Put Waste in its Place:

Takeout Containers

A Literature Review
& Project Summary

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Abstract

As communities strive towards a sustainable future, waste management has come to the forefront as being an issue that needs urgent addressing. Because recycling and reusing alone are no longer viable approaches, reducing solid waste is being adapted as the new norm. One of the greatest contributors to solid waste are single-use containers endemic to the food service industry.

To establish the best approach to waste reduction in the context of single-use takeout containers, this review provides background to the barriers and motivators that are most significant in changing consumer behaviours to more pro-environmental practices, explores what past initiatives have been implemented globally to gauge the likelihood of success and to avoid past mistakes, and lastly it ascertains how visual reminders can best be used as a tool in effecting waste reduction goals. Drawing on the existing literature a proposal was made for a sticker campaign that would serve as a visual reminder to encourage diners at various food vendors to bring their own reusable containers. The review concludes with future recommendations for the direction of the sticker proposal and makes suggestions on ways in which to build on the initial project.

[keywords: pro-environmental practices, sustainability, solid waste, visual reminders, waste reduction, behavioral change, sticker]

This literature view and project summary was produced by Land and Food Systems students at the University of British Columbia, and in partnership with the City of Vancouver and CityStudio. To see more about this project go to: http://blogs.ubc.ca/putwasteinitsplace/

Table of Contents

List of Acronyms

BYOC····· Bring Your Own Container

CE·····Circular Economy

ESB·····Environmentally-Supportive Behaviour

PEB·····Pro-environmental Behaviour

SME ·····Small to Medium Enterprise

VCH ·····Vancouver Coastal Health

Guiding Research Questions

This paper will attempt to address and answer the following questions with the support of an academic and community-based literature review:

1. What are the barriers to waste reduction?
2. What motivates individuals to reduce waste and practice pro-environmental behaviours?
3. What kinds of waste reduction initiatives have been implemented in other cities and locally?
4. What is a possible solution to encourage reduction of single-use takeout waste?
5. What are the short and long-term goals of the proposed solution?

Introduction

Throughout the years, the issue of waste reduction has turned into a major focus for many organizations, governments and individuals. As populations increase, the importance of the management, mitigation and reduction of waste becomes increasingly relevant. One of the most significant ways in which to address sustainable consumption of resources is by changing one's behaviour (Liao, Ho, & Yang, 2016).

The aim of this paper is to provide a literature review on what motivates and prevents people from producing waste, what initiatives have been implemented in Western cities to mitigate the waste problem, and how visual reminders can be used as an effective tool to promote less waste production. The literature review is to support a potential sticker campaign at various restaurants in the City of Vancouver by providing a well researched background.

Overview of Takeout Waste Production

In 2012, the City of Vancouver launched a city-wide initiative called the "Greenest City 2020 Action Plan", setting several sustainability targets to be aimed towards within its 8 year course. Some of these targets are related to economics, such as to have "double the number of green jobs over 2010 levels by 2020"; some to engineering targets, such as to "require all buildings constructed from 2020 onward to be carbon neutral in operations"; and some relate to the environment, such as to "reduce solid waste going to the landfill or incinerators by 50% from 2008 levels" (City of Vancouver, Engineering Services Transfer & Landfill Operations, 2016). None of these targets encourage waste reduction as the primary approach, instead, they focus on recovery, reuse and recycling. This disregard of the "reduction" part of the famous 3 R's (reduce, reuse, recycle) is a major issue within the City of Vancouver (P. Gagnon, personal communication, January 22, 2018).

The reduction of waste, as opposed to its minimization, reusing , recycling, or simple disposal, is the most favoured option when it comes to sustainability within a community (Racing to Zero, 2015). Despite this, municipal solid waste in the City of Vancouver has increased dramatically from 2015 to 2016, from 382,711 tonnes to 532,380 tonnes (City of Vancouver, 2016). Furthermore, more applicable to our project, recycling rates of containers have also increased dramatically; in 2015, 3.6 tonnes of containers (plastic, metal or paper) were recycled, whereas there were 4.8 tonnes recycled in 2016 (City of Vancouver, Engineering Services Transfer & Landfill Operations, 2016). In fact, this increased rate of recycling in the City of Vancouver can be highlighted with what is called the Prius Effect, a term given to a phenomenon which states that individuals adopt environmentally "sustainable" habits to ennoble themselves (Campbell, 2011). Although this statistic initially appears desirable, the environmental cost of production, transportation, and disposal of single-use items something best prevented from the onset (Currie-Halpern, 2017). The energy and money allocated to recycling such containers can instead be used towards other sustainability projects. For these reasons, it is important to set initiatives that aim to reduce container waste around the City of Vancouver, as there is an increasing trend of its waste (City of Vancouver, Engineering Services Transfer & Landfill Operations, 2016).

Barriers and Motivators of Waste Reduction

The barriers and motivators to waste production have been studied extensively within different areas. Some specific areas that have been researched include: businesses/enterprises, societal beliefs, and community benefits. Individuals have been found to have a range of beliefs and ideas that can either drive or discourage solid waste production. Furthermore, the studies in question expose and introduce elements relating to behavioural change.

Motivators

Small to Medium Enterprises

A recent study by Rekik and Bergeron (2017) highlighted the motivators of pro-environmental practices for small to medium sized enterprises (SMEs). It was noted that there are numerous benefits for SMEs to participate in green practices. In addition, SMEs typically represent greater than 90% of the organizations within a country; thus, they have a significant role in moving society towards a more pro-environmental mindset. Within this study, green practices refer to several different activities including: sustainable activities during the production process, green product design, and performance indicators. The results of Rekik and Bergeron's (2017) study found that green practices within SMEs are beneficial with regards to financial performance and sustainability. Pro-environmental actions were found to favour the company image by improving public perception and community support. Depending on the circumstances, SMEs may also employ green practices to increase employee and shareholder support. With regards to green production practices, Rekik and Bergeron (2017) stated that reduction of costs related to energy, materials and insurance may be a source of internal motivation. Likewise, the owner of the SME may have internal motivation to implement sustainable activities due to their own culture, beliefs and values. In comparison, external motivators can include various bodies such as customers, government, competitors, and society as a whole.

Pro-environmental behaviour of individuals

Pro-environmental behaviour (PEB) of individuals can be significantly influenced by media. A study by Liao et al. (2016) found that mass media can enhance and positively impact a person's environmental recognition and engagement. Correspondingly, the study also noted that individuals with high levels of media dependency employ PEBs. Liao et al. (2016) use the different types of beliefs and behaviours to help explain PEBs. Normative beliefs provide the motivation for individuals to act out. Typically these actions are triggered by fear and social rejection; therefore, normative beliefs about other people's environmental attitudes and engagement may be shaped by PEBs. The study states that environmental actions of others (descriptive norms), social expectations (subjective norms) and praise on personal behaviour (injunctive norms) also contribute to PEBs. For instance, there may be pressure to behave a certain way for social approval; hence, encouraging an individual to change and perform this specific behaviour.

The study by Liao et al. (2016) concluded that individuals' attention to pro-environmental media messages is linked with how they perceive others' attention to pro-environmental messages. In this manner, how a person sees media influence another person will affect their personal behaviour and intentions. In other words, perceived social

norms can greatly affect whether someone will adopt PEBs.

Moral Attitudes

Unfortunately, Canadian society has commonly displayed throwaway and "out of sight, out of mind" attitudes towards waste. Moreover, culture and institutions are factors that have significant impact in influencing environmental behaviour (Parizeau, von Massow, & Martin, 2015). With regards to moral attitudes concerning waste, a study conducted by Parizeau et al. (2015) found 63% of survey respondents felt guilty purchasing food and additional products sold with a great amount of packaging. Furthermore, 85% of respondents declared that their most "guilt-inducing practice was wasting food". It is notable that when Parizeau et al. (2015) questioned the survey respondents as to how they can reduce their food waste, 38% stated they had no solutions towards reduction. These findings may suggest that waste reduction is not a familiar or well recognized subject matter among the general public.

Barriers

Recycling versus Waste Reduction

A resurfacing pattern in the study of environmentally-supportive behaviours (ESB) shows that there is a set of shared characteristics across individuals of differing income, education, and age groups. These traits not only help to interpret what promotes waste minimization and diversion attitudes, but also explain the obstacles that inhibit the effectiveness of this practice (De Feo & De Gisi, 2010). One study conducted a nation-wide survey on ESBs and revealed that at an individual level, Canadians expressed that a lack of knowledge or information is a significant barrier in their attempt to practice ESB (Kennedy, Beckley, McFarlane, & Nadeau, 2009). In fact, when concerned with pro-environmental action, 72.3% of Canadians recognize a gap between their intentions and their actions. This can be explained by the majority of research heavily concentrating on recycling behaviours, and few on waste minimization behaviours (Tucker & Speirs, 2003). With knowledge disparities between recycling and reduction, the public is conflicted on what "the right thing to do" is, even with one's own values and beliefs (Babcock, 2009).

Access to Waste Diversion Stations

Many institutional structures are designed to manage waste and may be less effective when given the responsibility to prevent waste production. Stakeholders, such as recycling and collection facilities, may support waste management strategies such as recycling and incineration because they gain economic benefits. It is challenging, however, to identify benefits from generating less waste. The difficulty of effective waste reduction may lie with insufficient means to support its management methods and procedures. This struggle relates to the convenience and accessibility of waste facilities from individuals and the adequacy of

related programs. For instance, a study conducted on residents in Galway, Ireland, indicated the ease of access to facilities as a primary reason to participate in waste management projects, and second only to the overall concern for the environment (O'Connell, 2011). This shows that institutional structures are important when encouraging waste reduction behaviours.

Attitudes Toward Environmental Messages

Another research study expressed that when people are overwhelmed by negative environmental messages, they can respond with feelings of helplessness or take no action (O'Connell, 2011). For instance, brochures were distributed to Victoria, BC, residents by the city, which explicitly showed negative stereotypes of informal recyclers, rather than promoting the environmental benefits of their work (Gutberlet & Jayme, 2010). Similarly, a study conducted on the public's engagement with global warming visuals further indicated public disinterest. Messages with negative or fear-inducing content were revealed to be an ineffective tool for motivating genuine participation. Instead, nonthreatening images which relate to an individual's concerns in regards to a macro-environmental matter tend to be the most effective method (O'Neill & Nicolson-Cole, 2009). When looking at the impacts of climate change, people often exhibit two psychological behaviours: firstly, they will try to control the external threat; secondly, they will attempt to control the internal fear. Since global warming is not perceived to be controllable, people will attempt to manage their internal fear. The emotions developed from this control, such as issue denial and apathy can describe the barriers to participation in ESBs (O'Neill & Nicolson-Cole, 2009). With this knowledge, it is essential to ensure that future representations for sustainable awareness create a sense of connection for others. In other words, the reminders allow a person to see their impact on the community in a positive manner.

Previous Sustainable Packaging Initiatives

Partaking in green initiatives bring businesses a positive impact on their commerce; thus, many have begun to transition to using recyclable containers. Recyclable containers may be a necessary first step in the move to a sustainable food system; however, it is not a sufficient one. Over the last several years, a concept termed Circular Economy (CE) has begun to make headway in challenging the production and consumption model of the current economy; which is based on continuous growth and increased throughput of resources (Ghisellini, Cialani, & Ulgiati, 2015). Instead, emphasizing the idea that in order to increase the efficiency of resource use we must adapt reductionist production patterns which eliminate waste in the first place are being counselled as the new norm (Pietzsch, Ribeiro, & de Medeiros, 2016; Ghisellini, Cialani, & Ulgiati, 2015). In the food industry, several projects have emerged globally over the last decade that embraces reduction ahead of recycling as the

new approach to waste management.

Initiatives from abroad

In New York City, the Manhattan Solid Waste Advisory Board proposed to implement a CE approach as a solution to the city's growing takeout waste problem (Currie-Halpern, 2017). A 2017 section 81.46 amendment to Article 81 of the NYC Health Code now enables restaurants to increase the use of reusable containers by 1) providing customers with a reusable container that they can return to the restaurant for washing and sanitation before reuse, or 2) establishing a standard operating procedure approved by the Department of Health and Mental Hygiene that does not require washing and sanitation to ensure no contamination of food and/or food contact surfaces occur (Currie-Halpern, 2017).

Similarly, a program called "GOBox" that originated in Portland, OR, and has since expanded to the Lloyd district and San Francisco Bay area, CA, provides participating businesses with reusable containers that their customers can return to drop sites after use (GOBox, 2018). The containers are then washed in commercial kitchens and redistributed back to the vendors for reuse once a week or more often if needed (GOBox, 2018). The annual subscription fee for using the program is $24 USD for private individuals and starts at $125 USD for commercial businesses, and includes 69 vendors in Oregon, and 19 in the San Francisco Bay area (GOBox, 2018). The cost for vendors is lower than purchasing single-use takeout containers, and provides the extra incentive of attracting sustainability conscious customers. Furthermore, free marketing is provided for participating vendors on the GOBox website and social media pages (GOBox, 2018).

In Germany, the "Refill it!" program by El Rojito operates on a borrowing principle (El Rojito, n.d.). Eco-friendly cups are used at participating coffee shops where patrons pay a €1.50 deposit for a cup that they can then use at participating locations, and upon the return of which they receive their deposit back in full. Additionally, customers can purchase their own lid that they can reuse with the cups provided, as well as a red felt sleeve. Not only are El Rojito cups biodegradable and made of 100% renewable resources, but they undergo a minimum of 75 cycles in the dishwasher (El Rojito, n.d.). This business model not only addresses waste reduction, but also recognizes consumer convenience in a sustainable manner.

Initiatives from our community

Similar to some of the approaches from abroad, Hunter Moyes of Vancouver founded a waste reduction initiative in 2012. Moyes' initiative, "The Tiffin Project", targeted takeout waste specifically (Lee, 2012). "The Tiffin Project" was modeled after Shafeen Jamal's

program at the “Curry 2 U” vendor on Granville Island —which sold tiffin containers to patrons and then provided them with discounts on future orders if they reused them (Lee, 2012). Likewise, the Tiffin Project aimed to limit the use of disposable restaurant takeout containers by replacing them with a durable, single-layer, watertight tiffin container (Lee, 2012). In addition to reducing waste, Moyes wanted to offset the cost for restaurants to buy produce from local farms and did so by donating 15% ($4 per container) of his container sales to participating businesses (Lee, 2012). The Noodle box is an example of a restaurant chain in Vancouver that joined this project because supporting a local food economy and reducing solid waste aligned with their values. Sarah Wagstaff, operations manager of the Noodle Box stated they go through 750,000 single-use noodle boxes annually (Lee, 2012). The Tiffin Project appealed to her because even though their boxes were compostable, she was keen on furthering the waste reduction cause and offering a financial incentive to customers who registered with the program. The one concern regarding the enterprise was its noncompliance with local food safety guidelines. Addressed by Trudi Beutel, a spokesperson for Vancouver Coastal Health, she stated that liability lied with the food operator when engaging in the project. However, she also voiced her belief that the use of outside containers to be a “low-risk activity” (Lee, 2012). The project ended its operations in 2015 in view of the regulations. In the next section we will discuss the stakeholder approach to waste reduction embraced by the City of Vancouver, one of which is a collaboration with Vancouver Coastal Health Authority to establish if altering regulations would help such initiatives thrive in the future.

The City of Vancouver has prioritized short and long-term action plans to help achieve a zero-waste future. The majority of their initial proposals focused on proper waste diversions such as implementing a food scraps recycling program, and the Construction and Demolition Waste Diversion Strategy (City of Vancouver, 2015). However, as part of Vancouver’s 2040 Zero-Waste goal, a reductionist approach became essential. In 2016 the Vancouver City Council initiated a review on the “regulatory options for addressing the distribution, use and recycling of commonly used single use item, such as shopping bags, disposable cups and takeout food containers” (City of Vancouver, General Manager of Engineering Services, in consultation with the Director of Corporate Communications. 2017). Based on the initial review, the City of Vancouver launched a stakeholder consultation and public engagement program to determine the best approach to reducing the amount of waste generated from single-use items (City of Vancouver, 2017). The findings subsequently reported that 2.6 million coffee cups end up in Vancouver landfills every week, and together with takeout containers make up 50% of on-street garbage volume. Additionally, takeout food packaging represents 19% of large litter items in Vancouver (City of Vancouver, 2017). As a result the following solutions were proposed: a proposed umbrella ban on the use of all polystyrene foam coffee and takeout containers; a general ban on disposable coffee cups; and an imposition of fees on non-foam single-use takeout containers (City of Vancouver, 2017). By enforcing this order, the city hopes to decrease the outstanding cost of 2.5 million dollars

to collect single-use items from public waste bins, parks, and green spaces, as well as reduce the amount of solid-waste that goes to the landfill (City of Vancouver, 2017).

In keeping with the Greenest City 2020 Action plan, the City of Vancouver is also presently piloting a "Bring your own container" project with Vancouver Coastal Health (VCH) as a further means of encouraging waste reduction (Kosmak & Massoud, 2017). Similar to the aforementioned Tiffin Project, this approach would allow restaurants and retailers to fill to-go orders in reusable containers brought by customers. The greatest concern for the project on part of the health authority is to mitigate the risk of cross-contamination (Kosmak & Massoud, 2017). The pilot proposal involves 5-10 restaurants that will develop a standard operating procedure with Vancouver Coastal Health Department Oversight for ensuring adherence to health and safety standards preventing cross contamination when packing customers' reusable takeout containers. If the pilot is successful, the long term goal is for VCH to develop a region-wide guideline for reusable container use in restaurants (Kosmak & Massoud, 2017).

The Importance of Visual Reminders

Moving onto the proposed media campaign to promote the use of reusable containers in restaurants, literature regarding visuals in communication and advertising is assembled in the following section. Visual communication is said to "supplant printed or written culture" as it reaches across language and cultural differences (Estrada & Davis, 2015). The idea to design a promotional sticker stemmed from the display of other common stickers on restaurant fronts. There are numerous restaurants in Vancouver that use stickers from Yelp, TripAdvisor and other third party review websites that advertise their popularity. Each sticker is visible and has an easy to read slogan, such as Yelp's "People Love Us" slogan; informing customers of their popularity among other diners. Not only are stickers ubiquitous, they are also economical to produce and distribute; thus, utilizing a sticker to promote the use of reusable containers for takeout and leftovers is an ideal proposition for a solution to reduce takeout container waste around the city.

A total of six sticker ideas were illustrated and upon selection, both the visual and verbal (i.e. the slogan) components of the sticker were researched to guide the finalization of the design. Visually, it was found that people are less likely to break away from high-level perceptual cues, such as faces (Brasel & Gips, 2017). In Brasel and Gips' (2017) research of multitasking, it was found that visual cues that include faces or people held the attention of people better than other visual cues (motion and light). As a graphic, it is not possible to depict a realistic human face, as such, a simple face similar to emoticons is used. Emoticons are important nonverbal cues that promote personal connection, which can help connect customers with the project aim (encourage reusable containers) through the sticker (Saini,

Khatri & Raina, 2017). By incorporating a human-like face, the sticker is hypothesized to attract customers and maintain their attention to read the slogan.

When deliberating on the best slogan to showcase our message of takeout containers, we found that research on the effectiveness of various advertisements showed incorporating humour allowed the ad to stand out. In magazines, or print advertisements, readers were more attentive towards the ads with humour (Madden & Weinberger, 2013). In addition to humour, different green advertisement studies showed that abstract appeals are more successful when they associate pro-environmental behavior benefiting others, particularly in environmental/community conscious consumers. Whether these consumers buy a "greener" product or use reusable containers, abstract appeals are more effective as opposed to concrete appeals in such populations (Yang, Lu, Zhu, & Su, 2015). An example of an abstract appeal is one that uses unspecific or ambiguous wording, such as "this product does not harm oceans" or "this restaurant buys all organic produce." On the other hand, a concrete appeal is one that includes specific information or statistics to appeal to the consumer, such as "this product has a 40% lower carbon footprint than the leading brand" was found to be less effective regardless of the individuals' environmental/collective awareness (Yang et al., 2015). Moreover, it was found that the product, in this case the project aimed to reduce takeout waste, is more effective when linked with the benefit of others, when the consumer is self-aware of their actions and their personal image in the eyes of others (Yang et al., 2015). This self-awareness of their collective consciousness will lead the consumer to partake in pro-social behaviours (Yang et al., 2015). On the basis of this research, it is concluded that for abstract appeals to be most effective, the project should be presented in a manner that encourages consumers to align themselves with the greater community. Hence, the sticker is intended for individuals who have a collective level of self so the abstract slogan "Put a lid on it" evokes sufficient effect.

The Proposed Sticker Campaign

The proposed sticker is aimed at reducing single-use takeout containers through a visual reminder. The sticker (see appendix A) would be posted at food outlets and establishments such as diners, cafes, and restaurants. In this way, customers would be notified that the food establishment is accepting of their bringing in reusable containers for their leftovers. Furthermore, the sticker can be posted at the front window entrance amongst the other stickers relating to the establishment awards (see appendix B), or at the counter where customers pay for their purchase. The goal of the sticker campaign is to establish reduction practices within the city, and also get the public more aware of what they can do for personal solid waste reduction. The sticker proposal can be also be used on social media to promote waste reduction. The use of social media to promote behavioral changes is most effective when individuals feel empowered and that they play an important role in the community (Korda & Itani, 2013). Thus, it is suggested that future social media campaigns

take advantage of user generated content due to the effectiveness of Social-Interactive Engagement when promoting a cause (Calder, Malthouse, & Schaedel, 2009). Consumers and food service establishments can hashtag their posts of reusable container use on Instagram, Facebook, Twitter and SnapChat using the acronym of "Bring Your Own Container (BYOC)." This can encourage the active participation of consumers and food establishments, which can consequently influence a chain reaction of participation.

The expected result is that food establishments will also promote and support this project, especially considering that there are extensive social and financial benefits possible. If customers bring their reusable containers, the cost of single-use takeout containers would ultimately be reduced. In addition, the spaced used to store single-use takeout containers may decrease so much so that the need for takeout container storage space may be eliminated. As the public becomes more aware of a food establishment's support for the campaign, public perception of a business may positively increase due to association of approving pro-environmental practices. With this in mind, the sticker project was introduced to a manager at "The Naam" restaurant located in the Vancouver neighbourhood Kitsilano. The manager expressed great enthusiasm and support towards the possibility of a pilot campaign using the proposed sticker. The prevalent use of takeout containers for leftover food was recognized and therefore contacting employees at this restaurant was a very relevant and, luckily, feasible option. The manager was also very kind to approach the possibility with an open mind, and welcomed the prospect of social as well as economical benefits with enthusiasm.

Future Steps

The next steps of the project would be to survey the public on their opinion of the project. After collecting data it may be necessary to make adjustments in the visuals, tagline and implementation. Likewise, various food establishments in Metro Vancouver should be categorised into types: single vs. chain, dine-in vs. takeout, general pricing and other categories if necessary. The purpose of categorisation is to identify what type of food establishments are best suited to directly implement the proposed sticker and media campaign (and common barriers and motivators). Surveying can be used to gauge their willingness to participate, as well as their opinions on the project. For efficiency, it may be helpful to contact restaurant associations within the city. Using an informational brochure (see appendix C), can help promote and explain the sticker to businesses. If the survey comes back as positive, the sticker campaign can be piloted. A short-term test run could be carried out within a few diversified establishments. Having a project pilot to collect data on the number of single-use containers before, during and after the implementation of the sticker can measure the initiative's effectiveness. Running the pilot with a diversified portfolio of restaurants may also help decide what types of establishments best to target in a broader implementation.

Project Add-ons

This sticker project has the potential to develop further add-ons. The following list outlines a few additions that could be implemented:

1. Discounts to Customers

   Customers receive a percent or set amount deducted from the cost of their meal when they opt to take home their leftovers in a reusable container. This discount is similar to coffee shops when they take $0.10 off the cost of the drink when a reusable mug or tumbler is used.

2. Stamp Card

   Customers are issued a reward/stamp card that is stamped when a reusable container is used for leftovers. Over several visits, the customer accumulates stamps until the card is full. Once this card is completed, a reward (e.g. Free drink) can be redeemed.

3. Container Stickers

   Each time a customer brings in their reusable container, they can collect stickers. The stickers would be playful and hopefully encourage younger individuals to bring reusable containers. This idea was inspired by the sticker-nalgene trend where individuals stuck their accumulated stickers/decals on their nalgene water bottles.

4. Certification

   Food establishments would be deemed some type of "certification" by participating in the sticker campaign. This could aid the support from the food establishments by explicitly adding to their reputation in a positive way.

Concluding Remarks

This literature review considered the information available and necessary in establishing a feasible waste reduction approach. In particular, it determined how best to encourage the use of reusable takeout containers in food service establishments. The publications reviewed identified the barriers that need to be overcome when encouraging sustainable behaviours and the motivators that best support the engagement in pro-environmental actions. It referenced the past approaches to takeout waste reduction both globally and locally, and restated that reduction must become the new norm for tackling waste management issues. Finally, it identified the importance of visual reminders and how they can best be used to promote desired behaviours. Based on the existing literature, a sticker campaign was proposed as a method for encouraging local diners to participate in

waste reduction through their use of reusable containers. Looking forward, the proposed sticker campaign can serve as a foundation for a reusable takeout container pilot that can be implemented in a collaborative effort between the Land and Food Systems faculty at UBC, CityStudio and the City of Vancouver.

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Appendix - A

Our final sticker design created on Adobe Illustrator

Appendix - B

Example of where the sticker could be located at a restaurant

Appendix - C

Who We Are

About Us

We are a team of 6 University of British Columbia students in the faculty of Land and Food Systems. Our studies focus on sustainability, agriculture and nutrition. Throughout this project, we have worked with the City of Vancouver and CityStudio.

CityStudio is an innovative and experimental hub that allows students to design solutions towards the 2020 greenest city challenge.

How would this project be implemented?

It's simple!

1. Restaurants receive their stickers and post them on their front windows
2. Customers find out which places are reusable container friendly and actively bring their containers!
3. Reusable container users spread the word and post on social media using #BYOC and tagging @citystudiocvan

Let us know what you think!

CityStudio Email:
ileana.costrut@citystudiovancouver.com

CityStudio Webpage:
www.citystudiovancouver.com

Project Webpage:
blogs.ubc.ca/putwasteinitsplace

REDUCING TAKEOUT WASTE

A proposed takeout container solution

In partnership with:

CITYSTUDIO CITY OF VANCOUVER

Additional taglines that could be on our sticker:

- Contain your leftovers, not your excitement!
- #BYOC
- Reusable container friendly restaurant

Why should restaurants get involved?

Restaurants can save money by encouraging their customers to bring their reusable containers. Less takeout containers will need to be purchased and additional shelf-space may be freed up for other products. Furthermore, there is likely to be improved public perception of the restaurant by associating and approving sustainable practices.

An example of where our sticker could be placed at a restaurant

An example of what can fit inside a reusable container

- Costs our city $2.5 million per year to collect single-use disposables
- 50% of waste collected in public bins are takeout containers
- Styrofoam is hazardous and difficult to clean up especially on our beaches!

What can we do?

Recycling is not the only answer! Reducing the production of waste is the first step to a greener city. Individuals can bring their own reusable containers to restaurants. In doing so, they can pack their own leftovers to-go and help reduce takeout waste.

Preview of our sample brochure