

CITÉ-ID
LIVING
LAB

Gouvernance
de la résilience
urbaine

Urban resilience
governance

Gobernanza
de la resiliencia
urbana

Urban resilience and digital data:

Examples of data partnership governance in Montreal and Quebec

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Open and Agile Smart City Summit — Panel: Local Artificial Intelligence for Communities and Public Administrations, where to start?

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Cité-ID LivingLab – Governance of urban resilience

- Created on **January 30, 2018** with the **support of the Quebec Research Funds and the Ministry of Public Security**, Cité-ID is a research-intervention laboratory of the National School of Public Administration of Quebec.
- Its mission: To carry out **research-intervention work** on complex issues identified by **stakeholders** (public, private, community actors, citizens, etc.) in order to co-construct innovative **governance practices** to increase **resilience**.

[Cité-ID LivingLab \(cite-id.com\)](http://cite-id.com)

Other Responsibilities :

- Co-director of the **Uni-Cité Collaboratory** : Foster links between science and urban public policies - *Create a space for collaboration to optimize and promote the realization of projects uniting municipal actors and researchers* – www.uni-cite.ca
- Co-responsible for the **Deliberation function** of the International Observatory on the societal effects of digital technology and artificial intelligence: <https://observatoire-ia.ulaval.ca/fonction/deliberation/>

Key issues

1. A few elements of **definition** on **key notions** :
 - Urban resilience, smart cities and data governance
2. **Governance issues** of digital data partnerships
 - from **scientific papers**
3. **Governance issues** of digital data partnerships
 - drawn from **3 practical examples** , i.e. research-action approaches carried out by ENAP's Cité-ID LivingLab

1. A few elements of definition on key notions

Urban resilience

- New paradigm in civil security advocating for the need to develop new **adaptive capacities** of urban systems to crises through the construction of **collaborative networks** (Normandin et al. 2019; Therrien et al. 2021).

Smart cities

- Socio-technical constructions linking digital technologies and collaborative governance (Meijer , 2018).
- They use new technologies (eg sensors) to **visualize data** from different sectors (health, transport, energy) in order to allow **cities to identify risks and make better decisions** (Leszczynski, 2016).

Governance

What **are the challenges** to the development of **adaptive capacities** by governance networks in smart cities?

1-Definition of data governance

➤ The **rules** and ways of doing things that guide **collective decision-making** through **data partnerships** through **communication and collaboration processes** (Ansell & Gash , 2008).

The governance of data partnerships involves :

- Identification of **stakeholders** ;
- Definition of the **data to be shared and their use** ;
- Construction of a **common vision** ;
- Definition of **common objectives** ;
- Determination of **ethical principles** and **operating rules** ;
- Definition of **roles** and **responsibilities** .

2- Issues of data governance – Scientific writings

- **Legal** barriers
- Working in **silos**
- Data **Ownership**
- **Organizational capacities** : appropriate infrastructures, human resources, skills, analytical capacities, etc.
- **Collaboration** : different objectives and feeling of loss of control of the process
- **Lack of interoperability** systems, lack of **standardization** and **quality of data** .
- **Cyber-security**
- Difficulties integrating data into **decision-making**

3- Data governance issues – Practical examples of Cité-ID

Example 1 : Use of **geographic information technologies** and **evidence-based data** for the **ecological transition** in the borough of Rosemont – la Petite-Patrie

3- Data
governance
issues drawn
from practical
examples

- Research as part of the **Civic Innovation Laboratory for Regulatory Experimentation (LICER)** with **public administrators** working in **regulatory review** in Rosemont
- Use of **territorial maps** of the borough to **visualize data** on greening, canopy, carbon capture, heat islands, mineralization and biodiversity.
- These data are the basis of the **ecological transition plan** and the borough's **regulatory changes** associated with it.

Issues raised : **Lack of technologies and expertise** . Use of **private firms** to carry out the studies. **Impact at borough level** but differences with other boroughs. **Lack of formal mechanisms for sharing information** and data between the different boroughs.

3- Data governance issues – Practical examples of Cité-ID

Example 2: Co-construction of the Institut du Nouveau Monde (INM) data governance model

- **Cité-ID** supports **the INM and partners** in a **knowledge transfer process** aimed at co-constructing its governance model for sharing **data from public and citizen consultations**

- **Issues identified** so far:
 - **No ready-made recipe** .
 - Issues specific to NPOs and data sharing : no specific legislation, lack of concrete examples, lack of scientific research
 - Lack of **intra-organizational capacities** in terms of:
 - **Human resources** to identify data to be shared;
 - **Expertise** : responsible data governance, knowledge of the legal framework and ethical principles
 - **Financial resources** to operate the digital shift & data management
 - **Feeling of overflow** : a lot of new knowledge to integrate into the work practices of the organization

3- Data governance issues – Practical examples of Cité-ID

Example 3 : COVID-19 Community Action Plan (CAP) Studies

- Produced by Cité-ID, in collaboration with the Public health authorities + researchers from the McGill Department of Epidemiology
 - PAC: Funded by the Fonds COVID Québec, 26 Gr. Mtl territories, community organizations, CIUSSS/CISSS + boroughs
- Our study demonstrates
 - PAC = mode of **collaborative governance** based on community engagement that has promoted **resilient health crisis management**
 - the importance of **data sharing** to support **informed decision-making** and **coordinated interventions** on the ground

However, several issues :

- organizations : mistrust, discomfort, lack of digital literacy, expertise and resources in data cleaning and analysis
- Health organizations: legal and regulatory obstacles (consent, protection of personal information)
- Lack of discussion on a responsible data sharing governance model
- Lack of digital infrastructure for common data management

Conclusion

- The development of **adaptive** and **resilient capacities of smart cities** requires the development of **capacities for the governance of data partnerships**.
- The examples presented
 - show that these partnerships can take place at **different scales** (organization, district, city, province) and that the **size of the networks** of stakeholders varies according to these.
 - reveal common issues:
 - Lack of **intra-organizational capacities** (financial resources, expertise, technological infrastructures)
 - Lack of **inter-organizational capacities** (governance and collaboration mechanisms, including formal communication and data sharing mechanisms).
 - Even if there is no "**ready-made recipe**" for a governance model, each case seems to be called upon to reflect on the following dimensions:
 - policy, use and valuation of data, legal, technological, ethical and evaluative
- The **governance of data partnerships** is a **complex process** requiring support and varied expertise.

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