

LFS 350 Final Community Project Report

CityStudio- Plastic Bag Reduction at Killarney Community Centre

Group 11

Theresia Clairine, Puloma Kaushal, Courtney Lau, Anica Li, Helen Zhou

The University of British Columbia

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Introduction

Our community-based learning project is the “Reduction of Single-Use Plastic Bags at Killarney Community Centre”. This project is a collaboration between CityStudio which is an innovation hub, founded with SFU (City Studio, n.d.) and the City of Vancouver where city staff, students, faculty and community work together to design experimental projects that make Vancouver more sustainable, livable and joyful (City of Vancouver, n.d.-b).

Two million plastic bags are thrown into landfills in Vancouver weekly (City of Vancouver, n.d.-a). Their inability to biodegrade signifies the long-term harm of ‘throwaway’ culture of consumers which is a significant barrier to sustainable development and consumption (Ritch, 2009).

To address issues of high single-use plastic bag usage as well as low waste diversion rates in Killarney Community Centre (KCC), this project supported the City of Vancouver’s Zero Waste 2040 Strategy which aims to implement policies and actions for Vancouver to achieve zero waste by 2040. We focused on The Single-Use Reduction Strategy which aims to target single-use items such as plastic bags and reduce the amount going to landfills (City of Vancouver, n.d.). KCC is one of two city owned facilities with the lowest waste diversion since 2012 (P. Gagnon, personal communication, September 18, 2019). Waste diversion is characterized as the reduction of waste going into landfills by diverting it recyclable or organic waste.

The City of Vancouver has identified the need for its engineering team to have a report of global and corporate initiatives which have invoked a shift in behaviour of the general public to reduce the consumption of plastic bags and commit to proper waste

disposal. The team also identified slogans to be an effective method of this change and asked us to create a few strong slogans to potentially be posted on future signage at KCC. The objective of this report is to meet these needs.

Methods

Data Collection

We conducted scholarly and web-based searches for global and corporate plastic bag reduction strategies as well as the characteristics of effective slogans so that every aspect of our project was evidence-based. Using these theoretical guidelines, we created three slogans to encourage the use of reusable bags and compiled a list of various global and corporate initiatives.

Ethical Considerations

Each member of our group attained the TCPS-2 certificate for Ethical Research before conducting research. An Asset-Based Community Development approach was used during our site visit to identify existing assets such as any present signage or slogans (Mathie and Cunningham, 2003).

Results

Site Visit

During our October 5th site visit which lasted from 2:30-3:30pm, we scanned the facility and learnt that the centre includes a pool, fitness centre, rink, and bookable community rooms. We found the majority of visitors to be either youth under the age of 18 or seniors over the age of 55. Additionally, we proposed to have the signage (slogans and waste

bin labels) written in English, Chinese, and Mandarin to meet the language needs of many patrons.

Global Sustainability Initiatives

1. Alberta, Canada: Partnership with Canadian Retail Associations

Alberta's Plastic bag distribution reduction strategy decreased the number of plastic bags distributed by 21.6%, a gross reduction of 160 million bags (Retail Council of Canada, Canadian Federation of Independent Grocers, & Canadian Association of Chain Drug Stores, 2013). They found these practices to be most effective in altering consumer behavior: broadening in-store communication, implementing customer incentives such as rebates or loyalty points for bringing reusable bags, providing alternate reusable bags or cardboard boxes, adding plastic bag recycling bins, and integrating branded reusable bags highlighting environmental programs.

2. Kamikatsu, Japan: Recyclable Paper Point Campaign

This campaign was launched in 2014 to promote paper segregation to reduce incineration waste (Zero Waste Academy, 2018). Point cards were distributed to local residents so they could collect points when they brought paper waste such as scrap paper. The collected points could be exchanged for merchandise. A draw was held once a month, where ten selected winners were given gift coupons to shop in Kamikatsu to enjoy the benefits and rewards of participating (Zero Waste Academy, 2018).

3. Woolworths & Coles, Australia: Self-Imposed Bag Prohibition

In 2017, Woolworths and Coles -two of the largest supermarket chains in Australia- declared that they would stop using plastic bags (Slezak, 2017). Woolworths claimed to hand out more than 3.2 billion plastic bags each year (Slezak, 2017), and started to offer a range of reusable bags to buy. By December of 2018, the National Retail Association (2018) stated that 1.5 billion single-use plastic bags were eliminated which lead to an overall decrease of 80% in the plastic bag consumed by December.

4. New Jersey, United States: Reusable Bag Education Program

Sustainable Jersey (2018) is a nonprofit organization that established a reusable bag education program which includes encouragement of press releases and outreach and targeted events to promote awareness of decreasing plastic bag usage. Municipalities within New Jersey hold community-wide events to give away reusable bags as well as school assemblies for the showing of “BAG IT”, a movie addressing the concerns and negative effects of plastic bags. The events have had attendance rates ranging from 65 to 6,000 people with additional public outreach through distribution of flyers and press releases.

5. Toronto, Canada: A High School Recycling Program

When it was noticed that students of a Toronto high school were throwing waste on floors and throwing compost in waste bins, CleanRiver partnered with the school to perform a waste audit. The company suggested an installation of Transition® bins at advised locations and customized graphics, branded with the

school's logo. Transition® bins allowed the waste and recycling to be collected in the same bin. Two weeks after the installation of bins and graphics, it was found that recycling stream contamination decreased by 72.5%, diversion rate increased by 20%, and there was positive cultural change (CleanRiver, 2019).

Corporate Plastic Bag Reduction Strategies (n=20)

Through a web-based search we have collected data on 20 companies regarding their strategies around plastic bag reduction.

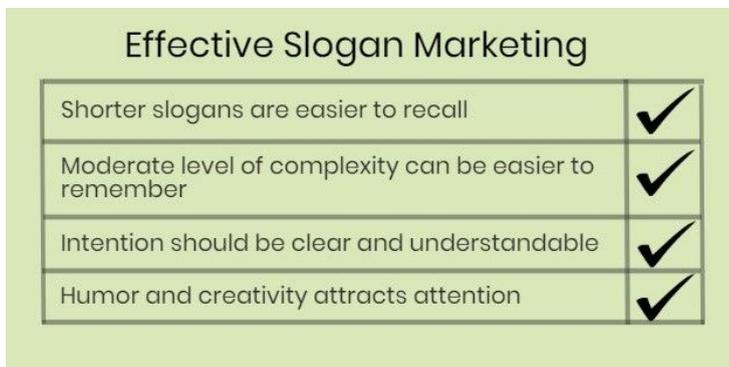
Plastic Bag Reduction Strategy				
Company	Cardboard	Reusable Bag	Paper	Combination of one or more
Costco	x			
Walmart				x
Safeway				x
Whole Foods			x	
Krogers		x		
IKEA				x
Loblaws		x		
London Drugs		x		
Starbucks			x	
IGA		x		
Trader Joes				x
HelloFresh	x			
ThriftyFoods				x
Superstore				x
Kin's Farm Market				x
Publix				x
Walgreens				x
CVS				x
Aldi				x
Target		x		
Sodexo				x

Figure 1: List of companies and their strategies towards reducing plastic bag consumption

In summary, it was observed that 25% of companies began offering reusable bags to consumers as a substitute for plastic bags while 10% of companies offered paper bags or cardboard boxes.

Slogans

In 2008, there was a Swiss study that evaluated the effectiveness of slogans designed to encourage the recycling of batteries. We combined the discoveries of this study and those of an article on guidelines of effective slogans from a report called Business Horizons in Figure 2.



The image shows a table titled "Effective Slogan Marketing" with a light green background. The table has two columns: the first column lists four marketing strategies, and the second column contains a checkmark for each strategy, indicating they are effective.

Effective Slogan Marketing	
Shorter slogans are easier to recall	✓
Moderate level of complexity can be easier to remember	✓
Intention should be clear and understandable	✓
Humor and creativity attracts attention	✓

Figure 2: Effective slogan marketing strategies

The 3 slogans we presented at our community partner meeting, which our partners were impressed by, were:

- I. It's only 1 plastic bag...said 8 billion people.
- II. I don't mean to brag, but I brought my reusable bag!
- III. It's time to stop plastic pollution with this easy solution-bring your own reusable bag.

A recycling bin signage company known as Clean River Recycling Solutions, which has found a decrease in contamination rates by 52% through their custom-made bin signage, has

a list of effective signage strategies which we inserted into figure 3.



Figure 3: Effective signage tips as identified by Clean River Recycling Solutions

Discussion

Limitations

Our site visit lasted 1 hour and the observed demographic did not encompass all individuals, especially those who visit during different times and days. Since many of our group members are residents of the Killarney community who are aware of the neighborhood's cultural makeup, they believe that effective signage can be understood by most patrons if written in Chinese alongside English.

The Swiss study on effective slogan traits was done on the packing of batteries, thus results may not be reflective of those from community centres as our slogans may be visible in public spaces rather than in private homes. The differences in external influences of others as well as visibility (small packaging writing versus large colorful signage) may also result in differences in consumer or visitor compliance. Despite these differences, the qualities of

effective slogans as determined by the study were useful in our creative process of designing our own slogans.

Conclusion

Our CBEL project contributes to the City of Vancouver engineering team's need for a concise resource of potential initiatives, signage, and slogans to be implemented in support of the Zero Waste Strategy. Food justice exists when ways food is grown, processed, transported, distributed and consumed are shared in a fair manner and common goals are linked with other social justice activism and advocacy (Gottlieb & Joshi, 2010). Not only is plastic bag usage detrimental to the contribution of greenhouse gases, but this leads to significant long-term climate change (Astrup *et al.*, 2009). Reducing single-use plastic bags helps minimize harmful ecological impacts to achieve community food security and a more sustainable food system (Spranz *et al.*, 2018).

Next Steps

Moving forward, the next steps are to adapt, implement, and test global and corporate plastic bag reduction initiatives in Vancouver to measure their contributions to the Zero Waste Strategy.

We hope that a team, perhaps one of future LFS 350 students, will be able to take our researched data to create and post signage with slogans at community centers and test for changes in waste diversion rates.

Appendix

Critical Reflections

Puloma

This being my first LFS course in-class (I was in Science first year and took LFS 250 online), I was very appreciative to have been placed in a group with such interdisciplinary, supportive, hard-working, and genuinely dedicated members. Not only did the deadlines and marking rubrics motivate us to do well, but we had an inherent interest in providing the city's team of engineers a useful document which could be an informative resource in increasing waste diversion rates and reusable bag usage in KCC and potentially, other public spaces in Vancouver. This project was very well balanced in the types of tasks it required as we had the opportunity to conduct literature searches, interact professionally with CityStudio and City of Vancouver, but also use our creativity to design the slogans and the infographic. I understand that assessing, implementing, and testing these slogans and initiatives is a lengthy and rigorous process but I hope that our project is a sufficient catalyst in beginning this journey. I also look forward to seeing how our slogans and signage strategies are used by future LFS 350 students who can perhaps mold their term project on testing if and how they alter waste diversion rates in KCC. Overall, I am grateful that this project was one which supported the societal cause of decreasing landfill waste and wish to see how it, among other student-led sustainability plans, contributes to achieving a zero waste Vancouver.

Anica

I appreciate the rare opportunity LFS 350 has provided me through the collaboration with our community partners, CityStudio Vancouver and the City of Vancouver, to work on the “Reduction of Single-Use Plastic Bags at Killarney Community Centre” project. During the process of creating our proposal, we were tasked with connecting our project to community food security. However, I was stumped because I did not understand what our project had to do with community food security. I eventually learned how our project was connected to community food security, through ecological sustainability. Our project involved finding strategies for reducing the usage of single-use plastic bags, which therefore would reduce the amount of plastic polluting the various ecosystems, especially the ocean.

The process of the community project was time-consuming and challenging in terms of finding reliable sources of literature, developing a proposal, and designing an infographic. Despite those challenges, I have enjoyed working alongside such dedicated and hardworking group members. I am quite proud of what we as a group have accomplished in the span of three months and I look forward to having one of our slogans being used promote the Zero Waste Strategy 2040.

Theresia

The community project has been a great opportunity for me to have hands-on experiences to address low waste diversion rates. This project is not limited to find strategies to reduce the use of plastic bags, yet also eye-opening for me that it relates to ecological sustainability, while at the same time affecting the community food security. Before taking

this LFS 350 course, I never realized to the extent that our daily activities such as throwing plastic bag away can be destructive for food system in the long term. Moreover, this collaboration with the City of Vancouver and CityStudio Vancouver gave me some insight into how to work with professionals. I am also grateful because through this project, I can work together with amazing teammates who are supportive and driven individuals and received unlimited support from the teaching team through guidance and useful feedback and that we can implement to improve our work.

Helen

Through completing our community project, I have gained much more knowledge on the City of Vancouver's initiative of Zero Waste 2040 and how our project can be a major contribution to help reduce plastic bag usage among the community. I have also learned to connect concepts of the food system with topics that may have seemed to have no correlation, such as plastic bag waste. Topics of the food system, such as Community Food Security or Food Justice are impacted with plastic bag consumption and I have learned to realize the importance of these plastic bag reduction strategies.

Along with strengthening my understanding of sustainability strategies surrounding plastic bag waste as well as global and corporate initiatives, I have also acquired transferable professional skills through this project. Through collaboration with both City Studio and City of Vancouver, I have gained valuable insight into the expectations, roles and responsibilities of professional collaboration and project development. Working with a group of committed and enthusiastic group members, I have learned a lot through their work ethic and

determination and I feel as though I am much more prepared to work on projects involving professional collaborations.

Courtney

As a student who recently has been more intrigued by the idea of the policy aspect of the food system rather than solely on the nutrition aspect, I chose this project with the mindset of exploring new areas outside my main interests. Through working with CityStudio and the City of Vancouver, my group members and I were challenged to find connections between concepts we learned in LFS 250 and LFS 350 to real-life problems such as single-use waste in the city. In addition, when the community partners decided to shift the focus of the project from slogans to waste diversion initiatives, it reminded me that in the food system, nothing is static.

I believe that my understanding of food justice has changed from what I thought at the beginning of the course. Because of the word “food” in food justice, I was lost in connecting the term with plastic bag usage. Now, I have learned that food justice does not exclusively surround the sustainable and cultural ideas behind food, it also includes how we distribute and transport foods.

Overall, this course has provided me with a wonderful opportunity to work with professional workers in the food system as well as hard-working and dedicated team members that helped make all this learning possible. I now feel more equipped with skills and knowledge to work with and along-side stakeholders for future projects.

References

- Astrup, T., Fruergaard, T., & Christensen, T. H. (2009). Recycling of plastic: Accounting of greenhouse gases and global warming contributions. *Waste Management & Research*, 27(8), 763-772. doi:10.1177/0734242X09345868
- Barboza, L. G. A., Vethaak, A. D., Lavorante, B. R., Lundebye, A. K., & Guilhermino, L. (2018). Marine microplastic debris: An Emerging Issue for Food Security, Food Safety and Human Health. *Marine Pollution Bulletin*, 133, 336-348. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0025326X1830376X>
- CityStudio. (n.d.). About CityStudio Vancouver. Retrieved from <https://www.citystudiovancouver.com/what-we-do/>
- City of Vancouver. (n.d.-a). Single-use item reduction strategy. Retrieved from <https://vancouver.ca/green-vancouver/single-use-items.aspx>
- City of Vancouver. (n.d.-b). Sustainable food systems grants. Retrieved from <https://vancouver.ca/people-programs/sustainable-food-systems-grants.aspx>
- CleanRiver. (2019). High school makes recycling program cleaner. Retrieved from <https://cleanriver.com/case-study/high-school-recycling-program/>
- Environmental Initiatives - Reducing global impact. (n.d.). Retrieved from <https://www.safeway.ca/about-us/sustainability/environmental-initiatives>.
- Gottlieb, R., Joshi, A., & Project Muse University Press eBooks. (2010). Food justice. Cambridge, Mass: MIT Press.
- GreenBiz (2008). IKEA to phase out plastic bags in U.S. Retrieved from <https://www.greenbiz.com/news/2008/04/02/ikea-phase-out-plastic-bags-us>.
- Hansmann, R., Loukopoulos, P., & Scholz, R. W. (2009). Characteristics of effective battery recycling slogans: A swiss field study. *Resources, Conservation & Recycling*, 53(4), 218-230. doi:10.1016/j.resconrec.2008.12.003
- Kohli, C., Leuthesser, L., & Suri, R. (2007). Got slogan? Guidelines for creating effective slogans. *Business horizons*, 50(5), 415-422. doi:10.1016/j.bushor.2007.05.002
- Mathie, Alison, and Gord Cunningham. "Who is Driving Development? Reflections on the transformative potential of asset-based community development." *Canadian Journal of Development Studies*, vol. 26, no. 1, 2005, pp. 175.
- National Retail Association. (2018). 1.5 billion single use plastic bags eliminated since July. Retrieved from <https://www.nra.net.au/media-release/1-5-billion-single-use-plastic-bags-eliminated-since-july/>

- Newsroom. (2008.). Retrieved from <https://media.wholefoodsmarket.com/news/whole-foods-market-to-sack-disposable-plastic-grocery-bags-by-earth-day>.
- Retail Council of Canada, Canadian Federation of Independent Grocers, & Canadian Association of Chain Drug Stores. (2013). Alberta plastic bag distribution reduction strategy. Retrieved from <https://www.alberta.ca/assets/documents/ep-plastic-bag-reduction-2012-report.pdf>
- Slezak, M. (2017). Woolworths and Coles to phase out single-use plastic bags. Retrieved from <https://www.theguardian.com/environment/2017/jul/14/woolworths-to-phase-out-single-use-plastic-bags-over-12-months>
- Spranz, R., Schüter, A., & Vollan, B. (2018). Morals, money or the master: The adoption of eco-friendly reusable bags. *Marine Policy*, 96, 270-277.
doi:10.1016/j.marpol.2018.01.029
- Sustainable Jersey (2018). Reusable education program. Retrieved from http://www.sustainablejersey.com/actions-certification/actions/?type=1336777436&tx_sjcert_action%5BactionObject%5D=507&tx_sjcert_action%5Baction%5D=getPDF&tx_sjcert_action%5Bcontroller%5D=Action&cHash=10433e6ede5425af2cb18f9d4b336a31
- Sustainable Packaging. (2019). Retrieved from <https://www.costco.com/sustainability-packaging.html>
- Zero Waste Academy. (2018). The zero waste measures of Kamikatsu, Tokushima Prefecture. Retrieved from http://zwa.jp/wp/wp-content/themes/zwa/assets/pdf/ZeroWaste%20in%20Kamikatsu_infobook_2018.pdf