Samsung: The Re-Greening - Proposal of Changes to Samsung Website to Increase Accessibility to Samsung's Take-Back Programs

For: Samsung Electronics Device eXperience (DX) Division

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Introduction

1. Introduction

Electronic waste is one of the fastest-growing pollution problems in the world. Major tech companies have fast-tracked their innovations by instilling fear among consumers, with the idea that their personal devices are at risk of becoming obsolete. The technology industry is fast paced and efficient in regards to releasing groundbreaking innovations and leaping at new opportunities for business profits. However, these tech companies are subject to scrutiny for manufacturing short lived devices that have significantly increased the rate of disposal and toxic emissions released into the atmosphere. (Freitag, and Blair). One tech company, Samsung Electronics, has moved towards new systems and processes to combat electronic waste around the world, and reduce global warming in our environment.

Over the past decade, vast amounts of new research and statistics on global warming have revealed that our planet will not survive the future if humanity does not change its way. The existence of global warming, which was once a nonexistent topic, has quickly gained immense traction and support from the public, government, and various tech companies. These tech companies have slowly recognized and acknowledged the detrimental impacts that their products have on humanity and the environment. Specifically, the South Korean tech corporation, Samsung, has taken the lead in managing e-waste by publicly acknowledging and informing their consumers of the potential risks that may arise if electronic waste is not disposed of properly. (Abdelshafie et al.). Samsung has developed a systematic operation at no cost to the consumer to combat this major problem. After further research, our group found that Samsung's website is consistent with their CSR report by encouraging the recycling of e-waste. Despite this, the

website fails to properly market its sustainable practices and how consumers can efficiently navigate their e-waste management process.

2. E-waste problem

Electronic waste or “E-waste” is commonly referred to as used, electronics or home appliances that are nearing the end of their life span, and are discarded, without any intention of being reused. (WHO). This is due to the major role that tech companies play in the direct creation and accumulation of e-waste worldwide. As a vast majority of electronic devices lack both a sustainable product design and a robust lifespan thus, creating a large waste stream of obsolete electronics with scarce amount of resources for upkeep. For example, WHO emphasizes,… in 2019, nearly 53.6 million tons of e-waste was generated globally, and only 17.4% of the e-waste was collected and recycled properly.” (WHO). Unfortunately, the improper disposal of e-waste (in reference to the 2019 statistic) poses various dangers to our environment and wellbeing. There are several consequences posed by e-waste if it is disposed improperly, which will lead to the release of hazardous chemicals into the environment, advancing climate change and polluting our planet. In addition, these toxic materials and chemicals are also susceptible to having an adverse effect on human health, if improperly prepared, and in close proximity during the disposal of the electronic waste. (WHO). Nevertheless, the technology industry has widened the gap between advanced technologies and their repercussions impacting humanity and the world.

Electronic waste management in the U.S. has shifted the burden of e-waste abroad. As the United States and other developed countries adapt the process of simply exporting the majority of e-waste into developing countries that are severely lacking in resources, unable to reject or handle the disposal of e-waste properly (EPA). As a result, several developing countries

have established their own business model to help combat the massive amounts of e-waste being imported in. What are commonly referred to as “backyards” are informal recycling markets that can be found across China, India, Pakistan, Vietnam, and the Philippines. (McAllister). These markets handle between 50% to 80% of their own e-waste by shredding, burning, and dismantling the devices without the proper resources or equipment. (McAllister). Which ultimately endangers several individuals, as they are more physically vulnerable to encountering e-waste firsthand, and risk their health. As electronic waste is still being dispersed unfairly across the globe, it is threatening the future of our environment and humanity as a whole. Nonetheless, some major technology companies are shifting their focus and business to a more sustainable approach that deflects from traditional models of production.

3. E-waste management infrastructure (circular model)

Many technology companies are changing their traditional ways of operation, to a more efficient and sustainable business model that aims to protect our planet. The global tech producer, Samsung Electronics, is moving towards integrating a circular economic model into its operations, which specifically targets the environmental, social, and economical impacts. According to the Multidisciplinary Digital Publishing Institute, “A circular economy depicts an economic system that is built on business models which replace the ‘end-of-life’ concept with reducing, alternatively reusing, recycling, and recovering materials in production, distribution and consumption processes.” (Diaz). Moreover, the circular economic model is a regenerative system that has proven to generate much less electronic waste than a linear business model. Samsung Electronics is ranked as one of the biggest e-waste collectors in the world — they have taken back more than 1 billion pounds overall in the United States since 2008. (Serzhena). However, for this title to stay relevant, Samsung Electronics has put significant efforts in the

collection of e-waste both locally and internationally, and continues to safely dispose of e-waste, as well as integrating an almost efficient green management program.

4. Samsung's sustainability

For instance, the multinational conglomerate Samsung Group has taken a leadership role in recycling e-waste and acknowledging the significance of electronic waste management. After further research, our group found that Samsung's website is consistent with their CSR report by encouraging the recycling of e-waste. Despite this, the website fails to properly market its sustainable practices and how consumers can efficiently navigate their e-waste program. However, after further research, our group found that Samsung's website encourages recycling e-waste. Still, the website fails to properly market its sustainable practices and how consumers can efficiently navigate their e-waste program.

Driving Question

Our driving question is: How can we improve consumer accessibility to Samsung's sustainability practices through their website considering socioeconomic, technological, and psychological challenges?

Reasons for improving the accessibility of sustainable practices at Samsung include combating green marketing, gaps in Samsung's sustainability practices, and accessibility concerns. Our preliminary research into e-waste and Samsungleft us with these major concerns and the goal of figuring out how to address them. The following paragraphs outline the specific research that informs our opinions about Samsung's sustainability practices and lays the groundwork for our final project outcome.

Research

1. Initial research

We first reviewed the firm's Corporate Social Responsibility (CSR) report for 2023, officially titled Sustainability Report, which reveals ample efforts by the firm in becoming more sustainable in their operations: Page 7 introduces key stakeholders and describes "major activities" being done to center sustainability in their interactions with their stakeholders. For example, "sustainability specialists" are hired at all corporate levels to keep their customers informed (Samsung 7). Page 9 highlights product sustainability, detailing the life cycles of their product lines: They utilize a "Device eXperience Division" who selects the raw materials with the least environmental impact for products, collects e-waste for the recycling program, and leads the take-back program (Samsung 9). To support their current efforts, Samsung also provides numerical data and ratings exhibiting progress. Page 11 notes how their products in 2023 exceed the South Korean government's energy efficiency rating by 10 to 60% (Samsung 11). Page 108 notes how energy consumption from their products have been reduced between 18 to 32% yearly from 2020 to 2023 (Samsung 108). Page 109 notes that 95 to 97% of all waste is recycled from 2020 to 2023 (Samsung 109).

Another report that we reviewed was the firm's Environmental, Societal, and Governance (ESG) report produced by Morgan Stanley Capital International (MSCI). ESG scores are rated on a 7-point scale from CCC to AAA, and measure a company's financial resilience to risks related to environmental, societal, and governance issues. Samsung has held an ESG score of A since December 2021 (MSCI). An A-score means that of the 87 companies in the industrial conglomerate industry, Samsung's ability to resist is "average". Broken down further, the company has been rated as a "leader" in corporate governance but a "laggard" in corporate

behavior. Additionally, they are “average” in their health management, labor management, and opportunities in clean technology. Considering the challenges posed to the large electronics conglomerate, the firm’s score reveals that they are doing an “average” effort of resisting decisions that threaten the environment.

Given that the CSR report is an internal evaluation of the firm’s operations, there are risks of personal bias and greenwashing. To mitigate these risks, the ESG report conducted by MSCI was analyzed to provide an external evaluation of the firm. Comparing these two reports, ample overlap of information was found of Samsung’s current sustainable efforts. Although the firm received an “average” ESG score by MSCI, the sustainable operations laid out by the firm in their CSR report prove they are moving towards an environmental direction. They may not have reached their goal of being a fully sustainable firm yet, but they are at least putting ample effort in working towards this goal. Thus, we can conclude that Samsung’s efforts are genuine and progressing, and align with the perspectives of financial companies such as Morgan Stanley.

2. Gaps in research

After our initial background research on Samsung, we decided to pivot towards measuring their sustainable initiatives’ effectiveness on consumers. With ample evidence of Samsung’s sustainable efforts already existing in the current body of research done, we decided to find a gap in our own personal experiences with the firm: We noticed that the firm does not explicitly make known to the public, their consumers, their sustainable practices such as their take-back program. Their link to the program is not easily accessible on the firm’s website - it is not located on the front page. In fact, their general “Sustainability” page is not even highlighted - it is located at the very bottom of the website.

3. Arrival to proposed solution

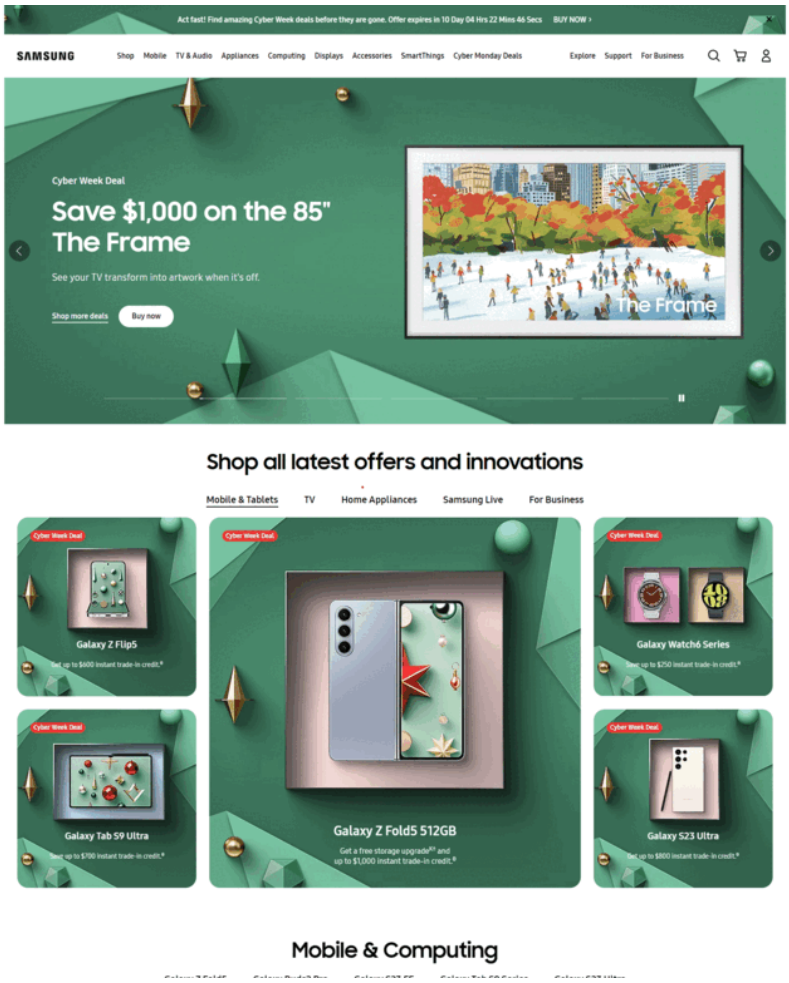
We suggest that if the firm were to embrace their recent sustainable efforts and slightly rebrand as a ‘green firm’, then more of their consumers would be involved in sustainable efforts such as the take-back program. Consequently, we reworked their current website as a suggestion to the firm, showcasing “Sustainability” and their take-back program. Key redesigns include having the word “Sustainability” located at the top of the front page in green and showcasing information of the take-back program on the front page.

Proposed Change

We propose to edit Samsung's website to make the sustainability pages more apparent, thus garnering Samsung sustainability programs more traffic/use at zero cost. So far in 2023, Samsung is receiving 500 million to 1 billion views on its website every month, meaning that increasing visibility to Samsung's sustainability programs on its website by even 1% would yield 5 million to 10 million extra monthly views to this program that previously would not have happened. This speaks to Samsung’s hegemonic market position. To enhance the effectiveness of the website, we can present a reworked website page and compare it with the original design. This rework would put their sustainable programs to the forefront (in line with the eye movement tracking studies presented below) in order to increase their traffic, attention, and use. This comparison can be further enriched by conducting surveys to gauge the effectiveness of the changes.

One key alteration in the new design is the relocation of the sustainability banner to the top of the page, whereas before it appeared below sales banners including “Appliances” and “Computing.” Adding the banner to the top of the page above banners such as “Home Appliances” and “Shop all latest offers and innovations” more properly reflects the priorities of

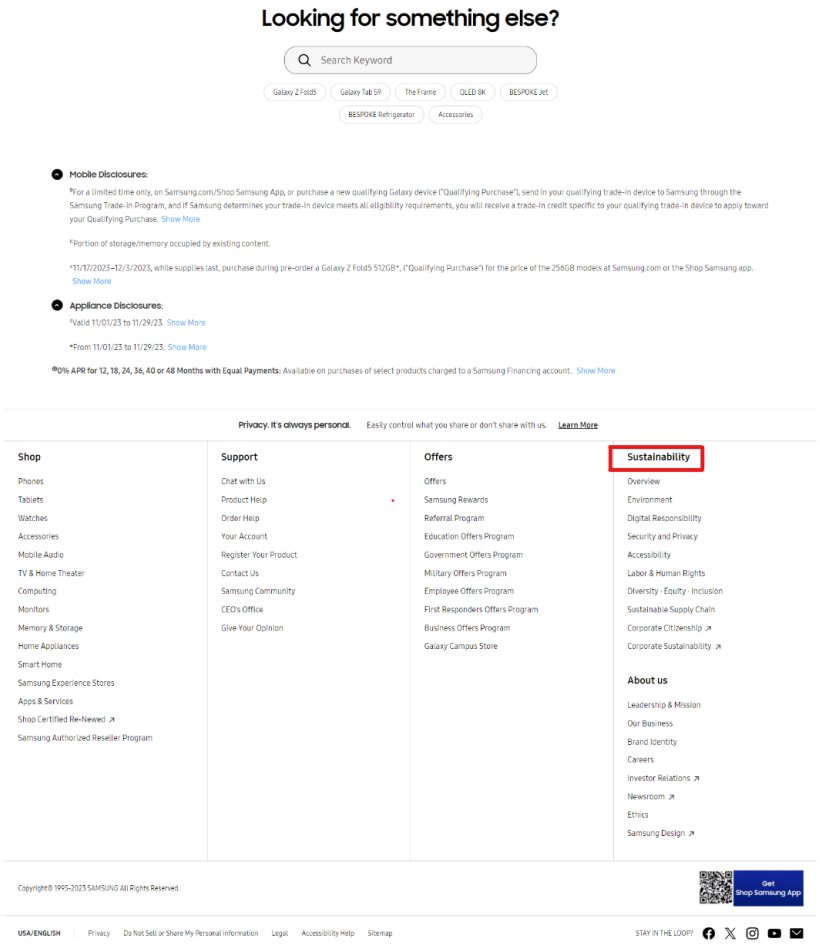
the company. This will be more apparent for the millions of users that access the website every month and will inevitably lead to more traffic to those programs. Additionally, we added a “Sustainability” link to the top navigation bar. Changing this to green will also increase the draw of users' attention, the difference of which is shown in the images below.



Side-by-side comparison/GIF of Samsung’s original site and our modified website with the relocated “Sustainability” banner, and addition of a “Sustainability” tab on the homepage

Another key change we are proposing applies to Samsung’s international websites. Currently, the U.S. website is the only one with sustainability links or banners that are accessible

from the homepage. Samsung's webpages in Europe, Asia, and South America all contain a link to their “Sustainability” page, but it is hidden at the very bottom of the front page. The traffic to these sustainability pages is even lower than in the United States. As shown below, outside of scrolling to the very bottom of the page, there is no other way to access the subpages (ex: samsung.com/in/sustainability/enviornment). Even then, it is very difficult to find the link once you reach the bottom. Bringing these elements to the top of the front page through techniques such as making a banner would surely increase traffic to the page, and thus engagement in the program itself- all at minimal expense to Samsung’s bottom line.



Pictured: the bottom of Samsung India's homepage, with the Sustainability tab circled in red to highlight its obscure position.

Evidence

The culmination of research on eye movements, color-theory, and information location informed our decisions on the updated research design for Samsung.

1. Primacy and recency effect

In a study done regarding image location on a hotel website, researchers found that images at the top of the website are more effective and memorable (Francisco). This is further proven by the primacy and recency effect. The primacy effect states that items seen first and last are the most memorable, while items in the middle are easily forgotten. The recency effect is similar in that items that you have seen recently are the ones you remember better. Currently, the sustainability section on the Samsung website is in the middle of the website, the most forgettable spot (Mcleod).

2. Eye movement tracking studies

Eye-movement tracking studies concur with these theories, and also determine that the left side, rather than the right, is the first priority (Laja).

Seeing as Samsung has their company logo in priority 1, we recommend that the sustainability tab be added to the header in the second priority box.

3. Color theory

Lastly, based on color theory, green is associated with the environment and nature. The addition of the "Sustainability" tab in green makes it stand out from other black headings and attracts the attention of consumers (Innovations).

Analysis

By proposing changes to Samsung's website with applications of psychological theories, we hope to increase website traffic for our "Sustainability" tab and information regarding the firm's takeback program. Given that these changes are not to alter or generate a sustainable program but rather to modify user experience on their digital platform, little to no costs would be incurred by the firm. Our proposal highlights making the firm's current sustainable operations more accessible to its consumers while being cost-effective in implementation.

The next step in our ongoing project to re-green Samsung would be to test the effects of our changes. We propose a formal research experiment to be conducted in which we compare

how long website users locate the “Sustainability” button/page on the original website versus on our modified website. Our desired outcome for this experiment is to observe a significant reduction in the time it takes to locate sustainability options on Samsung’s website. Such an outcome would support our claim that our website changes have made Samsung’s sustainability information more accessible to the website’s visitors. All in all, such an experiment would provide measurable and quantitative data that supports our qualitative analysis in our current proposal.

On the design aspect of our project, more changes could be made to the website to further propagate an environmental theme that informs Samsung’s stakeholders of the firm’s sustainable operations. Such changes can include but are not limited to, utilizing the color green more throughout the website, or showcasing a statistic of recycled phones in the current year on the front page of the website. We have reason to believe these two changes could further induce a sustainable mindset within Samsung’s consumers, and potentially increase the participation rate in the take-back program as well due to research into the psychological aspects of visual stimuli.

Conclusion

Early in our research, we realized that there were sustainability practices already implemented within Samsung’s business model including their take-back program and recycling. However, the flow of e-waste is still high with Samsung being a major stakeholder involved in this process. Through our driving question “How can we improve consumer accessibility to Samsung’s sustainability practices through their website considering socioeconomic, technological, and psychological challenges”, our project aimed at making sustainability practices for the major electronic company more accessible to consumers. We have reason to believe that Samsung is taking steps towards sustainability due to internal and external reports on

sustainability, as well as research into their sustainability practices such as take-back programs. Our proposed modifications to Samsung's website, a major selling point for the producer, aim to improve accessibility and participation rates to Samsung's existing sustainability practices. We believe this model to have the potential for success due to research in psychology.

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