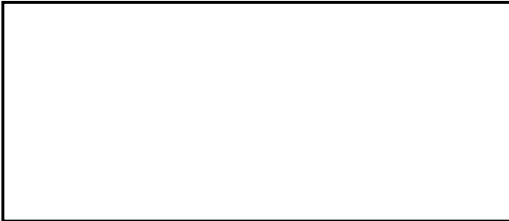


# Sustainable Procurement at the University of Toronto

ENV461H/ENV1103H The U of T Campus as a Living Lab of Sustainability



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## Background

The concept of sustainability is making its way into our society and beginning to impact our everyday lives. Individuals as well as institutions are adopting more sustainable lifestyles and methods of operating. A report published by The Organisation for Economic Co-operation and Development (OECD) stated three key points for universities and other higher education institutions (HEIs) to incorporate sustainable development values: (1) Engaging in peer review which is to help build strong mutually beneficial collaborations, (2) Establishing professional recognition for staff to engage in sustainable development research, (3) Building the capacity of university leadership which is to ensure that strategic initiatives are implemented and that demand for sustainability from students is well informed and positive. (OECD, 2007) As an influential university, it is therefore important for the University of Toronto (U of T) to follow these key points and contribute to sustainable development.

The Committee on the Environment, Climate Change, and Sustainability (CECCS) was founded in March 2016 as one of the new sustainability initiatives in U of T. According to an annual report published by CECCS, U of T is adopting a regenerative sustainability approach which has two major differences from the conventional approaches to sustainability. First, it recognizes the connections between human and environmental wellbeing. Second, it emphasizes creating net positive outcomes for both human beings and the environment. (CECCS, 2017)

To help contribute to CECCS initiatives we were contracted by the Procurement Office to work with them to incorporate regenerative sustainable procurement in their policy and understand the driving factors regarding how the key stakeholders act in making purchasing decisions. The scope and methodology of this project is as follow:

1. Academic and industry literature review to a) better understand what sustainable procurement is at its current stage and b) how to influence sustainable purchasing behaviours. From this we were able to articulate insightful interview questions for other educational institutions and departments within U of T.
2. Evaluate current Procurement procedures at U of T so we can compare and contrast with other Universities.
3. Interview other educational institutions (chosen based on secondary research and The Association for the Advancement of Sustainability in Higher Education's (AASHE) STARS rating, which is a system setup to rank universities on their sustainable practices in various categories) have incorporated sustainability into their practices to understand what motivated them to implement sustainable changes and what they've done to promote sustainable purchasing behaviors.
4. Interview different departments within U of T to understand staff purchasing behaviours.

Through these investigations, we were able to create a sustainable purchasing principle to be included in U of T's Procurement Policy, determine how to create awareness around the importance of sustainability, and understand what is required for people to make sustainable decisions.

## **Main Findings**

### **Literature Review on Understanding Sustainable Purchasing**

To better define sustainable procurement and understand how existing sustainable procurement policies are operating, a literature review was conducted. Research shows that individuals are becoming more attuned to the effects producing, buying and disposing of goods are having on the natural environment, and therefore greater demand for a shift to more circular and sustainable consumption patterns is present. Sustainable procurement, which takes into account social, economic and environmental factors when buying goods, is a popular way to address this issue (Grob & Benn, 2014). Adding elements of sustainability into purchasing policies helps organizations improve their public image, allows buyers to obtain better quality products, and gives the suppliers a competitive marketing edge (Ageron, Gunasekaran & Spalanzani, 2012).

Implementing an element of sustainability into procurement processes, or policy, is a complex adjustment made up of internal and external drivers (Giunipero, Hooker, & Denslow, 2012). Strong interorganizational relationships are required of an institution that wishes to implement sustainable purchasing, as the more unified the changes are the greater overall impact is produced, and the more likely departments are to adhere to the new principles (Meehan & Bryed, 2010). The idea of having a common goal to work toward, rather than trying to develop a universal framework was reiterated by Fabel, Schneider & Wallenburg as being more likely to have a successful outcome (2014).

In terms of sustainable procurement in a university context, one of the most prevalent issues was the issue of constrained budgets. As a result, decisions are often made by prioritizing upfront price over longer-term life-cycle costs, and frequently ignore any social or environmental costs (Luttenberger & Luttenberger, 2016). A second issue the literature cautioned about was the decentralized nature of university operations. Due to their size it is hard to create a detailed sustainable purchasing policy that applies to all departments and is realistically enforceable. Communication barriers also exist, which makes effective dissemination of information challenging as well (Weneen, 2000). From the review of the above sources we have come to understand the main themes and issues surrounding sustainable procurement, allowing us to properly compare the universities and understand which methods and guidance we should take from each.

## **Literature Review on Influencing Sustainable Behavioral Changes**

By conducting a literature review to understand the psychology behind sustainable purchasing behaviours we were able to strategically develop our department interview questions and further understand what is required to develop viable recommendations. Literature identifies factors that have an impact on sustainable and pro-environmental behaviours and those relevant to the university are described in detail in Appendix A, while the key points are presented below.

Workplaces can influence personal habits, values and norms through available facts and information, and more importantly, through organizational norms and routines (Blok et al., 2015). Therefore, it is important to recognize that establishing sustainable organizational norms and creating a culture that values sustainable behaviors is vital to achieving organizational sustainability. Managers should act as role models and focus on interventions that increase; behavioral control of employees, organizational norms, knowledge and attitudes towards sustainable behavior (Blok et al. 2015). Furthermore, because people make decision based on perceived benefits, it's important to educate people on the benefits of sustainable actions and their ability to make a difference towards sustainable development (Blok et al. 2015). When this information is tailored to the needs, wants and perceived barriers, employees are more likely to be influenced (Steg & Vlek, 2009). Additionally, removing barriers such as lack of product availability and creating ease of implementation will increase people's ability and likeliness to behave sustainably (Blok et al. 2015). Creating goals will also allow organizations to influence behavior, set internal measurements and boost morale.

## **University Interviews**

A major component of the research we conducted regarding sustainable procurement was collected through the utilization of interviews. As explained in the methodology, the six universities we conducted interviews with were selected on the basis of being prominent educational institutions that have demonstrated successful and effective sustainable procurement practices. These six universities include: the University of Alberta, Arizona State University, University of British Columbia, University of Calgary, McGill University and University of Waterloo. Through these interviews we were able to collect a wide-range of information that proved extremely useful in determining institutional procurement strategies that were the most applicable to U of T.

The evaluation of the data collected via the interviews gave our group the means of compiling a list of five principal factors that have contributed to procurement success at these universities. The five principals include: a clear vision or goal, an appropriate means of measuring these goals, university approved or preferred vendors for all institutional purchases, creating a culture developed around sustainable behaviour, and the use of simple, concise, user-friendly communication when conveying procurement strategies. Not only did these five principals provide our group with insight into how other educational institutions have succeeded

in sustainable procurement, they also played a fundamental role in the creation of our reformed sustainable purchasing principle for U of T.

A recurring theme that was apparent in the majority of the university interviews was the interviewees' attribution of many aspects of sustainable procurement success at their respective institution to an underlying culture of sustainable behaviour already present at the university. As opposed to strict purchasing policies that are sternly enforced by the university, by focusing on culture change, the process of implementing sustainable practices throughout the institution becomes more fluid. Based on the interview results, once a culture of sustainability is established, employing supplementary procurement strategies is more effective, and ultimately more successful.

In addition to the aforementioned principles of success, the importance of clear, user-friendly communication was mentioned in multiple interviews. In order to effectively implement sustainable procurement practices, fundamental guidelines and policies must be communicated in a way that is easily understood and comprehended throughout the institution, regardless of department or occupational position.

Gaining a deeper understanding of what has worked for other North American educational institutions, in regards to sustainable procurement, has proved an invaluable resource to our group. By evaluating the current limitations of procurement practices at U of T in conjunction with strategies that have been utilized by comparable universities, our group has outlined several functional procurement modifications that can be effectively applied at U of T.

Key insights from each interview are detailed below and full interviews can be found in Appendix B.

## **University of Alberta**

### *Background*

The University of Alberta (UA) received an overall Gold rating and 2.5/3.00 in sustainable procurement through STARS (The Association for the Advancement of Sustainability in Higher Education, 2017). The University of Alberta has also received several awards for its sustainability initiatives for example, the University of Alberta was recognized as one of Canada's Greenest Employers in 2017.

### *Procurement Policy*

The University of Alberta recognizes that procuring materials and services has a potential social, economic and environmental impact. The university works with suppliers, students, staff and faculty to ensure the purchases are fulfilling the campus' sustainability commitment and guiding principles. Efforts are being made in the areas of paper, cleaning products, furniture, and

food. (University of Alberta, 2017b). Green purchasing principles were developed in 2011 to help the campus community make informed purchasing decisions. Furthermore, the University of Alberta encourages its staff and student to consider green purchasing principles when making decisions which include, reduction, recycled content, reusable, quality & durability, third party certified, efficient, materials, packaging, choice of vendor and order/supplier consolidation. (University of Alberta, 2017b)

#### *Key Takeaways from University of Alberta Phone Interview*

During the phone interview with University of Alberta's Director, Procurement & Contract, Supply Management Service she attributed UA's successful sustainable procurement practices to the communities strong support of sustainability. The success of their sustainable procurement practices has nothing to do with policies rather, it is a result of a deeply embedded campus culture and the joint effort of the engaging faculty members, staffs and students. The Students' Union of UA is given a chance to participate in the selection process of suppliers of different services, such as food services and professional services.

The interviewee stressed the difficulty for the University to adopt sustainable procurement by adding constraints on purchasing. It is because researchers require unique purchases, therefore it is not reasonable to mandate certain purchases. She suggests that the university should work on outreach to the departments within campus, educate them and better communication on the opportunity of green purchasing. She also said the main challenge for sustainable procurement is that people do not have the information to do the best decision.

### **Arizona State University**

#### *Background*

ASU is a large university with an enrollment of approximately 72,000 students, divided amongst five separate campuses across Arizona. Selected on the basis of a strong STARS rating of "gold" (81.11), including a sustainable procurement score of 2.50/3.00, ASU has been recognized for two consecutive years as the top performer in sustainable purchasing by AASHE.

#### *Procurement Policy*

ASU's continued commitment to sustainable procurement is driven by a "Green Purchasing Policy", defined on the university website as "the method whereby environmental and social considerations are given equal weight to the price, availability, and performance criteria that the university uses to make purchasing decisions". Attempting to reduce the detrimental impacts of unsustainable purchasing decisions, ASU aims to buy goods and services exclusively from suppliers whose commitment to environmental sustainability align with those of the university.

### *Key Takeaways from Arizona State University Phone Interview*

The phone interview for ASU was conducted with Corey Hawkey, the Assistant Director of Sustainability Practices, which proved insightful into the reasons ASU has gained recognition as one of North America's most sustainable educational institutions. Mr. Hawkey explained that much of ASU's success in sustainability stems from a culture created by the current Chief Sustainability Officer, whose sustainable ideologies proliferated throughout the university as she ascended the ASU sustainability department. Noting that effectual change starts from the top, Mr. Hawkey touched on the importance of leadership through sustainable procurement as a major component of ASU's success.

When asked about the ASU "Green Purchasing Policy", Mr. Hawkey clarified that although the guidelines are in place, the policy itself is not rigorously enforced and is not the major driver of sustainable behaviour. Mr. Hawkey went on to explain that procurement at ASU is in fact driven through simplified, concise and user-friendly communication, understanding "who needs to know what" for departmental procurement, and continuously self-reflective reevaluations of how the goals of the "Green Purchasing Policy" can be appropriately reflected through procurement decisions. Mr. Hawkey used the example of the Event Planning Department only needing to know the sections of the purchasing policy that will be applicable to their department, and through research, user-friendly updates and training, the resulting behaviour will be accordingly evident.

Mr. Hawkey reiterated the significance of having a suitable means of measuring sustainability success. Explaining that ASU has consistently utilized the sustainability guidelines set by STARS, in the past few years the university has additionally been using the Sustainable Purchasing Leadership Council as a congruent measuring tool of the institutions' success. These means of measurement provide the university with a way of evaluating whether the time and energy spent on implementing certain sustainable practices is warranted and effective.

When asked about the most crucial first step in creating a sustainable procurement strategy, Mr. Hawkey emphasized the importance of having a clear idea of your organization's vision, an appropriate means of measuring targets, an understanding of your organization's current position and the available resources in the pursuit of your goal.

## **University of British Columbia**

### *Background*

The University of British Columbia (UBC) was the first university in Canada to adopt a sustainable purchasing element into their procurement policy in 1997. It was selected based on its high ranking on STARS, and for its extremely straightforward and user friendly interface. On STARS the University of British Columbia has achieved a Gold ranking consecutively since 2015, with its current ranking being 75/100.



### *Procurement Policy*

UBC's procurement policy defines sustainable purchasing as incorporating social, economic and environmental factors in the purchasing process. It explains to the user why sustainable purchasing is important, based on the impacts buying has on the environment and how it helps the university meet their overarching waste reduction and sustainability goals. They have a sustainable purchasing guide which clearly outlines in a concise manner the benefits of buying sustainably sourced goods in addition to their more dense full procurement policy. UBC operates its departmental purchasing through a system called "Procure to Pay", and was one of the most user friendly interfaces of all the universities assessed. It allows the user to identify the category they are looking to purchase in, and then recommends a variety of options from pre-approved, sustainable vendors. All approved UBC vendors are in accordance with their Supplier Code of Conduct, meaning they meet high ethical and environmental standards. UBC also highlights the importance of considering the life cycle of goods being purchased, and recommends sustainable disposal methods.

### *Key Takeaways from Phone Interview*

We were able to conduct an interview with Alexey Baybuz, who is involved with Supply Management at UBC. One of the biggest takeaways from speaking with the university was that they found the greatest degree of success in achieving sustainable procurement goals by tying them back to overall campus sustainability goals. Since they are a large, decentralized campus this was an effective way of ensuring each department understood how their purchasing behaviours impacted the overall conditions of the university. Baybuz also spoke to the fact that education is key when making changes to existing systems or adding in new components to the purchasing process. UBC focuses heavily on holding workshops and making information on the importance of sustainable purchasing readily available for its buyers. The university has also done a considerable amount of work to make their purchasing system, called Procure to Pay, as user friendly as possible by studying the logic of its users and adapting the system when necessary.

## **University of Calgary**

### *Background*

The University of Calgary (UCalgary) was selected because they received an overall Gold rating and 3.00/3.00 in sustainable procurement through STARS (The Association for the Advancement of Sustainability in Higher Education, 2016). Additionally, the university's efforts to make sustainability a priority has been reflected in other rankings and various rewards they have received, including the UN Global Compact Network Canada's Sustainable Development Goals Award (University of Calgary, 2017b). Furthermore, the university's main page for supply chain management states that all preferred vendors are required to demonstrate their commitment to sustainability and vendors whose sustainability commitments align with the universities are

favoured (University of Calgary, 2017a). Sustainability is also incorporated into the contracts of all preferred suppliers (University of Calgary, 2017a).

### *Procurement Policy*

The Procurement Procedure and Guidelines, Procurement Handbook states “Expenditure approval requirements shall comply with all the University of Calgary’s policies and procedures including: Delegation of Authority Policy, Signing Authority Matrix, Supply Chain Management Policy & Sustainability Policy (University of Calgary, 2014).” Additionally, the handbook states “Preferred suppliers are also required to meet the standards of the University Sustainability Policy (University of Calgary, 2014).” Additionally, the University of Calgary’s (2009) Sustainability Policy defines their Sustainability Commitment as “The University of Calgary is committed to excellence and leadership in advancing the pursuit of Sustainability in teaching, research, Campus Operations and community service.”

### *Key Takeaways from University of Calgary Phone Interview*

During the phone interview with UCalgary’s Associate Director, Operational Sustainability & Reporting, she pointed out three main reasons why sustainable procurement has been successful at the university. First, their goal for sustainable procurement came out of their institutional strategy, endorsed by their president. Second, the University has set up a purchasing working group, with various member departments, allowing them to establish goals and a strategy to promote sustainable procurement. Third, the preferred vendors are chosen through a range of criteria which includes sustainability. As a result, having accessibility to preferred vendors that meet the University’s sustainability criteria takes the thinking out of sustainable purchasing and there is less of a need to focus on influencing behavioral changes. The interviewee suggested that a way to deal with decentralization is to create increased awareness and training for employees when they first receive their Purchasing Cards.

## **McGill University**

### *Background*

McGill University received an overall Gold rating and 2.75/3.00 in sustainable procurement through STARS (The Association for the Advancement of Sustainability in Higher Education, 2017). Some highlights from their report, including a 5-year strategic plan, Vision 2020 and 15 on-going projects. McGill University has also won the Sustainable Purchasing Leadership Council Case Study.

### *Procurement Policy*

McGill University believes that “ultimate success in sustainable development depends on its principal actors being dedicated to a disciplined approach to sustainable procurement, incorporating the right balance of environment, society and economy considerations in each procurement activity.” (McGill University, 2013)

McGill University's principle also "requires aligning procurement activities with the University's support of human rights, never allowing an association with suppliers seeming to condone human rights abuses, with its commitment to health and safety, demanding equal commitment from its suppliers, and with its philosophy of building partnerships of productivity and respect with its neighbors, encouraging suppliers to partner with merchants and residents of the University's host communities." (McGill University, 2013)

#### *Key Takeaways from McGill University Phone Interview*

During the phone interview with Stephanie H. Leclerc, the Project Manager for sustainable procurement at McGill University Procurement Services, she attributed McGill's success to a detailed strategic plan and a full-time member committed to the plan. She stressed the difficulty for the University to adopt sustainable procurement by educating the public. Similar to U of T, McGill is also decentralized, hence it is better to educate and allow people to adopt into sustainable procurement voluntarily. A major problem within McGill is limited resources in terms of staffing and money. She suggests that the university should have a detailed strategic plan and at least one full-time staff that is an expert in the field to carry out the plan. She also stressed the importance on building a bond with different professors and growing the network.

### **University of Waterloo**

#### *Background*

While all the other Universities for this report were chosen due to their STARS rating, the University of Waterloo was chosen due to their firm commitment to environmental initiatives. Since 2013, the University of Waterloo along with Laurier University played vital roles in the development and implementation of the first of its kind community-wide Climate Action Plan (Council of Ontario Universities, 2015). The University has also shown initiative on sustainable waste management and the establishment of the Intact Centre of Climate Adaptation. Furthermore, the University's Procurement web page includes a section on Sustainable Procurement with multiple subsections. Some of the subsections included are: Sustainable Procurement Principle that the University adapts, suppliers, technology, sustainable travel as well as tools and calculators that aid departments with making sustainable purchasing decisions (University of Waterloo, 2017).

#### *Procurement Policy*

Sustainable Procurement at the University of Waterloo focuses on offering buying actors the required tools for sustainable purchasing. As a university they believe that they "all have a role in the impact University of Waterloo has on the Environment. This does not only pertain to our large acquisitions, but probably even more so to the smaller more repetitive purchasing decisions we all make every day" (University of Waterloo, 2017).

The principle also touches on the Procurement Office's goal to encourage suppliers towards sustainability as well as a statement that the University "will always consider environmentally superior product choices in our procurement decisions, and will, when appropriate, factor a certain percentage of cost towards superior environmental goods and services" (University of Waterloo, 2017).

#### *Key Takeaways from University of Waterloo Email Interview*

The interview with Stephen Cook, the Director of Procurement at the University of Waterloo, highlighted the importance in creating awareness around sustainability to achieve any viable change. For the University of Waterloo sustainable procurement is a "culture change; no different from any other change at a large institution" (Stephen Cook, November 6, 2017). The lack of a specific policy in place, illustrates alternatives to mandating change, possible through the implementation of practices and procedures.

Along with practices in including sustainability in every aspect of decision-making at the purchasing level, the interview also pointed to the importance of focusing on the suppliers as actors of change. By ensuring to suppliers that the University considers sustainability an indicator of quality, which ultimately leads to preference in purchasing. By directing efforts in considering sustainable suppliers, the University ensures that they are offering the buyers with the necessary knowledge to make informed decisions. Overall, the interview suggested that any change in large institutions is a slow process that needs constant comprehensive efforts, that must come from all aspects of procurement.

### **Department Interviews**

In person, phone and email interviews with buyers at the following U of T departments were conducted: School of Continuing Studies, Institute of Management and Innovation UTM, Management Department UTSC, Chemical and Physical Sciences Department UTM, Facilities and Services, Chemistry Department, Rotman Commerce, Economics Department and Faculty of Nursing. These departments were selected in an attempt to represent the diversity of purchasing habits and different perspectives from other campuses and departmental divisions. Each interview was thoroughly considered, coded and interpreted to provide insight on the best strategy to implement sustainable procurement at the university.

### **Key Insights**

#### *Current Practices*

From the nine departments interviewed, six departments were already implementing or attempting to implement sustainable purchasing on their own accord. This suggests that there is a movement towards sustainability even without the creation of a sustainable procurement policy.

However, all of these six departments indicated difficulty incorporating sustainability in their purchases with the current procurement processes. The remainder of the departments had little to no knowledge on sustainable procurement, which suggests that education and information on sustainability should be a priority, in order to reach the ones that lack prior knowledge on what sustainable procurement entails.

Another important point taken from these interviews is that decentralization occurs even at the departmental level. Many of the departments indicated that purchases are not centrally done. The Chemistry Department and Faculty of Nursing for example both indicated that purchases are done through individual professors, pointing to differing purchasing habits even within a single department. Such decentralization, reinforces the idea that education and training are essential for the successful transition into sustainable purchasing.

### *uSOURCE*

The Procurement Services Office provides buying actors with an online marketplace that centralizes suppliers, which ideally makes procurement a lot easier. However, the department interviews highlighted that uSOURCE presents a major obstacle in achieving sustainable procurement. With only three departments advocating for uSOURCE, 67% of the departments interviewed reported uSOURCE as limiting in terms of suppliers, time-consuming, not user-friendly and lacking information. Almost 80% of the departments indicated that, if information on which products and suppliers were sustainable was to be indicated within uSOURCE, it would persuade them into making the most sustainable option. These results suggest that in order to expect that buyers will practice sustainable procurement, information on suppliers and sustainability must be included in the eProcurement service. To achieve that, the Office must prioritize identifying sustainable vendors as well as redesigning the interface in order to provide users with an effective platform.

### *Factors of Change*

Three main factors of change were noticeably mentioned in the interviews. The first is that information on sustainability would influence their buying behavior as mentioned in the above section. Another important factor is the information access cost, in other words, the effort and time required to retrieve information on sustainable vendors. If such costs are too excessive, buyers are more likely to give up trying to pursue a sustainable purchase. Therefore, minimizing the time that it takes to acquire that information would increase the likelihood that buyers will be choosing the most sustainable option. Six departments mentioned time as a defining factor on their decision-making processes, while only four presented prices and the economic cost of a product to be a defining factor. This suggests that buying actors are willing to pay more for sustainable products as long as it is accessible and straightforward to do so. This result further emphasizes the need for supplier information to be extremely user-friendly in order to minimize the access cost and maximize the opportunity for sustainable procurement.

Full interviews and a table with a summary of the results can be found in Appendix C.

### **U of T School of Continuing Studies - English Language Program**

The interviewee emphasized the need for a more user-friendly service within procurement. The interview showed that for a buyer with no prior knowledge on sustainability, information must be simple and clear so that the easiest option can be made. Time and price for the interviewee were more important than having information on what products are sustainable or not. Time and user-friendliness were mentioned multiple times which suggests the importance of these factors in decision-making.

### **UTM - Institute of Management and Innovation, Sustainability Management Program**

Since the interviewee works within a sustainability program, her main criteria for any purchase is that it is sustainable. She explained her frustration with the lack of preferred vendors with sustainable options and noted that she often sticks with the same two preferred vendors or seeks out different companies. She also mentioned that receiving information from the department's business manager was a viable route for communicating procurement announcements and policies. Furthermore, she suggested that when people receive the P cards this would be an appropriate time to share sustainable purchasing policies and information with new P Card users.

### **UTSC – Management Department**

The Administrative Coordinator mentioned that working with approved vendors and price are her number one determinants for purchases however, if a vendor were to offer a sustainable product at a fair price she would choose that product. It is obvious that she is supportive of sustainable procurement and would like to see less product packaging. She also mentioned that it would be easier to choose the sustainable option if she knew which options were more sustainable and if uSOURCE advertised the sustainable vendors and products.

### **UTM - Chemical and Physical Sciences Department**

This interview further demonstrated that price is an important factor when making purchase decisions. The interviewee expressed their understanding of sustainable procurement and their willingness to make sustainable purchasing decisions based on price comparability.

### **Facilities and Services, Sustainability Office**

One of the office's Project Coordinators explained that the office does not use USource for their own purchases, but that is mainly due to the scale of the purchases being low enough they can source their own items. Sustainability is their number one priority, and they often choose their products based on the most environmentally friendly option. The other factor they

do consider is the time sensitive nature of the purchase; in the event they need a product immediately they will obtain the product themselves rather than ordering through the university.

### **University of Toronto - Chemistry Department**

The interview was conducted with the head of purchasing for the Chemistry Department. A strong advocate for the use and utility of USource, she explained that because purchases are made individually by the professors of the department, USource offers access to approved suppliers that the professors can choose from. The interviewee explained that it is her job to inform and advise the professors about purchasing competitively priced sustainable products, but at the end of the day it is up to the professors to make purchasing decisions. Voicing her frustrations with the U of T procurement policy, the interviewee described the policy as “unclear” and “inconsistent”. Explaining that searching for competitive vendors provides extra work, using USource is the easiest and most efficient means of making purchases in the Chemistry Department.

### **Rotman Commerce**

The interviewee said that most of the purchases in Rotman Commerce follow the purchase policies, which primarily focuses on the best financial values in terms of dollars. However, she also said that Rotman Commerce is very aware of the principle of sustainability, they are going to rename their “corporate citizenship committee” into something that has the sustainable element embedded in the name. Some staff members are practicing sustainable purchase on their own, for example, the Director of Billing of Rotman Commerce is currently trying to buy more green product on a voluntary basis. She also said that her department is consisted of accountants, who loves to follow rules and guidelines. Therefore, they are open-minded to any changes in existing procurement policy that are necessary to protect the environment. She concluded that “Sustainable procurement policy should be mandated, otherwise people will just try to look good on the spreadsheet”.

### **Economics Department**

The interview with the Economic Department has shown that they have no concept of sustainable purchasing. They use USource often, however, they have concerns over little freedom of choice. They also believe the online procurement policy is too difficult to read and not user friendly.

### **Faculty of Nursing**

Similar to the economics department the nursing department showed they have little concept of sustainable purchasing and that the current procurement policy could be more user friendly.

## **Recommendations**

Based on above findings from literature reviews, interviews with other universities and interviews with departments within U of T. We made recommendations in five areas for the Department of Procurement to consider in order to best implement and incentivize sustainable awareness and purchasing in different departments within the university. Recommendations are based on the following areas; supplier, uSOURCE system, training and collaboration, goals, and policy.

### **Suppliers**

This requires working with suppliers and letting buyers know sustainable options. The department of procurement is recommended to create a set of sustainable criteria for vendors to meet and a supplier code of conduct. This will make sustainable options more accessible to buyers and allow them to see which preferred vendors meet the university's sustainable criteria and code of conduct. Moreover, it is believed that through better communication with vendors you can negotiate better deals and therefore make purchases more affordable, which is often a big barrier to people making the decisions.

### **uSOURCE**

We believe ease of access to information and accessibility are the primary challenges to be addressed. The existing uSOURCE system is said not to be user-friendly. Changes to the uSOURCE system are needed, for example, sustainable preferred vendors listed on uSOURCE and the use of labels on uSOURCE to indicate sustainability approved products.

### **Education, training and collaboration**

Interviews with various universities highlighted the need for education and giving people the information needed to make informed decisions. It is important to notify buyers about the importance of sustainable purchasing both for the public image of the university and for the cost-effective component. Send departments things they specifically need to know about sustainable procurement. Furthermore, we suggest the department of procurement take on a proactive approach to reach out to departments to find opportunities for training and collaboration.

### **Goals**

Create a culture change through a detailed strategy including goals and performance measurement. University wide and department specific goals will create motivation for both short term and long-term vision. Key performance indicators are suggested to measure the



success of the strategy. An example of a goal could be having a certain percentage of the departments products being sustainably sourced.

## **Policy**

Incorporate sustainability into the existing procurement policy. A sustainable procurement principle will clearly outline sustainable criteria that buyers should take into consideration when making purchase decisions.

## **Procurement Principle**

We have created a guiding principle which includes sustainable criteria that we suggest buyers take into consideration when making purchase decisions. This principle aims to help U of T advance their contributions to meet the challenges of climate change and sustainability, act as an agent of change, and raise the profile of the universities contributions to sustainability. This principle is intended to be broad as it is directed to many different departments. Furthermore, it is recommended that this guiding principle acts as an underpin for future sustainable procurement strategies and policies to be put into place at U of T. To develop the principle we considered the promotion of environment and human well being, what other universities were focusing on and the Ten Principles of the UN Global Compact.

## **Sustainable Procurement Principle**

Procurement can play an important role in helping the university improve environmental quality and human well being. In line with U of T's recent adoption of a regenerative sustainability approach the Procurement Office encourages buyers to think before they buy and take into account the environmental, social and economic impact of the goods and services they are buying.

*Think before you buy:*

Is it necessary to buy this product or service?

Can the product be borrowed, shared with others or purchased used?

Can we reduce the number of shipments?

Can we use a less energy intensive form of shipment?

*Environmental Impact*

Emissions, waste, energy and water produced and consumed throughout the product or service life cycle including:

- Material input
- Manufacturing processes
- Packaging

- Shipping
- Disposal or recycling at the end of its useful life

#### *Social Impact*

- Diversity
- Localized sourcing
- Human rights
- Ethical treatment of workers including safe working conditions and fair wages

#### *Economic Impact*

- Cost
- Quality
- Life-cycle cost analysis including, energy efficiency, durability and reparability
- Contribution to the local economy

### **Trade-offs to Our Client**

Our client has voiced their concern with the decentralized environment at U of T and the fact that some faculties members are somewhat uncooperative to procurement policies and guidelines from a bottom-up approach. Therefore, the clients expected deliverables were to focus on behaviour changes and come up with a principle to make the buyers feel morally obligated to act sustainably and adopt sustainable procurement practices on a voluntary basis. Based on what we learned from literature and more importantly, other universities, a collective consumer behavior change towards sustainable procurement is unlikely to happen without working with suppliers. Our recommendation attempts to incorporate behaviour changes however, it focuses on the need to work with suppliers and inform buyers of sustainable options.

## Appendix A

### Factors Influencing Sustainable Behaviour

#### *Personal norms, social norms and reference Groups*

According to Blok et al. (2015) norms can be defined as individual expectations about a person's behaviour in a particular social situation. Personal norms represent one's own beliefs on how to act, and social norms represent the group-shared beliefs about how members of the group should act and behave (Blok et al. 2015). In the workplace employees cannot always act according to their personal norms and values as they are often dependant on the norms, values, roles and routines of the workplace (Blok et al. 2015). Therefore, it is important to recognize that influencing social values and norms is vital to establish pro-sustainable behavioural changes.

Studies have shown that contrary to household behaviour, it is often more difficult to establish behavioural changes in the workplace and that these changes often rely on hard facts and data (Blok et al. 2015). As result, it is important to rely on management as an important external factor and that sustainable leadership is required by a company's top management (Blok et al. 2015). Leaders have the ability to create descriptive norms and therefore, influence employees and play an important role in creating a more sustainable organization.

#### *Values and Emotions*

It has been recognized that people who are more altruistic, self-transcendent and open to change are more likely to act in sustainable ways. In contrast, values related to self enhancement and conservatism are often negative predictors of sustainable behaviour (Blok et al. 2015). Furthermore, people with strong social and environmental concerns and emotions are more likely to have sustainable purchasing intentions and behaviours (Joshi & Rahman, 2015).

#### *Habits*

Behaviour is often habitual and influenced by cognitive process as opposed to elaborate reasoning (Steg & Vlek, 2009). People are often neglect information that is not in line with their habitual behaviour and are inclined to focus on information that confirms their choices (Steg & Vlek, 2009). Hence, it is important to understand how habits are formed, reinforced and sustained in order to change them (Steg & Vlek, 2009). Not allowing new employees to develop unsustainable habits from the beginning should be considered.

#### *Perceived behavioural control*

According to Ajzen and Fishbein (2014) a person's intention to act is a strong predictor of their actual behaviour. People like to believe they are in control of the performance of their expected behaviours, and this is referred to as the theory of planned behaviour (TPB) (Blok et al. 2015). In order for people to have control over their choices they need to make the choices based on their own perceptions and therefore require hard facts to justify new actions (Blok et al. 2015). Furthermore, as a result of the perceived importance of TPB, it is important to influence a person's attitudes and subjective norms to create an intention to act in a sustainable way within the workplace (Blok et al. 2015).

### *Perceived consumer benefits*

Individuals make reasoned choices and usually choose alternatives with highest benefits and lowest cost and price can often act as a barrier to purchasing sustainable products. Therefore, if the perceived benefits of the sustainable option are lower than those of an unsustainable option people will be less likely to choose the sustainable one. As a result, it is important to educate people on the benefits of sustainable actions. When people are aware that their consumption can make a difference to the overall problem they are more likely to have sustainable purchasing intentions and behaviours (Joshi & Rahman, 2015).

### *Knowledge*

When people have more information about environmental and social problems and how their behaviours can impact these issues, the more likely they are to act in a pro-sustainable way (Blok et al. 2015). People's exposure to information and continued reinforcement can positively impact their perceptions. Furthermore, when information is tailored to the needs wants and perceived barriers of individual audiences they are more likely to be influenced (Steg & Vlek, 2009). It is also important to listen to all stakeholders to understand the information that is required.

### *Trust*

Lack of consumer trust in companies that claim to have sustainable products and green claims, is a significant barrier to sustainable purchasing actions (Joshi & Rahman, 2015). Procurement departments can help resolve this by requiring vendors to meet sustainable criteria and auditing. Furthermore, eco labeling and certification can help improve people's trust.

### *Situational factors*

When the required conditions and infrastructure is available, people are more likely to make sustainable choices. In the workplace, this often refers to available options, access and leadership support. With more possibilities available to behave sustainability, such as sustainable product availability, the more likely people will behave sustainably (Blok et al. 2015). Therefore, removing barriers and creating a perceived ease of implementation can be highly effective. To do this, it is important to understand which factors promote and inhibit sustainable behaviour (Steg & Vlek, 2009).

### *Regulations and policies*

Regulations and policies can be implemented and enforced to make sustainable decisions mandatory and violations of these can be met with a form of punishment to ensure specific behaviour (Steg & Vlek, 2009).

### *Motivations and Goals*

A suggested strategy to influence sustainable behaviour is to develop positive and negative consequences. This strategy aims at changing the consequences following behaviour such as feedback, rewards and penalties (Steg & Vlek, 2009). Rewards are associated with positive attitudes that support behavioural changes however, it's important to note that one can attribute these changes to the rewards and not personal convictions and attitude changes (Steg & Vlek, 2009). As a result, rewards can result in short term impacts and therefore goals are often more successful. Goals can influence the way people process information and act upon it (Steg &

Vlek, 2009). When goals are created they often influence what information people are sensitive to, what alternatives they perceive and how they will act (Steg & Vlek, 2009).

## Appendix B

### University of Alberta: Phone interview with Wendy Abel Director, Procurement & Contracts, Supply Management Services

1. *How did you start to implement sustainable procurement? (What do you think is the most crucial first step in developing sustainable procurement practices?)*

We do not have a policy yet. There is only guideline. Our students are very engaging and the community has strong support for sustainability.

2. *Is your sustainability policy/ clause a mandatory requirement for buyers, or something you ask them to consider? (If mandatory; how do you enforce it? If a consideration; do you use anything to incentivize sustainable buying? (how did people react to the new policies)*

Not mandated. Much like UofT we are dealing with a decentralized environment. Our researchers require unique purchases, its not reasonable to mandate.

3. *How did you make sustainable procurement clear and easy to understand/user friendly?*

Work on outreaching faculties, educate them and communicate the information for evaluating opportunity of green purchasing.

4. *Do you feel the changes you have made to your procurement system have been successful? If so which changes in particular. What challenges are you still facing, and why do you believe you are still experiencing them?*

We have a great success in clearing products. Standard institutionalized. It has been challenging for lots of people to have the information to make the right decision.

5. *How do you measure your sustainable purchasing success? (do you have KPIs or goals?)*

Not measuring.

6. *What advice would you give to another university looking to create a sustainable procurement strategy?*

All about getting the message across. Awareness and Communication

### Arizona State University: Phone Interview with Corey Hawkey, Assistant Director of Sustainability Practices

1. *How did you start to implement sustainable procurement? and What do you think is the most crucial first step in developing sustainable procurement practices?*

ASU was lucky to have the current associate VP come through sustainability office (specializing in procurement). At one point served as chief sustainability officer. She built a tradition and culture of sustainability that has continued to be passed on through the university. Points towards leadership through procurement, and the edge this has provided ASU in sustainable practices.

Noting that success starts from the top and has a trickle down impact that influences behaviour at the university.

By finding alternative ways to incentivize sustainable purchasing, using simple communication methods that are clear and concise, and centralized office training through teaching and updates, ASU has developed effective sustainable procurement practices.

- 2. Is your sustainability policy/ clause a mandatory requirement for buyers, or something you ask them to consider? (If mandatory; how do you enforce it? If a consideration; do you use anything to incentivize sustainable buying?)*

Use of a “green purchasing policy” (GPP). Has approved suppliers and ASU only selects to purchase products from these suppliers, whose environmental views align with those of the university. The GPP isn’t followed necessarily and does not drive behaviour because it is not enforced strictly. Instead applying the policy in the appropriate places, for example providing policy guidelines specific to each department. Also making these guidelines clear, concise and easy to follow helps.

- 3. How did you make sustainable procurement clear and easy to understand/user friendly?*

Through continuous reorganization, reevaluation, better labeling, questioning application of policy throughout departments, making policy easier to understand, providing categories, bullet points, basic language, concise, simplicity is better. Making sure policy is being communicated to the right people and that there is an appropriate mode of delivery. (eg. event planning department only needing to know sections of the GPP that are applicable to them. Communicated through training and research)

Making sure people are not over loaded with information and reevaluating “who needs to know what”. Trying to communicate behaviour and manipulate the process through cheaper options.

- 4. Do you feel the changes you have made to your procurement system have been successful? If so which changes in particular. What challenges are you still facing, and why do you believe you are still experiencing them?*

Having dedicated personnel who understand, take ownership and lead through sustainable procurement is a huge reason for success at ASU. Challenges consist of capped resources and only recently has a new position been created for this exact challenge.

- 5. How do you measure your sustainable purchasing success? (do you have KPIs or goals?)*

We use STARS to measure our success as a university and recently we have joined the Sustainability Purchasing Leadership Council (SPLC) in order to provide a more comprehensive measure. Having a way to measure success is important, provides reinforcement that time and energy spent on these practices are worth it. More and more suppliers are monitoring their supply chains’ and displaying sustainable behaviour. Marketing, encouraging and understanding lead to more sustainable procurement.

- 6. What advice would you give to another university looking to create a sustainable procurement strategy?*

There is no one correct path to sustainable procurement success. However, the most crucial first step in creating a sustainable procurement strategy is having a clear idea of your organization’s vision, an appropriate means of measuring targets, an understanding of your organization’s current position and the available resources in the pursuit of your goal. Also finding the required resources for these goals is a difficult but important aspect of creating change.

## University of British Columbia: Phone Interview with Alexey Baybuz, Supply Management

1. *How did you start to implement sustainable procurement? (What do you think is the most crucial first step in developing sustainable procurement practices?)*

We worked very closely with our sustainability office on campus, they are one of the best resources in terms of procurement because they had adopted those practices well before other departments on our campus had.

2. *Is your sustainability policy/ clause a mandatory requirement for buyers, or something you ask them to consider? (If mandatory; how do you enforce it? If a consideration; do you use anything to incentivise sustainable buying? (how did people react to the new policies) How do you deal with decentralized purchasing decisions?*

UBC has influence as the value of the purchase increases. Buyer are also asked to submit requests showing how the purchase will align with the university's overall sustainability targets. Sometimes when a buyer had a preferred vendor they were attached to there was some degree of resistance if they could not longer buy from them, however we have tried to continually be disseminating knowledge on why all changes about accepted vendors are being made which has generally appeased any resistance. We are also constantly making announcements about the approved vendors and posting webinars regarding the importance of sustainable buying to keep people informed.

3. *How did you make sustainable procurement clear and easy to understand/user friendly?* Holding lots of workshops and identifying a user group to study. This allowed us to predict the needs of the buyers. We also tried to make it structured with as logical thinking steps as possible. Our goals was to make it as least time consuming as possible.

4. *Do you feel the changes you have made to your procurement system have been successful? If so which changes in particular. What challenges are you still facing, and why do you believe you are still experiencing them?*

No major changes have been updated to the policy in my time with the department. I would recommend keeping current with the technology available and running informative sessions when changes do occur so that buyer are as up to date as possible with the user interface.

5. *How do you measure your sustainable purchasing success? (do you have KPIs or goals?)* We reach out to other universities and ask questions very similar to these. We are interested in finding out about what other trends are common in the procurement departments at other universities, or what management practices they are implementing. We also monitor the click through rates of our pages to see what sections are getting the most attention and looking at where people are spending the most time to see if those are potential areas lacking clarity. We have no specific measures for sustainable purchasing success, but everything plays into overarching campus goals. We have 2020 campus goals that departments feel compelled to meet, and by making sustainable choices when purchasing that keeps them on track for meeting those targets.

6. *What advice would you give to another university looking to create a sustainable procurement strategy?*

Have materials written by subject matter experts to make it very clear on why the steps that are being taken are occurring helps with push back from buyers. Well disseminated information usually is enough to get people on board with small, incremental changes. Additionally, create a knowledge around striking a balance between cost efficiency and sustainability.

We have found success in having our departments work towards campus targets rather than purchasing ones, as that has helped overcome the various challenges associated with the decentralized structure of the campus.

**University of Calgary: Phone Interview with Associate Director, Operational Sustainability & Reporting**

1. *How did you start to implement sustainable procurement? and What do you think is the most crucial first step in developing sustainable procurement practices?*

Sustainable procurement along with a number of the other goals came out of their institutional sustainable strategy. It was launched in 2016 and endorsed by their president. The strategy pointed to commitments in sustainable procurement. They then set up a purchasing working group, which is chaired by their directors of supply chain and included members such as IT, the bookstore and the sustainability office. This group was setup to help them deliver on their goals and strategy. The sustainability office facilitated the process to engage with everyone and came up with their own goals. The goals were also supported by the VP of Finance and because so many people were engaged in the process none of it came as a surprise.

2. *Is your sustainability policy/ clause a mandatory requirement for buyers, or something you ask them to consider? (If mandatory; how do you enforce it? If a consideration; do you use anything to incentivize sustainable buying?)*

Depends, if they need a request for proposals (RFP) or if it goes through supply chain it goes out for tender, and in this case, it does have a clause they have to follow. Uniforms and paper all go to RFP and it is mandatory. The office of sustainability however, doesn't enforce it. But if they want to meet their commitment under the strategy then they have to consider sustainability, so it's in their own interest to deliver on it.

*Lastly, how do you deal with decentralized purchasing?*

The greatest opportunity to deal with decentralization is through procurement credit cards (P Cards). It is often tricky to influence or track sustainable purchasing if it is not going through supply chain. However, anyone who has a P Card is must follow the purchasing handbook which includes the University's sustainability policy. The handbook also says please choose from the preferred vendors which have been chosen on a range of criteria such as safety and sustainability. However, even with this in place it still tricky to understand how effective it is. Also, they may or may not have a preferred vendor for everything and people often just pick local ones they know.

3. *How did you make sustainable procurement clear and easy to understand/user friendly?*

A couple of ways. First, since they realize that the majority of the staff don't think about sustainability when purchasing they make it easy and clear through the preferred vendors and they also usually get great deals through them. As a result, people are often interested in using the preferred vendors. They also have some engagement programs – targeting people in office



who are doing a lot of the purchasing. They also have the opportunity to attend workshops on how to make their office or environment more sustainable and purchasing is a big part of that. There are only 25 people in this program, so that may be a sign that it's not doing that well. Maybe an alternative would be to make guides on the website. Alternatively, they could make sure that anyone applying for a P Card is made aware of these programs and resources.

4. *Do you feel the changes you have made to your procurement system have been successful? If so which changes in particular. What challenges are you still facing, and why do you believe you are still experiencing them?*

The most successful aspects are the low hanging fruit and she believes that a huge amount still needs to be done. Again, it's tough because half of the purchases are made with a P Card so it makes it tough to monitor. They may be able to tell through accounting coding, but they don't have the technology set up and often times people put in the wrong coding so it's often hard to even tell if they are using the preferred vendor. So, people could be buying things that are produced in a sweatshop and they may not know. They have managed to do the things that are easy and everything else is complex. The working group they have set up is great though since they are working together to try and solve the issues.

Investment in behavioral changes is often tricky and requires a lot of investment. So, taking the thinking out of it by having preferred vendors that meet sustainability criteria makes it easier. Aine also thinks that when people get P Cards they should have to do sustainability education and training.

5. *How do you measure your sustainable purchasing success? (do you have KPIs or goals?)*

They do measure percentage of things that are purchases sustainability. They want to turn this into a dollar amount but have found it hard to track this. The accounting system doesn't always speak nicely to the procurement department's needs. All information goes to accounting but Supply Chain Management doesn't always know what that means. Trying to fix this could be an IT nightmare. Goals: Working with IT to make the systems speak to one another would help to understand the sustainability purchases. They are also working to become a member of the fair labour association. Meaning that any clothing that has the university's logo is verified.

6. *What advice would you give to another university looking to create a sustainable procurement strategy?*

She thinks it's hugely important that the initiative for sustainable procurement is led by the Supply Chain Management office, and that the sustainability office is only giving them support. The sustainability office should never be telling them what to do, they should just offer them support. Lastly, it's been helpful that one of the performance goals of the supply chain management department is sustainable procurement and it is backed by the Director of Supply Chain Management.

### **McGill University: Phone interview with Stephanie H. Leclerc, Project Manager for sustainable procurement.**

1. *How did you start to implement sustainable procurement? and What do you think is the most crucial first step in developing sustainable procurement practices?*

The first step was 2 things, 1 look at what we are doing already, some recycle paper, the main thing was the bring key stakeholders IT services, business student housing, resident, researchers,

buyers, plan and define vision and scope. How do you tackle that, the risk, coming up with short term goal middle goal and long term goal. Develop vision. Roles and responsibility.

Find the expert and then implement the strategy. So much awareness to do. You can't do sustainable procurement resource and proper tools, and having the vision. Communication as it, logistic.

2. *Is your sustainability policy/ clause a mandatory requirement for buyers, or something you ask them to consider? (If mandatory; how do you enforce it? If a consideration; do you use anything to incentivize sustainable buying?)*

No sustainability policy, but they have key principles. We don't want to change it. Develop supplier code and conduct. Training. Min. standard requirement, computers: we require EP gold. Computers, printers, monitors. Research → min. Standard, need a certain energy Vehicle.

It's not something you just follow, it involves a lot more. Which items to go after first. What makes the computer sustainable, is different from a t-shirts.

- a) how did people react to the new policies?

So far, it's been good. Computers: EP gold, because of call of tender. If we say we only need EP gold computers, they will know computers will consumer energy, electric bill is less and better air quality. They last longer, repair easier. Some models of product didn't meet EP gold, silver will be good.

- b) How do you deal with decentralized purchasing decisions?

Staff of 20, buying outside of procurement. Training on the buyers outside of procurement service. Workshop and take the course.

3. *How did you make sustainable procurement clear and easy to understand/user friendly?*

- Vision, brainstorming. Break down stuff into smaller details. Expert will help as well.
- Get the right people on board, then they will develop vision and how to change the environment and it gets.
- One supplier code of conduct
- How we are gonna tackle this thing, and here is how we are going about

4. *Do you feel the changes you have made to your procurement system have been successful? If so which changes in particular. What challenges are you still facing, and why do you believe you are still experiencing them?*

It's the resource, Optimal purchasing, how to manage the end-life of the product. Lack of transparency of supply chain. Keep pressure on supplier to get more info. Labour conditions. Share of variety, 20 thousands of suppliers. Decentralized. Training will be helpful. Building bonds with different professor and grow the network. When we buy things for them, they are like okay they have different strategy, so they will be like can you upgrade.

5. *How do you measure your sustainable purchasing success? (do you have KPIs or goals?)*

- ASHE stars.
- Logistics output: how many call of tenders, how many people have you train.
- Buying from local social NP, employment contributed to.

6. *What advice would you give to another university looking to create a sustainable procurement strategy?*

Getting someone to do it full-time. Setting up asset management, life cycle thinking. Have a vision and a strategy.

**University of Waterloo: Email Interview with Stephen Cook, Director of Procurement & Contract Services**

1. *How did you start to implement sustainable procurement? (What do you think is the most crucial first step in developing sustainable procurement practices?)*

Awareness. Factor sustainability into all of your acquisition preparation and decisions. Think about the entire supply chain cycle – specifications, negotiations, shipping and logistics, use, lifecycle and finally disposal. There are sustainability issues in every one of those components – consider and decide with sustainability in each.

2. *Is your sustainability policy/ clause a mandatory requirement for buyers, or something you ask them to consider? (If mandatory; how do you enforce it? If a consideration; do you use anything to incentivize sustainable buying? (how did people react to the new policies)*

We do not have (currently though pending) a policy on sustainability. We have a practice, and we have a procedure. Sustainability is a part of all of our acquisition decisions. From the specifications we develop, to the packaging of the product, to energy use and lifecycle – all are considered. Our suppliers are advised early on that these considerations will help define a purchase award. Many have policy stating that they will pay a % of cost to support sustainability. Waterloo simply states up front that we will pay for best value, and better sustainable choice is just part of our decision.

3. *How did you make sustainable procurement clear and easy to understand/user friendly?*

We talk about sustainability the same as we talk about specifications, electrical certification, AODA considerations. All are part of responsible procurement, and the procurement staff make an effort to discuss these issues with people on campus ordering goods.

4. *Do you feel the changes you have made to your procurement system have been successful? If so which changes in particular. What challenges are you still facing, and why do you believe you are still experiencing them?*

I feel there is much more we can do, but change is evolving. We have been talking about green procurement and sustainability since the mid 90's at UofW. We have pushed packaging back to manufactures and developed strong environmental initiatives that touch on some of what we do. We have not "mandated" at this institution, but more and more sustainability is a factor in all of our decisions.

We would like to see sustainability integrated into all that we do. In time.

5. *How do you measure your sustainable purchasing success? (do you have KPIs or goals?)*

We currently have very few (% of recycled paper etc), but we have tasked our buying team to develop more indicators over the next little while.

6. *What advice would you give to another university looking to create a sustainable procurement strategy?*

It is culture change; no different from any other change at a large institution. It will be slow and it will take time, but efforts to bring sustainability to decision making at all key touch points will over time, become of institutions ethos.

## Appendix C

### **Interview with the Program Manager from the Master of Science in Sustainability Management Program (MScSM), Institute for Management & Innovation**

1. *Who sends you information on procurement at U of T including any policies that may exist?*

I was shown the policy when I first started. Yes, she has been asked to review it in monthly communications meetings. These happen the first Thursday of every month. During the meetings, they talk about marketing which often leads into the vendors.

She thinks that a lot of people don't even think there is a policy. She believes that if Procurement sent information to each departments businesses manager/officer, then they would be able to pass it on best. Just including a tab wouldn't reach enough people from her perspective.

2. *Have you ever been asked to review the purchasing policy?*

Yes

3. *Do you follow the purchasing policy?*

Yes, when applicable. Occasionally the vendors do not have what she is looking for.

*If yes, is there anything you dislike about it*

It lacks vendors who have environmentally friendly products. She has two vendors that she uses most the time. More vendors are starting to have sustainable options.

*If no, are there specific reasons why not*

N/A

4. *Do you use suppliers that the University suggests?*

Yes.

5. *How do your purchases get approved?*

It's a little complex, if it's over \$5,000 you must get three quotes. She usually doesn't get approval and just does it on her own for the most. When they get a P Card and they have to sign some things and it comes with a \$5000 limit. When they get the P Card they also have to go over the policies with the business officer.

6. *Do you use uSOURCE?*

No. She recognizes that other programs require them to use it though. It's burdensome in that they don't have what they wanted.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

Non-issue because most don't offer environmentally friendly products and that's what she is often looking for as the reputation of the program is sustainability. When there are several companies that offer what she wants she usually talks to her colleagues about it.

8. *Are you familiar with sustainable purchasing and what do you think it means?*

N/A she works in the Sustainability Management Program.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

That is her number one concern.

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

She only knows a little bit about it. Shashi Kant (MScSM Director) is good at keeping them updated and was involved in its creation. Business officer and director should keep them up to date on this. The Sustainability Office at UTM doesn't do much to communicate things. There is a lack of leadership from the top down regarding sustainability on campus.

11. *What do you think would make you choose the more sustainable option?*

If there actually was the choice she would always choose it.

### **Interview with UTSC – Management Department**

1. *Who sends you information on procurement at U of T including any policies that may exist?*

The procurement department at UTSC send them stuff on uSOURCE and all other general information is sent by the business officer.

2. *Have you ever been asked to review the purchasing policy?*

Yes, and she asks other to review it within her department.

3. *Do you follow the purchasing policy?*

Yes.

*If yes, is there anything you dislike about it*

*If no, are there specific reasons why not*

She does like the controls that are in place and the specific vendors however, at times it can be limiting. Going outside the approved vendors is often difficult.

4. *Do you use suppliers that the University suggests?*

Unless she can't find it through them she does. The pricing is also better

5. *How do your purchases get approved?*

Through her manager who is the business officer.

6. *Do you use uSOURCE?*

All the time. Overall she likes it but it has caused her a few challenges with order getting stuck in the system and not going through to invoicing. Some specific products are not available and it can be frustrating. It can be limiting but in general she likes it much more than the older Ushop, that was a nightmare.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

If there is one product that has a more environmentally sound element it will sway her. Price is a big one determinant though. Also, if it is approved vs. not approved will change her decision.

8. *Are you familiar with sustainable purchasing and what do you think it means?*

To her it means a few things. First the end product is made from reclaimed products, the manufacturing process is more environmental and has less packaging.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

At work she doesn't tend to as much and her personal purchases. She has hope that the purchasing department is doing what they can to source sustainable products. She does however, get on her soap box when something is over packaged and has even complained to vendors about this.

*10. Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

Somewhat I cannot quote it.

*11. What do you think would make you choose the more sustainable option?*

If it is an approved supplier and the price is close to other products, she will choose the more sustainable option. She will try and lean towards recycled material option. It would be easier if she knew what options were sustainable. If uSOURCE helped to advertise this that would be great. She would also think that the staff and the students would feel better about using sustainable products.

### **Interview with University of Toronto School of Continuing Studies - English Language Program Financial Officer**

*1. Who sends you information on procurement at U of T including any policies that may exist?*

Not a lot of information is available and no prior training was given on any procurement policies.

*2. Have you ever been asked to review the purchasing policy?*

It is a possibility. I might have had to look at reimbursement policies to see what is allowed or not.

*3. Do you follow the purchasing policy?*

*If yes, is there anything you dislike about it?*

There is a huge wait time for invoices. The office holds an invoice for around 35 days which makes it difficult for purchasing. The more they hold the invoices, the more profitable it is so it becomes hard to deal with the wait times.

*If no, are there specific reasons why not?*

*4. Do you use suppliers that the University suggests?*

Yes I do. If I can't find what I am looking for then I go outside. As an employee I am told to use USource and use the recommended suppliers but it is not always possible. For example we had to make a huge furniture purchase where we had to look at an outside supplier that provides us with a cheaper price for better quality.

*5. How do your purchases get approved?*

The business manager at the school needs to approve it. Sometimes, it is not possible for him to approve it so we must send it to headquarters so that they will approve the purchase.

*6. Do you use uSOURCE?*

Yes. For basic supplies, the reason behind that is that I simply cannot figure it out. It is too time consuming and not user-friendly. It was supposed to create less paperwork and labour in general but it has accomplished the opposite. Even the accountant at headquarters says it creates more work. If I had a choice, I wouldn't use it, since it is very poorly designed. Information is

inaccessible, I can never find anything. Applying accounting codes never work and makes it for a longer processing time. Again, it is really not user-friendly.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

Price and Quality.

8. *Are you familiar with sustainable purchasing and what do you think it means?*

I guess not. I don't know.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

No.

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

I know the basics, sustainability keeps emissions lower. They also created the water-bottle ban on campus.

11. *What do you think would make you choose the more sustainable option?*

If it is cheaper and not time consuming. Perhaps if they were on USource, easy to see and at a cheaper price I would choose the more sustainable option. It is all about time. If it is easier for me, I will do it.

### **Interview with University of Toronto St. George Campus – Lawerence S. Bloomberg Faculty of Nursing.**

1. *Who sends you information on procurement at U of T including any policies that may exist?*

Nobody.

2. *Have you ever been asked to review the purchasing policy?*

Nope.

3. *Do you follow the purchasing policy?*

*If yes, is there anything you dislike about it*

Yeah. We do actually give feed backs and it makes a difference.

*If no, are there specific reasons why not*

N/A

4. *Do you use suppliers that the University suggests?*

Yes, 95% from Usource, 5% from other source (If the items are not available on Usource).

Mostly from Stables and Grand and Toy.

5. *How do your purchases get approved?*

Managers approves them.

6. *Do you use uSOURCE?*

Yes.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

Pricing and quality.

8. *Are you familiar with sustainable purchasing and what do you think it means?*

Nope, nothing.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

Yes, order the recycle products. Reco machines are not compatible with recycle paper.

Whenever they can, for example: Uline (not in Usource)

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

Posters and that's it.

11. *What do you think would make you choose the more sustainable option?*

Sometimes it is not in people's hand. Specific items → profs have their own options and their own idea. They are just not open to the idea of sustainability. (Suggesting on training)

The website is not user friendly. More down to earth → more bullet point.

### **Interview with University of Toronto St. George Campus – Department of Economics**

1. *Who sends you information on procurement at U of T including any policies that may exist?*

Nobody.

2. *Have you ever been asked to review the purchasing policy?*

Nope.

3. *Do you follow the purchasing policy?*

*If yes, is there anything you dislike about it*

They follow it. But the policy online is not too clear.

4. *Do you use suppliers that the University suggests?*

Yes we do.

5. *How do your purchases get approved?*

Department manager is in charge of it.

6. *Do you use uSOURCE?*

Yes.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

Pricing and quality

8. *Are you familiar with sustainable purchasing and what do you think it means?*



Not familiar with it, maybe it is the price and quality of the brands. How reliable the items are. For example: if we have a problem with a certain item, we can always call the vendor and someone will come and fix it right away or replace it.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

Nope, not just generally uoft. I don't believe that, until I see it.

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

Paper base, waste time. Practically nothing is there. In real life, nothing is happening.

11. *What do you think would make you choose the more sustainable option?*

Insteading of using Usource, more option. Keep track. More freedom on what you can buy instead of choosing whoever you can.

### **Interview with UTM - Department of Chemical and Physical Sciences**

1. *Who sends you information on procurement at U of T including any policies that may exist?*

They go to FIS training that are hosted for staff and learn briefly about the procurement services. They are also informed about the procurement website and it is where thee go and check out the policies and approved vendors.

2. *Have you ever been asked to review the purchasing policy?*

Yes

3. *Do you follow the purchasing policy?*

Yes

4. *Do you use suppliers that the University suggests?*

Most of the time, yes. But sometimes it is cheaper to purchase from vendors that are not authorized by U of T.

5. *How do your purchases get approved?*

Approved by the manager.

6. *Do you use uSOURCE?*

Yes

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

Price

8. *Are you familiar with sustainable purchasing and what do you think it means?*

Yes, purchasing items from vendors who follow sustainable/low carbon emission practices when producing goods.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

Yes

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

Yes

11. *What do you think would make you choose the more sustainable option?*

If the goods cost about the same as non-sustainable options

### **Interview with U of T St George Sustainability Office**

The Sustainability Office is a subsection of the Facilities and Services Department at U of T.

1. *Who sends you information on procurement at U of T including any policies that may exist?*

We find out most of our information from the procurement office personnel or their website.

2. *Have you ever been asked to review the purchasing policy?*

Reviewed it to become familiar with the different price brackets regarding what items must be approved.

3. *Do you follow the purchasing policy?*

We have certain requirements I know we need to follow broken down by price brackets, and we follow those policies for what vendors we can buy from.

*If yes, is there anything you dislike about it*

*If no, are there specific reasons why not*

We tend to buy from suppliers we have done research and found to be the most sustainable.

4. *Do you use suppliers that the University suggests?*

When required, certain items are communal and ordered in bulk or for example need to be purchased through the IT department for our office. Otherwise we chose the most sustainable vendor.

5. *How do your purchases get approved?*

Our personal purchases are done on our department credit card, and for ones beyond that with things like office equipment or IT related items they are done other staff. Office supplies like paper and toner are bought in bulk and just used by the office communally. IT follows much stricter buying policies and we just let them know what we're interested in trying to have for our office.

6. *Do you use uSOURCE?*

No, and briefly looking at the website it seems time consuming, even logging in is challenging and these first two links do not work.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

We look for the most sustainable one, but in time sensitive situations we are sometimes forced to take the quickest option.

8. *Are you familiar with sustainable purchasing and what do you think it means?*

Yes.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

Yes, whenever possible we chose the most sustainable options and our office has personal policies for staff to make the most sustainable choice.

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

Yes, we know about it and are promoting the committee and its goals in our yearbook.

11. *What do you think would make you choose the more sustainable option?*

We already take action to make the most sustainable purchases whenever possible. For other departments who this is not the basis of their work making it the most convenient and ensuring that there is no extra work would probably be the most successful way to make them consider sustainable options. Consider also the cost trade off and timeliness of deliveries.

### **Interview with University of Toronto Chemistry Department - A/P Purchasing**

1. *Who sends you information on procurement at U of T including any policies that may exist?*

It comes directly from the procurement department if it is a major change but the rest is up to our department.

2. *Have you ever been asked to review the purchasing policy?*

Yes

3. *Do you follow the purchasing policy?*

We try to, but all purchases are made by professors within the department, so I try to influence, inform and advise the professors about purchasing competitively priced sustainable products, but at the end of the day it is up to the professors to make purchasing decisions.

*If yes, is there anything you dislike about it*

In many ways the U of T policy is unclear and inconsistent. If I want to make a purchase that is not from a university preferred vendor, I have to submit two additional competitive quotes before I can purchase from this new vendor. Although the product may be cheaper and more sustainable, I have to do extra work in order to make a simple order from this vendor.

*If no, are there specific reasons why not*

N/A.

4. *Do you use suppliers that the University suggests?*

Again, we try to but because of individual professors (within the Chemistry Department) making purchasing decision, the department tries to suggest that the professors utilize the preferred suppliers.

5. *How do your purchases get approved?*

Professors submit a requisition through uSource and the purchase is made. Very simple transaction. What the professors need, they get.

6. *Do you use uSOURCE?*

Yes. Our department finds uSOURCE very helpful. Easy access to suppliers.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

We try to encourage selecting the most suitable products at the lowest cost. We also encourage choice, and assessing a variety of factors when professors make purchasing decisions.

8. *Are you familiar with sustainable purchasing and what do you think it means?*

Again, through my position the most I can do is encourage cost-savings and advising professors to make purchasing decisions that align with U of T policy, however unclear it may be. Trying to implement behaviour change.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

Try to encourage professors to consider these impacts.

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

Yes. The Administrative Manager of the Chemistry Department is a member of the committee and a major advocate for environmentally sustainable practices throughout the University of Toronto

11. *What do you think would make you choose the more sustainable option?*

A more clear and concise U of T policy that is consistent across all departments. Needs to be easier to use vendors that are not on preferred university list.

### **Interview with University of Toronto– Rotman Commerce**

1. *Who sends you information on procurement at U of T including any policies that may exist?*

We get the information from the procurement website mainly. The director will communicate the new information through email

2. *Have you ever been asked to review the purchasing policy?*

Yes, been asked a year or two years ago.

It like a consulting process to learn what other departments are thinking and how to improve the experience of purchasing.

3. *Do you follow the purchasing policy?*

Yes.

*If yes, is there anything you dislike about it*

*If no, are there specific reasons why not*

She does not complain about any policies.

She said “I am an accountant and accountants love to follow rules and guidelines”.

4. *Do you use suppliers that the University suggests?*

The interviewee is the head of purchasing officers and she does not handle purchasing decision on her own. Under her supervision, the officers do use some of the suggested suppliers.

5. *How do your purchases get approved?*

She said Rotman Commerce is a more budget unit than other department. Approval of purchases are based on the purchasing policy (she did not mention clearly if it is the policy in Rotman or Procurement) which primarily focuses on money value.

6. *Do you use uSOURCE?*

Yes. Purchasing officers do use them sometimes, but not very often.

7. *What process do you go through to make a purchasing decision if there are several companies that offer similar products?*

Dollar value mainly. However, she said some of her colleagues are performing green purchasing, for example the Director of Billing, she is actively trying to buy more green products.

8. *Are you familiar with sustainable purchasing and what do you think it means?*

Not too much. She said that being accountant will only think of what financially best for dollars.

9. *Do you ever think of the social and environmental impacts of your purchases i.e. working conditions of the manufacturer or high carbon footprint products?*

Rotman Commerce is very aware of sustainability. We have corporate citizenship committee which is working on business ethics and sustainability, and we are going to rename the committee to encode the element of sustainability in it

10. *Do you know about U of T's Committee on the Environment, Climate Change, and Sustainability?*

Heard of it.

11. *What do you think would make you choose the more sustainable option?*

She encourages people to think more about the environmental and the social consequences of our actions. She said she originally came from an island (no exact location) that was impacted by a hurricane. She believes that sustainable procurement policies should be mandated, otherwise people will not follow the rules. People will just try to look good on the spreadsheet.

Table - Summary of Department Interview Results

	Department	Sustainable Practice	Usource	Factors of Change		
				Information on Sustainability	Cost	Time
1	Sustainability Management	Yes	Limiting			
2	UTSC Management	Tries to	Limiting, but better	x		
3	ELP - SCS	No	Limiting, lacking information	x	x	x
4	UTM - Chemical and Physical	Tries to	Good, but lacking information		x	
5	Sustainability Office	Yes	Time consuming	x	x	x
6	Chemistry Department	Tries to	Usource good, policy unclear	x		x
7	Rotman	Tries to	Mandate Change	x	x	
8	Economics	No	Limiting	x		x
9	Nursing	No	Limiting	x		x

Sustainable	22.22%	
No sustainable purchasing practices	33%	66.67%
Pre-disposed to sustainable purchasing	44%	

Usource as a problem	67%
Information on uSOURCE influential	78%

## References

- Ageron, B., Gunasekaran, A., & Spalanzani. (2012). Sustainable supply management: an empirical study. *International Journal of Production Economics*, 140 (1), 168-182. Retrieved from [https://econpapers.repec.org/article/eeeproeco/v\\_3a140\\_3ay\\_3a2012\\_3ai\\_3a1\\_3ap\\_3a168-182.htm](https://econpapers.repec.org/article/eeeproeco/v_3a140_3ay_3a2012_3ai_3a1_3ap_3a168-182.htm)
- Ajzen, I. & Fishbein, M. (2014) *The Influence of Attitudes on Behavior*. Retrieved from [https://www.researchgate.net/publication/264000974\\_The\\_Influence\\_of\\_Attitudes\\_on\\_Behavior](https://www.researchgate.net/publication/264000974_The_Influence_of_Attitudes_on_Behavior)
- The Association for the Advancement of Sustainability in Higher Education (2016) *University of Calgary*. Retrieved from <https://stars.aashe.org/institutions/university-of-calgary-ab/report/2016-12-21/>
- Blok, V., Wesselik, R., Studynka, O. & Kemp, R. (2015) *Encouraging sustainability in the workplace: a survey on the pro-environmental behaviour of university employees*. Retrieved from [https://journals-scholarsportal-info.myaccess.library.utoronto.ca/details/09596526/v106icomplete/55\\_esitwatpboue.xml](https://journals-scholarsportal-info.myaccess.library.utoronto.ca/details/09596526/v106icomplete/55_esitwatpboue.xml)
- Council of Ontario Universities (2015) *Going Greener Report 2014* (2015, October 22). Retrieved from <http://cou.on.ca/reports/going-greener-report-2014/>
- Fabel, S., Schneider, L., & Wallenburg, M. (2014). Implementing sustainability on a corporate and functional level. *International Journal of Physical Distribution & Logistics Management*, 44(6), 464-493. Retrieved from <https://search-proquest-com.myaccess.library.utoronto.ca/docview/1655512800?pq-origsite=summon&accountid=14771>
- Giunipero, L., Hooker E., & Denslow D. (2012). Purchasing and supply management sustainability: Drivers and barriers. *Journal of Purchasing & Supply Management*, 18(2012), 258–269. Retrieved from [https://journals-scholarsportal-info.myaccess.library.utoronto.ca/details/14784092/v18i0004/258\\_pasmsdab.xml](https://journals-scholarsportal-info.myaccess.library.utoronto.ca/details/14784092/v18i0004/258_pasmsdab.xml)
- Grob, S., & Benn, S. (2014). Conceptualizing the adoption of sustainable procurement: an institutional theory perspective. *Australasiaon Journal of Environmental Management*, 21(1), 11-21. Retrieved from [https://journals-scholarsportal-info.myaccess.library.utoronto.ca/details/14486563/v21i0001/11\\_ctaospaitp.xml](https://journals-scholarsportal-info.myaccess.library.utoronto.ca/details/14486563/v21i0001/11_ctaospaitp.xml)
- Higher Education for Sustainable Development: Final Report of International Action Research Project . (2006). Retrieved from <https://www.oecd.org/edu/innovation-education/centreforeffectivelearningenvironmentscele/45575516.pdf>
- Joshi, Y., & Rahman, Z. (2015) *Factors Affecting Green Purchase Behaviour and Future Research Directions*. Retrieved from [https://www.researchgate.net/publication/280042183\\_Factors\\_Affecting\\_Green\\_Purchase\\_Behaviour\\_and\\_Future\\_Research\\_Directions](https://www.researchgate.net/publication/280042183_Factors_Affecting_Green_Purchase_Behaviour_and_Future_Research_Directions)

Luttenberger, A., & Luttenberger, L. R. (2016). Sustainable procurement and environmental life-cycle costing in maritime transport. *WMU Journal of Maritime Affairs*, 16(2), 219-231. Retrieved from <https://bib.irb.hr/datoteka/780488.luttenberger-IAMU.pdf>

Meehan, J. & Bryde, D. (2010). Sustainable procurement practice. *Business Strategy and the Environment*, 20(2), 94-106. Retrieved from <http://www.scielo.br/pdf/prod/v27/0103-6513-prod-0103-6513213616.pdf>

Robinson, J., Anderson, C., Banda, M., Bazylak, A., Corts, K., Hinde, J., . . . Swail, R. (2017). *Annual Report 2017*(pp. 1-22, Rep.). *University of Toronto: Committee on the Environment, Climate Change, and Sustainability*.

Steg, L., & Vlek, C., (2009) *Encouraging pro-environmental behaviour: An integrative review and research agenda*. Retrieved from <https://www.rug.nl/staff/e.m.steg/stegvlekencouraging.pdf>

University of Alberta (2017a) *Campus Achievements*. Retrieved from <http://sustainability.ualberta.ca/OurApproach/Achievements.aspx>

University of Alberta (2017b) *Green Purchasing Principles*. Retrieved from <http://sustainability.ualberta.ca/Resources/Office%20Resources/GreenPurchasing/GreenPurchasingPrinciples.aspx>

University of Calgary (2014) *Procurement Handbook: Procurement Procedures and Policies*. Retrieved from <http://ucalgary.ca/finance/files/finance/purchasinghandbook.pdf>

University of Calgary (2017a) *Supply Chain Management*. Retrieved from <http://www.ucalgary.ca/finance/scm>

University of Calgary (2009) *Sustainability Policy*. Retrieved from <http://www.ucalgary.ca/policies/files/policies/Sustainability%20Policy%20v2.pdf>

University of Calgary (2017b) *UCalgary wins prestigious national sustainability award*. Retrieved from <https://www.ucalgary.ca/utoday/issue/2017-10-05/ucalgary-wins-prestigious-national-sustainability-award>

University of McGill (2013, May 1). *Procurement Policy* Retrieved from [https://www.mcgill.ca/procurement/files/procurement/procurement\\_policy\\_en.pdf](https://www.mcgill.ca/procurement/files/procurement/procurement_policy_en.pdf)

University of Waterloo (2017) *Sustainability Procurement*. Retrieved from <https://uwaterloo.ca/procurement/sustainable-procurement>

Weneen, H. (2000). Towards a vision of a sustainable university. *International Journal of Sustainability in Higher Education*, 1(1), 20-34. Retrieved from <http://www.emeraldinsight.com/doi/pdfplus/10.1108/1467630010307075>