Improving Arts Undergraduate Society's sustainability practices

through inventory management & waste reduction

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IMPROVING AUS' SUSTAINABILITY PRACTCES THROUGH INVENTORY MANAGEMENT & WASTE REDUCTION

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ABSTRACT
This document will describe the project under taken by the 504 team to improve UBC's Arts Undergraduate Society's (AUS) Inventory Management procedures thereby reducing excessive purchasing of inventory and the cumulative generation of waste.

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1 TABLE OF CONTENTS

2 EXECUTIVE SUMMARY

In partnership with UBC's Social Ecological Economic Development Studies (SEEDS) Program, the 504 team conducted a three-month long project that endeavoured to improve sustainability practices of the UBC Arts Undergraduate Society (AUS) through the introduction of improved inventory management tools and post-event waste reduction practices.

This report provides a detailed analysis and evaluation of the current AUS's sustainability practice of events. Methods of information collection include interviews, focus group discussion, site visiting and observation. All related documents can be found in the appendices. The information we collected show that AUS has no standard policy or system for event management. Also, AUS doesn't organize the leftover from the events. Therefore, AUS is facing the problems of over purchasing of goods for events, which creates many wastes.

Based on the situation analysis, the report discusses the two main objectives to solve the sustainability issues, which are:

1. Improve AUS's standard operating system for event purchases
2. Tackle waste production related to events at AUS

Recommendations discussed to meet the goals include:

1. Developing the efficient inventory management system
2. Reducing waste via the use of reusable items and the encouragement of behaviour change towards waste reduction.

3 CLIENT OVERVIEW

UBC's Social Ecological Economic Development Studies (SEEDS) Program seeks to establish collaborations between faculty, students, staff and community partners to mainstream sustainability issues both within and outside UBC through research. SEEDS works with student societies in the university to create a sustainable culture in their day-to-day running of the respective societies.

The Arts Undergraduate Society (AUS) represents Arts students across the different departments. The AUS operates through seven committees with their executives and different sub-committees. The current Meekison Arts Student Space (MASS) located in the Buchanan D building provides students with an open space and kitchen area. In this space, AUS hosts events, both social and professional, throughout the year for students or rents the space to external clients to raise funds. In organizing and hosting such events, the AUS is faced with waste management and supplies purchasing difficulties.

Waste management of the AUS space is managed by UBC cleaning services. The waste sorting bins provided by the UBC cleaning services have not been enough to accommodate wastes from events. As the recycle bin gets full quickly participants tend to throw recyclable items in the garbage. Furthermore, the AUS aspires to reduce overall wastes generated from events. Two policies recently adopted by the AUS are hosting zero waste events and purchasing wooden cutlery for events. In February 2019, the AUS hosted one zero waste event where it required participants to bring their own mugs for drinks. The initiative was not successful as per the AUS analysis but the detailed outcome has not been documented by the AUS. The AUS starting from February 2019 started to buy wooden cutlery for events hosted by the different committees. Thus far, the AUS has been successful in using such items for events hosted by the AUS and its committees.

Purchasing of event supplies is the responsibility of committees organizing events. Committees are allowed to use supplies in storage. The AUS has storage space within the Meekison Arts Student Space to store event supplies and other promotional merchandises. However, they face difficulties in terms of communication across different committees who organize events thus often end up repurchasing supplies that are already in storage. Previously there have been measures to try and address the issue, one of which was the use of a Google Doc for the different committees to indicate the supplies that they have purchased and used. However, this initiative ultimately proved unsuccessful.

4 DEFINITION OF THE POLICY PROBLEM

Based on the information gathered by the initial client meeting as well as a preliminary site visit, the 504 team will be addressing the lack of proper inventory tools present in the storage space of the AUS, and the subsequent build up of clutter and excess of material as a consequence.

IMAGE 1

IMAGE 2

IMAGE 3

5 DESCRIPTION OF THE PROJECT DESIGN

5.1 PROJECT STATEMENT

The project seeks to create a system for events management for the Arts Undergraduate Society (AUS) that will achieve sustainability and efficiency. This will entail reducing unnecessary expenditure that leads to a culmination in the number of disposable items which inherently increases waste production from events conducted or coordinated by the AUS. The project will ensure that the AUS can keep track of all items they have to their disposal and avoid repurchasing items already available through the use of a comprehensive inventory management system. This means the society will be able to save funds while at the same time ensuring fewer purchases of unnecessary disposables and eventually finding their way into the AUS storage space. Proposed project activities have been informed by client meetings and site visits to the Meekison Arts Student Space (MASS). The project ensured to engage the client in the design and implementation of project interventions.

5.2 OBJECTIVES, OUTPUTS AND INTENDED OUTCOME

The project has two main objects: focusing on improving the AUS's inventory management procedures and tackling waste production related to events hosted at Meekison Arts Student Space (MASS). The project will address the following gaps and response requirements:

5.2.1 Objective 1 - Improve AUS's standard operating system for event purchases.

Intended Outcome: Sustained reduction in excess costs via the use of a proper inventory system.

Beneficiaries: AUS (Executives as well as committee members)

Output - Development of efficient inventory management system.

As of 28 March 2019, following a focus group discussion with AUS executive committee members the society acknowledged they were unaware of the exact total number of items they have in their storeroom. Indicating there are no measures in place to track items in stock.

Committees continue to purchase items for events which may already be available. The month of March was a very eventful with AUS hosting more events, the increase in events was accompanied by an increase in items in the AUS storeroom (this when comparing items from an initial site visit in February).

- Effective implementation and utilization of the inventory system.
- Ensuring compliance with the standard operating procedures
- Utilization of suggested inventory tools (stake cards and online system).
- Incentivization of AUS committees to fully comply until actions become habitual.
- Gentle reminders to buttress effectiveness of the inventory management system.

5.2.2 Objective 2 - Tackle waste production related to events at AUS

Intended Outcome: Increased utilization of more durable reusable products and increased recycling.

Beneficiaries: AUS (Executives as well as committee members), students that use the Meekison Arts Centre as a study or leisure space, UBC – will see an overall reduction in waste production.

Output - Reduced waste via the use of reusable items and the encouragement of behavioural change towards waste reduction.

Information gathering has shown that the AUS makes no use of reusable products in any of its events. This objective will seek to address:

- Full uptake of the UBC zero waste policy.

- Strengthen reduction in waste production by using more durable items such as serving dishes and cutlery.

- Support current measures in place through the use of waste reduction checklists;

5.3 POLITICAL CONSTRAINTS AND POTENTIAL CONSEQUENCES

5.3.1 The change of Arts Undergraduate Society (AUS) body members

As changes of Arts Undergraduate Society (AUS) body members are anticipated after annual elections, there is a likelihood that the successors to the current AUS committee might not adapt the recommendations and instead proposed the alternatives which deemed suitable for their management.

5.3.2 Subject to compliance by committees hosting events

The introduction of stock card recording system is subject to compliance by authorized committee members hosting event and AUS' authorized administrator(s) who are students with hectic schedules. As there are 7 committees who are conducting events, it can take time for them to get used to the system. The external parties who are charged hourly rate of CAD 10 for conducting events might be more reluctant to comply with the system.

The issue can be minimized as the manual inventory recording process will be easier and less time consuming by placing cards on cupboards. The online system will also be designed with the intuitive user-interface without the requirement of special expertise to install, maintain or troubleshoot.

The behavioral changes of event hosting committees can also be promoted by suggesting that their participation matter by introducing the rephrased "gentle reminders" as below;

- Help your AUS Society by filling out the form!

- One minute! It's all we ask for to keep the AUS society organized!

- Your contributions matter to reduce unnecessary waste in AUS!

5.3.3 Possibility of human errors

Both physical stock cards and online system are prone to human error. Event organizers who are in charge of managing large-scale events under time pressure can make mistakes when updating the stock cards. In addition, even if pre-event inventory is updated, it does not negate the possibility of failure to update leftover/returned stock after the event. As the system requires a nominated AUS representative or an administrator, upon collection the stock cards, to transfer the consolidated data onto the streamlined online inventory management system, errors can also result during the manual data input stage.

It is therefore advisable for the AUS to keep the shorter time frame of data transfer to an online system such as monthly or bi-monthly. This will also facilitate an administrator if there are cases when he/she is required to follow up with relevant committees for any significant discrepancies between physical records and actual stocks as there are stronger chances that event organizers might be able to recall the records from recent events.

It would also be helpful for AUS to give access to fewer administrators to prevent further complications in the system.

5.3.4 Possibly of lost stock cards and missing online records

It is also possible that the stock cards get lost especially during hand over of documents from an administrator to his/her successor or during the peak event season. Some online records can get deleted accidentally or lost as well.

The issue can be minimized by getting the authorized administrator to keep the scan copies of stock cards and by incorporating the back-up system in the online platform.

The followings are the possible political constraints which might hinder the successful implementation of the recommendations;

6 RESEARCH METHODS

This policy project mainly relied on primary data to analyze and provide policy alternatives for the policy problem. Following the initial meeting with SEEDs, relevant documents relating to the status, relationship and administration of the student societies were reviewed in order to understand the client's' position and its mandate in relation to implementing the changes to be proposed by the team. This helped in framing the policy problem as well the approach adopted by the project. Subsequently, the following methods were employed to collect data the project:

6.1 DOCUMENT REVIEW

The policies and guidelines of the AUS in relation to event related purchases as well as waste management were reviewed. In addition, similar policies and guides of the two undergraduate societies i.e. Science and Engineering were reviewed to better understand and learn from the practices of these societies. In addition, UBC sustainability guidelines and policies and other relevant researches were reviewed and used to inform the policy project.

6.2 INTERVIEW OF KEY INFORMANTS

Interview is the primary method of data collection that informed the policy formulation and analysis of the project. Two semi- structured interviews were conducted with the current and incoming AUS Vice President of finance and administration to better understand the context and policy problem. Further, one unstructured interview was conducted with office administrator of the Abdul Ladha Science Student Centre to learn about the practices of the center in relation to event related purchases and waste reduction.

6.3 FOCUS GROUP DISCUSSION

After the preliminary assessment and development of policy alternatives, a focus group discussion was held with the AUS president, office administrator, sustainability coordinator and VP finance. The focus group followed a structured format with presentation of preliminary findings followed by

facilitated discussion. The focus group discussion was employed as a tool to receive feedback on the preliminary findings as well as to decide on a suitable timetable for implementation and to devise an incentive mechanism(s) to facilitate implementation.

6.4 OBSERVATION AND SITE VISIT

Observation was made through five site visits conducted through the course of the policy project. The team also conducted a site visit to the Abdul Ladha Science Student Centre. The objective of the site visits were to observe how the AUS and the Science Student Centre is utilized both by students and AUS executive and administration members.

6.5 PROJECT MONITORING

A project monitoring system will be employed which will work concurrently with the rewards system. The prospect of being rewarded will work as an impetus to adherence. The office administrator will tally the number of events held at the AUS per month alongside the updated monthly online inventory system. This will be the project database. Effective use of the system will be indicated by a corresponding project database, which will track project performance (filled and signed inventory management tool).

Project monitoring will encompass changing conditions (change in committee members), along the lines of risk assumptions tackled in this report. The recommended management process will help to identify at what stage of the implementation process there may be the most constraints which provides information on which problems need further attention. The work plan will be adjusted to suit the client's schedule and this will impact project implementation and evaluation.

6.5.1 Limitations

Though the team managed to communicate and interview some of the executive committees, the team was unable to interview all committee executives especially those committees who frequently hold events. In addition, in terms of communication, the lack of designated representative from the

AUS to liaise with the project team resulted in miscommunication of relevant information that led the team to undertake and work on a problem that one of the committees was working on. Further, because multiple people were involved in the communication, it created a gap in data collection, as there were variations in the information we received from the AUS.

As a policy project, the policy design was set up to include not only provision of policy alternatives but also to implement and evaluate the outcomes of the policy intervention. However, due to time constraints the policy project was limited to only providing policy recommendations and development of inventory tool and waste reduction strategies.

7 IMPLEMENTATION AND POLICY EVALUATION - PROJECT BASED GROUP

7.1 PROJECT IMPLEMENTATION[1]

Effective implementation and utilization of the inventory system bases on the premise of urgently decluttering and conducting stock counts of available items. The office administrator pointed out previous cleaning and decluttering of the space had been unsuccessful because there was no tracking system something which the inventory management system hopes to address.

To ensure compliance the standard operating procedures accompanying the inventory management system will be imbued into the AUS codebook making them regulations that are to be adhered to as part of the standard operating procedure.

To incentivize compliance a rewards system will benefit those committees that fully adhere to the recommended management system.

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[1] A step by step inventory management guidebook has been created specifically for the purpose of implementation as is included in the Appendix.

The system will make use of a physical stock cards supported by an online system to help keep track of items and save funds.

The manual system will provide an immediate depiction of what is available while the online system will help in focusing as it will be updated on a monthly bases as suggested by the AUS executives themselves.

The office administrator will be responsible for updating the online system to help him/her keep track of what is available and what is required for future events.

Gentle reminders will be placed in and around the AUS storage to nudge committee members to remember to adhere to the inventory management and waste reduction checklists aimed at reducing waste production from AUS events.

Committees will be given a three-day grace period to update their stocks and clean up the storage unit provided the grace period does not overlap with other events.

7.2   PROJECT EVALUATION AND INDICATORS

The project will be allowed to run through the summer session to allow for measurability, impact assessment and evaluation.

7.2.1   Evaluation: The project will evaluated using the following criterion:

I.   **Sustainability** - can the policy be managed over an extended period of time with minimal resources required.

II.   **Accessibility** - will the recommended measures be accessible to all key stakeholders.

III.   **Transferability** - considering the AUS is in the process of constructing a new student space, will they be able to use the system in their new student space.

To further measure impact an opinion poll will be conducted to ascertain how users perceive the system and how it has been beneficial or how it has improved the AUS functionality. This will also present an opportunity lessons learned and possible improvements to the system.

As such users will be given the opportunity to state how unfavourable the system may be and why. This will help feed into future planning of initiatives addressing AUS standard operating procedures.

7.2.2 Indicators: Indicators for success for this initiative include but are not limited to:

A **reduction in spending** for the AUS in regards to events. Purchases will be made on an informed decision and actual need. The Vice President Finance will be expected to track funds expenditure related to events planning in the past and compare them to funds disbursed after implementation of policy.

In the long-term if the system is able to be **transferred** and stands the test of time through shuffling of committees and the eventual move to the future AUS building it will be considered as a successful initiative.

8 POLICY RECOMMENDATION AND AREAS OF FUTURE RESEARCH

After comparing a set of alternative solutions in a Criteria Matrix Analysis--the details of which can be found in the Appendix--the team is making the following set of policy recommendations:

8.1 RECOMMENDATION 1: INVENTORY MANAGEMENT

The AUS implement a two-step inventory management system to keep track of all materials that come in and out of the Meekison Arts Centre storage space.

In regards to step 1, the 504 team recommends that the AUS post stock cards on the outside of all the storage room cabinets. Every committee that wants to remove materials from the storage room

would first be required to fill in the stock cards with the appropriate information, namely the number of items they were removing from the cabinet.

> **E.g. If the Sustainability Committee was hosting an event and needed 60 compostable plates, then before they could remove the plates, they would first need to update the corresponding stock card with the following information: the name of the item (compostable plates), the number of items removed from the cabinet (60), the number of items remaining in the cabinet (100-60=40), the name of the committee (Sustainability), and the date (April 6th).**

In regards to step 2, at the end of every month[2] the administrative assistant[3] would compile the information onto an online database.

There are a number of benefits to employing this two-step system.

I.   *Shared Responsibility* - Physically recording the items as they are being removed (or added) shares the burden of responsibility amongst the committees. Moreover, it divides the work based on frequency of use. The committees that most frequently hold events will also be the one to most often utilise the stock cards. Additionally, they will also be the ones who find the system the most beneficial.

II.   *Ease of Monitoring* - Because the administrative assistant is aware of the events that occur every month and the committee responsible for each event, the admin will simply need to take a glance at the stock cards to see if the corresponding committees have updated them that month.

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[2] This time period was decided based on the discussion generated in the focus group

[3] See appendix for further details

III. ***Reducing chances of entry error*** -Allocating the responsibility of updating the online system to a single person (the administrative assistant) reduces the chances of recording errors being made on the online system.

IV. ***Cost effectiveness and Sustainability*** - using paper stock cards eliminates cost almost entirely. Additionally, after the information has been updated on the online database, the stock cards can be easily recycled.

8.2   RECOMMENDATION 2: PRE & POST EVENT CHECKLIST

The implementation of a pre & post event checklist the details of which can be found in the appendix.

Our original intention had been to suggest waste management guide, similar to the inventory management system, that focused specifically on reducing waste produced at events. However during the course of the focus group we were made aware that the Sustainability Coordinator was currently working on the creation of a sustainability guidebook. To help supplement the work already being undertaken, the 504 team focused instead on the development of a pre & post event checklist that may be implemented as a policy alongside the sustainability guidebook.

8.3   AREAS OF FURTHER RESEARCH

As the duration of the project was limited to 3 months, there were some areas of research that the 504 team was unable to properly undergo. Namely, comparison of incentives to see what best motivated the AUS committees to actually use the recommended inventory management system.

In addition, as indicated in the Inventory Management Guidebook, neither the stock cards, nor the Online Inventory database can be properly implemented until such time as the storage space is cleaned, and an initial stock count is conducted. This step will tentatively take place near the end of April, and is therefore outside the scope of this report.

9 APPENDIX

9.1 <mark>APPENDIX A : SURVEY TOOLS</mark>

9.1.1 Tool 1 – Inventory Management Guidebook

Inventory Management Guidebook

This document will briefly describe the procedures necessary for the UBC Arts Undergraduate Society to properly/successfully implement and carry out the proposed inventory management system.

The following is a list of step by step recommendations created based on the information gathered by the 504 Inventory Management Team:

Step 1*: With the budget allocated towards the SEEDS Project, hire a service[4] to organize and take initial stock of the materials in the storage space.*

- Option 1: Hire a service as stated above

- Option 2: Hire a student for ½ day

   - Advantages: salary given in one lump-sum rather than by hour

Approximate date of completion: End of April, 2019

Step 2: *Place inventory stock cards[5] on each cupboard, and ensure that the cards are updated every time items are removed or added to the cupboard.*

- The stock cards will be utilized by anyone who wishes to add or remove inventory from the storeroom.

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[4] Estimated cost of service is $500.00. With a budget of approximately $160.00 as discussed during the focus group, Option 2 is more applicable moving forward.

[5] An example of what these stock cards could potentially look like is included among the tools presented

- A representative must be chosen to file the stock cards and keep them updated (i.e. remove filled cards and replace them with new cards that are ready to be used).

- After the information has been updated on the online system, the representative will be responsible for recycling the used stock cards so that they are not continuously piling up.

Step 3: *Place a representative in charge of updating the online inventory management system using the information provided by the stock cards.*

- The 504 team has designed an online management system as a part of their two-tier approach. The AUS representative chosen would update the online system, and manage the stock cards.

- Option 1: Responsibility of the Administrative Assistant

- Option 2: Elect a second Administrative Assistant (one will focus solely on events, while the second focuses on inventory management)

- Option 3: Hire a third party[6] to take care of inventory management.

Step 4: *Update online inventory management system*

- A prototype has been created by the 504 team, but adjustments can be made at the discretion of the AUS representatives.

- A representative (the same as the person chosen to collect and update the stock cards) will need to transfer the information from the stock cards onto the online system.

- A timeframe for transferring this information can be chosen based upon what the AUS representatives feel is most appropriate, but the 504 team suggests either a *monthly[7]* or *quarterly* update.

Step 5: *Include these changes within the society's codebook*

- Integrating these change into the tasks of one of the AUS representatives

- This step should help tackle the problem of quick turnaround time of AUS representative.

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[6] Least cost effective option, and might not translate long-term as it would not change the AUS committees' overall behaviour.

[7] Based on the focus group, monthly updates appear to be the best option

9.1.2   Tool 2 – Sample Stock Card

UBC ARTS UNDERGRADUATE SOCIETY (AUS)

STOCK CARD

Commodity/Item :……………………………..

DATE	FROM/TO (COMMITTEE NAME)	RECEIPTS	DISBURSED	BALANCE	COMMENTS	SIGNATURE

9.1.3   Tool 3 – Online Inventory Management Database
Arts Undergraduate Society (AUS) Inventory Control Online System

ITEM NO.	DATE OF LAST ORDER	ITEM NAME	STOCK LOCATION	DESCRIPTION	COST PER ITEM	STOCK QUANTITY	TOTAL VALUE	RE ORDER DATE	iTEM REORDER QUANTITY	RESPONSIBLE
1	4/1/2019	Disposal Plate	B1	Ordered from Amazon	$ 0.22/count	150	$33.64			Jenny

9.1.4 Tool 4 – Pre & Post Event Checklist
Waste Management Checklist

The AUS Society organizes multiple events in a short span of time. One of their main concerns was waste generation and effective ways to tackle it. The issue can be tackled through an effective 'Waste Management Checklist'. The main components of the checklist are the following:

Pre Event Checklist

Certain aspects to be taken care of before any event would be:

1. **Cutlery**

   Every event organized by the AUS requires committees to first utilize the cutlery in the inventory before attempting to buy more. AUS raised concerns over the inventory not being utilised judiciously. Our project also proposes the use of durable and non-durable cutlery both which includes cups, spoons, plates and glasses. The pre event checklist would enable AUS to keep a track about the number of cutlery gathered from the inventory or bought from the market for an upcoming event.

2. **Dustbin Size**

   The AUS building lacks huge dustbins for recycle which makes it difficult to throw pizza boxes in them. The checklist would help AUS keep a check on provision of huge dustbins before each event.

3. **Decoration Boxes**

   Each committee has decoration boxes in the AUS inventory. The checklist would keep a track on the number of decoration boxes of each committee before each event. In addition to that the AUS has to buy boxes to stock other items. The checklist would help them keep a track of that as well

Post Event Checklist

List of thing to be taken care of after any event:

1. **Cutlery**

   After every event, it is essential to count the number of durable and non-durable cutlery leftover. This will help AUS organise their inventory better. Keeping a track of the amount of cutlery consumed in each event.

2. **Overflowing of dustbin**

   It is important to keep a check on the fact that the dustbin does not overflow by the end of the event. If it overflows, then AUS needs bigger bins as the size is inadequate for the events organized

3. **Bags of Waste**

   The checklist also talks about the number of bags of waste generated by the end of each event. This enables the AUS to keep a track on how much waste is being generated in each event and to work towards making the events more sustainable.

4. **Feedback**

   At the end of the checklist, there is a section on feedback from the event. The feedback can include a to-do list to follow for the upcoming event or simply including how waste was managed and reduced while organising the event.

Waste Management Checklist

Event		
Person in charge		
Date of Audit		
Pre Event Checklist		Quantity
Durable Cutlery	Cups	
	Spoons	
	Plates	
	Glasses	
Plastic Cutlery	Cups	
	Spoons	
	Plates	
	Glasses	
Adequate Dustbin size?	Yes	
	No	
Decoration Boxes	Committee 1	
	Committee 2	
	Committee 3	

Post Event Checkist		
Durable Cutlery	Cups	
	Spoons	
	Plates	
	Glasses	
Plastic Cutlery	Cups	
	Spoons	
	Plates	
	Glasses	
Dustbin Overflowed?	Yes	
	No	
Bags of waste		
Feedback		

9.2 <mark>APPENDIX B : MEETING MINUTES</mark>

9.2.1 Interview 1

GPP 504 Group Project

10 MEETING MINUTES
11 MARCH 6, 2019

11.1 OPENING
Structured interview for the GPP 504 Group Project was called to order at 12:00 pm on March 6, 2019.

11.2 ATTENDANCE FROM AUS
Jina Marwood and (I don't know the other guy's name)

11.3 PRESENT GROUP MEMBERS
Shivangi Khanna; Beatrice Zano; Yi Yang; Hafsa Khan and Khaing Aye Nyein

11.4 APPROVAL OF AGENDA
The agenda has been approved as originally distributed.

Point of contacts for our Project:

- Administrator

- Samantha - sustainability coordinator

- VP Finance

Question 1: We are looking at inventory system in event management as well as waste. Who is the Administrator? What exactly his or her duties are exactly?

The person has the duties to organise office better such as items from IKEA, junk removal service and recycling. We just have one person responsible who has a lot to do. He is responsible for organising the office and event schedules as well.

Question 2: Is the job of an administrator paid? What are the incentives?

- No. His office hours include One hour a week to check in.He was hired before October

Question 3. List of item receipts. Is there any pattern of buying inventory?

VP Finance- Victoria - Contact for all finance concerns. We give receipts to her. Also all reimbursements go to AMS. She can provide you the email form of receipts of our major event - GALA which had a lot of purchases.

Question 4: Do you have your receipts numbered?

This is not our area of concern.

Question 5: Have you tried using a spreadsheet?

No not at all. It has not been implemented. We have different committees for different events and we are very separated. We have a lot of Departmental clubs and there is no one platform to keep a track. Either they throw away their things or bring it home or to the office (Referring to leftovers here). There is no rule or system in place!

Question 6: Do organisers ask to communicate with you? Do they take a look at what you already have?

They do check if the stock is in usable condition. We also have enough cutlery! Even if we have plastic, we try to avoid it. We have to buy new boxes for storage. We recently have started using wood cutlery. We switched from plastic. We aim for waste free events which includes to bring your own containers and cutlery.

Question 7: Who is incharge of purchasing for these committees?

We have a reimbursement form that attaches to the receipt. The events from external parties pay a mass fee for 10$ an hour which is not reimbursed. Only departmental clubs get reimbursed. All purchases for AUS events are reimbursed.

Question 8: How many committees do you work with?

7 executives

7 committees

We also have sub committees.

Some of our main committees are:

1. Health and wellness committee-most events held by this committee.

2. Student life committee

3. External committee

4. Academic Committees

Question 9: Is there a collaborative system to know what other committees are doing?

They report to executives in charge and bring it to the meeting. They have a basic understanding of what events are which extends only to executive committee.

Question 10: Inventory system: Do you ask previous committees what they used?

It's really separate and there is no connectedness.

Question 11: What is the structure of clean up after events?

UBC cleaning services is responsible. We only have waste sorting bins which is the only waste sorting that is happening. UBC has some statistics for us to refer to which is not building specific but more overall accumulation.

Question 12: What's your typical audience number?

Scale based - 110 attendees for the GALA.

Capacity - 65 sitting and 110 standing (approx)

External parties: Maximum capacities: 140 people (High school dance)

Food event or give away: Peak hours 30-40 people is a good number for an average.

Question 13: Do you have a manager for events?

Yes, they take charge if its an external party for event. If it's an AUS affiliated party, we do whatever we can to provide them with tables or chairs and stuff. The committee members themselves take care and look after waste disposal. They also pay damage deposit of a $100.

Question 14: Should we visit science student society? Is there anything to cooperate?

Not necessary because they have different spaces with a lot more volume and traffic.

Question 15: Looking into future AUS society, are there any changes desired?

Anything that promotes waste management-streamlined inventory plan. We've done google docs for purchases and leftovers. No one really ends up actually doing it. Its hidden under the rug. We need a plan that people take seriously! As of now it has only been communicated with executives.

Question 16: Do you have any upcoming events?

We have few in 3rd week of march. I will email you the facebook event pages.

Question 17: Moving from plastic to wood are there any changes or aims desired?

The plan is to not buy plastic cutlery even if it's more expensive. It is doable. We strongly enforce it. However, it is not necessarily recommended. We just shifted from plastic to wood beginning this semester!

Question 18. What did you mean by T-shirts as leftovers in your email?

When events are organised, we have AUS merchandise for orientation leaders. Inventory plan for t-shirt exceeds the number we plan. We get our volunteers to use these t-shirts but we always have an excess. These t-shirts are only year specific. At the moment we have 300 t-shirts and 25-50 hoodies in 2-3 years. The 4 big boxes just stay in the inventory. There is no way to dispose them off.

Question 19: Can you donate them?

- Maybe.

We also have a storage space in BUCHANAN A which is really small where usually we keep the tshirts.

Question 20: Why google doc has not worked?

There is no inventory system in place. Everyone runs separate events. They have no idea what accumulates and what can be reused, especially cutlery and merchandise. It has not been implemented in our system yet. The google doc gets lost in our group chat and is not a good system to use.

Question 21: Could we use a Whiteboard?

Well, it could work! + organising our space better! We only have labelled cupboards which does not help either. We will appreciate something online that can help match and stuff the items in the inventory. From the past we know, no one follows labels!

Question 22. What is your budget?

The budget is approximately $2000 CAD for buying boxes. We are willing for extra money to spent on the system for sustainable ways.

Question 23. Tell us your major waste issues.

- **Office**

There is no waste disposal system inside the office. We have no recycling bins and only restricted office space! Waste disposal inside the office is an urgent need.Since not a lot of waste generated so smaller bins are preferred.

- **Building**

Recycling bin is full quickly so people throw it in trash because cardboard takes more room. We need to make recycling bins bigger. The public space is huge so bigger bins are preferred.

- **Funding for Dustbins?**

UBC has a budget accommodating for dustbins. If the building needs a separate bigger recycling bin and UBC feel it's not necessary, then we have to pay. We are not willing to implement operation costs! We can contact UBC and ask for overall budget updated version.

11.4.1 Focus Group

Agenda

SEEDS Arts Students Society (AUS): Focus Group Discussion

March 28, 2019

	Time	**Presentation/discussion points**
Project update	1:00-1:05 pm	· Problem formulation · Preliminary finding and proposal
Preliminary assessment and activities	1:05-1:10 pm	· Cleaning · Stock counting
Presentation of proposed tools	1:10-1:20 pm	· Inventory management ● Inventory process ● Inventory stakecard ● Gentle reminders in the storage facility · Event waste reduction ● Use of durable supplies for events ● Zero waste management checklist (UBC) . Monitoring mechanisms

Discussion and feedback	1:20-1:40 pm	· Code of procedures · Role of office administrator ·
AOB	1:40 -1:45 pm	

GPP 504- Group Project – Arts Undergraduate Society (AUS)

Meeting Minute

Focus Group Discussion

March 28, 2019

Opening

The focus group discussion of the GPP 504 Group Project was called to order at 01:00 pm on March 28, 2019.

Attendance from AUS

- Kat Aquino, President, AUS

- Bailey, VP Internal, AUS

- Samantha, Sustainability Director, AUS

- Houston, Office Administrator, AUS

Present Group Members

- Zeynya Alemayehu

- Hafsa Khan

- Shivangi Khanna

- Khaing Aye Nyein

- Yi Yang

- Beatrice Zano

Approval of Agenda

The agenda has been approved as originally distributed.

Record of the Meeting

According to the agenda, the team first updated on the preliminary findings and proposal of the project.

Question (Team) : We'd like to highlight the importance to first clean the inventory space as it is very challenging to initiate any management interventions without the knowledge of the existing inventory stock. Firstly, we'd like to hear if you already have any suggestions to clean the space?

AUS : Houston, the only Office Administrator have previously spent 4 hours cleaning the space. As events are AUS' priority over inventory and I find it hard to manage it on his own. Many committees have been holding events for free. AUS have tried to tidy up the inventory space in the beginning and it has greatly improved compared to last year.

Question (Team) : We'd like to bring your attention that our focus should be more on preventing unnecessary waste materials from over purchasing, rather than how it looks. We'd also like to emphasize on accountability and sustainability aspects of it. We understand that AUS will need about 5 to 6 hours to organize the space?

AUS : Yes, around 5 to 6 hours.

Question (Team) : We'd like to suggest hiring third party to clear the space such as hiring on a part-time basis students to do the job either hourly or get paid in lump sum. Does AUS has any budget to do so and how much would be feasible to spend on the hired third party?

AUS : Yes, there is current budget of CAD 180 that can be used for cleaning the space.

The team introduced the stock card and explained how it would work that each committee has to update the stocks they've taken manually so the repetitive purchasing of event items can be prevented. The team also explained about the computerized system for regular data entry after some period of time. The team explained that the administrator will be the only person who is updating the computerized system and undertaking the reconciliation monthly or quarterly.

Question (Team) : Do you think the updating of the system would be feasible and how would the timing work?

President of AUS: the online system would be updated monthly for the school term and once during summer.

Question (AUS) : who is going to transfer the data into the online system?

Team : The transfer duty and timing is to be decided by AUS based on their constitutions or stipulated guidelines in the book. But it is up to each committee to update the stock card. There was also a suggestion to develop a cupboard layout diagram after the cleaning and implementation of the inventory management system.

Question (Team) : Is there any possible action to take the committees in case of noncompliance to update the stock card manually? Could fining them be an option?   AUS : The rewarding system could be introduced rather than penalizing the committees. Committees who organized events would be given two to three days after the event to clean up the space.

Additional incentive suggested was to engage the executives of the committees to supervise until it becomes habitual.

Question (AUS) : Is there a change of recording the stock take online rather than manually?

Team: Recording it manually as they go would be faster and easier than going online or possibility of forgetting it after aiming to do it "later". AUS can also use gentle reminders and possibility of rephrasing them to change the committee members' behaviours to stick to the manual recording.

Question (Team) : Regarding zero waste events issue, we'd like to raise about durability issue and the chance of replacing paper plates or other cutleries with proper ones, possibly starting with smaller events with 30 people?

AUS : AUS currently does not have a dishwasher and the challenge is that after the events, no one wishes to clean up and do the dishes. But it might work to do the rental of cutleries

Question (Team): Do you think it is possible to switch serving foods that require using less cutleries such as serving finger foods and other similar nibbles.

AUS: We could consider the suggestion. We are moving to a new building soon and anticipate transitions in the AUS team.

Question (Team) : What are the common types of foods served in events?

AUS: it is pizza. They mentioned about moving to a new building soon and anticipating transitions in the AUS team.

Question (Team): Would it be possible to have 2 Administrator positions in the future if budget allows?

AUS: There is a possibility. People could do better than the current condition to improve the storage facility.

Question (Team): Is there any way to incorporate zero waste event checklist in any of your society's guide books?

AUS: Samantha is in currently in charge of developing guidebook for AUS which covers zero waste event checklist.

11.5 APPENDIX C : CAM ANALYSIS

GPP 504: SEEDS CAM Analysis

11.5.1 CAM Analysis 1
Client: UBC Arts Undergraduate Society (AUS)

Group Members:

      Zeynya Alemayehu

      Hafsa Khan

      Shivangi Khanna

      Khaing Aye Nyein

      Yi Yang

      Beatrice Zano

CAM for Objective 1: Improve AUS's standard event operating system

Weights	Criteria	Alternatives				
		Hire manager	Committee leaders manage	Inventory policy	Reintroduce previous system	Incentive based system

30%	Sustainability	5%	5%	7%	3%	10%
25%	Feasibility/ Utilisation	6%	6%	5%	5%	3%
25%	Adaptability/ Transference	2%	4%	7%	3%	9%
15%	Time Efficiency	4%	1%	3%	3%	4%
5%	Budget Friendly	0%	1.25%	1.25%	1.25%	1.25%
100%	**Total**	17%	17.25%	23.25%	15.25%	27.25%

The AUS conducts a lot of events which requires them to purchase materials to be used during events. A sizeable amount of materials remains after events but there is currently no reliable system to track items in or out of stock. As a result, the society continues to incur unnecessary costs by purchasing items in stock and producing unnecessary excess waste while taking up more of the limited storage space.

This CAM seeks to identify the optimal alternative that will assist the AUS in the development of efficient inventory management system which in long run will lead to sustained reduction in excess costs via the use of a proper inventory system.

Justification of Criteria selection

    i.   **Sustainability**

How durable is the alternative solution over time

    ii.   **Feasibility/Utilisation**

Extent to which alternative can be implemented and utilized

    Iii.   **Adaptability/Transference**

The ability of the alternative to be able to easily adaptable by successive AUS body members and host committee executives

Iv. Time efficiency

The amount of time taken for an alternative to feasibly be implemented.

v. Budget

Is the alternative solution budget friendly, the lower weight the less budget friendly is the alternative.

Alternatives selection

i. Hire manager

Hiring someone to manage the inventory of items bought for AUS events. As the storage of inventory items are currently disorganized, it lacks visibility for AUS members to keep track of stocks which results in piling up of many items, inability to fully utilize the storage space and increasing wear and tear. A manager whose primary role is to act as centralized contact for AUS will be able to keep the system updated while keeping the storage more organized and easier to access.

ii. Committee leaders manage

Designated executive or organiser from each committee which host events to be responsible for managing the inventory prior to and after events.

iii. Inventory policy

Develop a specific set of policies regarding events inventory management which state implications of failure to adhere to the stated policy

iv. Obtain online system

Purchase or access a user friendly online inventory management system or automated software that can be used to track inventory items from AUS events.

v. Incentive based system

Formulation of a comprehensive incentive-based inventory management system

11.5.2 CAM Analysis 2

CAM for Objective 2: Tackle waste production related to events at AUS

Weights	Criteria	Alternatives			
		Use of reusable materials	Zero waste policy	Use of checklist	Obtain bigger waste bins
30%	Sustainability	10%	10%	7%	3%
25%	Feasibility/ Utilisation	6%	3%	8%	8%
25%	Adaptability/ Transference	6%	5%	7%	7%
15%	Time Efficiency	3%	2%	10%	N/A
5%	Budget Friendly	2%	1%	2%	0%
100%	**Total**	27%	21%	34%	18%

The AUS purchases of a lot of disposable items for their events with the most frequent items being paper plates, cutlery, napkins and food waste. These purchases increase the production of waste by the AUS.

This CAM seeks to identify an alternative that will reduce production of waste by encouraging the use of reusable items and the encouragement of behaviour change towards waste reduction through increased utilization of more durable reusable products and increased recycling.

Justification of Criteria selection

vi. Sustainability

Sustainability in this case refers to environmental sustainability. The highest weights are given to

alternatives that promote sustainability--are the most 'environmentally friendly'.

vii.   Feasibility/Utilisation

As with the Inventory Management CAM, feasibility/utilisation refers to logistical capability of the AUS executive body to implement each of the alternatives.

viii.   Adaptability/Transferability

How adaptable the alternative is to annual changes in AUS executive bodies and whether it can be successfully transferred from the Meekison Arts Centre (the current site of the AUS) into the new Arts Student Building. In the case of use of *reusable materials* and *zero waste policy*, weights are assigned with the added caveat that the 504 project group will simultaneously advocate for these changes to be cemented into AUS policy.

ix.   Time efficiency

Refers to the amount of time required to implement the alternative.

Obtain bigger waste bins was not given a weight as it was decided that the alternative would be falsely bolstered if given a percentage.

x.   Budget Friendly

Is the alternative solution budget friendly, the lower weight the less budget friendly is the

alternative.

Reusable materials - short term expense that will be budget friendly in the long term.

Zero waste - incurring cost of wasted food, if people forget their own plates, or there are not enough plates distributed.

Alternatives selection

i.   Use of reusable materials

Purchase durable and reusable materials for the AUS.

ii.   Zero waste policy

Implementation of zero waste policy at AUS events.

iii.   Use of checklist

Formulation of events waste management checklist that should be adhered to prior to and after the event.

iv.   Obtain Bigger waste bins

Getting bigger waste bins for the AUS events space to avoid unnecessarily mixing of types of waste and encouragement of proper waste disposal methods.

The survey tools utilized include

- CAM Analysis
- Meeting Minutes (focus group and interviews, observation)

11.5.3   CAM Analysis 3 (Incentives)

CAM for Incentives: Alternative incentives/disincentives for the use of the Inventory Management System.

This CAM seeks to identify methods of incentivizing member of different AUS committees to properly utilize the 2-step inventory management system recommended by the 504 team. Incentives emerged from the focus group held on March 28th, and as some of the incentives were verbalized by AUS members themselves, there is a higher propensity for these incentives to be utilized moving forward.

As the scores are particularly close in this CAM Analysis, we recommended a combination of Alternatives 3 and 4 moving forward.

Weights	Criteria	Alternatives			
		$100 Gift Card reward	Regular site visits and monitoring	72 hour 'after event' clean-up and inventory update policy	Implementation of inventory regulation into AUS codebook
25%	Feasibility/ Utilisation	10%	3%	6%	6%
25%	Adaptability/ Transference	6%	6%	6%	7%
20%	Sustainability	5%	3%	6%	6%

15%	Time Efficiency	5%	2%	4%	4%
15%	Budget Friendly	0%	5%	5%	5%
100%	**Total**	26%	19%	27%	28%

Justification of Criteria selection

i. Feasibility/Utilisation

Extent to which alternative can be implemented and utilized

ii. Adaptability/Transference

The ability of the alternative to be able to easily adaptable by successive AUS body members and host committee executives

iii. Sustainability

How durable is the alternative solution over time

iv. Time efficiency

The amount of time taken for an alternative to feasibly be implemented.

v. Budget

Is the alternative solution budget friendly, the lower weight the less budget friendly is the alternative.