Shifting to Deconstruction

THE CHALLENGE

The lack of market for the reuse of construction, demolition and deconstruction materials

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- **Actors:** Producers, governments, designers, users/reusers
- **Scope:** ⅓ of regional waste, impacts throughout lifecycle
- **Obstacles:** Lack of regulation/concern, end-of-life not considered
- **Impacts:** GHGs, old growth, landfill space, cultural loss, jobs
- **Why challenge persists:** Industry capacity, awareness, no regulation/standards
- **How evolving:** Emerging bylaws, diversion targets, GHG concerns
- **Opportunities:** Examples, campaigns, industry resources, research

THE CURRENT SOLUTIONS THAT ARE BEING TRIED

- Minimum recycling requirements
- Deconstruction as part of development strategy (e.g. London, Richmond, Toronto)
- Affordable retrofit programs (e.g. Yukon, Toronto)
- Programs to allow for moving buildings (e.g. Richmond, Dawson City)
- Deconstruction hubs for materials (e.g. Vancouver, Habitat for Humanity)
- Regional approaches (e.g. Metro Vancouver Solid Waste Strategy)

THE GAPS THAT EXIST AND WHO/WHAT IS PRIMARILY IMPACTED? WHAT IS THEIR SPECIFIC NEED?

GAP

- Physical space
- Data on industry information
- Indigenous involvement/solutions
- Education
- Tools
- Policy

THE GAPS THAT EXIST AND WHO/WHAT IS PRIMARILY IMPACTED? WHAT IS THEIR SPECIFIC NEED?

WHO/WHAT is impacted

WHO/WHAT	SPECIFIC NEED
marginalized/ low income communities	better employment opportunities
community at large	safe and affordable housing
natural ecosystems	protection, advocacy, policy
future generations	ethical practices now
economic impacts - real estate industry	job development, time to build responsibly
Indigenous communities	seat at the table, indigneous perspective
Consumers	need more sustainable options

WHAT ARE THE IMPACT ZONES (1 TO 3) TO ACT ON IN THE NEAR FUTURE? AND WHY?

- Establishing market engagement and dialogue processes to monitor and encourage market readiness, capacity, and commitment; and assessing stakeholders' level of confidence in making the change, and the underlying causes of discomfort. Takeaways from the engagement and dialogue are critical to understanding the alignment with existing cross-cutting strategies and plans.

- Developing standards and regulations to expand local infrastructure and to promote innovation, partnerships, grants, and procurement.

- Implementing cross-level education on critical thinking, systems, values, and training to speed up transition to a knowledge-based economy

OUR KEY LEARNINGS DURING THE PROCESS (AND HOW WE CAN USE IT IN OUR FUTURE WORK)

- Don’t reinvent the wheel: there are numerous examples of initiatives that can be built out and expanded to support this emerging new market for reclaimed materials.
- Industry engagement and dialogue are key to overcoming the current barriers and challenges.
- There is a lot of passion on this topic, which can fuel further change if bolstered by decision-makers.
- The time for talk has passed: we don’t need to have all the answers to start to taking action to reduce CRD waste.
- There is no silver bullet: actions have a compounding effect to support the reuse/deconstruction market.

OPPORTUNITIES FOR ACTION

Moving on from this process, there are a few key actions that will be important for sparking change at multiple levels of influence:

- Encourage **innovation**: partnerships, support, grants, procurement are needed to create space for change.
- Find opportunities to expand local **infrastructure**: primarily storage, workshop, and retail space.
- Build an **approach/strategy/road map** for your organization based on existing local and regional frameworks.
- Engage and **communicate**: learn what works, what is already being done, and how you can contribute.

EcoHack-a-City: The Demolition Disrupters Final Presentation

Challenge: Lack of Markets for the Reuse of Construction and Demolition Waste

THE CHALLENGE

Challenge

Lack of markets for the reuse of construction and demolition waste

Who or what is affected?

The natural environment/climate, local government, landfills, processing facilities, developers, resellers, haulers, deconstruction services, etc.

Scope of challenge:

- C&D waste makes up one third of the region's municipal waste stream
- Approximately 3,000 buildings are torn down yearly in Metro Vancouver
- New construction projects in the region have been able to reuse or recycle more than 75% of their potential waste materials
- Experience in Metro Vancouver and other regions demonstrates that deconstruction can divert at least 80% of building materials from the landfill

THE CURRENT SOLUTIONS THAT ARE BEING TRIED

Local Government Action/Policies and Regulation

- Municipal recycling and deconstruction policies and bylaws
- Financial incentives to source separate at the landfill
- Circular building of civic sites such as using materials from a deconstruction site into a new building
- Minimum reuse requirements for salvaged materials at new civic sites
- Access for salvage at landfills (e.g., Urban Ore Salvage)

Research, Innovation, and Facilitation

- Deconstruction hubs
- Research of markets for materials, building capacity for deconstruction, embodied carbon impacts, etc.
- Working groups focused on C&D waste (e.g., National Zero Waste Council)

THE CURRENT SOLUTIONS THAT ARE BEING TRIED

Reuse Stores

- Non-profit stores that receive donations and sell for reuse/repurposing
- For profit business that buy and sell used building materials
- Reuse malls that only sell secondhand items

Innovators/Service Providers

- Businesses that provide recycling options for C&D waste or deconstruction services

THE GAPS THAT EXIST AND WHO/WHAT IS PRIMARILY IMPACTED? WHAT IS THEIR SPECIFIC NEED?

Gaps

- Data to understand current C&D material flow
- Market capacity uncertainty
- Policy to mandate recycling and reuse
- Regulation that dictates types of materials used and designing for modularity/disassembly
- Space available for storing materials for reuse
- Demand creation for some products (e.g., blinds)
- Solutions to use materials that may be outdated (e.g., single pane windows)
- Lack of general awareness of the problem by the general public/builders

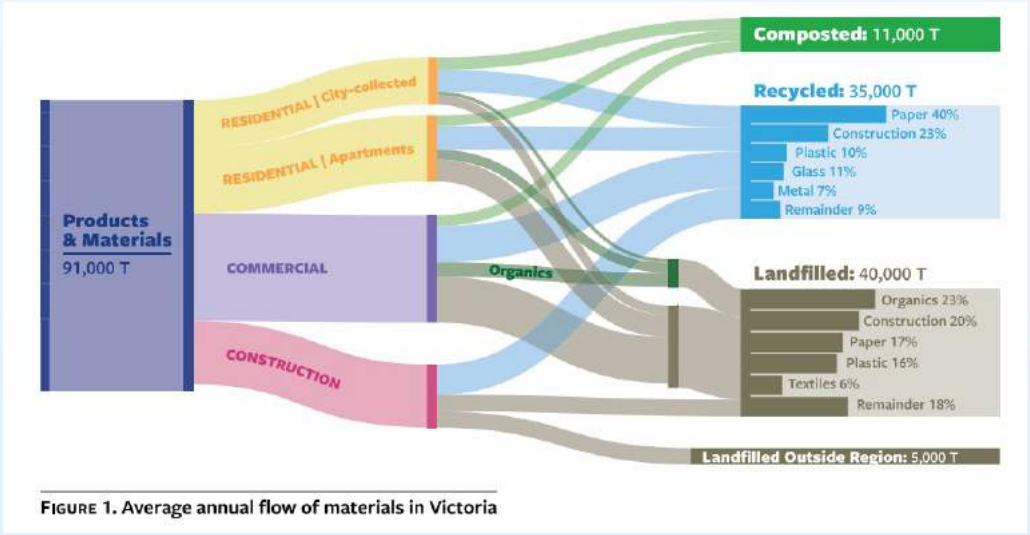

FIGURE 1. Average annual flow of materials in Victoria

THE GAPS THAT EXIST AND WHO/WHAT IS PRIMARILY IMPACTED? WHAT IS THEIR SPECIFIC NEED?

Impacted Groups

- Natural environment (trees!)
- Reuse stores: Cost of disposal for reuse stores, uncertainty of influx of materials, and space can be a barrier
- Innovators inhibited by current market availability for materials
- Local landfills
- Service providers
- Lack of understanding of needs for certain stakeholder groups (e.g., architects or other groups that could reuse building materials)

WHAT ARE THE IMPACT ZONES (1 TO 3) TO ACT ON IN THE NEAR FUTURE? AND WHY?

Research and Data Collection

- Understand where materials are currently going and additional market capacity required

Collaboration

- Continue to collaborate with peers to share best practices and learnings
- Gain a better understanding of the problem from groups that are traditionally do not participate in this sphere of work

Partnerships

- Partner with organizations that can help progress innovation by providing resources or financial support (e.g., deconstruction hubs or pilot programs)
- Facilitate/enable a network of connections to help create a more robust market
- Look for new, creative ways to build awareness and develop impactful messaging to drive change

OUR KEY LEARNINGS DURING THE PROCESS (AND HOW WE CAN USE IT IN OUR FUTURE WORK)

- Raise the profile of the value of this challenge
- General culture shift towards circular economy and uptake for this type of work
- Effect of the pandemic on supply chains may help expedite uptake for salvaged materials
- Important to collect data to understand current capacity for markets to develop measured and phased approach to policy making
- Taking a holistic approach to problem and linking it to existing initiatives may help with uptake
- New building materials are made of composite materials which makes them more difficult to disassemble/recycle – designing for future modularity/disassembly is important