Smart City

Canadian Geographic's September/October issue examines the importance of designing "smart" cities in the face of increasing population sizes and mental health crises in Canadian urban centers. Urbanist Robin Mazumder discusses some solutions to these issues, and more specifically, an innovative project called Sidewalk Toronto. With your students, use the infographic and the following questions to learn more about unique approaches that can be used to support healthier cities and happier residents.

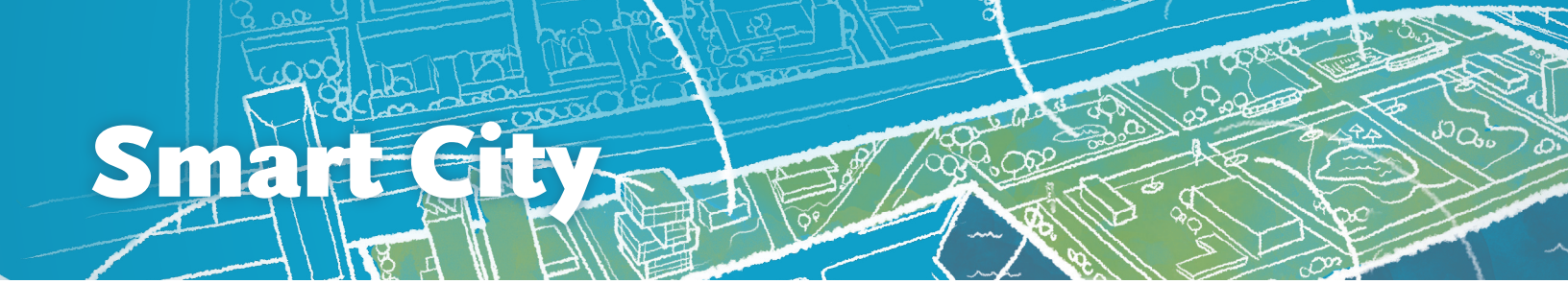
Check for understanding

1. Why is there a need for "smart" cities in Canada?

2. What is a mixed-use community? What are the benefits of this type of development?

3. How could the physical location of Sidewalk Toronto impact the mental health of nearby residents?

4. How can open data and smart technology be combined to improve future urban centers?



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Extend your geographical thinking

1. Using aerial photos from your local library, the National Air Photo Library, or Google Earth Timelapse, have students track past urban development in your neighbourhood. Provide students with the following questions to encourage critical thinking:

   a. Identify the areas that now have the highest density of people. What is it that makes these areas attractive to residents?

   b. Research any ongoing issues related to urban planning, housing, mental health or resources. Are there any projects or proposals that have been put forth to remedy these issues?

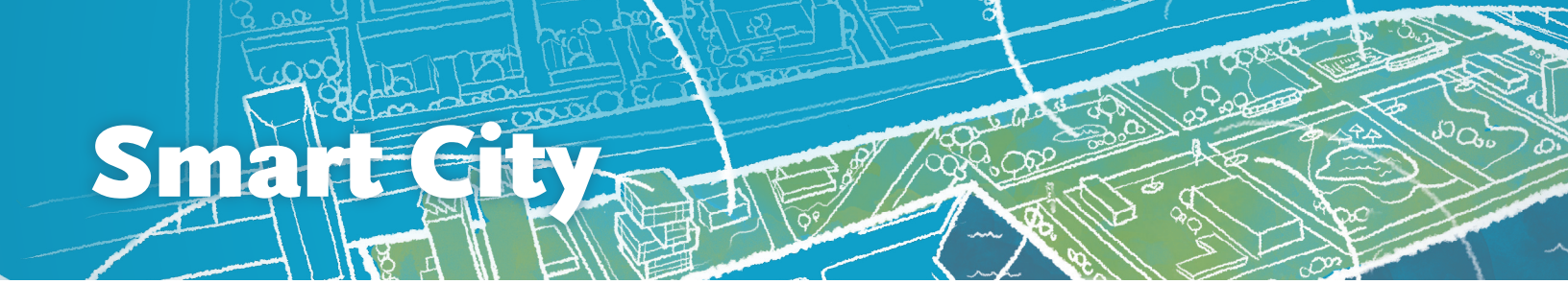
2. As a class, identify a neighbourhood issue related to urban planning, housing, mental health or resources that everyone is passionate about. Work together to develop a proposal for a community initiative or a letter of concern and send it to your local member of parliament (MP). Find out who your local MP is by searching for your postal code in the House of Commons database. Use the resources listed below for tips on how to communicate with your MP in a concise and respectful manner, and how to broach the subject of "smart" neighbourhoods.

3. Divide the class into four groups. The first three groups will act as three different neighbourhood councils, each putting forth a "smart" urban planning proposal they would like to see implemented in their community. The fourth group will act as a committee of community officials in charge of decision-making related to urban planning (e.g., a volunteer executive committee working out of the local community center).

   a. Task the first three groups with writing a "smart" urban planning proposal for an area in close proximity to the school. Each group should use the seven categories presented in the infographic (i.e., inclusion, commerce, city layers, social connection, mobility, food access and sustainability) to help shape their proposal. Students can rely on the template or the resources section below for ideas on how to design and write a proposal (the resources section also includes examples).

   b. In the meantime, have the fourth group review examples of "good" and "bad" proposals (written by you or retrieved elsewhere), and familiarize themselves with what should be included in a proposal. Students can also create a rubric outlining how they will measure a successful proposal.

   c. Let each of the three groups present their proposal to the committee of officials. Have the committee vote on the proposal they feel will be the most successful (you can even celebrate the winning proposal/project by hosting a launch party with light refreshments!).



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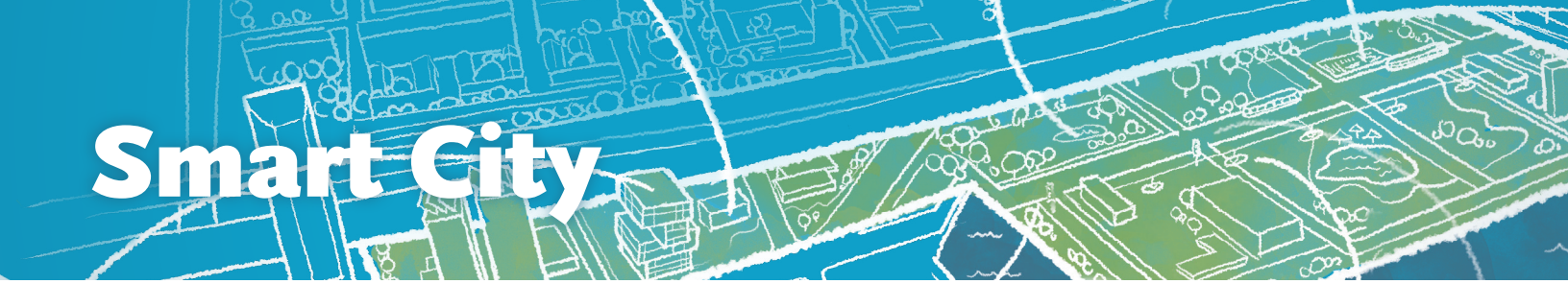
Proposal Template

Title of "Smart" Urban Planning Proposal	
Objectives:	
1. 2. 3.	
Primary Demographic (e.g., children, adults, families, people with disabilities, low-income residents)	**Location Within the Neighbourhood**
Description of the Neighbourhood	
Statement of the Community Problem	
Description of Project Being Proposed	



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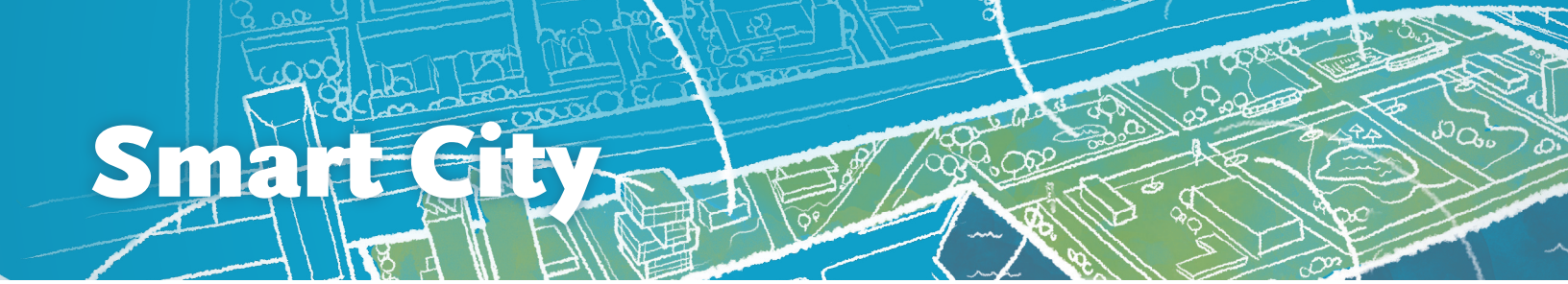
Specific "Smart" Strategies to be Implemented		
Inclusion	**Food Access**	**Smart City Layers**
Commerce	**Sustainability**	**Other**
Social Connection	**Mobility**	**Other**
How Will This Project Solve the Problem Mentioned Above?		



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Resources

- Robin Mazumder's website: robinmazumder.com
- *Ottawa Citizen* article on urban change in the capital: ottawacitizen.com/news/local-news/ottawa-is-transforming-before-our-eyes-as-we-hit-canadas-150th-where-is-the-capital-going
- Engineering for Change's recommendations on how to write a proposal: engineeringforchange.org/news/how-to-write-a-proposal-for-development-work-in-your-community-2/
- The Community Tool Box's examples of grant writing and community recreation project proposals: ctb.ku.edu/en/applying-for-grants/examples
- Learn about a day in the life of an MP: lop.parl.ca/About/Parliament/Education/ourcountryourparliament/html_booklet/day-life-member-parliament-e.html
- House of Commons current members of parliament: ourcommons.ca/Parliamentarians/en/members
- Citizens for Public Justice on how to write a letter to your MP: cpj.ca/writing-letter-your-mp
- OXFAM's template and list of tricks for writing to your local MP: oxfam.org.nz/sites/default/files/imgs/get-involved/Templates%20and%20tricks%20for%20writing%20to%20MPs.pdf
- Smart Growth Network: smartgrowth.org/
- Smart Cities Council: smartcitiescouncil.com/
- Sustainable Learning – Sustainable City Living: sustainablelearning.com/resource/my-green-city

Smart city

Urbanist Robin Mazumder reviews Quayside, the new 'smart' neighbourhood on Toronto's eastern waterfront

By Robin Mazumder

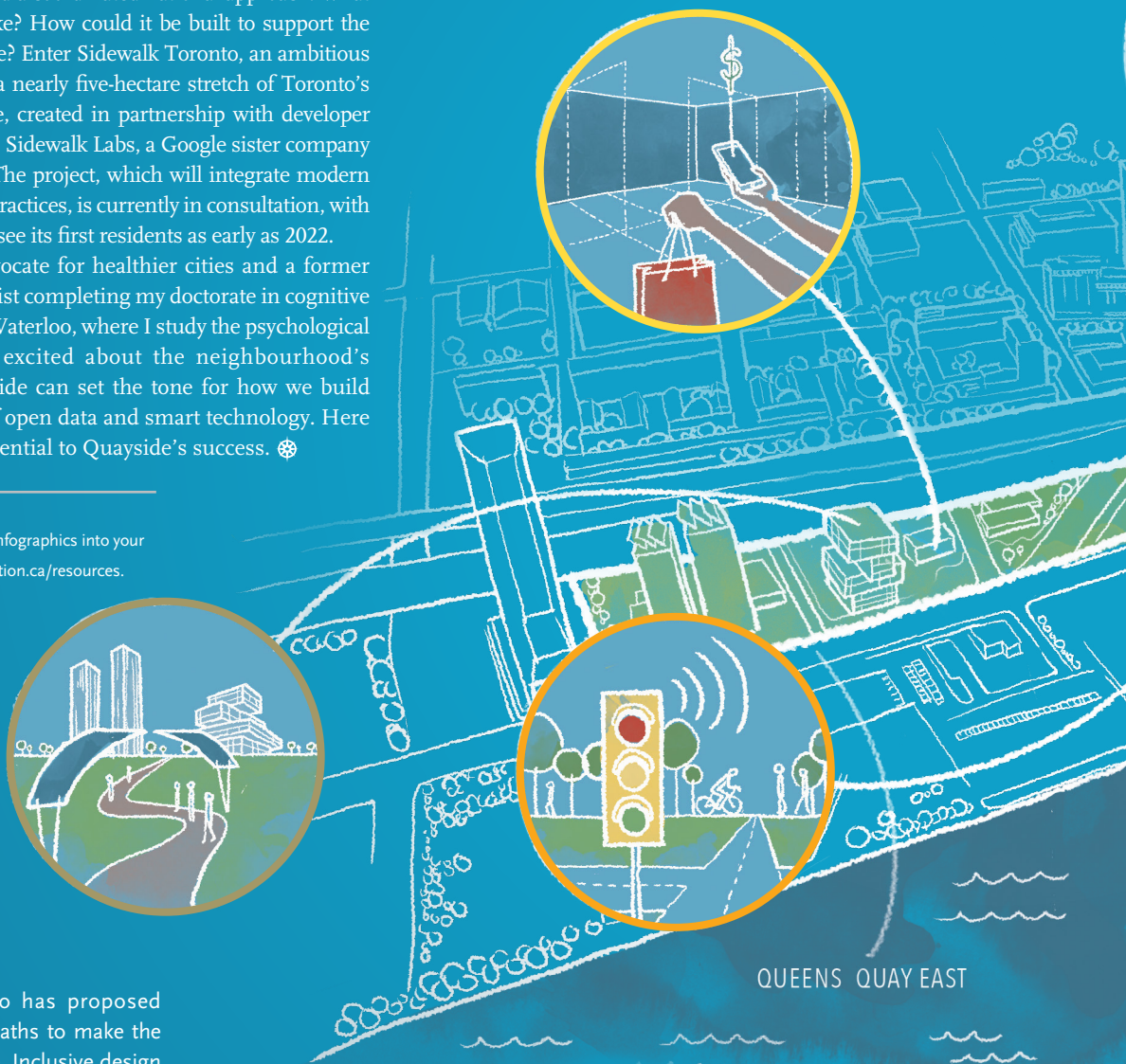
Imagine being able to build a neighbourhood from scratch in the heart of Toronto, the country's most populous city; to experiment with innovative urban design in the midst of a housing shortage and what Mayor John Tory has called a citywide mental health crisis, as many citizens struggle with issues related to a lack of city resources and a coordinated national approach. What would that neighbourhood look like? How could it be built to support the well-being of the people living there? Enter Sidewalk Toronto, an ambitious mixed-use community project on a nearly five-hectare stretch of Toronto's eastern waterfront called Quayside, created in partnership with developer Waterfront Toronto and Alphabet's Sidewalk Labs, a Google sister company specializing in urban innovation. The project, which will integrate modern technology and best urban design practices, is currently in consultation, with plans to break ground in 2020 and see its first residents as early as 2022.

As an outspoken urbanist, advocate for healthier cities and a former mental health occupational therapist completing my doctorate in cognitive neuroscience at the University of Waterloo, where I study the psychological impacts of urban design, I'm excited about the neighbourhood's possibilities. If done well, Quayside can set the tone for how we build future urban centres in the age of open data and smart technology. Here are some elements I think are essential to Quayside's success.

Teachers! Bring this and other infographics into your classroom by visiting cangeoeducation.ca/resources.

COMMERCE

While online shopping makes life easier, it can have detrimental impacts on local businesses, a crucial element of urban life. Sidewalk Toronto is attempting to revolutionize retail, offering flexible spaces with design elements that can be reconfigured based on the retailer's needs, such as a floor of small independent pop-up shops that can be converted into an open-plan community craft market. Sidewalk Toronto is also looking to merge brick-and-mortar stores with digital technology, such as automatic billing to eliminate checkout lines.



INCLUSION

We know that Sidewalk Toronto has proposed retractable canopies and heated paths to make the city's long winters more accessible. Inclusive design must be implemented at every step, and no one should be barred from engaging in their community because they have a disability. Furthermore, this project will only be successful if it is inclusive, so affordable housing should be a top priority.

A SMART CITY LAYER

Smart sensor technology can help improve efficiency and optimize services, such as waste management and energy use. Quayside will be outfitted with adaptive traffic lights that sense pedestrians and cyclists, prioritizing their movement at intersections — a technology that's long overdue in many cities.

CHELSEA PETERS/CAN GEO

SOCIAL CONNECTION

Sidewalk Toronto has suggested a neighbourhood assistant application that would connect neighbours through an online platform. But as social isolation is a major problem in most cities, I think a well-designed, inclusive public space can help address that problem. You need to *physically* make those community connections through face-to-face time with residents.

FOOD ACCESS

Food deserts are urban areas with little or no access to high quality, affordable and healthy food, and they're a mounting concern for many communities. To combat this, Sidewalk Toronto plans to create a public garden space, which is an excellent way of ensuring access to fresh, healthy foods. Not only do they provide a space to grow food, but they also encourage community engagement.

MOBILITY

Every effort should be made to reduce our dependence on cars through good design, such as separated bike lanes, reliable public transit and people-first pedestrian infrastructure such as narrower streets and speed bumps to reduce traffic flow. Sidewalk Toronto has a goal of having the lowest car-use of any neighbourhood in Toronto, aiming for foot, bike and public transit to account for 75 per cent of all travel.

SUSTAINABILITY

It is imperative that cities of the future prioritize sustainability. Sidewalk Toronto has proposed energy efficient housing and a multi-source district heating and cooling thermal grid system that harnesses heat from geothermal sources and waste energy from the nearby Portlands Energy Centre, and cooling from the depths of Lake Ontario. This system will have to be adaptive, given Toronto's temperature swings.

CHELSEA PETERS/CAN GEO