

The Federal Geospatial Platform (FGP) and Open Maps Canada



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Natural Resources Canada
Earth Sciences Sector**

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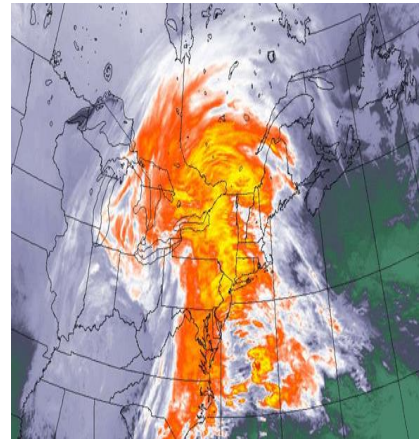
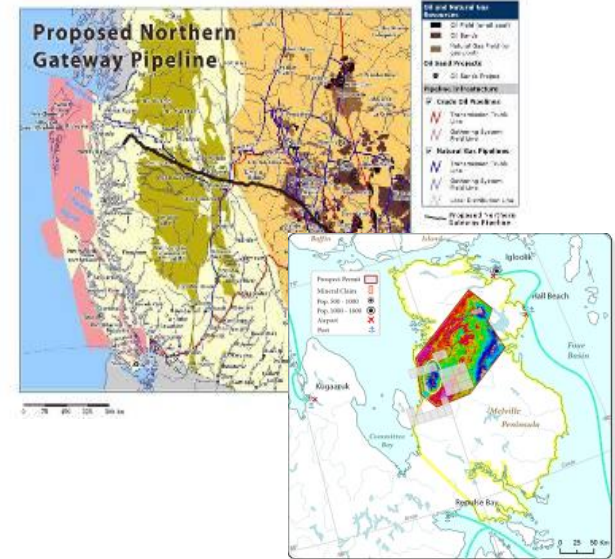
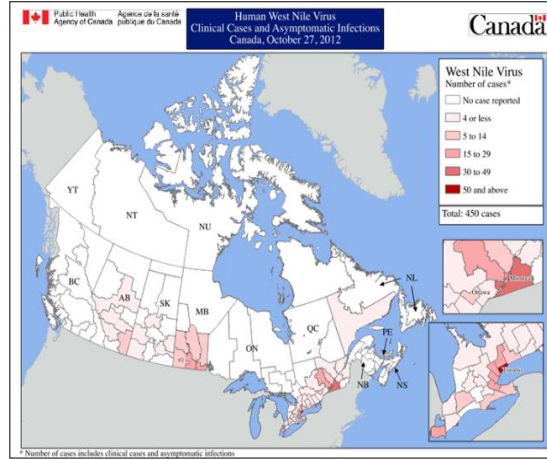
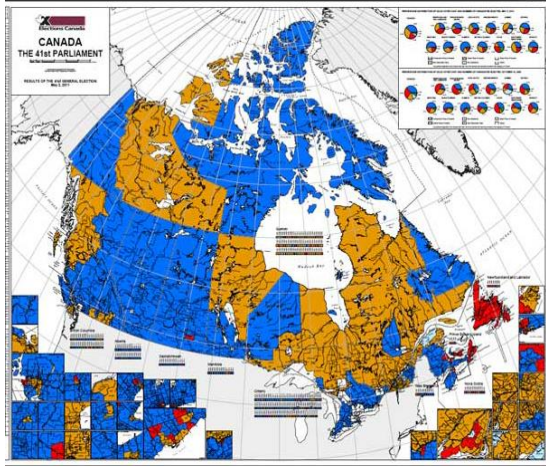


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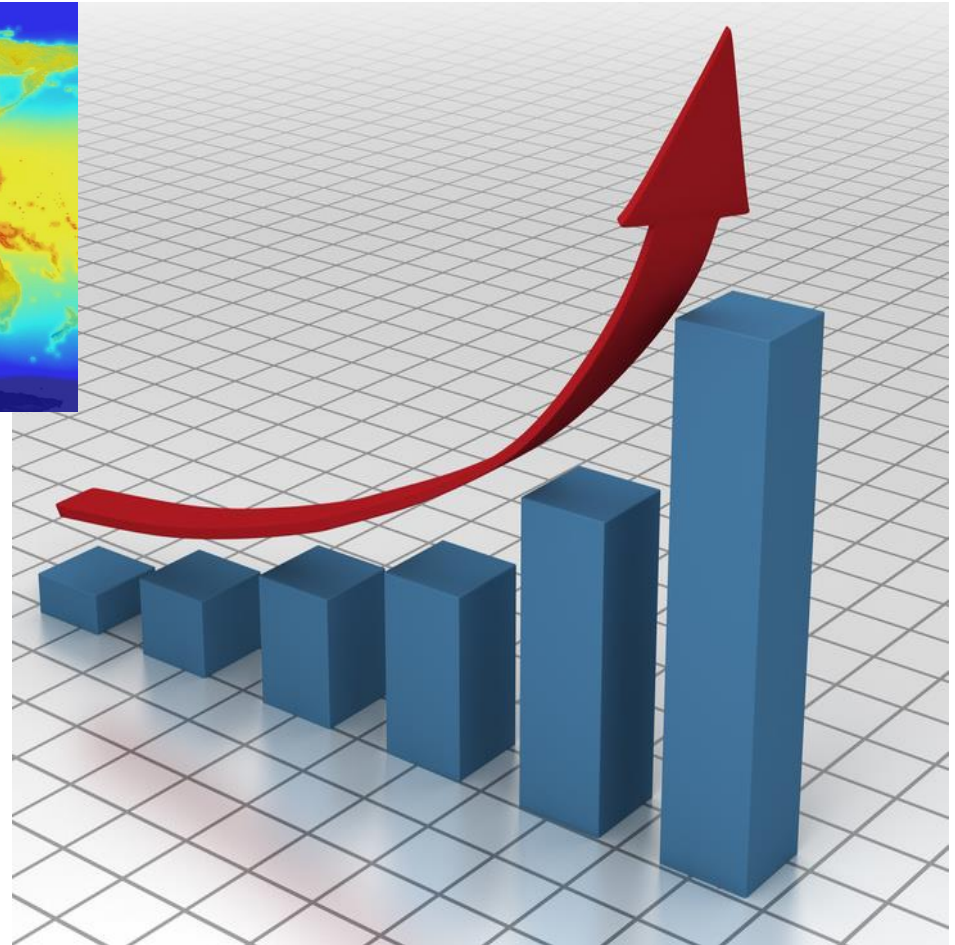
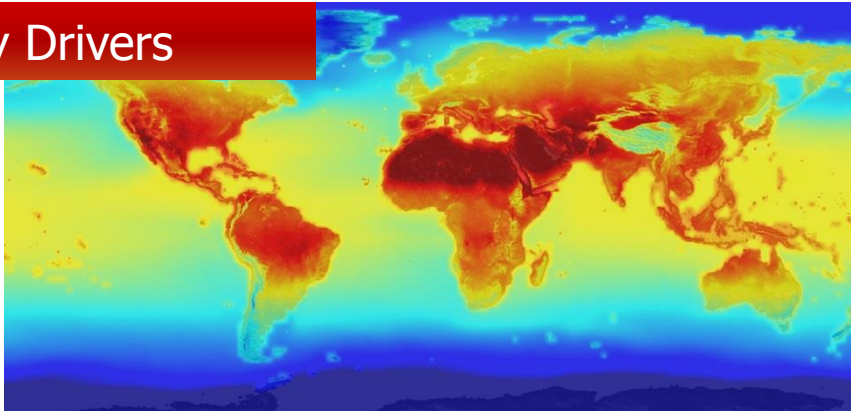
Canada

Geospatial data are produced and widely used in the federal government...



The Federal Government's Data is Growing Exponentially

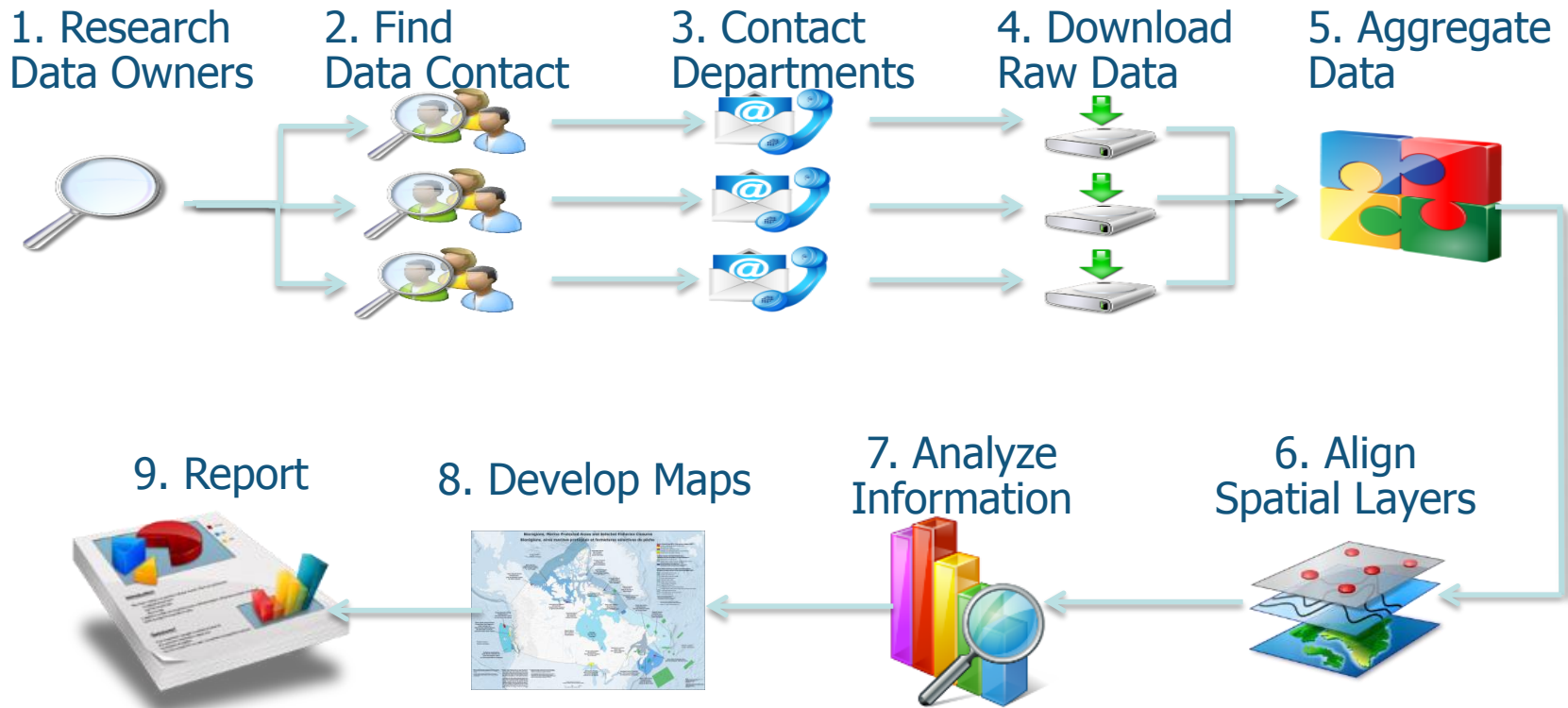
Policy Drivers



Technology Drivers



Currently it takes weeks, months or years to pull the required data together for use ...



... and even though many departments have data available online, different data policies and standards may still make it a daunting task to bring data together for analysis

About the Federal Geospatial Platform Initiative...

A three-year Government of Canada (GC) Initiative taking place between 2014 and 2017 that:

- Supports horizontal efforts to advance economic growth, social cohesion, well-being, and environmental management
- Will fundamentally change the way the GC shares, uses, and manages geospatial assets to better support the delivery of programs and services
- Facilitates a coordinated approach to geospatial thereby reducing duplication of efforts in acquisition and management of geospatial data, tools, and services
 - Focus on getting the right data *right*
- Involves 21 GoC departments and agencies of the Federal Committee on Geomatics and Earth Observations (also known as the FCGEO)



Vision:

Geo-enabling the Federal Government

The vision means:

- Leveraging the power of location and geography within workflows and business processes
- Sharing the best technology and data to produce applications and services which support decision-making
- Allowing non-technical users to discover, access and use geospatial information to produce their own maps
- Making the most relevant and current triple "A" geospatial information available to our leaders, analysts, and scientists to support decision-making
- Open geospatial information, services and applications are presented to the public coherently



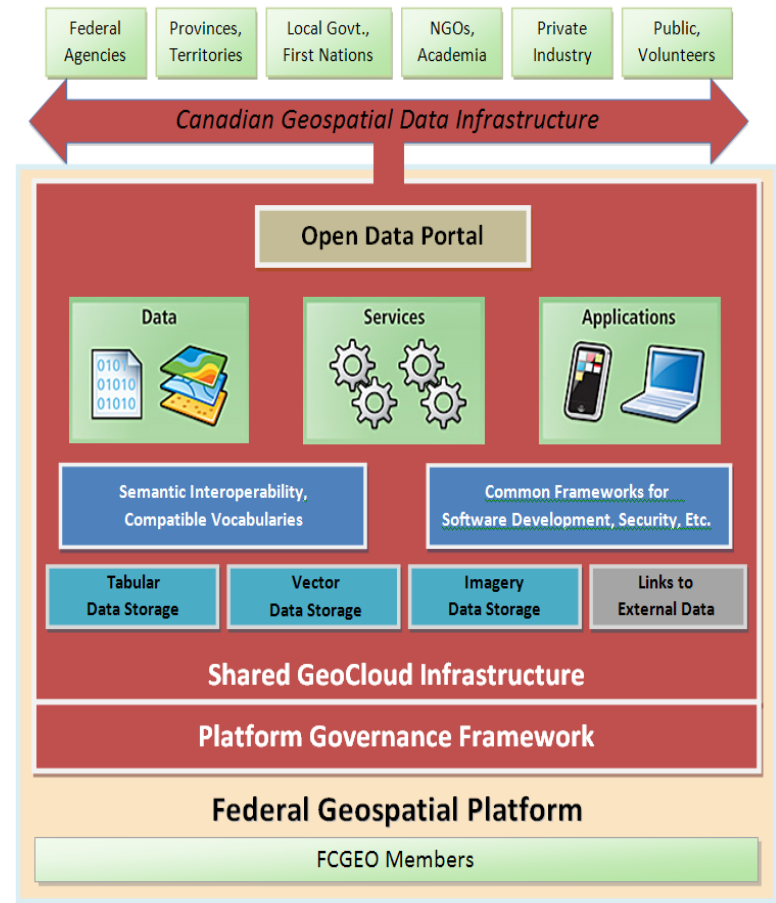
What will FGP do?

- Bring together the Government of Canada's **economic, social and environmental** geospatial data for **one-stop access** by applying **common data policies and standards**
- Users can **search, integrate and view** the data on maps or download the data and create your own maps
- Takes the data handling process from a complex one that took months or years to a simpler one that takes weeks, days or even hours



The Federal Geospatial Platform is an enterprise solution that would provide...

- Comprehensive collection and sharing of **authoritative data**
- Search, discovery, access, and visualization tools that are **built once and reused many times**, and enable the user to **search once and find everything**
- Common web-based environment that enables **data integration, analysis, and visualization** to support informed decision-making
- Shared governance and management** of geospatial assets and capabilities, through operational standards and policies, for Canadians

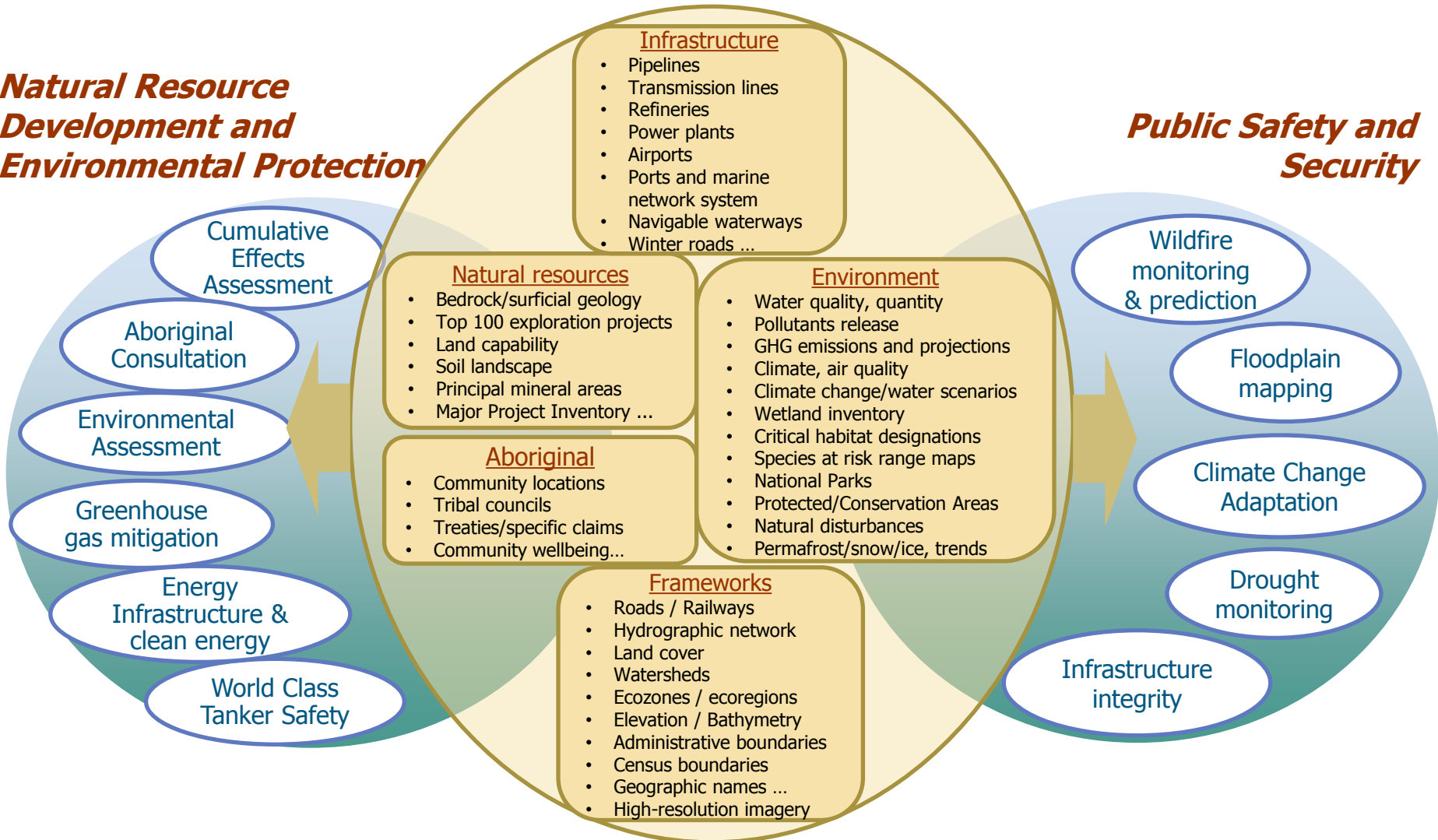


...resulting in operational efficiencies, increased internal productivity, and improved services and value to Canadians

FGP Core Data for Horizontal Priorities

Natural Resource Development and Environmental Protection

Public Safety and Security



FGP CORE DATA

Geospatial datasets in FGP: preliminary overview

Socio-economic

Energy Infrastructure

- Oil / gas pipelines
- Power transmission lines
- Power generating stations

Transportation

- Highway systems
- Airports
- Marine ports
- Border services

Population

- Age, Education, Occupation, Marital status,, Income, Household characteristics, Mother tongue, Population and dwelling, Labour force status

Health

- Health facilities and services
- Federal regulated meat establishments
- Plum pox virus – regulated areas
- Emerald ash borer

Public safety

- Flood plain maps
- Flood monitoring
- Wildfire dangers
- Public Facilities
- Communication Utilities

Environmental

Atmospheric

- Weather prediction
- Air quality prediction
- Climate baseline
- Climate change scenarios

Water-Inland

- Hydrographic networks
- Watersheds
- Water quality
- Stream flow monitoring

Water-Marine

- Tides and currents
- Winds and waves
- Water quality
- Water level
- Sportfishing areas in BC

Biota

- Ecological Regions/Framework
- Species at risk critical habitat (marine)
- Aquatic invasive species
- Ecologically/environmentally significant areas

Environmental Management

- Protected Areas (land)
- Protected Areas (marine)
- Large Ocean Management Areas
- Environmental Cooperation Zones

Environmental Monitoring

- Air quality Indicators
- Fresh water quality indicators
- National pollutant release
- Greenhouse gas emissions
- Protected habitat indicators
- Agri-environmental Indicators

Natural Resources

Geological

- Geology
- Principal mineral areas
- Aquifers, wells
- G/Water monitoring sites

Mining

- Top 100 exploration deposit Appraisal Projects
- Mines in Canada
- Major project inventory

Land

- Canada Land Inventory
- Soil landscape of Canada
- Land cover
- Permafrost

Agriculture

- Detailed soil surveys
- Agricultural biomass
- Crop inventory
- Saturated surface soil moisture
- Interpolated census of agriculture

Forest

- Annual fire-burned area
- Wildfire seasons
- Forest biomass
- Plant hardiness zones
- Species distribution
- Forest inventory
- Genetic resources

Fisheries

- Marine Bioregions
- Ecologically/biologically significant areas
- North American Fisheries Organizations (NAFO) Zones

Base and Framework

Geo-referencing

- Geodetic network
- Geographical names
- CHS Chart Index

Cadastral

- Northern oil/gas rights
- Aboriginal lands administrative boundaries
- Inuit communities
- First Nations
- Tribal Councils
- Aboriginal mining agreements

Base Map Features

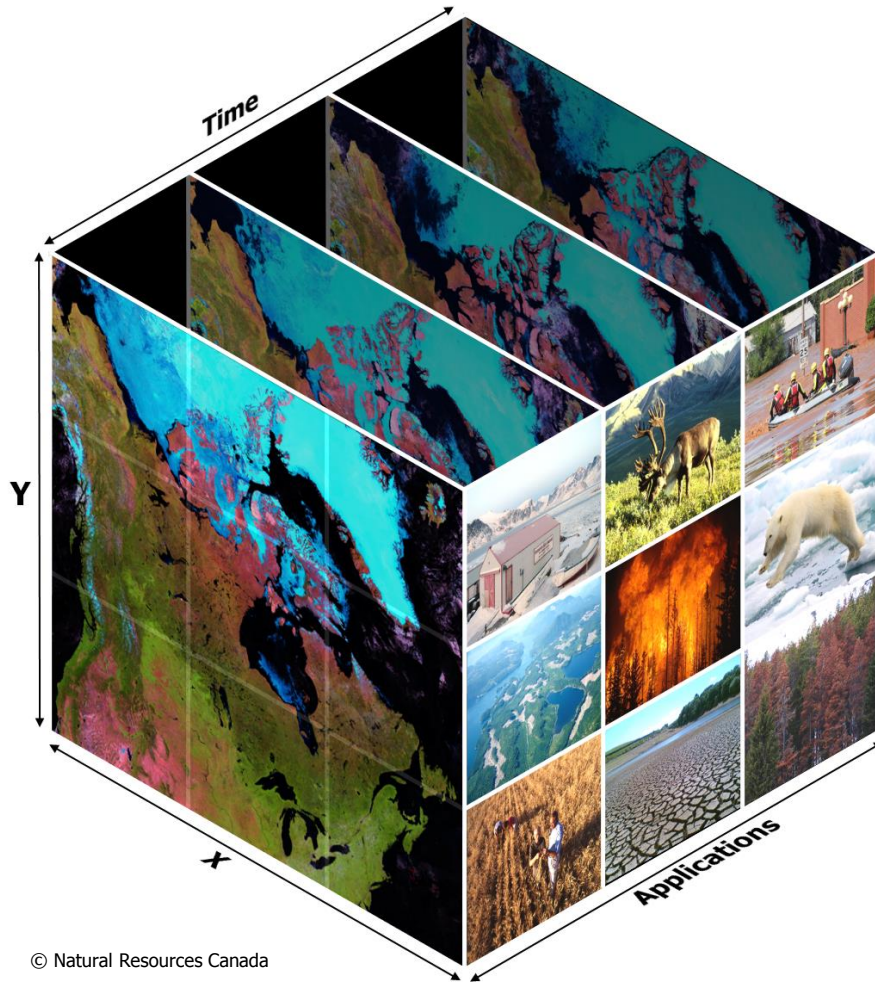
- Administrative boundaries
- Principal municipal areas
- Road/railway networks
- Air/marine ports
- Digital elevation data
- Gridded bathymetry
- Federal electoral districts

Imagery

- Orthoimages of Canada Landsat
- Long term satellite data records
- National Master Standing Offers' imagery
- High resolution imagery



Big Data Analytics in Geospatial



“Today’s” analysis focuses on an understanding of the past and current state of Canada, and in higher detail

- Understanding dynamics of land surface processes
- Ability to forecast for a variety of issues
- Move to moderate and high resolution analyses

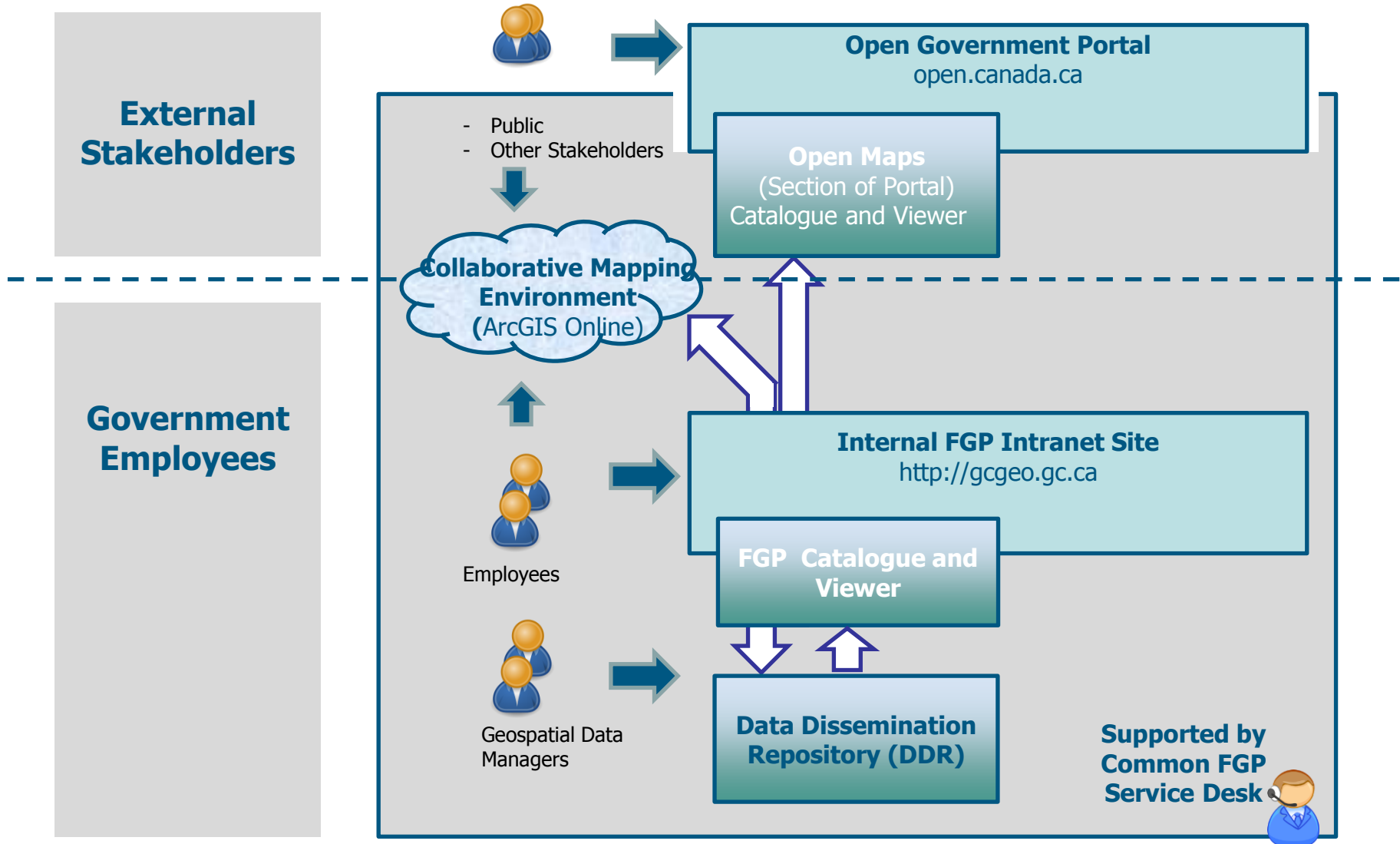
“Today’s” analysis

- Accurate, consistent measurements
- High frequency of measurements over time (seasonal, annual changes)

“Today’s” Challenges

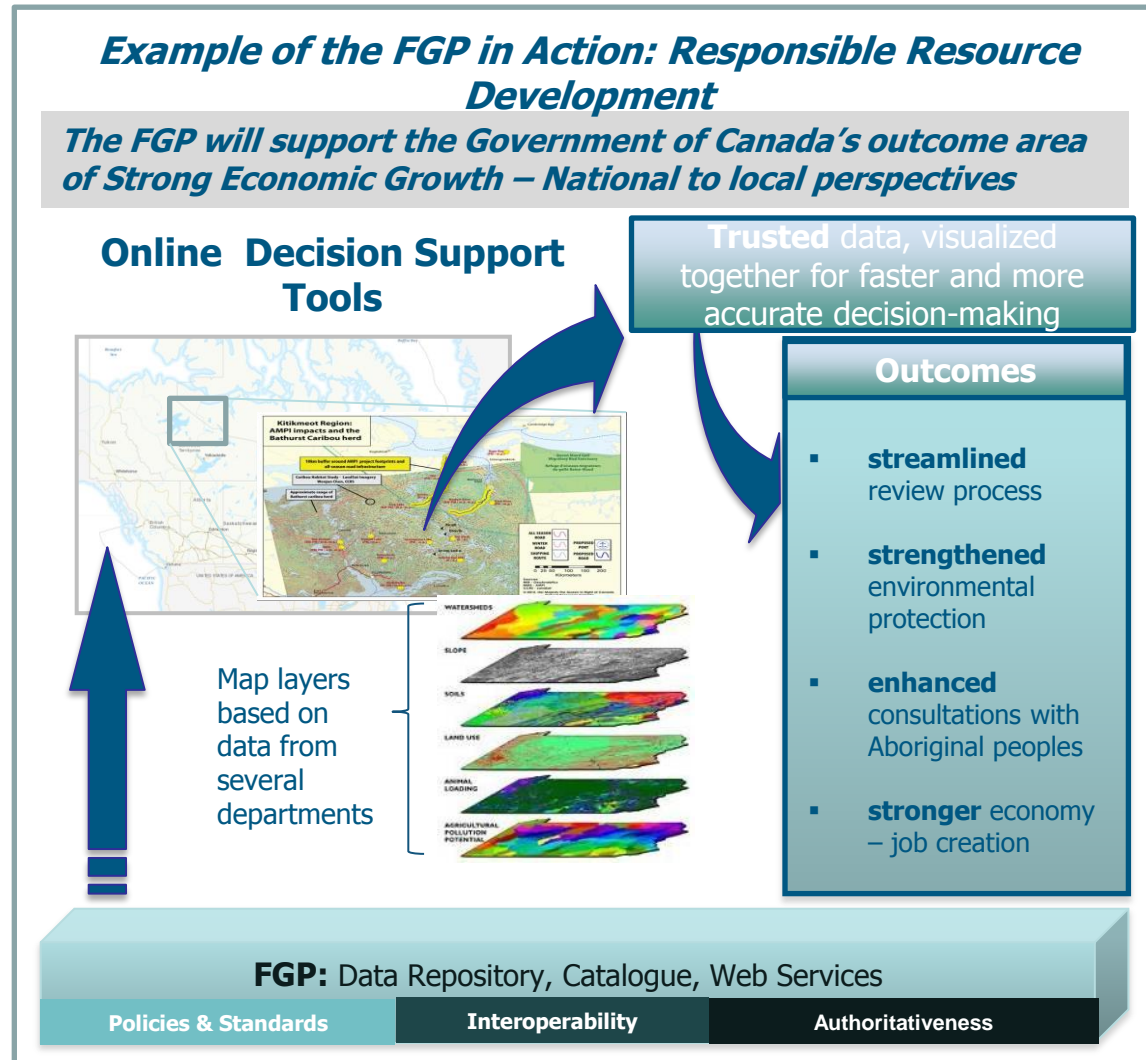
- Expertise / Algorithms / Capacity
- IM/IT Infrastructure (data management, processing and access)

Overview of the of the FGP and its components...



The FGP in a nutshell...

- **Best possible pathway for GC Spatial Analytics**
- **Use of common suite of GC-wide tools**
 - Users can search, discover, access, and visualize data to support informed decision-making
- **Has a comprehensive collection of “Triple-A Data”**
 - **A**ccurate, **A**uthoritative, and **A**ccessible geospatial data that can be viewed, used, and shared
- **Shared governance and management**
 - Sharing of geospatial assets and capabilities, through operational standards and policies
- **Client centric design**



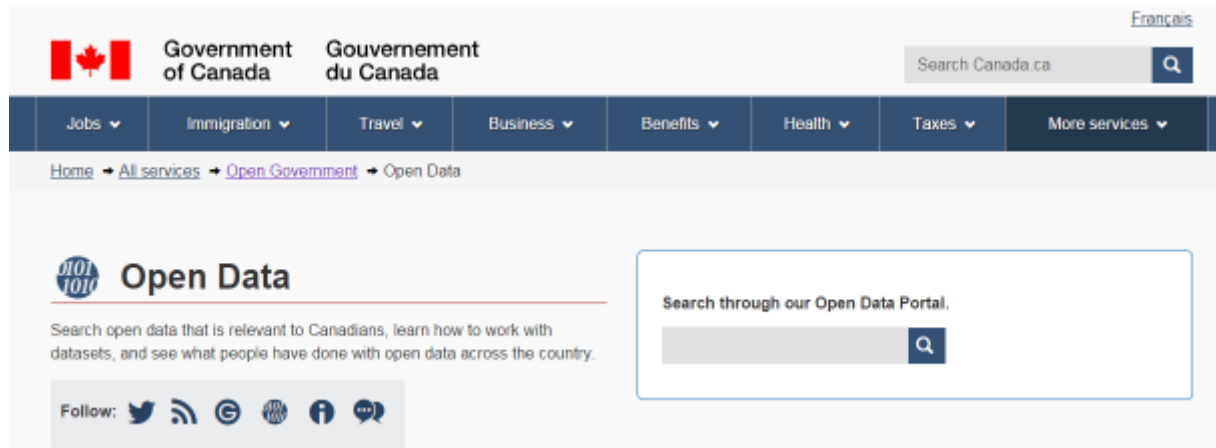
Merci / Thank you

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FGP's Role in Open Government

Open Data

- Open.canada.ca – GC raw data available in machine-readable formats



- Currently 96 percent of the data available at open.canada.ca is Geo Data
- Will be the primary dissemination channel for the FGP



fGp Federal Geospatial Platform

[Search](#)[Map Gallery](#)[Tools and Resources](#) ▾[Sign In](#)

Welcome to the Federal Geospatial Platform (FGP), one-stop access to the Government of Canada's geospatial information. This is the place where you can create new knowledge by combining, visualizing and analyzing the data, and by collaborating with your colleagues.

The FGP will continue to evolve as more features and datasets are added by our partners. Come back often to explore and see what's new!

[Access geospatial data](#)

Search the data catalogue to discover and download data.

[Explore our map gallery](#)

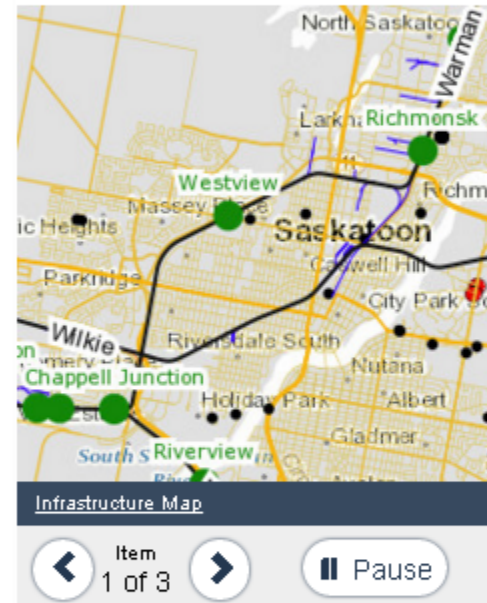
Use our gallery of maps to start creating your own maps to meet your needs and then share them with your colleagues.

[Collaborate with your colleagues](#)

Select your data and produce maps jointly in an online environment. [Send us an email](#) if you are interested.

[Add your data to the catalogue](#)

Help others find and use your data. Get an [account or sign in](#) to contribute your data.



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- Dataset Metadata Type
 - With Map Layer (3)
- Topic Category
 - Economy (3)
 - Transportation (1)
- Core Subject
 - Biomass (1)
 - Cartography (1)
 - Coal (1)
 - Electric power stations (x)
 - Electricity (1)

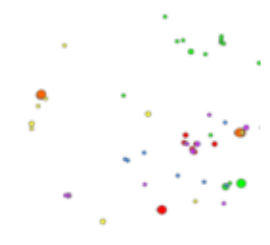
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Sort by: Title View: 10

Showing 1-4 of 4

[Electric Generating Stations](#)

A generating station is an industrial facility built and operated to generate electricity. Data shows the 916 generating stations (power plants) operating in 2007. There were 479 hydroelectric statio...



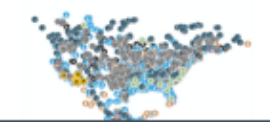
[North American Cooperation on Energy Information, Mapping Data](#)

Mapping Resources on energy facilities implemented as part of a North American trilateral cooperation on energy information between the Department of Energy of the United States of America, the Depar...



[Power Plants, 100 MW or more - Energy Infrastructure of North America](#)

Includes all stations containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy with an installed capacity ...

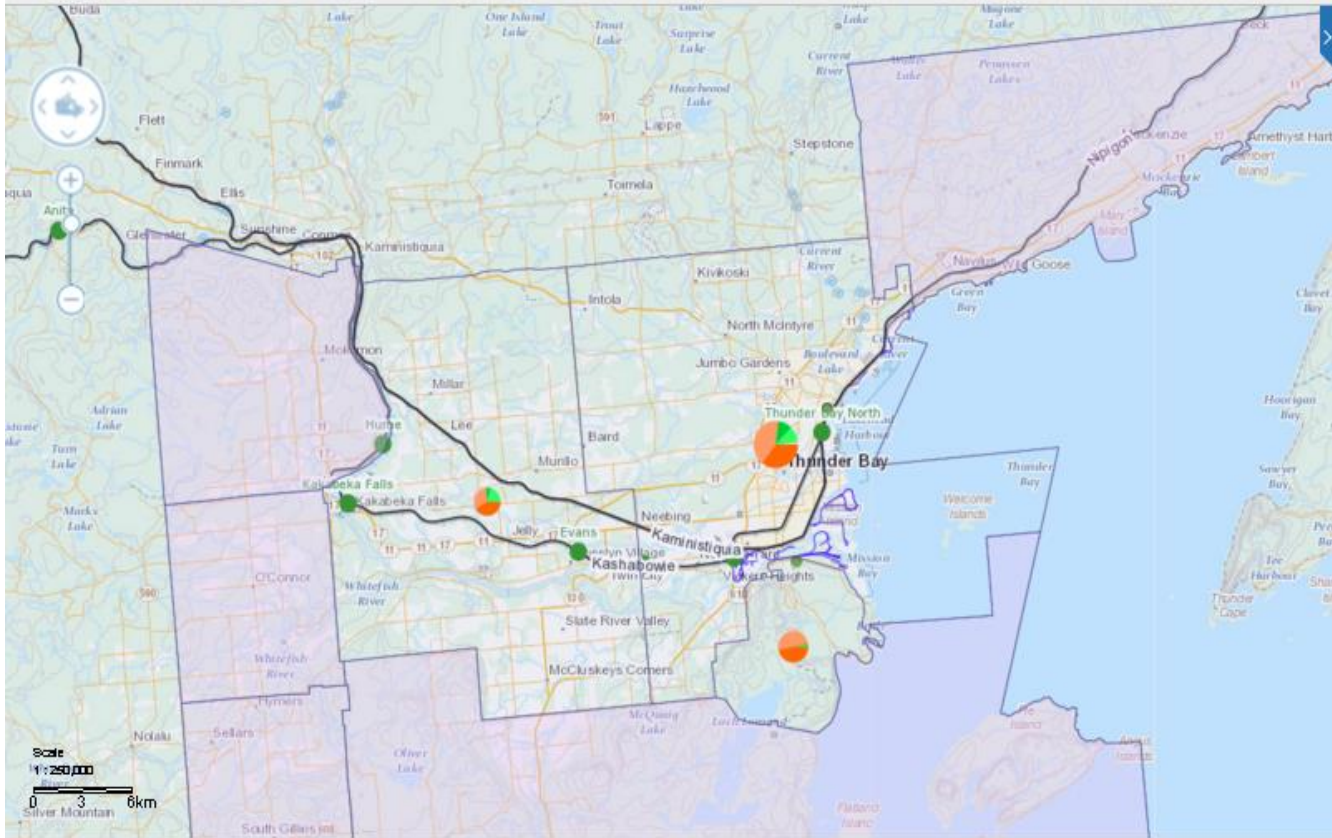


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Canada Transportation, Canada Atlas Lambert

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Datasets	Data
+	
major_projects Settings Remove	
First Nations Location (Esri REST) Metadata Settings Remove	
aboriginal_population Metadata Settings Remove	
Legend	
	First Nations (North American Indian) single identity - Male
	First Nations (North American Indian) single identity - Female
	Métis single identity - Male
	Métis single identity - Female
	Inuk (Inuit) single identity - Male
	Inuk (Inuit) single identity - Female
	Multiple Aboriginal identities - Male
	Multiple Aboriginal identities - Female
	Aboriginal identities not included elsewhere - Male
	Aboriginal identities not included elsewhere - Female
	No aboriginal population or insufficient data
	No data available
railway Metadata Settings Remove	

FGP
GEO-ENABLING THE GOVERNMENT OF CANADA

◀◀

▶▶

- The Pacific Flyway Ambassadors**
- Canadian Northern Economic Development Agency**
- Tri-Lateral Energy Infrastructure Story Map**
- The Canada Base Map - Transportation (CBMT) -**

Get started! Learn how to...



Map data in Microsoft Excel



Make a web application with a template



Add authoritative content to a map