RE-ARRANGING THE URBAN BUILDING BLOCKS:

An Expanded Role for Urban Design in Canada's Future

By Dan Leeming, Eric Turcotte and Diane Riley

SUMMARY

The practice of urban design has traditionally been focused on arranging urban built form and natural systems in a manner that is attentive to design detail while ensuring the functionality and interrelationship of buildings, streets, public places and neighbourhoods. This article proposes that to cope with challenges such as climate change and economic disruption, urban designers will also be actively working at the macro scale to foster social, environmental, and community cohesion. The need to deliver and maintain infrastructure, buildings, and natural areas consistent with growth challenges requires focus, determination and balance – and the expertise of urban design professionals. Urban designers can play a key role over the next 75 years to determine how well our urban environments respond to basic and evolving human needs.

SOMMAIRE

La pratique de l'urbanisme s'est traditionnellement concentrée sur l'aménagement de l'environnement bâti et des systèmes naturels de manière à respecter les détails de la conception tout en garantissant la fonctionnalité et l'interrelation des bâtiments, des rues, des lieux publics et des quartiers. Cet article propose que, pour faire face à des défis tels que les changements climatiques et les perturbations économiques, les urbanistes travaillent également activement à grande échelle pour favoriser la cohésion sociale, environnementale et communautaire. La nécessité de fournir et de maintenir des infrastructures, des bâtiments et des espaces naturels adaptés aux défis de la croissance exige de la concentration, de la détermination et de l'équilibre, ainsi que l'expertise des professionnels de l'urbanisme. Les urbanistes peuvent jouer un rôle clé au cours des 75 prochaines années pour déterminer dans quelle mesure nos environnements urbains répondent aux besoins fondamentaux et évolutifs de l'humanité.

CANADA IN 2100
CANADA EN 2100

Introduction

Canada is urbanizing at a rapid rate. For example, in 2023, the cities of Vancouver, Calgary, Toronto and Montreal grew by a combined total of over 500,000 people. Delivering and maintaining infrastructure, buildings, and the natural environment consistent with growth challenges such as these will require focus, determination and balance – and the expertise of urban design professionals.

Urban planning and design are distinct but interdependent and complementary processes. We define urban planning as the strategic framework for urban management and growth in a cohesive manner while ensuring equitable provision for human needs over time. In conjunction with and complementary to this, urban design is the practice of delineating the elements of built form and natural systems at human scale. This ranges from the micro, detailed, design to the macro regional scale to foster social, environmental, and community cohesion. Urban design is most often practised in Canada by individuals with overlapping and complementary backgrounds in planning, landscape architecture and architecture. A mark of successful urban design is that it is functional, cost-effective and resilient as well as attractive. Over the next 75 years urban design will play a fundamental role in how well our urban environments respond to our evolving human needs.

Fundamental Needs

To meet the range of challenges facing our communities, the fundamentals of good urban design will need to deal with more than built form, focusing on how basic human needs within the human ecosystem (air, water, the built environment) fit together. Over the next 75 years, urban designers must come to grips with these complex relationships, facilitate them and seek to prevent one dominating over the other. Good planning and good urban design will be inseparable, as urban designers learn to anticipate these needs through the interpretation, arrangement and sympathetic cohesion of built elements, recognizing that needs and priorities will change over time.

A problem faced by urban designers today is that not everyone understands the level of effort required to achieve livability in the places we build. Good urban design doesn't just happen! The current rush (and need) to build more housing has led to a widespread view perpetuated in the media that sees urban design as an obstacle just adding more process and bureaucracy that holds things up.

Because urban design is at the nexus of various disciplines (ranging from landscape architecture to engineering and more) it tends to be praised and owned when it works, and criticized and disowned when it doesn't. Yet good urban design is essential in creating functional, attractive, and durable public and private spaces that we pass through daily. The experience can be subtle or spectacular, but human beings gravitate to places they find beautiful and pleasing.

Where We Were 75 Years Ago: This article looks ahead 75 years to 2100. In 1950, Canada's population was about 14M, today it is 42M; immigration contributed a third of this growth. The role of immigration in the future expansion and development of Canada's urban areas will continue to be a defining factor. Immigrants have not only diversified Canada's social cultural mosaic, but also expanded the range of building forms, functions and influences utilized in urban design and will continue to play a formative role in the future.

Imagining the Future: Urban Design in the Context of Future Growth

The case for urban design to respond to pressures such as climate change, rapid growth, as well as our ability to move through and around our communities relies on its ability to shape communities and neighbourhoods that are simultaneously economically viable, environmentally sustainable, and socially cohesive. The pace and impacts of change, likely to accelerate decade by decade, will not tolerate today's reliance on inflexible rules, standards and guidelines. To avoid sacrificing quality for quantity, urban designers will need to find ways to stay flexible to local needs.

Urban Designers as Leaders: The success of urban design in the decades ahead hinges on fostering a public understanding of how the built environment affects daily life, health, and community well-being. Urban designers can play a crucial role in helping citizens recognize the vital connection between urban design choices and their personal experiences.

Leading the Charge to Minimize Our Carbon Footprint: Climate change is already shaping our responses to change. Where leadership, marketplace acceptance and private investment permits, important strides in building and community design have already been taken. The current response is slow compared to the level of need and it must accelerate markedly over the next 75 years to keep pace with climate change and our changing needs. We may understand the issues but we struggle to understand what our sustainable communities will look like. Understanding that built form and transportation represent over 70 per cent of our GHG emissions is key to comprehensive, sustainable, urban design.

> **Most critically, we must ensure urban design remains on the agenda, fostering ongoing reflection and dialogue to guide our communities through demographic transformation, technological change and the climate emergencies ahead.**

This design should include: a full range of multi-mobility options, compact and diverse built form, expanding natural form within urban areas, and utilizing emerging sustainable technologies within comprehensive design strategies. Future communities must achieve carbon neutrality, not just in operations but in embodied carbon from construction materials. This requires a shift toward local sourcing, recycled materials, and designs that maximize building efficiency, lifespan and adaptability. Urban designers must continue to embrace innovation and integrate technological advancements in their practices to meet these challenges and the ongoing need to build faster, be more efficient, and sustainable.

The incorporation of AI in urban design will significantly impact our practices, but it must be balanced with human-centered design principles and human oversight. It is crucial that technology enhances, rather than replaces, human judgment and community engagement in urban design processes. This approach will ensure that the integration of AI contributes positively to the overall fabric of urban life.

Protecting Livability

The projected growth, particularly in urban areas, will necessitate that we continue to build dense and compact communities. Livability must become a primary metric for urban success, transcending simple housing provision to include a diverse range of integrated life necessities (such as amenities, parks, jobs, retail, etc.) that support quality of life. We don't want communities where people merely survive; we need to create places and environments that are enjoyable and fulfilling for everyone, regardless of age, ability, or economic status – places where people thrive.

Urban design must acknowledge that the built environment has a profound impact on both physical and psychological well-being. This means designing spaces that are inclusive, comfortable, safe, beautiful, and foster social connections and contact with nature. Designing with higher density in mind requires an open-minded approach to urban design that focuses on human scale while meeting the needs of residents.

Climate change is already reshaping our response to urban planning and design. We passed our former limit of 1.5C by 2050 in 2024; climate change is moving faster than we can respond to it (the statistics are set out in the 'Canada 2100' long paper, January, 2025). The need to harden our buildings and infrastructure for extreme heat, fires, flooding and high winds will be a priority in all future planning considerations.

Facilitating Mobility: As mobility patterns continue to evolve toward transit-oriented and active transportation by 2100, urban designers can promote and advocate for seamless, multi-modal networks and champion transit-oriented development where daily needs are accessible within walking distance of high-frequency transit. Urban designers have a role to play in engaging both policymakers and the public in creating communities where car ownership is not necessary, rather than simply making vehicles cleaner or more intelligent.

Promoting a Healthier Public Realm: As urban density increases, the public realm becomes increasingly critical to community livability and social cohesion: places that are safe and welcoming to all. The unwritten social contract of urban living – that greater density, means less private space – mandates exceptional public spaces that serve as extensions of people's homes. This requires urban designers to prioritize the creation and maintenance of high-quality public spaces that can accommodate the complex needs of dense communities.

Conclusion

As Canada's urban future unfolds through 2100, growth will bring diverse perspectives that fundamentally reshape urban design, demanding collaboration across cultures and generations. The path forward demands continuous adjustment while maintaining our commitment to inclusivity, livability, sustainability, and climate resilience as non-negotiable principles. Most critically, we must ensure urban design remains on the agenda, fostering ongoing reflection and dialogue to guide our communities through demographic transformation, technological change and the climate emergencies ahead. This must be a collaborative effort as the next 75 years will define whether our urban environments enhance human potential or merely enable our current level of survival.

Dan Leeming RPP, FCIP was a founding partner of the Planning Partnership, where he is currently a special advisor. His areas of expertise include: community planning, from regional to neighbourhood scale, the relationship between urban design, public health and sustainability initiatives. Dan was co-chair of LEED-ND Canada and currently chairs CanU's Climate Change and Resiliency Caucus. **Eric Turcotte** RPP, FCIP is a partner with Urban Strategies Inc. He is a planner, urban designer, and architect with experience in Canada, the U.S., the UK, and Ireland. He is a founding member and past-president of the Council for Canadian Urbanism (CanU). His practice focuses on urban design and city-building projects across Canada and internationally. **Diane Riley** is a psychophysiologist, consultant and therapist who has written a number of papers and books has been a frequent co-author with Dan Leeming. She has worked in Canada and internationally for many years in the areas of development, security, addictions, harm reduction, and mental health. She is currently an advisor to international and local organizations. ◼