Data Governance Directive

Ville de Montréal

June 2022

Version	Date	Main changes
2.0	2022-06	Complete review of roles and responsibilities. Addition of the consumer's contribution. Distinctions between roles played by technical, content and supervision teams.
1.0	2015-12	First version of the directive.
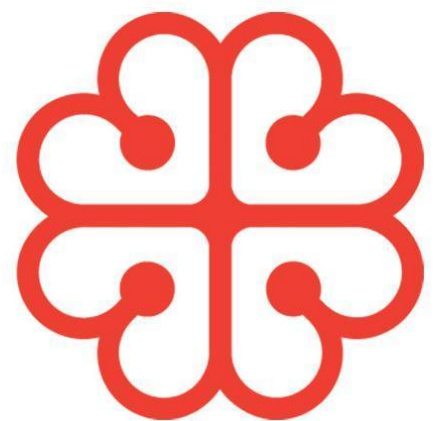
01. Background

Montréal recognizes the important role that data has to play in meeting its strategic planning objectives. The city generates and manages a vast amount of data within the framework of its activities. The data represent significant digital assets that exert a direct impact on residents. They span a broad spectrum of fields and areas of expertise and involve numerous specialists, users and analysts. The Data Governance Directive aims to operationalize the supervision and standardization of the organization's internal data management practices, including non-technological aspects. The directive also creates opportunities to use data to improve the delivery of municipal services and decision-making, thereby allowing the city to improve its contribution to the common good and exert a greater impact on the community.

02. Objective

This directive describes the scope, objective and structure of the city's data governance in order to promote sound data management and a shared understanding of its requirements. Specifically, the directive aims to:

- Clarify the ownership of data held by the city.
- Define guiding data governance principles.
- Define the roles and responsibilities related to data governance.

03. Areas of application

This directive applies to all administrative units at the city, including central departments and boroughs that collect, manage and use data in the course of their activities.

It provides a framework for the management of all data acquired, produced, processed, stored or shared by the city via its technological platforms, and all data over which the city holds intellectual property rights or an acquired data usage right. It also applies to data in connection with activities that fall under the jurisdiction of the agglomeration.

04. Definitions

Data life cycle: Process for describing the main activities and competencies required for sound data management. Inspired by document management, it helps specify concepts by drawing from the management of similar physical assets. It also includes activities related to preparation (planning and classification), operations (acquisition, analysis, use and dissemination) and the end of life (deletion and archiving).

Chief data owner: Person who is given and fulfils the responsibilities associated with the property of data held by the city.

Reference data: Data shared by all the processes in support of current activities in a business field.

Data flow: Sequence of data processing, collection and consumption procedures, including the data cleanup and transformation.

Data trustee: Administrative unit named to ensure data acquisition and management.

Data repository: Central point used to link reference data and centralize information on the storage, harmonization and reliability of data across the organization.

Administrative unit: Within the scope of this directive, designates a central department or a borough.

05. Data ownership

The city acts as trustee of its data on behalf of its residents. With this directive, the city designates the Direction générale (city manager's office) or the city manager to serve as chief data owner for all municipal departments and boroughs.

The Direction générale mandates data owners within its business units to oversee the sound management of data they receive.

06. Guiding principles

1. Data governance serves to guide, supervise and standardize data management practices, including non-technological aspects, in order to meet three main objectives:
    1.1. Guarantee the quality of data.
    1.2. Generate opportunities.
    1.3. Implement means to protect data based on their level of confidentiality.
2. Data governance is an integral part of Montréal Numérique, the city's digital transformation strategy.
3. Data governance supports the application of principles adopted under the city's Digital Data Charter.
4. The Open Data Policy is a lever for the application of data governance.
5. Data are often cross-sectional and span several business domains.
6. Data governance clarifies the framework for applying the data life cycle to existing business processes.

07. Roles and responsibilities

This directive must be applied in compliance with the *Act respecting access to documents held by public bodies and the protection of personal information*.

Each administrative unit is responsible for implementing the provisions set out in this directive in its activities and managing its application. In order to support their efforts and ensure success, the directive assigns certain roles and responsibilities.

Chief data owner

The Direction générale or the city manager:

- Guides and approves the city's data strategy.
- Appoints the administrative units as data trustees responsible for the sound management of data and approves the establishment of the steering committee.
- As required, arbitrates disputes concerning the stewardship, administration, degree of openness or sharing of data.
- Disseminates, interprets and ensures the application of this directive by coordinating and mobilizing the city's administrative units.
- Ensures the establishment of mechanisms for evaluations, organization-wide quality criteria, monitoring and documentation so that business units can fulfil their responsibilities concerning the sound management of data under their governance.

Data Governance Steering Committee

The Steering Committee, formed to represent all stakeholders involved in the data life cycle:

- Sets out the broad guidelines and strategic objectives of data governance and management, and ensures that they are approved.
- Guides the organization's principles, standards and quality criteria.
- Prioritizes the actions and projects initiated under the data governance strategy.
- Communicates and promotes the data governance vision within the organization.
- Resolves and arbitrates when problems are reported by business domains.
- Reviews and approves data governance decisions that affect all business domains.

Data Owner

The director of the administrative unit acting as data trustee:

- Assumes the role of data trustee with their administrative unit, assigned by the Direction générale, and helps promote a data culture.
- Ensures that the production, management and integrity of data under their responsibility observe the data life cycle, including through corporate inventory updates.
- Helps define and manage data quality criteria on their administrative unit.
- Establishes the follow-up mechanisms required to evaluate the implementation of the directive within their administrative unit and issues periodic reports.
- Designates persons responsible for data stewardship:
  - Data steward coordinator(s) for the administrative unit
  - A data steward for each data set
- Assumes the security risks and ensures compliance with administrative principles and standards and with the laws and regulations in force, specifically in connection with the data under their responsibility.
- Complies with Montréal's Open Data Policy.
- Implements reasonable means to secure intellectual property or publication rights during the acquisition of data.

Data Steward Coordinator

The person designated to coordinate data-related activities within their administrative unit:

- Prioritizes data-related needs on the same level as application needs and proposes data initiatives for approval by the data owner.
- Coordinates the process of updating their administrative unit's corporate inventory and data repository.
- Ensures that the strategic positioning of the organization, the governance committee and their administrative unit is shared within their administrative unit.
- Coordinates the activities of content guarantors to ensure the application of strategic positioning goals and meet the data quality objectives of the organization and their business unit.
- Identifies non-existent data that can enrich their administrative unit.
- Serves as the main point of contact for data on their administrative unit and networks with data stewards.
- Promotes a data culture within their administrative unit.

Data Steward

The reference person designated to ensure the operational management of data:

- Acts as the main point of contact for the data under their responsibility.
- Identifies, manages, and escalates in the event of problems and risks related to the management of data under their responsibility.
- Establishes, executes and validates the results of processes aimed at ensuring the quality of data under their responsibility.
- Documents the data sets under their responsibility by providing metadata and a data dictionary.
- Supports users and consumers in connection with the use of data.

Data Administrator

The department in charge of the technological infrastructure of data, generally the department of information technologies:

- Develops and maintains a consistent technical architecture for data and ensures the availability of the corporate data catalogue.
- Develops and ensures the evolution of the corporate computing architecture so as to facilitate open data sharing and ensure data integrity.
- Defines the technological solutions to use.
- Designates the persons responsible for the administration of data:
  - A technical coordinator for the complete data life cycle.
  - A data custodian for each data set.
- Operates and maintains operational and open data management systems and platforms.
- Establishes data security and integrity management mechanisms.

Technical Coordinator

The designated person with the technical data expertise and the mastery of the business domains that use the data, often in the service of information technologies for data from corporate systems:

- Ensures that data needs are communicated in the form of cross-sectional technological requirements, without regard for limitations in the competencies of administrative units or the scope of application systems:
  - Participates in data modelling.
  - Defines and implements the architecture of reference data.
  - Ensures that processes for the creation, entry, maintenance and accessibility of metadata are in place.
- Defines and validates the data integration strategy based on the enterprise's architecture orientations.
- Documents and produces mapping for data flow in information systems (Data Lineage).
- Provides follow-up and helps technical guarantors solve problems in connection with the data under their responsibility.
- Promotes the integration of data governance in the operating life of data under their responsibility.

Data Custodian

Designated persons responsible for the proper operation of information technology and operational tools:

- Ensure that there is a balance between data needs and requirements and the techniques and technological systems deployed to meet them.
- Adapt the techniques and technological systems in order to meet the data needs expressed by the data steward.
- Ensure the suitability and evolution of technologies in relation to user needs and architecture orientations.
- Document the technical dimension of data and data systems under their responsibility.
- Provide technical assistance to data stewards, data steward coordinators and consumers.

Data governance team

The team responsible for promoting data governance at the city and overseeing its implementation:

- Oversees the application of this directive and the decisions of the Data Governance Steering Committee and the Direction générale or the city manager.

- Ensures the broader application of commitments concerning the sharing of public data within the framework of the Open Data Policy.
- Guides and supports the production, management and use of data and ensures coordination between the different actors working with data.
- Coordinates the data inventory process, the management of the corporate data catalogue and the control of its application.
- Helps define data quality criteria and develop the city's data architecture.
- Facilitates the understanding and implementation of data governance.
- Defines the organization's data quality principles, standards, and criteria.
- Ensures the enhancement of public data, as well as the mobilization of and relations with external users.

Data Consumer

The user of data held by the city:

- Expresses to the data trustee and data producer their requirements and needs in relation to the data consumed in the performance of their duties.
- Uses data within the framework and limitations defined by their data trustee, in accordance with the applicable data governance policies and the data sharing and dissemination agreements entered into by the city.
- Informs the data trustee about issues encountered in relation to data access, content, quality and security.

08. Previous directive

This directive cancels any previous directive on this subject, which could be incompatible with this version.