Sustainable & Circular Procurement at UBC

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The University of British Columbia
Sept. 25th, 2024

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Executive Summary

This report, commissioned by the Senior Manager of UBC Procurement Programs and the UBC SEEDS team, focuses on advancing sustainable and circular procurement at the University of British Columbia. The researching and writing of this report was completed from April 2024 to September 2024. The primary goal of this report is to furnish UBC with a set of actionable recommendations for sustainable procurement. To achieve this, the report is organized into six sections: ***1.0 Introduction, 2.0 Sustainable Procurement Background, 3.0 Analysis of UBC Data, 4.0 Jurisdictional Scan, 5.0 Recommendations*** **and** ***6.0 Conclusions***.

In section *2.0 Sustainable Procurement Background*, key concepts are introduced, including sustainability, LCA, relevant policies and businesses. *3.0 Analysis of UBC Data* provides an in-depth look at UBC's procurement data as it relates to development of a Sustainable Procurement Action Plan. *4.0 Jurisdictional Scan* offers a thorough evaluation of sustainable procurement practices across Canadian universities and public institutions, identifying successful strategies for UBC to model. The *5.0 Recommendations* section synthesizes insights from the previous sections, providing targeted steps for UBC to implement a Sustainable Procurement Action Plan. Finally, the *6.0 Conclusions* section closes the paper with my observations and key takeaways from my research into sustainable and circular procurement.

There are several key takeaways from this report.

- The first is that the field of sustainable procurement is still in its infancy and Canadian Public Institutions are just beginning to navigate it. **The majority of institutions surveyed had either no sustainable procurement activities or a "Vague Sustainable Procurement Plan"**, which means an intention to support sustainable procurement but with no practical strategy developed yet. A few of the institutions surveyed, like the City of Winnipeg, BCLC and the City of Mississauga, had exemplary Sustainable Procurement Action Plans that could serve as a model for UBC.
- **The next step for UBC is to develop a comprehensive Sustainable Procurement Action Plan** that includes clear goals, metrics, and timelines, aligning with existing sustainability initiatives and policies. This plan will include ongoing actions like the development of High Impact Procurement Opportunities (HIPO) and supplier engagement. I have provided detailed steps for the development of this plan in *5.0 Recommendations*.
- Additionally, leveraging software tools like EcoVadis could help map UBC's supply chain and provide actionable insights, but these **digital tools should complement a robust procurement strategy rather than replace it.** Without first developing top-down sustainable procurement policies and procedures at UBC, it would be challenging to implement any of the learning from these tools.

In conclusion, by adopting the recommendations outlined in this report, UBC can significantly enhance its sustainable procurement practices. These efforts will not only reduce the environmental impact of UBC's procurement activities but also position the university as a leader of sustainable and circular public procurement in Canada.

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List of Abbreviations

AASHE: Association for the Advancement of Sustainability in Higher Education

BVM: Best Value for Money

CCSP: Canadian Collaboration for Sustainable Procurement

HIPO: High Impact Procurement Opportunity

ISO: International Organization for Standardization

LCA: Life Cycle Assessment

MSS: Management System Standards

SDG: Sustainable Development Goals

SEEDS: Social Ecological Economic Development Studies Sustainability Program

SPP: Sustainable Public Procurement

STARS: Sustainability Tracking, Assessment & Rating System

UBC: The University of British Columbia

UN: United Nations

1.0 Introduction

1.1 Report Background

This report was commissioned by the Senior Manager, UBC Procurement Programs, and UBC SEEDS team to support ongoing work at UBC related to sustainable and circular procurement. It was decided that this report would specifically focus on the environmental dimension of sustainable procurement, as there are existing initiatives at UBC relating to the other dimensions of sustainable procurement like ethical or social procurement. The research and writing of this report was completed during the period from April, 2024 to September, 2024.

1.2 Goals & Objectives

The goal of this report is to provide actionable recommendations that will lead to more sustainable and circular procurement at UBC. To provide sufficient context and justification for these recommendations the report is structured as follows: *1.0 Introduction*, *2.0 Sustainable Procurement Background*, *3.0 Analysis of UBC Data*, *4.0 Jurisdictional Scan*, and *5.0 Recommendations and 6.0 Conclusions*.

In section *2.0 Sustainable Procurement Background*, key concepts are introduced, including sustainability, LCA, and circular procurement, while highlighting relevant UBC and Canadian policies as well as relevant businesses and services. *3.0 Analysis of UBC Data* provides an in-depth look at UBC's procurement data as it relates to development of a Sustainable Procurement Action Plan. *4.0 Jurisdictional Scan* offers a thorough evaluation of sustainable procurement practices across Canadian universities and public institutions, identifying successful strategies for UBC to model. The *5.0 Recommendations* section synthesizes insights from the previous sections, providing targeted steps for UBC to implement a Sustainable Procurement Action Plan. Finally, the *6.0 Conclusions* section closes the paper with my observations and key takeaways from my research into sustainable and circular procurement.

2.0 Sustainable Procurement Background

2.1 Theoretical Background

2.1.1 Sustainability & Life Cycle Assessment

The most pervasive definition of sustainability comes from the 1987 United Nations (UN) Brundtland Commission which defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987). This definition is a useful north-star as it recognizes that the world today has a need to consume energy and resources and that this can still be sustainable so long as the rate and quantity of this consumption is within replenishable operating limits. However, this definition falls short in providing practical guidance on what these operating limits are and how we stay within them.

The most common environmental limit discussed in the field of sustainability is the climate change targets from the 2015 UN Paris Agreement, which called to reduce greenhouse gas emissions in order to "hold global temperature increase to well below 2°C above pre-industrial levels and pursue efforts to limit it to 1.5°C above pre-industrial levels" (United Nations, 2015). This agreement led to the development of initiatives like the Government of Canada committing to net-zero emissions by 2050 (Government of Canada, 2023). Greenhouse gas emissions and climate change are, however, just one dimension of our environmental impact. Another useful framework for safe operating limits is called the "Planetary Boundary" framework which recognizes there is a safe operating space for greenhouse gas emissions but also adds eight other categories for consideration: Biosphere Integrity, Land System Change, Freshwater Use, Biogeochemical Flows, Ocean Acidification, Atmospheric Aerosol Loading, Stratospheric Ozone Depletion, and Novel Entities. For descriptions of these terms see Appendix A.

It is important to have a baseline understanding of these different planetary boundaries to allow for a more holistic understanding of the impacts of human activities on the environment. If only some of these impacts are evaluated then there is a potential for "greening" activities to lead to an unaccounted for burden shift across categories (ex. GHG emissions decrease, but freshwater use increases). The field of LCA was developed in part to prevent these burden shifts but also to standardize methods of quantifying the environmental impacts to enable more informed decision making in industry.

LCA can be defined as identifying the environmental impacts of a process from start to finish or from "cradle to grave" and typically either completed to compare the impacts of two alternatives or to identify impact hotspots in a process (Hellweg & Mila i Canals, 2014). Common impacts evaluated by LCAs are greenhouse gas emissions or energy use, but depending on the objectives of the LCA, any of the planetary boundaries discussed above, like freshwater use, could be evaluated. An example of the results of an LCA are shown in Figure 1 comparing the environmental impacts of beverage containers under different return conditions (Stefanini et al., 2020)

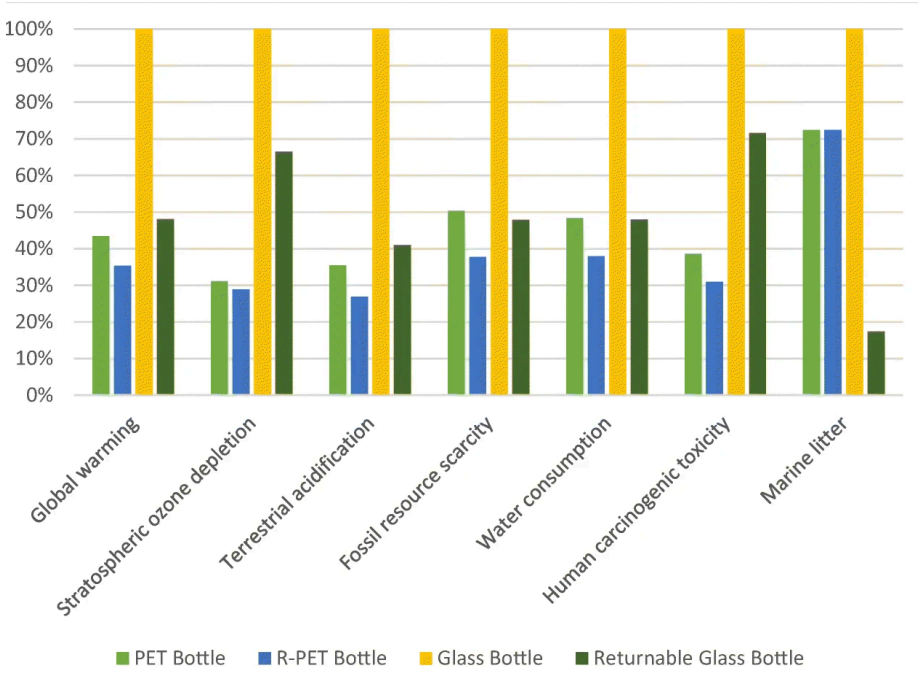


Figure 1. Example of Results from an LCA comparing Impacts of Beverage Containers (Stefanini et al., 2020)

In an ideal scenario where time and resources were unlimited, sustainable procurement would rely heavily on environmental decision-making tools like LCAs. This would allow us to compare factors such as greenhouse gas emissions and energy use for every product. However, in reality, such detailed data is often unavailable or too time-consuming to gather. Consequently, sustainable procurement practitioners have had to create procedures and best practices that, although informed by this theoretical knowledge, are more feasible and practical to implement on a larger scale.

2.1.2 Sustainable, Public & Circular Procurement

The definition and practice of sustainable procurement varies across institutions depending on their values and objectives. A useful general definition comes from the Canadian Collaboration for Sustainable Procurement (CCSP):

> "Sustainable Procurement (SP) embeds relevant sustainability considerations into processes for selecting goods/services and suppliers, alongside traditional considerations like price, quality, service, and technical specifications. It is a broad umbrella term under which most sustainability issues that relate to procurement can be nested, including environmental, social, Indigenous and ethical considerations. SP ensures that buyers obtain the best value for money when purchasing more sustainable goods and services from more sustainable suppliers, to support your organization's strategic goals." (CCSP, 2023)

This definition is useful as it recognizes that many organizations nest multiple categories of procurement like environmental or Indigenous procurement under the umbrella title of sustainable procurement. The expression, "Social Procurement" is also similarly used by some organizations as an umbrella term for multiple procurement activities. Given the ambiguity of these terms, it is considered a best-practice for

organizations to provide a definition of what is and is not included in their application of sustainable procurement. Figure 2 was created to help illustrate the relationship between these concepts.

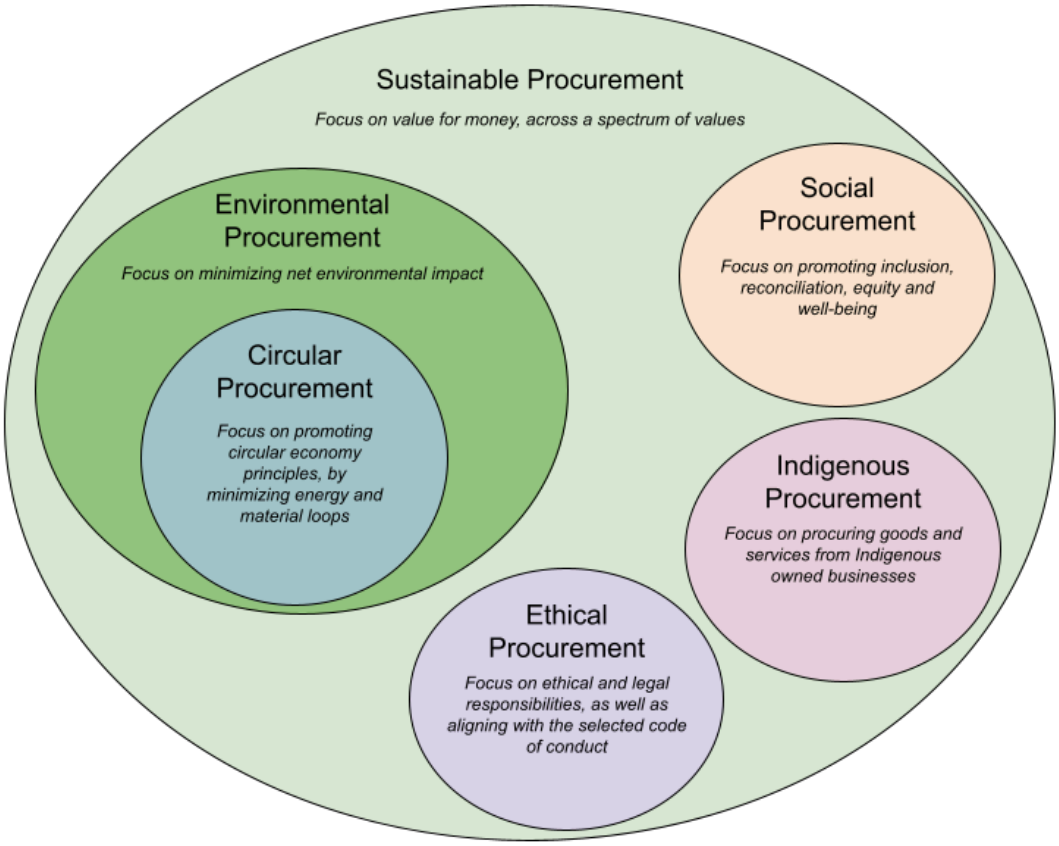


Figure 2. Relationship between Sustainable Procurement Activities

The phrase *Best Value for Money* (BVM) is also included in CCSP definition of sustainable procurement. BVM is sometimes used similarly to the expression of *Life Cycle Costing* to discuss the concept that a purchase with an initial lower upfront cost may end up being more expensive overall when maintenance, replacement or repair costs are considered. However, within the context of sustainable procurement, BVM is often used to express the idea that there is a financial value to an organization when a purchase reflects their values.

Sustainable Public Procurement (SPP) refers to sustainable procurement practiced by public sector organizations. It is considered somewhat distinct from private sector sustainable procurement due to the differing constraints within each field. Research into SPP has noted public procurement tends to have a greater focus on using procurement to support the local economy and that there is often greater scrutiny on public spending which can dissuade sustainable purchasing if it is perceived to cost more (Brammer & Walker, 2011).

Circular Procurement is a model of sustainable procurement that applies the principles of circular economy. The circular economy model is typically described in contrast to our current linear economy in which materials are extracted, used and then discarded, whereas a circular economy is “a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing

materials and products as long as possible" (European Parliament, 2023). Circular procurement could be considered a subset of sustainable procurement. Sustainable procurement considers the net environmental impact of all procurement activities, whereas circular procurement tends to specifically focus on activities that keep materials in the system through reuse and recycling. Increasing circularity should be one part of a larger sustainable procurement strategy.

2.2 Policies

2.2.1 UBC Policies

The following UBC policies are relevant in the development of a sustainable procurement strategy:

A. UBC Purchasing Policy

- This policy outlines the current purchasing procedures of UBC and provides the framework for which future sustainable procurement activities must be incorporated into. The policy document does state that "decision making factors may be weighted to acknowledge local business development and the University's role in environmental leadership" (UBC, 2022).
- The purchasing procedure varies based on the amount being purchased:
    - **Purchases Under $3,500:** can be made by individual employees using a UBC Visa. A purchase order may or may not be required.
    - **Purchases above $3,500 and below $75,000:** a purchase order is required in Workday.
    - **Purchases above $75,000:** a public tender process is required.
- There are exceptions for these policies for certain categories of purchases or in the case of emergencies (UBC Finance, 2024).
- Additionally, there are Supplier Catalogs available that staff are encouraged to use when possible due to streamlined processes and pre-negotiated prices.

B. UBC Sustainability Action Plans

- The UBC Sustainability Action Plans are a series of 6 documents that outline the "vision, goals and targets for sustainability initiatives" (UBC, 2024). These documents are useful references in understanding how sustainable procurement activities could fit into larger campus initiatives.
- ***Climate Action Plan 2030 (CAP2030)***
    - This is a high-level document that provides an overview of all campus sustainability initiatives. Key climate targets are mentioned including a goal of net-zero operational emissions by 2035.
    - Sustainable procurement is directly mentioned under "Food Systems" and "Waste and Materials" headings.
        - Food Systems Goal by 2024: "Develop and implement mandatory campus-wide Climate-Friendly Food System Procurement Guidelines applicable to all food providers" (P. 37).
        - Waste and Materials Goal by 2024: "Scope and develop a central sustainable procurement program that could include vendor and product sustainability criteria, packaging requirements, updated procurement guidelines and processes, and integration with the Integrated Renewal Plan (UBC's enterprise level IT systems upgrade)" (P.37).
- ***Zero Waste Action Plan***
    - This plan most directly relates to sustainable procurement initiatives.

    - There are hard targets of 50% reduction in operational waste disposal by 2030 and 90% diversion rate for construction projects by 2024. Food and lab waste are also highlighted. These targets could be incorporated into vendor selection.
    - There is also a direct call to implement a sustainable procurement plan: "Scope and develop a sustainable/circular purchasing strategy and program that could include vendor and product sustainability criteria, packaging requirements, updated procurement guidelines and processes, and integration with Workday, and other procurement processes" (P. 10).
- ***Green Building Action Plan***
    - This report discusses environmental compliance and the impact of construction material and waste. It also outlines the ratings that buildings on campus will be required to achieve moving forward such as LEED certification or the UBC specific, Residential Environmental Assessment Program rating.
    - As there is existing momentum towards sustainable construction, which has procurement and material implications, there could be opportunities for UBC procurement staff to develop relationships to better support the implementation of the Green Building Action Plan.
- ***Neighbourhood Climate Action Plan***
    - This report discusses construction and transportation emissions, climate resilience and local ecology.
- ***Integrated Stormwater Management Plan***
    - This report discusses the plan to manage stormwater on campus in response to future climate change.
- ***Water Action Plan***
    - This report discusses reducing and managing UBC's water consumption.

C. UBC Sustainable Purchasing Guide
This is an online resource promoted on UBC Finance's website that provides an introduction to sustainable procurement topics, lists relevant UBC initiatives and provides guidance on relevant labels and certifications. This is currently the most relevant public facing sustainable procurement resource for UBC.

2.2.2 Canadian Policies & Regulations

The following Canadian policies are relevant in the development of a sustainable procurement strategy. Most do not directly impact procurement today at UBC, but they are important benchmarks and an indication of the priorities of purchasing today.

Table 1. Canadian Policies Relevant to Sustainable Procurement

Policy	Description	Relevance to Sustainable Procurement
Bill S-5, Strengthening Environmental Protection for a Healthier Canada Act	Bill S-5 was an act that passed in 2023 to strengthen the Canadian Environmental Protection Act (1999), this is the first significant change in 20 years. The most notable components of this Bill are: i) the recognition of Canadians' right to a healthy environment and ii) a tightening of policy on chemicals and toxic substances (Spickler, 2023).	This may impact the procurement of some chemicals.
Bill S-211, An Act to enact the Fighting Against Forced Labour and Child Labour in Supply Chains Act and to amend the Customs Tariff	Bill S-211 came into effect in January, 2024 and requires public and private Canadian businesses to release "reports detailing their efforts to prevent and mitigate forced labour and child labour in their supply chains" (Bond et al., 2023).	UBC will be required to respond to this bill and this will impact procurement procedures. This should be considered when developing a sustainable procurement plan.
Federal Indigenous Procurement Requirement	As part of the "Transformative Indigenous Procurement Strategy", all federal departments and agencies must ensure a minimum 5% of the total value of contracts are held by Indigenous businesses (ISC, 2023)	This does not impact UBC, but could serve as an example for a similar target.
Federal Green Procurement Act	This policy requires all federal departments and agencies to integrate "environmental considerations into the procurement process" (Government of Canada, 2022). The policy calls on departments to set targets but does not specify any firm requirements.	This does not impact UBC.
Canada's 2030 Emissions Reduction Plan	This plan is an overview of current and future actions in Canada to meet a reduction target of 40 to 45 percent below 2005 levels by 2030 and net-zero emissions by 2050 (Government of Canada, 2022a).	This may not directly impact procurement but will impact what is purchased, like electric vehicle requirements and green construction materials.
Canadian Net-Zero Emissions Accountability Act	This is the legally binding component of the Emissions Reduction Plan.	See Above.

2.3 Businesses, Services & Guidelines

2.3.1 Sustainable Procurement Management Systems

As sustainable procurement and other environmentally conscious business approaches are becoming the status-quo, businesses are being developed to sell frameworks and tools to aid companies in transitioning to more sustainable business practices. These services may also be combined with a rating or accreditation system that companies can use to more formally demonstrate their commitment to environmental stewardship. While these tools and ranking systems can be used to develop more sustainable business practices, the acquisition of a "green ranking" should not be substituted for meaningful environmental changes.

1. ESG Procurement Software

EcoVadis a private company offering "End-to-End Solutions for Sustainable Supply Chains" (EcoVadis, 2024). EcoVadis provides a suite of software and consulting services for private and public companies. The workflow of their core products involve first mapping a customer's supply chain and then providing ongoing recommendations related to risk management, regulation compliance or sustainability improvements. Additionally, EcoVadis can conduct a one-time assessment in which companies can receive "medals and badges" related to sustainable supply chain performance. SFU advertises it has received an EcoVadis assessment (SFU, 2024).

A competitor to EcoVadis is Sphera, who is most well known for their LCA software, but offers similar supply chain tracking software and sustainability consulting services asEcoVadis. Additional competitors in this space include SupplyShift and Assent. In selecting a software, it would be useful to find one with previous experience with public sector Canadian companies as some of the softwares seem more specialized toward manufacturers or consumer stores. Based on the available information online, EcoVadis seems to have the most relevant experience for UBC.

It should be noted that these ESG procurement softwares represent a shift in conventional sustainable procurement strategy. Typically, organizations develop top-down policies based on sustainability best practices to reduce the organization's environmental impact, but the impact of these policies are difficult to measure. These softwares instead use a bottom up approach of first determining what is being purchased and what the environmental impact currently is, and then using that information to develop informed recommendations.

It is resource intensive to map and manage an institution's entire supply chain and even more to then evaluate where the most impactful sustainability opportunities are. These software tools could provide a comprehensive understanding of UBC's supply chain and provide useful recommendations. However, it does seem like these tools are favored by smaller, private organizations where it is simpler to update procurement strategies based on insights from the software. Public procurement departments frequently face limitations due to existing regulations and purchasing policies. While these tools could be beneficial for UBC, the primary focus should be on creating a sustainable procurement strategy. This will establish a framework that can then be used to apply the insights from these applications.

2. STARS

The STARS program is a "Sustainability Tracking, Assessment & Rating System" and is described as a "a transparent, self-reporting framework for colleges and universities to measure their sustainability performance" (STARS, 2024). It is run by the Association for the Advancement of Sustainability in Higher Education (AASHE). In the STARS system, a school will complete a self-evaluation of their environmental initiatives across the categories of: Academics, Engagement, Operations, Planning & Administration, and Innovation & Leadership. The Purchasing section is nested under Operations and includes the categories of: Sustainable Procurement, Electronics Purchasing, Cleaning and Janitorial Purchasing and Office Paper Purchasing. Depending on the number of initiatives within each category that the school has completed, they will receive a score. Schools can submit these self-evaluations to the STARS program and pay a fee to have them reviewed and then receive either a Bronze, Silver, Gold, or Platinum Rating. The ranking is considered valid for 3 years.

As of June 2023, approximately 40 Canadian schools have completed the STARS program publicly and have a valid ranking. These schools include BCIT, UVic, McGill University and the University of Waterloo. Even more Canadian schools, including UBC, have previously completed the STARS program but their ranking has expired. Completing the STARS program again could be a useful exercise for UBC but would require participation from across the entire organization. However, the tool could still be useful for the UBC procurement office as an exercise that they could independently complete. A copy of the Procurement questionnaire is provided in Appendix B.

3. ISO-1400

ISO, or the International Organization for Standardization, is an international body responsible for the development and updating of technical and management standards. The ISO management system standards (MSS) are designed to:

> "...help organizations improve their performance by specifying repeatable steps that organizations consciously implement to achieve their goals and objectives, and to create an organizational culture that reflexively engages in a continuous cycle of self-evaluation, correction and improvement of operations and processes through heightened employee awareness and management leadership and commitment" (ISO, 2011).

One of these MSSs, ISO 14001, has become an industry standard for environmental management systems. The ISO 14001 model is a high level framework that an organization can implement to systematically evaluate and improve their environmental impact. Organizations can pay a third-party evaluation service to audit their performance and certify them as an ISO 14001 compliant company.

ISO MSSs tend to be typically adopted by private sector organizations however there is some discussion that ISO standards could become more common in the public sector (CCS, 2024). For now, UBC could use the ISO 14001 standard accreditation system as one of their checks when evaluating the environmental performance of suppliers.

2.3.2 Guidelines

The following are guidelines that commonly occur in discussion of sustainable procurement practices.

1. United Nations Sustainable Development Goals

The UN Sustainable Development Goals (SDG) were developed in 2015 as part of the "2030 Agenda for Sustainable Development". The UN states that the development of these SDGs recognizes that "ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests" (United Nations, 2024). There are 17 SDGs shown below in Figure 3.

Figure 3. UN SDGs (United Nations, 2024)

While SDGs were initially developed for the UN member countries to adopt, it is becoming more common for cities, universities and businesses to adopt commitments to implement the SDGs. Sustainable procurement typically falls under SDG 12: Responsible Consumption and Production.

The targets under SDG 12 that are most relevant to sustainable procurement are:

- 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
- 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.
- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

As the UN SDGs are so widely adopted and used to guide sustainability policy, it is worthwhile to continually reference them to understand how any development plans could be strengthened by this framework.

2. EcoLabels

EcoLabels are a category of labels that are designed to be placed on products to help consumers select more environmentally preferable products. EcoLabel systems can be managed by governments, nonprofits or private sector entities (US EPA, 2014). It is important therefore to recognize that as EcoLabels are an unregulated field and corporations can develop their own ecolabels to attempt to "greenwash" their product. Therefore each product category must be evaluated individually to determine which EcoLabel provides a comprehensive and unbiased evaluation.

The EcoLabel index provides and maintains a comprehensive list of EcoLabels, which as of June 2024 has 456 entries. This is a useful repository but is not edited down for quality. The following list of EcoLabels is developed based on guidelines from the Canadian government (Government of Canada, 2022b) and the UBC Sustainable Purchasing Guide (UBC Finance, 2024a).

Table 2. Examples of EcoLabels

Category	EcoLabel Name	Description
Automotive	E3 Fleet	Provides an independent review and rating of an organization's transportation fleet, based on factors such as vehicle idling, fuel management, and greenhouse gas emissions performance.
Technology, Electronics and Appliances	ENERGY STAR	Certifies that the product is highly energy efficient. Used for high energy appliances like washers, dryers and refrigerators.
	EnerGuide	Used to compare the energy performance of products. Used for high energy appliances like washers, dryers and refrigerators.
	Epeat	This standard is maintained by the Global Electronics Council and is based on life cycle impact standards. They maintain a searchable registry of different product types like phones and laptops.
	TCO	A wholistic certification for IT products, which includes environmental impacts as well as dimensions like social responsibility and user health and safety.
Forest Products	Forest Stewardship Council	Certifies that wood and paper products come from sources that meet environmental and social standards.
	Sustainable Forestry Initiative	Certifies that wood and paper products come from sources that meet environmental and social standards.
	Programme for the Endorsement of Forest Certification	Certifies that wood and paper products come from sources that meet environmental and social standards. Also provides chain of custody certification.
Company	B Corp Logo	Certifies that a company has met standards of social and environmental performance, accountability and transparency.
	UL ECOLOGO	Certifies that the product has received a relevant life cycle evaluation of environmental impacts.
	Green Seal	Certifies products and institutions to ensure commitments to sustainability, human health and efficiency.
Food & Beverage	Marine Stewardship Council Certification Logo	Certifies companies have used sustainable fishing practices.
	Oceanwise	Label provides assurance that a seafood choice is the most ocean-friendly choice.
	Fairtrade Canada Logo	Certifies that produce was sourced in an environmentally responsible manner that promotes sustainable development and works to improve the livelihood of farmers and other workers in the developing world.
	Canada Organic Logo	Certifies that the products that contain at least 95% organic content.

3.0 Analysis of UBC Data

In order to better understand procurement at UBC, the UBC Procurement office provided an export of their purchasing data. It is analysed here for reference in developing a sustainable procurement strategy.

3.1 Data Cleaning

The following processing steps were applied to exported data:

- The initial dataset contained 620,645 purchases ranging from April 01, 2022 to March 31, 2023. These purchases totalled $1.6 billion CAD.
- Categories of purchases were removed from the dataset that are not controlled by the procurement office or are not relevant to the discussion of sustainable procurement. These included categories like salaries, awards, professional services, taxes, etc. For a full list of the categories removed see Appendix C.
- Any negative purchase values (sales or reimbursements) were removed.
- After filtering, the dataset contained a total of 467,155 transactions with a total value of $750 million CAD.

3.2 Data Analysis by Procurement Type

As discussed in *2.2.1 UBC Policies*, the UBC procurement policy varies across the procurement categories of Less than $5K, $5K - 100K, Greater than $100K. Sustainable procurement interventions tend to be designed to fit into existing procedures and therefore unique steps will likely be developed specifically for each of these categories. The goal of this data analysis is to understand how UBC's procurement activities vary across these procurement types.

Table 3 provides a breakdown of the Total Spend and Number of Invoices across the three procurement types: Less than $5K, $5K - 100K, Greater than $100K. It's notable that the large majority of invoices are in the "Less than $5K" category, but the greatest total spend is from the few invoices in the "Greater than $100K" category.

Table 3. Total Spend and Number of Invoices by Procurement Type

Procurement Type	Total Spend ($CAD)	Number of Invoices
Less than $5K	$173,528,933	456,183
$5K-$100K	$175,516,774	10,216
Greater than $100K	$401,761,119	756
Total	**$750,806,826**	**467,155**

Figures 4 and 5 graphically represent the data from Table 3.

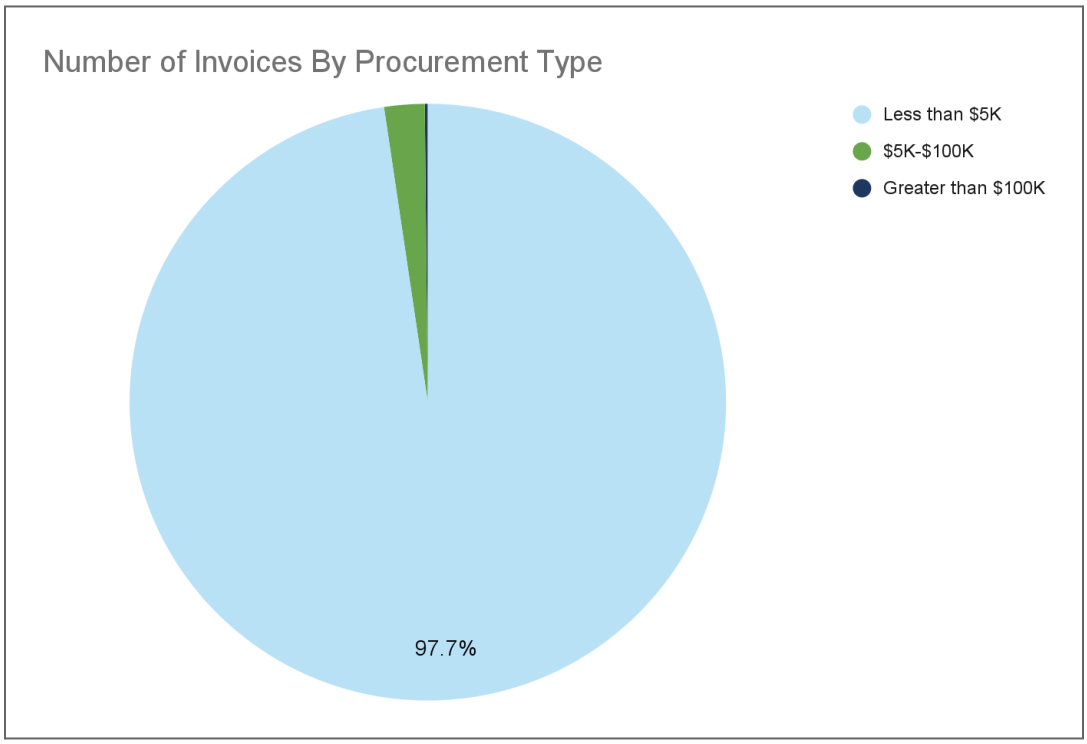


Figure 4. Number of Invoices by Procurement Type

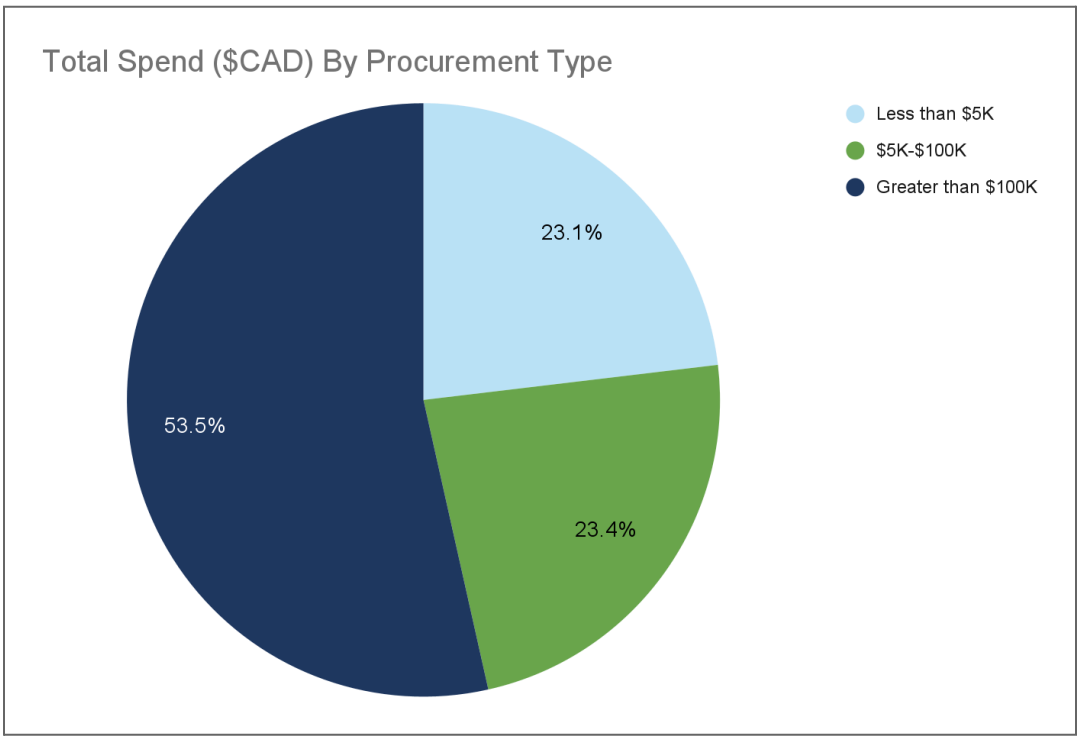


Figure 5. Percentage Spend by Procurement Type

3.3 Data Analysis by Purchase Category

HIPOs are "specific categories of focus for sustainable purchasing, ideally those with high volume, spend, and/or strategic importance for sustainability" (CCSP, 2023). Organizations will then make a custom sustainable procurement strategy for each HIPO. Table 4 introduces the top purchase categories based on the amount of invoices from those categories and similarly, Table 5 shows top purchase categories based on total spend. Analysing data by purchase category is a useful exercise in identifying if there are any significant opportunities for the development of a HIPO.

Table 4. Top Purchase Categories by Number of Invoices

Top Purchase Categories by Number of Invoices				
Purchase Category	Total Spend ($CAD)	Percent of Total Spend ($CAD)	Number of Invoices	Percent of Invoices
Less than $5K	$173,528,933		456,183	
1. Research Supplies	$29,699,172	17%	77,017	17%
2. Other Travel Transportation	$5,434,665	3%	45,930	10%
3. Office Supplies	$4,556,097	3%	32,380	7%
Other Categories	$133,838,998	77%	300,856	66%
$5K-$100K	$175,516,774		10,216	
1. Equipment | Between $5,000 and $100,000	$20,233,605	12%	816	8%
2. Research Supplies	$12,899,190	7%	772	8%
3. Cost of Goods Sold | Food and Beverage	$5,790,941	3%	766	7%
Other Categories	$136,593,038	78%	7,862	77%
Greater than $100K	$401,761,119		756	
1. Major Renovations | Over $50000	$23,315,657	6%	117	15%
2. Equipment | Between $5,000 and $100,000	$27,528,254	7%	78	10%
3. Software Licenses and Subscriptions	$21,082,448	5%	51	7%
Other Categories	$329,834,761	82%	510	67%
Grand Total	$750,806,826		467,155	

Table 5. Top Purchase Categories by Total Spend

Top Purchase Categories by Total Spend				
Purchase Category	Total Spend ($CAD)	Percent of Total Spend ($CAD)	Number of Invoices	Percent of Invoices
Less than $5K	$173,528,933		456,183	
1. Research Supplies	$29,699,172	17%	77,017	17%
2. Air Travel Transportation	$15,209,914	9%	27,583	6%
3. Cost of Goods Sold | Food and Beverage	$14,254,424	8%	19,413	4%
Other Categories	$114,365,423	66%	332,170	73%
$5K-$100K	$175,516,774		10,216	
1. Equipment | Between $5,000 and $100,000	$20,233,605	12%	816	8%
2. Research Supplies	$12,899,190	7%	772	8%
3. Software Licenses and Subscriptions	$12,158,715	7%	580	6%
Other Categories	$130,225,265	74%	8,048	79%
Greater than $100K	$401,761,119		756	
1. Buildings | Concrete	$117,782,326	29%	45	6%
2. Property Management	$45,768,132	11%	30	4%
3. Cost of Goods Sold | Utilities	$34,618,383	9%	43	6%
Other Categories	$203,592,278	51%	638	84%
Grand Total	$750,806,826		467,155	

3.4 Discussion of UBC Data

My key take-away from my analysis of the UBC data is that there is a significant difference between where the most invoices are coming from and where the most money is being spent. For example, purchases less than $5K represent 97.7% of total invoices but only 23.1% of all money spent. Similarly, the "top purchase categories" vary depending on whether the total spend or number of invoices is used. This distinction becomes relevant in the development of sustainable procurement goals. Typically, targets are framed as either % of spend or % of purchases. For example a goal could be: "80% of purchases under $5K will be from suppliers on the sustainable supplier list". There is no industry standard for choosing % spend or % of purchases, so I would recommend UBC should select one and remain consistent across targets.

When purchases are sorted by purchase category, a few stand out, specifically: concrete representing 29% of the total spend of purchases greater than $100K and research supplies representing 17% of total spend on purchases less than $5K. These should be referenced in the development of HIPOs, which will be further discussed later in this report

However, in general, most individual purchase categories only represent a small proportion of all purchases. Given this diversity of purchases, UBC would likely receive a greater overall benefit from creating generalized sustainable procurement strategies over procurement category specific policies.

4.0 Jurisdictional Scan

4.1 Methodology Development

A jurisdictional scan is an unsystematic research methodology and decision making tool that is used to synthesize learnings on a topic. Jurisdictional scans are typically used by organizations to: i) survey how problems are being framed and/or addressed in other jurisdictions, ii) evaluate options based on action taken in other jurisdictions in response to similar problems, iii) identify and anticipate implementation considerations associated with options (Kilian et al., 2016).

The typical procedure for a jurisdictional scan involves setting inclusion criteria for the scan, collecting the data and then developing conclusions. The inclusion criteria should be developed with consideration for the questions trying to be answered by the jurisdictional scan and the resources available to conduct the scan. A key limitation of jurisdictional scans is that there are no systematic or standardized procedures for developing selection criteria or how the jurisdictions are "scanned". A jurisdictional scan could therefore be used to develop biased or incomplete conclusions, intentionally or otherwise. To help overcome these limitations it is important that jurisdictional scans are accompanied with a literature review on the topic to provide appropriate context and the conclusions of the jurisdictional scan are not broadly applied outside of the scope in which the data was collected (Kilian et al., 2016).

Research Questions

The following questions are used to define the intended outcome of the jurisdictional scan:

1. How does UBC compare to similar institutions in terms of their sustainable procurement initiatives?
2. How are other institutions framing their sustainable procurement initiatives? What lessons can be learned that could be used to guide UBC?

Inclusion Criteria

- Inclusion Criteria:
    - Public Institution
    - Canadian
- As this inclusion criteria leaves too many institutions to evaluate, the following selection criteria is applied to refine the search into achievable scope.
    - The 50 institutions who are members of the CCSP
        - Reference: (CCSP, 2023)
        - Justification: Sustainable procurement is a relatively new field, so selecting institutions that have opted into a sustainable procurement collective are more likely to yield useful learnings.
    - 10 largest Canadian Universities
        - Reference: (Wikipedia, 2019)
        - Note: excluding those already members of CCSP (UBC, University of Calgary)
        - Justification: Evaluating the efforts of other large Canadian public Universities will help baseline the performance of UBC.

4.2 Main Jurisdictional Scan

4.2.1 Initial Sort

A total of 58 institutions are evaluated. To help quantify sustainable procurement activities and identify sustainable procurement leaders, these institutions are initially sorted into the following categories:

- **Group A: No Sustainable Procurement** (12/58 Institutions)
    - These institutions do not have any published documents or websites that state they are practicing sustainable procurement.
    - 12/58 Institutions were sorted into this group.
- **Group B: Vague Sustainable Procurement** (21/58 Institutions)
    - Sustainable procurement mentioned but not described.
    - These institutions mention sustainable procurement on their published documents or websites, but do not commit to targets or provide information on practical steps they will be taking.
    - 21/58 Institutions were sorted into this group.
- **Group C: Sustainable Procurement Champions** (23/58 institutions)
    - These institutions have committed to sustainable procurement and have published at least some of the details of how this will be implemented.
    - 23/58 Institutions were sorted into this group.

The sorted list of institutions with links to their online resources are available in Appendix D.

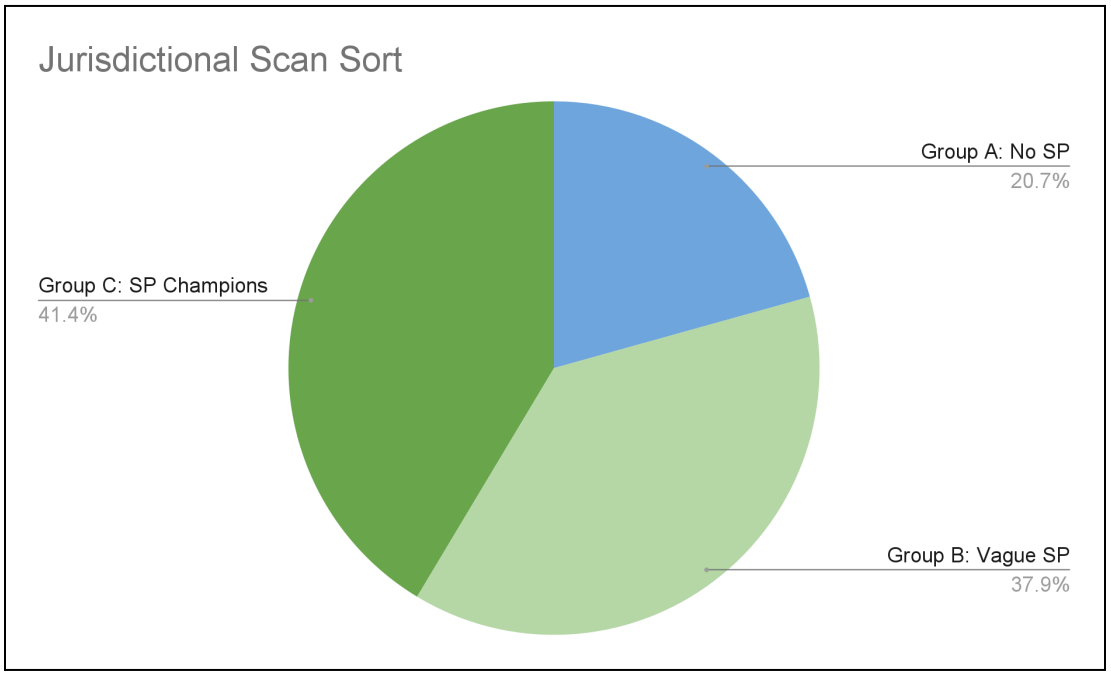


Figure 6. Jurisdictional Scan Sort

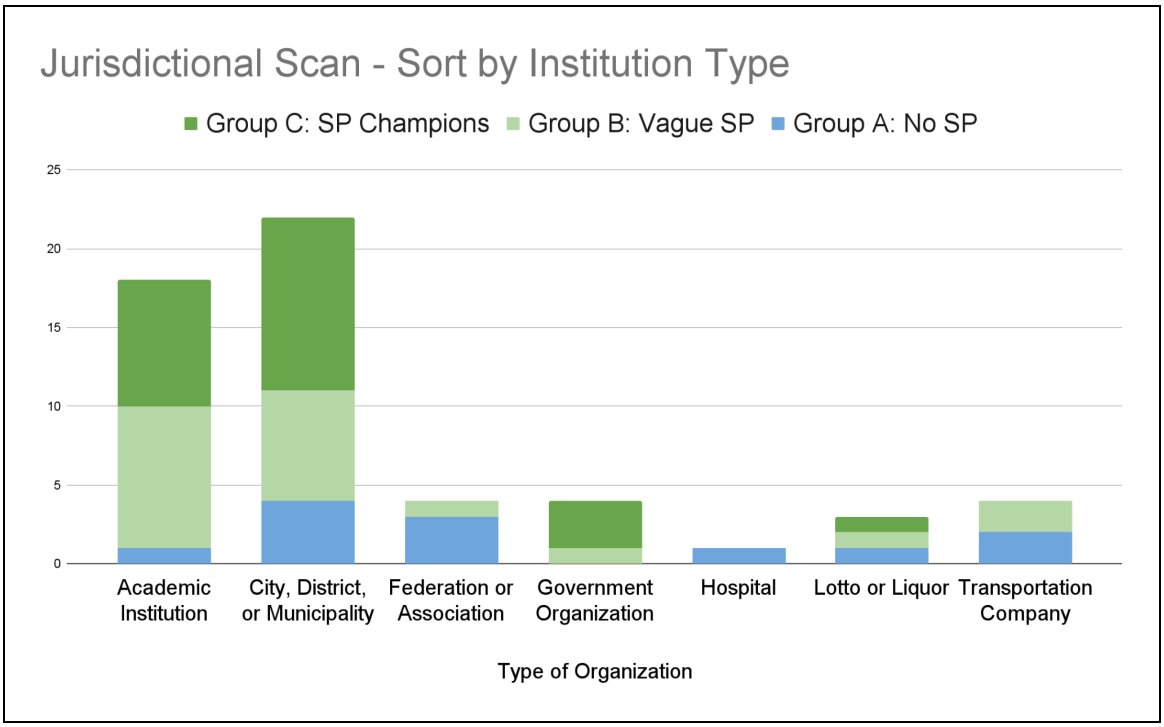


Figure 7. Jurisdictional Scan Sort by Institution Type

4.2.2 Lessons from the "Vague Sustainable Procurement" Institutions

The jurisdictional scan sorted approximately a third of the institutions surveyed into the "Vague Sustainable Procurement" category. These institutions do explicitly mention sustainable procurement in their online resources, but do not provide practical details or specifics on how this will be implemented or tracked. These institutions are separated from the "Sustainable Procurement Champions" group as there are less valuable insights or learnings that can be gained from them. Common patterns that emerged with these institutions are:

- **Plan to Make a Plan:** the institution may have issued a sustainability report that called for them to develop a sustainable procurement strategy, which appears to not be completed. For Example:
    - Translink Sustainable Procurement Website: "With the Sustainable Procurement Strategy in place, we are implementing an action plan to meet our goals and working towards improving our policies. We'll continue to keep our supplier community informed and engaged as we move forward."
    - McMaster University Sustainable Procurement Website: "To support the development of sustainable procurement at McMaster, we are striving to meet the following goals by the end of the 2021/2022 academic year", but no update since.
- **"When Appropriate" / "Where Possible":** the institution will state in its procurement strategy that sustainability criteria will be included when appropriate or where possible, without providing any more information. For example:
    - University of Toronto, Procurement Policy: "Procurement planning and activities should be undertaken with a view to promoting social, environmental and financial sustainability."
- **Non-Environmental Procurement Goals:** the institution may provide detailed procurement goals and targets related to other procurement objectives like local or social procurement. Environmental or sustainable procurement may be a more secondary goal. For example:

- The Government of Yukon procurement policy provides detailed targets for working with Yukon First Nations Businesses but only briefly mentions environmental procurement targets.

While it is possible some of these institutions may have more detailed policies that are not published online, the large percentage of institutions in this category perhaps demonstrates the challenge of converting a sustainable procurement goal into a practical procurement strategy. These should serve as examples of the kinds of sustainable procurement plans that UBC should avoid.

4.2.3 Top 5 "Sustainable Procurement Champions"

There are 23 institutions classified as "Sustainable Procurement Champions". These institutions were sorted into this group if it was deemed their sustainable procurement strategy or website had useful learnings or could serve as a model for UBC. The full list of institutions is provided in Appendix D and the learnings from these institutions are used directly to develop the *5.0 Final Recommendations* section.

The top 5 institutions are highlighted below, to be referenced as examples:

Table 6. Top 5 Sustainable Procurement Institutions

Institution	Description	Relevant Link(s)
BC Lottery Corporation (BCLC)	Has partnered with the "Social Purpose Institute" to become a "Social Purpose Company". Their annual report details unique initiatives and quantified emissions calculations.	Link 1 Link 2
City of Charlottetown	Followed the CCSP framework to develop a sustainable procurement strategy.	Link
City of Mississauga	Followed the CCSP framework to develop a sustainable procurement strategy. Plan includes consultation strategy and 3 year goals.	Link
City of Winnipeg	Partnered with Buy Social Canada to publish a "Sustainable Procurement Action Plan 2022-2025". This plan features a month by month breakdown of sustainable procurement initiatives.	Link
Government of Manitoba	Has a dedicated sustainable procurement website that includes a purchasing guide and detailed information on policies and buying strategies.	Link

4.2.4 Collaborations with External Institutions

The following is a complete list of the external organizations that collaborated with the institutions in the jurisdictional scan:

Table 7. Collaborations with External Institutions

External Institution	Jurisdictional Scan Organizations	Description of Collaboration
Social Purpose Institute at United Way	BCLC	Advised in development of "Social Purpose and Sustainability Procurement Policy"
SupplierLink Saskatchewan	City of Regina	Software platform created to manage vendors in Saskatchewan, used as part of sustainable procurement plan to enable vendor engagement.
Informed Sustainability Consulting	McMaster University	Hired to conduct an individual LCA of "Carbon Footprint of Food Purchases McMaster University Hospitality Services".
EcoVadis	Simon Fraser University	Completed an "Sustainability Scorecard" for them. Unclear if they are using their other services.
British Columbia Collaborative for Social Infrastructure	Simon Fraser University	Collaborated to develop a social procurement guide.
Buy Social Canada	City of Winnipeg	Buy Social worked as a consultant to develop their sustainable procurement guide.

4.3 Comparison of UBC to other Institutions

The two resources available from UBC are the purchasing policy, which mentions sustainability, and a "Purchasing" page on the UBC Sustainability site which mentions a few individual initiatives like the sustainable purchasing guide, mindful consumption guide and the Re-Use It program. Using the classification criteria described above, UBC today would qualify as a "Sustainable Procurement Champion".

Relative to other institutions recognized as "Sustainable Procurement Champions," UBC is positioned in the middle tier. While UBC distinguishes itself with a dedicated webpage outlining its sustainable purchasing initiatives (UBC Sustainability, 2019), it falls short compared to its peers in the following areas:

- **Sustainable Procurement Action Plan**: Many of the "Sustainable Procurement Champions" published dedicated reports that detailed their strategy, policies, and targets as well as highlighting any success stories. Having all of this information in one document made it easy to understand the institution's sustainable procurement work, compared to when it is spread out across multiple webpages.
- **Future Looking Goals and Timelines**: Some "Sustainable Procurement Champions" published sustainable procurement action plans and set time-bound targets for themselves to achieve.
- **Collaboration with External Institution**: While not necessary to develop a sustainable procurement plan, collaborations with external institutions demonstrated a commitment of time and resources.

5.0 Recommendations

The next step for UBC is to develop and publish a Sustainable Procurement Action Plan. This plan will align the vision of sustainable procurement at UBC, commit to targets and outline actionable steps. Therefore, I have structured my final recommendations as a 10 step procedure for implementing a Sustainable Procurement Action Plan. The high-level steps are based on the CCSP's "10-point Best Practice Program Framework'' as I have found these guidelines to be the most comprehensive. Using learnings from the jurisdictional scan, academia and other external sources, I have aimed to provide both generalized context, specific recommendations and relevant examples.

1. Strategy Development

- **Definition:** A Sustainable Procurement Action Plan could be broad enough to include Indigenous or Social Procurement activities or be as narrow as ensuring procurement meets environmental compliance standards. UBC should first develop a working definition for what is covered under their sustainable procurement initiatives.
    - Example - almost all surveyed sustainable procurement policies began with a definition of which "pillars" of sustainability were included in their policy. This was typically 3 - 5 of the following: environmental, social, economic, ethical, Indigenous. Some institutions created individual policies for different objectives.

- **Strategy:** If the current UBC procurement strategy is to optimize solely for financial value, then incorporating environmental criteria into the purchasing process represents a significant shift in organizational values. UBC may decide to minimize environmental impact, but only when there is no added financial cost or UBC may justify any added cost from sustainable procurement by expanding "their view of commercial risk management to encompass environmental, social and economic impacts" and that any added costs of sustainable purchases are justified by reducing that risk (Brady et al., 2013). While some studies have found sustainable procurement saves organizations money (EcoVadis, 2024), including a justification for why sustainable procurement is important to UBC will strengthen the overall strategy.
    - Example - City of Mississauga: "Because staff took the step to consider which sustainability risks or opportunities might apply ... the City has procured a gift or prize that *comes with a story that reinforces City's innovation brand*; not without due consideration to cost, but neither is the decision simply driven by finding an adequate item at the cheapest possible price."

- **Stakeholders:** UBC should identify early which stakeholders should be included in the strategy development to ensure future buy-in. In particular, leadership support for sustainable procurement has been found to be the most important factor in the success of the program. (Brammer & Walker, 2011).
    - Example - City of Mississauga: included a stakeholder consultation takeaways section in their sustainable procurement report.

- **Dates & Timelines:** Including time-bound targets increases the credibility and accountability of the organization. Only some of the sustainable procurement strategies in the jurisdictional scan included information on when the initial policy was developed. Even fewer included information on when the policies would be re-evaluated or time-bound goals. UBC should include both to become a leader in this space.

- Example - City of Winnipeg: published "Sustainable Procurement Action Plan 2022-2025". This document includes a detailed implementation plan broken down to individual months.

2. Policy Connection

- UBC should connect their sustainable procurement policy to other internal (ex. Zero Waste Action Plan) and external policies (ex. UN SDGs). This provides context of how sustainable procurement relates to other organizational and global goals and demonstrates informed policy development. Refer to the *2.2 Policies* section in this report for resources.

3. Staffing and Resources

- High initial commitment is needed for procurement policy development, but ongoing resourcing will be required for successful implementation, monitoring and updating of the strategy. UBC should allocate these resources in advance to ensure ongoing success.
  - Example: City of Winnipeg: included a "Roles and Responsibilities" section of their sustainable procurement Plan.

4. Implement Sustainable Procedures

- Given that the current UBC procurement policy outlines specific purchasing procedures for three cost categories, sustainable procurement strategies should be tailored to each of these categories.
- **Large Purchases (> $75K):**
  - As these are high impact purchases, this should be a critical intervention point for sustainable procurement targets.
  - UBC should develop a sustainability assessment questionnaire that bidding organizations are required to complete. At a minimum, this questionnaire should have general questions about the supplier as a company and their sustainability performance, but ideally this could get updated per RFP to include questions about the product being supplied (ex. recycled content, end-of-life strategy, energy efficiency).
  - To quantify this performance, UBC should either set a minimum score on the assessment or specify how much it is weighted relative to other decision criteria.
    - Example - City of Calgary: published their "Social Procurement Questionnaire", which is considered in the awarding of city contracts.

- **Small Purchases (< $3.5K):**
  - As this category represents 97.7% of invoices and they are often not completed by procurement staff this can be a challenging category to manage.
  - A sustainable purchasing guide should be published and promoted to help guide more sustainable procurement. Alternatively, a list of vetted "sustainable vendors" may be provided.
  - UBC could create targets related to X% of purchases completed using the sustainable purchase guide or from the sustainable vendor list.
  - HIPOs could also be used to target purchases in this category. See Step 5.
    - Example - Government of Manitoba: Published a comprehensive sustainable purchasing guideline.
    - Example - City of Halifax: Published questionnaire used to determine if suppliers can be added to their sustainable vendor list.

- **Mid-sized Purchases ($3.5K - $75K):**
    - None of the examples in the jurisdictional scan had guidance for this category of purchasing, but as these purchases must be completed through Workday, a procedure could be developed to better enforce and track sustainable purchasing compared to the Small Purchases category. For example, steps could be added to the purchasing procedure to ask users if they are using a sustainable supplier or if they have consulted the sustainable purchasing guide.

5. Create a High Impact Procurement Opportunity (HIPO) List

- HIPOs are "specific categories of focus for sustainable purchasing, ideally those with high volume, spend, and/or strategic importance for sustainability" (CCSP, 2023). Organizations will then make a custom sustainable procurement strategy for each HIPO. These are commonly promoted as "procurement case studies" or "procurement success stories". HIPOs are targeted interventions that complement the more general policies described in Step 4.
- In practice, developing a HIPO strategy typically involves either identifying a procurement category and then restricting purchasing to a more environmentally friendly alternative or identifying a commonly used supplier and then working with them to improve their environmental impact (ex. decreased packaging, end-of-life return).
    - Example - BCLC created a custom end-of-life plan for their electronic gaming devices including component harvesting, vendor return and resell programs.
    - Example - TMU implemented a policy to purchase only vegetarian food for meetings/events to significantly reduce the impact of that meal.
- UBC should dedicate a procurement team member to identifying and implementing HIPOs. Refer to section *3.0 Analysis of UBC Data* for top procurement categories. Once sustainable interventions are made in these categories, they can be advertised on UBC's procurement website. If the HIPO strategy is successful, then it could even be formalized into the official procurement policy.

6. Measurement and Reporting

- **Measurable:** The EPA provides recommendations on developing climate plan targets which include: stating a target year, stating absolute GHG reduction targets and publicizing these goals (US EPA, 2015). Without a baseline of current GHG emissions of UBC procurement, it would not be meaningful to set a reduction target. Targets for sustainable procurement should instead be process based, ex. "100% of purchases will include sustainability considerations" or product specific, ex. "100% of paper purchases will be recycled content products".
- **Units of Measurement:** From the *3.0 Analysis of UBC Data* section, it is recommended that all targets are set using a consistent unit, so likely either by using "% Spend" or "% Invoices".
- **Reporting:** Tracking and publishing performance will demonstrate transparency and accountability.

7. Tools

- While implementing the above steps will lead to more sustainable procurement, UBC will likely want to further quantify the impact of these efforts or better understand their overall environmental impact. This is where external tools, like EcoVadis, may be useful. I would recommend UBC first develop their framework for sustainable procurement and then use external tools to better refine and focus their efforts into the future.

8. Training and Engagement

- **Training:** Training should be made to introduce procurement staff to environment and sustainability topics. This will equip procurement staff with environmental decision-making skills that will aid them in evaluating sustainability of products that may not be covered by existing buying guides or labels.
- **Engagement**: Steps should be taken to engage other procurement and purchasing groups as well as the general UBC community. Campaigns could be developed related to circular economy concepts like decreasing unnecessary purchases, renting instead of buying or increasing donation over disposal.

9. Supplier Engagement

- Over time UBC should build relationships with "green suppliers" and work with existing suppliers to improve their sustainability.
    - Example: McMaster highlighted 4x vendor success stories that included selecting more sustainable materials and reducing packaging waste.

10. Leadership and Collaboration

- CCSP and Buy Social Canada are the most relevant organizations for sustainable public procurement in Canada. UBC should continue their role as a leader within CCSP.

6.0 Conclusions

Coming into this research, I had assumed that the key challenge of sustainable procurement was developing methods to select the most sustainable choice from a set of procurement options. While this is certainly a challenge, given the multitude of buying guides and sustainable standards available today, the sustainable choice is often quite clear. The real challenge of sustainable procurement is taking an institution with existing procurement policies, a variety of stakeholders, budget constraints, and dispersed individual purchasers, and then navigating that institution towards sustainable procurement. In my opinion, the real challenges of practical sustainable procurement are logistical instead of environmental.

I would advise UBC to view sustainable procurement as a guiding principle or a strategic direction rather than a discrete task or a one-time audit. As the procurement needs of UBC evolves and as new more sustainable procurement options are developed, UBC's Sustainable Procurement Action Plan will need to evolve to keep up. By implementing the recommendations I have provided, developing formal policies and building awareness, UBC will advance towards a more sustainable future. These efforts will not only reduce the environmental impact of UBC's procurement activities but also position the university as a leader of sustainable and circular public procurement in Canada.

References

Bond, D., Lynd, J., & Saccomanno, I. (2023, November 28). *Preparing for Canada's New Anti-Forced Labour Supply Chain Law | White & Case LLP*. Www.whitecase.com. https://www.whitecase.com/insight-alert/preparing-canadas-new-anti-forced-labour-supply-chain-law

Brady, J., Ebbage, A., Lunn, R., & And, M. (2013). *Environmental management in organizations : the IEMA handbook*. Routledge.

Brammer, S., & Walker, H. (2011). Sustainable procurement in the public sector: an international comparative study. *International Journal of Operations & Production Management*, *31*(4), 452–476. https://doi.org/10.1108/01443571111119551

Brundtland. (1987). *Our Common Future: From One Earth to One World - A/42/427 Annex, Overview - UN Documents: Gathering a body of global agreements*. Un-Documents.net. http://www.un-documents.net/ocf-ov.htm

CCS. (2024). *The value of ISO Standards to the Public Sector*. Www.ccsrisk.com. https://www.ccsrisk.com/iso-for-public-sector

CCSP. (2023). *THE STATE OF SUSTAINABLE PUBLIC PROCUREMENT IN CANADA ANNUAL REPORT 2023 MANAGED BY*. https://www.reeveconsulting.com/wp-content/uploads/2024/03/CCSP-2023-Annual-Report_The-State-of-Sustainable-Public-Procurement-in-Canada.pdf

Ecolabel Index. (2024). *All ecolabels | Ecolabel Index*. Ecolabelindex.com. https://www.ecolabelindex.com/ecolabels/

EcoVadis. (2024). *Corporate Sustainability Assessments*. EcoVadis. https://ecovadis.com/enterprise/

European Parliament. (2023, May 24). *Circular economy: definition, importance and benefits | Topics | European Parliament*. Www.europarl.europa.eu. https://www.europarl.europa.eu/topics/en/article/20151201STO05603/circular-economy-definition-importance-and-benefits

Government of Canada. (2022a, March 29). *2030 Emissions Reduction Plan: Clean Air, Strong Economy*. Www.canada.ca; Government of Canada. https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/emissions-reduction-2030.html

Government of Canada. (2022b, June 8). *Environmental labels and claims*. Ised-Isde.canada.ca. https://ised-isde.canada.ca/site/office-consumer-affairs/en/be-green-consumer/environmental-labels-and-claims

Government of Canada. (2022c, November 14). *Policy on Green Procurement*. Www.tbs-Sct.canada.ca. https://www.tbs-sct.canada.ca/pol/doc-eng.aspx?id=32573

Government of Canada. (2023, July 11). *Net-Zero Emissions by 2050*. Government of Canada; Government of Canada.

https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050.html

Hellweg, S., & Mila i Canals, L. (2014). Emerging approaches, challenges and opportunities in life cycle assessment. *Science*, *344*(6188), 1109–1113. https://doi.org/10.1126/science.1248361

ISC. (2023, August 11). *Mandatory minimum 5% Indigenous procurement target*. Www.sac-Isc.gc.ca. https://www.sac-isc.gc.ca/eng/1691786841904/1691786863431

ISO. (2011). *Management system standards*. ISO. https://www.iso.org/management-system-standards.html

Kilian, A., Nidumolu, A., & Lavis, J. (2016). Jurisdictional scans in policy making: A critical interpretive synthesis. *Ses.library.usyd.edu.au*. http://hdl.handle.net/2123/15695

Meehan, J., & Bryde, D. (2011). Sustainable procurement practice. *Business Strategy and the Environment*, *20*(2), 94–106. https://doi.org/10.1002/bse.678

Quantis. (2022). *COMPARATIVE LCA OF NESPRESSO VERSUS OTHER COFFEE SYSTEMS IN SWITZERLAND*. Nespresso.

Richardson, K., Steffen, W., Lucht, W., Bendtsen, J., Cornell, S., Donges, J. F., Drüke, M., Fetzer, I., Bala, G., Werner von Bloh, Feulner, G., Fiedler, S., Gerten, D., Gleeson, T., Hofmann, M., Willem Huiskamp, Matti Kummu, Mohan, C., Bravo, D., & Petri, S. (2023). Earth beyond Six of Nine Planetary Boundaries. *Science Advances*, *9*(37). https://doi.org/10.1126/sciadv.adh2458

SFU. (2024). *Sustainable procurement*. Www.sfu.ca. https://www.sfu.ca/finance/services/procurement/sustainable-procurement.html

Spickler, K. (2023, July 19). *Canada Passes Bill S-5 to Reform and Strengthen CEPA*. UL Solutions. https://www.ul.com/news/canada-passes-bill-s-5-reform-and-strengthen-cepa

STARS. (2024). *About STARS*. The Sustainability Tracking, Assessment & Rating System. https://stars.aashe.org/about-stars/

Stefanini, R., Borghesi, G., Ronzano, A., & Vignali, G. (2020). Plastic or glass: a New Environmental Assessment with a Marine Litter Indicator for the Comparison of Pasteurized Milk Bottles. *The International Journal of Life Cycle Assessment*, *26*(26), 767–784. https://doi.org/10.1007/s11367-020-01804-x

U.S. Department of State. (2024). *The Montreal Protocol on Substances That Deplete the Ozone Layer*. United States Department of State. https://www.state.gov/key-topics-office-of-environmental-quality-and-transboundary-issues/the-montreal-protocol-on-substances-that-deplete-the-ozone-layer

UBC. (2022). *FM2: Purchasing Policy*. https://universitycounsel.ubc.ca/files/2022/05/Purchasing-Policy_FM2.pdf

UBC. (2024). *Sustainability Action Plans | UBC Campus & Community Planning*. Planning.ubc.ca. https://planning.ubc.ca/sustainability/sustainability-action-plans

UBC Finance. (2023, January). *Sustainable Purchasing Guide | UBC Finance*. Finance.ubc.ca. https://finance.ubc.ca/procure-pay/sustainable-purchasing-guide

UBC Finance. (2024a). *Glossary | UBC Finance*. Finance.ubc.ca. https://finance.ubc.ca/procure-pay/sustainable-purchasing-guide/glossary

UBC Finance. (2024b). *The University of British Columbia*. Finance.ubc.ca. https://finance.ubc.ca/buy/private/purchases-above-3500/private/purchase-order-process

UBC Sustainability. (2019, January 13). *Purchasing*. Sustain.ubc.ca. https://sustain.ubc.ca/campus/purchasing

United Nations. (2015). *The Paris Agreement*. United Nations. https://www.un.org/en/climatechange/paris-agreement

United Nations. (2024). *The 17 Sustainable Development Goals*. United Nations. https://sdgs.un.org/goals

US EPA. (2014, December 5). *Introduction to Ecolabels and Standards for Greener Products | US EPA*. US EPA. https://www.epa.gov/greenerproducts/introduction-ecolabels-and-standards-greener-products

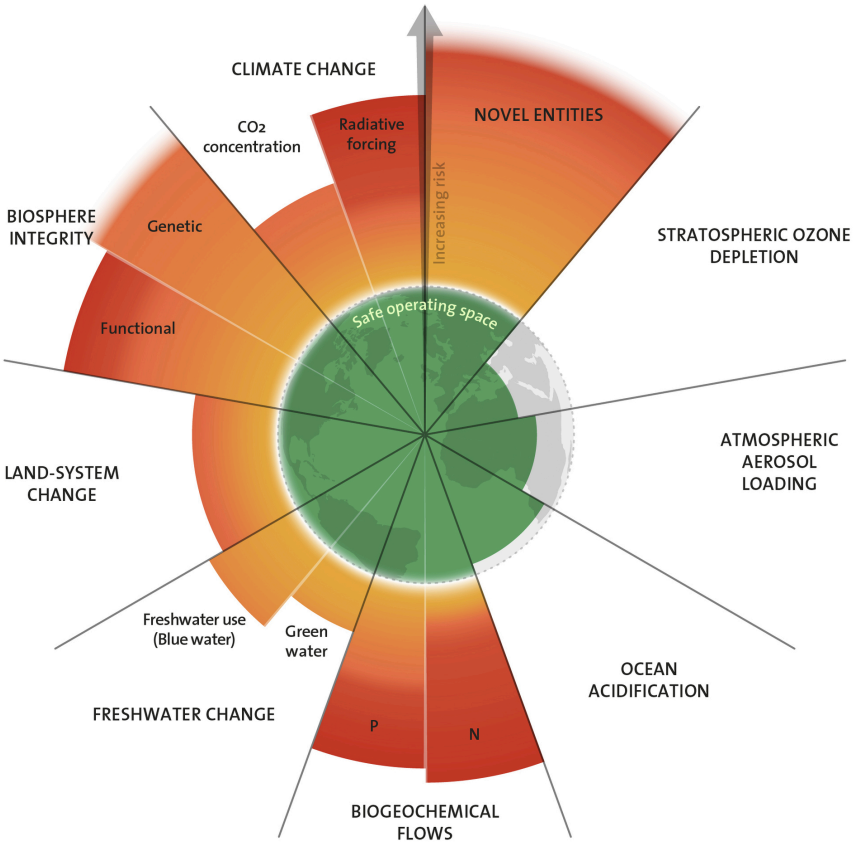
US EPA. (2015, July 24). *Target Setting*. Www.epa.gov. https://www.epa.gov/climateleadership/target-setting

Wikipedia. (2019, July 10). *List of universities in Canada*. Wikipedia; Wikimedia Foundation. https://en.wikipedia.org/wiki/List_of_universities_in_Canada

Appendix

Appendix A

A useful framework for safe operating limits is called the "Planetary Boundary" framework and was developed in 2009 by Johan Rockström. This framework recognizes there is a safe operating space for greenhouse gas emissions but also adds 8 other categories for consideration.



Planetary Boundary Framework - with 2023 limit update (Richardson et al., 2023)

The additional impact categories included in the Planetary Boundary Framework are:

- **Climate Change (CO2 Concentration & Radiative Forcing):** This metric quantifies changes to the Earth's energy flows due to "greenhouse gases and aerosols, and surface albedo changes" (Richardson et al., 2023).
- **Biosphere Integrity (Genetic & Functional):** The planet requires genetic diversity and functional diversity in order to maintain its steady state operating conditions. This metric looks at measurements related to extinction rates and biosphere integrity. Key activities that impact this are agriculture, silviculture and land use change.
- **Land System Change:** This metric tracks forest cover remaining compared to potential area of forest cover.

- **Freshwater Use (Blue & Green Water):** This metric tracks changes in the water available for people and plants.
- **Biogeochemical Flows (Phosphorus & Nitrogen):** This metric tracks the levels and flows of two critical elements of biospheres. This is similar to the more commonly used term of “eutrophication”. This metric is mostly impacted by increased chemical use in the agriculture industry.
- **Ocean Acidification:** This metric describes a change in ocean pH, caused primarily by carbon dioxide emissions.
- **Atmospheric Aerosol Loading:** Aerosols (particles suspended in air, ex. dust, smoke or mist) in the atmosphere impact weather, air quality and global warming. The causes and impacts of this category are more complex.
- **Stratospheric Ozone Depletion:** This metric measures the deterioration of the ozone layers due to the emissions of ozone depleting substances (ODS). The Montreal Protocol of 1987, which called for a phasing out of ODS used in refrigerators, aerosols and fire extinguishers, has led to a significant improvement in this category (U.S. Department of State, 2024).
- **Novel Entities:** This metric is created by the researchers to capture the impacts from any human-made sources not captured by other categories. This includes: synthetic chemicals, radioactive materials, nuclear waste and GMOs.

Appendix B

The following is extracted from the STARS v2.2 Purchasing self-reporting section (STARS, 2024).

OP-11: Sustainable Procurement

1. Does the institution have written policies, guidelines, or directives that seek to support sustainable purchasing across multiple commodity categories institution-wide?:
2. A copy of the policies, guidelines or directives:
3. The policies, guidelines or directives:
4. Does the institution employ Life Cycle Cost Analysis (LCCA) when evaluating energy- and water-using products and systems?:
5. Which of the following best describes the institution's use of LCCA?:
6. A brief description of the LCCA policy and/or practices:
7. Does the institution have published sustainability criteria to be applied when evaluating chemically intensive products and services?:
8. A brief description of the published sustainability criteria for chemically
9. Does the institution have published sustainability criteria to be applied when evaluating consumable office products?:
10. A brief description of the published sustainability criteria for consumable office products:
11. Does the institution have published sustainability criteria to be applied when evaluating furniture and furnishings?:
12. A brief description of the published sustainability criteria for furniture and furnishings:
13. Does the institution have published sustainability criteria to be applied when evaluating Information technology (IT) and equipment?:
14. A brief description of the published sustainability criteria for Information Technology (IT) and equipment:
15. Does the institution have published sustainability criteria to be applied when evaluating food service providers?:
16. A brief description of the published sustainability criteria for food service providers:
17. Does the institution have published sustainability criteria to be applied when evaluating garments and linens?:
18. A brief description of the published sustainability criteria for garments and linens:
19. Does the institution have published sustainability criteria to be applied when evaluating professional service providers?:
20. A brief description of the published sustainability criteria for professional service providers:
21. Does the institution have published sustainability criteria to be applied when evaluating transportation and fuels?:
22. A brief description of the published sustainability criteria for transportation and fuels:
23. Website URL where information about the institution's sustainable procurement program or initiatives is available:
24. Additional documentation to support the submission:

25. Data source(s) and notes about the submission:

OP-12: Electronics Purchasing

1. Total annual expenditures on electronics:
2. Expenditures on environmentally or socially preferable electronics:
3. Do the figures reported above include leased equipment?:
4. A brief description of the time period from which the figures reported above are drawn:
5. Website URL where information about the institution's electronics purchasing is available:
6. Additional documentation to support the submission:
7. Data source(s) and notes about the submission:

OP-13: Cleaning and Janitorial Purchasing

1. Total annual expenditures on cleaning products:
2. Annual expenditures on certified green cleaning products:
3. Total annual expenditures on janitorial paper products:
4. Annual expenditures on certified green janitorial paper products:
5. A brief description of the time period on which the figures reported above are based :
6. Percentage of expenditures on cleaning and janitorial products that are third party certified to meet recognized sustainability standards
7. Website URL where information about the institution's cleaning and janitorial purchasing is available:
8. Additional documentation to support the submission:
9. Data source(s) and notes about the submission:

OP-14: Office Paper Purchasing

1. Total annual expenditures on office paper:
2. Expenditures on office paper with the following levels of post-consumer recycled, agricultural residue, and/or FSC certified content::
3. A brief description of the time period from which the figures reported above are drawn:
4. Website URL where information about the institution's paper purchasing is available:
5. Additional documentation to support the submission:
6. Data source(s) and notes about the submission:

Appendix C

Broad Category	Spend Category
Blank	Benefits | British Columbia Employer Health Tax (BC EHT) Benefits | Purchased Benefits | Workers' Compensation Board (WCB) Commissions Grants Subaward External IMANT Management Fees Legal Claims Memberships and Association Fees Patenting | Non-Recoverable Patent Expense Patenting | Recoverable Patent Expense Payroll Withholding | Dental Payroll Withholding | Dues AAPS Payroll Withholding | Dues BCGEU Payroll Withholding | Dues CUPE 116 Payroll Withholding | Dues CUPE 2278 Payroll Withholding | Dues CUPE 2950 Payroll Withholding | Dues Faculty Association Payroll Withholding | Extended Health Payroll Withholding | Health Spending Account Payroll Withholding | Income Replacement Plan, Disability Payroll Withholding | Life Insurance Payroll Withholding | Pension Faculty Payroll Withholding | Pension Staff Payroll Withholding | Retiree & Survivor Benefits Rentals and Leases | Building and Land Rentals and Leases | Equipment and Furniture Research Study Participation Royalties Salaries | Faculty Health Authority Paymaster Salaries | Staff Health Authority Paymaster Sales and Services Refund Scholarships, Awards, and Bursaries Sponsorships Student Levy Fees Payable Utilities l Carbon Tax Warranty
TBD	Bank Charges Cost of Goods Sold | General Cost of Goods Sold | Packaging Materials Customs, Duties, Tariffs and Tax Installation Services | Over $5000 Inventory | Held for Resale Inventory | Held for Use
Professional Services	Accounting and Audit Services Advertising and Marketing Services Digital and Creative Services

	External Temporary Labour Backfill Information Technology Consulting Services Insurance Premiums Investment Management Services Legal Services Performing Artists Professional Development and Training Project Management Services Recruiting Services Security Services Strategic Consulting Services Teaching Services
Non-Adressables (Under $500k)	DNU Installation Services | Below $5000 (Inactive) Endowment Custody Fees Enterprise Systems | Below $50000 Insurance Claims Living Allowance Payroll Withholding | Dues IUOE Payroll Withholding | Dues Unifor 467 Payroll Withholding | Garnishees Payroll Withholding | Pension BCGEU Vancouver Payroll Withholding | United Way Campaign Petty Cash Property Taxes Status Indian (On Reserve) Tax Integration | GST Input Tax Credits (ITC) Tax Integration | GST Rebates Tax Integration | Non-Payroll Withholding Tax Tuition Fee Refunds

Appendix D

Group A: No Sustainable Procurement			
Institution	**Type of Organization**	**Inclusion Criteria**	**Relevant Link(s)**
Alberta Health Services	Hospital	Member of CCSP	Link
Atlantic Lottery Corporation	Lotto or Liquor	Member of CCSP	Link
City of Kelowna	City, District, or Municipality	Member of CCSP	Link
City of Ottawa	City, District, or Municipality	Member of CCSP	Link
City of St. Albert	City, District, or Municipality	Member of CCSP	Link
Edmonton Regional Airports Authority	Transportation Company	Member of CCSP	No Procurement Information Available
Federation of Canadian Municipalities	Federation or Association	Member of CCSP	No Procurement Information Available
Metro Vancouver	City, District, or Municipality	Member of CCSP	Link
Northern Alberta Institute of Technology	Academic Institution	Member of CCSP	Link
Ontario Colleges Purchasing Managers Association	Federation or Association	Member of CCSP	Link
Ontario Education Collaborative Marketplace	Federation or Association	Member of CCSP	Link
Ontario Northland	Transportation Company	Member of CCSP	Link

Group B: Vage Sustainable Procurement			
Institution	Type of Organization	Inclusion Criteria	Relevant Link(s)
BC Ferries	Transportation Company	Member of CCSP	Link
Capilano University	Academic Institution	Member of CCSP	Link
City of Abbotsford	City, District, or Municipality	Member of CCSP	Link

City of Edmonton	City, District, or Municipality	Member of CCSP	Link
City of Saskatoon	City, District, or Municipality	Member of CCSP	Link
City of Spruce Grove	City, District, or Municipality	Member of CCSP	Link1 Link2
City of Victoria	City, District, or Municipality	Member of CCSP	Link
City of Whitehorse	City, District, or Municipality	Member of CCSP	Link
District of Saanich	City, District, or Municipality	Member of CCSP	Link
District of Squamish	City, District, or Municipality	Member of CCSP	Link
Government of Yukon	Government Organization	Member of CCSP	Link
Manitoba Liquor and Lotteries	Lotto or Liquor	Member of CCSP	Link
Mohawk College	Academic Institution	Member of CCSP	Link
Ontario University Professional Procurement Management Association	Federation or Association	Member of CCSP	Link
Red River College Polytechnic	Academic Institution	Member of CCSP	Link
Sheridan College	Academic Institution	Member of CCSP	Link
St. Lawrence College	Academic Institution	Member of CCSP	Link
Town of Stratford	City, District, or Municipality	Member of CCSP	Link
TransLink	Transportation Company	Member of CCSP	Link
Universite Laval	Academic Institution	Large University	Link Stars2022
University of Ottawa	Academic Institution	Large University	Link Stars2021
University of Toronto	Academic Institution	Large University	Link
York University	Academic Institution	Large University	Link Stars2024

Group C: Sustainable Procurement Champion			
Institution	**Type of Organization**	**Inclusion Criteria**	**Relevant Link(s)**
**BCLC	Lotto or Liquor	Member of CCSP	Link 1 Link 2
**City of Charlottetown	City, District, or Municipality	Member of CCSP	Link
City of Brampton	City, District, or Municipality	Member of CCSP	Link
City of Calgary	City, District, or Municipality	Member of CCSP	Link1 Link2
City of London	City, District, or Municipality	Member of CCSP	Link
**City of Mississauga	City, District, or Municipality	Member of CCSP	Link
City of Nanaimo	City, District, or Municipality	Member of CCSP	Link
City of Regina	City, District, or Municipality	Member of CCSP	Link
City of Vancouver	City, District, or Municipality	Member of CCSP	Link
**City of Windsor	City, District, or Municipality	Member of CCSP	Link
**City of Winnipeg	City, District, or Municipality	Member of CCSP	Link
Federal Government	Government Organization	Member of CCSP	Link
**Government of Newfoundland and Labrador	Government Organization	Member of CCSP	Link
Halifax Regional Municipality	City, District, or Municipality	Member of CCSP	Link1 Link2
**Government of Maintoba	Government Organization	Member of CCSP	Link
McGill University	Academic Institution	Large University	Link Stars_2024
McMaster University	Academic Institution	Large University	Link
Simon Fraser University	Academic Institution	Member of CCSP	Link EcoVadisLink
**Toronto Metropolitan University	Academic Institution	Large University	Link1

			Link2 Stars2024
University of Calgary	Academic Institution	Large University & Member of CCSP	Link Stars_Expired
**University of Alberta	Academic Institution	Large University	Link Bill S-211 Report Stars_Expired
Universite de Montreal	Academic Institution	Large University	Link Stars2022
**University of Waterloo	Academic Institution	Large University	Link1 Link2 Stars2021

** indicates an institution with a particularly interesting Sustainable Procurement strategy.