Procuring the Circular Economy

A GLOBAL REVIEW OF CIRCULAR ECONOMY STANDARDS AND CERTIFICATION PRACTICES IN PROCUREMENT

AND RECOMMENDATIONS FOR CIRCULAR PROCUREMENT AT THE CITY OF VANCOUVER

This report provides a global review of leading practices with respect to circular economy design standards and certification practices and applicability for procurement at the City of Vancouver and more broadly in the Vancouver community. The report includes recommendations to the City for a circular economy strategy and circular procurement policies.

Prepared by:

Max Cohen, UBC Sustainability Scholar, 2020

Prepared for:

Brian Beck, Senior Engineer, City of Vancouver.

August 2020

This report was produced as part of the Greenest City Scholars (GCS) Program, a partnership between the City of Vancouver and The University of British Columbia, in support of the Greenest City Action Plan.

This GCS project was conducted under the mentorship of City staff. The opinions and recommendations in this report, and any errors, are those of the author, and do not necessarily reflect the views of the City of Vancouver or The University of British Columbia.

The following are the official partners and sponsors of the Greenest City Scholars Program:

Acknowledgements

The author would like to thank the following individuals for their contribution, feedback, and support throughout this project: Brian Beck, Andrea McKenzie and Chris Underwood.

Introduction

The goal of this project is to complete a global review of leading practices with respect to circular economy design standards and certification practices and applicability for procurement at the City and more broadly in the community. The final report includes 4 parts:

1. A literature review of leading practices from around the world with respect to circular design and procurement policies, practices and certification programs for products, equipment, infrastructure and services purchased by the City of Vancouver.
2. Interviews with representative staff at the City responsible for procurement (of products, equipment, infrastructure and services).
3. Summary of findings from literature review and interviews.
4. 6 Recommendations based on results of literature reviews and interviews for applying leading new circular economy procurement practices within the City of Vancouver.

Recommendation 1: Bolster the definition of circular economy in the City of Vancouver internal Sustainable and Ethical Procurement (SEP) Guidelines with reference to Circular Public Procurement (CPP) to provide clarity.

Recommendation 2: Design a set of internal circular economy Guidelines that would feed into the SEP Guidelines to build capacity to explore new circular economy pathways.

Recommendation 3: Consider refining circular economy related sections in the Sustainable and Ethical Procurement Vender Questionnaire to provide opportunities for venders to demonstrate their circular credentials and capabilities (without increasing length of questionnaire).

Recommendation 4: Incorporate new circular economy criteria/elements within products, equipment, and infrastructure technical requirements with high value procurements to start.

Recommendation 5: Procuring departments could consider identifying high-value components for purchased products, equipment, and infrastructure and then complete a market assessment with select venders to address at least the following three (3) questions:

Recommendation 6: Consider issuing a local or regional circular economy Request for Information (RFI) to establish (a) the readiness of key venders to implement circularity principles, (b) the viability of products' as services, (c) and where there may be liability, warranty or other reasons for precluding the purchase of repaired, refurbished, remanufacture products.

This Executive Summary includes 3 sections:

- Background
- Research Approach [Methodology]
- Recommendations [Next Steps]

Background

The circular economy is an alternative to a traditional linear economy (take, make, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life. The circular economy is restorative by intent and design (Ellen Macarthur Foundation, 2015).

In practice this means procuring products, equipment, infrastructure and services which are designed to have long and productive lifespans and that can be repaired and reused before being recycled. In a circular economy, the objective is to eliminate waste to contribute to wider sustainability strategies. circular economy design produces products and services which are designed for the 6 R's: reuse, recycling, repair, refurbishment, remanufacturing, and retrieving (Van Geet 2014).

Three circular economy principles capture the essence of the idea (Ellen Macarthur Foundation, 2015):

(1) Design Waste Out; (2) Circulated Materials and Resources; (3) Regenerate Natural Systems.

The City of Vancouver has also implemented a series of plans and policies that help to position it at the forefront of spearheading the circular economy globally. Examples include prohibiting organic waste from the landfill, increasing the range of recyclable materials and authorizing deconstruction and wood waste recycling (De Paoli, 2016).

1) Greenest City Action Plan/Climate Emergency Response Plan: Zero Waste

2) Green Operations Plan: Zero Waste

3) Zero Waste 2040 Plan

4) Vancouver Economic Action Strategy

Circular Procurement policy was identified among participants of GLOBE 2020 as the best opportunity for advancing Canada's circular economy (GLOBE, 2020, 4). As a relatively large local authority, the City of Vancouver is well poised to take advantage of Circular Economy opportunities. Research has demonstrated bigger cities have fared better than smaller ones in achieving progress in green public procurement (Testa et. al, 2012). This report investigates the applicability of leading circular procurement practices at the City of Vancouver.

Research Approach [Methodology]

1) Literature Review Methods

A literature review of leading practices from around the world with respect to circular economy design and procurement policies, practices and certification programs for products, equipment, infrastructure and services. This literature review will inform a set of questions for subsequent interviews.

- This research report used search engines (e.g. Google/Google Scholar/Grey Literature Websites) and networks of expertise to build the literature list for review.

- In the search engines, I used a combination of search strings including these keywords: “Circular Economy”; “Procurement”; “Certification(s)”; “Criteria”.

- Literature was compiled and prioritised list in reference management software and selected readings were chosen on the basis of their includability. The list was confirmed with the project mentor.

- I analysed the literature and extracted key data/findings.

2) Interview Methods

The purpose of the interviews was to understand:

1. The role of sustainability criteria within procurement processes.

2. The role of circular economy requirements within procurement processes.

3. Identifying leverage points where incorporation of circular economy criteria within procurement processes could be desirable and feasible.

Interviews were conducted in an open, semi-structured format with some broad questions to guide the conversation. These questions were structured under two themes:

1) Current Procurement Requirement

- What do you procure in terms of products/equipment/infrastructure or services?

- Are you able to customize the requirements for your procurements? If yes, in what way?

2) Sustainable & Circular Economy Procurement Requirements

- Do you have sustainability criteria with your requirements? What are those criteria? How do you define sustainability?

- How do you maximize serviceability and lifetime of the products/services/equipment and infrastructure you buy? And do you have any requirements that you use now (e.g. spare parts)?

Recommendations [Next Steps]

This research has identified a number of best practices for circular procurement but limited global developments in actual circular economy certifications. Even still the City has made good efforts towards applying circular economy in local procurement. In the absence of a clear circular economy certification program to adopt, the following strategic recommendations within the City, and in partnership with other levels of government and industry, will help guide the City towards even greater circular economy practices in the City's procurement of products, equipment, infrastructure, and services.

Recommendation 1: Bolster the definition of circular economy in the City of Vancouver internal Sustainable and Ethical Procurement (SEP) Guidelines with reference to Circular Public Procurement (CPP) to provide clarity.

- E.g. Circular public procurement is defined by the European Commission (2017) as 'public authorities purchasing works, goods or services that seek to contribute to closed energy and material loops within supply chains, whilst minimizing, and in the best case avoiding, negative environmental impacts and waste creation across their whole life-cycle'.

Recommendation 2: Design a set of internal circular economy Guidelines that would feed into the SEP Guidelines to build capacity to explore new circular economy pathways.

- The success of the SEP guidelines demonstrates there could be space for the design of a supporting circular economy Guideline that is referred to within the SEP guideline (both for internal use and for venders in some cases). There are a number of resources open for the City of Vancouver to use as source material to help design such a document including best practices in Circular procurement policies (e.g. Toronto). As discussed in the Circular Procurement section of this report, Circular Public Procurement has been relatively well established over the past decade in the EU. Repurposing insights and information from EU policy documents on Circular Public Procurement (e.g. SPP Regions, 2017) could be an effective way of producing this information.
- As well as supporting procurers in ensuring their procurement practices are more circular, this circular economy Guideline could be an important way of building capacity and generating internal knowledge and learning within distributed user groups about the best circular economy practices.

Recommendation 3: Consider refining circular economy related sections in the Sustainable and Ethical Procurement Vender Questionnaire to provide opportunities for venders to demonstrate their circular credentials and capabilities (without increasing length of questionnaire).

There are two ways in which vendors can demonstrate their circularity in the Sustainable and Ethical Procurement Vender Questionnaire through participation in sustainability frameworks that align with circular economy:

i. If the supplier has attained any circular economy certifications, then they can detail these achievements.
ii. Similarly, if the vendor uses circular economy certified tools or methodologies to assess their products' and company's circular performance, they could also demonstrate this in the questionnaire. This can either be self-assessment conducted internally or by an external third-party.

Demonstrated Participation in Sustainability Frameworks that Align with Circular Economy			
Circular Economy Certification	Cradle-2-Cradle	○	
	Ecolabels (e.g. Nordic Swan/EU Ecolabel/Green Seal[1])	○	
Circular Economy Tools/Methodologies	Material Circularity Indicator	○	
	Life Cycle Assessments (LCAs)	○	
	Circular Economy Toolkit (CET)	○	
	Circular Economy Indicator Prototype (CEIP)	○	
	Circular Economy Index (Di Maio & Rem, 2015)	○	

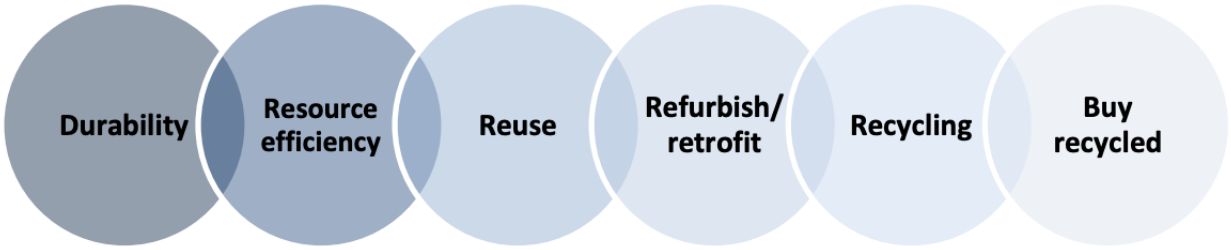
[1] For a comprehensive list of EPA recommended Standards and Ecolabels, see: https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing

- Relatedly, the City could complete annual scans for circular economy certification frameworks. Many of these circular economy standards, tools and certifications are still in development due to the complexities of measuring the circular economy. The consensus from the literature is that it would be difficult to produce a one-size-fits-all circular economy certification that is applicable in every place and at every scale. Instead, bespoke circular tools could be selected for particular industries/sectors by the City. More research is needed into the different circular economy indicators under development including comparative analysis to evaluate the suitability and effectiveness of circular indicators.

Recommendation 4: Incorporate new circular economy criteria/elements within products, equipment, and infrastructure technical requirements with high value procurements to start.

Building from the recommendations of the EU SPP Regions (2017, 6), there are 6 circular economy criteria themes that can be introduced into technical requirements. These are: durability; resource efficiency; reuse; refurbish/retrofit; recycling; buy recycled.

All or some of these criteria can be incorporated into the technical specifications and can be included as part of the award criteria and weighted according to the City's priorities.



(SPP Regions, 2017, 6).

Below find some examples of possible circular economy criteria that could be included in the technical requirements Suppliers.

Circular Criteria Elements Examples

DURABILITY

- Sufficient spare parts and services with the product.
- Local provider for parts and service and remanufacturing as applicable.
- Options for longer base warranty period.
- Option for onsite manufacturing of spare parts when appropriate (with 3D printing or other).
- Practical and easy to use operation and repair instructions available with product (or online) when safe and practical to do so.
- Service repair videos and/or chat lines for servicing your products.
- Embedded technology for remote troubleshooting and servicing.
- Network of repair volunteers trained on how to support increasing product life locally.
- Promoting owner capability to repair where appropriate.

RECYCLING

- Verification of recycling methods and confirmation of recycling or remanufacturing processors (ideally locally or regionally).
- Post-Consumer Content Materials.
- Participating in a regional and/or local extended producer responsibility program for recycling.

BUY RECYCLED

- Purchase textile sub-components with recycled fibres, recycled paper etc.
- Require a minimum of recycled material in packaging.

REUSABILITY

- Have a clear and local plan for material recovery and re-use at the end of life of the product
- Deliver products in reusable transport packaging.

RETROFITTING/REFURBISHMENT

- Building appliances and systems through energy service contracts
- Option for refurbishment

Recommendation 5: Procuring departments could consider identifying high-value components for purchased products, equipment, and infrastructure and then complete a market assessment with select venders to address at least the following three (3) questions:

- How they have designed those components for long life and useful end of life towards circularity?
- How the City can extend the life of the component with proper maintenance etc.?
- How to specifically best manage the end of life of components towards circularity?

Recommendation 6: Consider issuing a local or regional circular economy Request for Information (RFI) to establish (a) the readiness of key venders to implement circularity principles, (b) the viability of products' as services, (c) and where there may be liability, warranty or other reasons for precluding the purchase of repaired, refurbished, remanufacture products.

In alignment with the Canadian Federal Government's Request for Information (RFI) on Upcoming Requirements on Circularity and Durability of Goods in Public Services and Procurement Canada (PSPC, 2020)[2], the City of Vancouver could issue a circular economy RFI.

By issuing its own local/regional RFI in the future the City could gather critical information from suppliers, continue to elevate the importance of circular economy in the region, and help to focus on viable opportunities.

[2] For more information see: https://buyandsell.gc.ca/procurement-data/tender-notice/PW-19-00901187

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