An Investigation into Incorporating UBC’s Eco-to-Go Program in the New SUB

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An Investigation into Incorporating UBC’s Eco-to-Go Program in the New SUB

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ABSTRACT

At the University of British Columbia (UBC), a food container program called Eco-to-go prompts the idea of sustainable living by reducing the solid waste and carbon footprint of food outlets on campus. The program is currently only offered at limited locations due to infrastructure and lack of participation. However, the construction of the new student union building (SUB) is expected to be completed in 2014, and it provides the opportunity to introduce Eco-to-go to a broader student population. To enhance the liability of investigation, eleven food outlets in the new SUB are treated as eleven small restaurants, and a standard washing facility is implemented in each food outlet.

A Triple bottom line analysis in the interest of sustainability is conducted to assess the feasibility of integrating the Eco-to-go program (ETGP) in the new SUB. To evaluate the participation rate of the ETGP, a survey was created to collect the opinions of UBC students, which then helped assess the social impact of integrating the program. It was found that the majority of the 143 participants supported the integration plan for the ETGP, and many of the participant’s believe that a percentage based discount should be applied to those enrolled in the ETGP. The environmental aspect is studied using limited statistical data from the existing ETGP, and the result is extrapolated by estimating 25% participation rate of ETGP in the new SUB. Using this estimate, the ETGP can reduce waste by 29 tons, which translates to a reduction of 970 L in fuel and 2.94 tons of carbon dioxide emissions. Similarly, the economics of integrating the program are investigated by retrieving commercial business data. An economic assessment showed that the initial first year investment into the program is very steep, but reduces to $1500 per vendor per year. In the large scale operations of the SUB, this can be considered a miniscule cost and although the program is not profitable venture, it can financially break even, and so the implementation of the ETGP can be justified.

To improve the implementation of the program in the new SUB, a more efficient way must be found to wash the containers, in order to reduce costs. A greater emphasis must also be placed on advertising the program, so as to reach a larger audience, and an on campus heating chamber should be implemented so as to allow the containers to decompose at the end of their life cycle. Ultimately, using a triple bottom line assessment, the conclusion is that the AMS should proceed to integrate the EGTP in the new SUB.
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GLOSSARY

Kilowatt hour – A commonly used unit of energy

Monomer – Chemical classification of a molecule that binds to other molecules to form polymers.
LIST OF ABBREVIATIONS

AMS – Alma Mater Society

ETGP – Eco-to-Go Program

kWh – Kilowatt hour

SUB – Student Union Building

UBC – University of British Columbia
1.0 INTRODUCTION

The new AMS SUB is slated to open in 2014, and will operate 11 AMS food outlets. With UBC pushing to make a more sustainable campus, we will explore integrating the existing Eco-to-Go program into the new SUB. In the Eco-to-Go program, a student can pay a small deposit to receive a membership card. After enrolment, the students can use their membership to pick up a container from a participating outlet and use it to purchase food. Afterwards, the dirty container can be returned, and will be washed for the next student. This report will offer a triple bottom line assessment on the feasibility of integrating the program.

The triple bottom line consists of an economic, social, and environmental assessment on the program. The economic analysis will focus on the financial impact of launching the program in the new SUB and offer recommendations for cost reduction, while the social assessment will consist of a breakdown on the general student consensus surrounding the integration of the program. The environmental analysis will explore the implications on waste reduction, energy consumption, and reusability of the containers. Finally, we will offer any recommendations that may help improve the operational smoothness of the program, and ultimately enhance UBC’s goal in sustainable living. We will also reach a conclusion on whether we support the integration of the Eco-to-Go program.

Figure 1 Plastic Containers Retrieved from http://trade.indiamart.com/PlasticContainers_250x250.jpg
2.0 ECONOMIC ASSESSMENT

For the launch of the Eco-to-go program (ETGP) in the new SUB, cost is one the most important factors. In this section, we will discuss the both the implementation, and running costs for the ETGP. In the new SUB, the AMS will operate eleven food outlets, but due to limited statistical resources, educated estimates will be made by assuming each food outlet is a small local restaurant. In addition, an online survey attached in APPENDIX A will be used as a primary source and provide some findings in this section. The implementation cost takes into account various elements which are summarized into three main categories, including start-up cost, operating cost, and discount for consumers.

2.1 START-UP COST

2.1.1 CONTAINER COST

In the current program, implemented in the Totem and Vanier residence, UBC is able to purchase a container for $2.50 via a manufacturer called Starfrit. The container is leak proof and it is capable of withstanding industrial washers. Since most of the containers are still in use after 2 years, UBC has decided to purchase the same type of container for the food outlets in the new SUB. According to the statistical data (Chan & Wakefield, 2013), there were 1,156,890 transactions in 2012 from the food outlets in the current SUB, which contain paper products. On average, there were approximately 3170 food transactions involved every day in 2012. Taking into account that 50% of the people will enroll in the program, we suggest that UBC should purchase at least 5000 containers for the ETGP.

\[ \text{Cost} = \text{2.50/ container} \times \text{5,000 containers} = \text{12,500.} \]

Moreover, the cost of disposable containers will be subtracted from the container cost. Here, it is assumed that each disposable container has an average cost of $0.20 for the UBC food outlets.

\[ \text{3170 transactions/day} \times \text{50% enrolment rate} \times \text{260 days (5 days a week)} \times \text{0.20/ disposable container} = \text{82,420 savings/ year.} \]
In addition, we have estimated that there are about 115 tons of trash created by UBC each year. With the ETGP, 25% of the waste can be reduced (which will be further explained in the environmental assessment). Currently, it costs $107 to move each ton of trash to the BC landfill.

\[ 115 \text{ tons} \times 107 \text{ dollars/ton} \times 25\% = 3,076.25 \text{ dollars/year.} \]

Accounting to all the factors, UBC will have

\[ $12,500 - 82,420 \text{ dollars} - 3,076.25 \text{ dollars} = 72,996.25 \text{ dollars} \]

by using containers in the first year.

2.1.2 DISHWASHER MACHINE COST

Because every food outlet will have an industrial dishwasher, and each outlet is different in size, we decided to unify the sizes of washing machines to a small-medium size. We have chosen a standard commercial pass-through dishwasher machine, and they will cost approximately $6000 each. Therefore, UBC will have to make an investment of

\[ 6,000 \text{ dollars/machine} \times 11 \text{ food outlets} = 66,000 \text{ dollars} \]

on dishwasher machines.

2.1.3 ADVERTISEMENT COST

In our primary research, an online survey, the statistics showed that 65 out of 143 participants (45%) had no prior knowledge of the ETGP. We believe that UBC needs to make an investment on advertising in order to run the program effectively. We suggest that UBC invest $1,000 on posters, flyers, and extra activities to promote the ETGP.

2.2 OPERATING COST

2.2.1 LABOUR COST

Since the ETGP does not require consumers to return a clean container when exchanging for another one, UBC has to hire labour to wash the containers. Using a small local restaurant as reference, one person will use about 30% of his/her work time washing dishes. We assume workers will get paid at the minimum paid hourly rate, which is
$10.25 in British Columbia, Canada. Considering each food outlet in the new SUB will operate for six hours a day, five days a week, it is suggested that each person will work for four hours a day. Therefore, the total labour cost to operate eleven food outlets will be

\[2 \text{ hours} \times \$10.25/\text{hour} \times 5 \text{ days/week} \times 52 \text{ weeks} \times 11 \text{ food outlets} = \$58,630/\text{year}.\]

**2.2.2 DISHWASHER OPERATING COST**

Maintenance is an important factor to ensure maximum efficiency from the dishwasher machines. Keeping the machines in premium condition also guarantees the safety of workers, as insisted by BC Work Safe. Therefore, we suggest that maintenance be done once every two weeks for all machines, and this job is allotted to one worker. We assume the worker will get paid $25/ hour, and each machine will require approximate 30 minutes of maintenance. Therefore, UBC will have to make an investment of

\[5.5 \text{ hours} \times \$25/\text{hour} \times 26 \text{ weeks} = \$3,575/\text{year}.\]

Moreover, we have estimated the soap costs for the dishwashers to operate. Considering it will cost $500/ month for all the machines to operate, therefore

\[\$500 \times 12 \text{ months} = \$6000/\text{year}.\]

**2.3 DISCOUNT ON CONSUMERS**

In order to encourage more consumers to enrol in the ETGP, UBC will provide a discount for consumers who use the program or bring their own containers. Currently, there are several food outlets in the SUB providing discounts to people who bring their own containers.

<table>
<thead>
<tr>
<th>Jan - Dec 2012</th>
<th># of discount</th>
<th># of food/coffee transactions</th>
<th>#customers</th>
<th>discount % of transactions</th>
<th>discount % of customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Chip</td>
<td>57426</td>
<td>577626</td>
<td>584039</td>
<td>10.88%</td>
<td>14.95%</td>
</tr>
<tr>
<td>moon noodle</td>
<td>733</td>
<td>11904</td>
<td>90269</td>
<td>6.16%</td>
<td>0.81%</td>
</tr>
<tr>
<td>honour roll suki</td>
<td>16</td>
<td>280382</td>
<td>183307</td>
<td>0.01%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Pie R squared</td>
<td>0</td>
<td>597787</td>
<td>225583</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>bernoulli's bagels</td>
<td>1092</td>
<td>254371</td>
<td>101851</td>
<td>0.66%</td>
<td>1.65%</td>
</tr>
<tr>
<td>burger bar</td>
<td>32</td>
<td>155942</td>
<td>106050</td>
<td>0.02%</td>
<td>0.03%</td>
</tr>
<tr>
<td>gallery Restaurant</td>
<td>225</td>
<td>55192</td>
<td>64789</td>
<td>0.58%</td>
<td>0.35%</td>
</tr>
</tbody>
</table>

Table 1. AMS Outlets Container Discounts (Chan & Wakefield, 2013)

Table 1 shows that Blue-Chip, a beverage outlet, provides a $0.15 discount for consumers who bring their own cup. Other food outlets provide a $0.25 discount for people who bring their own
containers. Although the ETGP will only focus on containers only, these statistics are an excellent source to refer to when implementing the program. However, the data shows that there will be potential loss in revenue for food outlets if they provide these discounts to consumers. In 2012, there was a total of 60114 discounts provided. Considering each transaction has a $0.15 discount, there was a revenue loss of

\[
60,114 \text{ transactions} \times \$0.15 \text{ discount/transaction} = \$9,017.10
\]

within the seven participated restaurant. (Note that this number is not subtracted from the cost of disposable containers)

In addition, according to our survey, most people agree that a 3.2% discount for purchases is a reasonable deduction to promote the program. This is because there are flaws in Blue Chip’s $0.15 model, suggested by 93.8% of the suggestions in our survey: bigger containers obviously should cost more than smaller containers, so more revenue is lost if most people purchase small containers. Our 3.2% discount will take this flaw into consideration. According to the current EGTP, the discount that is offered is $0.05 as outline in the last row of Table 2.

<table>
<thead>
<tr>
<th>Cost</th>
<th>Description</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Start-up Cost:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Container Cost</td>
<td>$2.50/container * 5000 containers</td>
<td>$12,500</td>
</tr>
<tr>
<td>Disposable Containers</td>
<td>3170 transactions/day * 50% enrolment rate * 260 days (5 days a week) * $0.20/disposable container</td>
<td>$82,420 savings/year</td>
</tr>
<tr>
<td>Disposal Fee</td>
<td>115 tons * $107 * 25%</td>
<td>$3,076.25 savings/year</td>
</tr>
<tr>
<td>Dishwasher Machine Cost</td>
<td>$6000/dishwasher machine * 11 food outlets</td>
<td>$66,000</td>
</tr>
<tr>
<td>Advertisement Costs</td>
<td></td>
<td>$1,000</td>
</tr>
<tr>
<td><strong>Operating Cost:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour Cost</td>
<td>2 hours * $10.25/hour * 5 days/week * 52 weeks * 11 outlets</td>
<td>$58,630/year</td>
</tr>
<tr>
<td>Dishwasher Maintenance Cost</td>
<td>5.5 hours * $25/hour * 26 weeks = $3575/year</td>
<td>$3,575/year</td>
</tr>
<tr>
<td>Dishwasher Soap Cost</td>
<td>$500 * 12 months</td>
<td>$6000/year</td>
</tr>
<tr>
<td><strong>Discount on Consumers:</strong></td>
<td>3170 transactions/day * 50% enrolment rate * 260 days (5 days a week) * $0.05 discount</td>
<td>$20,605/year</td>
</tr>
<tr>
<td></td>
<td>First Year Cost:</td>
<td>$82,813.75</td>
</tr>
</tbody>
</table>

Table 2. Potential Cost Spreadsheet
3.0 SOCIAL ASSESSMENT

Currently, the Eco-to-go program (ETGP) has only been implemented in Totem and Vanier, and to date, approximately 1,500 student residents have enrolled (Chan & Wakefield, 2013). The entire Vancouver campus has 49,241 student enrolments (Farrar, 2012), and the 1,500 current ETGP participants’ only stand for 3.05% of the student population. Clearly, there is a need to improve the number of participating students in the ETGP, which can be done by integrating it into the new SUB. To assess the social impact of integrating the Eco-to-go program in the new SUB, we will be analyzing two major aspects: Popularity and Advertisement. In addition, some related ideas and suggestions will be stated to efficiently maximize the use of UBC’s social resources.

3.1 POPULARITY

In order for the ETGP to meet the scale of new SUB, the number of participating students will be crucial to make the integration plan feasible. A primary online survey was conducted to measure the popularity of the current ETGP and integration plan. The printed version of survey is attached in APPENDIX A (note: each question is only displayed according to participant’s response). By the closing date of our survey, 01 April 2013, 143 UBC students had participated in our survey through Facebook, Twitter, online chat rooms, and personal websites. Although 143 UBC students reflect a tiny group of UBC student population, it is sufficient to demonstrate the popularity of the ETGP through the theory of population sampling (Reis & Sprecher, 2009). The result of our survey is separated into two sections, one concerns the current ETGP, and other one focuses on the integration plan.

3.1.1 CURRENT ECO-TO-GO PROGRAM

Among 143 survey participants, 65 participants had no prior knowledge about the ETGP until the moment of the survey (Figure 2). After a short introduction of the program, 58 out of 65 agreed to consider enrolling in the ETGP if it was integrated into the AMS outlets in the new SUB. From Figure 2, we can see that each group, those with
prior knowledge and those without, account for roughly 50% of the survey population, thus, we can suggest that the survey result reflects equally from both groups.

![Prior Knowledge of ETGP](image)

**Figure 2: Prior Knowledge of ETGP**

Since most UBC students live off-campus, it is crucial to gather data on the eating style of these off-campus students. According to the survey, we found that 82.5% of 143 participants live off campus, and 55.9% of the participants purchase food at UBC.

Another aspect in examining the current ETGP, and assessing how to improve the implementation, is to examine what incentives motivate students to join. Figure 3 shows the different answers to the survey question: ‘For what purpose would you consider the EGTP?’ By looking at the data, and figure, it is evident that the reason most students would join the program is to receive a discount on their purchases. Some suggestions for a reasonable discount will be discussed in the following sections.
3.1.2 INTEGRATION PLAN

To gain an understanding of the student consensus towards integrating the program, two questions were asked. The first question was whether the participant was in favour of launching the ETGP in the new sub, and the other was if they believe we should keep the program exactly the same as it is currently. Among 143 survey participants, 137 responses are in favour of launching the ETGP program in the new sub, and of those 137 responses, 133 responses support the idea of integrating the program as is. Most of the direct feedback from the survey participants was positive, and the majority believe the ETGP is a great idea that will help raise awareness of sustainability. Furthermore, one particular participant left the following comment: “It is a good program to enhance UBC’s image on sustainable living, and also prompts the idea of re-usability”.

3.2 ADVERTISEMENT

When a new product is launched in a market, a certain degree of advertisement is needed to help the product gain popularity (Swayne & Dodds, 2011). Also, from the previous section, we can see that the integration plan is supported by most of the surveyed students. Therefore, we need to reach such a level of advertisement as suggested by Swayne and Dodds. To assess the effectiveness of the current amount of advertising, or lack of, a scale-rating question was asked.
during the survey. The scale ranged from 1, which represented not enough, to 5, which represented that sufficient advertisement has been done. The average result among 143 participants was 1.18, which indicates that there is insufficient advertisement regarding the ETGP.

Using the weak theory of advertisement (Swayne & Dodds, 2011), there needs to be a greater emphasis on promoting the program to increase the overall popularity of ETGP, and thus to increase the number of participating students in the program. Regardless of whether or not the integration takes place, we believe advertising the ETGP would benefit UBC overall. The reason for this is that advertising the ETGP can help raise awareness to sustainable living and recyclability. And from the strong theory of advertisement (Swayne & Dodds, 2011), extra messages can often subliminally deliver messages to the subconscious mind.

Furthermore, from a marketing perspective, advertisement brings a chain of information flow (Swayne & Dodds, 2011). This means that if a student sees the idea of the ETGP, it is highly likely that s/he would deliver the same information to his/her relatives, friends and associated personnel. Hence, we believe advertisement for the ETGP should be considered. In addition, some suggestions for advertisements are given in the next section.

**3.3 RELATED IDEAS AND SUGGESTIONS**

Touching from the popularity section, “Amount of Discounts” is the main driven incentive for most of the surveyed participants to consider enrolling in the ETGP. Figure 4 depicts the result of a question in the survey that asks what a reasonable amount of discount may be.

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**Figure 4: Reflective on Amount of Discounts**
From Figure 4, we can see 53% of participants are interested in having a quarter off on their meals if they are using the EGTP. Among the 34% of other suggestions, 93.8% of these participants suggest having their discount based on a percentage, and the average suggested discount is 3.2%. The food outlets in the current SUB offer a quarter discount if students bring their own containers. On the other hand, if students use the ETGP in Totem and Vanier cafeteria, they are given a 5 cent discount. Hence, in reflecting the survey result, we suggest the new SUB offer the same discount as the current SUB.

In terms of advertisement, we suggest that UBC starts advertisements regarding the ETGP as early as possible to achieve a maximum number of participating students. However, due to facility constraints, the location of advertisements has to be carefully chosen. Ideally, the amount of advertisement should reflect the size of the washing facilities and number of available containers.

Apart from the above, a question related to the membership system is asked in the survey. Among 143 participants, 130 participants support the integration of a membership system related to the UBC student card. In the short term, integrating the UBC card and membership systems might be difficult especially in the management aspect. However in long run, managing a single card system is easier than two different systems, where the other is the token based system currently in place. Moreover, since the UBC student card already has a few food service features such as a pre-load discount, it is convenient for both UBC and students to use the student card. Extending on the management aspect, since each food outlet in the new SUB will obtain its own washing machine, we believe the ETGP will create job opportunities for those who are interested in management and culinary related fields.
4.0 ENVIRONMENTAL ASSESSMENT

The current UBC enrolment, at the Vancouver campus, is 49,241 students (Farrar, 2012). Considering that these students spend a large portion of time on campus, a small change in either social habits or advancements in sustainable technology can have very large effects when scaled up to the size needed by UBC. Currently the SUB distributes compostable containers, and according to an email with Collyn Chan (2013), only a minority of students bring their own containers to purchase food at the outlets. By analyzing two major indicators: waste in terms of tons and energy in terms of kWh, we can assess the environmental impact of integrating the ETGP in the new SUB. This section will also investigate the health and safety risks and statistically show that incorporating the program will reduce waste from landfills and reduce greenhouse gas emissions without compromising the health and safety of the students.

4.1 WASTE

Currently, the in-vessel composter at UBC is capable of handling up to 1743 tons of material in a year (Ng, Guest & Aleksin, 2007, p.3). Although this seems like a very large amount, it is only 25% of the actual compostable material produced by UBC (“Composting”, n.d). Of the 1743 tons of compostable material used by the in-vessel system, 740 tons are from food services. According to our data (Chan & Wakefield, 2013), there were over 1,159,578 food transactions in 2012 from the AMS outlets in the SUB, of which 1,156,890 involved paper products. Because bringing a reusable container results in a discount, we subtracted the number of discounts given by the outlets from the total transaction number to reach the latter statistic.

We estimated that the approximate weight of a disposed container is 100 grams, although we do consider this as a lower bound. This weight accounts for the weight of the container and any food residue left behind. With this approximation, the disposed containers result in 115 tons of waste. Of the waste produced, only 25% can be composted by the facilities at UBC, and by this calculation, if a quarter of the UBC population (including faculty) enrolled in the ETGP in the new SUB, waste can be reduced by 29 tons a year.
4.2 ENERGY

Ng et al. (2007) point out that the in-vessel composter at UBC uses an average of 200,000 kWh per year, or in terms of weight, 109.59 kWh per ton of compost being input into the system. If UBC were to expand the composter to account for the extra amount of waste being saved by integrating the ETGP, it would take an additional 3,179 kWh per year. In other words, by using reusable containers in the new SUB, UBC would have the same impact as the composter composting 30 tons of waste without expending the extra 3,179 kWh.

The other major energy savings, as a result of integrating the program, would result from fuel savings. According to Nguyen and Wilson (2009), an average garbage truck wastes 33.5 L/ton of diesel gas, and 92.4 kg/ton of CO₂ emissions. If we use our initial estimate that the Eco-to-go program can save 29 tons of waste, then those 29 tons are no longer being hauled by trucks. This reduction in waste results in 971.5 L of gas per year being saved. Also, the reduction of fuel consumption directly relates to the reduction of CO₂ emissions. In this case, the program can save 2672.2 kg or 2.94 tons of CO₂.

4.3 MATERIAL USE

The current containers used in the existing ETGP are made from polypropylene, are BPA free, and are produced by Starfrit (Chan & Wakefield, 2013). Polypropylene is composed of hydrogen and carbon, which are non-toxic and safe (“PP”, n.d). Although this material is touted as being recyclable, it takes a very long time and necessary conditions (such as temperature) may be difficult to attain naturally, and so an external vendor that can handle such recycling may be needed.

4.3 LIFE-CYCLE ANALYSIS

4.3.1 MANUFACTURING

Polypropylene containers are neutral plastics, as mentioned previously, and as a result, they can subject to different elements without any degradation. One benefit of this is that the manufacturing can be done sustainably. Polypropylene is made from its
monomer, which is a by-product of the petroleum industry (“Polypropylene”, n.d). As a result, manufacturing this plastic actually reduces greenhouse gas emissions because this monomer would usually be burnt off into the atmosphere.

4.3.2 USE

Due to how inert the material is, it poses little to no risk of unwanted leakage to its surroundings. The material is also very durable, which has both positive and negative implications. As a result of its durability, recycling can take a long time, but from an economic viewpoint, it is beneficial. The current containers have already lasted over 2 years, and show little sign of degradation (Chan & Wakefield, 2013).

4.3.3 DISPOSAL

Polypropylene is suitable for both recycling and energy recovery (“PP”, n.d). Although it is recyclable, due to its durability, it will take a very long time for the containers to break down, and so a catalyst must be introduced. This catalyst must be an external heating chamber which needs to sustain temperatures which are difficult to attain naturally. Although this process slightly complicated the disposal process, the benefit is that this plastic is 100% recyclable as opposed to most other plastics on the market (“Polypropylene”, n.d).
5.0 CONCLUSION AND RECOMMENDATIONS

The economic, social, and environmental aspects of the Eco-to-Go program were analyzed to determine the feasibility of integrating the existing program into the new SUB. An economic assessment showed that the initial first year investment into the program is very steep. Even after the start-up year, vendors could lose up to $1500 in profit, a year, from offering discounts to those enrolled in the Eco-to-Go program. In the large scale operations of the SUB, this can be considered a miniscule cost and although the program is not profitable venture, it can financially break even, and so the implementation of the ETGP can be justified.

Summarizing the social considerations, we support the integration of the ETGP in the new SUB. By analyzing the surveys, it is evident that the program will attract a large number of students, but only if the right incentive is offered. The ETGP can also help raise awareness to sustainable living, which was even voiced by the survey participants. Also according to the survey results, a major concern of the current program is a lack of advertisement. Despite this minor setback, the integration of the program will create job opportunities and help UBC reach its sustainability goals.

For the environmental assessment, there were four major areas under investigation. The waste calculations showed that integrating the program can lead to a waste reduction of 29 tons. This also translates into a reduction in fuel and carbon dioxide emissions from the drop in garage transportation. The material used in the plastic containers is also made from a by-product of the petroleum industry, is non-toxic, and is although it can be difficult, it is 100% recyclable. Therefore, from an environmental perspective, we support the integration of the ETGP in the new SUB.

Although all three aspects supported the integration of the Eco-to-Go program, they all work under the assumption that a large portion of the student body will enrol. In order to better facilitate the integration, we recommend finding a more effective way to reduce the washing time for the containers, or finding a way to cut down on labour costs. We also recommend implementing a heating chamber, on campus, to facilitate composting the plastic containers at the end of their lifecycle. Finally, using the triple bottom line assessment and evaluating the conclusions reached, we support the integration of the Eco-to-Go program in the new SUB.
REFERENCES


Chan, C., Wakefield, V. (14 March 2013). Email Message


APPENDIX A

Eco To Go Survey
A custom survey designed to collect information about UBC Eco To Go Program from UBC undergraduate students.
All entered information will remain anonymous. Thank you for your participation.

Individual Information
To separate participants into groups

Where do you live? *
- UBC Student Residency - On Campus
- Off UBC Campus
- Privacy, I don’t want to answer this question

How do you get your food in UBC? *
Includes all breakfast, lunch, dinner, drink/coffee, and snacks
- I bring my own food or going home to eat (off campus)
- I mostly purchase my food through UBC Food Services
- I mostly purchase my food at the nearby village
- Other: 

Do you know about UBC Eco To Go Program? Have you been using it? *
- Yes, I know Eco To Go in detail.
- No, I have never heard it.
- Yes, I know Eco To Go and I have been using the program.

Eco To Go Information - Please Read
Eco To Go: A food service program initiated by UBC Food Service to prompt sustainability by using washable containers. The washing process will be provided by UBC.
- Membership is $5 plus tax. Once you buy your first membership card, there is no expiry date or annual renewal.
- For lost or damaged container and/or card, a replacement fee is required. This program does not make a profit. It simply covers the actual cost of the container. You can purchase a container at any of the participating locations.
- You simply exchange your membership card for a container and vice-versa you’ll never have both in your possession at the same time.
- Drop it off dirty when you are finished with it, obtain your card, or get another meal to go. Now you can enjoy your campus food any where you go, with less waste!
Eco To Go Information - Not Currently Using

To gather information about Eco To Go program from not currently enrolled participants.

Eco To Go: A food service program initiated by UBC Food Service to promote sustainability by using washable containers. The washing process will be provided by UBC.

Would you consider to use Eco To Go? *
Given now you knew about it.
☐ Yes
☐ No

If you answered "No", please state your reason

For which of the following reasons, would you decide to use Eco To Go? *
Note: participated food outlets offer discounts if you use Eco To Go program.
☐ The amount of discounts
☐ The environmental benefits
☐ The design of food containers
☐ It is just cool to use some programs like this
☐ Other

What do you think about the amount of advertisements on Eco To Go program? - Optional
If you have never seen any advertisements, please choose "Not Enough".

1 2 3 4 5

Not Enough ☐ ☐ ☐ ☐ ☐ Enough

How much discounts do you think are reasonable? *
To reflect the ineffectiveness of Eco To Go program
☐ 25 cents
☐ 30 cents
☐ 40 cents
☐ 50 cents
☐ Other

Why do you think such amount of discounts are appropriate? - Optional
Eco To Go Information - Currently Using

To gather information about Eco To Go program from currently enrolled participants.

For which of the following reasons, you decided to use Eco To Go? *

Note, participated food outlets offer discounts if you use Eco To Go program.

☐ The amount of discounts
☐ The environmental benefits
☐ The design of food containers
☐ It is just cool to use some programs like this
☐ Other: ______________________

What do you think about the amount of advertisements on Eco To Go program? - Optional

If you have seen any advertisements, please choose "Not Enough".

1 2 3 4 5

Not Enough ☐ ☐ ☐ ☐ ☐ Enough

Any suggestion that you would like us to know? - Optional

For you to reflect your opinions on Eco To Go program

Add item
New Student Union Building (SUB)

To gather responses specifically to new SUB.

Do you support the implementation of Eco To Go program in the new SUB (building completes in 2014)*
Eco To Go in the new SUB will be organized by AMS

- Yes
- No

Do you think that Eco To Go from AMS and UBC Food Service should be integrated? *
For example, a container from AMS Eco To Go can be exchanged in UBC Food Service Eco To Go?

- Yes
- No
- Other: [input field]

Do you like to get rid of the current token/membership card system on Eco To Go Program? *
Note: If answer yes, it means you agree to have your UBC student card replaces the current system.

- Yes
- No
- Other: [input field]

Any suggestion that you would like us to know? - Optional

[text input field]

Add item

Thank you for your participations
Please click continue to submit your responses.

Add item

Confirmation Page

Your response has been recorded. Thank you for your participation. If you would like to see the results of this survey, please contact Jackie C at jackielemor@gmail.com.

- [ ] Show link to submit another response
- [ ] Publish and show a link to the results of this form
- [ ] Allow responders to edit responses after submitting

Send form