UBC Social Ecological Economic Development Studies (SEEDS) Student Report

Re-use of Surplus Furniture at UBC Ina Tessnow-von Wysocki University of British Columbia VOL 500 December 30, 2016

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SEEDS Project

Re-use of Surplus Furniture at UBC

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Executive Summary

Waste is a resource that we are wasting. ~Rose George

Waste is becoming an increasing challenge in a throw-away world with a growing population and requires significant behavioural changes in society. In 2014, the amount of solid municipal waste that went to the landfill in Metro Vancouver Area was 370,561 tonnes (City of Vancouver, 2015, p.8). The University of British Columbia (UBC) holds values of sustainability high and works towards a zero waste campus (UBC, 2014). UBC aims at increasing overall diversion rates to 70 % by 2016, and 80 % by 2020 (UBC, 2016, para 6). Re-use of surplus assets constitutes an important part of waste reduction, as it significantly reduces and ideally avoids, landfill waste.

UBC has long realized the responsibility for environmentally and socially responsible practices on campus. UBC achieved a Gold rating in the Sustainability Tracking, Assessment & Rating System (STARS) in 2011, with a high score in the waste category, showing that UBC generates less waste per capita on average than other universities (UBC Sustainability, 2015, p.3; UBC, 2014, pp.7-8). Large educational institutions, like UBC, have the responsibility to work towards a circular economy, generating zero waste. As one of BC's biggest research institutions, UBC needs to ensure the re-use of surplus assets. This Re-Use Project proposes a structured and organised way of ensuring the re-use of surplus furniture at UBC. The scope of this study focuses on the re-use of furniture, however points to the importance of including other surplus assets, such as IT waste into the re-use process. UBC has initiated several re-use initiatives in the past, however, the official process for re-use is largely bypassed and ineffective. This study gathers information about UBC's official and current actual process of the re-use and disposal of furniture and compares it to other universities in Canada and the USA. Online research and personal interviews with faculty and staff members of the different universities help to provide recommendations for UBC, as well as an optimal scenario for a structured re-use process. *Recommendations that can be drawn from this study are:*

- 1. Ensuring the tracking of surplus items. This can be achieved by making the Surplus Declaration Form the first step- before Building Operations, Project Services and outside contractors are involved, to ensure the transportation of furniture occurs only after the surplus was registered.
- 2. Using the Re-Use It! Website to its full potential. The Re-Use-It! Website needs to be extended to other educational institutions and the broader public, to reach the whole target market. Further marketing is required to raise awareness about the existence of the platform.
- **3.** *Identifying storage space for the surplus items between use and re-use. Ideas include on-campus storage in form of a warehouse, containers, parking lots, unused buildings, as well as off-campus storage.*
- **4. Re-selling the surplus items.** Priority for re-sale of surplus items should be UBC departments, then other educational institutions, and lastly the public. If there is no purchaser to be found, donations of the surplus assets to charity organisations and NGOs are necessary to ensure socially responsible practice in the community. A "Pool of Partners" needs to be identified.
- 5. Hiring a person in charge of the Re-Use Program. Responsibilities of the Surplus Assets (SA) Manager would include the oversight of declared surplus items at UBC, communication between different departments and facilitation of re-allocation on-campus, as well as reaching out to the full "Pool of Partners". The SA Manager would be managing the Re-Use it! Website and would be the one in charge of posting surplus assets online. He/she would also be responsible for identifying and managing storage space, as well as overseeing the budget of profits from surplus assets sales.

The provided "optimal scenario" for a Re-Use Program at UBC shows an effective way of managing furniture surplus re-use. In this way, UBC would hold up to environmental and social responsibility and generate revenue that can be used internally for a Re-Use Fund for sustainability initiatives at UBC and further research.

Purpose of the study

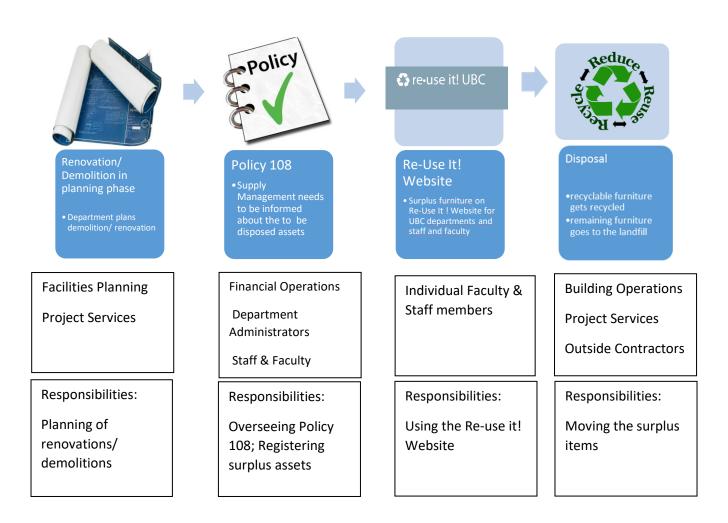
The project aims at reducing the amount of landfill waste by re-using surplus furniture. Re-use should be a large part of the waste reduction strategy and the purpose of this study is to put in place a structured process that ensures re-use of surplus furniture at UBC. The study aims at closing the gap that exists in regards to theory and practice of policy implementation of a process that UBC faculty and staff members can follow when disposing furniture. Findings rely on research about surplus asset re-use at UBC, as well as other universities. Due to a lack of data about exact quantities of re-used, recycled and disposed items, the content of this study is strongly based on interviews with faculty and staff members at UBC, and the University of Victoria, as well as information from faculty and staff of the University of Washington.

The study acknowledges the importance of achieving a zero waste environment and refers to the financial and social value which can be re-captured by re-selling or donating the surplus assets. Re-use needs to come before recycling. UBC needs a structured, fair, transparent and competed surplus disposal process that adheres to the code of ethics of public procurement. This study focuses on furniture surplus, which is disposed for renovation of classrooms, lecture halls and offices, as well as for demolitions of buildings. However, the amount of E-waste and other waste, which would exceed the scope of this project, cannot be overlooked. The goal is to divert as much used furniture from going to the landfill as possible by providing options for re-use on-, as well as off-campus, and to open it up to donations. There have been previous projects and initiatives trying to address the challenge of reducing the amount of surplus furniture that goes to the landfill. Unfortunately, they have been either unsuccessful, or were reversed over time. This study gathers valuable ideas from past efforts and initiatives, such as the Surplus Equipment Recycling Facility (SERF), the General Services and Administrative Building (GSAB) Garage Sale, and the Re-Use it! Website, as well as from different universities' processes how to handle furniture surplus. UBC has ambitious sustainability targets and is a leader in sustainability, thus there is a huge reputational risk if no improvement in re-use at UBC is being made. The project provides recommendations for UBC to put a more effective process in place that oversees and manages the reuse of assets. With an effective re-use management in place, UBC would hold up to environmental and social responsibility and generate revenue which can be used for research on sustainability and initiatives on campus at UBC.

1. UBC's Context

1.1 Official Process

UBC has an official process in place for the re-use of surplus furniture. The first step is the renovation/ demolition planning phase, where the to be disposed items are identified and the project is organised by Facilities Planning and Project Services. There is an official policy- The Policy 108- developed in 1977 and last revised in 1993, which covers the procedure of handling surplus furniture (UBC Board of Governors, 1993, p.1). Surplus university material or equipment acquired from any source of funds can only be removed from campus under the authority of the Director of Supply Management (UBC Board of Governors, 1993, p.1). At the time, UBC had a facility where surplus assets were transported to and temporarily stored at. Disposal needed to be made through the Supply Management Department's Surplus Equipment Recycling Facility (SERF) on the recommendation of the responsible administrative head of unit (UBC Board of Governors, 1993, p.1). The official procedure includes the use of the website "Re-Use It!", which is an online platform for advertising and searching surplus furniture within UBC departments, open to all UBC faculty and staff members. Moreover, the policy identifies three streams for re-use of UBC's surplus furniture. First priority is given to re-use in UBC departments, the second stream refers to other educational institutions, and the third to the broader public. This process aims at reducing the amount of landfill waste by re-using surplus furniture.

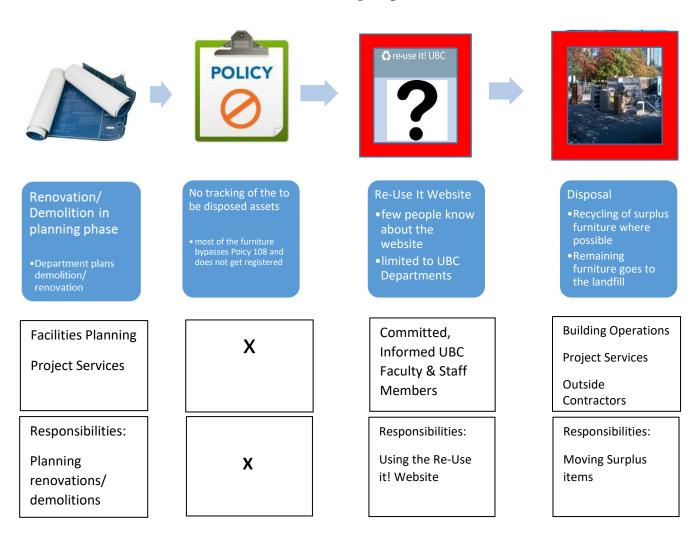


Official Process for Re-using Surplus Furniture at UBC

1.2 Actual Process

Unfortunately, the official process differs quite significantly from the current actual process. Even though SERF was a success and helped UBC to uphold its sustainability values, it was eventually closed down. Today, UBC's process in terms of managing surplus furniture requires revision and improvement. Interviews on campus show that faculty and staff members are currently not sufficiently aware of the Policy 108. There is need for updating, or even rewriting, the policy and ensuring awareness and compliance with the process. As a result, most of the time, the Policy 108 gets bypassed and no tracking of surplus furniture occurs. Furthermore, the Re-Use It! Website is largely unknown or unused by UBC faculty and staff. While offering great potential to reach people, it does currently not hold up to its expectations. It is limited to UBC faculty and staff members for use and therefore excludes other educational institutions, as well as the broader public. Thus, significant value is being lost, as an online platform provides an easy way to spread information about available surplus furniture in real time at no

cost. This ultimately leads to value being lost in the last step as well, as more surplus furniture ends up going to the landfill than necessary because the target market is not exploited sufficiently.



Current Actual Process for Re-using Surplus Furniture at UBC

4. Ideas From Past Experience

4.1 Surplus Equipment Recycling Facility (SERF)

The Surplus Equipment Recycling Facility (SERF) was an effective way to store and manage the reallocation of surplus furniture on campus. Primary emphasis was given to recycling equipment and materials through internal sales or rental of equipment to university faculties, departments, and affiliated programs (UBC Board of Governors, 1993, p.2). If the surplus assets did not find use within UBC, sales to other educational institutions in BC, and finally external private sales to members of faculty and staff and the public was considered (UBC Board of Governors, 1993, p.2). It was a successful way of reusing surplus assets and holding up to environmental and social responsibility but was closed down and no substitute has been established up to this date.

4.2 GSAB Garage Sale

In 2014, individual staff members at UBC, one of them Elizabeth Kukely, initiated a Garage Sale for the furniture that was left behind in the General Services and Administrative Building (GSAB) before its demolition. The idea came along because Elizabeth saw the furniture left behind, which was still in

good shape to use elsewhere. Elizabeth and her team dedicated many hours of free time to this project, receiving much support from their departments. In a small team of a few people she organized the garage

sale for UBC departments first, to then open it up for students and faculty. The purpose of the project was to divert assets from going to the landfill. For that reason furniture was given away for free, or for a maximum price of \$50. Revenues from the sale were still remarkable and given to the organisation "United Way" as donations. UBC saved an amount of \$173,100, the amount that was avoided to purchase new assets (Kukely et al, 2014, p. 5). 77% of the assets of the garage sale found a new owner, a total of 887 items (Kukely et al, 2014, p. 4). The UBC library got around 60% of all assets, where they found new use within UBC. The project shows



that re-usable surplus assets are currently going to the landfill and is a great example of how the university can re-capture value from asset re-use. The challenging part is, that organisation of a garage sale of this size requires time, which employees of UBC simply do not have. Many employees at UBC see the need for action in re-using surplus furniture, but as it does not fall into their responsibilities and they are restricted in engaging with the issue, the problem of re-usable furniture being thrown away remains. To ensure respecting UBC's commitments and dedication in regards to sustainability, an effective, structured process for re-use on campus needs to be implemented. The example of this past initiative shows the demand for UBC's used furniture and the potential for generating revenue when turning re-use into a business model.

4.3 Re-Use It! Website

The Re-use it! Website was launched to facilitate the re-use of surplus items on campus in 2011 (UBC, 2014, p.7; UBC Sustainability, 2016, para.1). The Re-Use it! UBC Website is a platform to advertise for used furniture and to arrange re-allocation of the items. It is a convenient way of reaching a lot of people at no cost and saves time and storage space, because ideally the surplus assets would be sold before being removed from their initial locations and thus would not require storage space. Between March and September 2011, a total of 1,100 items were re-used which saved UBC about \$24,700, the estimated cost of purchasing these items new (UBC Sustainability, 2016, para.2). However, due to lack of promotion after the site was launched, usage of the site and the number of items re-used dropped dramatically. Despite its convenience, UBC's Re-Use It! Website has not achieved the attention it could have and remains largely unknown and unused. The Re-Use It! Website has a lot of potential to provide a reliable platform to UBC faculty and staff members to facilitate communication between departments and coordination of the transportation of the items. Currently however, only committed and informed faculty and staff members are users.

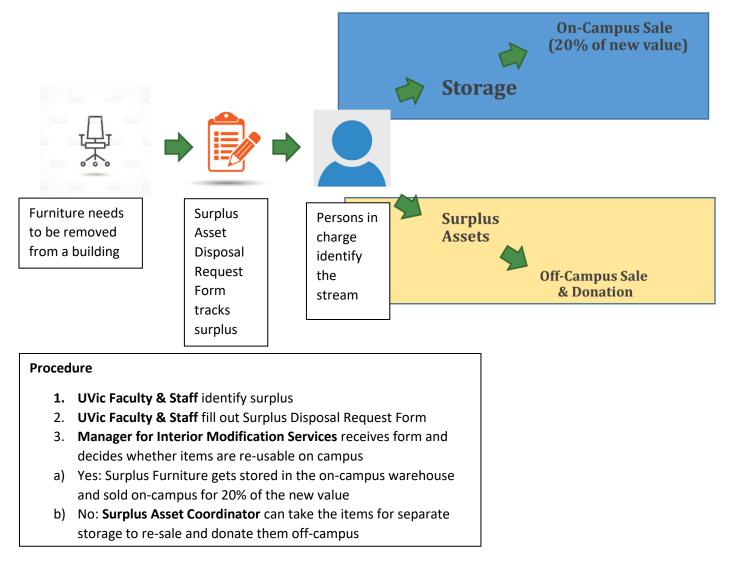
5. Best Practice Examples from Different Universities

5.1 University of Victoria (UVic)

The University of Victoria provides an example of a successful process of managing surplus items. The University runs a "Program of Warehousing and Re-allocation of Re-Usable Furniture". The Program is run by a small team of furniture coordinators, however, the time dedicated for re-use of surplus furniture alone would be equivalent to one full-time position. The furniture coordinators are within the Purchasing Services department to adhere to the public procurement code of ethics. The furniture coordinators work closely with Facilities and need their cooperation, but work separately from them.

The team gets contacted by UVic departments whenever there is demand for new furniture, as well as when there is surplus furniture.

All surplus furniture items at the University of Victoria need to be registered through an online systemthe Facilities Management Information System (FMIS)- by submitting a service request to have the material removed to Facilities Management (UVic, 2016, para.1). The person in charge of the Warehousing and Re-allocation of Re-Usable Furniture Program (Manager of Interior Modification Services) or a furniture coordinator of her team is then identifying if the item is re-usable on campus, preferably in person, but in some cases a picture is sufficient. Whether it will be re-used or disposed of by re-sale or recycle, the Furniture Coordinators arrange removal of the material. The manager of Interior Modification Services uses an online system that tracks all furniture on campus in the different departments. As at UVic, the purchase of furniture is centralized and need to go through the Manager for Interior Modification Services, assets can effectively be re-allocated on campus. In that way, it can be identified where furniture is needed, and where there is a surplus. Items can then easily be shifted between departments. Organisation of the pick-up with the UVic moving crew and sale of the items to departments and faculty and staff on campus for 20% of the new value is all done by the Warehousing and Re-allocation of Re-Usable Furniture Program Team. The departments are encouraged to buy used furniture, but are not obliged to. Regardless, the Program of Warehousing and Re-allocation of Re-Usable Furniture is a great success, generating approximately \$40,000 a year. Revenues from the Program go into maintaining the warehouse. Salaries are completely financed by the university since UVic recognized the need for an effective re-use program to ensure environmental and social responsibility. Whenever there is a profit in the end of the year, that money is invested in new furniture to improve student spaces on campus.





If the furniture item is not chosen by the Manager for Interior Modification Services for re-sale on campus, there is another option for re-use: The general surplus stream, where the Surplus Asset Coordinator can decide to re-sell it off-campus, or donate to local charities and NGOs. The general surplus stream is where all other re-usable surplus items other than furniture, such as IT, scientific equipment, etc. get collected and re-allocated. The Surplus Assets Coordinator at UVic is mostly using BC auction as a way of selling the general surplus assets, but considers other companies, and private persons as well. BC auction does not guarantee a high financial value in return for the items, nor does it ensure that the items will find a new owner, as it all depends on demand and the auction. However, in most cases, they accept to put the items for auction, which is an opportunity for the items to be re-used and emphasises UVic's sustainability commitments. If no owner can be found, the Surplus Asset Coordinator has a list of charities that they turn to, to give the assets away free of charge. Only after both streams are exploited, the surplus furniture goes to the recycling/ waste stream where it gets disposed.

The University of Victoria has a warehouse on campus for storing re-usable furniture temporarily. One part is for the furniture that is chosen by the furniture coordinators to be re-allocated on campus, a separate one for general surplus assets and the furniture which is identified by the surplus assets

coordinator to have potential to be re-used off campus. The storage space dedicated for surplus furniture that is to be re-allocated on campus is 4000 sq feet. Without storage space this process would be very challenging, as sometimes, furniture needs to be moved last minute. While the situation at UBC is very different- considering the much larger size and the de-centralized purchase and disposal process in UBC's case- UVic still constitutes a best practice example and offers a range of options which



UBC should make use of, such as storage space on campus for surplus furniture; and/or general surplus assets, as well as one person in charge for the re-use of furniture and one for the re-use of all surplus items.

5.2 University of Washington, Seattle (UW)

The university of Washington is also an example of successful surplus assets management. Their surplus store is selling forgotten or outdated UW property that does not find use on campus (Seattle Pi, 2016, para. 4). The surplus store items go beyond furniture and include other general surplus assets (Seattle Pi, 2016, para.1). Whereas UVic has a warehouse for furniture storage, exclusively for internal UVic sale, as well as another general surplus assets storage for remaining assets and furniture that is not to be re-used on campus, the University of Washington has one facility for all items, but uses it as a store, open to the public.

The University of Washington has differing store hours. UW departments, state agencies and non-profit organisation can access the store Monday to Friday from 12:30 -3:30 PM (University of Washington, 2016, para 1). Store hours for the general public are Tuesdays 12- 6 PM, and merchandise pick-ups also have specific hours allocated (University of Washington, 2016, para 1). Government agencies, as well as non- profit organisations require a list of representatives authorized to purchase on behalf of the institution, submitted in writing on the agency's letterhead, and signed by an authorizing agency official, to purchase surplus items at the store (University of Washington, 2016, para. 4-5). Non-Profit organisations must additionally provide a copy of the Internal Revenue Service document that states that the organization qualifies as tax exempt and the organisation's employer identification number (University of Washington, 2016, para. 5). As UW's surplus store receives a large quantity of beds,

desks, and chairs, therefore they offer quantity discounts for non-profit organisation (University of Washington, 2016, para.5). UW's surplus store comes close to UBC's former SERF building, where furniture was stored and sold to UBC departments, other educational institutions and the public and is a best practice example for an on-campus surplus store to ensure the re-use of surplus items.

LIBC a place of mind

6. Recommendations

6.1 Surplus Declaration Form

UBC has a Surplus Declaration Form, however, it is currently not used because there is a lack of enforcement to comply to the procedure, as well as the lack of awareness that this form exists.

Therefore, there needs to be a link between the Surplus Declaration Form and Building Operations, Project Services and outside contractors to guarantee that there is no pick-up of surplus items before they are registered. In this way, UBC's departments would

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need to declare surplus items, which ensures tracking of surplus items on campus and gives clarity about the quantity and type of surplus items that is currently unknown. Ideally this form would be online and linked to a database that collects the data on surplus items. The online form needs to allow for uploading a photo of the item.

6.2 Extension of the Re-use it! Website

The Re-use it! Website has significant potential for facilitating the re-use of furniture at UBC. As space for storage is limited, it offers an opportunity to advertise and sell re-usable furniture online, before a temporary storage space needs to be used. As it is currently not made use of to its full potential, UBC faculty and staff members need to be informed about the platform. As a marketing idea, it could be advertised on the Surplus Declaration Form to make UBC Faculty and Staff members who are about to dispose items aware of the possibility to purchase used items from UBC. Priority for re-use is given to UBC departments, before turning to other educational institutions and the broader public outside of UBC. The Re-Use it! Website should be opened up to other educational institutions and the public for items that did not find use within UBC after a certain time (a few weeks to a few months). Online platforms have a great impact in reaching a lot of people within a short period of time. Alerts can be sent out to departments when new items are on the website to inform UBC faculty and staff members and be opened up after a certain time (rational institutions and the broader public).

6.3 Storage

Even though space on campus is costly and limited, a warehouse for temporary storage of surplus furniture is essential. Having a warehouse on campus as a storage space for furniture that is going to be re-used is useful in case a new owner cannot be immediately found, or items need to be transported from the building where the renovation/demolition takes place within a short time-frame. However, most of the assets would already be re-allocated or re-sold and thus would not require storage for a long period

of time. Having a larger warehouse off-campus for surplus furniture that has potential for re-use, but where no new owner had been found until that point needs to be considered as well. It would ensure that all possibilities of re-using UBC's surplus furniture can be applied, in order to guarantee the tax payers' money to be used appropriately and to act responsibly to protect the environment.

Costs and staffing for the warehouse can be reduced by sharing storage space. In the case of UVic, the Program of Warehousing and Re-allocation of Re-Usable Furniture shares storage space with the section for General Surplus Assets. Many surplus operations also share warehousing or transportation with other departments. Surplus operations sharing warehouse space with waste and recycling or procurement departments gain the largest benefits. In the case of the University of Washington, the surplus operations' warehouse and trucking services are shared with the materials distribution services (MDS) (Aley et al, 2016, para 20). MDS trucks leaving the warehouse to deliver items, such as office paper and cleaning supplies, load surplus items from the on-campus docks they already visit for deliveries and return to the shared warehouse space (Aley et al, 2016, para.20). In this way, UW saves on transportation, infrastructure and staff costs (Aley et al, 2016, para.20).

If storage space on campus is challenging, there are several ways of going around investing in the establishment of a warehouse and still guarantee on-campus storage space. One idea is to rent containers for storage. The advantage is, that storage space could be adapted to demand, therefore only as many containers would be required to be rented as needed. Containers could also be moved if necessary. Another way of ensuring on-campus storage space is by making use of parking lots in a parkade on campus. As this space already exists, it would only need to be covered up with weather-resistant protection for the furniture. Moreover, there is the possibility to identify unused space in buildings on campus that can temporarily turn into a surplus furniture storage to ensure the re-allocation of the surplus items.

6.4 Partners for Asset Re-Sale and Re-Allocation

The re-sale of surplus assets has a number of advantages: It generates revenue through the avoidance of disposal costs, as the assets would be re-used instead of disposed. The regional garbage disposal rate increased by 50% between 2009 and 2012 and another 50% increase is anticipated by 2020 (UBC, 2014, p.6). Revenue would also be generated through decreasing purchasing costs, in case the departments buy used furniture for a reduced price instead of new. And lastly, there would be profits from the sale itself.

The priority for re-sale should be within UBC. All departments at UBC should be able to get the possibility to purchase used furniture at a reduced price (20% of the new value). In case, the items do not find use within UBC, there needs to be a "Pool of Partners", that can be contacted to purchase UBC's furniture surplus. UBC furniture is largely funded by taxpayer's money as part of the educational budget and thus, a surplus item needs to go to other educational institutions first, before re-sale is opened up to the broader public. A number of institutions have already shown interest in potentially being part of the "Pool of Partners", who would be informed if UBC has surplus furniture available for sale. Institutions that are proposed for a "Pool of Partners" are:

I. All departments at UBC

II. Other Educational Institutions

Vancouver School Board	
Simon Fraser University	
Vancouver Film School	
Capilano University	

III. External Institutions

Impact PROPS	
Impact Office Furnishing (partner of Impact PROPS)	
The Office Shop	
Smart Office Solutions	
Green Standards	

IV. Donations

UBC's surplus furniture should be sold to other UBC departments, or alternatively to other educational institutions and the broader public to generate revenue that can contribute to a Re-Use Fund for Sustainability at UBC. However, if all channels for re-selling the assets are made use of without successfully re-allocating the surplus assets, donations need to be considered before disposing the items. It is UBC's social responsibility to ensure the re-use of furniture and exploring all possibilities to do so, before disposal. With donations, UBC would give back to the community and uphold its values for integration, mutual understanding and support in society. There are charity organisations in Vancouver and abroad who would be potential institutions to contact for giving furniture as donations. A list of possible partners, that have indicated on their websites that they are receiving used furniture donations, which can be extended includes:

Habitat for Humanity Restore
Look Out Emergency Aid Society (Furniture donations to homeless shelters)
SPCA Thriftstore
Downtown Eastside Women's Centre
Helping Families in Need Society

6.5 Creation of the Job Position: Surplus Assets Manager

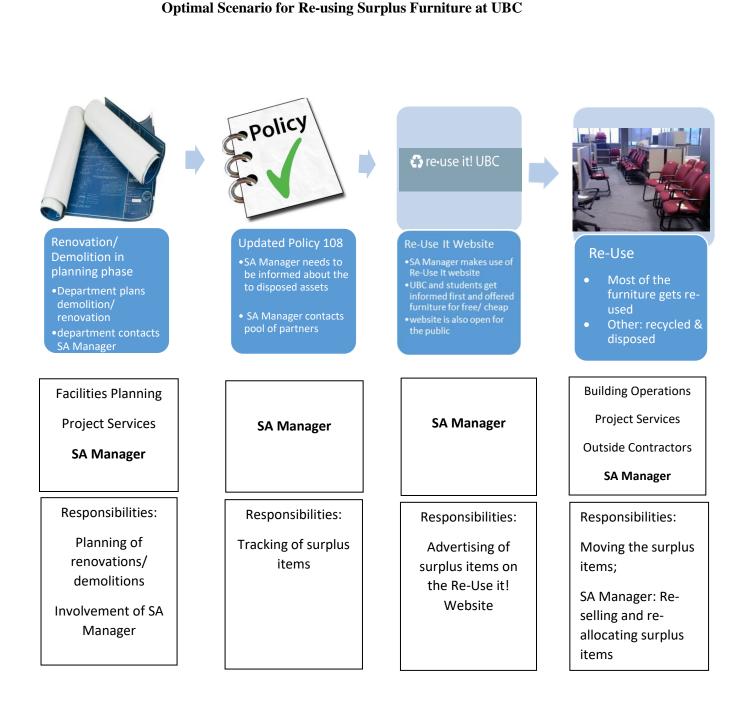
To ensure a structured and organised re-use process at UBC, a person is needed who is in charge of managing required tasks. Responsibilities of the Surplus Asset Manager would include: The tracking of items that are disposed and purchased, the decision which items can be re-used, management of the Re-Use It! Website, communication between different departments, the contact to other educational institutions, and external partners of the "Pool of Partners", the sale of surplus furniture, management of the budget and identification of storage space. It cannot be expected from dedicated individual UBC Faculty & Staff members that these tasks are being completed besides their jobs. By looking at other universities across North America, we can see current job position openings for Surplus Assets Managers (University of Wisconsin-Platteville, 2016; Temple University, 2016). Many universities already have a person, or even a whole team in charge of managing surplus assets, other universities now start to introduce job positions that put people in charge of ensuring a structured re-use process. UBC is known for its environmental sustainability and the creation of a job position for a person in charge of the management of surplus assets is necessary to hold up to environmental and social responsibility, as well as the reputation of a sustainability leader.

Due to the ineffectiveness of Policy 108, which is supposed to ensure the tracking of surplus furniture, there is a lack of data about the current quantity of disposed surplus assets. It is obvious that a job position is needed for ensuring an effective re-use process at UBC, however there is insufficient data to support the business case. It would be recommended to have a job pilot position for 2 years to lead the

process and build the business case. An initial investment will pay off in the future, in financial terms through avoided disposal costs, decreased purchasing costs and generated profits from sales, but also in environmental and social terms, which would ensure that UBC upholds its sustainability values and stays competitive in regards to other universities across North America and the world. Funding for that position could be supported by a 1% fee on newly purchased furniture. According to UBC Financial Operations, there is currently an annual expenditure of around \$ 2 million for furniture purchase, that is centrally tracked at UBC, therefore, only taking the tracked furniture purchase into account would be sufficient to fund a job position.

7. Optimal Scenario for the Process of Re-Use

After having gathered information about past experiences, as well as best practice examples from different universities, we can come up with a recommended way forward:



I. Surplus Asset Declaration Form

UBC staff and faculty members need to fill out a Surplus Declaration Form, indicating a brief description of the item (size, colour), as well as the reason for the disposal. This form should be sent to the Surplus Assets Manager before the items are moved by Building Operations, Project Services or outside contractors. This is the first step for tracking surplus furniture.

II. Surplus Assets (SA) Manager

The SA Manager would be the central point of communication, overseeing every step of the Re-Use process. He/She needs to identify if the surplus items can be re-used (quality, age, meeting technological requirements) and is responsible for the re-sale of the items first on campus at UBC, then to other educational institutions and lastly to the public, as well as re-allocation in form of donations. He/She needs to manage the Re-Use It! Website and manage the storage space, as well as the sale of surplus items.

III. Re-Sale and Re-Allocation

If surplus items are identified as "re-usable", the SA Manager is responsible for uploading them on the Re-Use it! Website. The SA Manager coordinates the communication with UBC departments, as well as other educational institutions and external partners and organises the logistics of moving the assets.

IV. Revenues

Profits generated by the re-sale of surplus furniture go to the budget of the SA Manager, which includes e.g. maintaining storage space for surplus items. Additional revenue generated would go into a "Re-Use Fund": A fund for realizing sustainability initiatives at UBC and facilitating research on sustainability.

V. Disposal

Only if surplus items can neither be re-sold to UBC departments, other educational institutions or the public, nor be re-allocated through donations, they will enter the waste stream. In this way, UBC would ensure that the whole target market for used assets at UBC is exploited and re-use of surplus items occurs.

8. Looking Ahead

This study focuses on the re-use of surplus furniture. However, there are more factors to waste reduction and the topic of surplus assets at UBC that need to be considered and require further research.

8.1 Other Surplus Assets

This study focused on the re-use of surplus furniture, however, there are further surplus assets (e.g. Electronic Surplus Items or Scientific Equipment) that need to be considered for re-use. This study recommends to start with a person in charge to handle surplus furniture and then to extend this position to a team who can manage the re-allocation of all surplus assets. As the management of all surplus assets will require more time for re-allocation and further storage space, it makes sense to start small and begin to track the items appropriately to get an idea of the quantity and types of items that are surplus.

8.2 Sustainable Purchase

Further research is needed on the purchasing side. When it comes to sustainable practices on campus, purchase is as relevant as disposal. UBC needs to ensure the purchase of furniture that is recyclable, to

avoid landfill waste at its time of disposal. It is also crucial to purchase furniture with a long life cycle and thus it makes sense to have a furniture policy in place that identifies certain standards for furniture at UBC. In that way, UBC would ensure that the furniture lasts longer and avoids frequent replacement, can get re-used more often and at the time of disposal would be able to get recycled completely. It is recommended to have a furniture guide in place, that suggests certain furniture types. In this way the on-campus re-allocation of surplus furniture is facilitated.

9. Conclusion

It is UBC's responsibility to reduce waste and ensure the re-use of surplus assets to pave the path towards a circular economy and a zero waste environment. The university has ambitious sustainability targets and is a sustainability leader compared with other universities. However, UBC lacks a comprehensive and structured process to handle the re-use of surplus items. This report identifies challenges of UBC's current actual procedure to re-use surplus furniture and compares it to other educational institutions. Valuable recommendations can be drawn from past initiatives by dedicated individuals at UBC, as well as best practices from other institutions, such as the University of Victoria and the University of Washington.

Policy is needed, however, this cannot work without communication between the different departments and working towards the same goal. Policy on paper and actions in practice go hand in hand and sustainable outcomes cannot be ensured with the lack of one or the other. We experienced individual initiatives, brought forward by dedicated staff and faculty members at UBC, such as the GSAB Garage Sale. However, such a predestined institution of large size with the reputation of a sustainability leader cannot solely rely on a few environmentally- conscious employees for the re-use of surplus assets. There needs to be a formal process in place that regulates the re-allocation of surplus assets in an organised and accountable manner. Policy 108 exists, however, without the awareness of faculty and staff members and a close collaboration between departments. This study aims at bringing together the formalities, as well as the parties involved to ensure a collaborative process and regulation for the allocation of surplus furniture at UBC in the future.

UBC lacks a system for tracking surplus items, thus the link of the surplus declaration form to the transportation of the surplus items is recommended. In that way UBC faculty and staff members would need to track the surplus items in order to get them picked up by Building Operations, Project Services or outside contractors. The Re-Use It! Website is a great concept in theory, however, needs better marketing so that more UBC faculty and staff members are aware of it. It is also encouraged to extend the reach of the Re-Use It! Website to other educational institutions, and the broader public to exploit all possible channels for contacting the target market. The other universities that this report compares UBC with, have a warehouse for storage of the surplus furniture available, which is also essential for UBC to ensure effective re-allocation of the items. This report emphasises the need for a person in charge to manage the complex procedure of re-use, as time does not allow for UBC faculty and staff members to take on these tasks besides their jobs. The Surplus Asset Manager became an essential position in many universities and there is the need for UBC as an environmentally responsible university to introduce one, as well.

Handling surplus furniture in a sustainable way is crucial for the sustainable image of UBC. Recycling and disposing the furniture appropriately is not sufficient to keep up the green image in a world where large amounts of waste go to the landfill each year. Universities and public institutions are responsible for exploiting all possibilities for re-use, may it be by re-sale or donation, before a re-usable surplus asset should be allowed to be disposed to the landfill. This report suggests that there are a few simple steps that UBC needs to take on in terms of the re-use process to come closer to its sustainability targets and to be a socially and environmentally responsible university.

10. References

Thank you to interviewees:

University of British Columbia

- 1. Tamas Weidner (Operations Manager- Labour Group, Building Operations)
- 2. Jeff Smith (Project Coordinator Maintenance, Building Operations)
- 3. Kyle Reese (Project Manager- Project Services, Infrastructure Development)
- 4. Michael Frost (Manager- Supply Management Financial Operations)
- 5. Henry Lam (Category Analyst- Supply Management, Financial Operations)
- 6. Alexey Baybuz (Category Analyst- Supply Management, Financial Operations)
- 7. Steven Lee (Facilities Planner- Facilities Planning, Infrastructure Development)
- Elizabeth Kukely (Communications & Learning Administrator- Financial Systems, Financial Operations)
- 9. Arlene Chan (Events and Film Liaison- Campus & Community Planning, Community Development)
- 10. Lynn Burton (Properties Supervisor- Theatre and Film)

University of Victoria

- 11. Kim Fawthorpe (Manager of Interior Planning and Logistics- Facilities Management Department)
- 12. Lynn Bartle (Coordinator- Waste Reduction)
- 13. Stephen Wylie (Surplus Asset Coordinator- Purchasing Services)

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