



Best Practice: Open Data Systems

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CITY: VANCOUVER

POLICY AREAS: PUBLIC INTEGRITY

BEST PRACTICE

Vancouver's city government launched an **Open Data Portal** located at data.vancouver.ca to freely share the greatest amount of data possible with citizens, businesses and other jurisdictions. The Open Data Portal enables citizens to create and access collective knowledge and information to create new services, suggest new ideas, and identify critical bugs in the infrastructure and services.

ISSUE

Governments, large and small, generate vast amounts of information. Finding the relevant piece of information in a timely fashion is a challenge, and that's assuming that the government has decided to share it with the public at all. Previously, City information was sold to anyone who wanted to purchase it. Now it is made freely available and people are encouraged to use it. Open Data not only innovates but also makes government accountable and responsible and provides citizens with information that supports their role in government and oversight. Open Data informs citizens of the underlying mechanics of government and promotes democratic engagement. Furthermore, the Open Data is akin to road building in the industrial age. The community needs access to digital information to stimulate and maintain economic and social growth.

GOALS AND OBJECTIVES

As part of the City of Vancouver's commitment to enhancing citizen engagement, fostering digital innovation and improving service delivery, the City is taking bold steps to provide more of its data to the public. By freely sharing its data in open and accessible formats - while respecting privacy and security concerns - Vancouver is joining many government agencies in harnessing the energy and involvement of citizens, community-based organizations, academics and private businesses in everything from creative community problem-solving to the development of new service-delivery ideas and solutions.

IMPLEMENTATION

Launched in September 2009, the Open Data initiative was recognized as a way to maximize the value of City data by sharing it freely among the community and with those who would use it in ways that would deliver value back to the City and its citizens. It was designed to benefit individuals, groups and organizations, including: researchers and the academic community, the business and non-profit communities, other government agencies, the City of Vancouver staff, citizens and visitors of the City of Vancouver, the local software development communities, freedom of investigation (FOI) requesters and the media.

The initial response focused on releasing data of high value and low difficulty (low difficulty meaning that the cost to access the data and to make it publicly available is minimal). The City continues to look for ways to provide this service in a way that is cost-effective, sustainable and beneficial to both the users and the custodians of the data.

The open data sets, posted online at data.vancouver.ca, cover a variety of topics including geo-spatial, 311, expense and business license data. Currently, there are more than 130 datasets available for free download. Datasets are published on a continual basis. Most of the datasets are geo-spatial in nature and are already available for viewing in VanMap, the City's online web mapping tool (<http://vancouver.ca/vanmap>).

Most recently, at the request of City Council the city manager released detailed Mayor and Council expense data, beyond the relatively limited information already available in financial disclosures.

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The City of Vancouver is involved in an effort to collaborate on open government data with other Canadian municipalities. A group initiative called the G4 that includes Vancouver, Edmonton, Toronto and Ottawa is underway. No official terms of reference for the G4 have been established, but the goal is to provide a common operational framework and common standards within the Canadian municipal space. One deliverable is to reach a common Terms of Use agreement among Canadian municipalities so that data can be legally combined and used from different source agencies. Having a common framework and standards makes accessing and combining data across different sources much more efficient, thereby increasing the value potential of Open Data across Canadian Municipalities.

The Open Data program is liaising with City departments to determine what value they can gain from it. Departments often build inefficient processes to gain access to information from City systems. If that information is already available through Open Data channels, then significant and quantifiable cost avoidance benefits are possible within the organization itself. Additionally, more efficient access to information internally frees up resources for staff to engage in other service-added work.

Next Steps

- The Open Data initiative plans to include other datasets such as financial, asset/inventory, crime, and performance-related datasets. The plan is to release three or four major datasets in the short-term and continue to increase the rate of publication over time.
- To increase the accessibility of data, the City intends to provide rich programming interfaces (APIs) that allow programmatic access into the datasets. The City needs to re-evaluate its current terms of use under which the data is released to ensure that the widest range of use and innovation is achievable.
- The City hopes to provide greater search capabilities allowing people to more easily locate and use the City's data.
- The City plans to increase its open data engagement and marketing activities.

COST

The initiative was given an initial budget of \$130,000 funded through the capital budget.

RESULTS AND EVALUATION

The Open Data initiative has empowered citizens to use the City's information in ways that are both meaningful and beneficial to the community. The benefits include the creation of a better informed public, providing a driving force for innovation, restructuring the cost of distributing and sharing government information, and providing economic stimulation.

In September 2009 the city published an online catalogue with 70 datasets open to the public at data.vancouver.ca. The initial files listed basic information, such as locations of schools, parks and drinking fountains. Today the catalogue has grown to over 130 datasets including, for example, a list of all 53,009 current business licenses in the city, complete with names, addresses and numbers of employees.

TIMELINE

September 15, 2009 – The City of Vancouver launched the Open Data Catalogue

January 20, 2010 – Launched Version 2 of the beta Open Data website with many more datasets

February 10, 2010 – Added a new feed to the web feeds page of the Open Data website

February 16, 2010 – Added a City Highlight feed to the web feeds page of the Open Data website

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March 10, 2010 – City added three new layers to the Open Data catalogue: shorelines, building footprints and webcams. The shoreline data is from 2002 while the building footprints are from 1999. They have been requested for comparative purposes; clearly there have been many changes in downtown building footprints since 1999 so these do not reflect the current reality.

March 17, 2010 – City added a Bike Route Detour Updates feed to the web feeds page. Subscribers will have easy access to the latest news about changes to bike routes in the City.

March 19, 2010 – City added park polygon features to show a filled-in green area representing the boundaries of the park. This may add significantly to the look of the map and make it easier to recognize and use.

June 2, 2010 – High resolution photos are added to the Open Data Site

July 6, 2010 – City added elevation points and webcams JPEG images

July 28, 2010 – More high resolution photos are added to the Open Data Site

August 3, 2010 – City added food vendor locations to the website. A map of the vendor locations can be found on the food pilot web page

August 26, 2010 – City improved food vendor locations and drinking fountain data

September 28, 2010 – Business licenses data added to the Open Data website. This dataset provides information on business name, type, status, location and other details

March 8, 2011 – Downloadable bike lane statistical data provided by the City's Engineering Department is added to the website.

March 10, 2011 – Business license data is improved on the website to include latitude and longitude attributes.

April 12, 2011 – City of Vancouver wins 2011 B.C. Business Innovator first place award for its open data program.

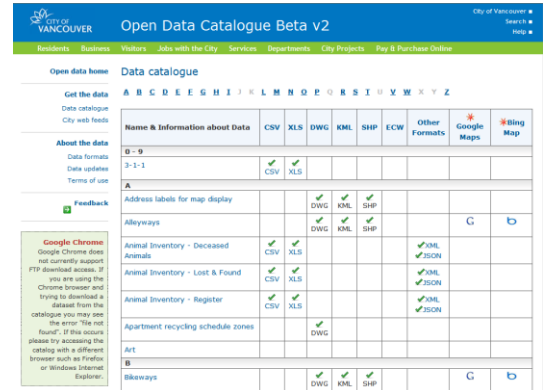
April 27, 2011 – City added expenses of each council member while conducting business of the city. Summary information is available for years 2002-2009 and detailed expense transactions are available starting in year 2010.

May 26, 2011 – Information on Vancouver parks and park facilities is added to the website

July 12, 2011 – 311 contact centre statistical data is added. Data includes contact centre metrics which shows the number of calls presented, handled, and abandoned at the centre, as well as the average speed of answer from customer service representatives and the resulting service levels achieved.

August 29, 2011 – Election 2011 voting division boundaries and voting places is added to Open Data

November 25, 2011 – Election 2011 municipal election results are added to Open Data



Name & Information about Data	CSV	XLS	DWG	KML	SHP	ECW	Other Formats	Google Maps	Bing Map
Animal Inventory - Deceased Animals	✓	✓						✓	✓
Animal Inventory - Lost & Found	✓	✓						✓	✓
Animal Inventory - Register	✓	✓						✓	✓
Apartment recycling schedule zones			✓						

A snapshot of the Open Data Catalogue



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January 4, 2012 – Three new datasets from Vancouver's Animal Control Office are added. The animal control inventory system provides a record of deceased and lost and found animals that have come into the custody.

January 17, 2012 – Quarter 3 of Council Expenses 2011 is provided on website.

January 24, 2012 – Vancouver Street Trees dataset is added to website. This dataset includes a listing of all public trees on boulevards in the City of Vancouver and provides tree location, species and other characteristics.

LEGISLATION

May 21, 2009 City Council Motion: Open Data, Open Standards and Open Source

LESSONS LEARNED

The major issues and challenges that have faced and that currently face this initiative are:

Business Buy-in and Participation

The biggest challenge is getting business buy-in participation to value add the data. Businesses typically manage the data, so success really depends on them providing much of the expertise and resources required accessing the data and making it publicly available in a way that is useful to constituents.

Supporting Applications Built by the Community

The costs of supporting applications such as VanTrash, which helps citizens manage their neighborhood garbage schedule more effectively, generally fall on the community. This may act as a disincentive to individuals who might otherwise develop innovative applications based on the City's data.

Data Management and Workflow Integration

Does the City know and understand what data it has to publish and what the legal implications are of publishing those data sets? What about data quality issues and the implications for Open Data? A concern is that inaccurate data will lead to incorrect analysis which will lead to an increased volume of unfounded questions. To reduce our costs we must do a better job of building and procuring systems that more readily support and integrate to open data. How do we integrate open data into our everyday business workflows? We must find ways to do open data not as a one-off activity but as a continual, sustainable process.

Measuring Value

Measuring the value of Open Data initiatives is a significant challenge for all government agencies. Members of the community are not obliged to disclose how they use the City's Data and it is difficult to know what intended or unintended benefits will result either immediately or down the road. A complete picture of the use of Open Data and its value to the community and City is probably unattainable. It is therefore difficult to justify open data as a long-term investment and the decision to proceed tends to be more a philosophical one rather than business driven.

Nevertheless, the following can be measured:

- Hit counts and downloads (internally and externally)
- Financial gain to the City or the community through business development
- Cost avoidance benefits to stakeholders

And the following can be observed:

- Improvements to public services
- Support of the City's strategic goals
- Better collaboration and involvement within the community
- Greater knowledge and awareness of government and greater democratic engagement



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- Positive impacts to the research and academic community
- Direct community feedback

TRANSFERABILITY

Open data portals are becoming increasingly popular in Canadian cities. Already cities such as Toronto, Ottawa and Edmonton have implemented an open data platform. Recently, the cities joined forces to collaborate on an “Open Data Framework”. The project aims to enhance current open data initiatives in the areas of data standards and terms of use agreements.

CONTACTS

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Facts and figures in this report were provided by the highlighted city to New York City Global Partners.