# Building the City of Vancouver's Open Data GIS Platform

### Meng Li GIS and CADD Services Branch City of Vancouver



URISA BC Seminar Feb 16 2012 – Open Data – So What?

## **Presentation Outline:**

- 1. Why Open Data
- 2. Government as a Platform
- 3. Platform Building Challenges
- 4. Strategy and Platform Building
- 5. Summary



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# 1. Why Open Data

#### What Are Local Government Roles?:

- transparency and accountability
- data collected: legislative, administrative, financial, etc.
- public service provision
- data collected: GIS data, service (311) & facilities data, etc.
- public safety
- data collected: crime data, fire/rescue response



# 1. Why Open Data

**Open Data Objectives & Benefits:** 

- encourages citizen engagement and participation

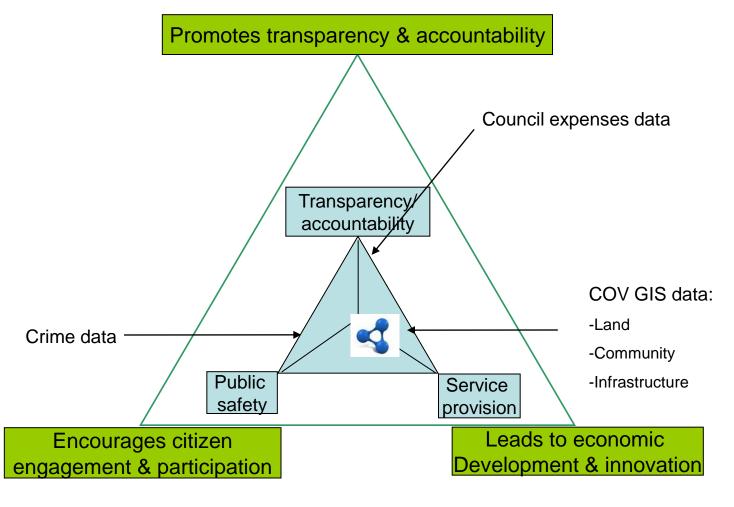
- promotes transparency and accountability

- leads to economic development and innovation (e.g. in service provision)

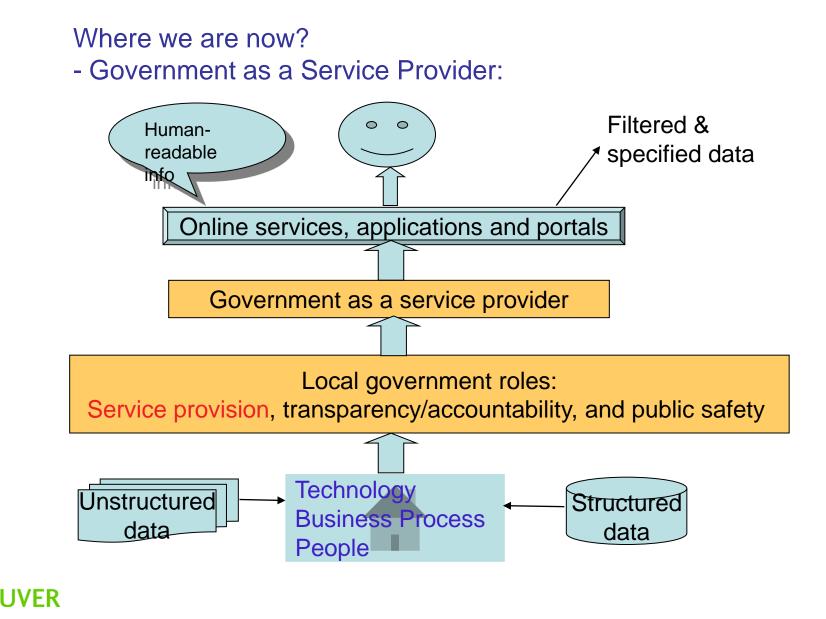


# 1. Why Open Data

#### **Open Data Objectives Focus on Local Government Roles**







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Why government as a platform?

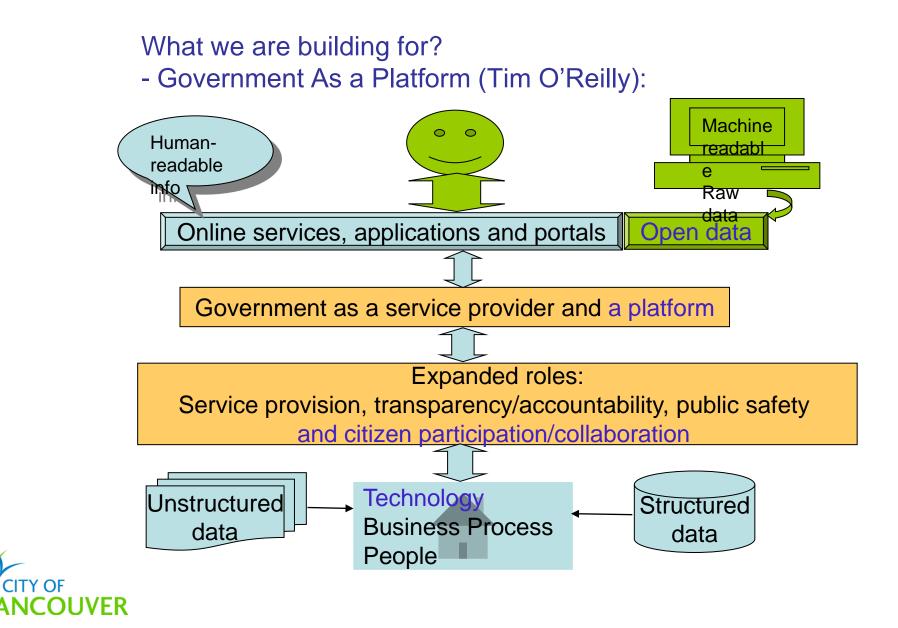
- government as a service provider-vending machine is limited: one-way and passive communication

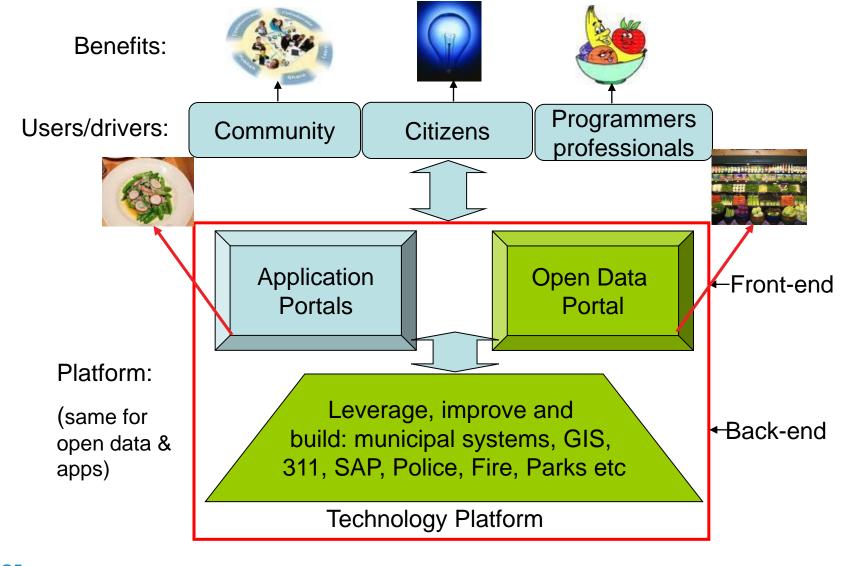
- government as a platform (Tim O'Really) is to enable the public and public servants to participate, collaborate and innovate using open data

- focuses on platform that opens up government data for others to use (Robinson & Yu), not on websites

platform consists of hard infrastructure (technology & data) and more importantly soft infrastructure (people & processes)







 3. Open Data Platform Building Challenges

What are the major barriers:

- Soft Infrastructure: people and processes
- legal: license, FOIP
- <u>cultural</u>: closed government culture

Hard Infrastructure: technology and data

- <u>technological</u>: platform readiness and openness for publishing raw data
- data quality issues



3. Open Data Platform Building Challenges

Identify who are the users and their requirements?

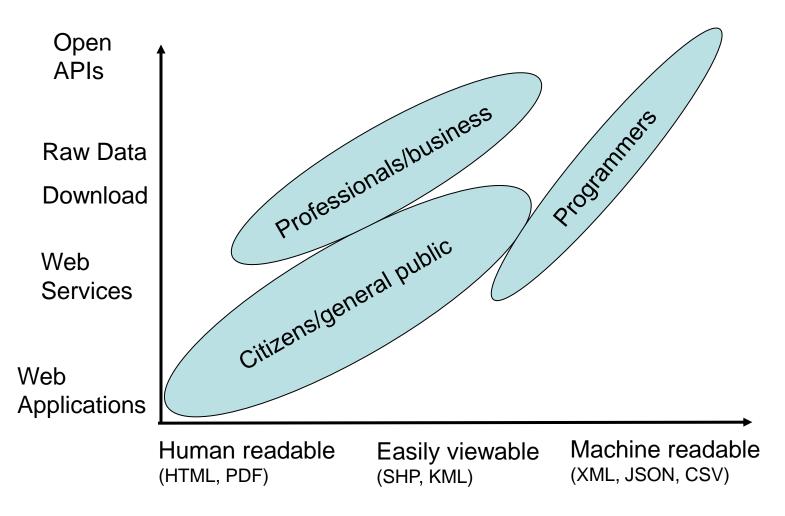
- programmers/developers

- professionals (business and community)

- interested citizens and general public



#### 3. Open Data Platform Building Challenges



User Requirements in 2 dimensions (data formats & open accessibility)



# 4. Strategy and Platform Building

4.1 Strategy: quick releases for <u>downloads</u> on ready <u>data sets</u> in open <u>formats</u>, & on <u>simple</u> <u>functionality</u>

- data sets: Public VanMap data (150 layers, 130 datasets)
- formats: csv, Excel, KML, SHP, DWG, GeoRSS, XML and JSON; ECW/MrSid for imagery.
- downloads: via FTP file server, not yet complex APIs



4. Strategy and Platform Building

4.2 COV Open Data Technology Platform

- front-end web portal: catalogue, metadata,navigation,map visualization and some collaborative features

- back-end systems/processes: ETL FME for GIS data extraction & update automation (weekly updated mostly)



#### Current Platform > front-end portal:

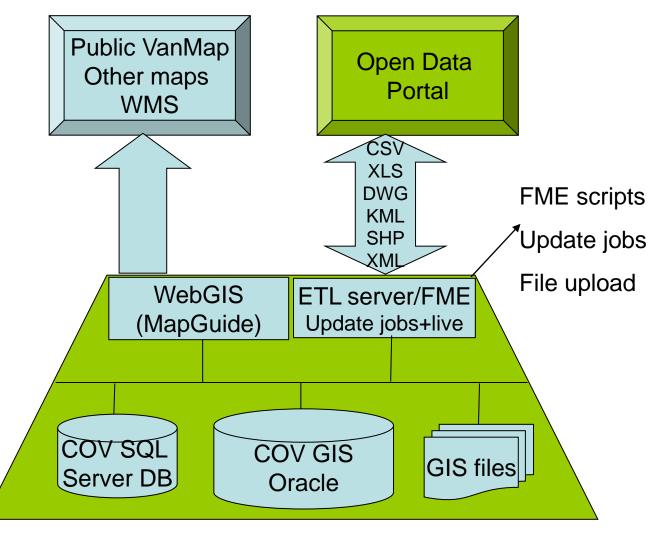
#### collaboration V 4 X Live Search http://data.vancouver.ca/index.htm - M vancouver's Open Data Catalogue -ENCITY OF City of Vancouver Search Open Data Catalogue Beta v2 VANCOUVER Help = Feed/live Open data home Give us your feedback data-Which data items would you Get the data still like to see added to the Data catalogue City's Open Data site? Fill out the survey. City web feeds See the feedback form About the data **Open Data updates** Data formats Receive updates on develop-Data updates ments related to this site: Terms of use Subscribe to the RSS feed Subscribe to the mailing list navigation Feedback Open Data update history Updates Connect with the **Collaborative Cities** Community Election 2011 Voting Division Boundaries and Voting Places Data catalogue Catalogue 011 Community developers have created a wiki and discussion ABCDEEGHI KLM group to share application ideas 1 Voting Division Boundaries and Voting Places have just been added to and discuss datasets Please feel free to provide us with feed Data catalogue **★**Google **★**Bing Name & Information about Other csv XLS DWG KML SHP ECW Data Formats Maps Мар Data website on our feedback page. As Metadata 0 - 9 Property information data package m this site is governed by the City's Te 3-1-1 ✓CSV ✓XLS u are agreeing to be bound by these Te Data custodian Engineering Services Α LOWG KML SHP Address labels for map display and Council expenses 2011 -LOWG KML SHP G b Data currency comments This data in City systems is updated frequently in the normal course of Alleyways business, however priorities and resources determine how fast a change ✓DWG Apartment recycling schedule in reality is reflected in the database. The extract on this website is zones s just added 311 Contact Centre statist updated weekly Art tre metrics which shows the number of в at the centre, as well as the average sp G ь ✓DWG ✓KML ✓SHP Bikeways Data set description This package consists of several files containing the following data: esentatives (CSRs) and the resulting se ✓DWG ✓KML ✓SHP G ь Block numbers the type of inquiries that come into th Cadastral boundaries including lot lines, property lines and their Bike lane stats (2009 & 2010) -XL9 he volume of those inquiries. The data i Burrard Bridge dimensions (lengths) Separated Value (.csv) formats. The da Easements Bike lane stats - Hornby & **XLS** Il be updated on a quarterly basis. For i Dunsmuir (including Burrard Block outlines Bridae) en Data catalogue. · Parcel polygons which are assessment based land polygons Block outlines ✓DWG ✓KML ✓SHP Addresses used for parcel polygon display (Please note: these VDWG VKML VSHP G ь Footprints 1999 addresses are the addresses displayed in VanMap and do not G Ь ✓DWG ✓KML ✓SHP improvement areas represent a complete set of all addresses. Some addresses are duplicated because they appear more than once on VanMap) licence ✓CSV ✓XLS ✓XML

#### COV open data portal



#### Current (GIS) Platform > back-end system:

Same GIS platform for open GIS data and Public VanMap





# 4.3 Technical Challenges

Most existing enterprise systems not designed for open data:

- data schema not suitable/meaningful for open data

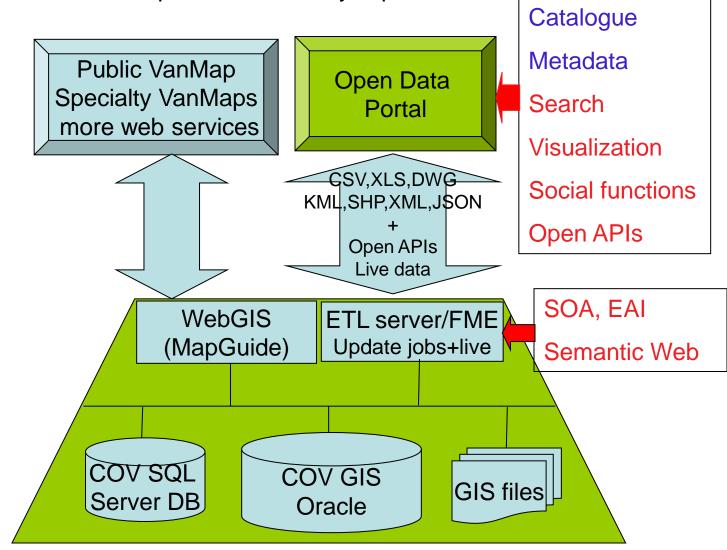
- back-end systems not interoperable, data integration difficult
- back-end systems not readily accessible for data publishing

- front-end portal lack of functions such as back-end systems integration automation, metadata interfaces/tool, searching, etc.



# 4.4 Future Technology Platform

More data, better portal functionality, Open APIs





## 5. Summary

- Open Data is about building a platform empowering public servants and the public to collaborate and innovate for fulfilling government roles

- COV quick wins started with publishing Public VanMap GIS raw data in open formats for three groups of users (not just programmers)
- Our initial success built on the platform of a simple and easy-to-use front-end portal and a flexible/open backend with update automation
- Our future work will focus on a more open and participatory platform readily exposing government data & information for public collaboration and innovation



#### **Questions?**

meng.li@vancouver.ca

http://data.vancouver.ca/

http://vancouver.ca/vanmap/

Tel: 604-871-6578

