OPEN DATA STRATEGY

OPEN CITY

Edmonton

JANUARY 2017

EDMONTON AS AN OPEN CITY

As the capital of Alberta, Canada, the City of Edmonton aspires to fulfill its role as a preeminent global city: innovative, inclusive and engaged. Building such a city takes foresight, planning and active participation by its citizens. A great city is an open city.

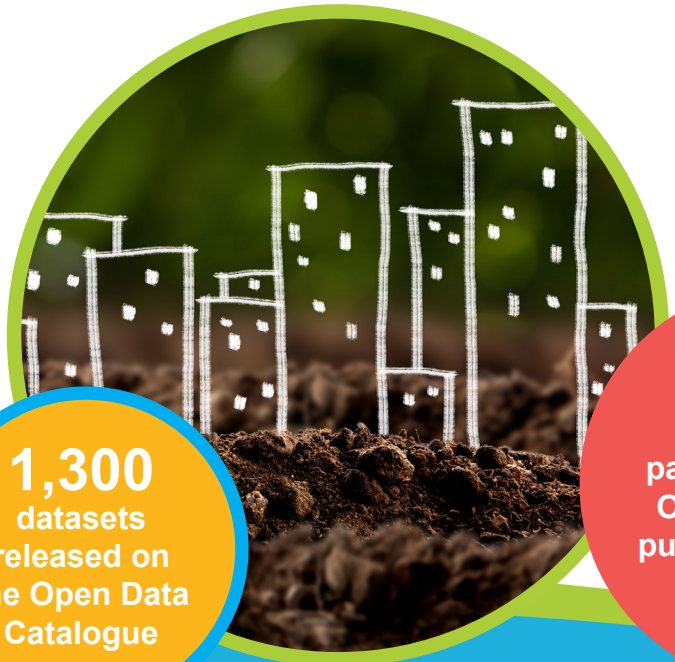
Edmonton creates opportunities for diverse input and participation by inviting citizens to play a larger role in shaping their community to enable social and economic growth.

The City's Open Data Catalogue (data.edmonton.ca) was launched in 2010 which was followed by the Open City Initiative - a municipal perspective on the philosophy of open government - in June of 2014. The Open City Initiative guided the development of the Open City Policy - adopted by Edmonton's City Council on April 14, 2015 - and as of January of 2017, 1,300 consistent and trustworthy datasets and visualizations have been made available through the Open Data Portal for public use.

Edmonton was nationally recognized by the Public Sector Digest as "Canada's Most Open City" for 2015 and 2016 and was awarded the prestigious GTEC Medal for "Excellence in Service Delivery" in December of 2016.

Building upon these past accomplishments, this Open Data Strategy is a measurable action plan to enhance Edmonton's robust Open Data Program by increasing the volume and quality of free and accessible machine-readable data, creating opportunities for informed citizens to discuss innovative opportunities for growth and realizing the economic and social value of open data.

As an open city, our entire organization is working to build new ways to share information with citizens, to find new opportunities for dialogue and to make our services easier to access. Through the application of this Open Data Strategy, Edmonton will continue to demonstrate international leadership in the practice of open government and will fulfill its role as a preeminent global city.



1,300
datasets released on the Open Data Catalogue

826
citizens participated in the Open City Policy public engagement sessions

OUR JOURNEY

2010
Launched Edmonton's Open Data Catalogue

2013
Launched an award winning Citizen Dashboard

2014
Created the Open City Initiative

2014
Hosted the City's first Open Data Hackathon

2015
Presented with the Canadian Open Data Award

2015
Received City Council approval of the Open City Policy

2015
Launched the Open Analytics website

2016
Presented with the Canadian Open Data Accessibility Award

2016
Presented with Medal of Excellence Award by GTEC

2017
Hosting the Canadian Open Data Summit

OPEN DATA VISION, PRINCIPLES & GOALS

VISION

"Leading the way to an open, smart and resilient city"

This vision statement emphasizes the City's commitment to continued Open Government leadership and support for the United Nation's Sustainable Development Goals[1] through the release of open data. Through provisioning, delivering, consuming and crowdsourcing data, the City will enhance services, stimulate economic opportunities, encourage innovation, unlock new social values, and inspire citizens.

[1] https://sustainabledevelopment.un.org/?menu=1300

PRINCIPLES

The Open City Policy is premised on the following principles:

Transparent - The City is a steward of the information we manage and the services we provide on behalf of Edmontonians. Being transparent with Edmontonians and internally promotes trust and accountability. The City's information is a public asset; consistent with privacy and protection legislation, it is disclosed in forms that Edmontonians can readily find and use.

Participatory - The City believes that a democracy values and respects public input and engages people in decision making. Community consultation provides valuable input into the decision-making process.

Collaborative - The City actively engages Edmontonians, non-profit organizations, businesses and the community to design and deliver programs and services in an integrated and effective manner.

Inclusive - Edmontonians and City employees have access to information, programs and services and the democratic processes that shape municipal decisions. This means reducing socioeconomic, physical and technical barriers, creating accessible channels for delivery of programs and services.

Innovative - With the participation of Edmontonians and employees, the City envisions, creates and fosters new approaches, and efficient and sustainable practices.

The Open Data Program includes best practice standards and operational expectations consistent with the International Open Data Charter[2]. The International Open Data Charter ("The Charter") provides governments with a common foundation to realize the full potential of open data. The Charter was developed based on the fundamentals of the United Nation's Sustainable Development Goals[3] (September 2015) and the G8 Open Data Charter[4] (June 2013).

The Charter has six open data principles that are well aligned with the Open City principles of transparent government.

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

[2] http://opendatacharter.net/
[3] https://sustainabledevelopment.un.org/?menu=1300
[4] http://open.canada.ca/en/g8-open-data-charter-canadas-action-plan

GOALS

The goals of the Open Data Program are:

1. **Inspire citizens to utilize open data as a strategic resource to enable opportunities for economic growth and address social challenges by:**

- Equalizing the access to data and market information for organizations of varying size and funding levels (ex. start-ups, small business, non-profit, academia)
- Collaborating with incubator organizations by educating entrepreneurs on the value provided by the application of open data

2. **Empower citizens to make informed decisions which result in a sustainable community by:**

- Increasing citizen awareness of the benefits of open data and providing the mechanisms by which to interpret data
- Creating additional tools for citizens to identify the data which would inform their interaction with democratic processes
- Leveraging opportunities for informed citizens to impact the design, development, and delivery of public programs, services and policies

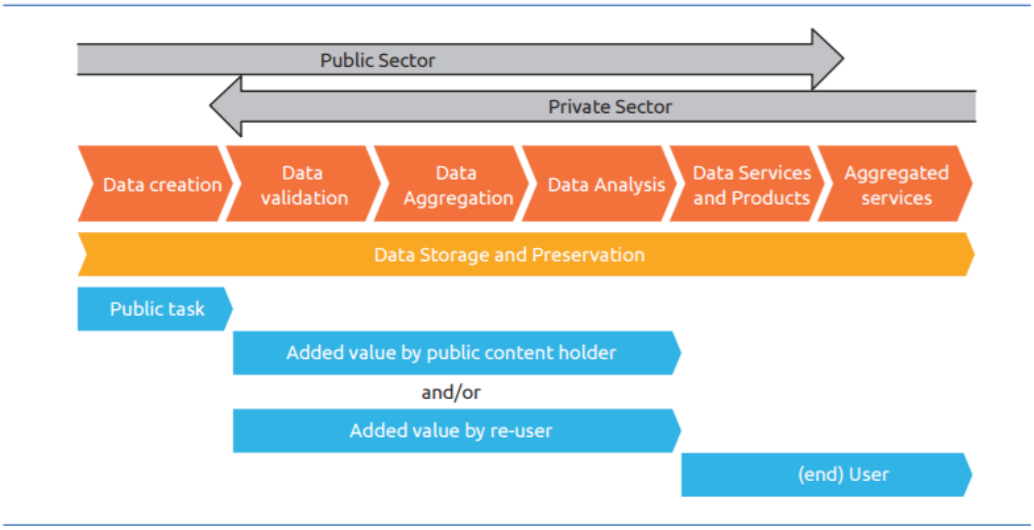
3. **Support openness, transparency and consistency by:**

- Increasing the volume of consistent and trustworthy datasets published to the Open Data Catalogue
- Engaging with other public organizations to extend the availability of data and better serve the needs of the public
- Enhancing the usability of the data for citizen and business use

OPEN DATA STRATEGY

An effective open data program balances both the release of information as a public asset and the consumption of data as a strategic resource. To do so, the program reflects cultural and institutional changes, engages citizens and users, develops external collaboration, and co-creates value.

According to the World Bank, governments should increase their participation in the open data value chain (as illustrated below) beyond the creation, validation and aggregation of data.

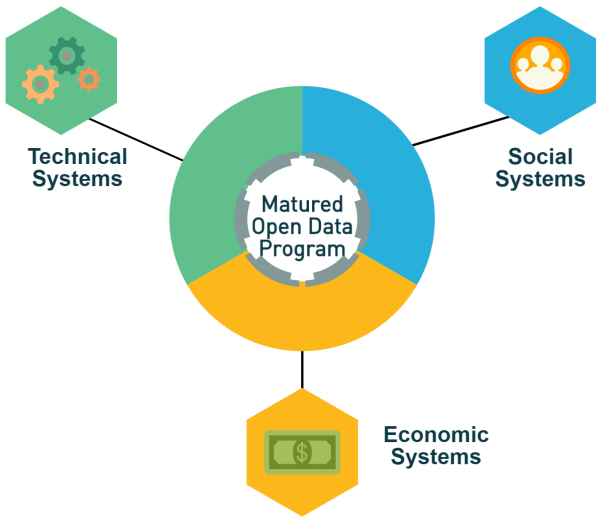


https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf and Capgemini Consulting, based on: MEPSIR (2006), p. 46

Building on the City of Edmonton's Open Data Program ("The Program"), the City will make more data available to citizens. Analytic tools will be enhanced to encourage the use of the data to improve decision making as well as for a variety of other purposes.

Citizen engagement and stakeholder relationships will be matured to develop a culture of sharing, collaborating, socializing, and openness.

By amalgamating the technical, social and economic systems, the City aims to move up the open data value chain and advance the City's open data maturity.



OPEN DATA ACTION PLAN

The City of Edmonton's Open City Policy articulates the City's commitment to bring to action the Open City principles of transparency, participation, collaboration, inclusiveness, and innovation.

To date, the Open Data Program has focused on the release of datasets through an established release process in accordance with global data standards. The processes to collect, aggregate, verify and publish these datasets were developed through collaboration among all areas of the City. As a result, data is 'open by default' and available in a consistent and trusted format, secure and private by design only when required.

Citizens are engaged through the Open Science Program (partnerships between professionals at the City and local academic institutions) and Hackathons (meetups for citizens to develop applications) to utilize the information released through Edmonton's Open Data Portal.

Open data impacts Edmonton's livability, social engagement and economic growth. A growing number of entrepreneurs and creative municipal employees use open data to develop innovative products and enhance public service delivery.

While there are numerous instances of the ways in which open data creates both social and economic value, the City will continue to build on this value by implementing new and innovative approaches realized in this action plan.

The action plan and supporting roadmap are categorized into six streams for efficient implementation and effective measurement. The streams are interdependent and will occur concurrently to accomplish program goals.

Governance

Citizen Engagement

External Partnerships

Knowledge Management

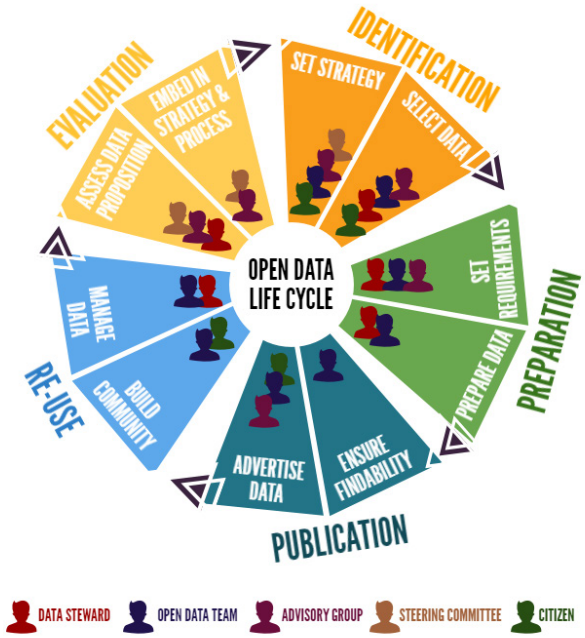
Technical

Value Realization

GOVERNANCE

City Council's governance and support are crucial to the success of Edmonton's Open Data Program.

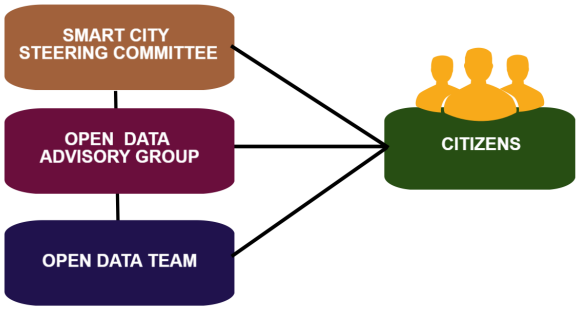
The City has established an Open Data Advisory Group (ODAG) with representatives from diverse business areas which include: privacy advisors, legal advisors, and data stewards. ODAG will be expanded to include citizen representation.



As an operational body, the ODAG also manages the open data lifecycle through a robust data quality review and release mechanisms.

In 2016, the Open Data Program established the Smart City Steering Committee with executive representation from across the City.

The Committee oversees and supports the Open Data Program as it achieves its goals and vision. By providing leadership support to the Open Data Program, the Committee ensures value realization through an annual performance audit. The Committee will be expanded to include citizen representation in 2017.



PROGRESS INDICATOR	MEASURE FREQUENCY	IMPLEMENTATION
Number of participant hours on steering committees (internal/external)	Annually	Q4 2017

CITIZEN ENGAGEMENT

As citizens utilize open data and provide public value, their feedback plays a pivotal role in advancing their expectations and needs.

Since the inception of the Open Data Program, key stakeholders (students, civic tech groups, and community leaders) have offered their perspectives regarding content, accessibility and quality. Currently, the majority of planned engagement activities address information delivery.

Following the application of the Open Data Strategy, citizens will be engaged in a two-way dialogue through an Open Data Book Club, a School of Data, meetups, and an Open Data Suggestion Board (online platform) to source citizen ideas and conduct meaningful consultations.

These engagement channels will incentivize and motivate a diverse user base including data experts, engaged citizens, and community leaders. Ultimately, the Open Data Program will co-create data with interested users through crowdsourcing - enriching the open data ecosystem.

PROGRESS INDICATOR	MEASURE FREQUENCY	IMPLEMENTATION
Number of external engagement sessions organized to prioritize data release and/ or improvement	Annually	Q4 2017
Number of open dataset requests from citizens	Annually	Q4 2017
Citizen satisfaction of open data engagement channels	Annually	Q4 2017
Number of participants in external engagement sessions	Annually	Q4 2017
Number of crowdsourced datasets	Annually	Q4 2018

Over 6,500 citizens actively provide regular feeback

EXTERNAL PARTNERSHIPS

An effective open data ecosystem encourages interaction between the public and private sectors. Regional relationships connecting multiple levels of government, academia, and citizen-serving organizations enrich the quality and comparability of data. As each organization collects and sources information derived from the same population base with different scopes, the merging of this information provides the opportunity for advanced data analysis.

The City actively engages non-profit organizations, businesses, and the community to design and deliver programs and services in an integrated and efficient manner. The Metro Edmonton Open Data (MEOD) group is a community of regional organizations brought together by the City of Edmonton to explore the potential for cross-collaboration and information sharing. The MEOD group strives to advance the principles of open government across the Edmonton region by sharing resources, sponsoring events, building knowledge, building high profile consolidated datasets and advocating for open data.

Another program, Open Science, engages the Edmonton research and post-secondary communities in solving practical issues that challenge citizens and businesses. Not only does Open Science promote innovative solutions to municipal challenges, it also increases public engagement in planning, service development, and decision-making.

As an open city, Edmonton learns from and integrates aspects of other open government initiatives through membership in the larger open data ecosystem. The ecosystem is evolving to collect and share data that will influence how public services are designed and delivered globally.

PROGRESS INDICATOR	MEASURE FREQUENCY	IMPLEMENTATION
External partner satisfaction of open data	Annually	Q4 2017
Number of external partners engaged	Annually	Q4 2017
Number of external open datasets hosted by the City of Edmonton on the open data catalogue	Annually	Q4 2018

KNOWLEDGE MANAGEMENT

To leverage the momentum of the existing Open Data Program and encourage the adoption of open data, the Program requires a formal knowledge management component. With an understanding of the value provided through the application of open data, City employees and citizens will impact the design, development, and delivery of efficient public programs, services and policies.

Internally, a training program for City of Edmonton employees will increase the adoption of data-driven decision making and an analytics culture.

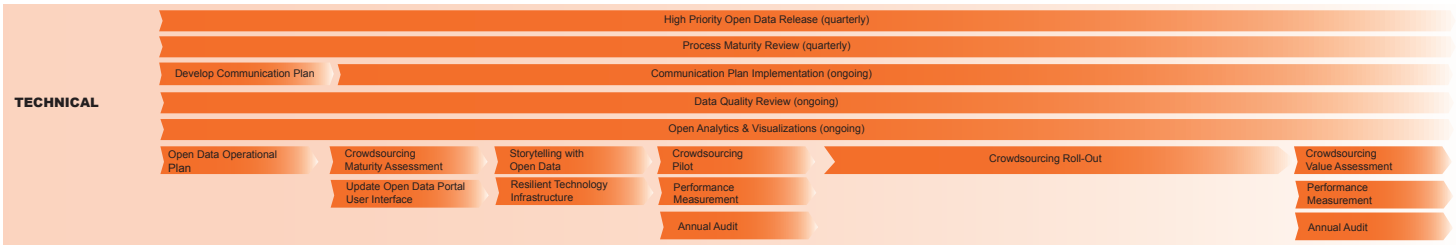
Externally, the City will design a training program in conjunction with the Edmonton Public School Board to empower educators as they develop a curriculum which normalizes the use of open data for analysis and critical thinking. In addition, the City will launch the School of Data to promote data literacy and reduce the digital divide among citizens.

The City will also host the Canadian Open Data Summit (CODS) in June 2017. This conference will address the most pressing challenges facing the open data and open government communities around the globe.

PROGRESS INDICATOR	MEASURE FREQUENCY	IMPLEMENTATION
Number of City employees trained in open data	Annually	Q4 2017
Number of training sessions organized	Annually	Q4 2017
Number of citizens trained in open data	Annually	Q4 2017
Overall satisfaction of training programs	Annually	Q4 2017

"The next frontier for governments is how we can use data and analytics to make better evidence-based decisions."

- Mayor Don Iveson, December 2016



TECHNICAL

The Open Data Program will evolve its approach to data collection, aggregation and release through regular technical upgrades and continuous process improvements.

The City will proactively identify datasets beneficial to citizens, verify the quality of the data and refresh the content of the datasets as updates are available. The City will also evaluate the prioritization of dataset releases through the user community.

New marketing channels and a communications plan (with a focus on internal and external stakeholders) will be developed to enhance the public's awareness of open data.

The Open Data Program will also play a critical role in implementing the City's crowdsourcing program.

PROGRESS INDICATOR	MEASURE FREQUENCY	IMPLEMENTATION
Number of open datasets released	Quarterly	Q1 2017
Number of open datasets downloaded	Quarterly	Q1 2017
Number of justifications provided for declined open data requests	Quarterly	Q4 2017
Number of open data visualizations created	Quarterly	Q4 2017

VALUE REALIZATION

Quantifying the value and return on investment for open data programs is complex. The international open data community has acknowledged the difficulty of quantifying the measurable impact of open data, and as such, few organizations have developed performance metrics.

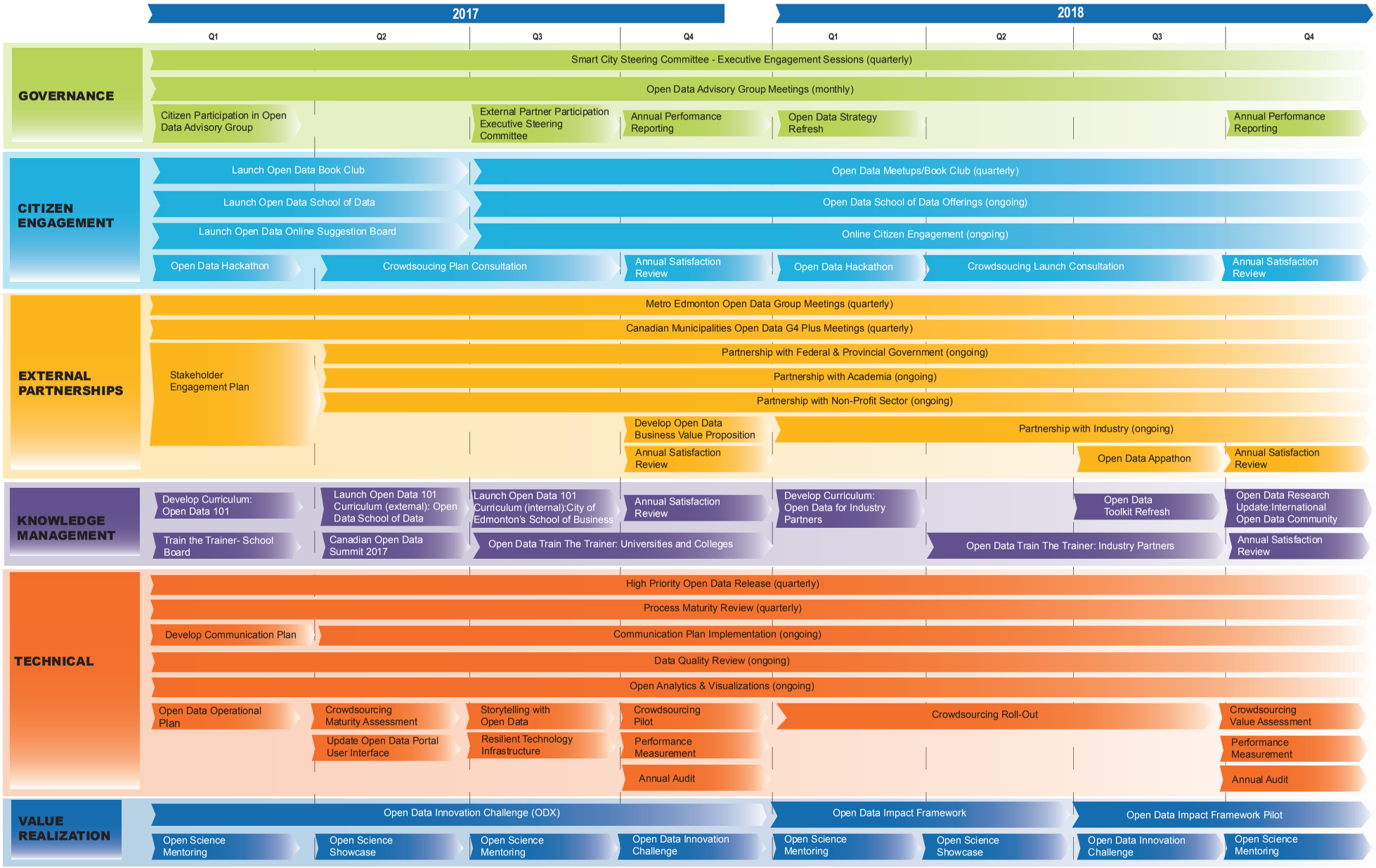
The application of the five previous streams of the Action Plan (Governance, Citizen Engagement, External Partnerships, Knowledge Management and Technical) will significantly increase open data usage and application.

The City will organize Open Data Innovation Challenges to encourage open data commercialization. Through this, a positive feedback mechanism will exponentially stimulate the growth of the open data ecosystem within Edmonton.

The City, in collaboration with the international community, will also develop an Open Data Impact Framework to measure the economic and social impact of the Open Data Program. The City, along with citizens and partner organizations, will analyze and gather detailed use cases to measure the impact of the program. Use cases include innovative solutions to public challenges, the development of consumer or commercial products and informed citizen interactions with members of City Council.

PROGRESS INDICATOR	MEASURE FREQUENCY	IMPLEMENTATION
Number of research summaries released in the past 12 months to address the social and economic impacts of open data	Annually	**Q4 2017**
Number of open data applications and tools created in the past 12 months by external partners	Annually	**Q4 2018**

ROADMAP


2017
2018
Q1
Q2
Q3
Q4
Q1
Q2
Q3
Q4
GOVERNANCE
Smart City Steering Committee - Executive Engagement Sessions (quarterly)
Open Data Advisory Group Meetings (monthly)
Citizen Participation in Open Data Advisory Group
External Partner Participation Executive Steering Committee
Annual Performance Reporting
Open Data Strategy Refresh
Annual Performance Reporting
CITIZEN ENGAGEMENT
Launch Open Data Book Club
Open Data Meetups/Book Club (quarterly)
Launch Open Data School of Data
Open Data School of Data Offerings (ongoing)
Launch Open Data Online Suggestion Board
Online Citizen Engagement (ongoing)
Open Data Hackathon
Crowdsoucing Plan Consultation
Annual Satisfaction Review
Open Data Hackathon
Crowdsoucing Launch Consultation
Annual Satisfaction Review
EXTERNAL PARTNERSHIPS
Metro Edmonton Open Data Group Meetings (quarterly)
Canadian Municipalities Open Data G4 Plus Meetings (quarterly)
Stakeholder Engagement Plan
Partnership with Federal & Provincial Government (ongoing)
Partnership with Academia (ongoing)
Partnership with Non-Profit Sector (ongoing)
Develop Open Data Business Value Proposition
Partnership with Industry (ongoing)
Annual Satisfaction Review
Open Data Appathon
Annual Satisfaction Review
KNOWLEDGE MANAGEMENT
Develop Curriculum: Open Data 101
Launch Open Data 101 Curriculum (external): Open Data School of Data
Launch Open Data 101 Curriculum (internal):City of Edmonton's School of Business
Annual Satisfaction Review
Develop Curriculum: Open Data for Industry Partners
Open Data Toolkit Refresh
Open Data Research Update:International Open Data Community
Train the Trainer- School Board
Canadian Open Data Summit 2017
Open Data Train The Trainer: Universities and Colleges
Open Data Train The Trainer: Industry Partners
Annual Satisfaction Review
TECHNICAL
High Priority Open Data Release (quarterly)
Process Maturity Review (quarterly)
Develop Communication Plan
Communication Plan Implementation (ongoing)
Data Quality Review (ongoing)
Open Analytics & Visualizations (ongoing)
Open Data Operational Plan
Crowdsourcing Maturity Assessment
Storytelling with Open Data
Crowdsourcing Pilot
Crowdsourcing Roll-Out
Crowdsourcing Value Assessment
Update Open Data Portal User Interface
Resilient Technology Infrastructure
Performance Measurement
Performance Measurement
Annual Audit
Annual Audit
VALUE REALIZATION
Open Data Innovation Challenge (ODX)
Open Data Impact Framework
Open Data Impact Framework Pilot
Open Science Mentoring
Open Science Showcase
Open Science Mentoring
Open Data Innovation Challenge
Open Science Mentoring
Open Science Showcase
Open Data Innovation Challenge
Open Science Mentoring

AN OPEN, SMART AND RESILIENT CITY

PREPARED BY THE CITY OF EDMONTON, OPEN CITY AND INNOVATION BRANCH

JANUARY 2017

Edmonton