

CITYAGE

CITYAGE VANCOUVER

# THE URBAN ZERO CHALLENGE

VANCOUVER, BC | FEBRUARY 6, 2024

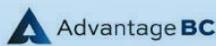
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# INTRODUCTION

CityAge Vancouver convened stakeholders from across North America to discuss innovative strategies for reducing urban emissions in rapidly growing cities like Vancouver, British Columbia. The event, held on February 6, 2024, aimed to provide an actionable roadmap for decarbonizing fast-growing urban centers through new technology, designs, policy developments and more. Throughout the summit, which featured a mix of panel discussions and presentations, attendees explored themes such as decarbonizing cities, zero emission transportation, buildings, urban development, and regional connectivity. This summary report outlines the key takeaways from the event, which fostered informative discussions towards decarbonizing our fast-growing cities.



# EVENT THEMES:



**Decarbonizing Cities:** The huge economic opportunity in promoting clean technologies that can build zero carbon cities



**Zero Emission Transportation:** From personal vehicle charging infrastructure through medium and heavy duty applications in ports, freight and airports, we'll look at the move to electrification and innovations in land, rail, sea and air.



**Zero Emission Buildings:** New tools to accelerate the decarbonization of embodied carbon in existing buildings, as well as build more low or zero emission buildings.



**The New Developers:** Vancouver is pioneering a new approach to urban development, by bringing in First Nations and developers to fast-track the creation of affordable housing stock while also lowering carbon emissions – through urban zero technologies.



**Connecting Cascadia:** How high-speed rail, digital tools and new infrastructure can connect the entire region, not just its cities, and take Cascadia to the next level.



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# EVENT SUMMARY

In the face of urgent challenges like climate change and housing affordability, CityAge Vancouver explored the vital intersection of sustainable architecture, engineering, transportation planning, decarbonization efforts, indigenous collaboration, and the development of EV charging infrastructure, emphasizing collaborative strategies and innovative solutions for a more sustainable future. Here is a summary taken from the discussions held throughout the event.



## Sustainable Architecture and Urban Design

There is an urgent imperative to confront the intersecting challenges of sustainable architecture, climate change, and housing affordability. Central to this effort is the integration of sustainability principles into urban design, leveraging innovative solutions such as mass timber construction and renewable materials. Meaningful progress hinges on collaborative efforts and evidence-based decision-making, recognizing the complexity of the issues at hand. Beyond striving for zero carbon emissions, it's imperative to tackle a multitude of sustainability challenges. Furthermore, community engagement and robust policy support are essential for translating intentions into actionable solutions

## Engineering for Sustainability

Addressing sustainability and resilience challenges requires collective action and collaboration as foundational elements. A holistic approach, which takes into account social, economic, and environmental factors, is emphasized to ensure comprehensive solutions. Organizations like *AtkinsRéalis* play a pivotal role in spearheading sustainable initiatives and driving change. Crucially, lasting impact is achieved through partnerships forged with communities, governments, and stakeholders, underscoring the importance of broad-based cooperation and engagement.

## Transportation Planning

Transportation's critical role in urban planning is increasingly emphasized amidst population growth and environmental concerns. As cities expand and densify, the need for efficient and sustainable transit systems becomes paramount. However, addressing this demand requires comprehensive, sustainable funding solutions to support transit expansion. One strategy involves leveraging development near transit stations for infrastructure financing, a practice that not only fosters economic growth but also enhances accessibility and connectivity. To achieve this, clear planning and collaboration between public and private sectors are essential, ensuring that transit projects align with broader urban development goals while meeting the needs of the community. By prioritizing these principles, cities can forge a path towards more resilient and inclusive transportation networks.

## Decarbonizing Major Facilities

Effective decarbonization efforts require collaboration among stakeholders from various sectors, recognizing the interconnectedness of their actions. Understanding and managing climate-related risks are imperative for ensuring sustainability, guiding decision-making processes towards resilient solutions. Conducting life cycle analysis is essential to inform strategic choices, considering the environmental impacts across the entire supply chain. Regulation emerges as a pivotal force, incentivizing and enforcing sustainable practices across industries. In addressing transportation emissions, a critical component of decarbonization, holistic approaches are vital to achieving broader sustainability goals.



## Net Zero Energy Future

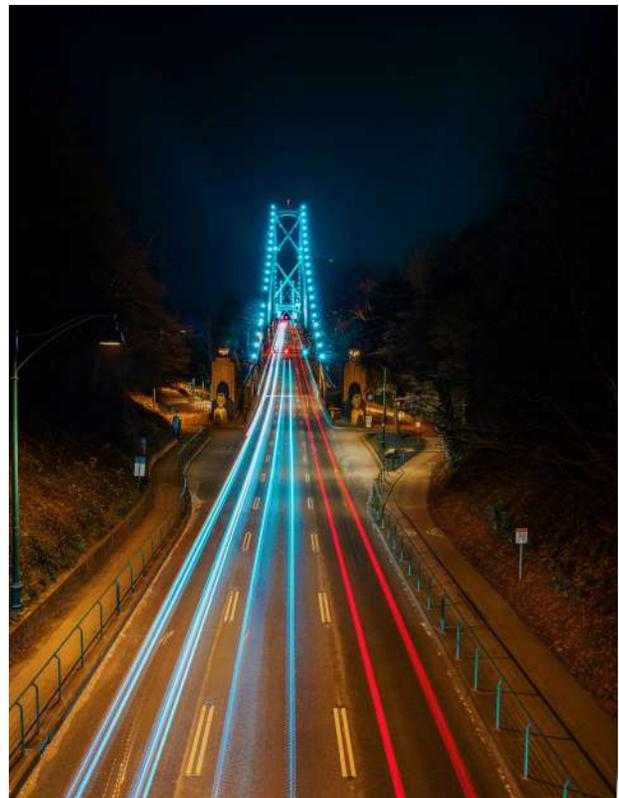
Transitioning to a net-zero energy future is both complex and essential, demanding attention to reliability, resilience, affordability, and decarbonization as primary objectives. Emphasizing the integration of diverse energy sources, including renewables and traditional sources, becomes paramount for sustainable progress. Success hinges on innovation, strategic planning, and policy consistency, ensuring a smooth and effective transition. Addressing safety concerns surrounding hydrogen is crucial, yet its potential for decarbonizing transportation underscores its importance in achieving ambitious emissions reduction targets.

## EV Charging Infrastructure

Emphasizing a comprehensive approach to advancing EV charging infrastructure in British Columbia underscores the commitment to fostering sustainable transportation solutions. Collaboration among stakeholders emerges as indispensable for developing inclusive and accessible charging solutions that cater to diverse needs. Addressing challenges such as design, reliability, and affordability is paramount to ensure the effectiveness and widespread adoption of electric vehicles. Highlighting the potential of vehicle-to-grid technology and strategic planning underscores the transformative impact of innovative solutions in shaping the future of mobility. Moreover, recognizing the importance of reliability in charging stations and discussing the potential impact of EV adoption on property values enriches the dialogue surrounding the integration of electric vehicles into the urban landscape.

## Indigenous Collaboration and Affordable Housing

The groundbreaking collaboration between First Nations and developers in Vancouver shines a spotlight on expediting the construction of affordable housing, showcasing the power of partnership in addressing pressing societal needs. Emphasizing the promotion of indigenous rights, reconciliation, and climate-conscious building practices underscores a commitment to both environmental stewardship and social justice. Recognizing indigenous sovereignty and incorporating sustainable urban development practices are crucial steps towards fostering inclusive and resilient communities. Furthermore, highlighting the importance of seismic upgrades in commercial buildings and exploring the potential of programs like PACE loans highlights proactive measures for enhancing safety and sustainability in urban infrastructure.



# CALLS TO ACTION & CONCLUSION

At CityAge Vancouver: The Urban Zero Challenge, participants explored strategies for achieving zero emissions in cities like Vancouver. Discussions covered ethical considerations, effective partnerships, and best practices in urban development and emission reduction. The conversations had offered insights for Vancouver's journey toward zero emissions, serving as a global case study, and providing 5 distinct calls to action.

- 1. Promote Sustainable Urban Design:** Transform urban landscapes by infusing eco-conscious materials and innovative designs into city planning. Embrace concepts like mass timber construction and renewable resources to combat climate change and enhance housing affordability. Let's pave the way for sustainable development that harmonizes environmental responsibility with urban growth.
- 2. Nurture Collaborative Partnerships for Sustainability:** Foster robust alliances with communities, governments, and stakeholders to drive impactful sustainable initiatives. By uniting diverse perspectives and resources, we can ensure that our efforts yield lasting benefits for both the environment and society at large.
- 3. Build Comprehensive, Sustainable Transit Systems:** Lay the foundation for efficient and accessible transit networks through sustainable funding and transit-oriented development. By prioritizing eco-friendly transportation solutions, we can support urban expansion while minimizing our ecological footprint and enhancing overall quality of life.
- 4. Embrace Holistic Decarbonization Strategies:** Embrace a holistic approach to decarbonization that spans entire supply chains and industries. Through stringent regulations, cross-sector collaboration, and emissions reduction efforts in transportation and infrastructure, we can effectively mitigate climate-related risks and pave the way for a greener future.
- 5. Drive Forward EV Charging Infrastructure:** Propel the transition to sustainable transportation by bolstering EV charging infrastructure. Through collaborative efforts, innovative technologies, and strategic planning, let's establish reliable and inclusive charging solutions that accelerate the adoption of electric vehicles and propel us towards a more sustainable future.

The discussions at CityAge Vancouver: The Urban Zero Challenge provided a roadmap for Vancouver to lead in sustainable development by addressing urban emissions comprehensively, and to serve as a global case study. By implementing holistic decarbonization strategies, Vancouver is poised to make significant strides towards zero emissions and sustainable urban living, ensuring a greener and more resilient future for generations to come.

**CityAge will be continuing this series in 2024. If you would like to speak or participate, please contact us at [info@CityAge.com](mailto:info@CityAge.com).**

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