CCES 2025 Session Summary

Living Proof: Canadian Circular Economy Business & Community Case Studies

Canada is gaining recognition for its leadership in the rapidly growing global circular economy. The country showcases leadership, innovative solutions, and engaging collaborations across various sectors and regions, highlighting the alignment between Canadian values and the benefits of a circular economy. From large-scale transitions to innovative incubators, Canada has become a welcoming environment for circular ideas and groundbreaking initiatives. This opening session set a significant tone for the Summit by featuring a range of new circular initiatives and their promising potential for the future.

Date / Location Tuesday, April 15, 2025 | Montreal

Speakers

- **Bruce Taylor**, President, Enviro-Stewards (moderator/speaker)
- **Behnoush Maherani**, Senior Director, R&D, Food Safety & Innovation, Greenhouse
- **Gil Yaron**, Managing Director, Circular Innovation, Light House
- **Andy Delisi**, Vice President, Sales, Envirotech Office Systems

SUMMARY

Behnoush Maherani, Greenhouse

Greenhouse is a Toronto-based organic beverage company leading Canada's plant-based nutrition and circular economy innovation. Founded in 2014, the company began as a small operation in a residential home and has since expanded to a nationwide presence. It offers a diverse range of functional beverages while maintaining a strong commitment to sustainability and waste reduction.

Product Portfolio

Greenhouse offers various organic, plant-based beverages designed to support health and wellness. Their product lineup includes cold-pressed juices, wellness shots, protein shakes, plant milks, kombuchas, lemonades, sparkling waters, and super smoothies. All products are made from organic, non-GMO ingredients without additives, preservatives, or added sugars, and are bottled in glass to ensure purity and recyclability.

Circular Economy Practices

Greenhouse prioritizes valorizing the nutrient-rich side streams generated by its pressing lines. These by-products—ginger, spinach, and carrot pulp—are transformed into high-value ingredients that re-enter the food chain.

For example, anti-inflammatory bioactive compounds extracted from ginger pulp are reincorporated into wellness shots. Similarly, Greenhouse collaborates with manufacturers like Green Bowl Foods, which use spinach and carrot pulp to create high-fiber, plant-based meals. Other side streams are also being explored with external groups to develop sustainable pet food products, ensuring minimal biomass goes to waste.

Greenhouse has also eliminated plastic from its primary packaging, choosing glass bottles with aluminum caps and recycled-paper labels. This commitment supports the company's broader goal of achieving zero packaging waste and closing the loop across its supply chain.

Commitment to Sustainability

Greenhouse is a Certified B Corporation, reflecting its adherence to high social and environmental performance standards, transparency, and accountability. Its production facility is certified organic and Safe Quality Food (SQF) certified, ensuring that its products meet rigorous quality and safety standards.

The company's mission extends beyond product offerings; it aims to make plant-based nutrition accessible and inspire broader environmental consciousness. Greenhouse exemplifies how businesses can thrive while contributing positively to the planet by focusing on sustainability, community engagement, and continuous innovation.

Gil Yaron, Light House

Gil Yaron is the Managing Director of Circular Innovation at Lighthouse Construction, a mission-driven Vancouver-based organization focused on advancing regenerative and circular practices in the built environment. Gill brings a strategic, systems-oriented approach to driving sustainability in construction and is leading several innovative programs to reduce waste and create a more circular construction sector.

Lighthouse's core initiatives include:

1. **Building Material Exchange (BMX)**
   A flagship program started on Vancouver Island, BMX acts as a "Tinder" for the construction sector by matching surplus or salvaged building materials with companies that can reuse them. It features three components:

   - Match Support: Auditing companies to identify and connect reusable materials with manufacturers and contractors.
   - Online Marketplace: A dedicated B2B platform where companies list and exchange materials.
   - Material Hub: A brick-and-mortar location in Nanaimo, in partnership with Habitat for Humanity, for aggregating and redistributing salvaged materials.

2. The first year of BMX saw rapid growth, with over 1,000 companies engaged and 150 actively participating. The program received significant media attention and financial backing from local governments and Coast Capital. It aims to become financially self-sustaining and scale its impact by refining its focus and services, like offering material pick-ups and tailored audits.

3. **Construction Plastics Initiative**
   This pilot addresses plastic pollution from construction sites, in alignment with Canada's 2030 zero plastic waste targets. Through on-site plastic collection bins, plastics are sorted, processed into reusable pellets, and turned into construction products like concrete void systems. These systems reduce the volume of concrete used in construction, cutting embodied carbon emissions.

4. **Circular Construction Accelerator**
   This initiative, funded in part by the federal government, supports 50 companies in scaling circular innovations in the built environment. Notable participants include firms that convert used cooking oil into concrete release agents and businesses that relocate salvageable homes to Indigenous and nonprofit communities.

Gil's leadership showcases how circular construction practices can deliver quadruple wins: reducing waste, saving money, preserving embodied carbon, and building local economic resilience. Lighthouse's projects not only divert materials from landfill but also demonstrate the financial viability and community value of circularity in action.

Andy Delisi, Envirotech Office Systems

Andy, Vice President of Sales at Envirotech Office Systems, presented a compelling case for how remanufactured office furniture can deliver environmental, financial, and wellness benefits—all at scale. He highlighted the company's 30-year journey as Canada's largest office furniture remanufacturer and the broader evolution of sustainability in the furniture and interior design industry, particularly in the last five years.

Andy emphasized the overlooked environmental impact of interior fit-outs. While the traditional sustainability narrative in office furniture focused on landfill diversion, the conversation has expanded to include embodied carbon. Office furniture contributes approximately 30% of an office building's total embodied emissions, and with lease cycles shortening to 2–3 years, churn rates are high, amplifying emissions with every interior refresh.

Andy presented a Life Cycle Assessment (LCA) of the popular Herman Miller Aeron chair to demonstrate the environmental costs, showing over 90% of its environmental impact comes from raw material extraction. In contrast, Envirotech's model starts at the end-of-life stage, refurbishing furniture to like-new condition with warranties, while drastically reducing emissions. Their products are third-party verified to have 90% lower global warming potential than their new equivalents.

Key case studies highlighted this approach in action:

- **The Region of Halton** rewrote its RFP to allow remanufactured furniture for its new HQ. This led to one of Canada's largest remanufactured installations: 1,100 workstations, over 254,000 lbs of waste diverted, and $1M saved.
- **Kraft Heinz Canada** initially used 25% refurbished furniture in a 55,000 ft² project, but thanks to proactive sourcing, reached 70% reused content, with just 30% new.
- **Ecovadis**, inspired by the Kraft Heinz model, targeted maximum reuse, achieving 95% refurbished or pre-owned furniture, and cutting project costs by 42%.

Andy acknowledged that used furniture remains stigmatized, particularly in high-end design settings. But successful, magazine-featured projects are helping shift perceptions by proving that remanufactured furniture is indistinguishable from new in appearance and performance—only the cost and carbon footprint differ.

Envirotech's model, which combines remanufactured, certified pre-owned, and new furniture under one roof, provides scalable, project-based solutions. Their approach allows flexibility: each project can blend reused and new products based on client goals and timelines. Andy closed with a call to normalize this hybrid sourcing model across the furniture industry to help meet corporate net-zero commitments and advance circularity in interior design.

Bruce Taylor, Enviro-Stewards

Bruce Taylor, President of Enviro-Stewards, shared insights from his 25 years of work helping companies reduce environmental impacts while improving profits. As a B Corp-certified engineering firm, Enviro-Stewards supports resilient business practices and reinvests savings into development initiatives, such as teaching entrepreneurs in East Africa to build and sell water purifiers using local materials (featured in their TEDx Talk "Better Than Charity").

Bruce emphasized deep conservation—reducing waste at the source—as a more innovative, cost-effective alternative to relying solely on renewable energy or waste-to-energy solutions. Case studies highlighted how companies can save money, cut emissions, and uphold brand stewardship through this approach.

Key Examples:

- **Maple Leaf Foods** became the world's first major carbon-neutral food company in 2019, not by offsetting alone, but by cutting waste and utility use at 35 facilities, saving $17 million to date.
- **Campbell's Soup** Toronto saved $1.6 million annually by internally pairing heating and cooling demands. A subsequent food waste prevention audit revealed 1,000 tons of preventable waste previously diverted to a waste-to-energy facility (with 4,000 tonnes/yr more emissions than preventing the loss in the first place). One specific loss: 13 tons of chicken left during changeovers, valued at $131,000, was written off as a $1,300 disposal cost, highlighting the need to focus on opportunity costs, not just disposal fees.
- Under a **Walmart Foundation** grant, Enviro-Stewards audited 50 factories across Canada—bakeries, dairies, breweries—and uncovered an average of $230,000/year in avoidable food waste per site, with $350 saved per tonne of CO_2 avoided, even without including a carbon tax.
- At **Beau's Brewery**, a planned wastewater plant expansion was scrapped after Bruce's team found that 10% of beer was going down the drain, most of which was recoverable. This saved $700,000 and significantly reduced waste (see CEC case study).

Key Takeaways:

- **Prevention trumps diversion:** The current focus in North America on composting and digesters overlooks the far greater value in preventing waste entirely.

- **Measure opportunity, not just waste:** Framing losses regarding food, emissions, dollars, or meals can resonate better with stakeholders (e.g., Conestoga Meats tracking waste as meals lost).

- **The smallest loops are best:** In circular economy terms, Bruce advises keeping loops tight—reuse within the original product when possible, then consider upcycling.

- **Policy and metrics matter:** Tracking diversion alone can backfire. For instance, Campbell's diversion metric worsened after reducing waste, underscoring the need to measure "diversion plus prevention."

Broader Work:

Enviro-Stewards has contributed to international efforts via the Commission for Environmental Cooperation (CEC) and is working with the World Wildlife Fund and ReFED on food waste prevention across supply chains in the U.S., identifying millions of meals' worth of recoverable food.

Lastly, Bruce promoted their new sustainability textbook for engineers and business students (www.sustainablebusinesstextbook.com), with all proceeds funding clean water projects. Events like film festivals and sustainable dining experiences (e.g., water-offset wine) continue to raise awareness and resources for global impact.

The central message: Preventing waste is the most impactful, economical, and often overlooked sustainability strategy—and it's not just possible, it's profitable.

Audience Q&A

Question: How do we increase the angle and move up the edge more quickly? What support do you need as an individual business operator to make your type of eco-circular innovation a business-as-usual reality?

Response

We need a comprehensive and collaborative approach to accelerate circular innovation and embed it as a standard business practice. That includes transformative mindsets, enabling policy, capital investment, industry willingness, and robust research and innovation ecosystems. While some of this exists, it's not yet at the scale or speed required, especially in sectors like construction, which has been notoriously slow to evolve. Homes are still largely built the same way they were a century ago, despite growing interest in modular and prefab construction. These innovations are still considered fringe.

An illustrative comparison is the automotive industry's transition to electric vehicles. The shift didn't start with Teslas—it began with hybrid models like the 1998 Toyota Prius, which faced skepticism and stigma around range, speed, and charging. But incremental adoption—fueled by public awareness, early adopters, and policy nudges—helped normalize the technology. Similarly, businesses don't have to overhaul their entire models overnight in the built environment or office

furniture sectors. Hybrid approaches that combine refurbished and new components can be the first

step. This blended model can help build confidence, prove economic value, and generate momentum for deeper innovation. The goal is to make circularity practical and scalable, not idealistic or inaccessible.

Question: While greenhouses use glass and aluminum, some companies receiving your pulp still use plastic. How are you encouraging them to shift behavior?

Response
We work closely with various small to large partners and see genuine interest in sustainable packaging. A key example is Green Bowl Foods. They are actively searching for sustainable packaging solutions compatible with their thermal processing needs, but the technology they require doesn't exist. They're committed to minimizing plastic use elsewhere in their operations.

One area where we've made progress is in how we transport pulp. We use reusable bins—no single-use plastic. These bins are cleaned, refilled, and returned, creating a closed-loop system. This collaborative model helps minimize plastic use and encourages partners to align with our sustainability values. However, broader adoption often requires more government support and investment in innovation to help companies transition, particularly when current materials or technologies don't meet their operational needs.

Question: Gil, now that you have a successful platform, is there a plan to scale nationally or pilot in other cities in Canada?

Response
Yes, absolutely. We're eager to expand and welcome any municipality interested in exploring circular construction models in Canada or North America. We recognize that this work only becomes truly impactful at scale, and our programs are designed to be scalable and adaptable. We're excited to collaborate with others who share our vision.

Question: Do you also work on changing construction standards to simplify deconstruction and disassembly?

Response
Yes. Lighthouse is actively engaged in policy work, especially around deconstruction. We're currently focused on municipal deconstruction bylaws that encourage or require deconstruction over demolition. Municipalities like Victoria, Burnaby, and North Vancouver already have such bylaws, and more nationwide are considering similar approaches. At the national level, work is underway to update the National Building Code to allow salvaged materials like lumber to be reused structurally. While we're not directly involved in that process, it's an essential development for the industry, though results likely won't materialize until 2030.

Question: Andy, do you purchase materials from companies, or are they donated? And how do you handle nonstandard or "oddball" furniture for custom office designs?

Response
We rarely receive donations. Instead, we manage materials through three main pathways:

1. Buybacks: We purchase the inventory for like-new furniture (e.g., from companies like Dropbox).
2. Neutral Value: We offer enough value to offset removal costs for older items (10–15 years).
3. Chargeable Services: If the items lack resale value, we charge clients for responsible removal.

As for nonstandard furniture, it's more challenging. Our model focuses on remanufacturing large volumes of specific systems—we maintain stock to rebuild up to 3,000 identical workstations at any time. This ensures consistent, scalable project delivery (e.g., 1,100 units for the Region of Halton). Odd, one-off items don't fit this model and often sit too long in inventory. However, we collaborate with other remanufacturers across North America who specialize in different brands or systems, allowing for redistribution when we can't take something ourselves.

Comment from Gil: This highlights the need for multiple material pathways. Different generators (e.g., manufacturers vs. construction sites) produce waste differently—some predictable and steady, others irregular. That's why the Building Material Exchange is exploring diverse pathways: direct matching, hubs for aggregation, and partnerships with companies like Envirotech. It's about building a transformative circular ecosystem with flexible solutions to suit different material flows, just like how juice can be sold through many channels, material reuse needs similar versatility.