



Global Network for Health in All Policies



**Social Inequalities in Health:
Understanding and Engaging Differently**

Photo credits: Guy Lessard

Social Inequalities in Health: Understanding and Engaging Differently



Québec City

- Over 530,000 residents
- Total area: 454.28 km²
- A UNESCO World Heritage Site
- Economic prosperity
- Affordable education
- Outdoor activities, cultural and athletic events



Smart Cities Challenge

Background

- Launched in 2017 and organized by Infrastructure Canada
- The Smart Cities Challenge is a pan-Canadian competition open to communities of all sizes:
 - Municipalities
 - Local and regional governments
 - Indigenous communities



Source: Infrastructure Canada

Smart Cities Challenge

Objective

To empower communities to adopt a smart cities approach to improve the lives of their residents through innovation, data, and connected technology.



Innovation



Data



Connected
technology

Smart Cities Challenge

Process

- Québec City: finalist in the \$50 million category
- Final proposals submitted on March 5, 2019
- Four winning communities were selected:
 - \$50 million: City of Montréal, QC
 - \$10 million: Nunavut communities, NU, City of Guelph and Wellington County, ON
 - \$5 million: Town of Bridgewater, NS



Québec City's Project in a Single Number

8 years

Québec City – Final Proposal

Challenge statement

Social Inequalities in Health: Understanding and Engaging Differently

Engage the people of Québec City in a broad-based initiative to promote sustainable health and well-being for all through collective intelligence and digital monitoring and decision support tools

Projected benefits

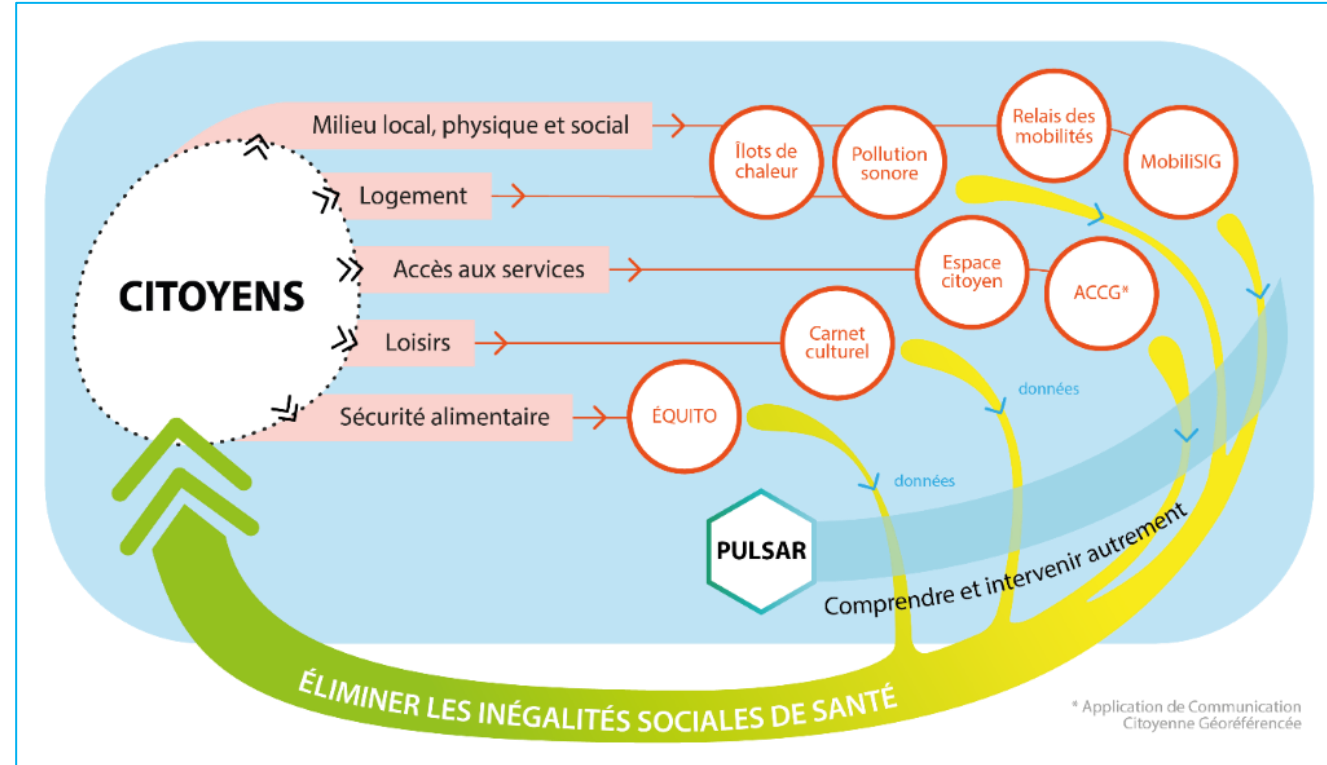
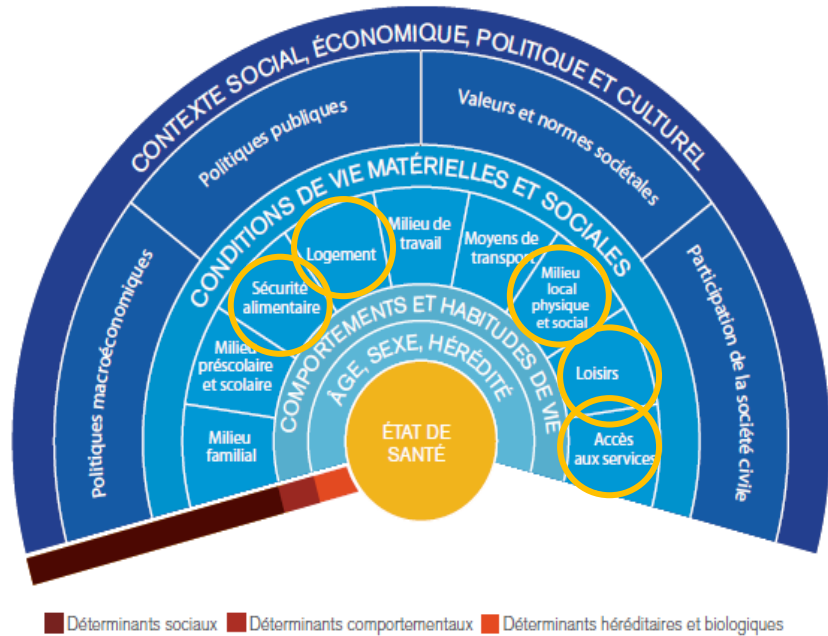
- Create a sustainable health ecosystem
- Obtain \$50 million in financing

Partners

- Université Laval
- Partners from the healthcare and business sectors, community organizations, and Indigenous communities

Québec City – Final Proposal

FIGURE 3
LES DIFFÉRENTES CATÉGORIES DE DÉTERMINANTS DE LA SANTÉ



A broad-based initiative for sustainable health and urban safety backed by scientific research and technological innovation that drives economic development and enhances the vitality of the Québec City region

Québec City – Activities

Support for the project and sustainable health

PULSAR

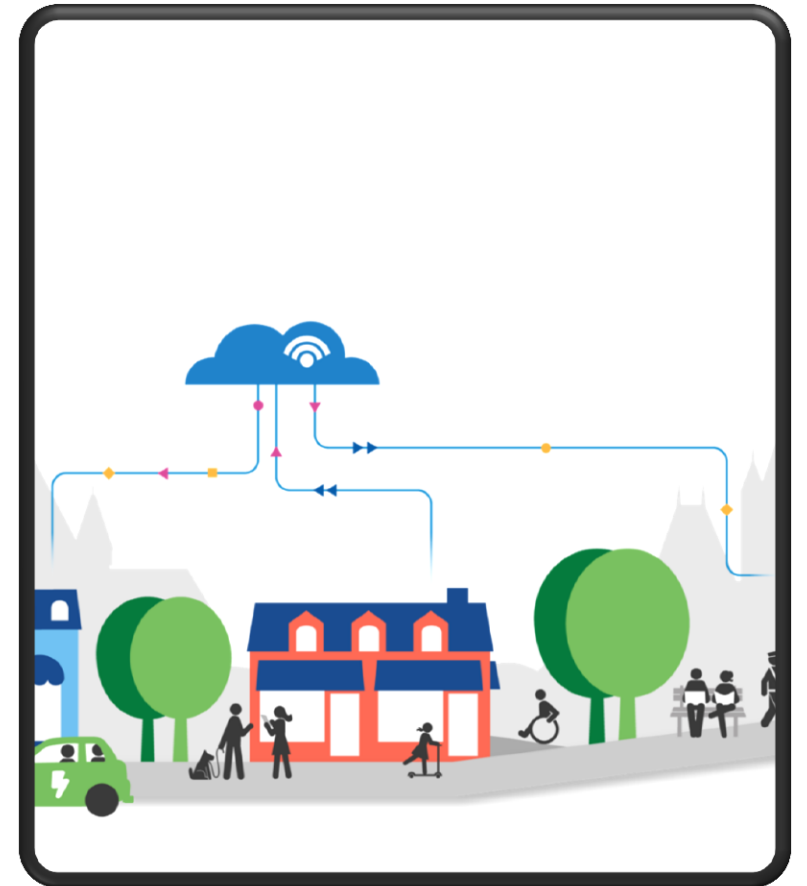
A collaborative platform for sustainable health research and innovation

<https://pulsar.ca/en/home>

Digital Twin

High definition 3D rendering of the city

- LIDAR 3D scanning tools
- Mobile capture unit with geolocation
- Ultra HD camera



Québec City – Activities

Housing/Local, physical, and social environment

Heat islands

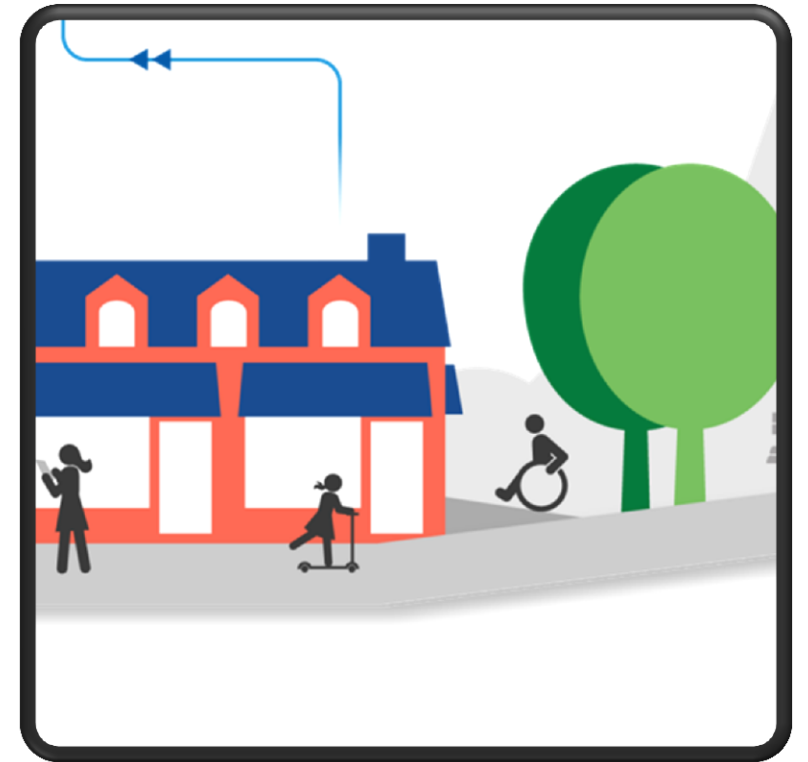
Reduce heat islands and their impacts

- Fixed sensors
- Thermal imaging cameras
- Wi-Fi devices

Noise pollution

Expand quiet areas and reduce noise pollution

- Fixed sensors
- Sound level meters
- Wi-Fi devices



Québec City – Activities

Local, Physical, and Social Environment

Relais des mobilités (Mobility Lab)

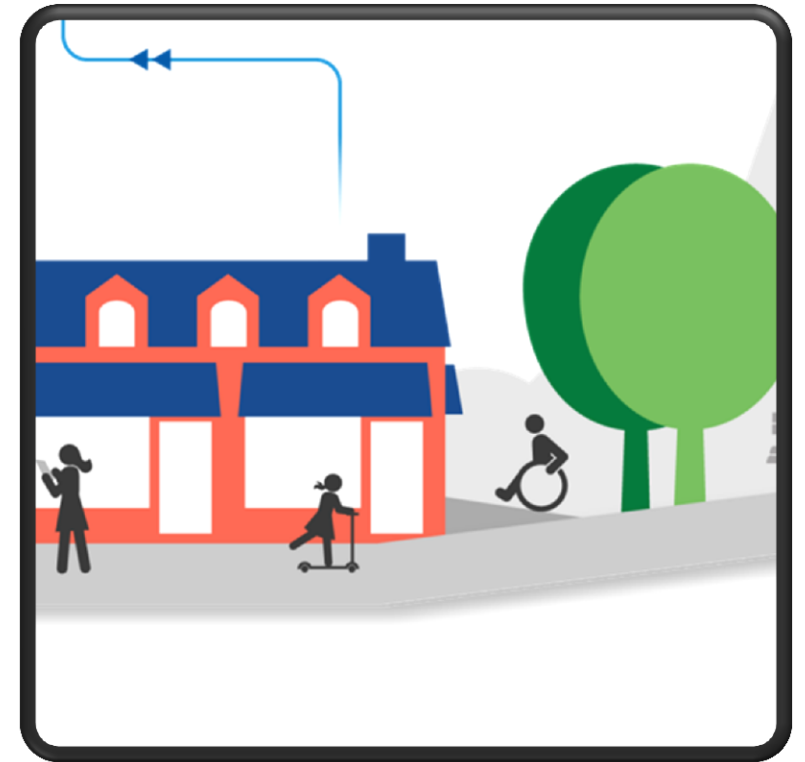
Outdoor semi-controlled trial area for people with functional limitations

- Sensors
- Video and motion-analysis systems
- Street furniture and accessories equipped with Wi-Fi devices
- Development room (3D printers, laser cutters)

MobiliSIG

Assistive technology to facilitate multimodal mobility

- Geographic information system (GIS) database
- Power to calculate and cross-reference PULSAR data



Québec City – Activities

Access to services

Citizen Portal

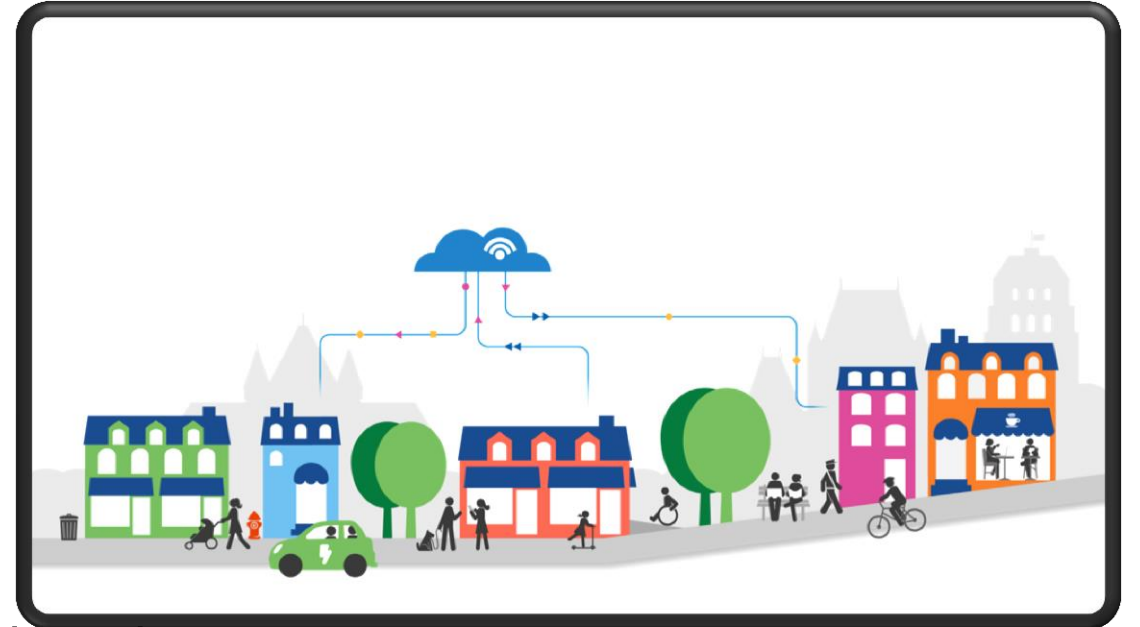
Digital transactional space to facilitate dialogue and access to services

- Authenti-Cité federated authentication system
- Progressive Web app (PWA) and Web design

Location-based citizen communication app

A location-based discussion platform designed as a shared solution for citizen communication and engagement

- Space Pulse, the location-based social networking app for citizen communications



Québec City – Activities

Food security

ÉQUITO

Improve the quality of and access to food

- Applications and websites
- Technology to measure, control, and monitor products

Recreation

Culture guide

Digital passport offered to all newborns, combined with cultural activities offered starting in early childhood

- Citizen e-services



Québec City – Project Cost

COÛTS DU PROJET



COÛT TOTAL DU PROJET: 61 M \$

Contributions	2019	2020	2021	2022	2023	Total
Infrastructure Canada	6 744 933\$	13 122 973\$	9 630 671\$	8 355 770\$	7 977 701\$	45 832 048\$
Ville de Québec	1 913 285\$	2 880 718\$	2 584 704\$	2 480 945\$	2 499 672\$	12 359 324\$
Université Laval	416 250\$	492 919\$	510 171\$	523 528\$	541 851\$	2 484 719\$
Autres partenaires	50 000\$	62 100\$	64 274\$	64 274\$	68 851\$	309 498\$
Total des contributions	9 124 468\$	16 558 709\$	12 789 819\$	11 424 517\$	11 088 075\$	60 985 589\$

Committed Partners



Final Application Video

- <https://www.ville.quebec.qc.ca/villeintelligente/defi/candidature.aspx>