

UBC Social Ecological Economic Development Studies (SEEDS) Student Report

Melt Collective: Proposing a Constant Working Space for Recycling Plastics

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University of British Columbia

COMM 486M

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TODAY, TOMORROW, AND THE FUTURE FOR THE MELT COLLECTIVE

Prepared for the Melt Collective by COMM 486M Team 2

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EXECUTIVE SUMMARY

THE TODAY

Developing the current business model of the “Melt Collective” will require an extensive analysis of the current market as well as the future market of where they want to sell their product or service. Furthermore, the actual product that they are trying to sell, being recycled plastic products, will have to be refined as well as it seems that the actual product that they want to sell leans more towards the “experience” and “message” rather than the actual physical products themselves.

Our strategy will revolve around focusing the start-up initially setting up a well-planned and standardized model for this proposed craft centre, where Melt Collective can supply recycled plastic that is clean and prepped to be workable for customers to create their own products. In the long term, once a system is stable and working we can then perhaps transition into having people not only buying these recycled products, but also have a team that can educate on recycling these plastics as have customers create their own products using the “Melt Collective” system.

The “Melt Collective” will need to solidify its personal working space as provided by the AMS in order to secure a constant space that can be exclusively used for their operations which is easily accessible for them. They currently have no system of retailing this proposed service, and as a result have no customers yet, however we will aim to target specific products and how to market their products in the near future. The available assets are currently sufficient enough to run these craft centers operations if they can secure sufficient space provided by the AMS. Finally, another challenge that the company faces may be a lack of labor due to the high amount of labor turnover as only 5 original members remain since the clubs inception and they currently only have 8 consistent members working on the project. This will need to be addressed in order to keep consistent operations working properly within the company, where we propose hiring paid employees if necessary.

TODAY



TOMORROW



FUTURE

THE TOMORROW

Create Brand awareness of “Melt Collective”

Due to the company being in its very early stages of development, it is reasonable to assume that very few people at UBC know about its existence, which is exemplified with our survey as out of the 50 respondents, only 2 people have heard of it which therefore leads us to implement strategies to improve upon the company's marketing. This will include heavy advertisement through social media and using a marketing stream that is very heavily used by the UBC community, in order to get a certain level of exposure. A great way to do this would also include partnering up with UBC Sustainability for big events and showcasing the process of melting plastic.

Introduce craft centers:

Due to the many economies of scale Melt Collective lacks, inexperience in designing and producing marketable products at a large scale, key personnel, and problems with markups due to selling their products at UBC, our recommended strategy and the general direction we feel that Melt Collective should go is more towards a craft Centre. Further analysis is provided as to why this strategy is superior to merely selling recycled plastic products and will benefit the company more as it emphasizes the importance of sustainability and is a better way to voice their ideology of being sustainable as customers can actually create their own products with recycled plastic, rather than simply buying a finished product. This will entail Melt Collective having an exclusive space where they provide segregated and cleaned recycled plastic as well as the technology required, for customers to be able to create their own products, with initial instruction from members of Melt Collective.

THE FUTURE

Scope and Timeline

As of now, the scope of the project will most likely be contained within the confines of the UBC community as the company does not have the proper resources to move its undertakings to other places of sale such as downtown Vancouver. If the project is successful here in a more controlled environment, expansion will be a prospect for the future; however more extensive market research will need to be performed after the project is seen to be promising here on Campus.

Overarching Goals

Have a sustainable business that is able to properly educate the public on the importance of recycling and sustainability, that is well-known around the UBC campus.



**TODAY, TOMORROW,
AND THE FUTURE FOR
THE MELT
COLLECTIVE**

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Outcomes and Goals

Working Facility

- Furnished Space
- Proper operating equipment
- Communicates the values of sustainability and importance of recycling

Connections

- Approval from necessary institutions
- Useable plastic garbage supplied
- Well established and recognized brand

Dedicated Staff

- Trained and Educated staff
- Dedicated workforce
- Proper customer service performance

THE GOAL

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THE STEPS

THE FUTURE

Outcomes of our recommendations and goals we wish to be satisfied:

Here is an outline of where we want the company to be after we have implemented our strategies and they are successful. We will revisit this slide later on in the presentation after our analysis and recommendations.

Strategy Issues – Current Company Position



THE GOAL

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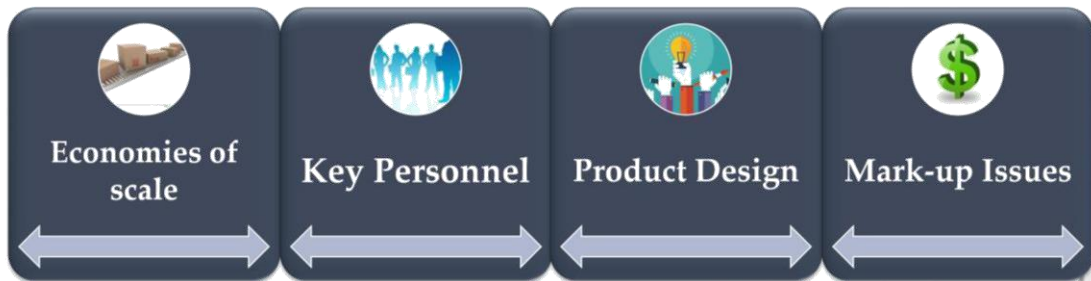
THE STEPS

THE FUTURE

Current Position:

The company, being still in its experimental stages will require quite a bit of work before it will be able to begin operations at the level desired to begin earning revenue and establish itself as a successful company here in the UBC campus. There are many promising aspects that the company can currently work with however. There is currently a small dedicated group of engineers that is working on the project and is necessary to further the project and get it where they want it to be, and have the proper skills and knowledge of working with recycled plastic, to melt and shape it into product as evident by their pendant they showed during their presentation. Furthermore, the idea of creating products from primarily recycled material is very appealing to those here in UBC due to campus member's strong opinions about being sustainable and green in today's world as evident in our surveys. Finally, the product we are proposing is very unique here in UBC, such that there is nothing like it where customers are able to go into a facility, and create whatever product they desire at a fee, using mostly recycled material that originated right here on campus.

Strategy Issues – Selling Finished Products



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Introduce craft centres:

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The Tomorrow– Value Proposition & Recommendation

- Zero-waste Campus
- Metro Vancouver region
- Craft Center
- Recycling lesson
- Educational oriented



THE GOAL

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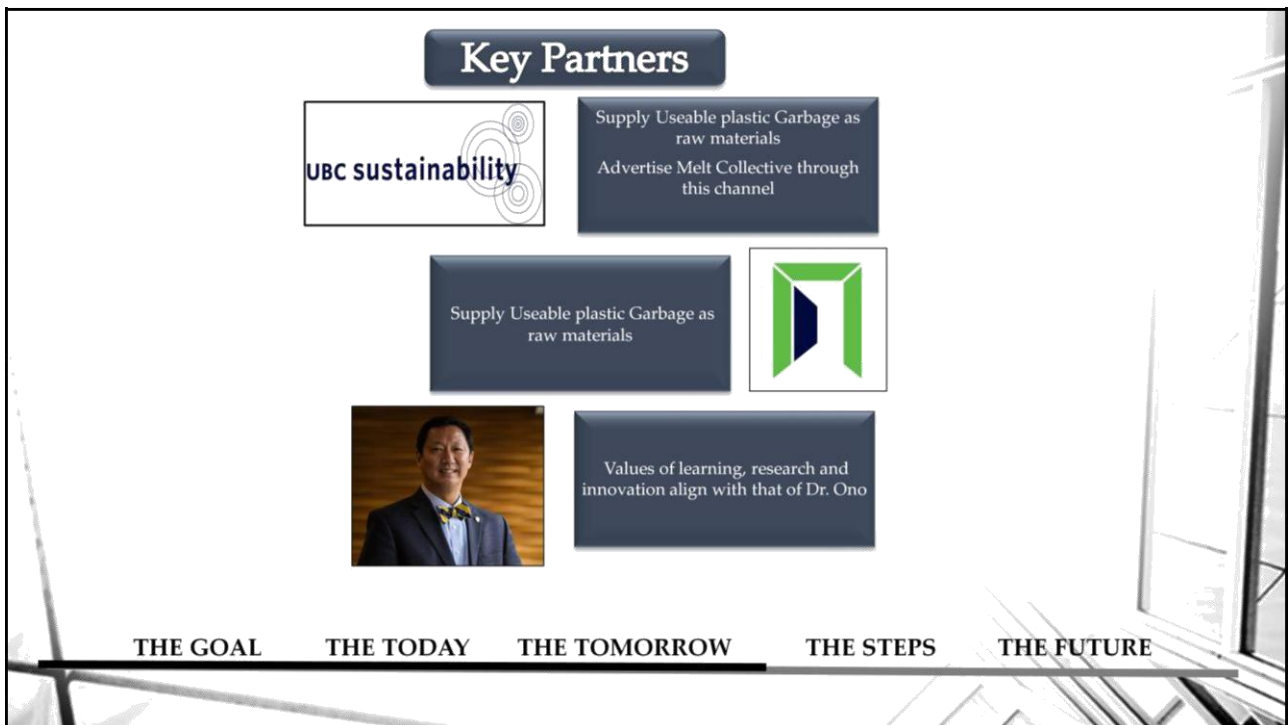
THE FUTURE

Value Proposition

In the short run our goal will be to create a zero-waste-campus, and looking at the grander scope of our mission, we aspire to instill within Vancouver citizens the consciousness to recycle and reuse their plastic waste as they participate with us at “Melt Collective”.

Recommendation

This concept, as mentioned previously, is very similar to that of a pottery craft center. Melt collective will have its own store or perhaps an area allocated exclusively for them at UBC with all required work stations and equipment for recycling and reproduce plastic articles. When customers enter the facility, there will be specialist (recycling professionals) who can give them a tutorial about the basic mechanics, broad ideas, and recycling process step by step. By using the machines available with guidance from these specialists, customers can make several different products. Through this experience, customers will not only learn how to recycle a plastic article, but also explore their creativity at an affordable cost and learn about the values of creating a sustainable environment.



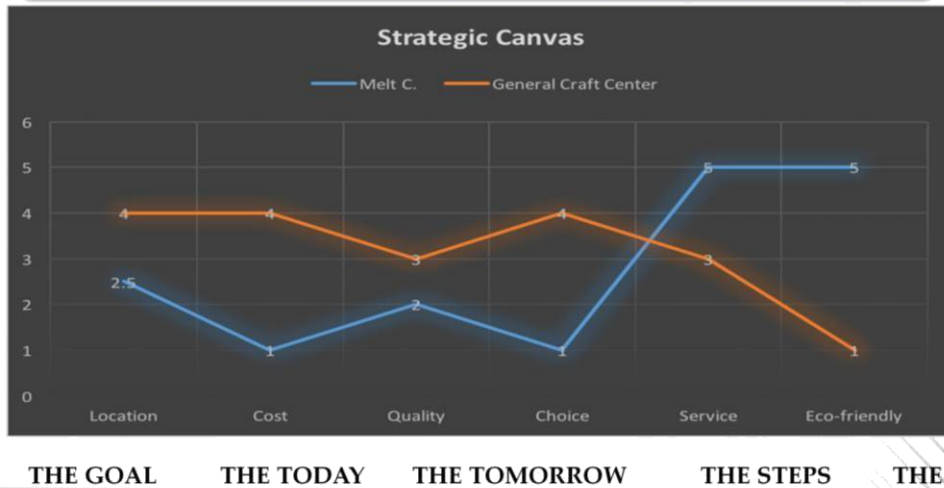
Key Partners

UBC Waste Management & UBC sustainability - Essential to have garbage collection and segregation be efficient. Normally the recyclable waste that the UBC waste management collects goes to Metro Materials for transformation into recycled commodities which companies may then bid on to create recycled products. Melt Collective must then take initiative and successfully partner with this entity in order to have sufficient plastic that its customers will work with at these craft centres. Currently UBC has a zero waste initiative where it aims to recycle 100% of its garbage and their site states that "Most of our garbage can be recycled, yet right now we recycle less than half." Melt collective can play an integral part here as there is available waste that can be recycled potentially but isn't, and Melt Collective can partner with UBC sustainability in order to supply it with the waste it needs, and in return UBC sustainability can advertise Melt Collective's operations to further grow the company's brand awareness and improve the brand's exposure.

UBC President, Dr. Santa Ono - During the annual BC Business Summit 2016, Dr. Santa Ono, president and vice chancellor of the University of British Columbia clearly stressed the importance of "Learning, Research, and Innovation" for an economy to be prosperous and strong. He also emphasized that talent is the element keeping BC province competitive and it is undividable between education and business. Melt Collective is a perfect example for Dr. Ono's points. The funders of Melt Collective learn from UBC, do their research, and made imaginary assumptions came true through innovations. Moreover, Melt Collective extends the idea of "education" to its customers. It is perfectly addressing the point of education and business, with talent and innovation. There is a \$10 million Sustainable Futures Fund launched by the board of governors in UBC, and Dr. Ono tweeted about this news on his twitter. It can be a very good resource for Melt Collective to further expand the business when it needs financial support.

Sauder School of Business - The MBA program at the Robert H. Lee Graduate School at UBC Sauder School of Business ranked the 14th as a global leader in sustainability again in 2016. Under sustainability of Sauder School of Business, there is a Recycling and Waste Management which is the response to UBC's Zero Waste Action Plan, which Melt Collective can be a good partner with. Furthermore, there is a program called "ReUse It! UBC" initialized by Sauder, aims to reuse of low value goods such as office supplies, furniture, and so on. Although it is a different way of reusing stuff, but the idea of eco-friendly is the same. Melt Collective can introduce its technology to Sauder and reinforce the "ReUse It" program to a new level.

The Industry



Industry – Strategic Canvas

As Melt Collective is aiming to provide more of an educational service rather than a profit-oriented small business selling products, there are several major differences compared to general craft centers.

Since Melt Collective’s operations is located in the UBC Vancouver campus, it is not as convenient as other community based craft centers, where is easier to access for families with younger children. However, it is a double-edged sword, since UBC is one of the landmark for Vancouver, Melt Collective can take this advantage and attract its popularity more broadly to UBC visitors be they can be high school students, parents, and tourists.

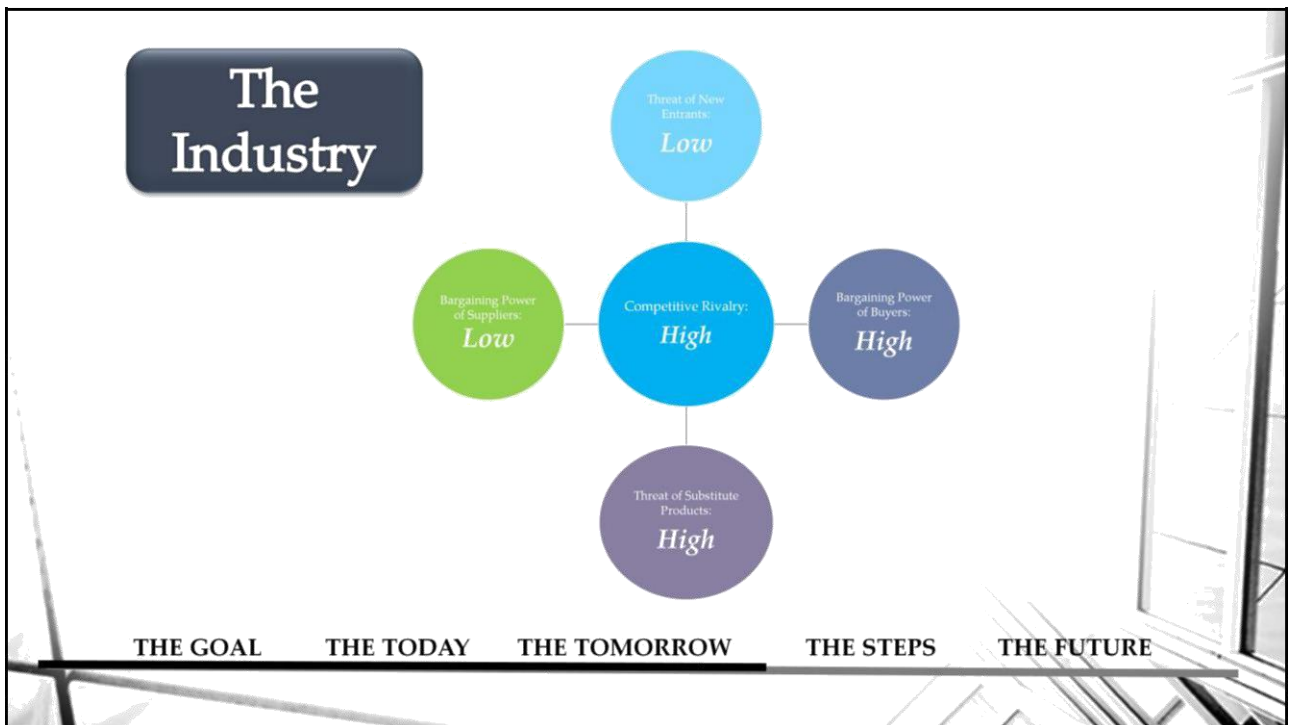
Melt collective provides plastic wastes to customers that can be used to make new products after they are segregated and cleaned at the Melt Collective facility. Customers only pay for the tutorial and using of the equipment provided. Therefore, the cost will be relatively low compared to the traditional craft centers.

The quality of the finished product may not be as high as those created in craft centers, Melt Collective are not as refined just yet, and the raw material are not consistent; the final product can lack in design and coloring (we cannot determine the color, and general quality of product that the customer will create).

Up until now, the machine in Melt Collective can only allow us to produce few products, such as pendants, writing boards, flower pots and so on, which is not like in the craft center, where people can design freely (like pottery for example). So, choice scores very low compared to other stores.

Melt Collective’s main focus is they wish to raise environmental awareness through the experience of recycling the plastic by the customers themselves. It requires professional knowledge, passion, and patience of the employees. There will be plenty of communication during the visit to Melt Collective. Therefore, the rating for service is very high.

Lastly, as mentioned above, the entire process—from the basic idea to the final product is all about environmental consciousness. Customers come in and we teach them how to turn plastic waste into something new and desirable. It makes Melt Collective a highly eco-friendly store that can provide excellent and friendly services and therefore it assumed that Melt Collective’s performance outweighs the general craft centers.



The degree of threat that new entrants pose is relatively low, since Melt Collective is not a profit-oriented organization and there is no similar service like it in UBC. Its goal is to educate people about environmental consciousness and re-use what once was garbage rather than drive up sales and make as much profit as possible. In the long run, Melt Collective will eventually spread by itself or by partnering with other companies and/or organizations, however currently it should primarily look at entities here in UBC to partner with as mentioned previously. Melt Collective's main supplier is UBC waste management with abundant supply of waste plastic and we assume the supplies are free of charge. Therefore, the bargaining power of supplier is low.

What Melt Collective doing is more related to selling an experience as well providing a space to have such an experience. The bargaining power of buyers is high because according to the main goal of Melt Collective, they aim to raise awareness of eco-friendly activities. We need to make everything we offer interesting, and affordable. The final product we can provide is not like other commodities that are daily essentials. We need to give up some profit margins to just attract people to come over, because after all we are not plan to make money through this organization. In UBC community, there are many places worth visiting, such as the Beaty Biodiversity Museum, which is one of the landmark of UBC, and it is rate quite high in.

Tickets are required to visit the whole museum where people can find ancient dinosaur fossil and other precious historical relics. Before leaving the museum, people can also find a souvenir store, where they can buy little stuff that are relative with the theme of the museum. The museum has its own website under UBC's site. As well as the UBC Botanical Garden, where an apple festival is hosted every autumn. During that period, people can visit the garden, taste around 70 different kinds of apple, and if they wish to, they can buy fresh apples at the festival. It has been one of the most famous family fruit-picking events in Vancouver area for many years. When it is approaching each opening date, the information about the festival is very easy to be accessed via various channels—such as Facebook, local newspapers, cell phone application news.

There are many more spots in UBC not mentioned but attractive for all age and gender. These spots can be seen as rivals that Melt Collective needs to compete with. However, we can make them our partners and new channels to advertise our brand. Last but not least, the threats of substitute can be high, because there are plenty of cheap, new, and well-designed plastic products waiting to be purchased. In that perspective, products made by recycled plastic by Melt Collective may not be competitive. Therefore, we need to emphasize on what makes us unique and appealing—environmental sustainability and we can reinforce this ideology through our ideas of craft centres. This way we can educate our customers that when they gain one product made in

Competitors

Organization	Melt Collective	UBC Beaty Biodiversity Museum	UBC Botanical Garden
Points of Parity	<ul style="list-style-type: none"> • Located in UBC Vancouver campus • Reasonable/affordable charge • Suitable for all demographic to visit 		
Points of Difference	<ul style="list-style-type: none"> • Service & orientation • DIY experience • Sustainability 	<ul style="list-style-type: none"> • Historical evidence • Biological fossils • Experience 	<ul style="list-style-type: none"> • Special event • Agricultural goods • Seasonal

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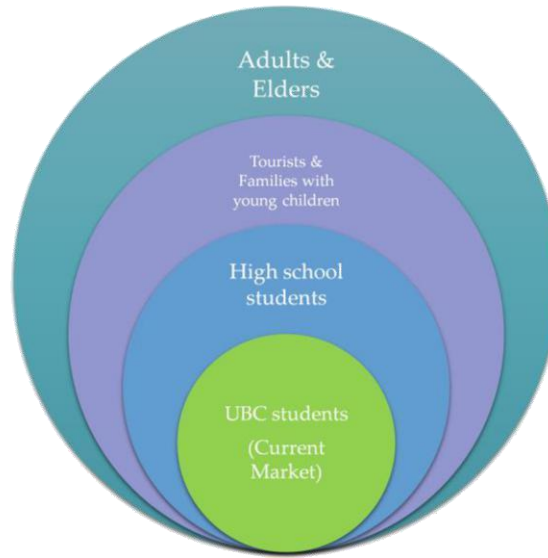
THE FUTURE

- All of the three organizations are located in UBC Vancouver Campus. Melt Collective is the newest among the 3. Its competitive advantage will be excellent service via teaching customers how to use recycled plastic to build new products. Its main focus will be the learning experience, but customers will get something to bring back home with, which is combining the outcomes of the other two organizations.
- In the future, we can make the competitors become our partners. Melt Collective can ask for a spot to put up their posters since those UBC scenic spots already gained their reputation and popularity. It will be more efficient and effective if Melt Collect successfully advertise themselves during events holding by those UBC landmark organizations.

To raise the brand awareness, Melt Collective can apply for an official web page under UBC's main website, to promote the ideas and physical location, such as other UBC facilities that mentioned above did. Secondly, Melt Collective can collaborate with local medias, such as newspapers to provide interview opportunities to compose real stories of its funders and employees. It is aiming to formally introduce Melt Collective and attract attention from elder customers. Then, they can also push their news via online platforms such as Facebook, twitter, and Wechat (commonly used communication smart phone application by Chinese). People will get the latest news and event information about Melt Collective if they follow their social accounts. It is a good way for Melt Collective to exposure itself more demographically with more diversified customers.

Lastly, in the "rivals" locations, such as the Botanical Garden and the Beaty Biodiversity Museum, Melt Collective can ask for a spot to put up their posters since those UBC scenic spots already gained their reputation and popularity. It will be more efficient and effective if Melt Collect successfully advertise themselves during events holding by those spots.

The Industry



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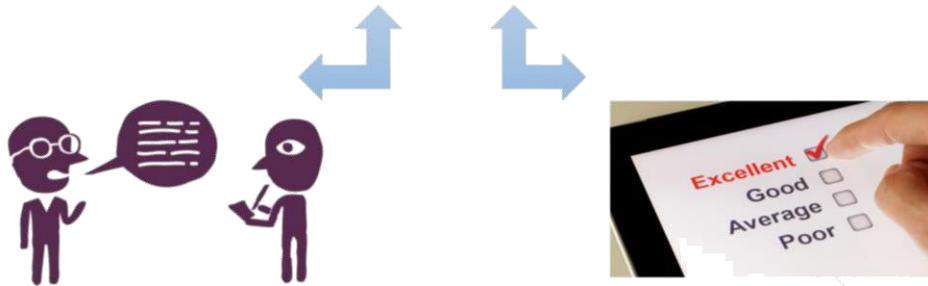
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- For now, Melt Collective is only targeting UBC students and pursuing cooperation with the UBC bookstore; and UBC students are the main customer stream.
- Soon, we wish to involve new groups of people from high school to become our customers. For those high school students who take summer camp or college tours will visit the centre and gain a different experience of recycling daily waste.
- As mentioned above, on campus location can be harder to access compared with those stores in the city but also it is an advantage to be in one of the most beautiful and high-ranked university. UBC is already a landmark in Vancouver; we can make Melt Collective a landmark of UBC, a place that every tourist must come and have their unique experience here. Also, we wish to attract younger generations, to educate them in their early life stage and plant an idea about environmental sustainability in their mind.
- Lastly, the working aged adults are those who usually not have enough time for community oriented events, and elders do not have too much awareness about new technology regarding environmental issues. Therefore they are in the third non-customer tier to be explored.

THE TOMORROW: THE CUSTOMER

PRIMARY RESEARCH



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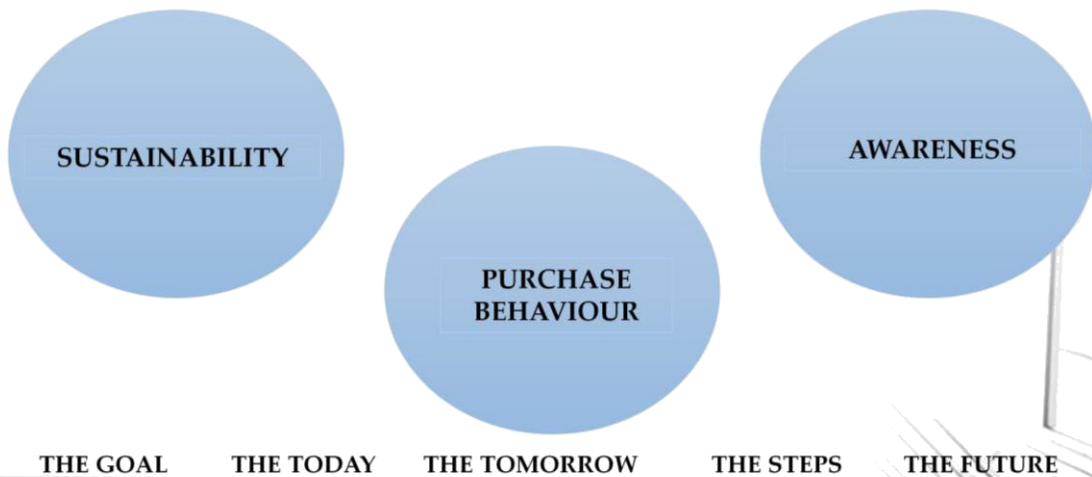
THE STEPS

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The main purpose of our primary research was to gain insight on student purchase behaviour, which included price sensitivity and taking a look at which kinds of products students would be willing to buy, if any. Another questions we wanted to address was how students felt about the topic of recycling plastic and sustainability, and if they had heard about Melt Collective in the past. We also wanted to know the overall attitude of these students. We chose to collect this data through our online survey, and tried our best to distribute the survey to different faculties to avoid biased preferences.

Our team also chose to conduct face-to-face interviews, which allowed us to ask more in-depth and open-ended questions to explore student motivation and attitudes further. The interviews focused on questions related to student familiarity with Melt Collective and their attitudes towards sustainability. The questions were designed to collect non-verbal cues, which is a good way to indicate honesty in responses. We also invited respondents to share their opinions on what they thought about Melt Collective's efforts on recycling plastic and what prices they would pay for various products, along with the main question of if they would purchase a recycled plastic product in the first place.

THE TOMORROW: THE CUSTOMER



Student behaviour towards sustainability: Our team found that a large population of the respondents were interested in sustainability and becoming more eco-friendly. Our online survey showed that 60% of the students ranked being a 5 on a 1-5 scale when asked if they were willing to buy a product made out of recycled plastic. When asked how important it was to that person that they buy eco-friendly products on a scale of 1-10, the majority of the people fell in the 5-6 ranges, which is quite low. Many of the respondents were more interested in making a change by re-using old products (71.4% yes), than creating their own products from trash (81.6% no). According to our face-to-face interviews, all 20 of our respondents answered positively when asked if they considered themselves to be eco-friendly.

Student purchase behaviour: A key point some of them made was that if they quite honestly were to go to a store to buy a product, they would stick to what they have bought in the past. They stated that they thought Melt Collective sounded like a unique and great initiative, but that would not necessarily compel them to go out and buy their products due to the lack of awareness around this brand. A few respondents also expressed the fact that they would not buy these products because they had never heard of Melt Collective.

Awareness in students: Out of all the respondents we had in the online survey and face-to-face interviews, only 2 people had heard of Melt Collective. Awareness is extremely low. It is very difficult to market a product or even gain volunteers to help out with the cause when those people do not know about this group in the first place. The lack of awareness is the biggest thing holding back Melt Collective, and we believe centering in on marketing and events (i.e craft centres), rather than products will be the best option.

THE STEPS: KEY ACTIVITIES

LARGER SPACE

HIRING & TRAINING

MARKETING

EDUCATING

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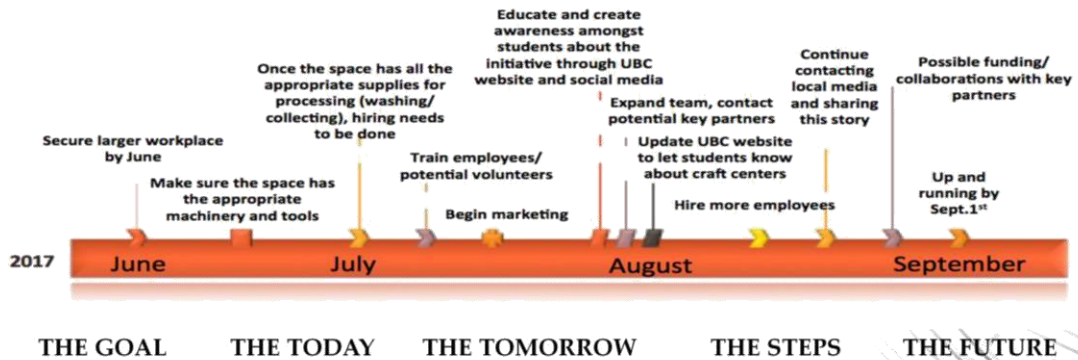
THE STEPS

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Some of the key activities for implementation include: securing a larger space, hiring and training, marketing the company and specific events, and educating the people.

THE STEPS: SPECIFIC TIMELINE

6 MONTH PLAN

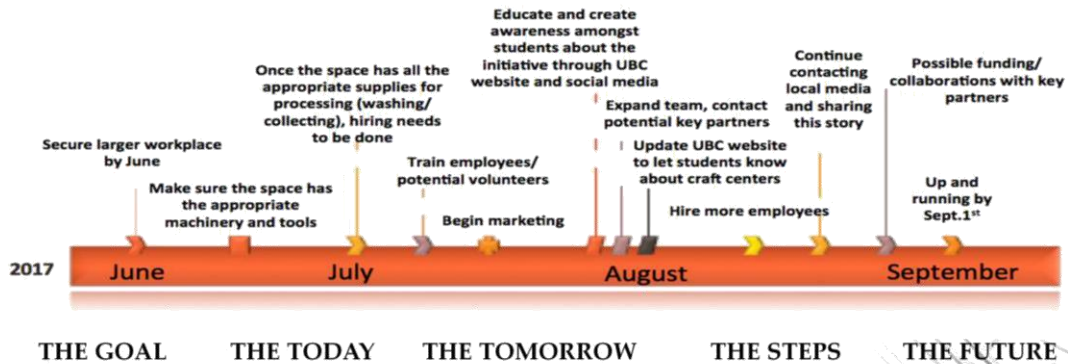


We are focusing in on a 6-month plan to be implemented right away. The first step includes Melt Collective securing a larger workspace by June. Once this is done they need to make sure the appropriate machinery and tools are in place for collecting, washing, shredding, and processing the plastic. This will be done quickly after the place is secured, so by July. They then need to focus on the hiring process. This will include hiring employees and potential volunteers passionate about the cause and training them on how the entire process of recycling plastic works.

Concurrently, the marketing initiatives begin (implemented around the end of July all the way to September 1st). This has to be the most extensive process because as seen in our research, the awareness around Melt Collective is extremely low. Marketing will educate the students and a beginning step will be to put themselves on the UBC website and remain active on social media sites. While this is going on, Melt Collective will contact key established partners and see if they can collaborate in terms of events and reaching a large audience. These key partners could include the Beaty Biodiversity Museum, UBC Waste Management, and lastly UBC Sustainability who share similar values and the future goal of making UBC a zero-waste campus.

THE STEPS: SPECIFIC TIMELINE

6 MONTH PLAN



Finally, Melt Collective will hire more employees depending on the current state and need. They will also reach out using the UBC website and their social media sites to promote the craft centers. This is a vital stage because their focus should mainly be the craft centers. Reaching out to local media and sharing their story (i.e radio), will generate traffic as well. The end goal of our timeline is to have everything up and running by September 1st. This is the time that will be the busiest due to the incoming students, and returning students. Opening up the craft centers during this time will attract a wide audience.

THE STEPS: FINANCIAL ANALYSIS KEY ASSUMPTION

While our full list of assumptions can be found the Appendix, we would like to highlight the following key inputs:

- \$20 Per Customer Visit
- 3 Hours per Customer Visit
- 30 Person Shop Capacity
- 50% Utilization of Shop During Open Hours

Assets	Quantity	Value
Commercial Washer	2	\$1,500
Small Shredder	1	\$200
Large Shredder	1	\$1,200
Small Plastic Melting Machine	1	\$200

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Following our discussion with the Melt Collective we have compiled a list of their current assets. With a commitment from the University to provide a facility this summer, we will assume they do not need further equipment to continue with our recommended strategy. Without the requirement of further equipment, we will assume that they do not require further funding beyond the \$2,000 grant they have received from the AMS.

We have also sourced a series of assumptions that will drive the following analysis, the list of these assumptions can be found in the Appendix. The majority of these assumptions are driven from the conversations we have had with the Melt Collective and general knowledge such as the hourly rate a student would require for labour. We have largely treated this as a for profit entity and therefore have not modeled in any benefit from volunteering hours or further donations.

Assumptions are bound to a margin of error and we recognize that such effect could make our analysis irrelevant. We would like to note that our first three assumptions above have been sourced by comparing our recommended strategy to current operations of local pottery crafting stores in Vancouver: U Paint I Fire, Claytek Studios, and Kaarigar.

THE STEPS: FINANCIAL ANALYSIS

Fixed Costs	
Rent	\$ 375.00
Utilities	\$ 75.00
Operations Salary	\$ 800.00
Machine Maintenance	\$ 100.00
Marketing Cost	\$ 250.00
Fixed Cost / KG	\$ 2.67
Unit Economics	
Revenue / KG	\$ 10.00
Total Variable Cost / KG	\$ 1.80
Total Fixed Cost / KG	\$ 7.17
Total Cost / KG	\$ 8.97
Profit / KG	\$ 1.03
Profit Margin	10.3%

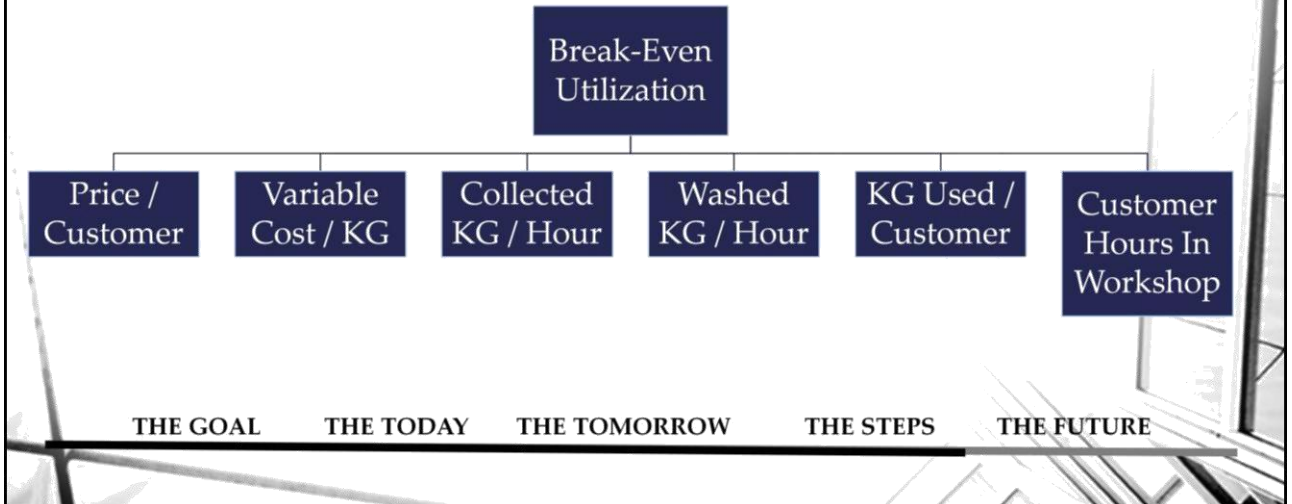
Break Even Analysis	
KG Required to B/E	524
Customers Required	262
Implied Workshop Utilization	43.7%
Payback Period	
Revenue / Month	\$24,000.00
Total Costs / Month	\$21,520.00
Profit / Month	\$ 2,480.00
Total Fixed Investment	\$ 3,100.00
Months to Payback	1.3
One Year Return	
Profit	\$19,840.00
Invested Capital	\$ 3,100.00
Return on Investment	640.0%

Weekly Process Analysis	
Step One : Collect Plastic	
Hours Collecting	20
Cost / Hour	\$ 15.00
Total Costs	\$ 300.00
KG Collected	600
Cost / KG Collected	\$ 0.50
Step Two : Wash Plastic	
Hours Washing	6
Cost / Hour	\$ 15.00
Total Costs	\$ 90.00
KG Washed	600
Cost / KG Washed	\$ 0.15
Step Three : Shred Plastic	
Hours Shredding	6
Cost / Hour	\$ 15.00
Total Costs	\$ 90.00
KG Washed	600
Cost / KG Shredded	\$ 0.15
Step Four : Workshop Use	
Workshop Open Hours	60
Employees / Hour Opened	3
Employee Costs	\$2,700.00
Workshop Utilization	50%
Customer Throughput	300
KG of Plastic Used	600
Materials Cost / KG	\$ 1.00
Revenue / KG	\$ 10.00
Fixed Cost / KG	\$ 4.50

THE GOAL THE TODAY THE TOMORROW THE STEPS THE FUTURE

Following the above analysis, we have further conviction in our recommended strategy. Without further investment, and at an assumed utilization of 50%, the Melt Collective could generate \$3,100 a month indicating a payback period of 1.3 months for their original investment. Due to the light initial investment required, this profit also generates a very attractive return on investment. With such a short payback period, we believe that such a strategy, once proven successful, is likely to be replicated across Universities.

THE STEPS: KEY METRICS & RISKS



Our strategy is focused on creating a self-sustaining business model, as such we believe the key metric to track is the break-even utilization, that is the utilization of the shop that is required to ensure that it does not operate at a loss. With our current set of assumptions, the required utilization is 43.7%. As this is ultimately an output of the range of assumptions we have committed to, we have done a sensitivity analysis on six variables that pose a risk to our expected break-even utilization:

- Price Per Customer
- Variable Per Kilogram (KG) of Throughput
- Collected KG Per Hour Worked
- Washed KG Per Hour Worked
- KG Used Per Customer
- Customer Time Spent In Workshop

THE STEPS: KEY METRIC SENSITIVITY

Sensitivity of Break Even Utilization to Price and Variable Cost

		Price / Customer							
		\$ 17.00	\$ 18.00	\$ 19.00	\$ 20.00	\$ 21.00	\$ 22.00	\$ 23.00	
Variable Cost / KG	\$ 2.10	56.0%	51.9%	48.4%	45.4%	42.7%	40.3%	38.1%	
	\$ 2.00	55.1%	51.2%	47.8%	44.8%	42.2%	39.8%	37.7%	
	\$ 1.90	54.3%	50.5%	47.1%	44.2%	41.7%	39.4%	37.3%	
	\$ 1.80	53.5%	49.8%	46.5%	43.7%	41.2%	38.9%	36.9%	
	\$ 1.70	52.7%	49.1%	45.9%	43.2%	40.7%	38.5%	36.6%	
		\$ 1.60	51.9%	48.4%	45.4%	42.7%	40.3%	38.1%	36.2%
		\$ 1.50	51.2%	47.8%	44.8%	42.2%	39.8%	37.7%	35.8%

Sensitivity of Break Even Utilization to KG Used / Customer & Time Spent In Workshop

		KG Used / Customer						
		2.6 KG	2.4 KG	2.2 KG	2.0 KG	1.8 KG	1.6 KG	1.4 KG
Customer Time Spent In Workshop	3.6 Hours	56.1%	54.8%	53.6%	52.4%	51.3%	50.2%	49.2%
	3.4 Hours	53.0%	51.8%	50.6%	49.5%	48.5%	47.4%	46.5%
	3.2 Hours	49.9%	48.8%	47.7%	46.6%	45.6%	44.7%	43.7%
	3.0 Hours	46.8%	45.7%	44.7%	43.7%	42.8%	41.9%	41.0%
	2.8 Hours	43.7%	42.7%	41.7%	40.8%	39.9%	39.1%	38.3%
	2.6 Hours	40.5%	39.6%	38.7%	37.9%	37.1%	36.3%	35.5%
	2.4 Hours	37.4%	36.6%	35.7%	35.0%	34.2%	33.5%	32.8%

THE GOAL

THE TODAY

THE TOMORROW

THE STEPS

THE FUTURE

The analysis shows that while all six factors above are important to track, the priority should be focused on tracking price per customer, variable cost per kilogram, kilograms used per customer in the workshop, and customer time spent in the workshop. We believe that following our recommendation, and through tracking these key metrics, the Melt Collective will not only be a self-sustaining enterprise, but a profitable entity that will inspire Universities across North America to implement their initiative.

THE STEPS: CONTINGENCY PLANNING

- Supplement labor hours with volunteer hours to reduce labor cost
- Adjust shop hours to maximize traffic
- Adjust prices to charge per hour instead of per visit
- Supplement plastic collection with customers bringing in own recyclables
- Create a VP of marketing title to get free marketing from some keen Sauder student

THE GOAL

THE TODAY

THE TOMORROW

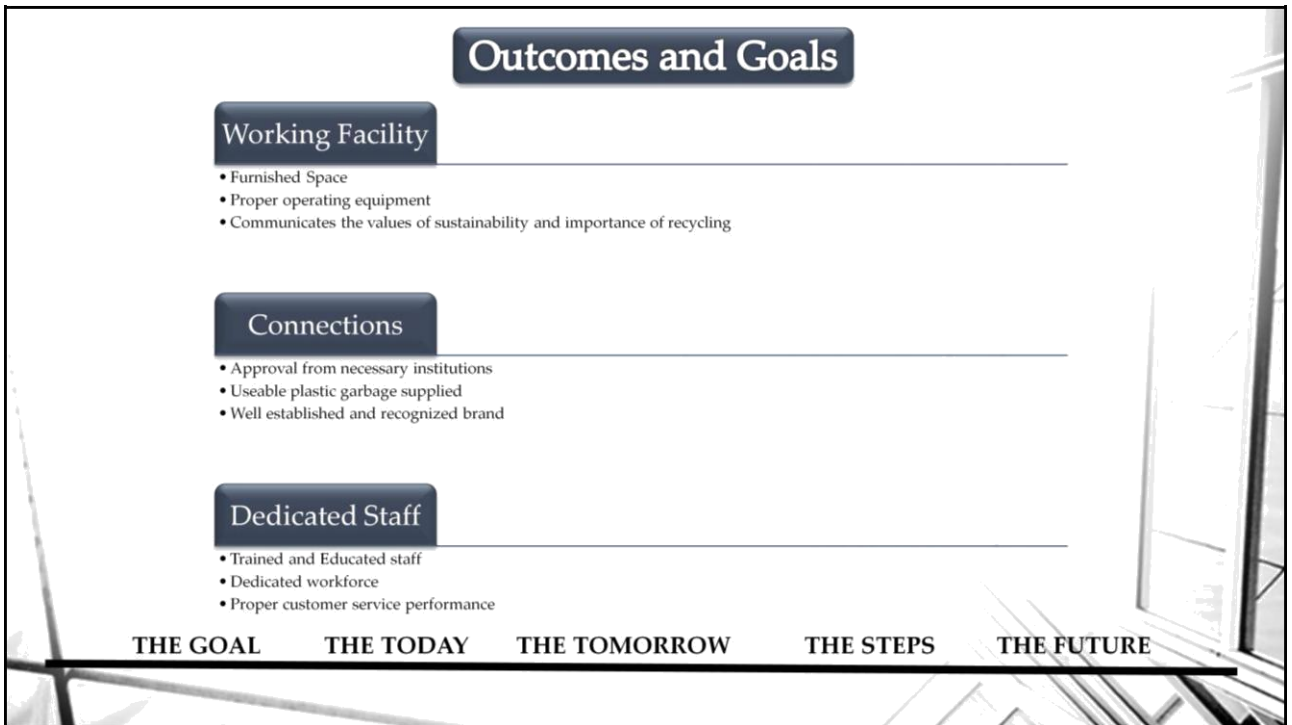
THE STEPS

THE FUTURE

We've addressed a series of cost saving actions that can be taken in the event that the Melt Collective fails to break-even. While this is by no means an exhaustive list, we have addressed:

- Variable and fixed costs of labor → Volunteers & Customer plastic sourcing
- Utilization → Customer traffic maximization
- Price per Customer → Per hour vs per visit revenue scheme

While we believe that our current plan is financially viable in the immediate future, we hope that the client remains diligent in monitoring the key metrics we have outlined and responding, using the contingency plan as a base, should costs significantly exceed our forecasts.



Outcomes of our recommendations and goals we wish to be satisfied:

Now, looking at our goals and outcomes once again, what we wish for the Melt collective is within 6 months by September 1st we will have a working and furnished facility ready to run planned sessions with proper connections with key partners in terms of supplying the recycled plastic, and marketing the company across the UBC sustainability website and UBC campus. We also seek to be properly staffed by then to instruct customers on how to operate the provided equipment and create their own products from the provided plastic, and ultimately begin earning revenue required to keep the company afloat. For the future, if our current strategy is successful we then may look into the option of selling our products as finished goods, once we have a stable customer base, improved brand awareness, increased staff to produce such products, and an established team dedicated to design and research into which goods should be focused on.

APPENDIX I: SWOT Analysis

Strengths: <ul style="list-style-type: none">•Dedicated core members•Sufficient assets to produce products•Appealing vision towards sustainability•Unique product here in UBC	Weaknesses: <ul style="list-style-type: none">•Lack of brand awareness•No exclusive space for operations•Lack of key partners•Inefficiency of garbage collection and refinement•Lack of dedicated employees
Opportunities: <ul style="list-style-type: none">•Large potential customer pool•Market interest in proposed product•Potential support from key institutions	Threats: <ul style="list-style-type: none">•Core member turnover•Community receptiveness to proposed concept

Here is an outlined SWOT analysis of general areas where the company can improve upon, where it currently holds its strengths, as well as areas it could look into and certain areas where it should be wary of and should address looking forward.

APPENDIX II: DETAILED KEY ASSUMPTIONS

Key Assumptions	
Student Plastic Collecting Hourly Rate	\$ 15.00
KG / Hour of Collection	30 KG
Student Plastic Washing Hourly Rate	\$ 15.00
KG / Hour of Washing	100 KG
Student Plastic Shredding Hourly Rate	\$ 15.00
KG / Hour of Shredding	100 KG
Workshop Rent / Month	\$1,500.00
Monthly Utilities (Electricity / Heat / Water)	\$ 300.00
Workshop Employee Hourly Rate	\$ 15.00
Weekly Salary for Operation Manager	\$ 800.00
Plastic Used / Customer	2 KG
Price Charge / Customer	\$ 20.00
Workshop Capacity	30 People
Customer Time to Craft	3 Hours
Workshop Open Days / Week	6 Days
Workshop Open Hours / Day	10 Hours
Workshop Utilization	50%
Machine Maintenance / Month	\$ 400.00
Marketing Cost	\$1,000.00
Materials Cost / KG in Workshop	\$ 1.00
Assumed Tax Rate for Not for Profit	0%
Operating Months	8 Months

These assumptions were determined through:

1. Conversations / Interviews with the Melt Collective (Primary Source)
2. Online research of other pottery craft centers (Secondary Source)
3. Common knowledge (Student Hourly Rate / Operating Months)

APPENDIX III: ADDITIONAL SENSITIVITY

Sensitivity of Break Even Utilization to KG / Hour Collected and Washed by Worker

		Collected KG / Hour Worked						
		15 KG	20 KG	25 KG	30 KG	35 KG	40 KG	45 KG
Washed KG / Hour Worked	70 KG	46.9%	45.4%	44.6%	44.0%	43.7%	43.4%	43.2%
	80 KG	46.8%	45.3%	44.4%	43.9%	43.5%	43.2%	43.0%
	90 KG	46.6%	45.2%	44.3%	43.8%	43.4%	43.1%	42.9%
	100 KG	46.5%	45.1%	44.2%	43.7%	43.3%	43.0%	42.8%
	110 KG	46.5%	45.0%	44.2%	43.6%	43.3%	43.0%	42.8%
	120 KG	46.4%	44.9%	44.1%	43.6%	43.2%	42.9%	42.7%
	130 KG	46.3%	44.9%	44.1%	43.5%	43.1%	42.9%	42.7%

While we believe these are key metrics to track as they represent the sourcing of materials needed for the workshop, we acknowledge that these are secondary metrics vs the four highlighted in the presentation as they have significantly less impact on the break-even utilization for the Melt Collective.

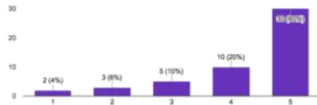
APPENDIX IV - Sample Lesson Plan

TIME	ITEM(s)	ACTIVITY DETAILS
3:00	Instruction/Introduction	Introduction to what Melt Collective is. Explanation of core values and importance of sustainability. Tutorial and safety precautions for working with recycled plastic
3:30	Product creation/customization	Customers are free to use recycled plastic and equipment to create customized products with close monitoring by Melt Collective employees
5:50	Clean-up	Customers finalize what they have made and employees prep facility for the following session
6:00	End of Session/Payment	Customers pay for session leave facility

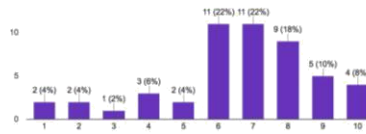
This Sample plan shows a potential itinerary of what a standard Melt Collective “Craft Session” will look like. If we wish to pursue selling finished goods, there would be an allocated space in the area that allows for people to simply purchase finished goods that Melt Collective staff have pre made, somewhat like a gift shop.

APPENDIX V – Survey Questions (I)

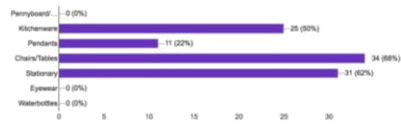
How willing are you to buy a product made out of recycled plastic (30 responses)



On a scale of 1-10, how important is it to you that you buy eco-friendly products? (30 responses)

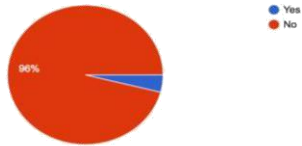


Here are some items available to you, which ones would you be willing to purchase? (30 responses)

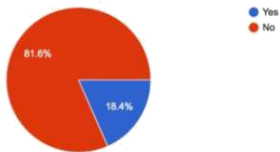


APPENDIX VI – Survey Questions (II)

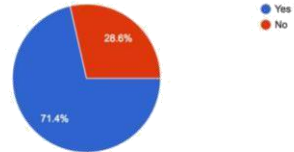
Have you ever heard of "Melt Collective"? (50 responses)



Do you ever consider creating your own products from trash?



Do you ever try to reuse old products? (49 responses)



APPENDIX VII – Survey Questions (III)

INTERVIEW QUESTIONS:

- 1.) What is your age?
- 2.) Are you currently a UBC student?
- 3.) Have you been to the UBC bookstore? If so, what are the main products you typically buy?
- 4.) Would you consider yourself to be fairly eco-friendly? If yes, in what kind of way do you show this? (i.e. recycling etc.)
- 5.) If you wish to purchase a product, are you the kind of person to weight out options and go to a store accordingly, or go to the nearest place due to convenience?
- 6.) Have you ever heard of Melt Collective?

Script to clarify misconceptions: Melt Collective is a new multi-disciplinary group based at UBC who support much needed research into plastic recycling. Besides research, they are motivated to change the narrative around waste through community engagement.

- 7.) What are your thoughts on this initiative?
- 8.) Would you be willing to purchase a product by them? If yes, what prices would you be comfortable with?
- 9.) What methods do you personally think would motivate the student body to become more aware of this group, and encourage them to buy the recycled products?

APPENDIX VIII – Websites Used

- <https://www.yelp.ca/biz/beaty-biodiversity-museum-vancouver>
- <http://beatymuseum.ubc.ca>
- Vancouver <http://vancouver.sun.com/newsun/staff-blogs/its-the-25th-year-for-ubcs-apple-festival>
- Vancouver <http://vancouver.sun.com/newsun/staff-blogs/its-the-25th-year-for-ubcs-apple-festival>

APPENDIX IX – Images Used

- <http://www.surrey womenscentre.ca/sites/default/files/styles/large/public/images/blog/mason-ubc13nw1A.JPG?itok=SFVTILUJ>
- <https://yt3.ggpht.com/-V-hqA1Nr0n0/AAAAAAAAAI/AAAAAAAAAA/PiK4Grf8n7Q/s900-c-k-no-mo-rj-c0xffffff/photo.jpg>
- <http://brand2.sites.olt.ubc.ca/files/2013/04/sustainability-short-name-with-ripple-effect.jpg>
- <https://thumbs.dreamstime.com/z/cardboard-boxes-conveyor-belt-8925706.jpg>
- <http://www.tradeready.ca/wp-content/uploads/2014/07/DesignSupplyChain.jpg>
- <http://www.clipartkid.com/images/47/green-dollar-sign-clipart-consulting-clipart-green-dollar-signwhat-is-KkM2nN-clipart.jpg>
- <https://3dprint.com/wp-content/uploads/2015/07/311.png>
- https://chemical-materials.elsevier.com/wp-content/uploads/2016/01/ChemicalsandMaterialsNow_DefiningSustainability.jpg
- <http://showme.co.za/pretoria/files/2016/03/Primary-Research.jpg>
- <http://www.oxbridgeprimaryresearch.com/images/question-splash-1.jpg>