CCES 2025 Session Summary

Act Local: The Critical Role of Local Governments for Enabling a Circular Economy

With over 80 per cent of Canada's population living in cities, local governments play a crucial role in advancing a circular economy. Through locally focused policies, incentives, planning, services and programming they are well poised to become hubs for innovation and catalysts for change. As powerful convenors they have a unique ability to facilitate collaboration between businesses, consumers, and community organizations, to create a supportive ecosystem for circular economy initiatives, driving both environmental and economic resilience. This session will gather local governments of various sizes and locations to profile their circular leadership and innovations.

Date / Location: Tuesday, April 17, 2025 / Montreal, Canada

Speakers:

- **Chandra Farley**, Chief Sustainability Officer, City of Atlanta
- **Manuel Valls**, Industrial Engineer at European Programmes Department, Municipality of Murcia
- **Corey Pembleton**, Advisor, Learning & Partnerships, Federation of Canadian Municipalities (moderator)
- **Chantal Marcotte**, Director, City of Gatineau
- **Laura Wittenzellner**, Outreach Sustainability Coordinator, District of Squamish
- **Jennifer Cass**, Senior Vice President, Sustainability & Resilience, NYCEDC

SUMMARY

Speaker Presentations

Manuel Valls, Industrial Engineer at European Programmes Department, Municipality of Murcia

Murcia, a historic city in southeastern Spain with a population of over 450,000, offers a compelling case study in urban sustainability and circular economy principles. Unlike Canada, where water is often considered free, Murcia faces a scarcity of rainfall, leading to an innovative approach to water management. The city reuses an impressive 90-98% of its water, a system funded by monthly charges to residents.

Founded in the 12th century, Murcia boasts a rich agricultural heritage, earning it the moniker "the orchard of Europe." This strong tradition of local production is deeply ingrained in the city's identity. As its urban population grew, Murcia recognized the need to strategically manage its resources and maximize the value of its waste, all while fostering innovation that challenged traditional practices.

To address these challenges, Murcia developed a comprehensive **Circular Economy Strategy**. This roadmap was the result of extensive citizen engagement, incorporating citizen science, gamification, workshops, and roundtables with diverse stakeholders, including NGOs, universities, and local associations. The strategy is built upon six key pillars, including waste and water management.

One notable initiative stemming from this strategy is the **Circular Economy Hub**. This hub provides a vital support system for circular startups, offering them space, resources, and economic assistance for a year of product development. This fosters entrepreneurship and helps new businesses focused on circular economy models flourish within the city. Murcia's approach demonstrates how an old city with deep traditions can successfully integrate state-of-the-art technology and business practices to achieve a more sustainable and resource-efficient future.

Laura Wittenzellner, Outreach Sustainability Coordinator, District of Squamish

Squamish, British Columbia, a rapidly growing community situated an hour north of Vancouver, is actively embracing a circular economy model. With a current population of 26,000 projected to reach 36,000 by 2040, the district sees significant opportunities for circularity in its ongoing construction and demolition activities. Despite being a smaller community, which can present capacity challenges, Squamish has made

substantial strides by fostering strong internal collaboration.

A key to Squamish's success is the collaborative effort between its **Sustainability and Economic Development Departments**. These two departments co-lead many circular economy initiatives, ensuring that environmental goals are integrated with economic development strategies.
Squamish's circular economy work is underpinned by several policy documents:

- The **Zero Waste Action Plan**, initially developed in 2016 and updated in 2022, was the first time the district consolidated its zero-waste and circular economy initiatives.
- In 2020, the **Community Climate Action Plan** incorporated the circular economy as a key action item.
- The **Circular Economy Roadmap and Implementation Plan**, developed by the economic development department in 2023, received council endorsement and set a strategic direction for future initiatives, aligning existing and new policies.

In 2024, Squamish received crucial funding from the **Redevelopment Investment Fund (RED Fund)**, which has significantly advanced its circular economy initiatives.
Current key initiatives include:

- **Circular Economy Trailblazer Program:** This program engaged 13 organizations, providing microgrants (up to $5,000) and innovation challenges ($20,000) to support them in developing circular strategies. In total, approximately $110,000 was distributed.
- **Circular Economy Asset Map:** This ongoing project aims to map available resources within Squamish to facilitate circular practices.
- **Feasibility Study for an Asset Sharing Tool:** This study explores how best to share resources within the community and streamline such exchanges.
- **Construction and Demolition Waste Diversion Resources:** Recognizing the substantial opportunity in this sector, Squamish is developing resources to improve waste diversion from construction and demolition activities.
- **Circular Economy Webinar Series:** An ongoing initiative to educate and support the local business community on circular economy principles.

The District of Squamish believes local governments play a crucial role in fostering change. They can **foster change through policy**, ensuring alignment with circular goals, and **empower organizations** by connecting them and providing information on best practices. Local governments should also **lead by example** by implementing circularity in their own processes, **increase awareness** through ongoing education and training, and **develop strategies and roadmaps** to guide the transition to a circular economy.

Chantal Marcotte, Director, City of Gatineau

Chantal Marcotte, Director of Water and Residual Materials Services for the City of Gatineau, Quebec, outlines the city's proactive approach to managing waste and transitioning towards a circular economy. Gatineau, the fourth-largest city in Quebec with approximately 300,000 residents, has been the province's top waste generator for four consecutive years, prompting an urgent need for effective strategies.

Strategic Planning and Stakeholder Engagement

In 2023, Gatineau adopted its seven-year Residual Materials Management Plan (2023-2029), a government-mandated accountability report comprising about 30 actions. A key action is developing a comprehensive circular economy roadmap. Marcotte emphasizes the crucial role of **municipal council support**, noting that their frequent engagement and approval are essential for advancing initiatives and securing necessary funding.
Gatineau's circular economy journey began with extensive **data collection** to understand the city's waste profile and material flows, recognizing its responsibility as a local government to manage waste and reduce landfill dependency. This was followed by significant **stakeholder engagement**. They conducted public surveys and collaborated extensively with non-profit organizations, particularly in the textile sector, to gather insights into public sentiment and challenges. While engaging private businesses proved more difficult, they leveraged existing support organizations to facilitate communication. Group workshops were also held to ensure broad understanding and buy-in for future action plans.

Focus Areas: Textiles and Construction, Demolition, Renovation (CDR) Waste
Gatineau's strategy focuses on two major waste streams: **textiles** and **construction, demolition, and renovation (CDR) waste**. Data revealed a dramatic increase in textile waste, rising from 8% to 11% of total waste in recent years, highlighting an urgent need for intervention. For CDR waste, while wood is often repurposed for energy recovery, significant amounts still go to landfill, indicating areas for improvement.

The city's vision aligns with being a **driver of change**, collaborating with and supporting businesses, institutions, industries, and non-profits through pilot projects and financial assistance. For textiles, the immediate focus is on **reducing consumption** and exploring circularity within the city's own operations, such as managing uniforms for municipal employees. For construction, the strategy involves optimizing existing buildings and infrastructure, integrating circularity into project planning, and exploring deconstruction opportunities.

Policy and Regulatory Considerations
While actively developing its action plan, Gatineau is also exploring regulatory measures. They conducted a regulatory analysis for unsold textiles, recognizing the potential for legislation. However, Marcotte states that their priority is first to gain **adhesion and collaboration** from stakeholders before implementing stricter regulations. This same approach will be applied to the CDR sector in 2026, investigating regulatory possibilities.

Gatineau's overall approach is **transversal and collaborative**, aiming to involve all local actors in building a more sustainable and circular economy. The full action plan, detailing specific measures and indicators, is expected to be submitted to the Municipal Council in 2025.

Chandra Farley, Chief Sustainability Officer, City of Atlanta

The City of Atlanta, known as the "city in the forest" due to its nearly 50% tree canopy, is actively pursuing sustainability and resilience under the leadership of its Chief Sustainability Officer. The Mayor's Office of

Sustainability and Resilience is deeply rooted in the vision of creating "safe, healthy, and connected neighborhoods" through environmental justice and community partnerships.

Atlanta boasts a long history of sustainability, notably driven by its sports teams and stadiums, which were among the first in the nation to achieve LEED Green Building Standard certification. This early adoption set a strong precedent for the city's environmental commitments.

Chandra emphasizes a science-based approach informed by community input, with a strong focus on racial equity. While the city is in the early stages of implementing circular economy initiatives as a municipal government, these efforts are heavily influenced by existing community partnerships.

Atlanta's sustainability evolution is marked by several key plans and directives:

- **Power to Change (2013-2014):** An initial directive setting the stage for sustainability efforts.
- **First Climate Action Plan (2015):** The city's initial comprehensive climate strategy.
- **Clean Energy Plan (current focus):** An ambitious goal to achieve 100% clean energy by 2035 for 100% of Atlantans, emphasizing equitable and sustainable development.
- **Climate Resilience Action Plan (currently launching):** This plan will update clean energy goals and address the city's three primary climate perils: heat, flood, and drought.

A unique aspect of Atlanta's sustainability efforts is the nation's first **Urban Agriculture and Food Systems Director**. This team, in collaboration with the Department of Public Works, is advancing initiatives focused on local food systems, climate-smart agriculture, and food waste. City Hall already implements composting for all events and meetings, and there are efforts to educate employees on zero waste. The city is also actively seeking funding to scale a municipal food waste diversion and composting service.

Community engagement is paramount, as evidenced by the **Community Advisory Board** mandated during the development of the clean energy plan. This board reserves seats specifically for residents from energy-burdened and climate-impacted communities, ensuring that marginalized voices inform policy development.

Recent assessments, including one conducted with Metabolic and the US Chamber of Commerce Foundation (Beyond 34), identified **construction waste diversion** as a top opportunity for Atlanta. The city is exploring pilot programs and funding community partners to advance this work. A key partner in this area is the **Life Cycle Building Center**, which focuses on deconstruction, salvaging materials for resale, and offering community education and workforce job training in deconstruction. Atlanta is partnering with the Life Cycle Building Center on municipal projects and through its Housing Agency to create job opportunities and integrate deconstruction practices.

In summary, Atlanta's primary circular economy opportunities and initial focus areas are centered around **food waste diversion and composting** and **construction waste deconstruction and training**. The city is committed to leveraging its strong history of sustainability, community partnerships, and a science-based approach to build a more resilient and circular future.

Jennifer Cass, Senior Vice President, Sustainability & Resilience, NYCEDC

The New York City Economic Development Corporation (NYCEDC), a quasi-agency and nonprofit owned by the city, is at the forefront of integrating circular economy principles into New York City's vast

construction landscape. Jennifer Cass, from EDC's Capital Construction program, highlights the significant opportunity for a green and circular economy within the city's infrastructure development. NYCEDC collaborates with numerous city agencies, including the Departments of Environmental Protection, Transportation, and Parks and Recreation, enabling it to influence a wide range of projects from buildings to parks and public infrastructure. This widespread reach positions EDC to drive systemic change.

Last year, NYCEDC released its **Green Economy Action Plan**, which included a groundbreaking document specifically addressing circular construction: **"Clean and Circular Design and Construction."** This document serves as a roadmap, outlining tasks, strategies, and goals for all EDC's design and construction projects. The aim is for this to become a template not only for other New York City agencies but also for municipalities and regions globally.

As part of this initiative, all EDC projects are now required to achieve either **LEED Gold or Envision Gold certification**. Furthermore, NYCEDC launched a **mass timber pilot program** last year, now entering its second cohort. This program is crucial for training the design and development community in New York City and for enhancing understanding of local regulations related to mass timber.

Jennifer highlights two key projects that exemplify EDC's circular construction efforts:

1. **Lower Manhattan Coastal Resilience at The Battery:** This coastal flood protection project served as the inspiration for the circular construction program. Tasked with rebuilding a deteriorating wharf to withstand 2100 sea level rise, the project prioritized the preservation of existing granite and other materials. It achieved **Envision Platinum** (the highest rating) and, remarkably, reduced its embodied carbon footprint by an unprecedented **56%** from the baseline. This was achieved through extensive on-site material reuse and the incorporation of recycled materials, such as expanded glass aggregate for lightweight fill. This project's success provided the foundation for EDC's broader circular construction guidelines.
2. **New City Campus (a $1 billion project):** This project involves the deconstruction of an existing 1950s City University of New York nursing school campus to make way for a new public school, life sciences office space, and other city facilities. This project, also situated near the shoreline as part of Midtown Manhattan's flood protection, presents a different typology (building deconstruction and new construction). EDC is rigorously exploring ways to reuse and recycle materials from the existing site, aiming to reduce embodied carbon, minimize transportation impacts, and lessen reliance on virgin material extraction.

A significant challenge and opportunity in these projects is the balance between reducing new material consumption and the increased labor involved in deconstruction and material salvage. While deconstruction can be costly, it creates jobs and reduces environmental impact. EDC is actively working to identify where city funds can best be leveraged to support these initiatives, understand existing markets for salvaged materials, and identify areas where new markets need to be spurred.
Atlanta's circular economy efforts will primarily focus on food waste composting and construction/deconstruction training, aiming to leverage partnerships and innovative projects to build a more sustainable future.

Audience Q&A

The question and answer session following the panel presentations addressed the crucial intersection of circular economy principles with social equity and community engagement, moving beyond technical

solutions to address the "people problem" of waste. Panelists highlighted how inclusive circularity can create pathways for economic mobility and community benefit, particularly through initiatives like deconstruction training and local food systems. The conversation also delved into policy frameworks and strategies for incentivizing and, if necessary, mandating circular practices in the construction industry, with examples from Atlanta, Squamish, Gatineau, and New York City.

QUESTION 1 - The discussion centers on the **critical intersection of environmental justice and inclusive growth within the circular economy**, an area often overlooked in the technical focus of circularity. The initial speaker highlights a disconnect between the technical solutions prevalent in the circular economy discourse (e.g., Sankey charts) and the "people problem" that underpins environmental issues. They draw parallels to climate resilience and adaptation, where inclusive approaches are more commonly discussed. The core question posed is, "What does an inclusive circular economy look like?" and how citizen science can inform policy in this regard.

Chandra kicks off the answer by emphasizing the practical application of inclusive growth through community partnerships. She explains that by supporting local NGOs and non-profits undertaking demonstration projects, municipalities can find tangible examples of inclusive circularity. She provides a concrete illustration: a building deconstruction project where large construction firms like Skanska or J.E. Dunn not only participate but also commit to training and then hiring community members. This approach, she argues, transforms circular economy initiatives into "circular community inclusion," offering pathways for career development rather than just temporary jobs. Chandra connects this directly to Atlanta's high income inequality, asserting that an inclusive circular economy can simultaneously address embodied carbon and emissions while fostering healthy communities by reducing pollution and providing economic mobility.

Manuel builds on this by offering a historical and cultural perspective from rural Quebec. He points out that traditionally, these communities were circular by necessity, not by design. He uses the example of a "Catalan" blanket, made from old cloth rags, to illustrate how reuse was ingrained in their way of life. This historical context serves as a reminder that the principles of reuse and resourcefulness can lead to broader employment opportunities and skills development, benefiting a wider range of people. Both responses underscore that an inclusive circular economy is not merely about technical efficiency but fundamentally about creating equitable opportunities and fostering community well-being alongside environmental benefits.

QUESTION 2 - The two Canadian panelists discussed the **crucial aspect of community involvement and inclusivity in developing circular economy strategies, particularly within their local contexts.**

Laura emphasized the importance of **accessible and diverse engagement channels**. They highlighted the need to remove barriers so that everyone can easily understand and participate in the initiatives. This means tailoring outreach methods to reach different segments of the community and ensuring that all information is digestible. Furthermore, the panelist acknowledged the current economic hardships many people face, stressing the importance of **meeting people where they are**. This pragmatic approach recognizes that while circular practices are vital, they may not be an immediate priority for individuals grappling with other essential challenges. The goal is to make learning and adopting circular practices feasible, even amidst these difficulties.

Chantal underscored the value of a **gradual and deliberate approach** to community engagement. They advised against moving too quickly, drawing from past experiences where rapid implementation proved less effective. Their strategy involves extensive **awareness-building, education, and information dissemination** related to waste management. Key to their success is the involvement of **municipal council members**, who serve as direct representatives in the community and can facilitate on-the-ground engagement. They also mentioned the importance of **collaborating with local stakeholders**, including non-profits and private businesses, and using incentives like "zero-waste kits" for survey participants to encourage collaboration. Chantal concluded by stressing that inclusivity is a **long-term endeavor**, requiring patience and consistent, small steps. They view community inclusion as the fundamental basis for successful deployment of circular economy initiatives, asserting that without it, further progress is impossible.

QUESTION 3 - The discussion between Manuel and Jennifer highlighted contrasting, yet complementary, approaches to circularity in the construction sector, particularly in the North American and European contexts. The core of the inquiry revolved around the concept of **utilizing existing urban resources** rather than continuously importing new materials.

Manuel, representing a European perspective, emphasized the concept of **urban metabolism** in Murcia, Spain. This involves meticulously understanding the resources flowing into and out of the city with the aim of maximizing reuse and minimizing new inputs. He stressed that circular economy principles begin at the grassroots level, highlighting the crucial role of **municipalities and citizen engagement**. For instance, Murcia transforms wastewater sludge into compost and recovers ammonia (nitrogen and phosphorus) for local agriculture, providing these bio-fertilizers free to local orchards. Another innovative example involves a network where industrial waste is converted into children's toys, emphasizing creative reuse and the "collateral effect" of waste transformation. Manuel also underscored the philosophy of the **New European Bauhaus**, which prioritizes the reuse of existing buildings and urban spaces, rather than immediate deconstruction, under the pillars of sustainability, inclusion, and beauty.

Jennifer, approaching the topic from a civil engineering background in North America, offered a more pragmatic view while aligning with the core principles. She strongly agreed with the priority of **reusing existing infrastructure and buildings** before considering deconstruction. If a full structure cannot be reused, the focus shifts to salvaging individual elements like foundations or walls. She cited a project in Brooklyn where a library is being lifted and its roof raised, demonstrating reuse even within flood plain mitigation efforts. When deconstruction is necessary, her priority is to **reuse materials on-site or locally**, particularly focusing on low-carbon concrete, lower-carbon steel, and soil. She specifically noted that using materials for landfill cover "doesn't count" as true circularity, advocating for genuine reuse and recycling. Jennifer also highlighted the constant emergence of new materials and the importance of incorporating them into engineering standards and specifications through partnerships with organizations like the American Society of Civil Engineers.

Ultimately, both panelists underscored the importance of shifting away from a linear "take-make-dispose" model. Manuel emphasized citizen engagement and innovative waste-to-resource initiatives within a framework of urban metabolism and architectural reuse, while Jennifer focused on practical engineering solutions for material reuse and recycling in construction, always prioritizing reuse over deconstruction.

QUESTION 4 - A question from the audience addresses the challenges of implementing deconstruction and reuse strategies in the construction industry, particularly given that these methods often require more time and money than conventional demolition. The speaker asks how permit conditions that mandate

such practices are successfully introduced, and what the conversation with industry stakeholders has been like to gain their buy-in.

One responder notes that while contractors initially prefer "shortcuts" like buying new materials, mandating deconstruction and reuse through design requirements shifts their perspective. They've observed contractors, initially unfamiliar with circular construction or sustainability, become proponents of these methods after engaging with the process, ultimately seeing it as "the right way to do construction." This suggests that direct experience can be a powerful conversion tool, even if initial resistance exists. While architects and designers are often more receptive, contractors require more convincing, but once involved, they tend to appreciate the approach.

Laura, from Squamish, describes their community's **demolition waste diversion bylaw**. This bylaw requires a financial deposit from projects, which is refunded if an 80% waste diversion target (through reuse or recycling, with higher credits for reuse) is met. They observe that contractors either fully commit to the targets or ignore them entirely. To bridge this gap, Squamish focuses on **on-the-ground engagement**, particularly relevant for a smaller, interconnected community. This includes site visits and "builders' breakfasts," where successful builders share best practices and demonstrate the economic feasibility of deconstruction. They also invite deconstruction specialists to speak, showcasing that these methods are indeed possible and practical. While financial incentives are present, they are not the sole motivator; education and convenience are key. The aim is to make deconstruction and reuse as "normal" and "convenient" as traditional methods, fostering pride in sustainable practices.

Manuel, from Murcia, adds that in their context, **reuse is a mandatory condition in tender processes** for public projects. Private companies bidding for projects must certify that 70% of materials will be reused, either on-site or off-site by certified partners. This mandate originated from European Commission funding programs, making it a compulsory element for certain buildings and now applied across all tender processes in Murcia. While direct control over private demolitions is limited, public demolition projects fall under this strict reuse requirement.

In essence, the collective response highlights several strategies for encouraging circular construction:

- **Mandatory requirements** through permits and tender processes.
- **Direct experience and education** for contractors to demonstrate feasibility and benefits.
- **Community engagement** and peer-to-peer learning to showcase best practices.
- **Financial incentives** (like deposit refunds), though these are seen as supplementary to broader educational and cultural shifts. The overarching goal is to normalize deconstruction and reuse, transforming it from an "extra work" burden into the standard practice.

QUESTION 5: The core question explores how circular economy principles can be leveraged to create more affordable social housing, shifting the perception from a "premium" to a cost-effective solution. It also delves into new models for social housing that promote community engagement and offer economic benefits to residents, such as tenant training in operations and maintenance leading to reduced rent, or property tax reductions for developers who build or retrofit sustainable structures.

Chandra, speaking from Atlanta, highlights the city's strong focus on affordable housing, driven by the mayor's goal to build or preserve 20,000 units within six years. She emphasizes the critical role of

partnerships in achieving this. To accelerate progress, Atlanta established the **Atlanta Urban Development Corporation (AUDC)**, an entity separate from the traditional economic development agency (Invest Atlanta), which functions as a bank for affordable housing initiatives. This structure allows for faster implementation, as seen in their rapid housing projects for the unhoused, utilizing innovative solutions like **container homes and small-scale adaptive reuse of existing buildings**.

Chandra explains that having a dedicated "vehicle" like the AUDC, with strong leadership support and mission-focused developers, transforms demonstration projects into standard practices. Crucially, the AUDC and the associated **Housing Innovation Lab** employ a unique approach to their Request for Qualifications (RFQ) and Request for Proposals (RFP) processes. They prioritize **extensive community engagement, co-development, and co-design** with residents to inform the initial RFQ/RFP. Furthermore, they maintain a continuous **feedback loop with the community** regarding developers' proposals.

This integrated approach serves as a vital entry point for Chandra's office to explore the intersection of affordable housing and climate resilience. She underscores a critical point: for Atlanta, and many other cities, **housing affordability is inextricably linked to utility affordability**. The inability to cover utility costs is a primary driver of displacement in the city, making sustainable, low-cost housing solutions even more impactful. In essence, the answer demonstrates how strategic institutional frameworks, community collaboration, and innovative building practices can create affordable housing that is not only sustainable but also economically beneficial and resilient for its residents.

QUESTION 6 - A PhD student specializing in low-carbon and circular economy in construction poses a question about policy frameworks. They seek to understand how policies can be reshaped to genuinely integrate circular economy (CE) principles into the construction sector, ensuring that developers and stakeholders view CE as more than just voluntary actions. The student highlights that current policies often fail to explicitly mention or drive circular economy practices.

The response from a representative of the New York City Circular Construction program offers a direct and concise answer: **they make it a requirement.** They emphasize that in New York City, implementing circular construction practices is not an option but a mandatory condition. This approach aims to compel developers and the industry to adopt CE principles by integrating them directly into policy and regulatory frameworks, thereby moving beyond voluntary engagement. The underlying sentiment is that by making it a requirement, the city effectively "forces" stakeholders to embrace circularity, transforming it from a "nice-to-have" to a "must-do." This shifts the onus from convincing individual actors to comply to establishing a systemic change through direct policy mandates.