CityShield: The Innovate Cities Data Trust

May 19th, 2021

Smart Cities Innovation for the Betterment of City Dwellers:

Smart cities technologies, which started as a tool designed to make cities more efficient and effective, are now seen as a means to serve the needs of city dwellers. This approach which puts people first – and not technology– is now integrated into the urban fabric and works to improve residents' quality of life.

Smart cities technologies impact a variety of areas; from urban resilience and climate change preparedness, to mobility, transportation, job creation, housing, and community engagement. A key component of these technologies is the gathering, use and storing of real-time data. This data is then used to improve the decision-making process and solve persistent urban problems, leading to more inclusive, livable and sustainable cities and a better quality of life for their citizens.

Data is also considered to be the raw material of innovation and is a key ingredient in ensuring the future of Canada's digital economy and prosperity. When it comes to societal benefits, innovation, security, and a transparent approach to data management must go hand in hand, as without public trust our ability to innovate lags. Innovate Cities is a not-for-profit network of innovators creating more inclusive, livable and sustainable cities. We are guided by the desire to transform Canada into a leader in smart cities technology, using data to improve citizen's quality of life, while protecting their privacy and earning their trust.

We believe that individuals must have personal control over their data. And as with individuals, so must our country. Innovate Cities believes in the urgent need to establish a national strategy for data sovereignty. If we Canadians continue to give up control over our data to multinational corporations and foreign nations, it will cost us the advantages of our vibrant innovation sector and we will find ourselves left behind.
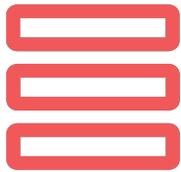
Innovate Cities calls for an ethical approach to digital governance that is anchored in transparency and democratic values of data collection, sharing, and use, coupled with a commitment to personal, and national, control over data. These values come to life in **CityShield**, **the Innovate Cities' Data Trust**: a platform designed to enable innovation among data collectors, monitored transactions, accountability, strict governance, and "Privacy-by-Design" principles.
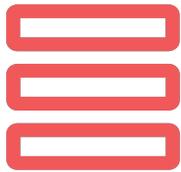
CityShield: The Innovate Cities Data Trust:
A data trust is a technological platform that allows participants to share their data with one another, while delegating the responsibilities and obligations of management to a trusted third-party entity; Innovate Cities. The aggregated data will then be used for analysis, workflows, outcomes, research, innovation, and technological development which aims to improve the lives of communities in which our innovators operate.

Innovate Cities invites members of its ecosystem to join in this communal model of data-governance, while operating as an impartial entity which oversees the members' interactions and guarantees that actions are conducted in a fair, ethical, and transparent manner.

At its core, CityShield is built on a series of relationships:

- Between Innovate Cities and intermediaries of data (e.g., technology vendors)
- Between Innovate Cities and consumers of data (e.g., researchers, municipal service providers, as well as technology vendors)
- Between Innovate Cities and individuals who produce data (e.g., residents, employees, and visitors)
- Between intermediaries of data and individuals who produce data
- Between consumers of data and individuals who produce data

Each one of these relationships will be clearly defined through a set of agreed-upon rules, responsibilities, rights, and obligations – explicitly spelled out in legally-binding contracts around sharing, use, and re-use of data, and subject to oversight from our Chief Privacy Officer and External Advisory Board. Innovate Cities will oversee the data exchange and interactions between involved parties and balance the interests of each stakeholder in a transparent manner.

CityShield's Governance Model, Commitment to Privacy by Design and Personal Control Over Data:
New technologies also require new thinking around governance. Innovate Cities is committed to adhere to values of transparency, accountability and honesty in the creation and operation of its data trust, CityShield.

To guide the creation of the data trust, Innovate Cities is collaborating with the CIO Strategy Council (a standards development organization accredited by the Standards Council of Canada) on the creation of national standards regarding responsible data stewardship. As a part of this process, to be completed by the end of 2021, members of Innovate Cities' team will join over 100 thought leaders and experts who work together to develop standards around data governance.

To ensure Innovate Cities is operating in the most ethical way possible, CityShield will be managed through a multipart mechanism of checks-and-balance:

- Dr. Ann Cavoukian — world-leading privacy expert, who served as the Information and Privacy Commissioner of Ontario for an unprecedented three terms, and creator of Privacy by Design — has agreed to fill the role of Innovate Cities' Chief Privacy Officer. She will guide the organization through the process of building CityShield and ensure that the Innovate Cities' Data Trust operates in a manner which complies to "Privacy-by-Design" principles.
- Innovate Cities will create a complaints process where individuals, organizations, and institutions can express their concerns with the Chief Privacy Officer.
- An External Advisory Board, composed of a variety of stakeholders, will provide oversight of operations and governance. The Board will handle the approval process of policies, rules, guidelines, and procedures and can request the creation, update, or elimination of certain policies or guidelines.
- An independent audit will be conducted annually through an external auditor to assess the data trust operations and provide feedback on the integral moving pieces of the data trust. The report will be delivered to Innovate Cities, its Board of Directors, the Advisory Board and will be made available to the public via the Innovate Cities website.
- Public consultations are another component of Innovate Cities governance model. The public will have a say in the data trust itself. We are committed to engaging the public in key touchpoints in our development and holding ourselves accountable to creating the infrastructure that works for innovators, governments, businesses, and the public.
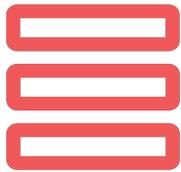
Together with transparency and accountability, Innovate Cities is committed to empowering individuals' regarding their data rights by creating a system which highlights personal control over data. Individuals will be able to decide what will be collected, where it is stored and how it is being used. Individuals can further choose to give consent and opt into certain services or choose to delete their data altogether.

The rules guiding the Innovate Cities Data Trust will adhere to the highest privacy standards, the GDPR of the European Union, whose approach is more rigorous than the existing Canadian regulations, as well as Bill C-11 (Canada's proposed new data privacy legislation). Going above and beyond, the data collected by the Innovate Cities Data Trust will not be kept on international cloud services but will be stored on Canadian servers.

Furthermore, CityShield will conform to the guidelines of Privacy by Design —the privacy focused system management approach invented by Innovate Cities' Chief Privacy Officer, Dr Cavoukian. The seven core principles of the Privacy by Design framework – proactive, not reactive; privacy as default, privacy embedded, full functionality, end-to-end security; visibility and transparency; respect for privacy – are central to CityShield's design and operation.

Once up and running, the data trust will function as a utility, generating enough revenue to cover Innovate Cities' operational costs. This could be realized through membership fees, through procurement of services to municipalities, and/or via a percentage of revenue of new products which benefited from CityShield. Other options that are considered are Freemium (that is a limited access service is granted for free), pay-per-use, subscription model, or fee for access. In line with our commitment to transparency, Innovate Cities will be upfront in regard to how revenue is generated and will reveal how the business model will function.

Join the Innovate Cities community today or reach out to learn more about our initiatives and products. Together we can create better, safer places to live, work and connect and benefit citizens everywhere.

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