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Sustainability in Business: Adapting to New Trends

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SUSTAINABILITY IN BUSINESS

Adapting to New Trends

Derek DeCastro

May 2017 | Honors Capstone

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Introduction

Technological advancements have been a part of culture since the beginning of humankind. Without the most primitive of technological innovations like the discovery of fire and the wheel thousands of years ago, humanity would not have achieved its capacity to thrive, and possibly even survive, for as long as it has. Discovering the ability to practice agriculture allowed humans to settle in desirable locations instead of remaining nomadic groups that had to travel simply in order to find food. Settling different locations at the founding of agriculture directly led to the creation of civilizations of people rather than small groups of people who relied on each other to survive. The basic foundation for culture, those which include socioeconomic classes and specialized forms of commerce, in virtually all societies stems from the creation of permanent settlements. Specializing in certain trades and services only furthered technological advancement, leading those who practiced craftsmanship and provided services to commodify and sell their products and services.

The Industrial Revolution in the early 1800's led to the commercialization of goods, beginning a sudden leap forward in production and creation. This era, though, jumpstarted the mass consumption of natural resources. Throughout history, people and societies have crafted innovation upon innovation to continuously further the progress of humanity. While technology has overwhelmingly benefited humankind, it has also

generated strains on the environment that technology should address. With regards to the natural environment, the ability to sustain humankind has become a significant stressor due to the Industrial Revolution.

The Environmental Protection Agency defines environmental sustainability as “the ability to maintain or improve standards of living without damaging or depleting natural resources for present and future generations” (2013). Sustainability should not involve making radical life changes, nor should it impinge upon the quality of life to which people have become accustomed. However, working towards sustainability and implementing it as a goal in further advancements can aid those who do not have the luxuries and amenities that others may have. Some parts of the world, in particular the United States, are significantly more technologically advanced and have greater access to a wider variety of necessities and conveniences than other underdeveloped regions, such as much of Africa or southern Asia. These technological advancements and amenities that highly developed regions possess are at the cost of ecological strain and natural resource depletion.

The quality of life that people in developed countries experience cannot be sustained for future generations or achieved in lesser developed parts of the world at the rate that resources are being extracted from the environment. Natural resources include items that are directly consumed by humans, including fossil fuels like oil and natural gas, natural vegetation like

lumber, animals, and water, according to the New World Encyclopedia (2013). Although the use of natural resources is not inherently harmful, not all natural resources, such as oil and water, are renewable, thus being finite and capable of being depleted beyond retrieval. Certain resources can also be termed as ecosystem services, which the National Wildlife Foundation defines as “any positive benefit that wildlife or ecosystems provide to people” (n.d.). Examples of ecosystem services are trees converting carbon dioxide into oxygen and erosion and flood control on the banks of water bodies. These resources are at the greatest risk for being overused to the extent that humans may never use them again.

Natural resources which are capable of regeneration and consistent usage are referred to as renewable resources. In aiming for sustainability, the more widespread use of renewable resources holds substantial promise. The use of renewable sources can help to reduce human’s dependence on other sources that may not sustain themselves. Through technological advancements, humans are capable of capitalizing on the ability of some resources to renew themselves, both in terms of prosperity and in sustaining a particular quality of life. Since innovation has been such an integral part of human culture for thousands of years, the market for technological advancement has gained even more ground. Not only would greater reliance on renewable resources reduce strain environmental strain from nonrenewable resources, but emphasis on renewable resources could create

a more sustainable business market along with a more sustainable quality of life and future for generations to come. Reducing the potential for running out of certain resources would contribute to a more prosperous, sustainable future.

A multitude of resources that are used on a daily basis around the world are currently managed unsustainably, including sources of energy, food, water, and ecosystem services, and hold significant potential to be switched to renewable resources. Rather than relying on fossil fuels, which also result in ecosystem disturbance and pollution, natural sources of energy like the sun and wind that will not deplete can be harnessed to provide a constant supply of energy. Alternatives to water and food source consumption allow for future generations to access these necessary resources without worrying about their availability. Striving for sustainability and incorporating it into individual livelihoods and business models will lead to a more secure and desirable future for generations to come.

Basis for Sustainability: The Triple Bottom Line

Environmental sustainability is a concept that businesses should incorporate in order to maximize production, increase competitiveness in their respective markets, and enhance their longevity. To address and incorporate environmental and sustainability concerns into business practice, a concept called the triple bottom line was developed by John Elkington. As

Timothy Slaper and Tanya Hall explain for the *Indiana Business Review* (2011), Elkington contrived the idea of the triple bottom line to include three primary factors: economic, environmental, and social, commonly referred to as the “three P’s” as profit, planet, and people (p. 4). Businesses that emphasize these three factors equally instead of financial gain and superiority, they argue, attain better success both in the short and long term. Although the triple bottom line cannot be measured entirely in a single unit, for example providing a monetary value to social and environmental success, striving to maximize environmental and social profitability creates a greater potential for a business to adhere to environmental regulations and maintain a positive public relation.

The triple bottom line is a universally applicable business model that yields great potential for a business to not only succeed but to excel in its market. With how innovative different technologies are presently, from self-driving cars coming closer to mass-production to having the entirety of the Internet in one’s hands via smart phones to drones delivering packages instead of UPS and FedEx, the traditional business model of maximizing rates of production to maximize profits by any means necessary is no longer sustainable, both in terms of environmental constraints and practicality. Because technology is changing at such a rapid rate, faster than any other point in human history, businesses and companies must utilize new strategies to properly adapt to the changing of the times. Adopting the

triple bottom line would allow businesses to develop and adapt to these changes more efficiently and in a manner that would create greater opportunity for further growth and development. Addressing social and environmental factors, rather than only the economic and financial factors of business, would be a practice that will also help to generate technological and practical innovation for the company or business.

The First "P": Profit

Profit is the ultimate goal of the overwhelming majority of businesses. Aside from nonprofit organizations, many businesses function to continue earning money in order to grow and become more widely successful. The concept of "profit" has been ingrained in human and business culture for centuries. In the article "Daily Life in Ancient Mesopotamia" (2014), Joshua Mark explained how economics and business was carried out between the Tigris and Euphrates Rivers. This civilization, founded over 8,000 years ago, is widely believed to be the first major civilization that could resemble modern cities and countries. Based between these two rivers in southwestern Asia, Mesopotamia was a goldmine for the foundation of modern societies. In Mesopotamia, people began doing work beyond standard survival procedures like their hunting and gathering predecessors. Businesses here, as Joshua Mark wrote (2014), originated as a means of survival. People worked as laborers, both enslaved or freelancers, religious figures, farmers, craftspeople, educators both of schooling and of trades,

merchants, and a multitude of other potential occupations. However, the main goal was to profit in order to feed one's family and to maintain or enhance their social status. The idea of running businesses for profit, consequently, is as ancient as the first real civilization of humankind.

Striving for profit is not and should not be an inadmissible or undesirable quality of any business. After all, the goal of many businesses is to make a profit and excel financially. However, prioritizing profit over other factors like environmental and social concerns creates substantial limitations for a business. Nonprofit organizations exist commonly as charitable foundations and are capable of thriving without aiming to make a profit beyond what is necessary for total functionality. While not all businesses can function as nonprofit companies, emphasizing profit as the only motivation or drive for creating and substantiating a business is not a reliable route. By focusing too much on profit but not other factors, a business cannot sustain itself long-term, especially with respect to the incredible rate of technological innovation. Some influencing components of profit, as Slaper and Hall wrote (2011), include company revenue, cost of underemployment, and job growth. These components may deal with expenses, income, or taxes. Understanding and addressing environmental and social factors, companies can further put their profit to better use. The correlation between profit increase and the other two factors will be explained in greater depth in the following sections of the "three P's."

The Second "P": Planet

Emphasizing environmental concern, or “planet,” is the second component of the triple bottom line. The environment is able to provide services for humans to consume, both directly and indirectly. As businesses and commerce have developed over time, reliance on these ecosystem services have also increased. Where agriculturalists, merchants, and craftspeople most frequently made use of whatever raw materials they could get their hands on (Mark, 2014), businesses today use both the raw materials and their derivatives, such as electricity derived from burning refined fossil fuels or reshaping and redefining the basic properties of raw materials in order to create a product. Since the beginning of the human race, people have been entirely dependent upon the environment’s ability to provide materials and services for them, and businesses are no different.

The impact that humans and businesses extends beyond the extent at which resources and materials are extracted and used. The consumption of materials and the results from consumption can have significant impacts on the environment just as the actual extraction can. Several impacts on the environment, put forth by Slaper and Hall (2011), stem from the use of materials rather than their extraction. For example, atmospheric pollution and chemical increases in air are a common effect from the burning of fossil fuels, such as sulfur dioxide and nitrogen oxides. From regularly inhaling such pollutants, people may succumb to a variety of respiratory

complications. The persistent burning of fossil fuels, which was the largest source of energy in 2015 at 81.5% of all energy consumed in America according to the US Energy Information Administration (2016), is depleting its resources. Therefore, not only is a finite resource still being consumed at massive rates with renewable alternatives readily available, the air that gets breathed in by humans throughout the United States and entire world and the atmospheric layer surrounding the planet is constantly being filled with harmful chemicals and substances. Another consequent of environmental degradation through consumption is poor land management strategies. The capacity for natural land surpasses its ability to provide us with water, fuel sources, and food. Important functions that can be lost from land degradation include the inability to grow food due to soil degradation, unclean air from deforestation, and poor land and soil adherence and erosion control. Maintaining a high land quality is imperative not only for the sake of biodiversity and other species, but humanity will have to learn to live with a quality of land that is far less fruitful and providing than what its ancestors could access.

Overdrawing resources from the natural environment places strains on it that consequently affect the ability of humans to thrive. Businesses are entities that would benefit both themselves and the general population should they incorporate environmental management strategies and emphasize environmental concern into action plans. Reliance on the

environment for natural resources has only increased with increased population and increase demand for products and services. For example, saving money is a concept that many businesses can rally around. Environmental consciousness opens up several opportunities to cut back on expenses. The cost of energy, whether it is transportation, lighting a facility, or using equipment, is a daily expense. However, renewable forms of energy can be implemented to reduce long-term costs. Technological innovation in recent years has led to feasible renewable energy in the form of solar and wind energy. Financial savings also come from locally sourced products. In short, materials purchased and retrieved from more local sources, rather than shipping across long distances, can both reduce spending costs on for transportation of supplies and environmental stress from supplies being more readily available. The advent of such new technologies as alternative energy sources and substitutes to different types of resources to use has created a great potential to divest from the commonly used unsustainable sources. With several other financial and ecological benefits from businesses arising from environmental consciousness, businesses can also enhance their social image and public relations.

The Third "P": People

Social measures encompass an array of factors that relate to human welfare and involvement. To address the social factors of commerce, a

business must understand the needs of its employees, its customers, and everyone who may be involved in allowing a business to function and sustain itself. As Slaper and Hall explained (2011), some social components of the triple bottom line include family-work balances, unemployment rate, and relative poverty. Ultimately, people are the backbone of any functioning entity. While technological advancements do not appear to have a direct impact on the well-being of people with respect to businesses, workplace safety and job security are integral components of daily human activities. People working around hazardous chemicals and pollutants are put at risk every time they begin their duties. Businesses must learn how to deal with such hazards not only because they can accumulate and negatively impact the environment but pose a direct threat to the people working around them. Addressing workplace hazards can both enhance employee loyalty and satisfaction with the company, while also fostering a public image of a company that cares about its employees.

Social responsibility can generate a positive impact on environmental and financial conditions relating to the triple bottom line. One of the most popular social initiatives that businesses can adopt is the practice of fair trade. The foundation Fair Trade USA defines fair trade as a process of consumption in which the development of a particular product is conducted with ethical standards and where those who provide such products, like coffee farmers and clothing makers, are paid a fair wage directly by

consumers without being impinged upon by any type of middleman (2017). For example, coffee has been one of the most widely discussed products in the fair trade movement. In this case, coffee consumed in America, which primarily comes from Latin America (Global Exchange, 2011), is mostly grown by smaller scale farms. Without fair trade policies, those who grow the coffee were being cut off from much of their revenue because of smaller companies that would supposedly contribute to the trade process between the farmers and customers in North America; however, the middleman would take a percentage of the sale, while the farmers who did the actual work received a significantly smaller portion of their due payments. By practicing fair trade, farmers are receiving their full payments and seeing the direct result of their work, as are the communities in which they live. Not only do these practices enhance the quality of life for people who work in more poverty-stricken areas, but environmental degradation is also lessened. Smaller scale farms that can persist through fair trade eliminate the need to convert land for farming or manufacturing by being more productive in smaller surface areas. The social component of fair trade is furthered because, by contributing to the well-being of lower income areas, less developed communities can use the financial gain to better living conditions and access to proper medical, educational, and financial resources.

The Case for Sustainability: What Are the Benefits?

Environmental sustainability is a practice that will become a necessary contributing factor to the success of businesses in the near future. With how rapidly technology is changing, companies must find ways to adapt to the new markets. The mark of a successful business is one that is capable of being flexible and adapting to market changes and demands, consumer and employee needs and patterns, and understanding and integrating technological advancements. Many of these changes, consequently, are arriving at a point in time in which the need for environmental concern has never been greater. Several aspects of the natural environment are on the brink of crisis, including human overpopulation, deforestation, resource depletion, and land degradation. With the pertinence of environmental concerns in today's society, taking action to address such concerns will help to increase the longevity of the natural environment as well as the ability of businesses to sustain themselves. The benefits of environmental sustainability as a focal point of business strategy and recommendations for implementation for the issues that are addressed will be explained in the following sections.

Market Trends: Meeting the Demands of Consumers

Successful businesses and companies are those that are capable of effectively adapting to shifts in markets and trends. One of the fastest

growing market changes is the movement towards green consumption. While no form of consumption of products can be entirely “green” since everything someone buys, uses, and discards ultimately ends up as a waste product, the potential to buy products that minimize environmental impacts is present. In a study conducted by Kanchanapibul, Lacka, Wang, and Chan (2013), consumers have taken a more environmentally aware route when determining what products to purchase. Several sources, including access to media and academic knowledge, appear to be the greatest influencing factors in people who take environmental consideration prior to a purchase. In order for a business to excel and remain on par or ahead of competition, it must be able to effectively react to market demands like the call for sustainable innovation.

Businesses can take several steps to assure that they have progressed their technology to coincide with the more widespread environmental ideologies that have begun influencing consumerism. Another study conducted by Josephine Pickett-Baker and Ritsuko Ozaki found that consumers have expressed disappointment in the green marketing effort (2008). Pushing forth the concept of sustainability in marketing campaigns would further entice customers in a market where sustainability and environmental efforts are legitimate concerns to customers. However, marketing for sustainability creates more harm than good if done either ineffectively or untruthfully. With green marketing to appease consumers,

businesses should incorporate the idea of “transparency.” A company that is transparent with its customers and employees, according to a survey from *Forbes* (Lipman, 2013), creates a greater sense of trust. Employees that feel confident in their management’s openness with practices, missions, and values are more likely to want to work hard and effectively. If customers are able to see that companies have strong ethical values, especially with environmental concerns rising, customer faithfulness would be increased and thus be more prone to giving their business to these transparent, environmentally-aware companies.

Case Study: Nike, Inc.

Nike, Inc. is one of the world’s leading shoe and sneaker providers. This company is known for its infamous logo, the “Nike swoosh.” Being a globally recognized company, Nike has clearly maintained an effective business strategy since its founding in 1964. However, the world-renowned shoe company has not had its successful history without facing public backlash. Campaigning and protesting against the company came from the Nike consumers because of poor ethical and environmental practices. As Simon Birch wrote for *The Guardian* (2012), “With the campaign scoring a direct hit on Nike's bottom line, the corporation today operates with an openness and transparency that would have been unthinkable 20 years ago.” The severe backlash that the famous shoe company was faced with sparked significant operational changes that have appeased customers while

also led to great improvement ethically and environmentally. Technology has been enhanced so that Nike was able to begin recycling more of its shoes and reducing its waste. In doing so, the company has begun making more of its shoes from older materials and refining used materials to reuse. Nike had also, in response to the backlash, written a plan in order to reduce both the use of toxic chemicals and reducing toxic waste in waterways and workshops around the world. The company also has been uploading their Sustainable Business Reports in recent years to their public website, allowing customers to view the progress that has been made thus far and what goals will be attacked in the near future. Nike is a clear example of how being transparent with customers, adapting to market demands with respect to sustainability, and making use of technological possibilities can enhance a company's public image and strengthen its foothold for both environmental and business sustainability.

Energy Consumption: Renew with New Technology

The consumption of energy is one of the most environmentally straining practices that has come since the Industrial Revolution. According to the Environmental Protection Agency (2017), twenty-nine percent and twenty-one percent of greenhouse gas emissions in 2015 came from electricity production and industry, respectively. The relevance of greenhouse gas emissions is that these emissions are the waste products of energy consumption. By these statistics, half of all greenhouse gas

emissions in 2015 came from electricity production and industry. Of the energy used for generating electricity, two-thirds of it was done using fossil fuels. A direct correlation exists between greenhouse gas emissions and the consumption of energy. In order to reduce pollution to the atmosphere, reducing energy consumption and utilizing alternative energy methods are the most effective means of doing so. Reducing pollution makes sense both environmentally and economically, since it alleviates strain and damage done to the environment and saves money by being more cost-effective in terms of individual savings and expenses by other agencies to address environmental impacts. Technological achievements have made this current era in human history the peak of renewable energy.

Renewable energy may come in several forms. The design of Earth has created a multitude of opportunities for harnessing energy. Two of the most widespread shifts to renewable energy have been solar and wind power. Solar power converts sunlight to usable energy, including electricity, while wind power converts wind to usable energy all the same. These two factors of Earth are often overlooked as natural resources, but for the foreseeable future, the sun and wind are two resources that will be renewable for millions of years to come. The daunting aspect of these forms of energy, aside from the major infrastructure change that takes place to establish solar and wind energy sources, is the initial cost. The upfront cost of solar and wind energy is certainly not a cheap expense. However, the

cost of such energies has decreased as the technology has improved and increased their efficiencies. The cost of installing solar panels varies depending upon several factors, including size of the panels and type of building using the energy like homes, parking garages, or office buildings. Wind energy can be harnessed by wind turbines. These turbines, much like solar panels, have advanced their technologies to increase in efficiency and ultimately decrease in price. Wind power, as explained by “Lazard’s Levelized Cost of Energy Analysis” (2016), may cost anywhere between \$14 and \$62 per kilowatt hour, while solar energy ranges between \$68 and \$193 per kilowatt hour for solar commercial and industrial use. The cost of solar has decreased to 1/150th of its 1970’s rates and wind energy has doubled in consumption four times, as Tom Randall wrote (2016). While fossil fuel prices have also been slowly declining, both the availability and demand for fossil fuels and the size of the industry has been decreasing. Such financial and technological advancements in the solar and wind energy businesses open the path for businesses to get ahead in the route to finding alternative energy sources.

Case Study: Target

The use of solar energy has captured the investment of several of the largest companies in the United States. Target has just recently taken the lead as the American company that generates more solar power than any other company according to information from the Solar Energy Industries

Association (Fehrenbacher, 2016). Major companies, including Apple, IKEA, and competitor and runner-up in on-site solar energy production Walmart, have been implementing solar energy at greater rates in order to become more environmentally conscious as well as to save money in the long-term. Target is one of these companies that has recognized the true value of solar energy. The lower cost of solar panel installation in recent years has made a more compelling case for switching to alternative energy. While the initial cost of converting to alternative energy may be steep, the long-term savings that a company, like Target, will experience outweighs this upfront cost. With seventy megawatts of solar energy installed in 2016, Target has nearly doubled the amount of solar energy to 147 megawatts at 300 of its installations. Although some companies or managers may argue that the initial cost of solar energy can be dissuading, powerful companies like Target have seen that the benefits of this energy source will continue to be a more practical investment than consistently having to buy energy from an outside source. The technology behind solar energy has greatly improved, and other companies should follow Target's lead to utilize sustainable energy sources.

Resource Conservation: Continuing Production

Conserving resources is possible in multiple forms. One of the most commonly sought after means of resource conservation, and often most misunderstood, is recycling. Recycling itself can be done in several ways. However, what is seen as recycling is leaving plastic, glass, and paper

materials in a separate barrel on the curb for waste pickup which all gets taken to facilities that sort them for eventual reuse in other products. While curbside recycling certainly is useful in reducing consumption of these reusable resources, many products, especially electronics, batteries, and textiles, cannot be treated with curbside recycling. The capacity for standard recycling centers has not been reached to take in such products in non-sort recycling, so these products must be brought to specific centers for sorting and breakdown for reuse.

One popular practice that some companies have begun adopting is a take-back program. These types of programs occur when a company recycles old products by extracting as many reusable materials from them as possible. Not only does doing so prevent materials from entering landfills where they become pollutants, but companies can reduce the need to buy more resources when making products again. An example of a take-back program exploiting technological potential is Apple's "Liam," as highlighted by Ryan Whitwam (2016). Liam is a robot created specifically for disassembling iPhones to recapture the precious metals that allow it to function. In doing so, Apple can create savings both in terms of having to purchase resources as well as reduce its demand on the environment.

Sustainably sourced consumption is another method in which to conserve resources. EcoVadis, a company that provides a collaborative for companies to assess the environmental and social performance of their

global suppliers, defines sustainable sourcing as “the integration of social, ethical and environmental performance factors into the process of selecting suppliers” (2017). Should a company begin sustainable sourcing practices, purchasing will be done more sustainably, meaning that the processes of extracting materials would not actively remove the environment’s ability to provide a service or resource. Sustainable sourcing, while most popular in the food industry, is an important concept for businesses to undertake in realms other than food. Since sustainability in its broadest sense is about longevity, sustainable sourcing provides businesses with the opportunity to use resources for longer periods of time and in manners that reduce environmental harm or degradation.

Case Study: Interface, Inc.

Every product that is consumed and used daily comes from natural resources. One carpet company’s founder, the late Ray Anderson of Interface, Inc., gave a TED Talk describing sustainability in business (2009). He described himself as having transformed from “plunderer” to “recovering plunderer” by altering his company’s course of action with regards to resource management. He went on to describe industrialization in the United States as the “take-make-waste” system, one in which resources are taken, converted into a usable and sellable product, then thrown away once the consumer has replaced it. He knew and understood that the carpet industry was one that relied heavily on resources like petroleum; however,

he altered his company's policy to ensure that all resources were taken, used, and reused sustainably. Anderson embodied the meaning of sustainability, going as far as to recommend that "theft of our children's future" through unsustainable business practices be a crime. He believed that business and industry must be the leaders for sustainability. Some of the resource usage declines that Interface saw include decreasing fossil fuel use by sixty percent, water use by seventy-five percent for worldwide carpet tile and forty percent in broadloom carpets, and 148 million pounds of carpets being divested from landfills. Technological innovation at Interface has generated sustainable savings and substantially reduced its environmental impact. By cutting down its resource use without slowing production, Interface proved that reducing reliance on natural resources is an effective strategy to sustain both the environment and a business.

Overpopulation: Supplying a Growing Planet

Overpopulation is one of the leading sources of environmental strain. With more people on the planet, a greater demand for resources will become more apparent. According to predictions from the United Nations (2015), based on current growth rates, the global population can be expected to reach 9.7 billion people by the year 2050. With 7.3 billion people currently inhabiting the planet and resource scarcity already prevalent, the projected sharp increase will only exacerbate these problems. Increased population is attributed to some phenomenal technological advancements, including

better quality health care and discoveries in the medical world. However, the adaptation to this growing population by addressing environmental strain has lagged significantly behind. Overpopulation is an environmental issue that directly leads into resource conservation issues. Human welfare is the other most significant side effect from overpopulation. Not only is the environment being overdrawn from, but people are having less access than before to both natural and manmade resources than before. If businesses are to endure a rapidly growing population, they must learn to manage resources more sustainably and address the needs of this growing population.

Case Study: Qualcomm

Overpopulation places significant limitations to people in areas of the world where increasing population density is making a greater impact. In order to assist with such environmental and social strains, Qualcomm has created the Wireless Reach initiative to help people in underserved parts of the world (Dunn, 2017). The program's founder, Angela Baker, worked to create the wireless technology's public outreach program to deliver power and opportunity to people of lower socioeconomic status. In parts of the world like cities in India and Africa, population density has spiked in recent decades, creating limitations in the ability for people, especially the lower classes, to access fundamental services like health care, education, and public safety. However, by spreading the Wireless Reach program to forty-

six different countries, people affected by these projects can once again access these services while also learning about environmental sustainability. Helping to give people from around the world Internet access and the ability to use other necessary services in the modern world has reduced some of the negative effects from which people in overly populated areas suffer. This program especially empowers women, which is vital in population control. According to a study by Saurabh, Sarkar, and Pandey (2013), higher birth rates become more prevalent with lower literacy rates for women because they do not have as much information, or even access to it, about reproductive control. Programs like Wireless Reach look to empower women and impoverished communities by dismantling the barriers imposed by overpopulation. Wireless Reach from Qualcomm is a clear display that technological advancement in places in need can counter some environmental and social strains while also educating people about what can be done to prevent further damage.

Social Consideration: Helping People and Business

Implementing social consideration is an assured method for businesses to move towards environmental sustainability and become a more desirable company. A company that represents strong ethical values through social works and efforts can strengthen its status and increase its longevity in the eyes of stakeholders. Just as the newer generation of consumers is becoming more environmentally conscious (Kanchanapibul et al., 2013),

businesses must understand the values that younger generations have regarding social programs and technological innovations. While technological advancements can benefit the developed countries and their consumers, such innovation can place heavy burden on underdeveloped and developing countries. One of the most detrimental effects of not being socially mindful is the result of electronic waste. Electronic waste, defined by the EPA and commonly known as “e-waste” (2017), consists of electronics that have reached the end of their useful life and have been discarded. Since e-waste cannot be easily recycled unless done by the company making a specific product, much of the e-waste is shipped overseas to underdeveloped and developing countries. Once overseas, this e-waste is usually burned by people working for abysmal wages that cannot support daily needs. The harmful effects that burning such chemicals are suffered both by the environment and the people directly involved. Social consideration in terms of e-waste could easily come from technological advancements, similar to the robot Apple uses to disassemble iPhones.

The raw materials that are used to make every product must be extracted from somewhere. However, the manner in which resources are acquired is unsustainable both environmentally and socially. According to an infographic from Jeff Desjardins (2016), the United States is only a leading global supplier of a few specific raw materials, including fossil fuels like crude oil, petroleum, and coal, timber, and cotton. With so few commodities

that the United States is able to produce for itself, it must import most of its raw materials from other countries. The other countries on the infographic that are global leaders for certain materials include China, some Latin American countries, and some Middle Eastern countries, all of which are considered underdeveloped or developing. While the United States is highly developed, it relies on these lesser developed countries to supply the materials for products like computers and vehicles. A company or business becoming more socially considerate would permit the people working in these lesser developed countries to specialize and not work as laborers on behalf of a developed country. Not only would greater opportunities arise if businesses gave people more freedom in this instance, but practices like fair trade allow the workers to receive adequate compensation for their work as well as a better quality of life. If businesses could find alternatives to some of the raw materials that are used regularly, social equity would be a more achievable goal and ensure environmental, economic, and social sustainability.

Case Study: Issara

Exercising social consciousness in business is a practice that has proven to be profitable for businesses, suppliers, and the environment. One company that emphasizes social consideration is the designer bag manufacturer, Issara. Founder of Issara, which translates to “freedom” in Thai (Fox, 2016), Rosh Govindaraj aimed to combat the practice of “fast”

fashion in which products were built to be obsolete with a short life span. Issara supplies luxurious leather bags that also are made surrounding the idea of social and environmental ethics. Govindaraj had experimented with different workshops throughout Asia and Java as well as leather suppliers. She chose New Zealand for the supplier of leather for the bags because of the high standards of animal welfare. Issara does not use any artificial chemicals and provides all of its workers, from cattle raisers to craftspeople making the bags by hand, substantial benefits for lesser developed areas including health insurance, family savings plans, living wages, and safe working environments. By revolving the missions and goals of Issara around sustainability and social concern while searching for the best technology to do so, Govindaraj has been able to successfully permeate a competitive market with a product that can contend other larger brands. Because of the emphasis on social and environmental concern, Issara is a company that can also sustain itself financially by having loyal, satisfied employees and continually aiming to make a positive impact in peoples' lives in lesser developed parts of the world.

Conclusion: Embrace Sustainability

Sustainability has gained a significant foothold in American culture in recent years. Although climate change is the most debated topic in regards to sustainability and has become more of a political issue rather than

scientific in popular culture, the argument that sustainability is a practical solution to many of the country's and planet's environmental strains has become relatively solidified. The potential for sustainability to generate success in many facets of society has never been greater. Technological innovations have created significant potential for environmental sustainability to make an actual difference.

Businesses are some entities that would benefit the most from adopting and practicing sustainable business practices. With how prevalent technology has become and how much emphasis is placed on innovation, businesses should incorporate sustainability into long-term goals, missions, and values. Sustainability does not benefit only the environment; people around the world, both those in developed countries like the United States and developing or underdeveloped countries like India and China, would reap the benefits of environmental sustainability. After all, the term "sustainability" is inherently anthropocentric since it concerns sustaining the planet's functionality for future generations of humans. As Ray Anderson said (2009), businesses and industry are the forces that must lead the rest of the planet out of the difficulties caused by environmental unsustainability. In order for business to continue succeeding in the distant future, sustainability should become a widely accepted and adopted practice. The availability of technology and its potential to truly help humanity and the environment has never been higher; the time has come to put it to use.

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