



circular SQUAMISH

DISTRICT OF SQUAMISH CIRCULAR ECONOMY ROADMAP

Stakeholder Workshop Summary

DECEMBER 20, 2021 | REPORT



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Key Take-aways

On November 26, 2021, the District of Squamish brought together business, government, education and training providers, and non-profit sector leaders as part of an interactive, virtual workshop to present its draft Circular Economy Roadmap. Several prominent themes emerged from the workshop discussions, summarized below.

Awareness Building and Local Engagement

- Community education and awareness building will be essential, leveraging collaborative relationships with local post-secondary institution, not-for-profits, and others.
- Better data collection and information sharing between local businesses and governments will be important.
- Targeted engagement with local businesses on CE priorities and focus areas will be important, leveraging Squamish's existing entrepreneurial strengths and community to promote circular business models.

Circular Economy Centred Policy and Incentives

- Important to align local and regional policy with provincial and federal priorities to maximize the synergies and potential for scale up of CE solutions.
- Incentives for local businesses will be needed to encourage the adoption of circular economy models (e.g., reduced fees or expedited permitting for projects that meet specific criteria) or to participate in programs that promote activities and behaviours that look to reduce waste.
- Procurement should be explored as a key driver of demand for local CE products and services.

Investments in Circular Economy Infrastructure

- Interest exists to support waste-to-resource opportunities, including in the areas of food and textiles, and the need for better infrastructure to support the collection of these resources.
- The development of digital platforms / infrastructure can help connect local and regional businesses and allow for the sharing of resources and find new synergies.
- Land use planning is important to consider as it relates to providing the space needed for developing CE infrastructure and related supply chain supports and systems.

Event Overview

The District of Squamish has been working to align its economic development strategy with its long-term sustainability goals and climate plans. This includes recent investments in its Economic Action Plan, Emerging Sector Roadmap and business resiliency programs, alignment with the **Doughnut Economics** framework, and its Community Climate Action Plan.

Bringing these elements together under one umbrella, the District of Squamish has drafted a Circular Economy (CE) Roadmap to support economic prosperity in the region while delivering additional environmental and social benefits to the community. The CE Roadmap aligns with global, national, provincial, and regional trends and includes a focus on building the ecosystem, linking with the research community, and supporting local businesses, including across three initial key sectors: construction and built environment, food, and textiles.

On November 26, 2021, the District of Squamish hosted a 3-hour virtual workshop that introduced the draft CE Roadmap and gathered initial input from stakeholders. Interactive breakout discussions explored how Squamish's CE Roadmap could best leverage the global groundswell toward a more circular economy, support local businesses and the community more broadly, attract investments and talent to region, and deliver on climate and environmental goals.

Key objectives for the workshop included:

1. Generating an understanding of the circular economy as a model for economic prosperity and its relevance to Squamish.
2. Socializing Squamish's draft CE Roadmap at a high-level and gather input from key stakeholders.
3. Understanding the types of activities and tactics (quick wins and medium-term efforts) that should be considered in line with the thematic areas, sector trends, and best practices – as well as the criteria that provide rationale to the selection of projects and initiatives.
4. Understanding how workshop participants would like to be engaged in and contribute to the success and implementation of the CE Roadmap going forward.

The workshop agenda was divided into two components (see Appendix A). A number of guest speakers shared perspectives on the circular economy and the draft CE Roadmap, including Tima Bansal (with the Ivey School of Business at Western University and Chair of the Expert Panel on the Circular Economy in Canada with the Council of Canadian Academies), Paul Shorthouse (Managing Director of Circular Economy Leadership Canada and Senior Director with the Delphi Group), staff from the District of Squamish, and two local businesses (see Appendix B for a summary of key points from the guest speakers).

Profile of Workshop Attendees & Poll Results

The workshop hosted a total of 52 participants from across local, regional, and provincial government, education and training, businesses, non-profits, and consulting firms (See Figure 1).

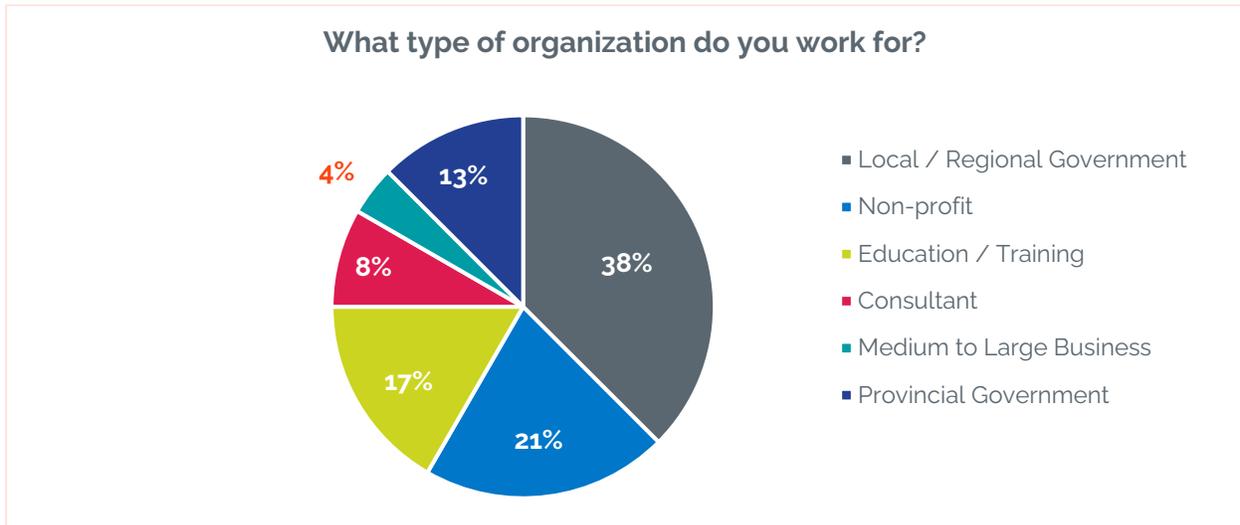


Figure 1: Participants by type of organization. (N = 24)

Over 80% of participants were familiar with the term circular economy, with just over one-third (38%) being very familiar with the term (See Figure 2).

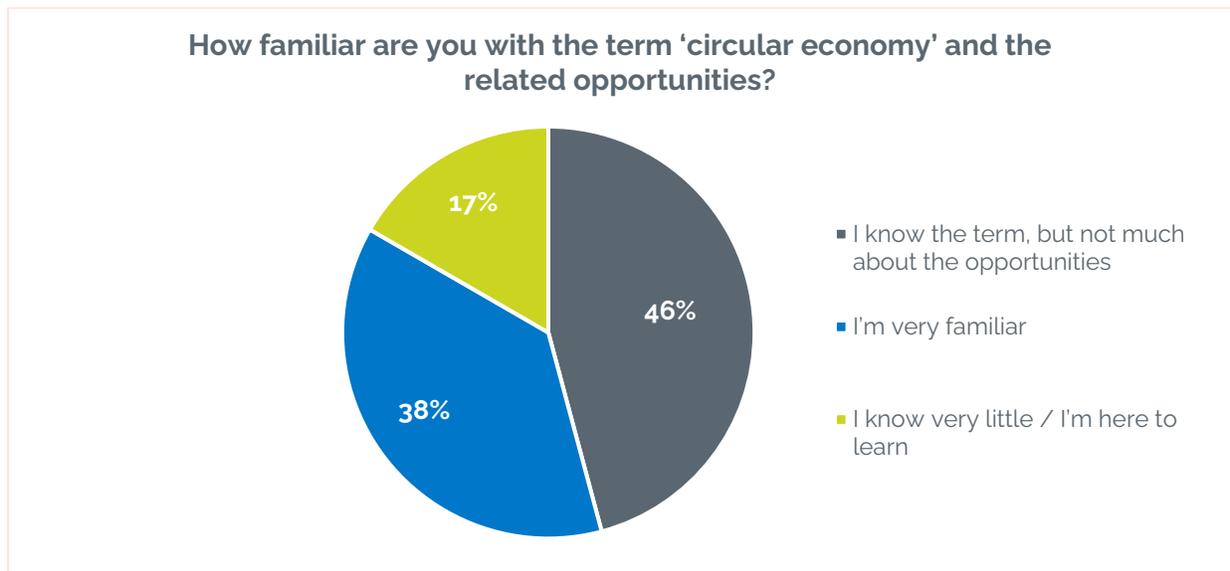


Figure 2: Participant familiarity with the circular economy. (N = 24)

The top benefits identified by participants (see Figure 3) through a polling question was a linkage to reducing GHG emissions and creating climate change resiliency, focusing on local resources and strengths by maximizing value from materials and resources, and using these benefits to improve social inequalities.

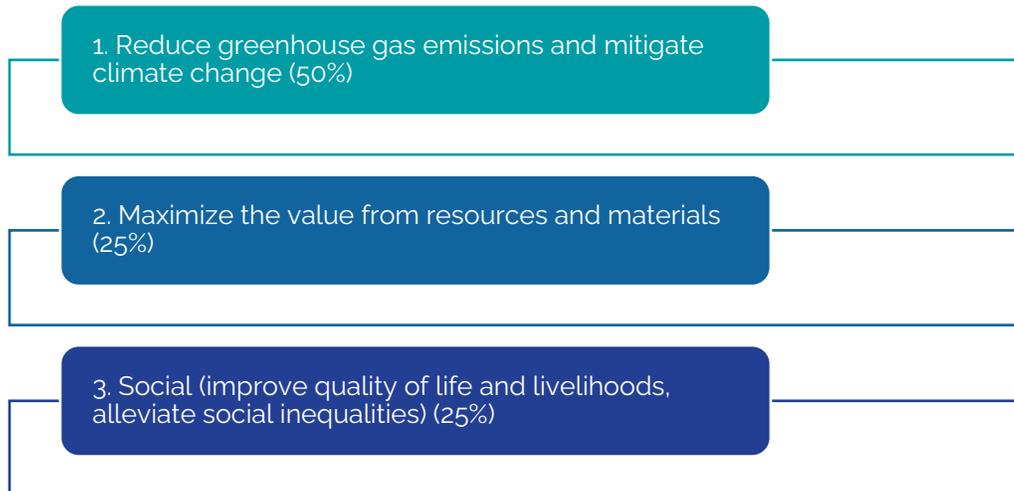


Figure 3: What are the top benefits you see for Squamish by embracing circular economy strategies and initiatives? (N=16)

In addition to the top benefits, participants selected the top actions to focus on to advance Squamish's circular economy (see Figure 4). The top three choices focused policy development to incentivize circular economy practices, alongside, growing awareness of the circular economy through information sharing and more investing in the infrastructure that enables circular economy activities.

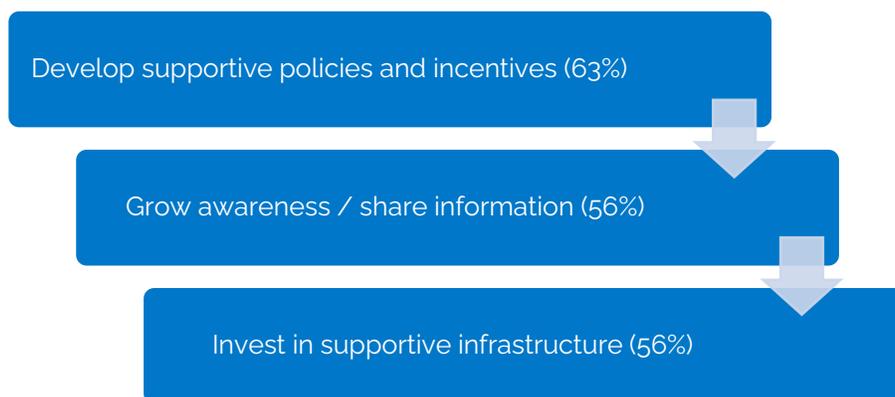


Figure 4: What are the top things we need to focus on to advance the circular economy? (N = 16)

Summary of Findings

The workshop offered two rounds of structured breakout discussions with participants. The key take-aways from the breakouts are summarized below under each of the relevant questions.

Breakout 1: Initial Feedback on Squamish's Draft **CE Roadmap** and its Ideal Outcomes

Question #1: What aspects of Squamish's draft CE Roadmap resonate most with you and/or get you most excited?

Local Leadership and Regional Collaboration

- Some are excited to hear that momentum around CE is starting to form in Squamish with mayoral support; lots of forward thinking happening around it.
- Collaboration is going to be a big piece of moving CE forward in Squamish, including regional collaboration and leadership on CE that aligns with provincial and federal climate action and environment, social, and governance (ESG) priorities.
- There is a role the Province of BC has in supporting investment in the region and working with the federal government to support this.
- There is an opportunity to work more collaboratively with the federal government and local communities to create more opportunities for funding and ensure that CE is included in future funding programs.
- Examples could include leveraging the B.C. Social Procurement Initiative, finding synergies and opportunities to scale funding and collaboration.

Leveraging Squamish's Strengths & Resources

- Important to prioritize and build of local community strengths and resources in line with CE opportunities.
- The CE presents an opportunity for Squamish to address pressing economic issues; including leveraging core and newly established sectors in Squamish primed for CE.
- Better data and information will help companies know more about the availability of resources; a more regional approach will help here.
- Waste-to-resource opportunities require knowing who else is out there, who is interested, and who wants to collaborate.
- Economies of scale are enabled by platforms that showcase and share the resources that exist across communities and businesses.
- Opportunity to meet the demand from the community to buy local and support businesses that has local best interests in mind.
- There are many First Nations wanting to start a business in Squamish but struggling to find land for manufacturing, as well as processing waste. CE concepts and business models may be able to support this.
- The community forest will be approved in coming months, creating some linkage opportunities for CE in Squamish.
- Some are looking forward to focusing on textiles as part of Squamish's CE Roadmap, including the social justice and equity piece that comes from that.

Workforce & Educational Opportunities

- There are many entrepreneurs in Squamish, many already with a CE mindset, which presents opportunities to help them further build CE into their business models and scale.

- New opportunities to upskill or reskill the workforce in line with the CE. There is an opportunity to focus on education (knowledge and skills development) to provide students with the tools to operate in a new type of economic model.
- There is an opportunity to develop micro-credentials as there is a shift in labour market towards new technologies and services that align with CE.

Question #2: How do you think applying a circular economy lens to the District of Squamish could bring new opportunities for and/or help achieve our goals as a community?

OCP Goal Area	Circular Economy Opportunities
Resiliency	<p>Supply Chains</p> <ul style="list-style-type: none"> • Strengthening local supply chains for food, energy, and goods independence and intentionally using local waste as an input can build resilience against supply chain failures. • Connect businesses locally / regionally to support more local supply chains - better for economy, reduce transportation impact and make more resilient / reduce reliance on large supply chains. <p>Land Use and Resource Extraction</p> <ul style="list-style-type: none"> • Less extraction of resources enables natural assets to do their important job. • Opportunity to use land for CE industry that is too hazardous for other land uses. <p>Regional Collaboration</p> <ul style="list-style-type: none"> • An appetite exists for an approach that addresses local / regional resiliency; however, getting municipal buy-in and promoting the attractiveness of a regional approach is not always easy. • Need for coordinated collaboration across sectors - creating a change in thinking about design and waste-to-resource opportunities.
Health	<p>Mental and Physical Health</p> <ul style="list-style-type: none"> • Mitigation of mental health impacts and ecological grief associated with a wasteful lifestyle and dependence on cars for transportation. • Resilience against climate change will support human health (access to shelter, water, food, ties into mental/physical health). <p>Equity and Affordability</p> <ul style="list-style-type: none"> • Circular economy can improve access to many things. • Less focus on commodification creates more room for equity and justice. • Improving affordability and inclusive access to resources people need to thrive.
Connectedness	<p>Local Business Community Building</p> <ul style="list-style-type: none"> • Importance of recognizing the opportunity regionally - a connected network for CE for businesses and residents. • A more connected business community will be invested in each other's success.

	<ul style="list-style-type: none"> • More communications about where things are coming and going to, creating more links to community businesses. • Can encourage conversations and collaboration between local businesses and NGOs. • More opportunity to capitalize on regional talents and opportunities. (e.g., tourism/service in Whistler, agriculture in Pemberton) to create an impact beyond Squamish. <p>Sharing</p> <ul style="list-style-type: none"> • Shared rather than individual access to goods provides an opportunity for more equitable access. • Sharing consumer goods provides a new opportunity to discover and meet other people in the community with shared interests and values. • Creating more community connectedness around repair centres, re-use stores, non-profits, and circular material networks. • Can include a consolidation of platforms to share information on waste / resources in Squamish.
<p>Livability</p>	<p>Local Job Creation</p> <ul style="list-style-type: none"> • Keep jobs in the local economy rather than seeking external/offshore manufacturing and recycling. • Creating youth employment opportunities. • Reinvesting real estate dollars into retrofitting of existing homes. • May open more niche opportunities for small businesses and options for self employment • CE will drive innovation, R&D, and public-private partnerships. <p>Cost of Living</p> <ul style="list-style-type: none"> • Landfills are incredibly expensive; less waste means less cost for taxpayers.
<p>Engagement</p>	<p>Education and Awareness</p> <ul style="list-style-type: none"> • There is a great opportunity to educate and potentially connect businesses with unexpected partners in the community or region. • A CE framework will bring visibility to ongoing actions and opportunities as well as celebrate winners. • More understanding of our industries (particularly core industries) and their role in community. • There's a good opportunity to help us become more aware of the full lifecycle impacts of our choices and hopefully leading to better choices. • Leverage Chamber relationships to aid communication and training to business. • Can invest in education and skills development that recognize CE as a viable alternative to the linear workforce skill set. <p>Regional Collaboration and Local Champions</p>

Climate

- CE projects and initiatives builds relationships, networks, and social capital.
- Opportunity to leverage CE for local branding.
- Amplification of efforts across businesses and across the region / participating communities.
- Great way to connect and engage with local businesses.
- Opportunity to take a regional approach to the CE work, including a strengthened agri-food sector.

GHG Emission Reduction

- Huge opportunities for scope 3 GHG emissions reduction.
- Less consumption leads to less GHG emissions globally, so the impacts go beyond Squamish.
- Opportunity to leverage the beneficial uses of landfill gas.
- Eliminating food waste is a key piece of climate action.
- Connect level of circularity of economy against GHG impacts (inside and outside of jurisdiction).
- Creating more local jobs tied to circularity reduces the commuting/GHG emissions tied to travelling to Vancouver or elsewhere.

Measuring Progress

- It's important to measure outcomes and link to targets: Starting with a few targeted areas like construction, textiles, food is a great way to pilot and measure on a smaller scale.

Breakout 2: Exploring Success Factors and Priority Actions for Squamish's CE Roadmap

Question #1: What are the broad elements you think Squamish CE Roadmap must consider to be successful over the next 5-10 years and achieve the desired outcomes?

CE Theme	Key Elements
Collaboration	<ul style="list-style-type: none"> Engage organizations that are in the same workspace as District of Squamish's circular economy team and create an active committee that has multiple representation (e.g., arts and culture, non-profits, and Squamish Nation) Work with education and training institutions for employment and skills training. Adopt or invest in digital tools that can support matchmaking, networking, and CE business models.
Innovation	<ul style="list-style-type: none"> Engage local post-secondary institutions to help drive key elements of the CE Roadmap to drive research. Develop accelerator programs to support and foster experimentation and proof-of-concept. Use community forests to keep harvesting in the corridor and providing wood products for the Sea to Sky community.
Policy	<ul style="list-style-type: none"> Track goals and KPIs to ensure alignment with CE goals and use good information / data to support policy development. Develop financial incentives for large-scale corporate buy-in to drive diversion or other programs/ initiatives. For example, require all businesses to divert or participate in CE (e.g., reduced fees or expedited permitting for projects that meet specific criteria). Consider tax/financial incentives for those companies that track and report CE activities. Adopt flexible zoning definitions that can support companies to pursue new activities across sectors.
Investment	<ul style="list-style-type: none"> Invest in infrastructure for the exchange of goods at landfill and create spaces for material reuse in a centralized location. Continue to focus on the development of green buildings using circular practices. Leverage other partner investments (e.g., collaboration with other post-secondary institutions in B.C.). Invest in more education events or workshops that support repair and aim to keep products in use for longer.

Question #2: What are some more specific actions you think Squamish's CE Roadmap should include? What are the top 5-6 priority actions the District of Squamish should consider in the next 12-24 months to achieve success in the long-run?

**Note: Bolded text indicates the actions that were voted as top priority in breakout groups*

Education Training & Awareness Building

- **Focus on the role of youth and get them involved in designing social media campaigns and teach circular approaches, new business models.**
- **Create a Community Ambassador program to support residents (funding for coordinators to scale procurement of circular materials / products).**
- **Use community focused circular economy education sessions at the local library to provide access to online resources, guides and toolkits, targeted education sessions, community**

directories providing information on repair, re-use-it spaces and showcase local organizations such as Pearls.

- **Deliver focus group discussions with local businesses (particularly those with traditional linear economy profit-only driven stakeholders), to get their ideas on how to overcome the (perceived and real) increased cost of CE and better understand CE models.**
- **Create a platform or network or marketplace of shared business assets that lists an inventory of opportunities and/or projects to collaborate around.**
- Partner with education institutions to develop new projects with industry who can bring funding.
- Develop a model/proof of concept that can then be circulated among community and businesses to illustrate steps and benefits of a CE.
- Give away cloth bags made from recycle materials with printed (in cloth) information about the circular economy.

Policy & Funding

- **Develop supporting policies and fee structures that encourage CE and discourage linear model of make and waste (e.g., penalties or fines, rather than education and carrot approach or cost-sharing for businesses to move to CE models).**
- **Incorporate land use considerations to enable CE to flourish.**
- Provide access to trained repair/installation staff as a DOS employee benefit (manage scheduling, trust, etc.), this could evolve into private operators with the experience to better support a local circular economy.
- Develop regulation around third-party, non-local, corporation to ensure their understanding of community values and needs are fully understood and encouraging local procurement through targeted policy.
- Ban plastic bags in the city and in stores by 2023.
- Require accountabilities for all sectors; identify the organizations and resources required for success and figure out how to involve those who aren't involved in the community.
- Develop of CE programs that create commercialized solutions/ventures that are linked to current core strengths and competency areas.
- Expand our GHG inventory to include scope 3 emissions, or measure and report on it.

Developing CE Infrastructure & Supportive Systems

- **Create infrastructure to support construction diversion from landfill (e.g., create space for deconstruction material sorting).**
- **Develop community indoor and/or outdoor agriculture hubs where locals can access an apprenticeship to learn about local farming, food production, farm business.**
- **Develop a textile recycling centre and bins available in the downtown core to collect and recycle textiles.**
- **Recruit volunteers to start recycling/upcycling textiles already in the landfill being stored.**
- Use landfill gas as a waste-to-energy resource.

Local Stakeholder Engagement

- Engage the rest of the industries and communities in the Sea to Sky region to better understand supply chain opportunities of local businesses to create efficiencies and acquire a baseline around data and stakeholders to better understand the ecosystem.
- Support community kitchens that can bring together wasted food with small scale producers for niche local food goods.
- Develop targets / metrics and incentives for organizations to focus on food waste diversion and composting and disincentives.
- Creates services such as a bike coop and lending library for sewing machines and tools.

Question #3: For the priority actions, who are the key organizations and/or stakeholder groups (including the District of Squamish) that must be engaged and involved? Is there an obvious lead or (two)?

Priority Action	Key Stakeholders and Lead Stakeholders
Develop targeted CE education sessions at physical locations (such as the local library), as well as through online resources	Lead: Academic Lead Lead: District of Squamish Sustainability Group Chamber of Commerce and local business leaders Local non-profits and climate action groups (e.g., Under One Roof and Pearls) School District and educational institutions (K-12 and PSI) Local library
Develop textile recycling centre and collection bins in the downtown core. Recruit volunteers to start recycling/upcycling textiles already in the landfill being stored.	Lead: District of Squamish Thrift Stores (i.e. Pearls) Waste haulers (including supportive training) Squamish citizens (including education)
Develop supporting policies and fee structures that encourage CE and discourage linear economy	Lead: District of Squamish Procurement networks
Host an online platform for local businesses to share their waste and resource materials with others	Lead: Local or Regional Organization Local SMEs District of Squamish Economic Development
Incorporate land use considerations to enable CE to flourish	Lead: District of Squamish Planning Department District of Squamish Real Estate Department Local business associations

<p>Develop an educational plan that informs key constituencies on need for and opportunities with CE; and that provides more specific skills/knowledge to support organizations engaged in CE within the District.</p>	<p>Lead: District of Squamish Post secondary institutions (e.g., Quest University, Capilano University) Local businesses</p>
<p>Financial incentives for SME, need to have direct private sector involvement.</p>	<p>Lead: District of Squamish Community Directories - repair, re-use-it spaces, surplus/need (ISO bread, ISO lumber, etc.)</p>

Other Insights from Participants

- **Receiving/sorting and resource yards** (probably plural, in time): these are needed for realizing the goals of the District's new Deconstruction Bylaw. Such infrastructure does not need to be provided by the District. However, the District must address this need in land use planning, zoning, and development application processing. Private sector investors in such facilities face obstacles relating to the above factors.
- **Low embodied carbon materials or design for disassembly:** Interest and excitement around incentives that might be on the table for low embodied carbon materials or design for disassembly plans (e.g. financial, zoning requirements, etc.)
- **With respect to other possible focus areas for the CE Roadmap:** "Landfill Circular Economy Options" should be more fully described. This is a large category. For Stage #2, it is not clear what "Forestry waste" refers to. There are four categories of forest and wood products sector wastes: Timber harvesting site waste; Log sort yard waste; Sawmilling waste; Remanufacturing plant waste (often clean dry material). Each category has its own stakeholders, challenges, opportunities; and there will be different levels of priority and opportunity for each.

Appendix A | Workshop Agenda

Start	Item
9:00am PDT	Meeting Begins
9:00-9:15am 15 mins	Welcome & Introductions: Setting the stage for a productive and collaborative workshop <ul style="list-style-type: none"> Welcome and introductions Background information and context
9:15-9:40am 25 mins	Overview of the circular economy model, its underlying principles, business strategies, drivers, and key trends (high level) in Canada and Provincially (policy, market, industry, and investment perspectives). <ul style="list-style-type: none"> Keynote Presentation: Tima Bansal, Canada Research Chair in Business Sustainability, Professor, Ivey Business School, and Chair, Circular Economy in Canada Expert Panel
9:40-9:55am 15 mins	High-level overview of Squamish's CE Roadmap and the three thematic focus areas (built environment, textiles, and food /organics). <ul style="list-style-type: none"> Q&A
9:55-10:30am 35 mins	Breakout 1: Interactive exercise on CE Roadmap to collect initial feedback on the CE Roadmap and ideal outcomes <ul style="list-style-type: none"> Facilitated breakout room discussions with input captured via Miro whiteboard board and in chat box
10:30-10:40am	10-min Break
10:40-10:55am 15 mins	Local Business Spotlight <ul style="list-style-type: none"> 2 local business presentations: Nexii & Under One Roof / Squamish Food Bank
10:55-11:10am 15 mins	Exploring the success factors for Squamish's CE Roadmap, including key enablers, priority activities, best practices, and case study examples. <ul style="list-style-type: none"> Q&A
11:10-11:50am 40 mins	Breakout 2: Interactive breakout exercise exploring success factors and priority actions the CE Roadmap <ul style="list-style-type: none"> Facilitated breakout room discussions with input captured via Miro whiteboard board and in chat box
11:50am-12:00pm	Summary of next steps and wrap-up.
12:00pm	Meeting Adjourned

Appendix B | Insights from Guest Speakers

Tima Bansal, Professor, Ivey School of Business, Western University; Canada Research Chair in Business Sustainability; and Chair, Expert Panel on the Circular Economy in Canada, Council of Canadian Academies

- A circular economy in Canada requires widespread shifts in practices in government, business, and civil society to:
 - Maintain utility of infrastructure, buildings, equipment, and goods;
 - Transform valuable waste into inputs; and
 - Strive for circular agriculture.
- By conserving material resources at their highest possible value, the CE aims to reduce the impacts of material extraction and bring human environmental footprints within planetary boundaries;
- Circular loops can be created throughout the value chain, from recovering by-products in the extraction phase, to reselling second-hand products to repairing goods and recycling materials at end of life;
 - Sustainable design and process optimization also have a role in reducing resource consumption, as do new models for accessing goods such as product-as-a-service;
- The circularity rate in Canada is 6.1% (vs. a global rate of 8.6% and 11.7% in the EU)
- What a circular economy offers Canada:
 - An opportunity for Canada to become a more environmentally sustainable, socially equitable, and economically successful country;
 - An aspirational direction in which to move, and ultimately involves transformative, system wide change;
 - Social and environmental opportunities including GHG reduction alongside a just transition and working in line with Canada's climate strategy;
 - Creates new revenue streams, reduced supply chain risks and promotes industrial symbiosis; and
- In the longer term, four scenarios were created to illustrate what a Canadian economy would look like in 2040 (see image below).

Paul Shorthouse, Senior Director, The Delphi Group & Managing Director, Circular Economy Leadership Canada

- The global transformation to circular economy has begun across all sectors of the economy, from natural resource and extractive industries, to manufacturing and construction, to more service-based sectors;
- It also spans the breadth of private sector, from established multi-national firms to innovative start-ups and small business entrepreneurs;
- There are five well-established circular business models or strategies. These are:
 1. *Circular Inputs into Supply Chains* – A business model which uses renewable energy, bio-based, or potentially completely recyclable materials as a key input.
 2. *Sharing Platforms* – A business model which involves increasing the usage rates of assets through collaborative models for sharing and community access.
 3. *Product as a Service* - A business model where a product's ownership is retained by the producer over the long-term to increase its productivity.
 4. *Product Life Extension* - A business model focused on extending the lifetime of products through repair, reprocessing, upgrading, and resale.
 5. *Resource Recovery* – A business model focused on the recovery of usable resources at the end of a product's life.
- What's Happening in Canada?
 - Canada has been including considerations for the CE in several of its sector strategies, including the Canada Minerals & Metals Plan, and its Forest Bioeconomy Framework for Canada;
 - In the last few years, Canada's gateway into the circular economy has been through a focus on plastics...
 - Including the launch of the Ocean Plastics Charter in 2018 at the G7 Meeting in Halifax and the Canada-wide Strategy & Action Plan on Zero Plastic Waste (with CCME);
 - More recently Canada completed a National Strategy for Remanufacturing & Value Retention Processes;
 - And are integrating circular principles into their Greening Government Strategy focused on procurement;
 - *In the Liberal Mandate Letter to ECCC was reference to forthcoming:*
 - Circular Economy Innovation & Infrastructure Fund for plastics
 - Right to Repair Legislation
- What's happening in BC?
 - CleanBC Roadmap to 2030 (incl. CE Strategy in 2022)
 - Plastics Action Plan (Single Use Items, recycling more plastics) & Cleaning Up Our Shores

- Organics management and food waste prevention
- Forest bioeconomy and construction (e.g., mass timber, biochar)
- Expanding Extended Producer Responsibility (EPR) coverage
- Local government action?
 - Union of BC Municipalities Resolution + leading municipalities and regional governments
- Private Sector & NGOs (examples):
 - **Metal Tech Alley** – initiative by the Lower Columbia Initiative Corp in Trail BC who have created in innovation cluster working with the large smelter run by Teck Resources, Selkirk college, and many innovative entrepreneurs and cleantech companies focused on battery recycling and the recovery of critical minerals and metals.
 - **Project Zero** – circular economy focused incubator that has been working with more than two dozen start-ups over the last few years.
 - **Share Reuse Repair Initiative** – Right to repair and just and inclusive workforce opportunities in circular economy.
- 4 key drivers, and a number of underlying enablers, are key to advancing the circular economy: Partnerships, Policy, Innovation, and Investment

Jennifer Stone, Economic Development Specialist, District of Squamish

- The Squamish CE Roadmap aligns with Squamish's official community plan goals as they relate to resiliency, livability, health, connectedness, engagement, and climate.
- Benefits of CE include reducing GHG emission and mitigating climate change, maximizing use of resource and materials, mobilizing new revenue opportunities, mitigating supply chain issues.
- The roadmap is working doc, outlines the methodology, and will be updated and improved as Squamish learns more on CE. There is a goal to include feedback from community as momentum builds.
- CE requires systemic change in thinking and is complex. The roadmap aims to simplify and break down the steps to a circular economy.
- Circularity does exist in Squamish, and the roadmap is a way of leveraging progress and expanding circular practices throughout the community.
- The roadmap is focusing on four key drivers: collaborate, innovate, policy, investment. These drivers will help focus on how to promote the following core elements: prioritizing the regeneration of resources, stretching the lifetime of products, and using waste as a resource.
- There are 2 focus areas within the roadmap:
 1. **Focus Area 1:** Set the foundations for circularity, provide clear direction and support for circular systems through investment, innovation, policy, and partnership.
 2. **Focus Area 2:** Take action on 3 key initial focus areas: food, textiles, and built environment.
- The goal is to ensure that projects pursued have the best chance of success and the highest level of impacts.
- Investigative work on projects is planned for 2022, with the expectation of rolling out initiatives in 2023.

Ian Picketts, Manager of Sustainability and Climate Change District of Squamish

- In 2019, a climate emergency was declared for Squamish, prompting targets of a 45% reduction in emissions by 2030, and to achieve carbon neutrality by 2050.
- In 2020, Squamish's Community Climate Action Plan (CCAP) also prompted the creation of an inventory of community emissions.
- Squamish's climate goals are to reduce emissions by 38,300 tonnes CO₂e per year by 2030. To reach this target, the District of Squamish is focusing on 6 bold moves:
 1. Closing the loop on waste;
 2. Shifting beyond the car;
 3. Decarbonizing transportation;
 4. Decarbonizing existing buildings;
 5. Constructing better buildings; and
 6. Other organizational actions.
- Recent accomplishments in these areas and for which CE initiatives can help build upon include:
 - New landfill gas system;
 - Active transportation improvements;
 - Telematics fleet assessment; and
 - Heat pump pilot project.
- The District has several other ongoing initiatives that can be reviewed by visiting ([Jeff / Ian to insert link here](#))

Jeff Wint, Outreach Sustainability Coordinator, District of Squamish

- Squamish's CE roadmap includes three thematic areas that align with existing community plans and goals through the CCAP. The three thematic areas include: organics and food systems, the built environment, and textiles;
- *Built Environment:*
 - Objectives: 1) Reduce GHG emissions of built environment, 2) reduce construction and demolition waste to landfill, 3) increase reuse of material in new construction and renovation; and 4) incentivize design for disassembly and use buildings as material banks;
 - Squamish is growing rapidly and opportunity exists to reduce emissions throughout the building life cycle;
 - Embodied carbon provides an opportunity to reduce emissions at various phases of construction (i.e. transportation, manufacturing, construction, use and maintenance, demolishing, landfill);
 - There is a significant opportunity to reduce emissions via deconstruction. This opportunity is highlighted in the District's deconstruction bylaw; and
 - Working with Whistler and Squamish Nation, the District is quantifying embodied emissions and working to identify actions that can be taken to reduce these emissions. The outcome from this study will also create a guidebook to guide other BC communities.
- *Textiles*
 - Moving forward, a focus will be placed on reducing textile waste to landfill, increasing access to textile repair and recycling, and increasing the awareness of and participation in the textile reuse market;
 - Opportunities include community reuse and repair events, online consignment and in-person thrift stores; and
 - The District can highlight and promote these activities and use them as a way to demonstrate to community how textiles plays a role in circular economy.
- *Organics and Food Systems*
 - This area is a key focus of the CCAP and Squamish's Zero Waste Plan. Objectives include organics landfill diversion; and, reducing avoidable food waste, increasing regenerative farming practices (such as Sea to Sky Food Recovery Strategy) and increasing food security by building resilient food systems.

Zosia Brown, Vice President of Sustainability, Nexii

- Buildings and construction account for 39% of global CO2 emissions, meanwhile the volume of buildings is expected to double over the next 40 years. The construction industry is also responsible for creating immense quantities of waste;
- Nexii is providing solutions to mitigate these challenges through sustainable building products (walls and roof) via panelized construction and design for building disassembly;
 - Case study: Starbucks building constructed with 20% less embodied carbon, 43% reduction in GHG from operation energy, and was constructed in 6 days;
- The Nexii focus is on reducing the impact of a buildings through whole building life cycle assessment and focusing on reducing embodied carbon;
- CE case study: Nexii Squamish Discovery Centre;
 - A sales office for Nexxi built in 2019, 700sq ft building, when lease came up on land, they found a buyer for the office building, and performed a disassembly/ reassembly case study;
 - Office was disassembled for a buyer by Lighthouse and Unbuilders and then reassembled for use on Salt Spring Island;
 - Disassembly process required a crew of 6 members and was not a physically intensive process; and
 - The project achieved 95% diversion from landfill and reduced embodied carbon by 63%.

Mariana Borsuk-Gudz, Program Manager, Under One Roof Food Hub / Squamish Food Bank

- Under One Roof Food Hub is social service organization born out of collaboration through Squamish Food Bank and Squamish Helping Hands;
- The focus of the Food Hub is on providing food access and food security and moves away from a narrative of a food bank and charity towards a more dignified and empowered view of providing food access for all;
- Under One roof and the Food Hub have several initiative that support a CE (i.e. recycle bicycle program);
- Market and community kitchen provides pay-what-you-can grocery space and does have any patron eligibility requirements;
- Through their work, on average each month, 29, 357 lbs of food is rescued and 26, 196 lbs of food is distributed to the community;
- Through its work, the organization has identified that that the dominant source of waste in the restaurant/service industry is plated food, that has sat in front of a consumer, and has been brought back to the kitchen;
 - Unfortunately, this waste is not able to be redistributed (though could certainly be diverted to farms/composts, to close the loop somewhat);

- Assuming food is relevant and edible, the largest barrier tends to be knowledge of the program and vendor incentivization, i.e., vendor willingness to put the time and resources into discerning what food is distributable and to prepare it for rescue in an ongoing way;
- Under One Roof also works on a scale somewhat limited by resources and infrastructure and are working on creative solutions within that scope; and
- They are simultaneously focusing on improving quality and quantity – the organization wants to grow, to provide more access to more people; however, it wants to make sure to do this in a way that is sustainable. Additional to its core work, the organization is specifically focusing on increasing community outreach and building relationships with more and more local vendors and organizations.

Appendix C | Registered Organizations

Below is a list of the organizations that registered for the CE Roadmap workshop.

- Backcountry Brewing
- BCIT
- B.C. Ministry of Environment & Climate Change Strategy
- B.C. Ministry of Forest, Lands, Natural Resource Operations and Rural Development
- Canada Climate Law Initiative
- Capilano University
- Carbon Engineering
- Chrysalix Energy Venture Capital
- Community Energy Association of BC
- The Delphi Group
- Destination Canada
- District of Squamish
- Downtown Surrey Business Improvement Association
- Foresight
- GHG Accounting
- GLOBE Series
- Helping Hands
- Kollektively
- KORE
- Matthews Southwest
- MP West Vancouver-Sunshine Coast-Sea to Sky Country
- Nexii
- Our Squamish
- Quest University
- Resort Municipality of Whistler
- SLRD
- Squamish-Lillooet Regional District
- Squamish Chamber
- Squamish Nation
- Squamish Terminals
- STARK Architecture Ltd.
- The Squamish Food Hub
- UBC
- Whistler Reuse-it

Appendix D | Exit Survey Results

Participant top takeaways from the workshop (verbatim responses):

- Progress on CE and the built environment in Squamish
- There's a lot of interest in the CE throughout the S2S
- Land use considerations to enable establishment of local CE
- DOS' circular economy approach will lead the S2S corridor
- New term: circularity rate... now wondering if we could calculate for Squamish community using modelling that Tima shared
- Squamish needs to increase awareness/education about circular economy
- Collaboration is going to be key to make this work
- Excited to hear about the commitment to CE.
- Loved Tima's keynote
- Need strong education framework
- The need for businesses to communicate their waste products and develop CE synergies
- There's some good work already being done
- Address cost barriers for CE businesses through policies
- There are great CE pilots and initiatives happening in Squamish already!
- Textiles recycle could be an excellent start point
- Financial incentives will be asked for by local businesses
- Happy to explore funding opportunities that may align with roadmap priorities.
- Listening to the work being done within our own communities in Squamish; Nexii and Helping Hands
- Private sector support and involvement key
- Role of land use planning, local procurement, and policies to support CE
- There's lots of opportunity to do more, and some is really low hanging fruit!
- Start building CE awareness locally, education, outreach
- CE roadmap with drivers is looking good
- Canada is very behind CE (not even at average levels)
- Education for the community and business will be key
- Appreciated the opportunity to learn more about local businesses and Under One Roof - thank you!
- Move iteratively to fail forward and evolve

Which activities might you like to contribute to as it relates to the development of Squamish's Circular Economy Roadmap going forward?

