Agenda – Executive Policy Committee – December 7, 2022

REPORTS

Item No. 5 2022 Open Data Annual Report

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

That this report be received as information.

DECISION MAKING HISTORY:

COUNCIL DECISION:

On September 30, 2020, Council concurred in the recommendation of the Executive Policy Committee, which included the following recommendation:

1. That the Winnipeg Public Service be directed to submit an annual report to Council detailing the progress of the City's Open Data program, to advise on the progress and successes of the preceding year.

ADMINISTRATIVE REPORT

Title: 2022 Open Data Annual Report

Critical Path: Executive Policy Committee – Council

AUTHORIZATION

Author	Department Head	CFO	CAO
A. Burton	T. Gooch	N/A	M. Jack

EXECUTIVE SUMMARY

On September 30, 2020, Council requested the Public Service submit an annual report to Council detailing the progress of the City's Open Data program, to advise on the progress and successes of the preceding year.

Key achievements of the past year include:

- 13 new datasets and maps released to the public.
- Three new Open Data-powered applications to provide the information in a more user-friendly manner.
- 2022 Hackathon hosted in a hybrid virtual and in-person manner, attracting over 40 attendees making up six teams.
- Open Data Steering Committee Terms of Reference approved by Chief Administrative Officer.

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

On September 30, 2020, Council adopted the following recommendation:

That the Winnipeg Public Service be directed to submit an annual report to Council detailing the progress of the City's Open Data program, to advise on the progress and successes of the preceding year.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications receiving this report as information.

HISTORY/DISCUSSION

History

On May 30, 2012, Council adopted the following:

1. That the City of Winnipeg endorse the principles of:

    A. Open and Accessible Data - the City of Winnipeg will share with citizens, businesses and other jurisdictions the greatest amount of data possible while respecting privacy and security concerns.
    B. Open Standards - the City of Winnipeg will move as quickly as possible to adopt prevailing open standards for data, documents, maps, and other formats of media.

On March 20, 2013, Council adopted an Open Data Initiative which endorsed the principles of providing Open and Accessible Data that could be shared with citizens, businesses and other jurisdictions the greatest amount of data possible while respecting privacy and security concerns.

On June 25, 2014, Council adopted the "Open Government Initiative - Improvements to the Freedom of Information and Protection of Privacy Act Process" which directed the Winnipeg Public Service to implement a new process for Freedom of Information and Protection of Privacy Act (FIPPA) requests. This process would focus on the concepts of openness and transparency in providing government data, while ensuring privacy and security of data for citizens and businesses, in keeping with the Open Data Initiatives adopted by Council.

On September 16, 2015, Executive Policy Committee requested that the Public Service conduct a review of all city data sharing and identify opportunities to apply machine readable format along with a review of security and privacy considerations and report back within 90 days.

On November 25, 2015, Council approved a report outlining leading open government initiatives in other jurisdictions and broad recommendations on next steps for the City of Winnipeg in implementing open government.

On June 6, 2016, the City hired a full time Open Data Administrator to manage and promote the City's Open Data program. Having a dedicated staff member accelerated the City's Open Data program by focusing on new datasets, new collaborations and new projects built with Open Data.

In 2015, the Public Sector Digest launched Canada's first Open Data benchmark – the Open Cities Index. This index measures the maturity of municipal Open Data programs by evaluating their readiness, implementation and impact. With no specific guidelines for what an Open Data program should be, the City used this survey as a rubric to develop the program. For 2015, the City of Winnipeg placed 20th. In 2016, the rank improved to 10th, relative to other Canadian cities. In 2017, Winnipeg jumped to third across Canada. After the Public Sector Digest paused the index survey in 2018, the 2019 score pushed Winnipeg to 2nd place. Finally, in 2020, the Index was expanded to all North American cities, and while Winnipeg ranked back down to third, the overall score improved 22% year to year to 96.30%, a near perfect score.

On September 30, 2020, Council adopted the International Open Data Charter. The Charter represents a globally agreed upon set of principles for publishing Open Data that is:

1. Open by Default.
2. Timely and Comprehensive.
3. Accessible and Usable.
4. Comparable and Interoperable.
5. For improved Governance and Citizen Engagement.
6. For Inclusive Development and Innovation.

On December 2, 2017, the City of Winnipeg partnered with North Forge to host the first Open Data Hackathon. A Hackathon is generally a code development event, open to interested members of the public, usually around a specific theme. The first Open Data Hackathon drew a crowd of around 50 people at the Red River College's Ace Project Space and was well received by all. On March 3, 2018, another Hackathon was hosted with the same partners to celebrate 'Open Data Day', with similar results. In 2019, the City of Winnipeg partnered with Decision Works to try out a different venue and audience, again with very positive reactions. The City of Winnipeg has partnered with Decision Works since then, for 2020 and 2021, which was hosted virtually in response to the COVID-19 epidemic. In March of 2022, the City worked with the Winnipeg Data Science Meetup group to host another well attended Hackathon. The City of Winnipeg expects to continue the tradition of encouraging members of the public to use Open Data Hackathons as an opportunity to learn about Open Data.

Over the last six years, the core priority of the Open Data program is the release of new City of Winnipeg datasets. Since September 2021, the Open Data team has released 13 new datasets and maps including Temporary patios, LRS (Linear Referencing System – geospatial data) speed limits, LiDAR (3d imagery data), and 311 Call Wait Times.

Discussion

The Open Data Annual Report provides a summary of the activities and work that has been done with the City's Open Data over the last twelve months, and to highlight upcoming initiatives and goals.

Open Cities Index

The Public Sector Digest publishes a report on the state of municipal Open Data programs, and the City of Winnipeg has used this as a rubric for developing a successful Open Data program. In 2020, the Public Sector Digest opened the survey to all North American cities. The City placed third in North America, with an overall score of 96%, just behind Ottawa and Edmonton. The Public Sector Digest has adjusted the reporting cycle of the Open Cities Index to every three years, and as the next report is not due until 2023, the City will remain third in North America on the index until that time.

Open Data Steering Committee

On December 16, 2021, the Open Data Steering Committee Terms of Reference were approved by the Chief Administrative Officer. The members of the Committee include the City Clerk, the Director of Customer Service & Communications, the City Records Manager & Archivist, the Manager of Innovation & Technology for Corporate Services, and chaired by the Director of Innovation & Technology. The Open Data Steering Committee is responsible for

management oversight of Open Data. The committee exercises this responsibility through prioritizing datasets to be published as open data, measuring performance for the use of open data, reporting to Council on open data, determining when to withdraw datasets from open data, and facilitating interdepartmental decisions regarding open data.

The Open Data Steering Committee has developed a mechanism for handling community-submitted visualizations and maps, based on feedback from residents of Winnipeg. This process includes a review of the title to ensure it is not editorialized, and appropriate messaging to the submitter in the case of submission rejection.

New Datasets

The core priority of the Open Data program is the release of new City of Winnipeg datasets. Over the last 12 months, the Open Data team has released 13 new datasets and maps for a total of 209 now available on our open data portal (data.winnipeg.ca). The following are all the datasets that have been released since September 2021.

Dataset	Release Date	Description
Temporary Patios	10/29/2021	List of temporary patios in response to Covid-19
Orthographic Photography Tiles	11/16/2021	Aerial Photography Tiles by year
LRS Speed Limits	11/23/2021	Used in conjunction with the Base Linear Referencing System (LRS - a geospatial representation of the City road network) - a list of all the speed limits
LRS School Speed Limits	12/24/2021	Used in conjunction with the Base Linear Referencing System (LRS - a geospatial representation of the City road network) - a list of all the school zone speed limits
Map of School Speed Limits	12/24/2021	Derived Map of LRS Speed Limits
School Zone Signage	12/24/2021	Dataset contains the locations of all road signs denoting reduced speed limit school zones
LRS Block Segments	11/23/2021	Used in conjunction with the Base Linear Referencing System (LRS - a geospatial representation of the City road network) - a breakdown of the streets into blocks, used by Public Works
Block by Block On-street Paid Parking	12/23/2021	Dataset represents parking allocations and restrictions by block-faces using pay-by-phone (as an alternative to parking by paystations)
Map of Block by Block On-street Paid Parking	12/23/2021	Derived Map of Block by Block On-street Paid Parking

Map of Water and Waste LiDAR	2/1/2022	This dataset is an index for City of Winnipeg LiDAR files created by the Water and Waste Department. Each file contains a point cloud detailing the location, elevation and surface type at each location point.
Community Energy Investment Roadmap Energy and Emissions Modelling 2016 to 2050	6/24/2022	This data includes source data and analysis which informed and is part of the Community Energy Investment Roadmap, presented to Council in 2022. It includes a baseline 2016 Community GHG inventory. This data is a companion to the report and will not be updated. Please see https://winnipeg.ca/sustainability/ceir.stm for more details.
311 Call Wait Times	6/29/2022	Caller wait time and call talk times for the 311 contact centre. Each row is the value for the average of the last 30 minutes of caller wait time and call talk time.
Map of 2022 Polling Subdivision Units	9/7/2022	Derived Map of Polling Subdivision Units for 2022

Table 1. Released datasets since September 2021

Community Engagements: Hackathon

On March 5, 2022, the City of Winnipeg partnered with the Data Science Meetup and other sponsors from the private sector to host its sixth Open Data Hackathon. Due to Covid-19, this was a hybrid hackathon with over 40 virtual and on-premises participants. The theme for the hackathon was “Geospatial”, with various datasets from all the departments highlighted as potential projects. The participants broke up into six groups and spent the day working on their projects and a presentation, which were reviewed by the Director of Innovation & Technology, as well as other staff from the City of Winnipeg. The winner was a prototype application that used multiple geospatial datasets to build a lookup tool to assist with crime scene investigations which was submitted by the Canadian Centre for Child Protection.

Analytics

Below are the top five datasets for site views, programmatic usage and download count for the period of September 2021 to September 2022. Also included below are figures for published datasets per year, and year over year comparison of web traffic.

DATASET NAME	VIEWS
Survey Parcel	22,309
Map of Assessment Parcels	21,128
Assessment Parcels	14,466
Recycling, Garbage and Yard Waste	5,783
Tree Inventory Map	2,320

Table 2. Top datasets by site views on data.winnipeg.ca

DATASET NAME	API READS
Lane Closure	348,105
311 Call Wait Times	314,636
Snow Parking Bans	86,274
Municipal Election Candidates	85,041
Council Voting Data	79,614

Table 3. Top datasets by programmatic usage, meaning automatic computer to computer usage and interaction with the Open Data through the Application Programming Interface (API)

DATASET NAME	DOWNLOADS
Assessment Parcels	813
Aggregate Building Permit Data	524
Detailed Building Permit Data	338
Swimming Pool - Indoor	296
Recycling, Garbage and Yard Waste Collection Days	273

Table 4. Top datasets by download count of all file downloads in the various export formats.

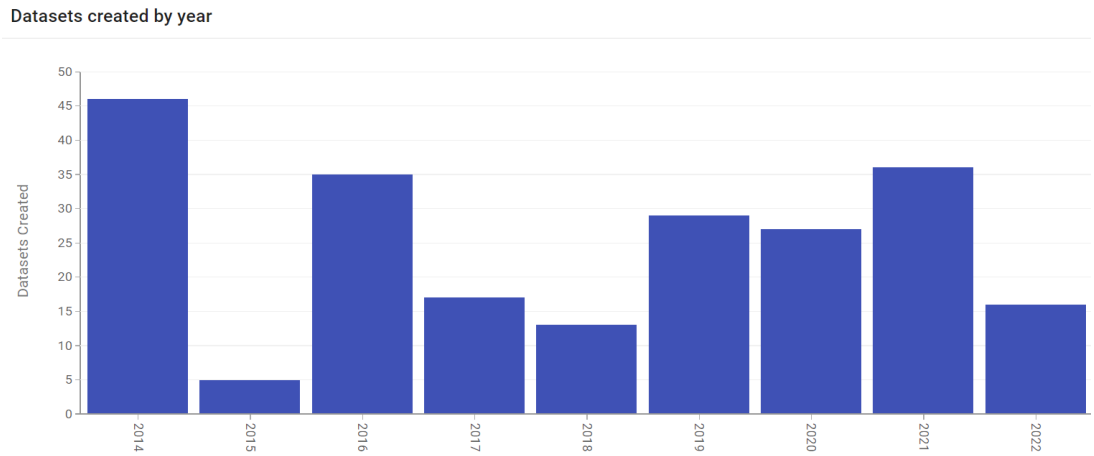

Figure 1. Datasets and Maps added to the Open Data portal by year – the portal launch in 2014 and was immediately loaded with the largest number of datasets.

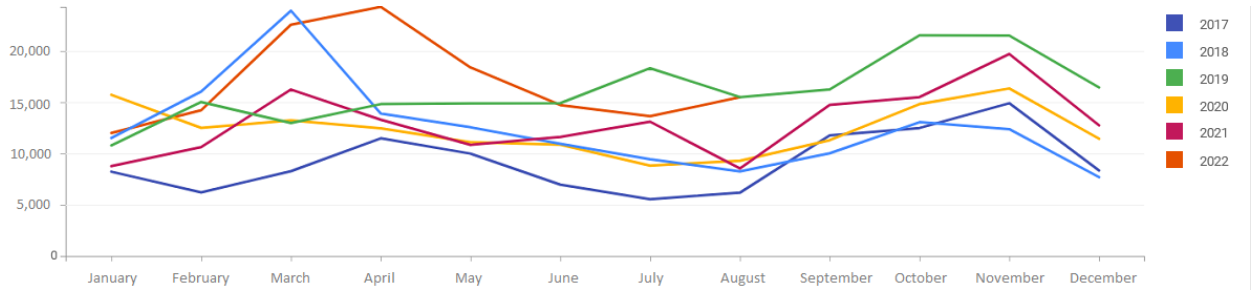

Figure 2. Page View Traffic on data.winnipeg.ca - broken down by month. Traffic is steady, with peaks in October, November, February and March. The peaks in these times correspond well with student activity, as Open Data is used in a variety of courses across Manitoba colleges and universities.

Open Data based applications

Three new applications based on Open Data were launched in 2022. These applications use the API available for each dataset and display the information in a user-friendly manner.

Public Notices

At the beginning 2022, The Public Notices application launched alongside the Planning, Property and Development department push to improve the readability of their posted public notices. This application highlights upcoming public notices, allows a deep archive search of past notices, and allows residents to sign up for email notifications for new notices. Notably, this dataset combines the public notices dataset along with the assessment parcels dataset to display pertinent information for residents in a quick and efficient manner.

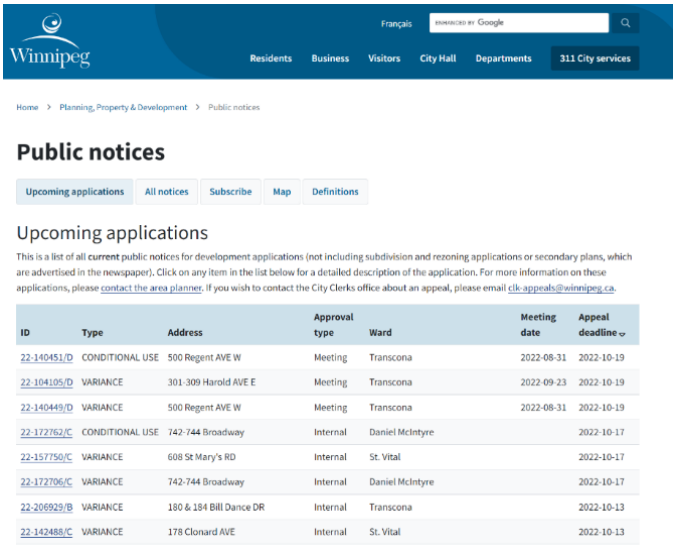

Figure 3. The Public notices web application on the Planning, Property and Development website.

311 call wait times

To provide better customer service to callers, the Customer Service and Communications department requested a new dataset on average call and wait times to 311. For this data to be useful to the public, a website widget was developed to display the average talk and wait time for the last thirty minutes. It also displays graphs showing average talk and wait time for the entire day and the previous day. This widget is showcased on the 311 webpage with the intent of highlighting times to call 311 that won't lead to a frustrating user experience. Winnipeg is one of the first cities in Canada to proactively post contact centre wait times online.

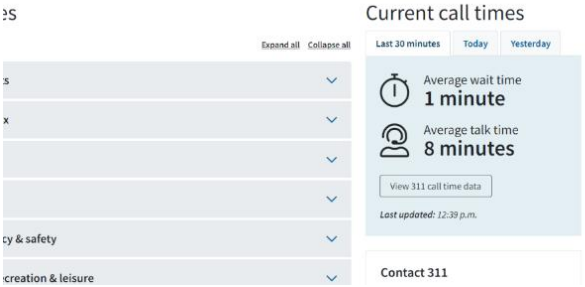

Figure 4. Screenshot of the 311 call wait times widget on the 311 homepage.

2022 Municipal Election candidates

With the 2022 Municipal Election on October 26, 2022, the City Clerk's Department requested a website be created to display the nominated and registered candidate information. Another key component was for the clerks to be able to update the information in a timely manner without having to involve other departments. A solution was developed leveraging Microsoft Office 365 and automated Open Data processes to allow the clerks full control over the municipal candidate data being displayed on the election candidate website.

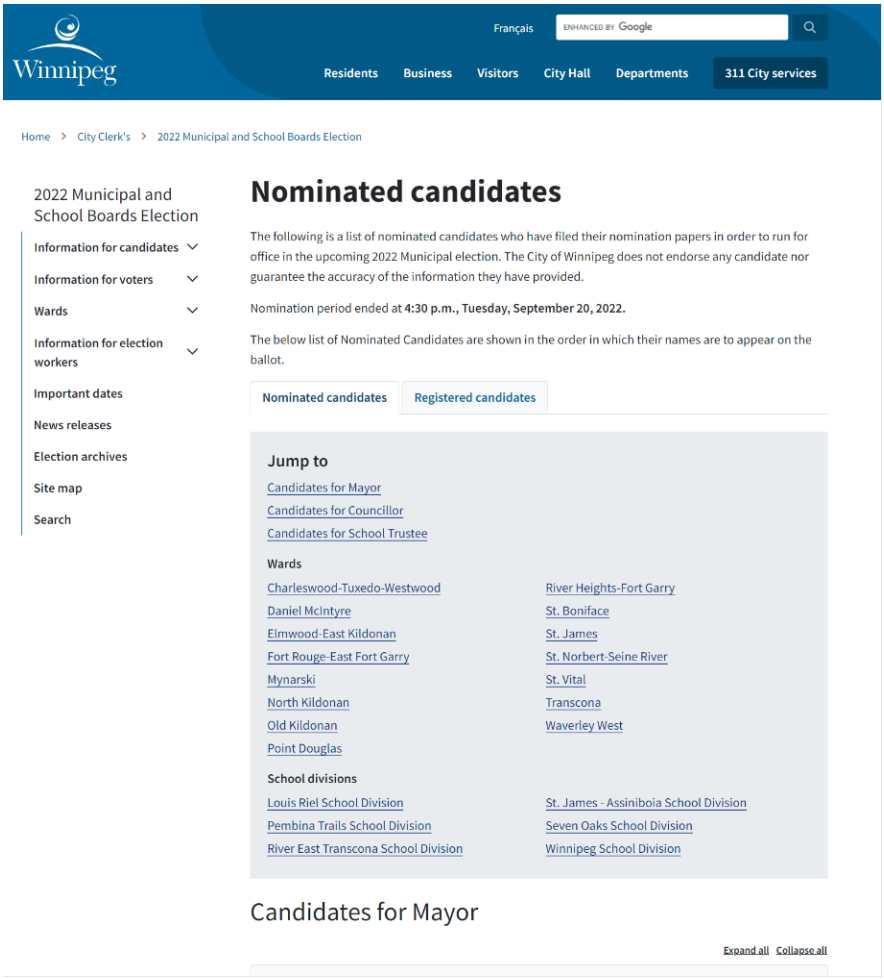

Figure 5. The nominated candidates application on the 2022 election website.

Future Plans

With the near perfect score (96.3%) on the Open Cities Index, the breadth and depth of the City of Winnipeg Open Data catalog is world class. The Public Service will continue to sustain the current catalog, publish additional datasets as they become available, and improve the quality of published data while containing costs to provide the service and continuing our leadership role in the North American Open Data landscape.

FINANCIAL IMPACT

Financial Impact Statement Date: October 18, 2022

Project Name:

Open Data Annual Report

COMMENTS:

There are no financial implications with receiving this report as information.

Jason Duke - October 18, 2022
Jason Duke, CPA, CGA
A/ Manager of Finance & Administration

CONSULTATION

In preparing this report there was consultation with:

- City Clerk's
- Customer Service & Communications

OURWINNIPEG POLICY ALIGNMENT

Our Winnipeg 1.5 - Evidence-Informed Decisions: Invest in data and technology in order to support objective, evidence-informed decision-making; support open government and open data principles for collection and sharing; help coordinate records and information management; and improve process efficiency and results-based service delivery. Residents are entitled to know, understand and consent to the data collected about them.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

N/A

SUBMITTED BY

Department: Innovation & Technology
Division: Data & Applications
Prepared by: A. Burton
Date: October 21, 2022
File No: N/A

Attachments: N/A