a story with our products and being more sustainable really brings a unique perspective to our story.

(Personal communication, July 24, 2017)

Roman mentions that Steelcase’s “Think” and “Gesture” chairs are cradle certified. The Cradle to Cradle Certified Product Standard guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories: material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness” (<http://www.c2ccertified.org/get-certified/product-certification>). Following this standard, Steelcase’s chairs are easily recycled and reused.

After my internship, I conducted a third interview with Kristina Tessmar. At the time, Tessmar was a Global Product Development Quality Engineer who had been with Steelcase 3.5

years (Personal communication, February 6, 2018). I asked Tessmar about trends toward sustainability she had observed at Steelcase. She responded:

Sustainability is a hot topic within our product development and our everyday work life.

There are many deliverables in our product development process around sustainability and meeting certain requirements. Our office staff also promotes sustainability in the café by using compost only products. We also have sorting station all around our facilities promoting proper recycling and minimal waste.

When I asked Tessmar about the culture of sustainability in house at Steelcase and what actions it makes to train employees about sustainability practices, she said there are “lunch and learn,” along with special events to promote sustainability. The “lunch and learns” are events hosted by Steelcase to inform its employees about certain topics. Tessmar mentioned that a lot of people are excited to attend the “lunch and learns,” because they create meaning for the products they are producing. After the “lunch and learn” discussion, Tessmar discussed new initiatives to help drive more environmentally friendly practices and products. She said “Our campus team recently switched over to all compostable products used in our café. They have also increased awareness around the office about proper recycling.” All the bins at Steelcase have three holes. One is for actual waste, one is for recycling paper products, and one is for recycling plastics. Using this strategy, Steelcase recycles more than it throws away. Next, I asked if Tessmar knew about any sustainable products at Steelcase. Tessmar said “Planked Veneer is made with sustainability in mind. Veneer layup that is made from recycled scrap material at the plant.” By using scrap material, Steelcase is saving money and saving waste. Lastly, I asked What makes Steelcase stand out against competitors regarding its sustainability efforts? Tessmar stated “Steelcase does not just preach sustainability, but we live in it and promote it. We are

consistently working to choose materials and processes that are better for the environment. We also work to promote sustainability in our everyday work lives” (Personal communication, February 6, 2018).

Steelcase is obviously committed to sustainability and it shows through its product lines, for example, Roman mentioned Steelcase’s “New Black” line of fabrics. Black is the easiest color to make sustainable because old colored fabric can be dyed black, and the color consistency is the same. The New Black line is made with 97% recycled material, compared to the colored fabric only being 68% recycled. The New Black fabric names are Jack, Harley, James, Bruce, and Henry; they are all used for seating upholstery (<https://www.steelcase.com/resources/surface-materials/>). The fabric used to create New Black is part of a “cookie cutter” system. Steelcase’s production cuts out shapes of fabric to create the needed look and then they re-roll the remaining scraps to make more rolls of fabric. By using this technique, Steelcase saves material and time spent in color-design meetings.

A Steelcase color design meeting includes the lead designer, the project manager, the surface materials leader, and a marketing representative from the surface materials group. During the meeting, the designer looks at the samples of fabrics, plastic, and glass under the Macbeth table. The Macbeth table is a tool that consists of different shades of light to see how the color will look in different environments, such as daylight and fluorescent light. The team spends multiple hours looking at the fabrics and determining whether they are similar enough to be produced and sold. If they are not similar enough, corrections are written down and the sample is sent back to the fabric production center. This process is continued until the colors are a perfect match.

Conclusion of Steelcase Study

This case study shows how Steelcase has evolved into an earth-friendly conscious company, from a strictly profit-driven company. Using that strategies and processes highlighted here, Steelcase combines the green marketing rules of the “green 4 P’s,” production, product, promotion, and price, and the operation’s motto of triple bottom line: People, planet, profit. Steelcase started its green evolution by eliminating hazardous chemicals, plastics, and other materials from its production processes. This tied into the “production” section of marketing. By using the mushroom packaging, Steelcase eliminated Styrofoam from its packaging, which created greener production processes. Also, when Steelcase decided to re-build its headquarters, it created a facility that is energy efficient, so it produced savings.

Steelcase has met all the qualifications of the “green marketing mix.” By switching to natural materials, Steelcase met the “product” requirements by making a safer product for its customer. Steelcase’s products no longer have hazardous chemicals or dust on them and are easier to recycle. By creating the chairs to be taken apart with a single screwdriver, Steelcase has created an easier way to consumers to recycle their older products. Steelcase’s custom-cut machine helps conserve textiles and lower waste throughout all its product lines. Another sustainable method used to make Steelcase’s products is using waste powder to coat the inside of drawers and other hidden parts. This reduces the amount of chemicals waste and thrown-out and ending up in landfills.

In the area of promotion, Steelcase uses recycled materials when promoting its products. This includes recycled paper flyers, wooden frames, and plastics. It also promotes “green” initiatives to its customers and educates its employees by hosting “lunch and learns” to promote sustainability throughout the company.

The last of the 4 P's is price. Steelcase is able to maintain its higher prices because it has superior quality and is a leading innovator in sustainable methods. Steelcase can keep its higher price point because it is the leader in sustainable furniture and will continue to expand its sustainable initiatives.

Steelcase's operations' motto starts with people. By creating safer products and educating employees, Steelcase has made people one of its top priorities. The second focus of its motto is our planet. By using natural materials, recycled promotions, and eliminating Styrofoam, Steelcase has considered its environment impact on the planet when creating and promoting its products. Profit is the last part of the operations' motto. Steelcase saves money by implementing sustainable methods, which creates higher profits, in the long-term.

Several aspects of Steelcase's products and processing are committed to lessening its impact on the Earth while helping sustain its position in the furniture industry. All its sustainable initiatives help Steelcase lower costs, time, and waste. In Patric Rabe's statement, he mentions continuous growth and learning on Steelcase's part and how they can improve in the future. Kristina Tessmar mentions "lunch and learns," that help educate employees and help drive sustainability throughout the company. Andrew Roman mentions balancing savings, value, and sustainability, and Steelcase has done amazing work to balance earth-friendly products with making a profit. All of these actions from product creation to innovation processing to company culture demonstrates Steelcase's deep commitment to sustainability. Steelcase has shown that sustainability and profitability are possible together.

4 P's Table

	Product	Price	Promotion	Place
Planet	<ul style="list-style-type: none"> -Use of natural materials -Recycling of chairs-single screwdriver -Eliminating hazardous chemicals -Eliminating Styrofoam 	<ul style="list-style-type: none"> -Higher prices for sustainable products 	<ul style="list-style-type: none"> -Recycled marketing promotions 	<ul style="list-style-type: none"> -Distribution strategies to reduce waste
Profit	<ul style="list-style-type: none"> -Custom-cut machine-less material used -Waste powder used 	<ul style="list-style-type: none"> -Lowering manufacturing coats creates a profit 	<ul style="list-style-type: none"> -Promoting “green” initiatives gain consumer’s trust 	<ul style="list-style-type: none"> -Steelcase Headquarters-natural light
People	<ul style="list-style-type: none"> -Helping people re-sell their old furniture- donate 	<ul style="list-style-type: none"> -People are willing to pay more for sustainable products 	<ul style="list-style-type: none"> - “lunch n learns”- educating employees 	<ul style="list-style-type: none"> -Training suppliers on sustainable methods

Conclusion

A commitment to sustainability is changing businesses throughout the United States because consumers are now demanding sustainable practices and products. Many companies are reacting to consumers' sustainability demands by updating their marketing and operations strategies to be more sustainable. Every such update to make marketing techniques more sustainable helps consumers understand a product's impact on the Earth and how companies are changing their products and production. Changes to operating techniques helps lessen the amount of waste in landfills and creates new production methods that save money and materials. Today's consumers are willing to pay more for sustainable products and support companies that are implementing sustainable initiatives into its marketing and operation practices.

As a major manufacturer of office furniture, Steelcase is a company that demonstrates that by switching to sustainable manufacturing methods, it can save money while also saving the planet. Altering its marketing mix to focus on sustainability practices, Steelcase is showing how a company can make a profit, take care of its people and consumers, and save the planet.

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