OPEN DATA AND OPEN APPLICATIONS: OPEN POSSIBILITIES

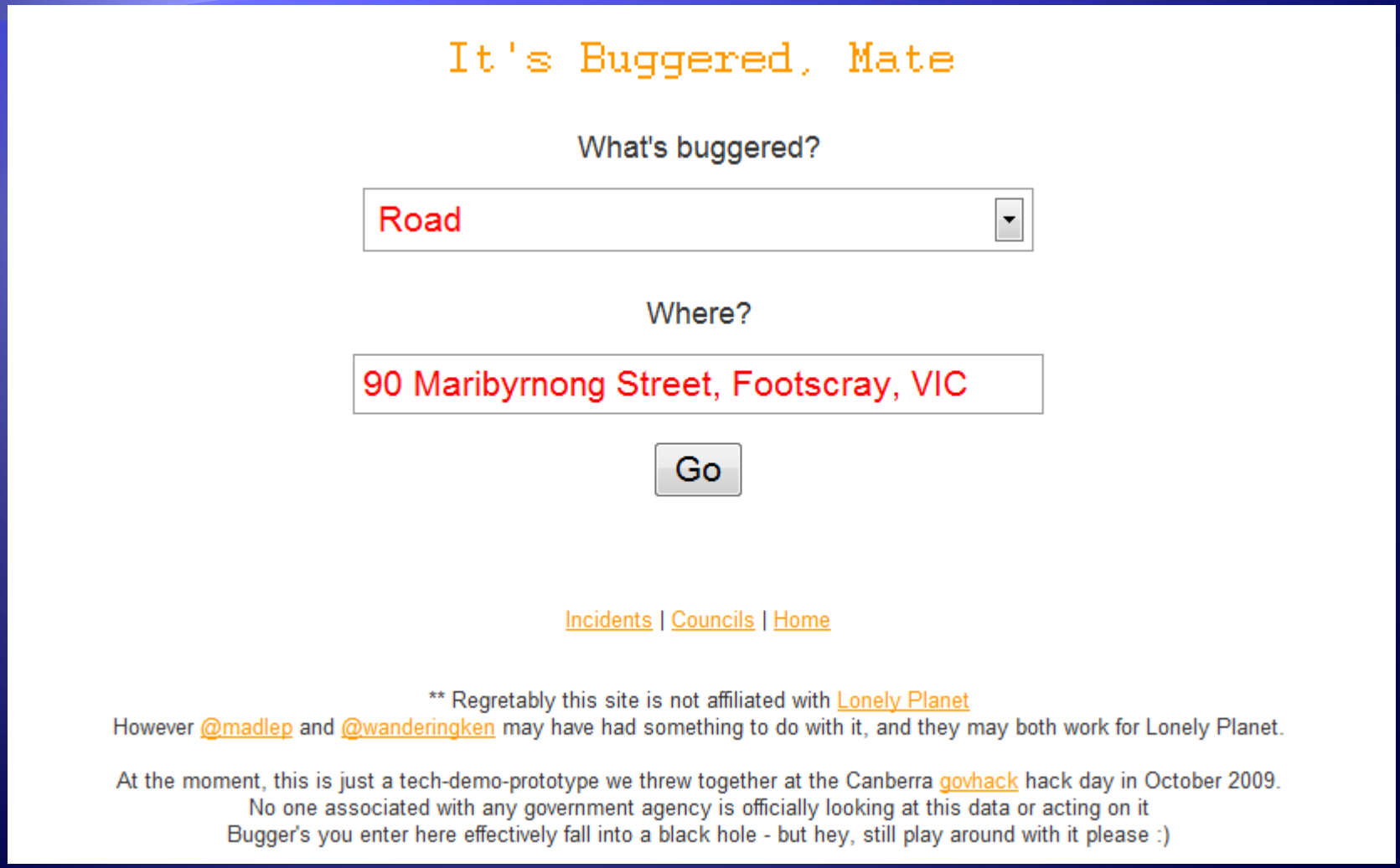
May 2010

Mark Gayler – magayler@microsoft.com
Technology Strategist
Microsoft Canada

Agenda

- What is 'Open Data'?
- Open Data in Government
- Open Data in Cities
- Open Data Applications
- Trends
- Demonstrations
- Q&A

It's Buggered, Mate



What is Open Government?

- Government initiative(s) to promote *transparency*, public *participation* and *collaboration*
- Global initiatives – Europe, Americas, etc.
- Common Principles:
  - **Transparency** – to enable greater accountability, efficiency, and economic opportunity by making government data and operations more open.
  - **Participation** – to create early and effective opportunities to drive greater and more diverse expertise into government decision making.
  - **Collaboration** – to generate new ideas for solving problems by fostering cooperation across government departments, across levels of government, and with the public
- Gov 2.0 = "Platform for Open Government".

Open Data in Government

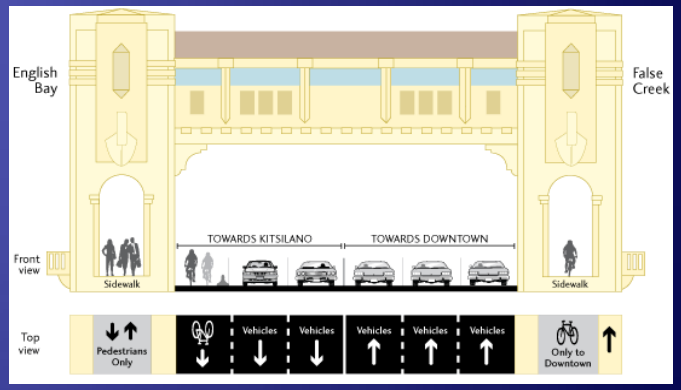
- Data generated by government organizations made available to the Public *free of restriction* (issued with EULA)
  - Timely, accessible, non-proprietary
  - Low-cost, generates more value than the data itself
  - Stimulates community development and citizen participation
- "The benefits to the City of Toronto are extremely significant. Individuals will find new ways to apply this data, improve city services, and expand their reach…the public can help us to improve services and create a more liveable city. And as an open government, sharing data increases our transparency and accountability" – Mayor David Miller, April 2009
- Why 'Open Data' in Cities?
  - Data is 'local' and 'relevant' to citizens, inherent 'buy-in'

Open Data in Cities…

City	Date of Activity	Action	Note	Website
Washington, DC	October 2008	Created a data portal on city website and launched apps for democracy	Action was taken by the CIO, no city motion passed. Currently launching a second apps for democracy contest.	http://data.octo.dc.gov/
Toronto, ON	April 2009	Announces intention of creating open data website	Mayor David Miller announces Toronto will create an open data website by fall of 2009 at Mesh 09 conference	http://www.toronto.ca/open
Vancouver, BC	May 2009	Vancouver City Council Passes the Open Motion	Beta 2 of Open Data website.	http://data.vancouver.ca
San Francisco, CA	June 2009	City of SF posts a craigslist request looking for developers to help create a data.gov like site for the city	No motion passed, there is an OpenSF blog where current activities and ideas are shared.	www.DataSF.org
Nanaimo, BC	June 2009	City launches an open data website	No motion passed.	http://www.nanaimo.ca/datafeeds/
New York City, NY	June 2009	A bill is being circulated by Council Member Gale Brewer	Has announced a "Big Apps" competition for apps that use 80 soon to be released city data sets.	N/A
Calgary, AB	July 2009	City of Calgary tables an Open Motion to be debated		N/A
Portland, OR	June 2009	Data portal being revamped (original created in 2000).	Availability of City metadata and GIS datasets.	http://www.portlandonline.com/omf/?c=28144
Ottawa, ON	April 2010	Open Data Hackfest	City Council considering release of data sets and apps competition.	
Edmonton, AB	Jan 2010	Launched Open Data Catalog.	Catalog uses MS OGDI and Azure	http://data.edmonton.ca

Open Government and Social Networking

- Governments now using social networking tools to communicate and 'collaborate' with citizens
  - Blogs – often used for citizen interaction
  - Facebook – many Gov orgs have FB accounts
  - Twitter – many Gov orgs and individuals use Tweets
  - YouTube – Public information videos



- Citizens collaborate across variety of interfaces and devices
- 'Case Study' in Open Government

  City of Vancouver – Burrard Bridge Trial

  "Interestingly however, the City of Vancouver has opted to share the *raw data* on a regular basis, as well as blog about the trial and give citizens an opportunity to leave comments and feedback. Indeed, the whole Burrard Street Lane Trial website - including twitter account and facebook page - is a well organized affair. Unsurprisingly, the data shows that the number of people cycling over the bridge has increased significantly." eaves.ca, August 2009

Engaging Citizens on Local Issues

CITY OF VANCOUVER

Burrard Bridge Lane Reallocation Trial

Residents | Business | Visitors | Jobs with the City | Services | Departments | City Projects | Pay & Purc

Burrard Bridge Lane Trial

n the conversation

About the trial
Background
Why this bridge?
Safety
tainability
dability
ions?

A positive step towards safer an

THE CITY OF Edmonton

ATTRACTIONS & RECREATION | BUSINESS | BYLAWS & LICENCES | CITY GOVERNMENT

Home > For Residents > Public Involvement > Social Media

For Residents

- 311
- Emergency Services
- Flooding & Sewers
- Garbage & Recycling
- Pay Bills, Taxes and Tickets
- Pest Management
- Pets

Public Involvement

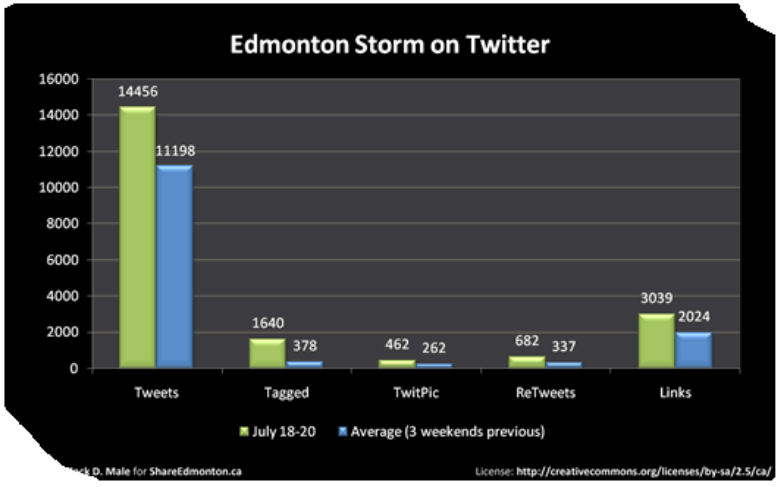
- Citizen Panel
- Public Involvement in City Planning
- cial Media
- vices & Programs

Social Media

The City of Edmonton is using several social media servic improve connections with Edmontonians, and people arou world.

Also known as "new media" or "Web 2.0" applications, soc tools give residents access to conversations with City emp more immediate information, or rich multi-media experience depending on the social media tool.

- City of Edmonton Twitter account
- City of Edmonton Facebook fan page
- City of Edmonton YouTube Channel
- Edmonton Stories web space
- Edmonton Stories Twitter account
- Edmonton Stories Facebook page
- Expo2017 bid Facebook page



CALGARY HERALD

Division of Canwest Publishing Inc.

vancou OFFICIAL SUPP

REGIONAL NEWSPAPER PUBLISHI

Home | News | Opinion | Business | Sports | Entertainment | Life | Health | Technolog

Calgary | Alberta | Politics | National | World | Good News | Weather | Traffic Cams | Today's Pap

Calgary alderman vows to oppose Memorial Drive closure 'madness'

'A FERGUSON, CALGARY HERALD APRIL 16, 2009 COMMENTS (71)

PHOTOS (1)

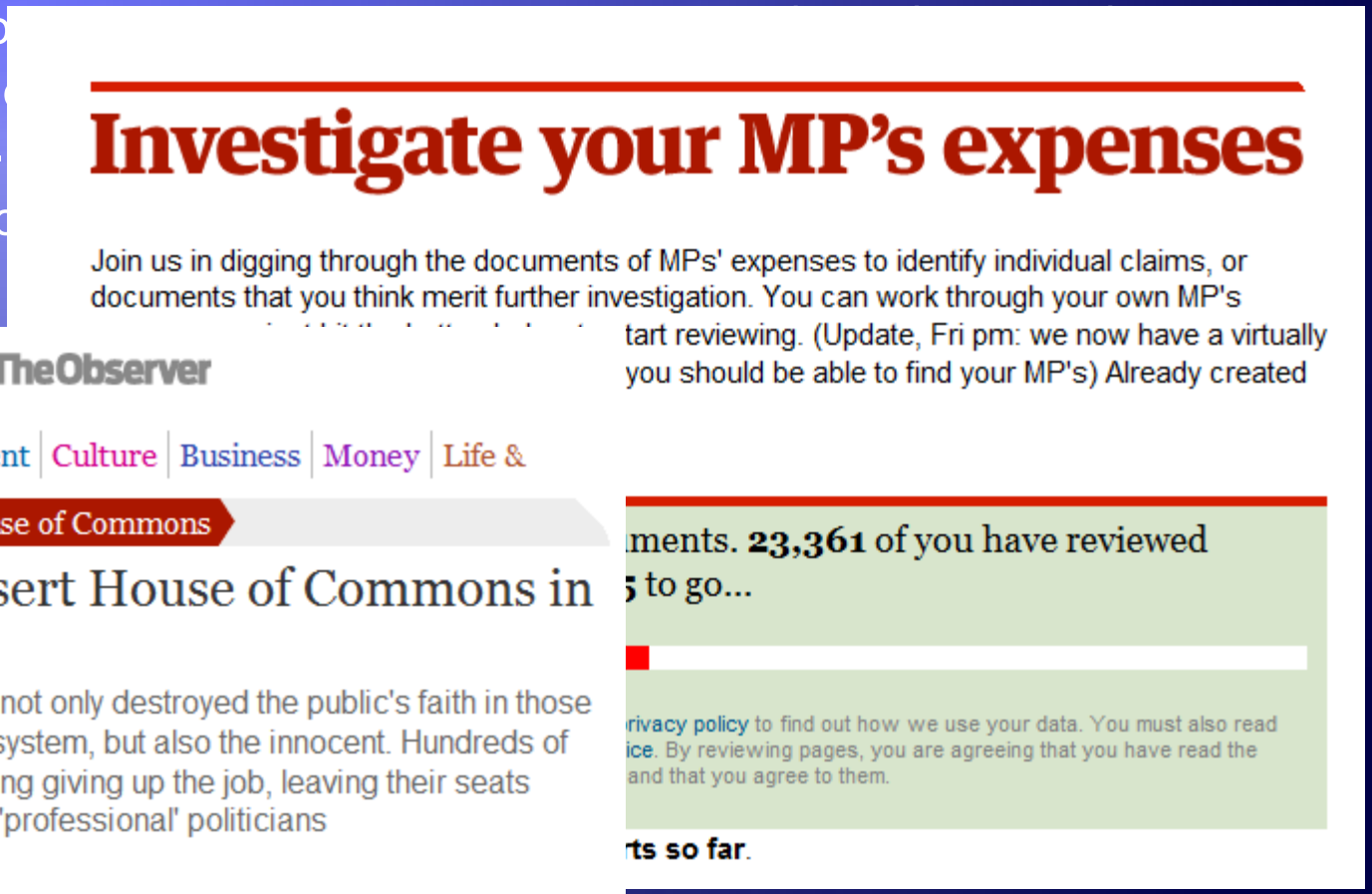
CALGARY - Ald. Ric McIver say he'll fight the partial closure of

MORE ON THIS STORY

- Calgary merchants leery of limiting cars on M

Crowdsourcing

- **Crowdsourcing** = the act of taking a task traditionally performed by an employee or contractor, and outsourcing it to an undefined, generally large group of p
  invited to devel
  as **community-**
  large amounts
- Examples:



Investigate your MP's expenses

Join us in digging through the documents of MPs' expenses to identify individual claims, or documents that you think merit further investigation. You can work through your own MP's
tart reviewing. (Update, Fri pm: we now have a virtually
you should be able to find your MP's) Already created

guardian.co.uk | TheObserver

News | Sport | Comment | Culture | Business | Money | Life &

News › Politics › House of Commons

MPs set to desert House of Commons in droves

The expenses scandal not only destroyed the public's faith in those who were abusing the system, but also the innocent. Hundreds of MPs are now considering giving up the job, leaving their seats open to inexperienced 'professional' politicians

Toby Helm and Anushka Asthana
The Observer, Sunday 9 August 2009

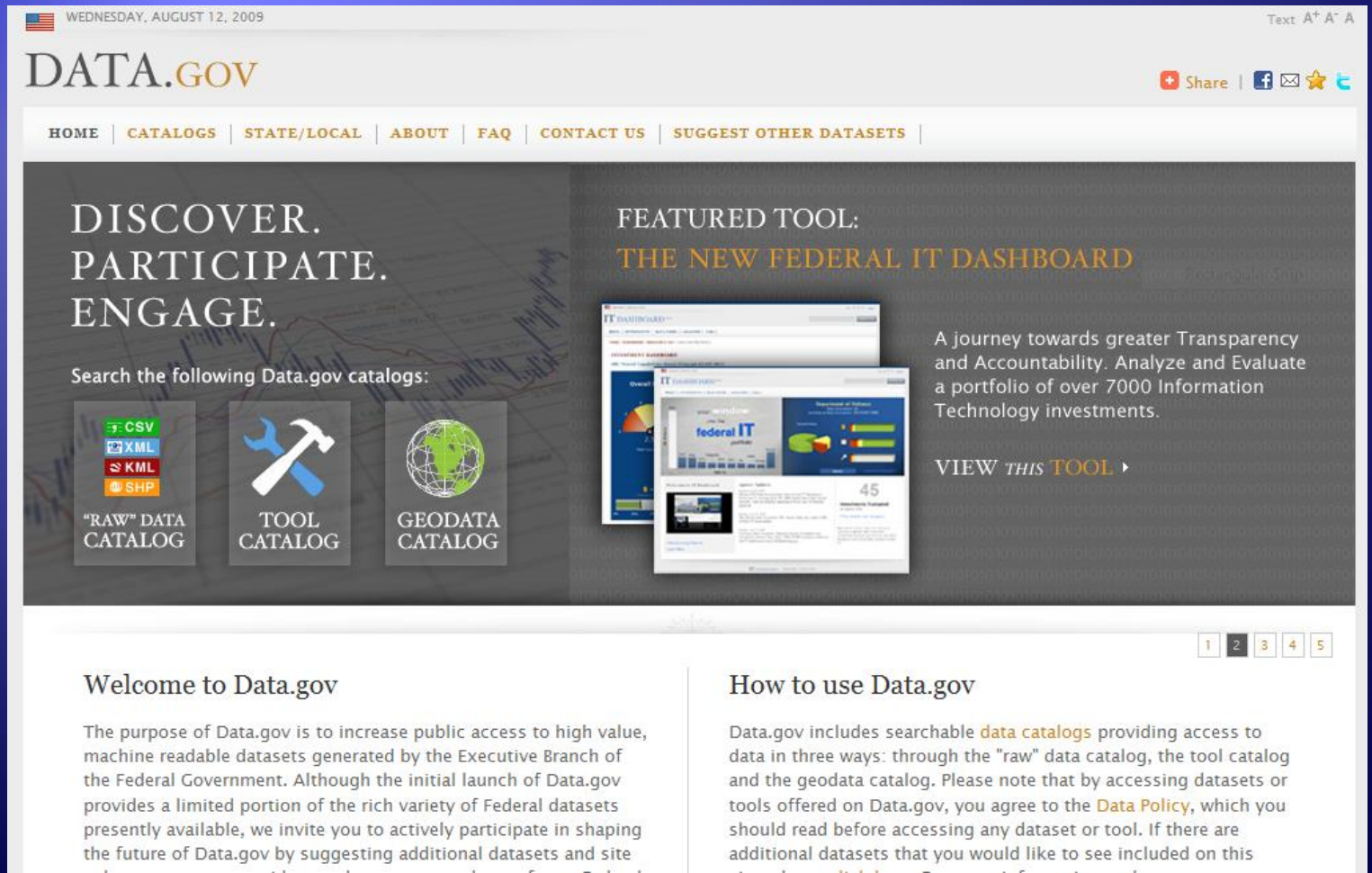
ments. 23,361 of you have reviewed
5 to go...

rivacy policy to find out how we use your data. You must also read
ice. By reviewing pages, you are agreeing that you have read the
and that you agree to them.

rts so far.

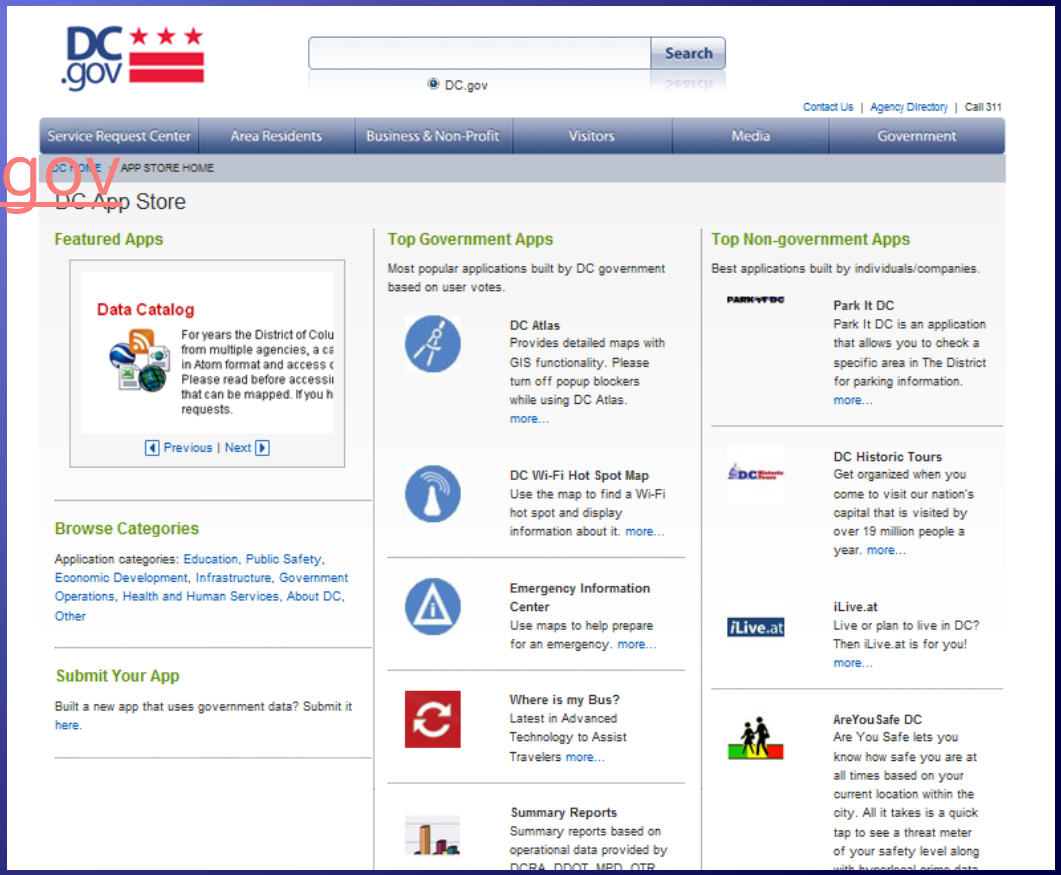
Data.Gov

- http://www.data.gov/



Washington DC

- Open Data 'Pioneers'
- First Open Data Catalog - http://data.octo.dc.gov/
- DC App Store
- http://appstore.dc.gov



Open Data - Applications

- Typically developed by Public
  - 'Community' developers
  - Local citizens
- Often called 'Mash-Ups'
  - Typically utilize mapping capabilities
  - Often use GPS and mobile capabilities
- Often utilize 'crowdsourcing'
- Open data protocols
  - E.g. KML, XML, RSS
- Often 'free' and 'open' toolsets…
  - Drupal, PHP, OGDI, MediaWiki, Python, Google Maps etc.

Open Data Applications e.g.

- Everyblock – www.everyblock.com
  - MSNBC Acquires 'Hyper-Local' EveryBlock.com
- OpenStreetMap – www.openstreetmap.org
- MySociety.Org (UK) – www.mysociety.org
  - FixMyStreet – www.fixmystreet.com
  - Travel Time – Travel Maps
  - TheyWorkForYou – www.mysociety.org/projects/theyworkforyou

DC - Apps for Democracy

- www.appsfordemocracy.org

"The first edition of Apps for Democracy yielded 47 web, iPhone and Facebook apps in 30 days - a $2,300,000 value to the city at a cost of $50,000 (all apps created are here). Our mission with "Community Edition" is two fold: to engage the populace of Washington, DC to ask for their input into the problems and ideas they have that can be addressed with technology and then to build the best community platform for submitting 311 service requests to the city. Submit your ideas and problems here!"

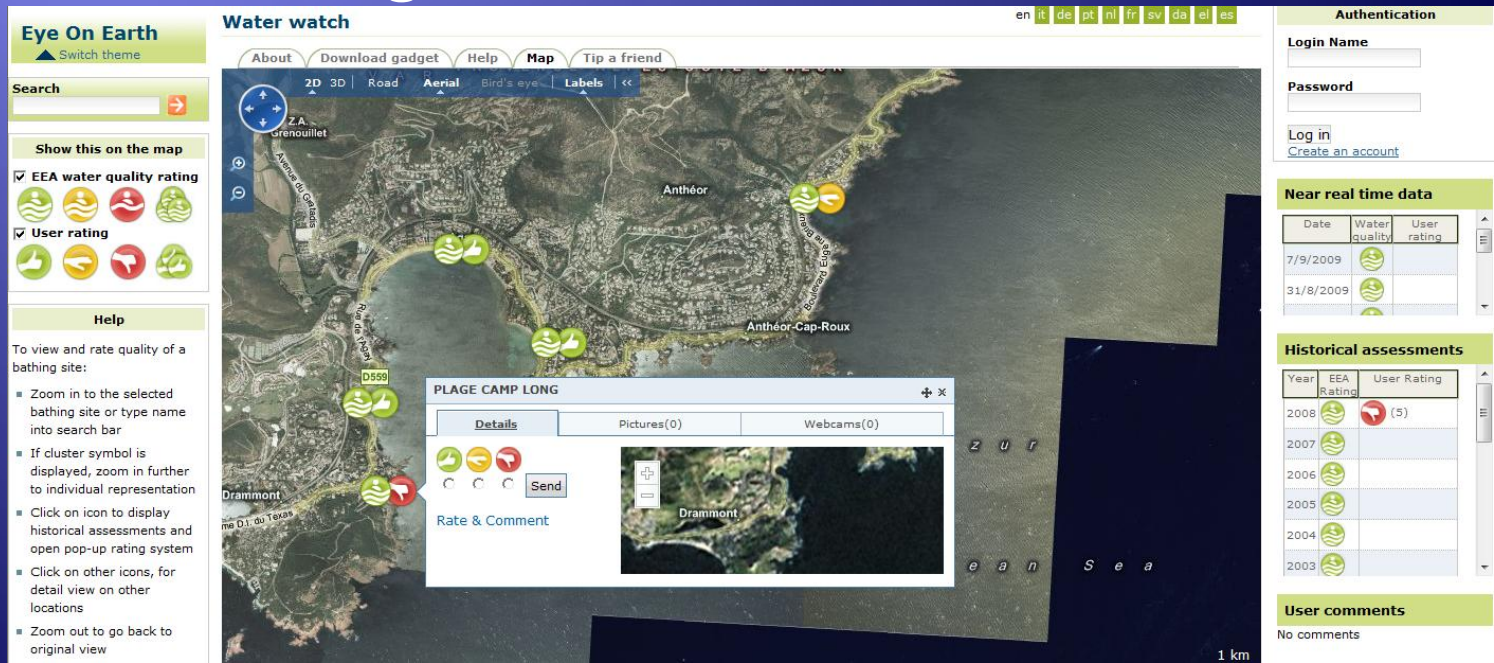
"Armed with insights from all corners of DC, we'll hold an innovation contest with **$34,000 in potential prizes!** Sign up to Build Apps for Democracy!"

US Recovery.Gov

- Public facing web portal
  - Citizens and Communities track stimulus funding
- Technology Platform
  - SharePoint
  - Amazon Web Services
  - SQL Server (data wareho sing)
  - ESRI
- Independent Developer
  - Smartronix, Synteractive

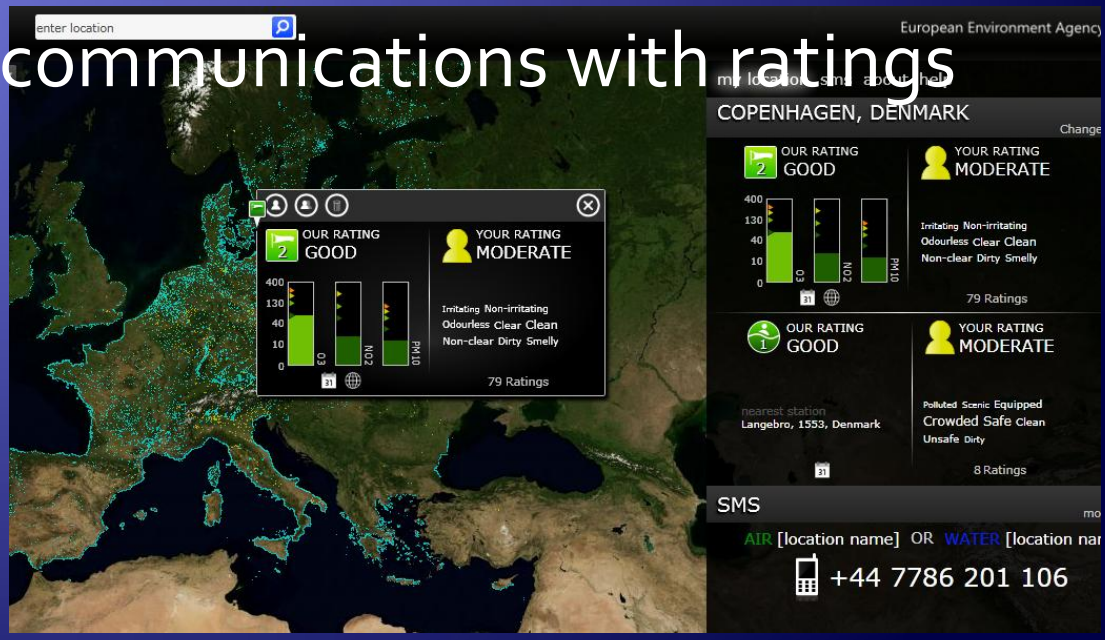
EU Water Watch

- http://eoe.eea.europa.eu/
- Combines Gov statistics with public feedback
- Interactive, 2-way communications with ratings
- Downloadable Gadget for Windows 7



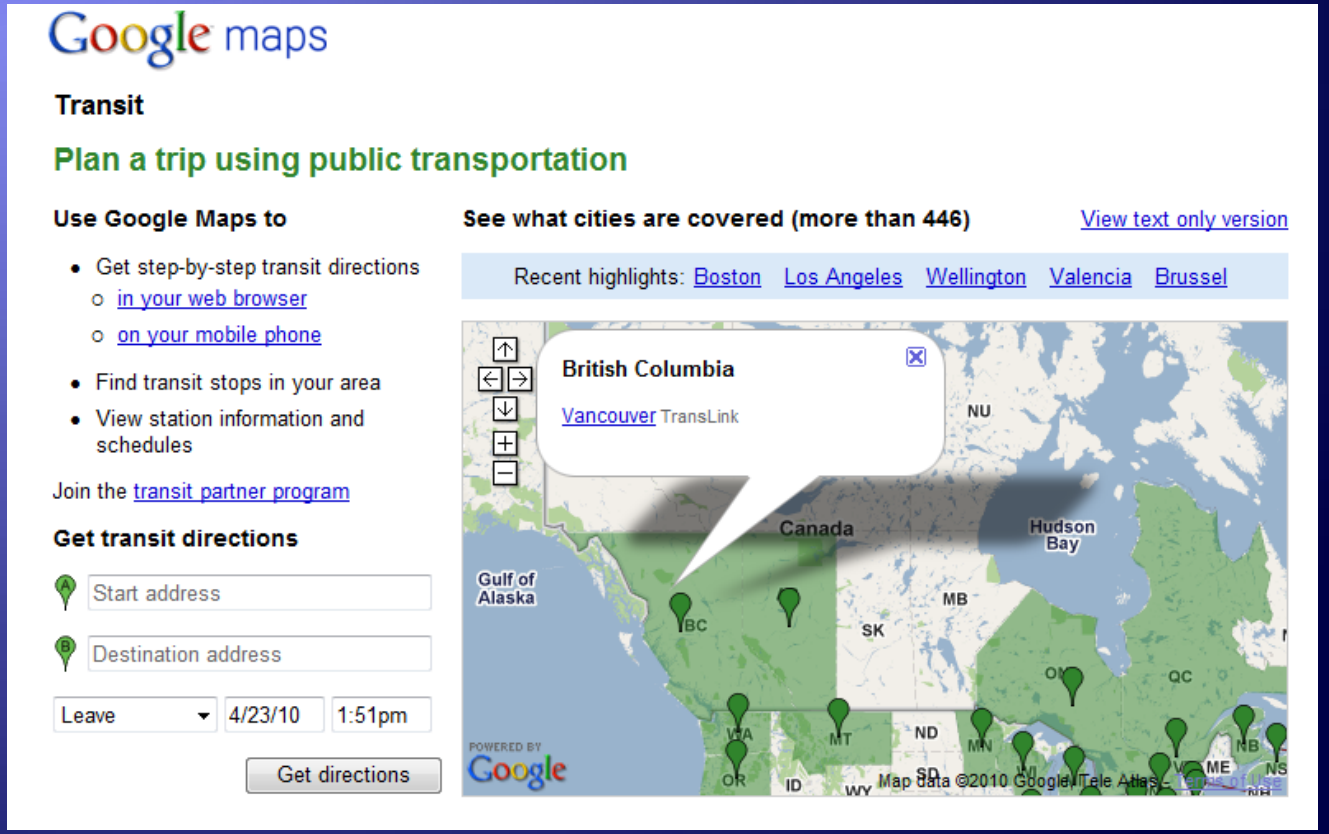
EU Eye on Earth

- http://www.eyeonearth.eu/
- Global observatory for environmental factors
  - Air and Water Quality
- Combines Gov statistics with public feedback
- Interactive, 2-way communications with ratings



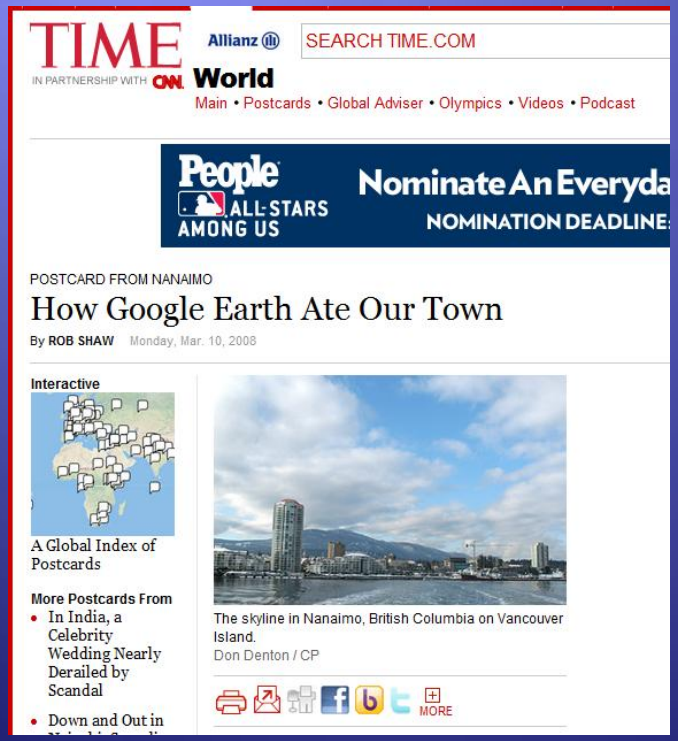
Open Data Apps - GIS

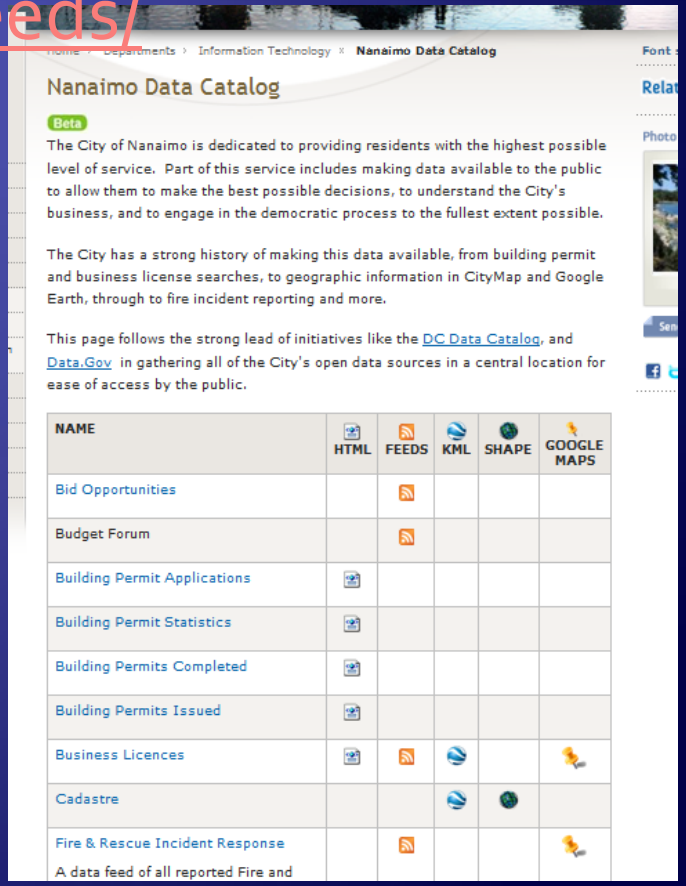
- Mapping
- Localization
- Relevance



City of Nanaimo - GIS

- "Google Earth Capital of the World"
- http://www.nanaimo.ca/datafeeds/





Open Data Apps - Mobile

- Data on the go
- Timeliness
- Location relevance
- Mobility
- Social Networking
- Washington DC - Stumble Safely
- Vancouver – VanTrash
  - Collections reminder service

Edmonton – Transit Apps

- http://www.edmonton.ca/transportation/ets/apps-for-ets.aspx

Vancouver - VanTrash

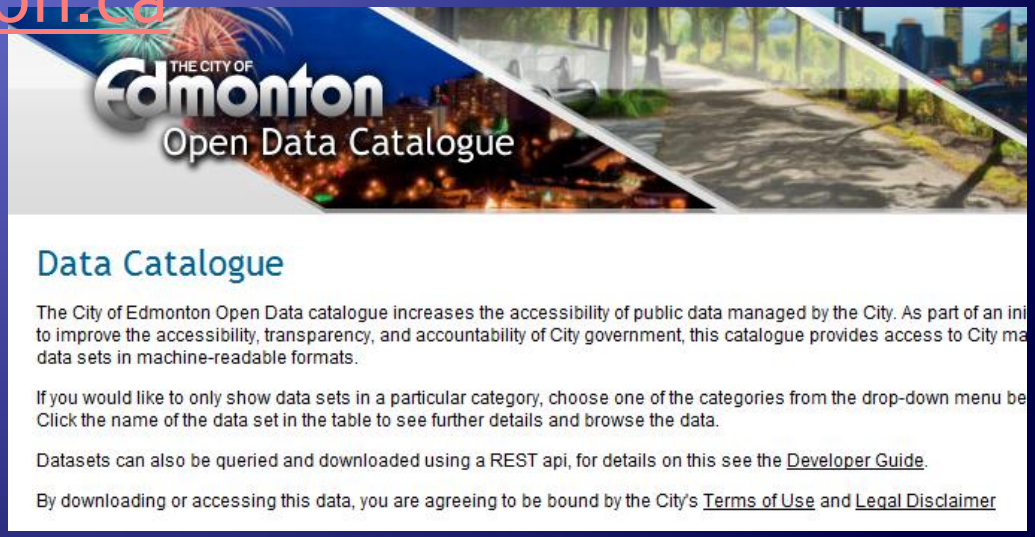
- Tracks garbage collection by area
- Users can sign-up
- Reminders via E-Mail
- Built using open-source on Github

Open Data Apps - Cloud

- Cloud inherently 'open'
- Low-cost
- Minimal infrastructure impact
- Fast time-to-market

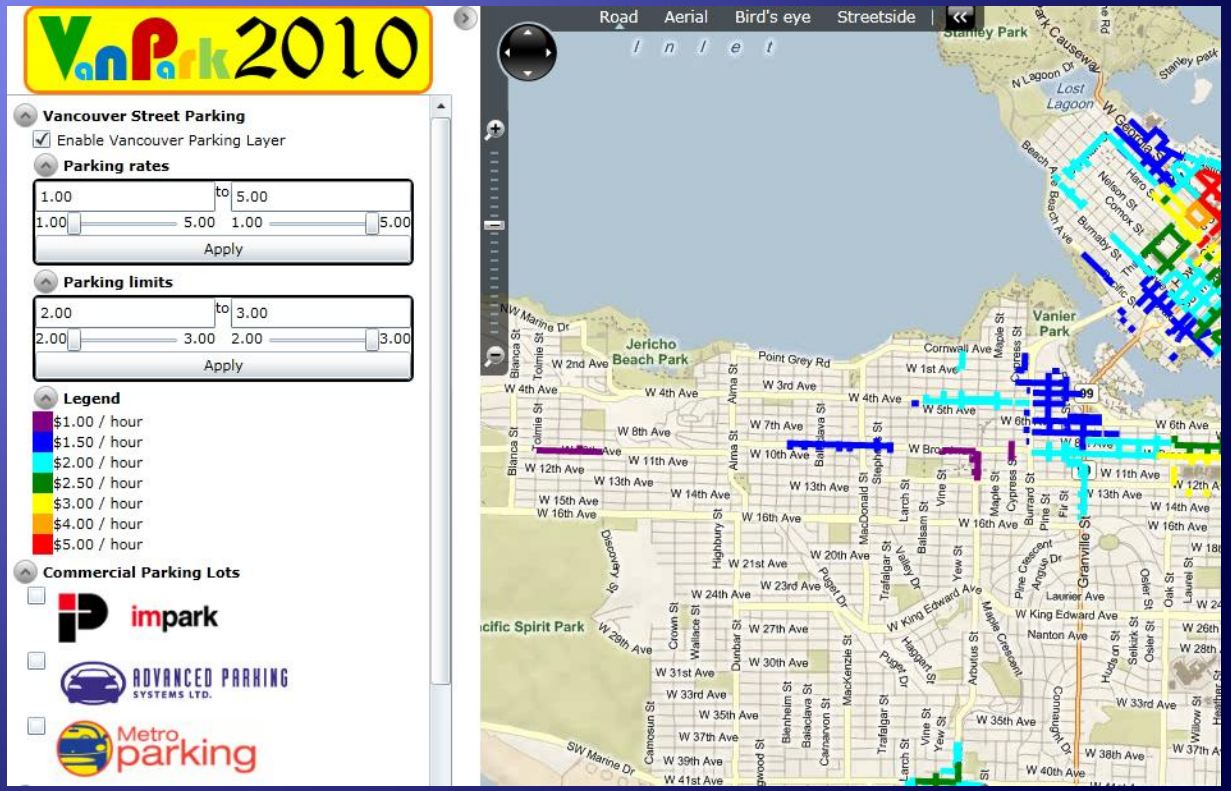
Edmonton – Open Data Catalog

- Launched Jan 13th 2010
- Built using MS Open Government Data Initiative (OGDI) and Windows Azure
  - Data hosted in 'Cloud'
- http://data.edmonton.ca



Open Data Apps - Integration

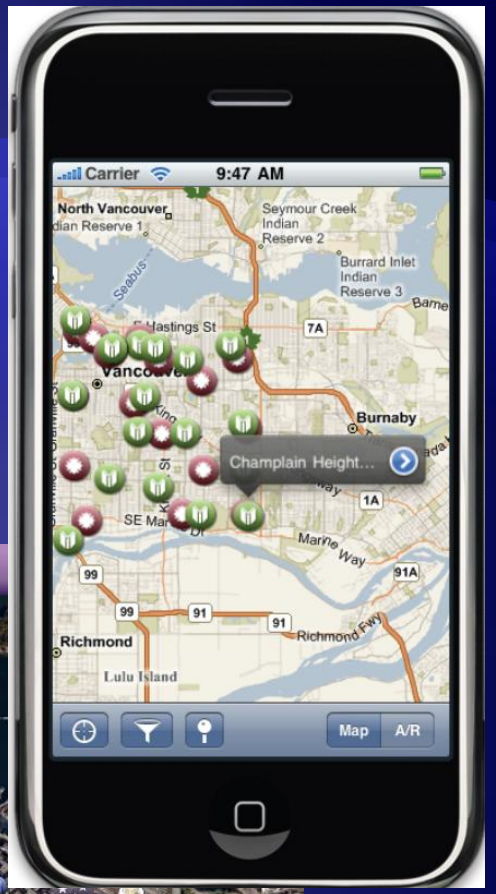
- Social Networking
- Commercial Data
- Open Data
- Cloud
- VanPark2010



VanGuide

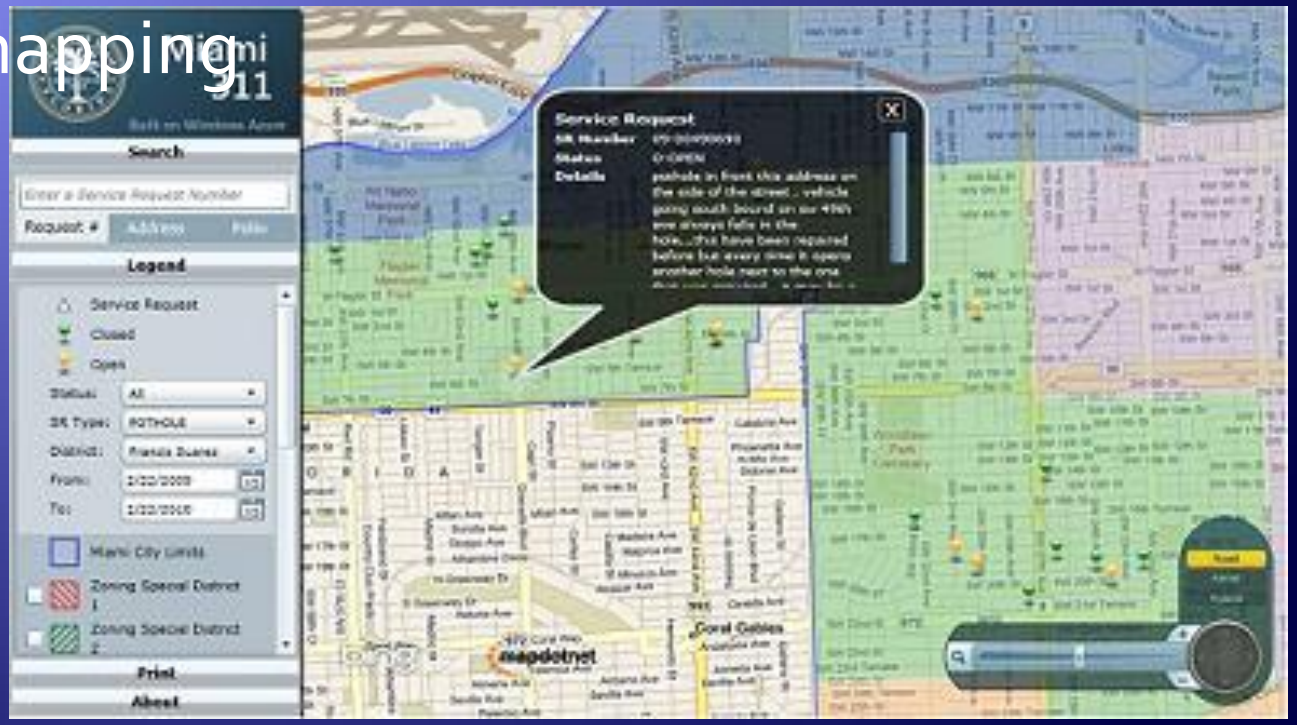
- Incorporates Cloud, mapping, social networking and iPhone
- ODAF

  Open Source on Codeplex



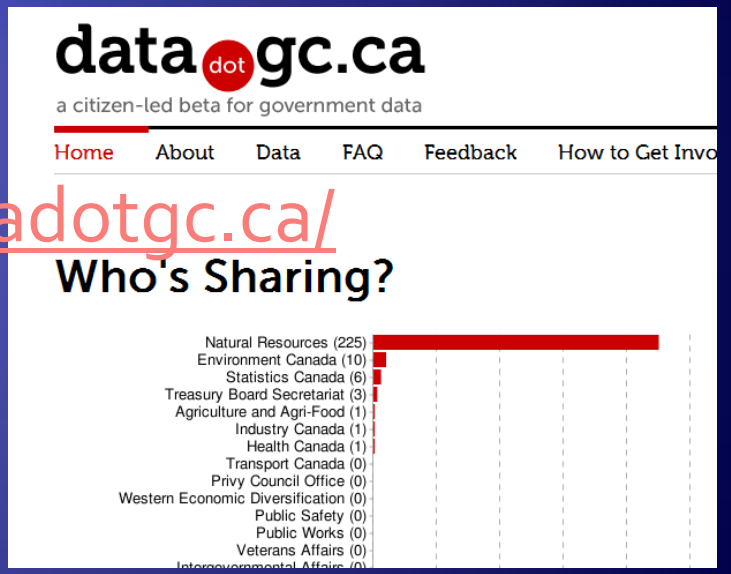
City of Miami – Open 311

- http://miami311.cloudapp.net
- Allows citizens to report and track non-emergency incidents
- Combines mapping with 'Cloud'



Open Possibilities

- Build Apps for http://data.edmonton.ca
  - E.g. re-use VanTrash
  - E.g. re-use VanGuide (ODAF)
- Build Apps for http://www.datadotgc.ca/
- Enter Apps Competition
  - E.g. Apps4Edmonton – May 21st
  - E.g. Make Web, Not War – May 20th



MONETIZATION $$$

Open Government Data Initiative

- Open Government Data Initiative (OGDI)
- Cloud Computing Application
  - Runs on Windows Azure
- OGDI Data Site - http://ogdisdk.cloudapp.net/
- Open Application
  - OGDI Source code is free and customizable
  - code can be used to publish data on the Internet in a Web-friendly format with easy-to-use, open RESTful API
  - API's can be accessed from Silverlight, Flash, JavaScript, PHP, Python, Ruby, mapping web sites, etc.
- Windows Azure Services Platform
  - E.g. SQL Azure Services

Microsoft - OData

- Open Data Protocol (OData)
  - Formerly 'data services protocol'
  - HTTP, AtomPub, JSON
- Published via Open Specification Promise
- RESTful way of exposing OGDI uses
- Breaks down data 'silos'
  - E.g. ODBC for Open Data
- http://odata.org
- IBM WebSphere eXtreme Scale Project

Visual Fusion in the Cloud

- Built by Partner – IDV Solutions
- MS Technologies
  - Windows Azure
  - Sharepoint (geospatial)
  - Silverlight (SpatialWiki)
  - Bing Maps
- Combined with:
  - Wikipedia, MapPoint
  - Visual Fusion Contribute (iPhone)
- Utilizes OGDI with Data.gov data sources
  - Supports KML/KMZ, ATOM, GeoRSS, WMS
- http://visualfusion.cloudapp.net

Q&A

Further Resources

- MS Interoperability & Open Government
- David Eaves Blog – http://eaves.ca
- Open Government Data Initiative – OGDI
- IDV Visual Fusion – Mashups in Sharepoint
- Microsoft - Shared Source Initiative
- David Crow's Blog - Open Government
- Open Data Application Framework (ODAF) on Codeplex – http://odaf.codeplex.com/
- MS Interoperability & Innovation