City of Mississauga
Corporate Report

Date: May 11, 2021	Originator's files:
To: Chair and Members of General Committee	
From: Shawn Slack, MBA, Acting Commissioner of Corporate Services and Chief Financial Officer	Meeting date: June 9, 2021

Subject
Data Handling Policy

Recommendation
That the corporate report dated May 11, 2021 from the Acting Commissioner, Corporate Services Department and Chief Financial Officer entitled, "Data Handling Policy" and Appendix 1 the draft Revised Data Handling Policy be approved.

Executive Summary

- The Data Handling Policy is intended to protect the corporation from harm by placing rules around the handling of sensitive, restricted and classified information.

- Data Handling and Classification will be phased in over a few years starting with a human focus on training, followed by a technical focus around tools and data loss protection.

- Data Handling refers to how data is handled while: in use, in storage, and in transmission based on the data contents. Data classification is the standardized process used to classify or label data in accordance with its contents.

- Other Governments have implemented data classification and handling policies in accordance with compliance against legislative and industry standards for example: Municipal Freedom of Information and Protection of Privacy Act (MFIPPA), Person Health Information Protection Act (PHIPA), and Payment Card Industry Data Security Standard (PCI-DSS).

- Citizen engagement through the Smart City Master Plan established the co-creation of a guiding principle titled, "Control, Consent and Comfort in Regards to Privacy, Data Protection and Security" that enforced the support of this policy development.

Background

Data Classification is the characterization of information based on an assessment of legal and regulatory requirement, and the potential impact that a loss of confidentiality, integrity, or availability of such information would have on organizational operations, organizational assets, individuals, other organizations, and the City. Data Handling refers to the means by which staff use, store, and transmit data. Data is grouped into four labels: Public, Sensitive, Restricted, and Classified. These labels have progressive requirements for how data is handled.

Federal, provincial and local governments have identified the need to handle data in accordance with a data classification schema. A data handling and classification program enables organizations to be more efficient at ensuring legislative and industry standard compliance such as (but not limited to): MFIPPA, PHIPA, and PCI-DSS. According to an internal benchmarking exercise, the following notable examples of governments that have public facing data handling / classification policies:

- Government of Canada
- Province of Ontario
- Province of Alberta
- City of Calgary
- New York City
- City of Chicago

The IT Master Plan recommends the, "Enablement of Decisions through Research and Analytics striving to improve City Services through the use and analysis of data in ways not thought of before supporting Business Planning, Lean and other continuous improvement initiatives." Data classification and handling are a core component of this recommendation.

Comments

All City of Mississauga Data will be handled in accordance with the criteria defined in the policy. The Data Handling Policy provides instructions to all staff and third party agencies on how to handle data in accordance with contents of the data.

The plan for Data Handling and Classification will be rolled out in a phased approach:

- Phase 1 – Human Focus
- Phase 2 – Technology Focus

Phase 1 – Human Focus
The first phase of this program will focus on the human side of data handling and classification. The scope of phase 1 is significant. The scope includes:

- All data (i.e., documents and databases)
- All servers (i.e., cloud and on premise)
- All devices (i.e., desktop PCs, laptops, mobile, USB storage devices, BYOD program)
- All paper documents and physical storage areas

In summary, the scope roughly includes: 200+ terra bytes of data, 700 databases (production and development), 5-10 million estimated digital documents, multiple filing rooms, thousands of devices, thousands of data license agreements and 7,000 staff.

The goal of the Data Handling Policy include:
- Clear instructions for staff as to how to handle data while: in use, in storage, and in transmission according to it's contents
- A mandatory training program designed to instruct all staff on how to handle data
- A Human Resources focus to formalize job duties for: Data Stewards, Data Owners and Data Custodians to position the City for phase 2 – Technology Focus
- Developing processes for the Data Governance Working Group that address: questions in data handling, breaches in data handling policy, and administering data license agreements
- Standardizing Data License Agreements across the corporation

Phase 2 – Technology Focus (Future Phase)
The plan for phase 2 is to focus on the technology side of data classification and data loss prevention (DLP). This includes the procurement of tools that will review massive collections of data (structured, semi-structured, and non-structured data) and automatically pre-classify (allowing for human override) it based on the data's contents in accordance with standardized Canadian data compliance requirements. Once the data is classified, the tools will handle the data in accordance with the assigned classification label. Reports can be generated as to the monitoring of DLP and data classification.

Governments are beginning to provide annual reports on the state of their data holdings summarizing how their data is being managed and governed. Cities report on additional items like open data, data classification, and innovation that results from the above. The two-phased approach recommended here will position the City of Mississauga for this future ability.

Once the City has confirmed the Data Classification Program (tools, resources, etc.), the Data Handling Policy will be amended to include the additional requirements for data classification and associated DLP. Additional training and processes will be developed for: Data Owners, Data Stewards and Data Custodians.

Engagement and Consultation

A significant engagement and consultation took place between 2018 and 2019 for the development of the Smart City Master Plan. The Smart City Master Plan engagement process developed the following framework titled, "Data Centric" meaning the responsible, innovative and efficient use of data.

The Center for Civic Curiosity also held a series of Data Governance events during the summer of 2019. During the events, the following Guiding Principle was co-created titled, "Control, Consent and Comfort in Regards to Privacy, Data Protection and Security: meaning "providing reliable data that is trustworthy, accurate, compliant with relevant legislation and secure to ensure services feel safe and secure. Ensuring privacy and control over personal data in both physical and virtual spaces to ensure digital confidentiality, security, anonymity, and sovereignty over their data including the right to know how their data is being used, by who and for what purposes." There was significant support for the co-creation of this Guiding Principle, and the development of the Data Handling Policy.

In addition to the external citizen engagement process, several internal stakeholders have been engaged on this policy including:

- Data Governance Working Group
- Open Data Working Group
- Extended Leadership Team (ExLT)

A related draft policy titled, "Smart City Policy" is also ready for citizen engagement and consultation. The Smart City Policy is designed to enable our city to deploy smart city technology in the public realm using a process that is co-created with our citizens. The Smart City Policy hinges on the ethical use of data, including practices such as privacy by design and security by design. Therefore, data classification and handling found in the Data Handling Policy are foundational to the Smart City Policy.

Financial Impact

There are no financial impacts resulting from the recommendations in this report. There will be financial implications for the recommended phase 2, inclusive of the Microsoft 365 implementation, which will include Data Compliance and Security features. Phase 2 will begin in 2023 as part of the Microsoft 365 implementation, and pending business planning and budget approval.

Conclusion

The development of a Data Handling Policy for the City of Mississauga aligns with the IT Master Plan, Smart City Master Plan and the draft Data Governance Strategy.

Moving forward on the Data Handling Policy mitigates risk to the corporation, by training all staff on how to handle data in accordance with this policy. Phase 2 enables the corporation to increase maturity around the technology phase of data classification and DLP.

Completing phase 1 and 2 of this initiative will lead the City of Mississauga towards a balanced data strategy that maximizes data value while minimizing risk of data breaches – this enables both a strong data offence alongside a strong data defence.

The City of Mississauga has significant data asset holdings. These data assets can be used for the betterment of our citizens by improving the City's posture towards a data-driven decision making culture. At the core of this movement is the establishment of a data handling policy.

Completing phase 2 will lay the foundation for an Electronic Document and Records Management System (EDRMS). Data Classification and Handling is a core component of EDRMS.

In summary, the benefits of a comprehensive data governance strategy including data classification/handling program include:

- Increased data compliance (i.e., MFIPPA, PHIPA, and OCI, etc.)
- Increased data loss prevention (i.e., strong data defence)
- Increased value (i.e., strong data offence)
- Increased staff literacy/understanding
- Increased data quality through increased data stewardship
- Increased drive towards a data-driven culture
- Increased agility and expansion of the City's Open Data program

Attachments

Appendix 1: Revised Data Handling Policy

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