

Building the City of Vancouver's Open Data GIS Platform

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Presentation Outline:

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

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

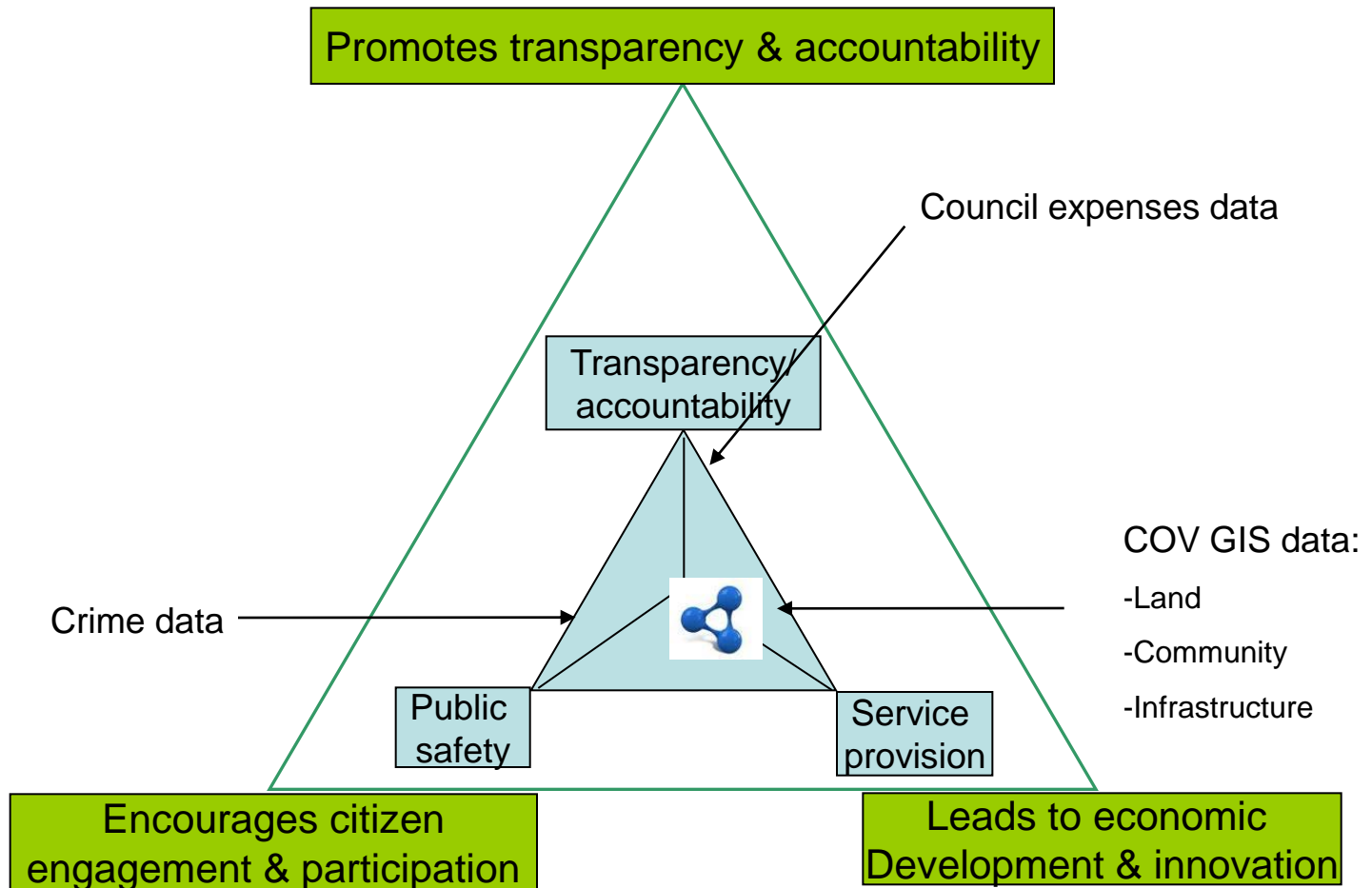
1. Why Open Data

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

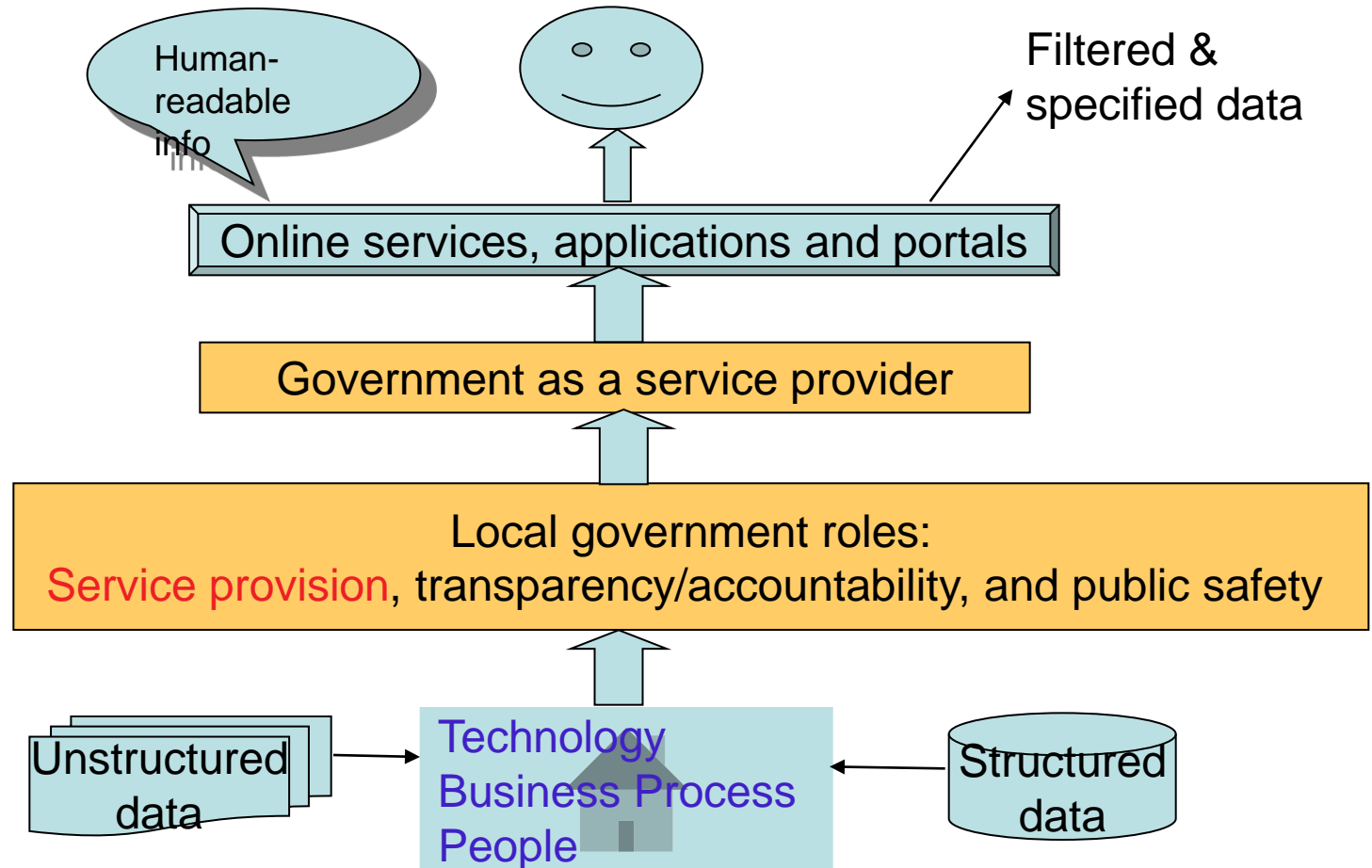
Open Data Objectives Focus on Local Government Roles



2. Government as a Platform

Where we are now?

- Government as a Service Provider:



2. Government as a Platform

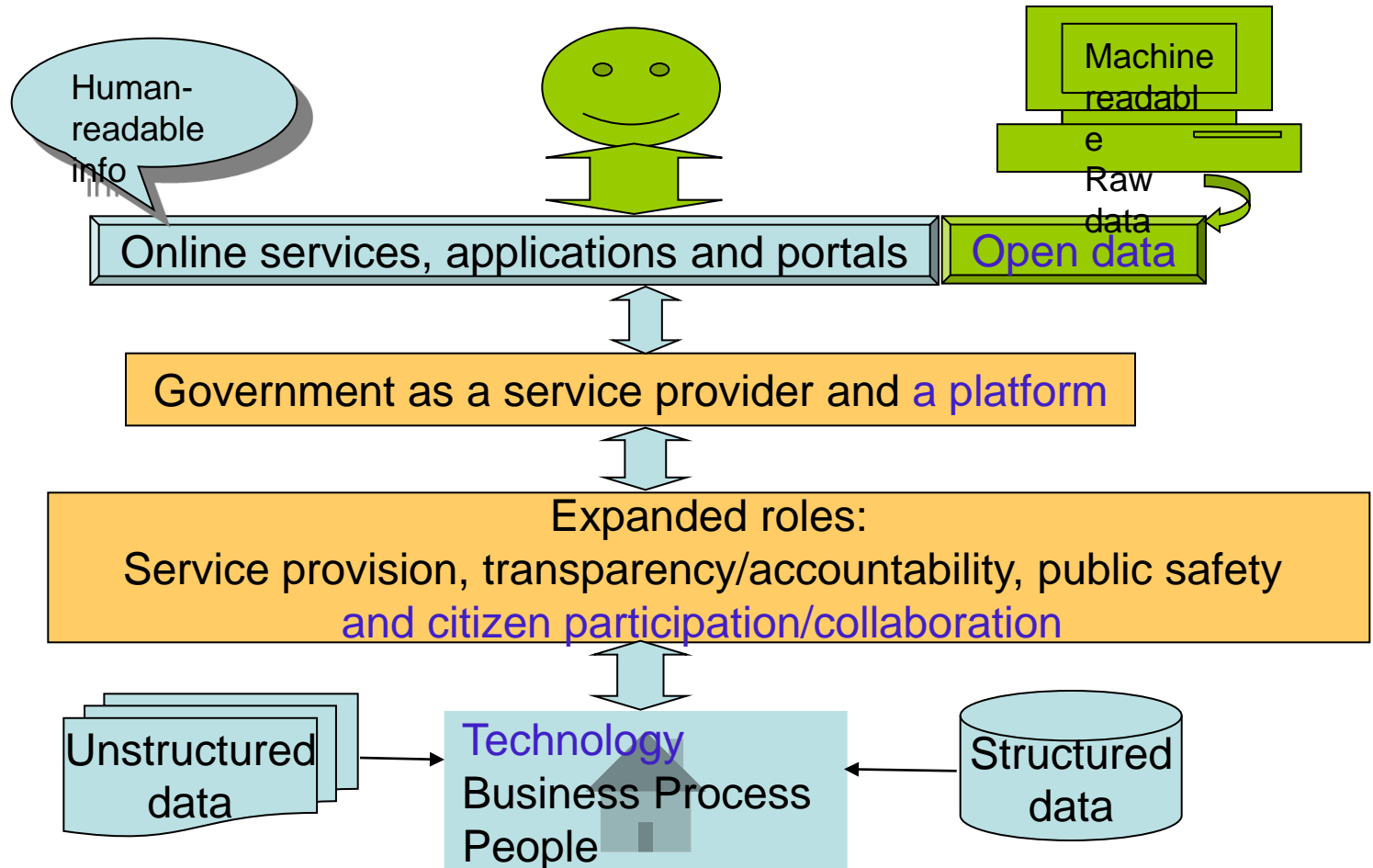
Why government as a platform?

- 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)

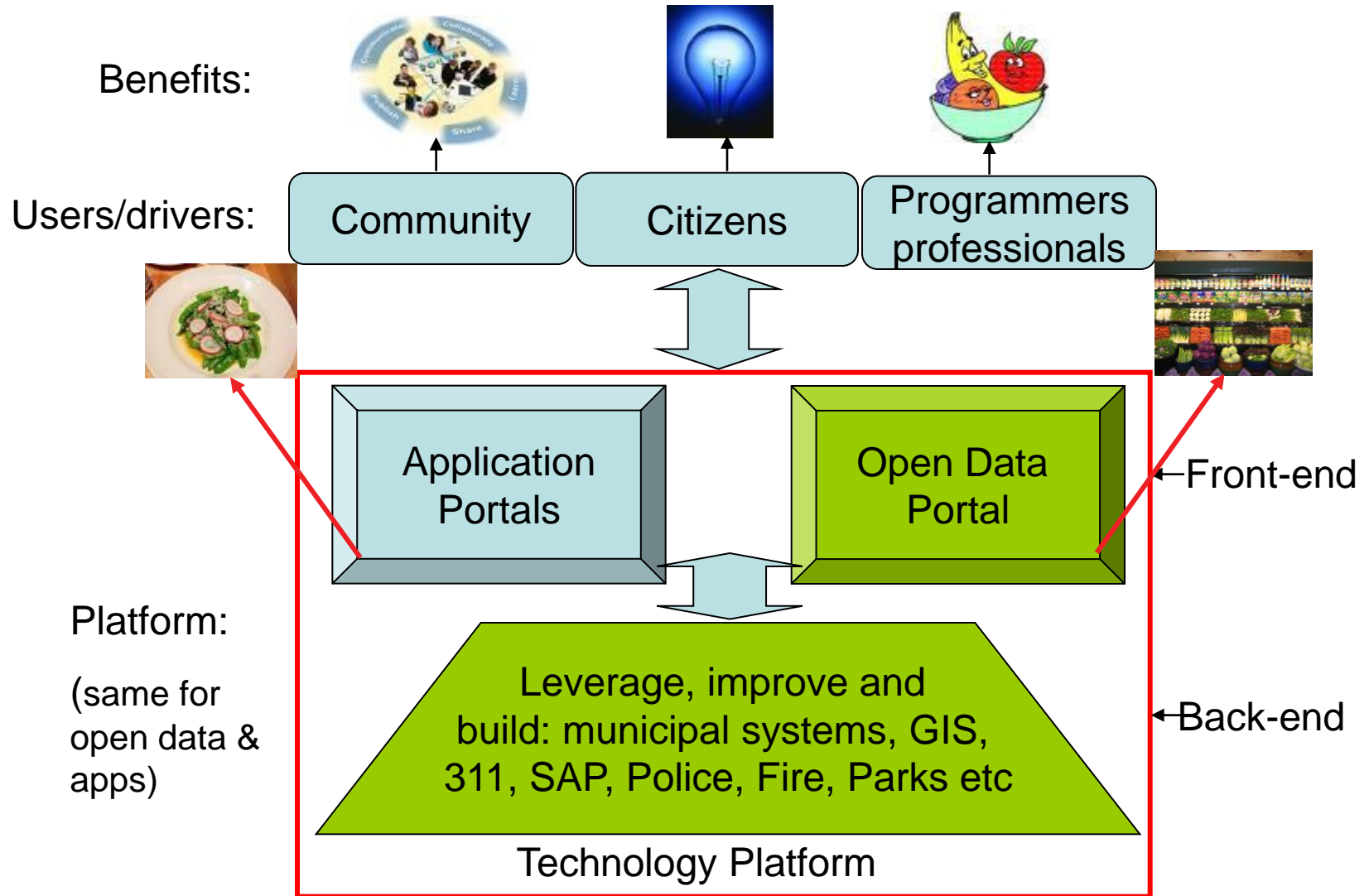
2. Government as a Platform

What we are building for?

- Government As a Platform (Tim O'Reilly):



2. Government as a Platform



3. Open Data Platform Building Challenges

What are the major barriers:

Soft Infrastructure: people and processes

- legal: license, FOIP
- cultural: closed government culture

Hard Infrastructure: technology and data

- technological: platform readiness and openness for publishing raw data
- data quality issues

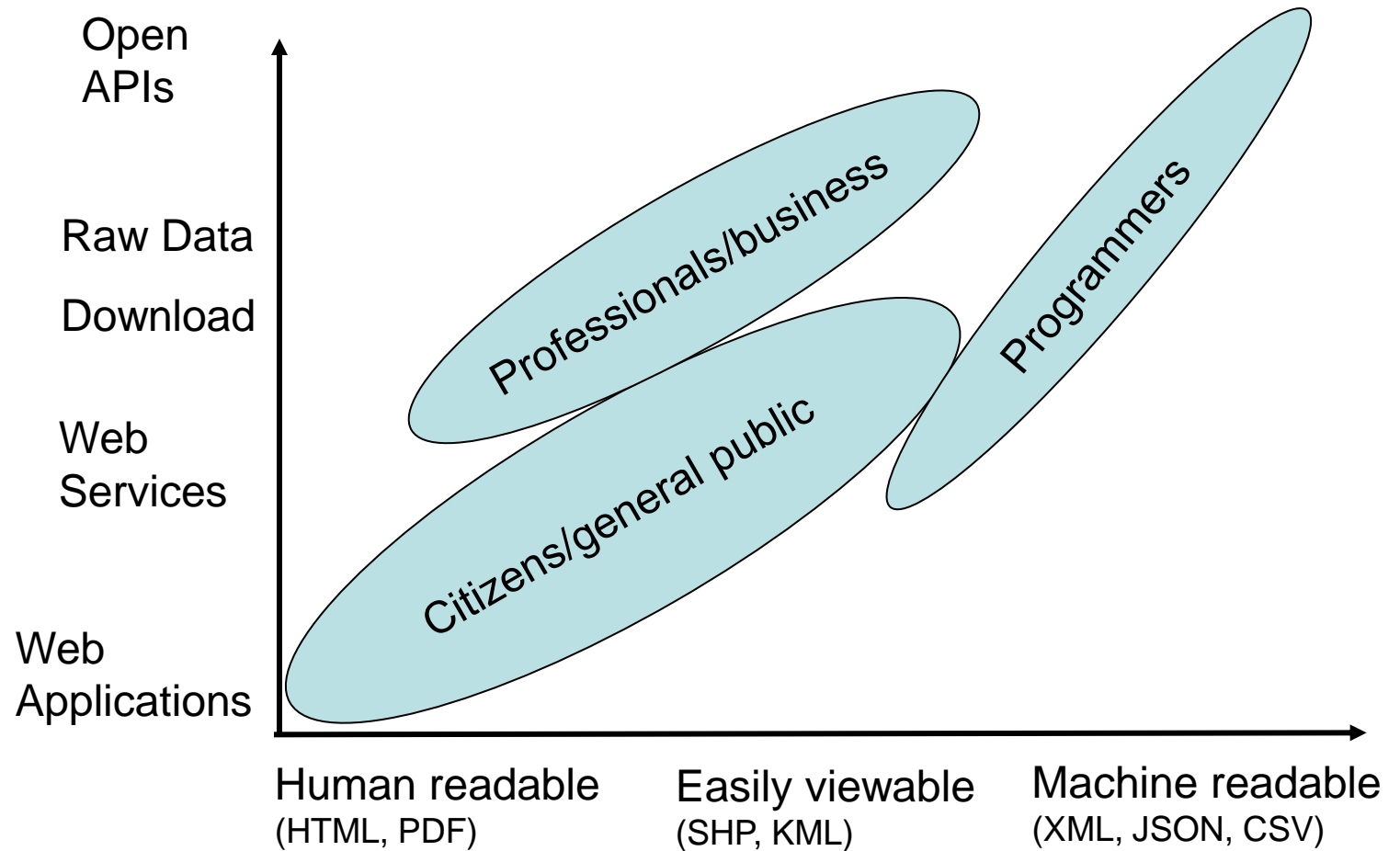


3. Open Data Platform Building Challenges

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 downloads on ready data sets in open formats, & on simple functionality

- **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:

COV open data portal

collaboration

Feed/live data

navigation

Catalogue

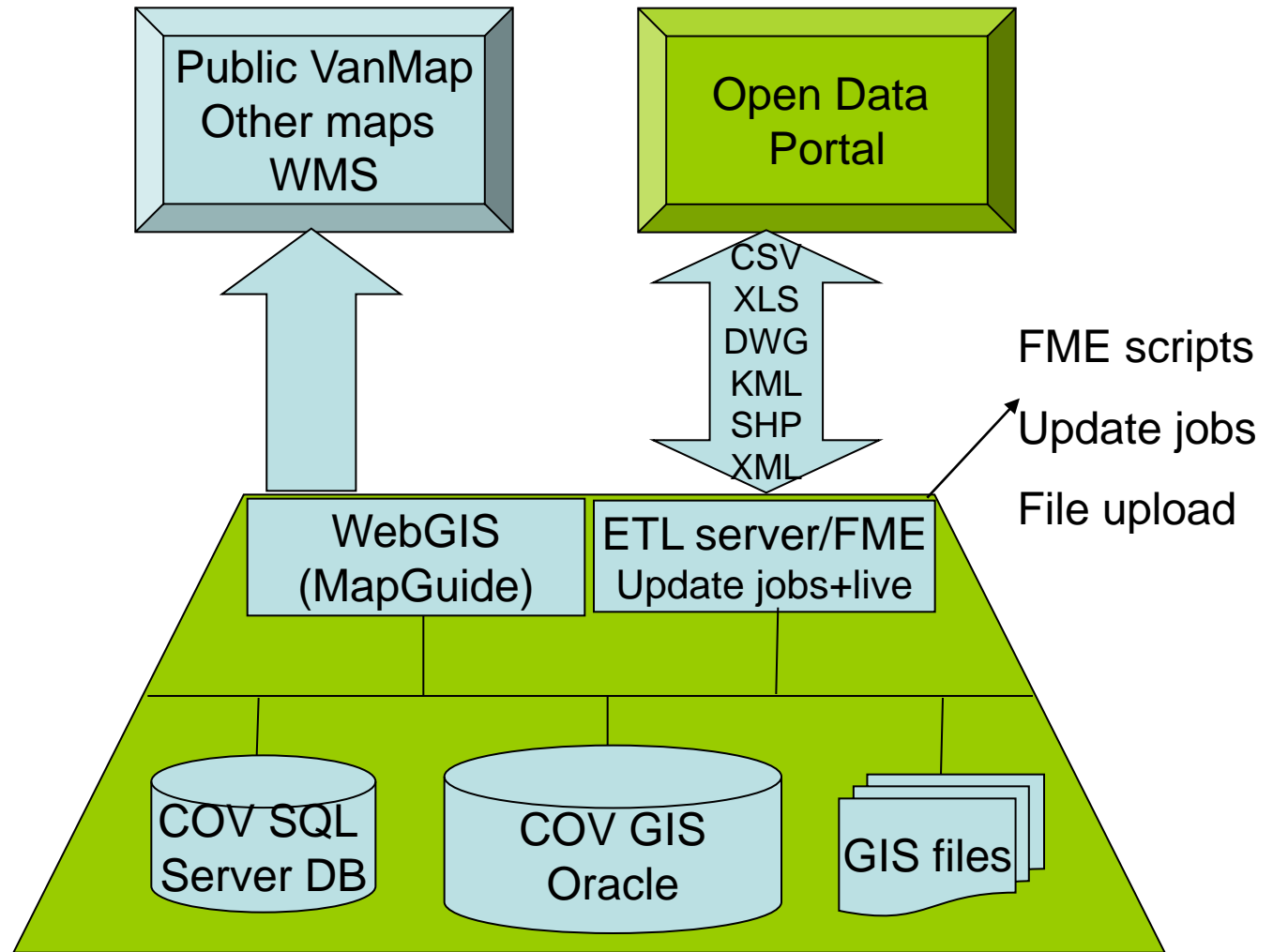
Metadata

Data catalogue									
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z									
Name & Information about Data	CSV	XLS	DWG	KML	SHP	ECW	Other Formats	Google Maps	Bing Map
0 - 9									
3-1-1	✓CSV	✓XLS							
A									
Address labels for map display			✓DWG	✓KML	✓SHP				
Alleyways			✓DWG	✓KML	✓SHP			G	b
Apartment recycling schedule zones			✓DWG						
Art									
B									
Bikeways			✓DWG	✓KML	✓SHP			G	b
Block numbers			✓DWG	✓KML	✓SHP			G	b
Bike lane stats (2009 & 2010) - Burrard Bridge		✓XLS							
Bike lane stats - Hornby & Dunsmuir (including Burrard Bridge)		✓XLS							
Block outlines			✓DWG	✓KML	✓SHP				
Footprints 1999			✓DWG	✓KML	✓SHP			G	b
improvement areas			✓DWG	✓KML	✓SHP			G	b
licence	✓CSV	✓XLS				✓XML			

Data catalogue	
Property information data package	
Data custodian	Engineering Services
Data currency comments	This data in City systems is updated frequently in the normal course of business, however priorities and resources determine how fast a change in reality is reflected in the database. The extract on this website is updated weekly.
Data set description	This package consists of several files containing the following data: <ul style="list-style-type: none"> ■ Cadastral boundaries including lot lines, property lines and their dimensions (lengths) ■ Easements ■ Block outlines ■ Parcel polygons which are assessment based land polygons ■ Addresses used for parcel polygon display (Please note: these addresses are the addresses displayed in VanMap and do not represent a complete set of all addresses. Some addresses are duplicated because they appear more than once on VanMap).

Current (GIS) Platform > back-end system:

Same GIS platform for open GIS data and Public VanMap



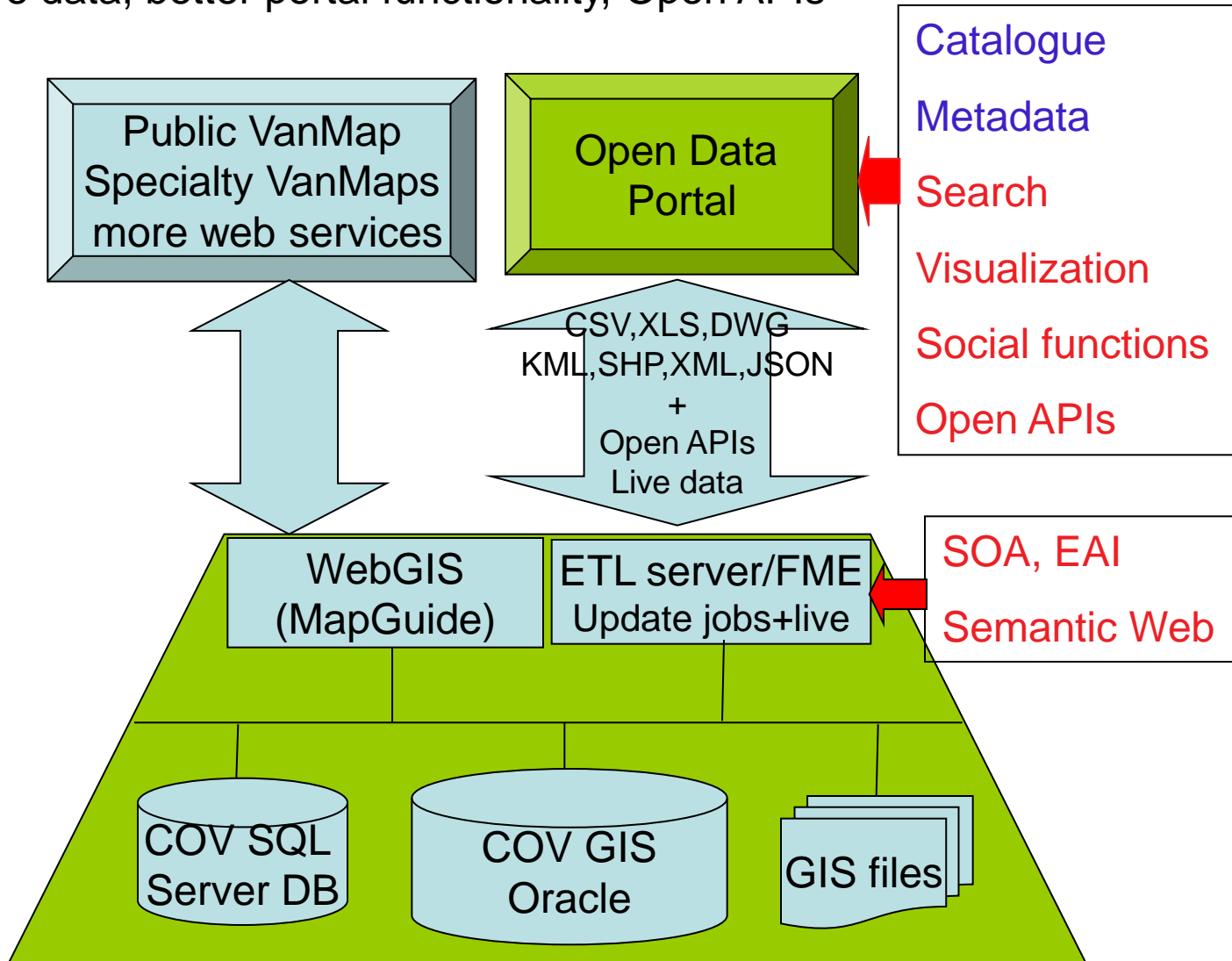
4.3 Technical Challenges

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?

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<http://data.vancouver.ca/>

<http://vancouver.ca/vanmap/>

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