

Sustainable Furniture Procurement at Dalhousie University

ENVS 3502 Environmental Problem Solving

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1.0 EXECUTIVE SUMMARY

Research was conducted by 5 Dalhousie Students in the SUST 3502 Campus as a Living Laboratory Course pertaining to sustainable furniture procurement at Dalhousie. The current problem at Dalhousie lies in the lack of overall dedication to sustainable furniture procurement. While awareness is somewhat limited to the importance of purchasing sustainable furniture in certain departments, an overarching set of guidelines is not in place to ensure and enforce the purchasing department's decisions. This results in furniture being purchased from various companies with no intentional consideration given to sustainability.

The research was conducted in both primary and secondary ways. The primary research consisted of interviews with professionals working in the field of procurement and sustainable furniture. The 6 interviews gave us a wealth of insight into furniture procurement and provided structure for the secondary research conducted for our study.

The goal of this study was to learn about the ways in which Dalhousie can improve its furniture procurement policy as it relates to sustainability. The purpose of the project was to elect a set of criteria for a Request for Proposal (RFP) that could be drafted and used by Dalhousie. The results of this research are listed in this report. A discussion of the findings and their relevance was included to complement the report, along with a conclusion of the findings and recommendations for future action.

2.0 INTRODUCTION

The United Nations (UN) Global Marketplace defines sustainable procurement as the “integration of requirements, specifications and criteria that are compatible and in favour of the protection of the environment, of social progress and in support of economic development, namely by seeking resource efficiency, improving the quality of products and services and ultimately optimizing costs.” (UN Global Marketplace, 2010). Through sustainable procurement an organization uses its purchasing power to signal to the market that they are in favour of sustainability and they base their choices of product on a triple bottom line consideration (economy, environment and social) which in turn makes the organization reputable on a sustainable level).

According to the mission statement of the Office of Sustainability for Dalhousie University, the university strives to create campus solutions that support positive ecological, social health, and economic outcomes (Office of Sustainability, 2012). Furthermore, the university prides itself as being the premier post-secondary education institution of the region. In a recent publication of Dalhousie's magazine states, “Tom [Traves] has the goal for this to be the best University in Canada. I think it can be one of the best in the world.” – Robert Gillespie (Weeren, 2012, p.17). If Dalhousie strives to live up to this standard, it must meet if not exceed the efforts of other

universities and organizations around the country in sustainability. One way in which Dalhousie can achieve this is through effective sustainable procurement policies.

As a large institution, Dalhousie makes an enormous amount of purchases in several different departments throughout the school year. However, not all purchases made by the university take sustainability into consideration. As of now, the university's policies on sustainability are being revised and it will include individual Request for Proposals (RFPs) and tenders that consider sustainability factors. This is a good step in the right direction.

On that note, this study is specifically focused on sustainable furniture procurement for Dalhousie University. Currently, Dalhousie does not have firm sustainable policies or criteria for purchasing furniture. Instead, the university has a system where over 800 staff members own purchasing cards with which they can purchase furniture from wherever they choose, without necessarily considering environmental, social, or economic factors. By employing the use of a Request for Proposal (RFP) with sustainability criteria, companies can be identified who can supply Dalhousie with consistent sustainable products. Working with the client, Nicola Embelton-Lake from Facilities Management, this study was narrowed down to tables and chairs in order to find more specific results.

The purpose of this report is to recommend a set of sustainability criteria to include in Dalhousie's RFP for furniture procurement. The study attempted to determine the specific set of criteria by conducting interviews with field specialists and by conducting outside research to understand what other institutions use as guidelines when making sustainable purchases. By comparing the interview answers with the research results, main themes and ideas surfaced which helped to create a set of criteria to recommend to Dalhousie. This report includes an explanation of research methods used, the results from the research, a discussion of significant research findings and their implications, and a conclusion of recommendation for action and further research.

3.0 RESEARCH METHODS

To come up with criteria that could be useful in the Dalhousie University's RFP, a qualitative research approach was used. Structured interviews were used as our selected technique to gather the necessary qualitative data. This research approach was chosen because intrusive and interactive analysis techniques were necessary to gather data. Furthermore, qualitative research methods were chosen to come up with sustainable criteria for the RFP; we needed our observers' subjective viewpoints on sustainability and its importance. Therefore, out of all the other qualitative research techniques to gather data, interviews deemed fit.

Our sample population was derived from purposive sampling and they were experts in field of furniture procurement. Purposive sampling was appropriate for this project because we needed

expert opinions on sustainable criteria for the RFP. The majority of our contacts for the interview process were given to us by our project mentor (Rochelle Owen) and client (Nicola Embelton-Lake). From our mentor and client, we received a total of 11 possible interviewees. We then sent each of these individuals an interview request via email. Out of the 11 possible interviewees only 6 responded back to use with days that were convenient for them to be interviewed.

Before the scheduled interview dates, our group came up with 12 questions to ask our interviewees. The questions were a combination of open end and closed ended questions. We also met a few times with our client and mentor to refine the questions to make sure they would generate the result we were looking for. Furthermore, our group picked out one member (Jackson Fowlow) who was confident to ask all the interview questions clearly. The rest of the group members were assigned the duty of recording the interviews. To record each interview, we listened and wrote down all points we heard. After each interview, the group documented its findings on a Word Document file. Out of the 6 interviewees, 2 were over the phone while the rest were in person.

One major limitation of the research was only 6 individuals responded to our emails out of 11. To avoid this problem we sent a follow up email and phone call, but we did not get any response back. Another limitation was time; with more time, we could have gotten more responses from those who did not respond to us about the interview, which could have improved our research. In terms of the validity of the research, we interviewed experts in the field of furniture procurement and their expert opinions and advice helped us to come up with reliable criteria for the RFP. In terms of the reliability of the research, we backed up the opinions we got from these experts with secondary research based on organizational and institutional leaders in sustainable procurement.

One delimitation in the research was keeping interviews to experts in the field of furniture procurement. Although, interviewing non-experts in the field of furniture procurement might change the results of the research, it would have been interesting to see their response. An additional delimitation was limiting the interviewees to only 10 individuals and this was done for time purposes.

4.0 RESULTS

4.1 Question: What are your day-to-day responsibilities?

Mike Drane

Sector: University - Purchasing

Title: Director of purchasing at dal (Office on sexton campus)

Bob Purdy

Sector: Public organization/relations

Title: Director of external relations and development for the Fraser Basin Council, Facilitating collaboration between civil society, government, and business. Plays a big role in media relations and communications.

Shirley Sherman

Sector: University - Purchasing

Title: Buyer in purchasing department at Dalhousie (sexton campus office)

She buys what the departments ask her to buy. She searches out goods and services for the university and liquidates the university assets on the Kijiji website. First they are shown internally and if no one needs these goods in the university then they are put out externally on Kijiji.

Ian Wagschal

Sector: University – Management

Title: Manager of projects - facilities management department

Oversees all major construction and demolition projects on campus

Lynda Rankin (& Jane)

Sector: Government

Lynda - Title: Sustainability purchasing manager, province of nova scotia. (gov't office)

Jane - Title: Buyer in the same office, for province of Nova Scotia

Norman Nance

Sector: Manufacturer (corporate)

Title: VP of Environment at Ki, 5th largest company in the industry in the U.S. (\$700 million in revenue)

<i>Themes in answers</i>	<i># Mentions in interviews</i>
<i>Purchasing</i>	<i>2</i>
<i>Public Organization</i>	<i>1</i>
<i>Management</i>	<i>1</i>
<i>Government</i>	<i>1</i>
<i>Manufacturer</i>	<i>1</i>

4.2 Question: How do you define sustainability?

The question of how one defines sustainability was asked in an attempt to better understand the viewpoint of interviewees, how different sectors see things, learn from their experience in the field and set the tone for the conversation. All of the interviews were able to come up with their own definitions, some with more depth than others. Three of the six respondents mentioned the **triple-bottom line** definition; this consists of concern for the environmental, social and economic factors. Bob Purdy best described this as a,

Tri-Win philosophy of which the environment, the economy and people are all winning. This is essential as they are connected, and one does not work without the other.

Lynda suggested that when organizations maintain the tri win philosophy as discussed above it will avoid purchasing of just the cheapest, or the prettiest and most expensive, furniture options on the market. Additionally, Bob Purdy stated how broad of a term this is and that many people have a different definition of the term; this being essential to making progress in the field. He also stated that he believes **collaboration is essential** to the definition of sustainability.

Sustainability is about collaboration. It is a broad thing. We have two ears and one mouth, and not the other way around.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
<i>Collaboration</i>	<i>1</i>
<i>Triple-bottom line</i>	<i>3</i>

4.3 Question: What sustainability factors are important in purchasing for your organization?

4.3.1 Primary Research Findings

Certification was a common theme with all of the interviewees. Whilst some such as Bob and Mike mentioned the confusion and limitations that certifications can often hold on purchasers in institutions, others such as Norman Nance promoted the benefits that certifications can offer. Drane suggested

while certifications can act as a good guideline for purchasers and producers, requiring these certifications can often exclude what local furniture suppliers are able to do.” This is a problem because Dalhousie must remain equal, fair and open to the entire business community; this includes smaller local businesses.

Purdy mentioned that the amount of certifications that are out there today can be confusing, overwhelming and sometimes useless for purchasers. Drane, Sherman, Rankin, Nance, Purdy

also however all commented on the benefits of such certifications. Nance and Rankin mentioned how certifications can act as excellent guides in knowing exactly what is in a furniture product and how it was produced. The certifications FSC, Greengaurd, LEED and BIFMA/LEVEL were among the top listed and recommended certifications by interviewees. FSC, Forestry Stewardship Council, ensures that the wood used in a product was harvested in a sustainably managed forest. Greenguard limits the number of harmful toxins released into the air during the lifecycle of a product. LEED is used for building construction primarily, with furniture accounting for only a few points out of a hundred, and Level being the most comprehensive and broad range of criteria related specifically to furniture that includes social and environmental considerations.

In the responses to this question, **viability** was also a common theme suggested by the interviewees. Viability here refers to whether or not the product can be purchased with specific concern about the price of the product. Nance stated how,

KI is concerned about pricing of their products. Purchasers must often pay a higher price for Good, sustainable products, but KI tries to keep these premiums low, or at least make their products lifecycle efficient if they are going to pay a lot for it.

Another theme mentioned in the responses to this question was the **lifecycle of a product with specific consideration of the waste produced in a products lifecycle**. It seems furniture is something where the lifecycle is particularly important. Many of the respondents were concerned with packaging and waste in production, but primarily what happened to the product after it was old/no longer usable. Sherman and Rankin exemplified their institutions online method of organization and distribution, where old and used furniture is allocated to others who have need for it, such as other faculty on campus, students, or local youth organizations/shelters, thus reducing furniture going into the landfill by up to 99%. Rankin also stated how life cycle costing is an important factor to be considered in purchasing/procurement of all products, including furniture. As a manufacturer, Nance highlighted,

we are focused on producing products with longer lifecycles so that consumers don't have to buy as much furniture and produce waste.

Buying local was an additional theme suggested by three interviewees. They highlighted that it is important for limiting the ecological footprint of greenhouse gas emissions in transportation, and also how supporting local businesses is beneficial to the entire community. Finally, **buying from a socially responsible producer and supplier** was a theme that arose in the interviews with both Rankin and Purdy. As a producer, Nance provided insight to some of the materials KI has started to use in their furniture. He suggested that purchasers,

must ensure that the materials used for production of the furniture is **rapidly renewable**, meaning that it can be grown and harvested in less than 10years. This includes wheat, sunflower, soy, lenoleum instead of laminate, cork, bamboo.

KI has also turned toward the usage of **translucent materials and bio-based** materials such as nylon in replacement of polypropalene.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
<i>Certification</i>	6
<i>Lifecycle/Waste</i>	5
<i>Local</i>	3
<i>Viability</i>	3
<i>Who</i>	1
<i>Bio-based</i>	1
<i>Translucent</i>	1
<i>Rapidly-renewable materials</i>	1

4.3.2 Secondary Research Support

The University of Saskatchewan provides a checklist for their employees containing a variety of questions for purchasers to answer when purchasing furniture. This checklist is shown in APPENDIX D. As seen in this checklist, the University of Saskatchewan **supports the four certifications** that were mentioned in the interviews: BIFMA, LEED, FSC, Greenguard. Additionally, TUFTS UNIVERSITY supports the FSC certification standard and Yale supports the BIFMA certification.

The University of Saskatchewan encourages **the lifecycle/waste assessment approach** by first encouraging their employees to evaluate whether a new product is necessary. If it is decided that a new product is required, employees must evaluate the waste that will be produced by the product in considering factors such as the packaging, costs of the end disposal, and whether or not the product is recyclable at the end of its usage. Yale University also states in their *Sustainable Procurement Standards Guide*,

to the greatest extent possible, the most commonly purchased commodities and services are now evaluated and compared using life cycle assessments.

The University of Saskatchewan's *Sustainable Purchasing Guide* also indicates that where possible, purchasers should buy furniture **made locally** or in Canada. Tufts further supports this idea in their *Green Purchasing* guide,

Supporting local manufacturers keeps jobs and money in your community, as well as cutting down on the emissions generated by transporting goods across the country (or world). Items manufactured in developing countries might be subject to less stringent environmental laws, putting the ecosystem and workers at risk.

Finally the University of Saskatchewan ensures that purchasers buy from socially responsible producers and suppliers by asking purchasers to answer questions on the *Sustainable Purchasing Checklist* such as,

are employees provided with a safe and healthy working environment? Does the company exercise transparent ethical policies? If applicable, are any third-party audits performed.

Additionally the University of Saskatchewan *Sustainable Purchasing Guide* that buyers purchase furniture that is made from,

either bio-based materials that natural ecosystems can easily assimilate, or be 100% recycled.

Tufts University also supports this. The University of Saskatchewan also asks buyers to consider if a product is made from renewable resources before purchasing it.

<i>Themes to be supported</i>	<i># Mentions in secondary research</i>
<i>Certification</i>	3
<i>Lifecycle/Waste</i>	2
<i>Local</i>	2
<i>Viability</i>	
<i>Socially responsible suppliers</i>	1
<i>Bio-based</i>	2
<i>Translucent</i>	
<i>Rapidly-renewable materials</i>	1

4.4 Question: Are you willing to pay more for environmentally sustainable products? (i.e. products that save energy, reduce waste, have lower toxins)?

4.4.1 Primary Research Findings

When asked if interviewees were willing to pay more, three interviewees pointed out that this is often a decision made on a larger scale. Thus arose the theme of having **a budget to abide by and outside considerations to attend to**. As they are located in the university sector, Drane and Wagschal highlighted the role public funding has on the university. Drane said,

It is important to consider and learn is that the university is mostly publicly funded, so it must do it's (not federal) processes according to that.

Wagschal explained this idea further,

If the government gives money to the university, the public has equal access to that money because it's public money... it's the students who [will have to be] most willing to pay extra to incorporate these changes.

Both Drane and Wagschal additionally suggested the theme that its not money, that criteria and/or **lifecycle costing** play the most critical roles in answering this question when purchasing furniture. They suggest that using a set of criteria can guarantee a certain lifecycle, or whether the product is actually less expensive in the long run. They said that is what decides whether or not people are willing to pay more.

If we had some questions that we had to ask not to limit people but guide them ... right away we can limit it [amount of money spent].

When our interviewer suggested to Mike Drane that the limiting to a few buyers could increase **bulk buying**, and taking advantage of bulk pricing, and thus reduce costs, he completely agreed, and even added how much simpler and time-saving this would be for his department.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
Budget/Outside Considerations	3
Lifecycle Costing	2
Bulk Pricing	1

4.4.2 Secondary Research Support

As universities, both University of Saskatchewan and Yale also have budget and public considerations to be conscious of when purchasing furniture. Yale's *Sustainable Purchasing Guide* states,

At Yale, purchasing decisions and vendor relationships must be based on a mix of social, environmental, and economic considerations.

Additionally, the University of Saskatchewan views life cycle costing as a vital process in determining whether or not they want to pay more for a sustainable product,

Although the upfront cost of a sustainable product *may* appear to be more, the Life Cycle Cost of the sustainable product is often less.

<i>Themes to be supported</i>	<i># Mentions in secondary research</i>
Budget/Outside Considerations	2
Lifecycle Costing	1
Bulk Pricing	0

4.5 Question: What are some of the most **hazardous materials** associated with when purchasing soft seating and table.

4.5.1 Primary Research Findings

Three themes arose from the answers to this question: **chemicals, materials, emissions.**

Nance suggested that the **Pharos list of chemicals** is a great place to start when developing criterion regarding chemicals. He also said that KI specifically **prohibits formaldehyde** presence in their furniture. Other interviewees brought up chemicals as a hazard to be avoided but did not provide the names of any major chemicals that they avoid.

PVC materials arose as a common theme when interviewees were asked what are the most hazardous materials associated with purchasing tables and chairs. Three interviewees suggested that PVC materials are the materials they are most aware of and cautious of. Nance explained why,

There has been a reduction in PVC material use in furniture. This is driven by health care as there is a continuous concern around the use of PVC. It is dangerous in the manufacturing and disposal stages of the products lifecycle.

Rankin provided the procurement group with the government's furniture purchasing guide. PVC materials were identified on this sheet; requiring that purchasers indicate whether the furniture purchased contains PVC materials. Nance suggested more dangerous materials such as **solvent-based adhesives** and petroleum,

KI has strayed **away from using petroleum** in their soft seating to using a soy blend instead. The auto industry uses this so we are under the impression that it works.

Additionally he suggested that **fire retardants be avoided** where possible as they can secrete dangerous off-gasses. Fire retardants are also located on Rankin's list asking purchasers to limit the presence of fire retardants on purchased furniture.

Two interviewees brought up **emissions as an important consideration** in purchasing. Purdy highlighted that there are not only emissions involved in the production and disposal processes, he asks what transportation emissions are required to get the product to its destination. Transportation emissions can be a considerable contribution to emissions over a products lifecycle. He further highlighted that there are emissions released from the finished product throughout its usage.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
Chemicals - Pharos list	1
Chemicals - Formaldehyde	1
Materials - PVC	3
Materials - Fire Retardents	2
Materials - Petroleum	2
Materials - Solvent-based adhesives	1
Emissions	3

4.5.2 Secondary Research Support

In their *Sustainable Purchasing Guide* The University of Saskatchewan asks all buyers to avoid purchasing furniture containing formaldehyde for the reason that,

[...] formaldehyde evaporates easily at room temperature, and may cause health problems such as chemical sensitivities.

Additionally, in their *Introduction to Sustainable Purchasing*, the University of Saskatchewan asks that buyers choose furniture that does not contain petroleum. Finally, in their *Sustainable Procurement Standards Guide*, Yale requires that all office furniture be purchased PVC free.

<i>Themes to be supported</i>	<i># Mentions in secondary research</i>
Chemicals - Pharos list	
Chemicals - Formaldehyde	1
Materials - PVC	1
Materials - Fire Retardents	
Materials - Petroleum	1
Materials - Solvent-based adhesives	
Emissions	3

4.6 Question: What *sustainable features* do you find most important when purchasing task chairs and tables (ghg emitting materials, fsc certified wood, types of laminate)?

For the reason that the interviewees did not speak directly to sustainable features concerning solely chairs and tables, save for the hazardous materials and foam questions, the answers provided in section 4.3 apply to both 4.3 and 4.6.

4.7 Question: Do you pay attention to **recycled content** when purchasing anything?

4.7.1 Primary Research Findings

Four interviewees indicated that they do look for **recycled content in furniture**. Nance indicated that KI tries to work with recycled content where possible but,

looking for products with high recycled content and using an exact percentage of recycled content as a requirement can exclude furniture products that strive in other areas of sustainability.

<i>Themes in answers</i>	<i># Mentions in Interviews</i>
Prefer recycled content	4

4.7.2 Secondary Research Support

The University of Saskatchewan and Yale University both require that buyers consider the following questions regarding recycled content when purchasing furniture,

does the product include post-consumer recycled content? What type and what percentage of recycled materials does the product contain? Does the product contain reconditioned parts? Is the product reusable or does it contain reusable parts?

Tufts University suggests,

choose goods made out of post-consumer waste and high recycled content ... it's equally important to provide a market for goods created from diverted waste.

<i>Themes to be supported</i>	<i># Mentions in secondary research</i>
Prefer recycled content	3

4.8 Question: Do you look for furniture that contains *biodegradable materials, refurbish-able and/or recyclable*?

4.8.1 Primary Research Findings

A major theme seen throughout the interviews was the indication that interviewees focus their purchasing largely around what can be **recycled**. Most interviewees indicated that they pay attention to whether or not the packaging can be recycled as well as whether or not the product itself can be recycled by the end user. Additionally Purdy asks,

can we recycle the furniture, are there recycling services around that can recycle these materials if we can't, does the supplier of the furniture recycle it if we can send it to them at the end of the lifecycle.

Whether or not the product is reusable in other situations is also considered as much as recycling is. Three interviewees expressed the concern of a product's **interchangeability**. Drane indicated, in regard to Dalhousie's lack of interchangeability,

as each manufacturer's brand is not interchangeable, meaning you can't fit them together, they often have a left over supplies in people's rooms lying around here and there and there is no centralized system to recover that.

Additionally not only should products parts be interchangeable, easy to unfasten, move around, and re-fasten Rankin highlights that,

purchasers need to consider buying furniture that not only works for what they are currently buying it for, it needs to be able to be used in all kinds of situations.

When purchasing new furniture, two of the interviewees directly indicated that a top priority is to evaluate whether or not the furniture can be **refurbished or repaired** as well as whether or not old furniture can be refurbished or repaired in replacement of buying new furniture. Nance indicated KI is engineering products to make them both more serviceable, easier to maintain, and easier to repair. Rankin highlighted the provincial government's focus on buying furniture that

is easily repairable, adjustable, reconfigurable... to get as much use of [it] as possible.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
Recyclable/Reusable	4
Interchangeable	3
Refurbishable/Repairable	2

4.8.2 Secondary Research Support

The University of Saskatchewan's checklist asks buyers to evaluate,

Can the product be disassembled for reconditioning and reuse? Can the item be recycled at end of life?
 Can waste be source separated on site and recycled? Do appropriate local facilities exist for recycling? Does the supplier/manufacturer offer take-back programs for reuse or recycling? Can this reuse or recycling be verified?
 Will consumables (such as toner cartridges) be accepted for recycling? Where hazardous waste is involved, can a certified recycler be engaged to reclaim or recycle material?

Tufts University also supports these questions and even has a program called the Free Cycle Room which is a room in which unwanted items go to be reused and recycled by participants.

<i>Themes to be supported</i>	<i># Mentions in secondary research</i>
Recyclable/Reusable	2
Interchangeable	1
Refurbishable/Repairable	1

*4.9 Question: What specifically do you look for when considering **foam for soft seating**?*

4.9.1 Primary Research Findings

Two interviewees commented on the **hazards of petroleum** in soft seating. Nance highlighted that KI is using a soy blend instead of straight petroleum based foam for soft seating.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
Petroleum	2

4.9.2 Secondary Research Support

The University of Saskatchewan argues the benefits and downfalls of soy-blend foam,

Recently, some manufacturers have introduced soy-based polyurethane in an effort to address concerns about toxicity and uses of petroleum-based polyols. While greener than conventional polyurethane, it still poses problems. Soybean oil can only replace 5 to 40 percent of the polyol, so the remainder must still be provided by petroleum-based polyols. Furthermore, TDI is still used to create the final product.

<i>Themes to be supported</i>	<i># Mentions in secondary research</i>
Petroleum	1

*4.10 Question: Are **there suppliers you've worked with** in the past that embody best management practices with regards to sustainability and furniture? For cost? Bulk? Locality? Materials used? Other ? For cost? Bulk? Locality? Materials used?*

4.10.1 Primary Research Findings

Nance was the only interviewee to reply to this question:

I'd like to think we are at the top and that that's why you are contacting us today... I'd say that Herman Millar and Hayworth are both similar suppliers to us in their focus on producing sustainable furniture and also both of somewhat similar size in terms of revenue.

When we asked for a more local or Canadian company Nance suggested Teknion as a Canadian supplier equivalent to KI,

it has very similar focuses on furniture but not as large of a company and less established than the three U.S. companies we just talked about.

4.11 Question: What are key strategies for increasing sustainability features in furniture purchasing for a large organization?

4.11.1 Primary Research Findings

Seven major themes arose from this question the most common one being the need of **support from the top** when striving for increasing sustainability features in a large organization. Purdy emphasized,

having a top-down, bottom-up approach is essential. having people on board from the top is essential, senior level aka the board, or else it is hard to get things done. often times there have been cases of people trying to get things approved only to be stopped by a ceo or co when almost being completed.

Wagschal talked about this need for support from the top in terms of the university and the need to get the provincial government on board in order to make projects like this work in the university. Both Drane and Wagschal also spoke about the importance of having a **specific set of questions or criteria** in order to increase sustainability features in the university,

if people in purchasing could have a set of specific questions or criteria that they could ask when putting a request or tender out.

Drane and Purdy talked about the need to **keep business options** open and not exclude companies from the possibility of purchasing from them,

I have to treat the business community openly and fairly. This means not going to just one company. So if one furniture supplier for example uses 60% recycled wood products, or is very good at one thing, then we can't say to everyone OK you need to have minimum 60% recycled wood products as not all companies may be able to do that, though they may be good or better in other aspects of sustainability.

Additionally, Purdy and Rankin highlighted the importance of **having a background and rationale** for what you do; to show how the sustainability ‘stuff’ fits in.

Why are you doing this? Have an answer to that question. Have a good reason, be very clear on your background and rationale, and what is going to be solved by doing this. A reason is so important.

Having a background and rationale for the efforts being made helps **build collaboration** and tangible visions that people can see themselves being a part of. Purdy and Rankin emphasized this is an essential strategy,

if people can see themselves in a vision and buy into it, then they will become a part of it and work towards it... remember that people have a left and right side of the brain. Yes one is good for technical specifications and resources but we also, as human beings, are emotive. Having people care about things is essential.

When people are on board and interested, Purdy and Rankin suggest that **having credibility and educating** are very important,

having credibility is also important when dealing with sustainability and workers. Rather than waving the finger to educate and advocate, we brought in champions of best management practices in the mining industry who are leaders in sustainable work to speak to the miners that we were working for and thus they really listened and paid attention because the educators were actually working in the field.

Finally, the last strategy was to **measure progress** made in regards to the project because this acts as reinforcement, encouragement, and a reward to people participating and working on the project. Purdy suggests,

having a set of means to tie these goals together, make sure they are measurable, and show how the changes on the micro level are also happening on the macro level... have a time line or three year plan.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
Support from the top	3
Specific questions/criteria	2
Not limiting business options	2
Having a Background and Rationale	2
Collaboration and Tangible Visions	2
Credibility and Education	2
Measurable	1

4.12 Question: How do you get through challenges around sustainability?

4.12.1 Primary Research Findings

The main theme arising from this question was to ensure that the project/effort has a clear outline and target.

Have a clear set of principles defined. Then if you get lost or its hard along the way, you can go back to them, your original goals. Set long-term goals and targets.

Drane explains further that having a **clear outline and targets** will help you to stay efficient and on track. Rankin highlights that with a clear outline, you will pick your battles wisely and not get preoccupied with ones that will not advance the project. Another theme arising was Wagschal's advice to just use **your discretion** as reps often just want to sell you and don't actually have your best interests in mind.

<i>Themes in answers</i>	<i># Mentions in interviews</i>
Clear outline	3
Discretion	1

5.0 DISCUSSION

Summary of research question/purpose of the research & overview of significant findings

The research question of how can we make the furniture procurement process at Dalhousie more sustainable was addressed by the two above-mentioned research methods. As well, the interviews provided an invaluable insight into the industry. As students with little previous knowledge of procurement nor any background experience with furniture between us, this was mostly new material for all. Speaking with leaders in various fields was incredibly important to developing our understanding and knowledge of the way both the furniture industry and procurement process operates, their relationship with each other, and how things can change. Once we discovered that processes needed to change here at Dalhousie, our goal was aided greatly by the interviewees.

One of the benefits of this research was how we were conducting with members from various different sectors in society. By talking to an interviewee who studied furniture design back in the seventies and is now the VP of Environment at Ki, the 5th largest furniture manufacturer in the U.S. with \$700 million annually in revenues, to a buyer in the purchasing department here at Dalhousie, who simply makes purchases as told to her by department, we got a greater scope and varied input of

information. By looking at the micro and macro level, we achieved a broader view of what is necessary to implement policies. The importance of having an understanding of the relationships of the micro and macro level was conveyed to us by Bob Purdy, the member of the Fraser River Basin Council, which collaborates with community leaders, MP's, CEO's to spiritual leaders three times a year to advance sustainability progress in their region. He said how a top-down involvement within a community is essential, with support from the university administration being critical if any change is to be made.

Mike Drane spoke on the freedom of opportunity for change that lies within a university environment. He said that universities are generally places where people can do what they want, things are open to change and as long as people will support it there is room for that flexibility. As such, if support for something like requiring certain criteria in a guideline for purchasers when procuring furniture is there from the university administration and leaders, then change can start to happen. He also stated that by being able to tell his purchasers to follow guidelines to acquire furniture, it is easier to enforce behaviour preferable to sustainability.

Our research interviewees suggested that if guidelines were in place, this would be of key importance which would make it possible to create a more sustainable procurement process. This was a significant finding; hearing the director of purchasing at Dalhousie Mike Drane state that he would love a set of guidelines in his hands (this would make things easier for his purchasers and keep people on track) is validity of this research.

Another key finding was what Bob Purdy's experience taught; to keep asking yourself "Why are you doing this?" Having a reason for your research, a well-defined and researched rationale for something, is essential when committing to a project on sustainability of any type. And such, our background and rationale section of the report clearly outlines the need for improvement here at Dalhousie.

Dalhousie has a very large purchasing power and as such is responsible and capable of having a huge impact on how furniture procurement operates in the province. By making demands to the suppliers, asking the questions and remaining strict to these principles, the local market will adjust to advance their business and thus the change will have occurred. The importance of remaining open and fair to the entire business community of the region is emphasized as important for Dalhousie, which is mostly publicly funded and as such must remain publicly accountable to the community.

Implications for theory/practice, & consideration of the findings in light of existing research studies

Currently, Dalhousie University is undertaking research into improving sustainability in procurement for a number of products and services in operation on campus. Our research and report was thus created in hope to aid the purchasing department here, specifically focusing on furniture. The criteria we suggest will be able to be implemented in the drafting of a future policy/set of guidelines. Our work would thus cut down on the amount of research that is required to do, as Dalhousie is currently

in the preliminary stages of drafting an RFP (Request for Proposal) to the business community.

Currently, no such research as ours has been conducted, that we are aware of, for Dalhousie. Though the demand has been made and recommendations for improvement suggested by various members in Facilities Management, our group project is the first of its type here at Dalhousie to interview people in the industry to discuss their knowledge and concerns in order to determine guidelines for recommendation. Our secondary research, on the other hand, draws on extensive work on various organizations including the United Nations, provincial and federal governments, and of particular importance, the University of Saskatchewan Office of Sustainability. Their Office has published multipage sustainable procurement guidelines for a number of products and services, including furniture. This criteria was greatly helpful when addressing and determining guidelines for Dalhousie.

6.0 CONCLUSIONS

By administering interviews and looking at the data, we were able to determine what kind of criteria is important for professionals in the field, when it comes to sustainable furniture procurement. Additionally, through conducting secondary research, we were able to identify what kind of criteria is already being implemented by other institutions, companies and organizations.

Our group hopes that the facilities management department, our client, and members of the Dalhousie purchasing department, can take our recommendations surrounding furniture procurement into consideration. These will hopefully be adopted not only into the RFP that is expected to be drafted by a consultant who is expected to be hired in the next 12 months. Sustainability is a clearly defined goal by the university administration, and moving in this direction is another step towards the goal. By adhering to the purchase of more sustainable furniture, as this relates to economics, the environment, and society, we are improving upon ourselves while being aware of the interconnectedness of all three of these sectors.

Recommendations for action

This study's main purpose was to identify a set of criteria to recommend to Dalhousie University for their procurement of sustainable furniture. Based on the interviews and research conducted, a number of criteria have been selected for recommendation to the University to include in their RFP. These themes were developed to address the concerns of those individuals who were interviewed, combined with what was identified as common practice for other institutions and organizations. The following criteria of finished furniture products are recommended to include as preferences in the RFP for sustainable furniture procurement:

- No PVC

- No petroleum
- No harmful chemicals (such as formaldehyde)
- A percentage of recycled material
- Locally produced
- Produces minimal waste: recyclable, reusable or refurbish-able
- Company uses socially responsible practices
- Minimal harmful emissions in the production process

Recommendation for further research

Although a number of criteria were able to be identified for recommendation to Dalhousie, the research conducted in this study had faced several limitations. In light of this fact, there are a number of recommendations to be made for further research on this topic. Interviews could be conducted on a wider scale, including more interviewees in general. As well, it could be helpful to include several other perspectives, such as additional Dalhousie employees, purchasers and perhaps even students concerned with sustainability. Further research would need to be done over a longer period of time, allowing for a more in-depth perspective into which criteria would be most useful and effective to include in an RFP.

7.0 REFERENCES

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8.0 ACKNOWLEDGMENTS

Shayla Meyer, Keren Lifshitz, Nathan Banton, Tosan Ikomi, Jackson Fowlow would like to express their appreciation to the following individuals who assisted in this successful research. They have been generous with their time and efforts:

Nicola Embleton-Lake, Rochelle Owen, Mike Drane, Norman Nance, Ian Wagschal, Bob Purdy, Shirley Sherman, Lynda Rankin

9.0 APPENDICES**Appendix A**

ETHICS FORM:\

ENVIRONMENTAL SCIENCE PROGRAM
FACULTY OF SCIENCE
DALHOUSIE UNIVERSITY

APPLICATION FOR ETHICS REVIEW OF RESEARCH INVOLVING HUMAN PARTICIPANTS

UNDERGRADUATE THESES AND IN NON-THESIS COURSE PROJECTS
GENERAL INFORMATION

1. Title of Project: Sustainable Furniture Procurement

2. Faculty Supervisor(s) Department e-mail: ph:

3. Student Investigator(s) Department e-mail: ph:

Shayla Meyer College of Sustainability

Nathan Banton “ “

Tosan Ikomi “ “

Jackson Fowlow “ “

Keren Lifshitz “ “

4. Level of Project: Non-thesis Course Project [X] Undergraduate [X] Graduate []
Specify course and number: 3502 ENVS/SUST Campus as a Living Lab

5. a. Indicate the anticipated commencement date for this project: Jan 12, 2012

b. Indicate the anticipated completion date for this project: Apr 13, 2012

SUMMARY OF PROPOSED RESEARCH

1. Purpose and Rationale for Proposed Research: The purpose of this project is to research and develop criteria to be included on Dalhousie University's Furniture Procurement RFP. The goal of the RFP is to achieve economically, environmentally, and socially friendly furniture procurement as Dalhousie currently has an unstructured procurement process.

2. Methodology/Procedures

a. Which of the following procedures will be used? Provide a copy of all materials to be used in this study.

[] Survey(s) or questionnaire(s) (mail-back)

[] Survey(s) or questionnaire(s) (in person)

[] Computer-administered task(s) or survey(s)]

- Interview(s) (in person)
- Interview(s) (by telephone)
- Focus group(s)
- Audio taping
- Videotaping
- Analysis of secondary data (no involvement with human participants)
- Unobtrusive observations
- Other, specify _____

b. Provide a brief, sequential description of the procedures to be used in this study. For studies involving multiple procedures or sessions, the use of a flow chart is recommended.

The Furniture Procurement group will be conducting telephone interviews with 8 individuals. The telephone interviews will be semi-structured, the questions will be asked from a pool of research questions predetermined by the group.

3. Participants Involved in the Study: Indicate who will be recruited as potential participants in this study.

Dalhousie Participants:

- Undergraduate students
- Graduate students
- Faculty and/or staff

Non-Dal Participants:

- Adolescents
- Adults
- Seniors
- Vulnerable population* (e.g. Nursing Homes, Correctional Facilities)

* Applicant will be required to submit ethics application to appropriate Dalhousie Research Ethics Board

b. Describe the potential participants in this study including group affiliation, gender, age range and any other special characteristics. If only one gender is to be recruited, provide a justification for this.

The individuals will be male and female adults all involved in purchasing related issues.

c. How many participants are expected to be involved in this study? Eight.

4. Recruitment Process and Study Location

a. From what source(s) will the potential participants be recruited?

- Dalhousie University undergraduate and/or graduate classes
- Other Dalhousie sources (specify) _____
- Local School Boards*
- Halifax Community
- Agencies
- Businesses, Industries, Professions
- Health care settings*
- Other, specify (e.g. mailing lists) _Mailing list provided by project mentor_____ *

Applicant may also

require ethics approval from relevant authority, e.g. school board, hospital administration, etc.

b. Identify who will recruit potential participants and describe the recruitment process. Provide a copy of any materials to be used for recruitment (e.g. posters(s), flyers, advertisement(s), letter(s), telephone and other verbal scripts in the appendices section.

Group member Nathan Banton will be arranging and conducting the 8 interviews. He will be arranging the interviews via e-mail. (See appendix A)

5. Compensation of Participants: Will participants receive compensation (financial or otherwise) for participation?

Yes No If Yes, provide details:

6. Feedback to Participants

Briefly describe the plans for provision of feedback and attach a copy of the feedback letter to be used. Due to the nature of the project and research process we will not be providing feedback.

POTENTIAL BENEFITS FROM THE STUDY

1. Identify and describe any known or anticipated direct benefits to the participants from their involvement in the project.

It is not anticipated that the participants will receive any direct benefit from participating in the study.

2. Identify and describe any known or anticipated benefits to society from this study.

I sit anticipated that society will benefit from this study in multiple ways. Firstly, Dalhousie University is a large institution with enormous purchasing power and if it commits to purchasing environmentally and socially responsible furniture, its negative impact on the environment can be lessened. Secondly, by adopting the guidelines set out in the RFP, Dalhousie could be setting a precedent for other institutions to use responsible purchasing methods. And lastly, at the level of the university, this study could lead to lowering Dalhousie's procurement costs.

POTENTIAL RISKS TO PARTICIPANTS FROM THE STUDY

1. For each procedure used in this study, provide a description of any known or anticipated risks/stressors to the participants. Consider physiological, psychological, emotional, social, economic, legal, etc. risks/stressors and burdens.

No known or anticipated risks Explain why no risks are anticipated:

Minimal risk * Description of risks:

Greater than minimal risk** Description of risks:

* This is the level of risk associated with everyday life. ** This level of risk will require ethics review by appropriate Dalhousie Research Ethics Board

2. Describe the procedures or safeguards in place to protect the physical and psychological health of the participants in light of the risks/stresses identified in Question 1.

No risks.

INFORMED CONSENT PROCESS Refer to:

<http://pre.ethics.gc.ca/english/policystatement/section2.cfm>;

1. What process will be used to inform the potential participants about the study details and to obtain their consent for participation?

Information letter with written consent form; provide a copy

Information letter with verbal consent; provide a copy

Information/cover letter; provide a copy

Other (specify) _____

2. If written consent cannot be obtained from the potential participants, provide a justification.

ANONYMITY OF PARTICIPANTS AND CONFIDENTIALITY OF DATA

1. Explain the procedures to be used to ensure anonymity of participants and confidentiality of data both during the research and in the release of the findings.

We will not refer to names when using specific examples from the research process.

3. Describe the procedures for securing written records, questionnaires, video/audio tapes and electronic data, etc.

The only data that will be recorded are written recordings of participants' responses which will be kept confidential and will be destroyed on the computer by Nathan Banton following the project deadline, April 13, 2012.

Indicate how long the data will be securely stored as well as the storage location over the duration of the study. Also indicate the method to be used for final disposition of the data.

Paper Records

Confidential shredding after _____

Data will be retained until completion of specific course.

Audio/Video Recordings

Erasing of audio/video tapes after _____

Data will be retained until completion of specific course.

Electronic

Erasing of electronic data after _____

Data will be retained until completion of specific course.

Other _____

(Provide details on type, retention period and final disposition, if applicable)

Specify storage location: _____ Computer _____

Appendices: ATTACHMENTS Please check below all appendices that are attached as part of your application package:

Recruitment Materials: A copy of any poster(s), flyer(s), advertisement(s), letter(s), telephone or other verbal script(s) used to recruit/gain access to participants.

Information Letter and Consent Form(s). Used in studies involving interaction with participants (e.g. interviews, testing, etc.)

Information/Cover Letter(s). Used in studies involving surveys or questionnaires.

Materials: A copy of all survey(s), questionnaire(s), interview questions, interview themes/sample questions for open-ended interviews, focus group questions, or any standardized tests used to collect data.

SIGNATURES OF RESEARCHERS _____

Signature of Student Investigator(s) Date

Signature of Student Investigator(s) Date

Signature of Student Investigator(s) Date

Signature of Student Investigator(s) Date

Signature of Student Investigator(s) Date

Signature of Student Investigator(s) Date

Signature of Student Investigator(s) Date

FOR ENVIRONMENTAL SCIENCE PROGRAM USE ONLY: Ethics proposal been checked for eligibility according to the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans

Signature Date

Signature Date

Appendix A: Interview Request and Draft Questions

Interview Request via e-mail

To request the interview Nathan will be sending a cordial email out to each and every contact listed above stating the following:

Dear Interviewee,

A group of students from the college of sustainability at Dalhousie University are formally requesting a telephone interview to discuss sustainable furniture procurement for campus. The students of Sustainability 3502 are working in partnership with the Facilities Management department at Dalhousie. We are interested in asking you a few questions given your expertise in the area, and we would like to assure you that all your answers will remain anonymous. Nathan Banton is hoping to host a telephone interview with you to discuss the topic and is interested in scheduling a time that is most suitable with you.

Regards,

Nathan Banton.

Interview Draft

Introduction

(General greeting)

Change

The furniture procurement group would like to thank you for taking the time out of your day to answer a few questions. Our initial research has identified the following factors as key sustainability factors to consider when purchasing furniture; sustainability of materials used, cost of furniture, locality of materials used in the manufacturing of the furniture as well as the supplier of the manufactured furniture, bulk-buying, supplier Corporate Social Responsibility, and Life Cycle of furniture. I will be conducting a semi-structured interview with a list of questions that I will be pooling from. All of your answers will remain anonymous.

Questions

- * What are your day-to-day responsibilities?
- * how do you define sustainability?
- * What sustainability factors are important in purchasing for your organization?
- * Are you willing to pay more for environmental sustainable products? (i.e. products that save energy, reduce waste, have lower toxins)?
- * What are some of the most hazardous materials associated with when purchasing chairs and tables?
- * What sustainable features do you find most important when purchasing task chairs and tables? (ex... ghg emitting materials, fsc certified wood, types of laminate).
- * Do you pay attention to recycled content when purchasing furniture?
- * Do you look for furniture that contains biodegradable materials, refurbish-able and/or recyclable?
- * What specifically do you look for when considering foam for soft seating?
- * Are their suppliers you've worked with in the past that embody best management practices with regards to sustainability and furniture? For cost? Bulk? Locality? Materials used? Other ? For cost? Bulk? Locality? Materials used?
- * What are key strategies for increasing sustainability features in furniture purchasing for a large organization?

Conclusion

We appreciate you taking the time to talk to us today, your valued responses will greatly assist in guiding the

Change

Appendix B

Interview Request and Interview Questions

Interview Request via e-mail

To request the interview Nathan will be sending a cordial email out to each and every contact listed above stating the following:

Dear Interviewee,

A group of students from the college of sustainability at Dalhousie University are formally requesting a telephone interview to discuss sustainable furniture procurement for campus. The students of Sustainability 3502 are working in partnership with the Facilities Management department at Dalhousie. We are interested in asking you a few questions given your expertise in the area, and we would like to assure you that all your answers will remain anonymous. Nathan Banton is hoping to host a telephone interview with you to discuss the topic and is interested in scheduling a time that is most suitable with you.

Regards,

Nathan Banton.

Interview Draft

Introduction

(General greeting)

Change

The furniture procurement group would like to thank you for taking the time out of your day to answer a few questions. Our initial research has identified the following factors as key sustainability factors to consider when purchasing furniture; sustainability of materials used, cost of furniture, locality of materials used in the manufacturing of the furniture as well as the supplier of the manufactured furniture, bulk-buying, supplier Corporate Social Responsibility, and Life Cycle of furniture. I will be conducting a semi-structured interview with a list of questions that I will be pooling from. All of your answers will remain anonymous.

Questions

- What are your day-to-day responsibilities?
- how do you define sustainability?
- What sustainability factors are important in purchasing for your organization?
- Are you willing to pay more for environmental sustainable products? (i.e. products that save energy, reduce waste, have lower toxins)?
- What are some of the most hazardous materials associated with when purchasing chairs and tables?
- What sustainable features do you find most important when purchasing task chairs and tables? (ex... ghg emitting materials, fsc certified wood, types of laminate).
- Do you pay attention to recycled content when purchasing furniture?
- Do you look for furniture that contains biodegradable materials, refurbish-able and/or recyclable?
- What specifically do you look for when considering foam for soft seating?
- Are their suppliers you've worked with in the past that embody best management practices with regards to sustainability and furniture? For cost? Bulk? Locality? Materials used? Other ? For cost? Bulk? Locality? Materials used?
- What are key strategies for increasing sustainability features in furniture purchasing for a large organization?

Conclusion

We appreciate you taking the time to talk to us today, your valued responses will greatly assist in guiding the furniture procurement group's research.

Appendix C

Preliminary Proposal

ENVS 3502/SUST 3502

Change

Environmental Problem Solving

Dr. Rochelle Owen

Furniture and Sustainability Purchasing Group

Tosan Ikomi

Shayla Meyer

Nathan Banton

Jackson Fowlow

Keren Lifshitz

March 3, 2012

Change

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1. PROJECT DEFINITION

The Furniture Procurement group has been assigned the task of assisting Dalhousie University Facilities Management with their research into sustainability criteria for procurement request for proposals (RFP) and tenders. University staff have become interested in improving their furniture procurement procedures as their current system is both economically and sustainably un-sound. With over 800 purchasing cards in existence, Dalhousie allows all staff members to individually purchase a variety of types of furniture..

Research will be conducted on organization's and individual's who have expertise procurement policies and procedures regarding sustainable furniture procurement. This will assist Dalhousie Facilities management in drafting a Request for Proposals (RFP). The RFP will outline environmental, social and economical requirements that Dalhousie deems to be most important in Sustainable Furniture Purchasing. From the proposals it receives, Dalhousie will choose a small number of furniture suppliers whom staff members can buy furniture from, ensuring only sustainable furniture is purchased as well as bulk pricing.

The Furniture Procurement group will conduct interviews in order to understand sustainable furniture factors and identify criteria to include on the RFP,. procurement.

Our final report will, given the time constraints of this term, take the form of suggestions of criteria to be included on the Facilities Management's RFP.

2. BACKGROUND AND RATIONALE

The Dalhousie College of Sustainability is the first undergraduate degree program of its kind amongst Canadian Universities. As students of this college and members in this course, we are dedicated to the study of sustainability. In this course we are committed to applying our schooling to a sustainability issue on campus, and thus further the aims of Dalhousie's Sustainability Policy and the work of the Office of Sustainability.

As outlined by our client, current furniture procurement methods could be enhanced to improve social, environmental and economic outcomes. Over 800 staff members own purchasing cards with which they can purchase furniture. No current guidelines exist which limit Dalhousie employees to purchase from certain suppliers, the result being not only a missed opportunity to save money by bulk-purchasing, but a lack of awareness and regulation for environmental and social consciousness. Drafting an RFP will thus hopefully aid in consolidating and organizing their furniture purchasing to a limited number of environmentally sustainably sound organizations, which we expect will also save them money.

Dalhousie University prides itself as being the premier post-secondary education institution of the region. A recent publication of Dalhousie's magazine states, "Tom [Traves] has the goal for this to be the best University in Canada. I think it can be one of the best in the

world.” – Robert Gillespie (Weeren, 2012, p. 17). If Dalhousie strives to live up to this standard, it must meet if not exceed the efforts of other universities and organizations around the country in sustainability.

Work towards sustainable procurement of furniture has been conducted and implemented in a number of organizations across the nation, which we will use as a guide in drafting our RFP for Dalhousie. These works include:

The University of Saskatchewan

The University of Saskatchewan’s Sustainable Purchasing Guide for furniture outlines what to strive for when purchasing (such as Eco-Logo certification and FSC and other certified wood products) and what to avoid (such as CFC’s and VOC emitting materials). The guide outlines the number of various options available to faculty purchasers and explains in detail the importance and benefits of sustainable purchasing. It is a great guide for our project (University of Saskatchewan, 2012).

The Government of Nova Scotia

The Nova Scotia Government has implemented 2 policies, an Accommodation and Furniture Standards Policy effective in October 2001 and an overall Sustainable Procurement Policy effective June 30th 2009. Both establish guidelines for the cost effective and environmentally conscious procurement process and set rules to be followed by all employees, with procedures going to head of department staff prior to most purchases (Government of Nova Scotia, 2012).

Metro Vancouver

The Metro Vancouver issued a Sustainable Green Procurement Information Package, an in-depth 180-page document outlining processes for improvement in multiple areas, including an RFP drafted for Desks, Workstations and Work Surface’s where staff have to follow specific guidelines and procedures to go through the Department’s Office Manager before purchasing (Metro Vancouver, 2011, p. 59).

Dalhousie is currently an active participant in the STARS program, recently receiving a Silver Award Certification, and The Office of Sustainability is working closely with InterUniversity Services Inc (ISI) on future education, programs and policies. Recent changes include a 100% switch to green cleaners on campus and recycled non-bleach single ply toilet paper and paper towels across campus (Office of Sustainability). Many sustainability initiatives are taking off well across the campus, and our project will aid the Office of Sustainability by improving the purchasing department’s sustainability initiatives with an RFP for furniture procurement.

3. RESEARCH METHODS

There are many factors which constitute “sustainable purchasing”, as such research will focus on the following six factors deemed most important to research within the time frame permitted for this project. These include sustainability of materials used, cost of furniture, locality of materials used in the manufacturing of the furniture as well as the supplier of the manufactured furniture, bulk-buying, supplier’s Corporate Social Responsibility policy, and Life Cycle of furniture.

Our group initially identified surveys, focus groups and interviews as the most effective research methods and means of data collection to use in order to obtain our desired information. We choose not to use surveys because such methods of data collection place a limit on the amount of open-ended questions that can be asked and heavily structured questions place a limit on specificity. These are two important aspects when considering the type of data our group intends to gather. Additionally, we decided against a focus group as there are many, and often conflicting, viewpoints concerning what constitutes sustainability as well as the ways in which it can be achieved. For this reason, we reasoned that a focus group would be ineffective as overpowering people and/or viewpoints may limit participant’s responses and further create a bias within the sampled population. Therefore we decided that semi-structured interviews would be the most unbiased, appropriate method of data collection as it will allow the interviewer to probe further into specific topics which will provide our group with a guideline for further research to be completed.

3.1. Interviews

We will be exploring the six elected sustainability aspects through a human-centered approach, collecting qualitative data through a series of interviews. These interviews will be conducted throughout the remainder of the semester. We will be contacting 5 individuals, whom are all located within the purchasing sector or whom are specialize and experienced within the field of furniture procurement. Nathan will be conducting all interviews via telephone.

Name of Contact	Position Occupied	Company Name	Contact Information
Lynda Rankin	Sustainable Purchasing Manager	Province of Nova Scotia	rankinlx@gov.ns.ca
Richard MacLellan	Director	HRM Sustainability Environment Management Office	902-490-6059
Kevin Lyons	Professor Supply Chain Management	Rutgers University	klyons@business.rutgers.edu

			973-353-5685
Bob Purdy	director of external relations and corporate development	Fraser Basin Council	bpurdy@fraserbasin.bc.ca 604-488-5355

The results from these interviews will provide valuable research insight into the field of sustainable furniture procurement. The interviews will allow the furniture procurement group to identify which aspects should be explored in further detail as well as uncover new aspects to be explored that were not previously identified by our group.

3.1.1. Interview Request

To request the interview Nathan will be sending a cordial email out to each and every contact listed above stating the following:

Dear interviewee,

A group of students from the college of sustainability at Dalhousie University are formally requesting a telephone interview to discuss sustainable furniture procurement for campus. The students of Sustainability 3502 are working in partnership with the Facilities Management department at Dalhousie. We're interested in asking you a few questions given your expertise in the area. Is this an okay time or can I schedule a more convenient time to call you back. Nathan Banton is hoping to host a telephone interview with you to discuss the topic and is interested in scheduling a time that is most suitable with you.

Regards,

Nathan Banton.

3.1.2. Interview Draft

Introduction

(General greeting)

The furniture procurement group would like to thank you for taking the time out of your day to answer a few questions. Our initial research has identified the following factors as key sustainability factors to consider when purchasing furniture; sustainability of materials used, cost of furniture, locality of materials used in the manufacturing of the furniture as well as the

supplier of the manufactured furniture, bulk-buying, supplier Corporate Social Responsibility, and Life Cycle of furniture. I will be conducting a semi-structured interview with a list of questions that I will be pooling from.

Questions

- What are your day-to-day responsibilities?
- How do you define sustainability?
- What sustainability factors are important in purchasing for your organization?
- Are you willing to pay more for environmental sustainable products? (i.e. products that save energy, reduce waste, have lower toxins)?
- What are some of the most hazardous materials associated with when purchasing soft-seating and tables?
- What sustainable features do you find most important when purchasing task chairs and tables? (Ex... GHG emitting materials, FSC certified wood, types of laminate).
- Do you pay attention to recycled content when purchasing furniture?
- Do you look for furniture that contains biodegradable materials, refurbish-able and/or recyclable?
- What specifically do you look for when considering foam for soft seating?
- Are their suppliers you've worked with in the past that embody best management practices with regards to sustainability and furniture? For cost? Bulk? Locality? Materials used? Other? For cost? Bulk? Locality? Materials used?
- What are key strategies for increasing sustainability features in furniture purchasing for a large organization?

Other comments

Conclusion

We appreciate you taking the time to talk to us today; your valued responses will greatly assist in guiding the furniture procurement group's research.

3.2. Research Limitations

Due to time restrictions the furniture procurement group had to limit the scope of the project and prioritize what were thought to be the most important determinants of sustainable furniture. The client provided insight regarding a few determinants they wanted included while additional research identified determinants that the procurement group thought to be most important. The limited scope of the determinants is a major limitation of this project as there are many determinants of the sustainability of a piece of furniture. Due to time restrictions, the determinants identified as most important, to the client and the group can/will be explored in this project.

4. SCHEDULE & BUDGET

4.1. Schedule

March	Task	Who
Mar 05	Request for funds	Keren
Mar 07	Meet with client (4-7pm), show interview questions. Incorporate recommendations for alterations and new questions.	All
Mar 12	Conduct interviews #1 & #2	One interviewer - Nate One recorder - Shayla
Mar 14	Conduct interviews #3 & #4 & #5. Share all notes with rest of group.	One interviewer - Nate One recorder - Shayla
Mar 15/16/17	Group meeting(s). Research areas delegated. to be done based on interview results	All

Mar 20	Entire group meets, share research findings. Delegate further research.	All
Mar 21	Meet with client (4-7pm). Update on group's status and research direction	All
Mar 22/23/24	Entire group meets, share findings. Delegate final report duties.	All
Mar 27	Group check-in.	All
Mar 29	Condense project & research findings onto slides. First edit of presentation slides	Jackson, Keren
Mar 30	Second edit of slides	Nate, Shayla, Tosan
April		
Mon 01	Send in slides	Keren
Tues 03	Presentation (Peecha Kucha)	Jackson, Tosan
Fri06/Sat07	First edit of final report	Keren, Jackson
Tues 10	Second edit of final report	Nate, Shayla, Tosan
Fri 13	Final Report Due	

4.2 Budget

The two main areas of the project that could incur costs would be transportation to meetings and the research process, which will cost the group nothing. As all group meetings and client meetings will be held on campus grounds where it accessible and convenient for everyone to meet (meetings will be planned to fit every ones schedule) our group will not incur any transportation costs. Additionally interviews with the project contacts will be done over the phone and on a phone that does not accumulate day time charges. Therefore the furniture procurement group will not be applying for funding as all activities carried out throughout the project will not incur any costs.

5. DELIVERABLES AND COMMUNICATION PLAN

5.1 Deliverables

At the end of the project the procurement group will submit to its client key sustainability criteria and evaluation mechanisms for insertion in a draft request for proposal (RFP) for furniture. The RFP is a document that will be issued at the early stage in the furniture procurement process, where the Dalhousie Facilities Management presents invitations to suppliers to submit a proposal on the furniture the university will be purchasing that meets the sustainably criteria stated in the document. The RFP will include sustainability criteria and process of evaluation which will be used in choosing the furniture that will be purchased for university use.

5.2 Communication Plan

This communication plan describes the approach for communicating and collaborating on the furniture and sustainability purchasing project. The plan identifies the audience of the project, the information to communicate, and the communication methods to use. This plan can help facilitate effective and coordinated communication between all project audiences.

5.2.1 Project Audiences

The communication plan includes communication of two main audiences:

Internal Audience

These are individuals and groups who directly influence the outcome of the project.

- The *Project team* includes all people assigned to work on the project – Tosan Ikomi, Shayla Meyer, Nathan Banton, Jackson Fowlow, and Keren Lifshitz
- *Facilities Management* – the client to whom the draft RFP is made for
- *Teaching Staff* – class instructor and TAs

External Audience

These are individuals and groups who indirectly influence the outcome of the project. This audience will not play a major role during the project phase; however, after the project deliverable has been submitted they can improve on the final product.

- The *Project contacts* – contacts provided by client and the instructor for the class, Rochelle Owen
- *Potential suppliers* of the furniture
- *Dalhousie staffs* who will make furniture purchases

What	Audience	Objective	When/Frequency	Type/Method(s)
Project Initiation Meeting	All Internal Audience	Gather information for Initiation Plan	At first day of class: January 10, 2012	Meeting
Distribute Project Initiation Plan	All Internal Audience	Distribute Plan to internal audience of project scope and to gain buy in.	January 27, 2012	Document distributed via hardcopy or electronically
Project Kick Off	Project team	Communicate plans and roles/responsibilities. Encourage communication among internal audience	February 3, 2012	Meeting
Status Reports	All Internal Audience	Update internal audience on progress of the project.	On a weekly basis	Distribute electronically or hardcopy

Team Meetings	Project Team	To review detailed plans (tasks, assignments, and action items).	On a weekly basis	Meeting
Project Advisory Group Meetings and Project Review	Project Team and Teaching Staffs	Update Teaching Staff on status and discuss critical issues. Work through issues and change requests	On a weekly basis	Meeting
Final Deliverable: Draft RFP	All Internal Audience	Facilities Management and Teaching Assistant Review the final product for approval	April 13, 2012	Submission of final deliverable online (BLS)
Post Project Review	Facilities Management and External Audience	Identify improvement plans, lessons learned, what worked and what could have gone better. Review accomplishments.	At a time convenient for facilities management to meet with external audience	Meeting
Presentations of RFP to Potential Suppliers	Potential Supplier and Facilities Management	Invite potential suppliers to submit proposal that meets the criteria on the RFP	At a time convenient for facilities management to meet with external audience	Presentation/Demonstration

6. REFERENCES

- Dalhousie Office of Sustainability. (2012). *Procurement*. Retrieved from http://www.dal.ca/dept/sustainability/programs/Procurement_and_Waste/Procurement.html
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- University of Saskatchewan. (2012). *Smart Purchases Big Impact-Sustainable Purchasing Guide: Furniture*. Office of Sustainability. Retrieved from http://www.usask.ca/fsd/colleges_depts_research/buying_goods/sustainability/index.php
- Weeren, M. (2012,). *Spirit of Engagement*. *Dalhousie Magazine*, p. 17.

Appendix D

The following sheets are used by the Province of Nova Scotia Procurement Services in purchasing furniture.

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Appendix B - Product Sustainability Evaluation Sheet

Please note that submission of this sheet with your bid is mandatory for evaluation purposes. Bids submitted without this sheet will be disqualified.

The province is committed to purchasing goods, services and construction in a sustainable manner that is better for our economy, environment and our communities. Our ability to purchase sustainable products relies on the capacity of suppliers to meet government's requirements. To help the province better understand the sustainable attributes of this purchase please include the following information when responding to this tender:

Company Name:

Contact Name/Number:

Attribute	Response	Point Score
This product does not contain polyvinyl chloride (PVC)	no PVC <input type="checkbox"/>	no PVC - 2
This contains polyvinyl chloride (PVC)	PVC <input type="checkbox"/>	PVC - 0
What is the percentage, by weight, of post consumer recycled fibre in your product ?	>20% <input type="checkbox"/> 1-20% <input type="checkbox"/> 0% <input type="checkbox"/>	Greater than 20% - 2 1-20 % - 1 0 % - 0
Are lamps are T8 high performance or Energy Star rated ?	Yes <input type="checkbox"/> No <input type="checkbox"/>	T8 / efficient - 2 Conventional - 0
Plastic foam (if used in the product) does not contain chlorofluorocarbons (CFCs), Hydrofluorocarbons (HCFC) or Tris(2-chloroethyl)phosphate (TCEP)	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes - 2 No - 0
- The product is shipped with re-usable packaging (e.g., blanket wrap or other protection that is reused in other shipments) - The product is shipped with packaging that is recyclable in collection programs throughout Nova Scotia (e.g., cardboard or LDPE #4) - The product packaging can not be re-used or recycled	re-usable <input type="checkbox"/> recyclable <input type="checkbox"/> non-reusable/ recyclable <input type="checkbox"/>	re-usable - 2 recyclable - 1 non-recyclable - 0
What chemical treatments have been applied to the modular furniture system or individual components? (<i>Chemical treatments include but are not necessarily limited to flame retardants, stain repellants and antimicrobial agents.</i>)		
What is the manufacturer doing to reduce the environmental impact of surface treatment applications ? (<i>for example, finding alternatives that are less harmful or toxic</i>)		

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Environmental Criteria and Managed Chemicals Declaration

Procurement Services
Province of Nova Scotia
Tel: 902-424-3333
Fax: 902-424-0780

Introduction

The Province is committed to purchasing goods, services, and construction in a manner that is better for our economy, our environment, and our communities. This Declaration is part of the overall implementation of the Province's Sustainable Procurement Policy (available at www.gov.ns.ca/tenders).
THE DECLARATION BELOW MUST BE COMPLETED, SIGNED AND RETURNED WITH YOUR BID.

Declaration

Vendor _____ as an authorized representative of _____ (product manufacturer) hereby guarantee that all products and parts, materials and accessories listed in this bid submitted to the Province by _____ (Vendor), meet the environmental criteria identified in Table A and Table B.

The Vendor covenants with the Province that if the Vendor is awarded this tender the Vendor shall indemnify and hold the Province harmless from and against any loss, cost or damages resulting from any inaccurate false or misleading information provided by the Vendor herein

If the Vendor is awarded this tender, the Vendor must undertake to notify the Province in writing immediately should the Vendor become aware that any of the substances listed in Table B are present in any of materials or products that are the subject of this bid.

Vendors please complete the following Tables

Table A		Environmental Criteria	
Attribute		Avg. Percent	
Post consumer recycled plastic in product			
Post consumer recycled fabric in product			
Other recycled/recovered material in product (identify)			
FSC,SFI, or CSA certified wood in product			

Table B		Substances to be Limited	
Substance	Not Present	Present (check one option below)	
PBDEs		No Change Expected	Substance to be Phased Out by _____
PFOs		No Change Expected	Substance to be Phased Out by _____
dec BDEs		No Change Expected	Substance to be Phased Out by _____
Halogenated Fire Retardants		No Change Expected	Substance to be Phased Out by _____

Change

**Environmental Criteria and
Managed Chemicals Declaration**

Procurement Services
Province of Nova Scotia
Tel: 902-424-3333
Fax: 902-424-0780

Note to Vendors: Products or materials containing the substances listed in Table B will only be considered for purchase by the Province when a satisfactory product or material, acceptable to the Province, cannot be obtained by the Vendor.

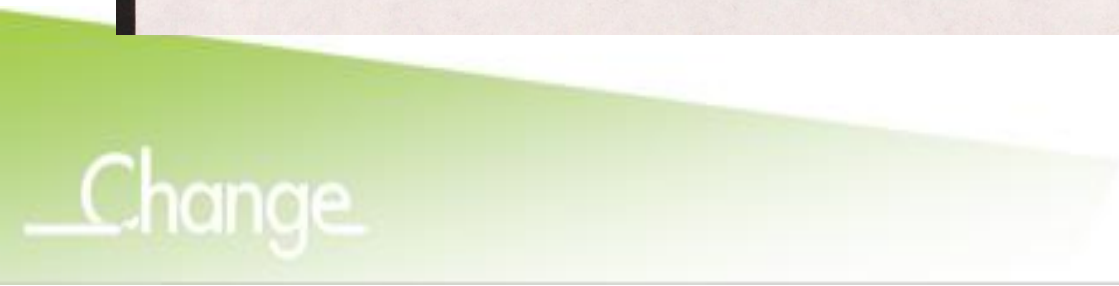
Additional Information:

Vendor Corporate Information and Signature

Company Name: _____
Name and Title of Person Signing: _____
Company Address: _____
Telephone No: _____

Signature: _____

I have authority to bind the Vendor.



Change