

The background of the top half of the image is a photograph of the Vancouver skyline at dusk. The city lights are visible, and the water in the foreground reflects the buildings. A large, white, stylized 'UR' logo is overlaid on the left side of the image. The text 'Understanding Risk' is in white, 'British Columbia' is in orange, and the subtitle is in white.

Understanding Risk

British Columbia

Collaboration and Innovation for a Resilient Future
2020 | Online Symposium + Event Series

**URBC 2020 Terra-Cognita: How Can We Accelerate
Disaster Resilience Planning with OpenData
The Federal Geospatial Platform**

November 24th , 2020

Outline of the Presentation

Introduction: What is the Federal Geospatial Platform (FGP)

- Platform Strategy
- Road Map
- Open Data + Provincial / Territorial Data Integration
- Emergency Management and the Covid-19 Request
- The Cloud

Conclusion: A Government-Wide Approach for the Win
Questions for the audience

The Federal Geospatial Platform

A Treasury Board approved initiative for a Geo-Enabled Platform to:

- Improve decision-making.
- Increase innovation and productivity.
- Make data more accessible.
- Improve government efficiency.

A partnership of federal departments and agencies.

Championed by Natural Resources Canada.

Launched internally in June 2016, and Open Maps (Open Government portal) which leverages the FGP, launched in November 2017.

The Strategy for Open Geo

Vision: The Federal Government is Geo-Enabled

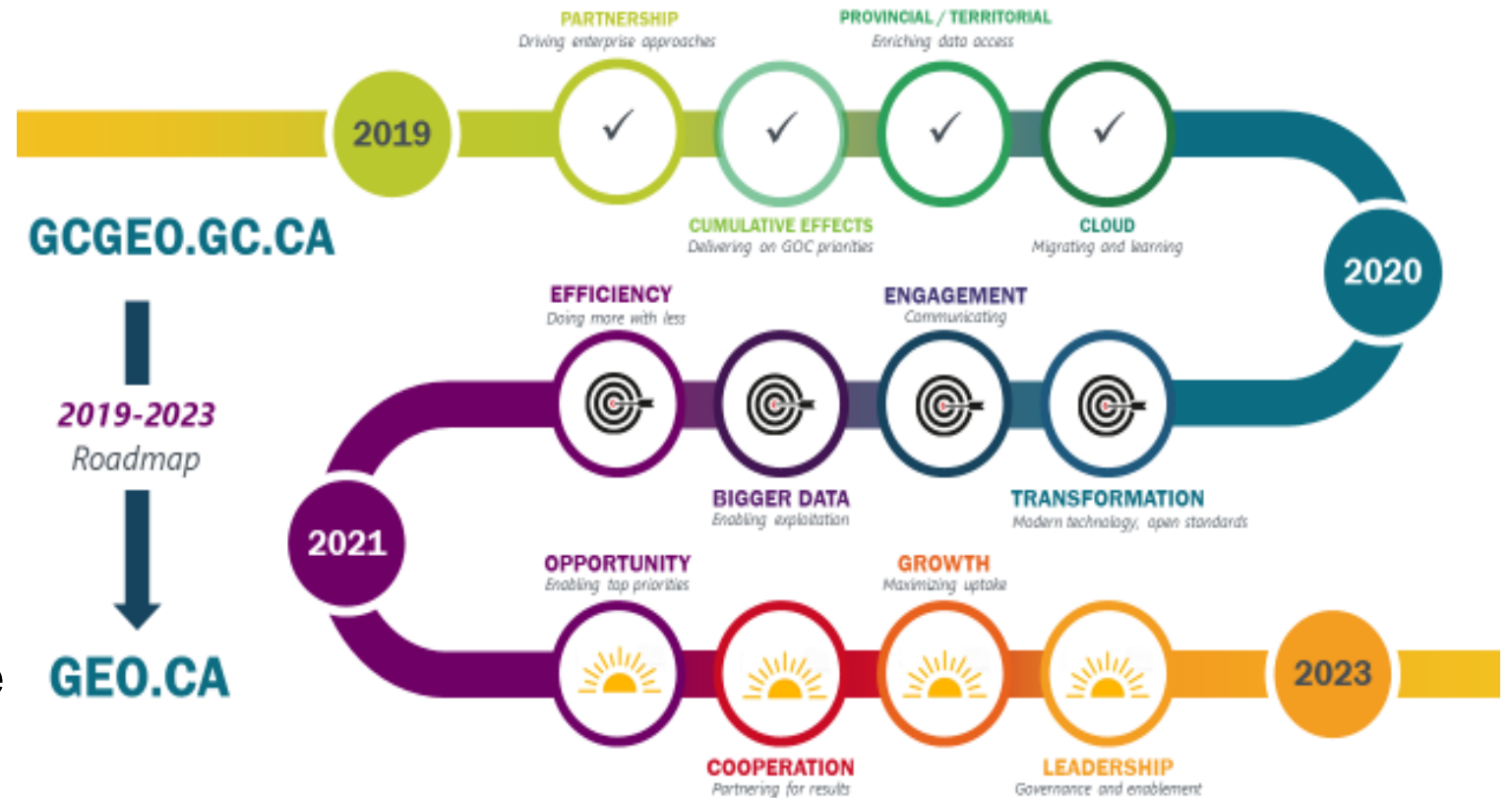
Mission: The FGP provides the go-to place for Canadian Governments and clients to access authoritative geospatial data, tools, and analytics capabilities to inform location-based decision making



Our Road Map

Today, the Platform actively works with organizations to publish and make discoverable over 3500 layers of from-the-source, interoperable geospatial data layers, supported by ISO standard metadata, available to federal employees and the public for analysis and decision support.

Building on years of development, there is still more to do to maximize the value of Canada's geospatial assets, and make our open geospatial information even accessible to everyone



Open Data

Open Maps

Continuously growing catalogue of **3500+ datasets** from 20 federal departments/agencies and 3 provincial jurisdictions - with 2 – 4 more jurisdictions coming online this year

Canadian Open Government Federated Search Project

Providing technical expertise to ensure Canadians will be able to search and download open geospatial data available from all fourteen jurisdictions from **Open Maps**

Open Science and Data Platform

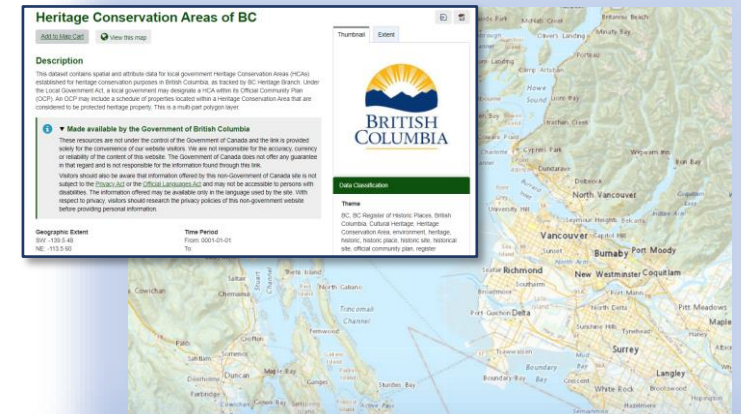
Enabling federal, provincial and territorial geospatial data content to the **Open Science and Data Platform** to support cumulative effects analysis and environmental assessments

Open Government Action Plan 2018-2020

Supporting Canada's international **OGP** commitment to "Extend federated open data search pilot to additional provinces and onboard at least 2 municipalities

Provincial / Territorial Data Integration

- Open geospatial data from **BC, AB and QC** now discoverable, **ON, NB, YK and NS** coming soon
- Weekly automated updates from **provincial/territorial APIs to FGP** Catalogue keep content fresh and accurate
- Complete content push to **Open Maps** every 15 minutes
- **Technical solution** leverages GeoNetwork, FGP's AWS Geo Community cloud, machine translation, FME and OGC standards
- Coming in 2021 : **GEO.CA** – the next generation, cloud-based, publically accessible Canadian Geospatial Platform

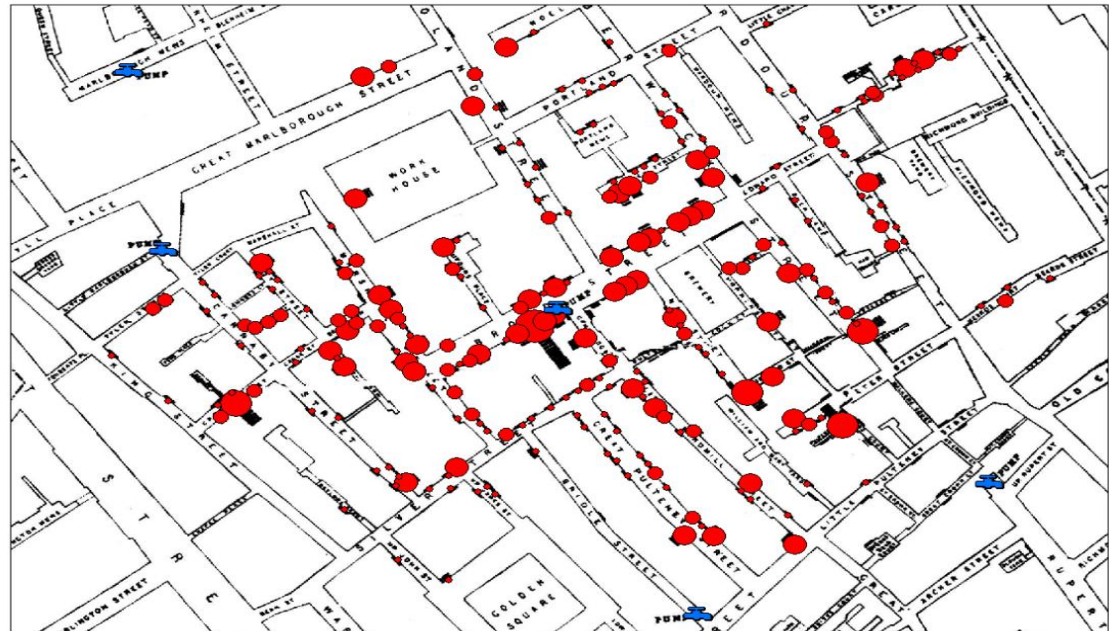


Geo for Canada's Emergencies

Emergencies occur in many forms. Each federal, provincial, and territorial government has a responsibility for emergency management and public safety.

Whether prevention, preparedness, response, or recovery, geospatial information is essential to emergency management.

Over 170 years ago, John Snow an English physician and one of the founders of modern epidemiology mapped the Soho Cholera outbreak to the Broad Street water pump. Utilizing mapping techniques to understand the extent and spread of the disease. Today, we will show you how the FGP and our partners use cloud-first technology to understand the pandemic.



Broad Street Pump Cholera Outbreak, Mapped by John Snow, 1854

Supporting Covid-19

Helping experts to know WHERE to help is critical for any response

The need:

On March 13th, assistance from the Federal Geospatial Platform was requested by the Public Health Agency (PHAC), Statistics Canada (StatCan) and NRCan's Emergency Geomatics Services.

This required authoritative geospatial data from the source, for the country, accessed by multiple organizations, visualized in an epidemiologically sound manner, and published for Canadians.

The solution:

A multi-departmental, geospatially enabled cloud environment, with high availability and reliability, with the appropriate tools, accessible by many departments. **One investment, many users.**

GeoCloud, a Solution for Emergencies

2+ years of investment, a dedicated Cloud Team, built on AWS Cloud Computing Services

- **GeoSpatial Cloud** - Providing a Multi-departmental geospatial enabled cloud for collaboration and dissemination
- **GeoSpatial Data Lake** – An open geospatial datalake, and data transfer mechanisms for multi-departmental data sharing and collaboration. **One source of data, many users.**
- **Mapping Infrastructure** - Providing enterprise level mapping infrastructure including open source and commercial software. **One investment, many users.**
- **Powerful Workstations** - Providing Geo-enabled high-performance workstations connected by a geospatial datastore for multi-department collaborative work. **Investment only where and when it's needed.**

GeoCloud – A User Perspective

Store and Discover

- Adhere to principles: store it once, use it many times
- Implement cloud-first strategy, using highly-available and scalable technology
- Establish an open geospatial data lake to fuel innovation
- Meet departmental needs via shareable technology stack as a geospatial first cloud solution
- Enable geospatial technology interoperability by being API centric

Use

- Create geo-enabled products and services
- Enable analysis and decision making for the geo-community
- Host mapping services to support disaster and emergency management, monitoring and policy initiatives
- Provide a Geo-community Cloud Centre of Excellence – A leader in geospatial technology architecture in the cloud

Collaborate and Share

- Enable hosting of “community” geospatial data and services in a collaborative environment
- Provide highly-available content management for geospatial content
- Deliver open by default web presence to promote multi-jurisdictional collaboration
- Use shareable and accessible open source technology to meet the needs of the geospatial community

The Results

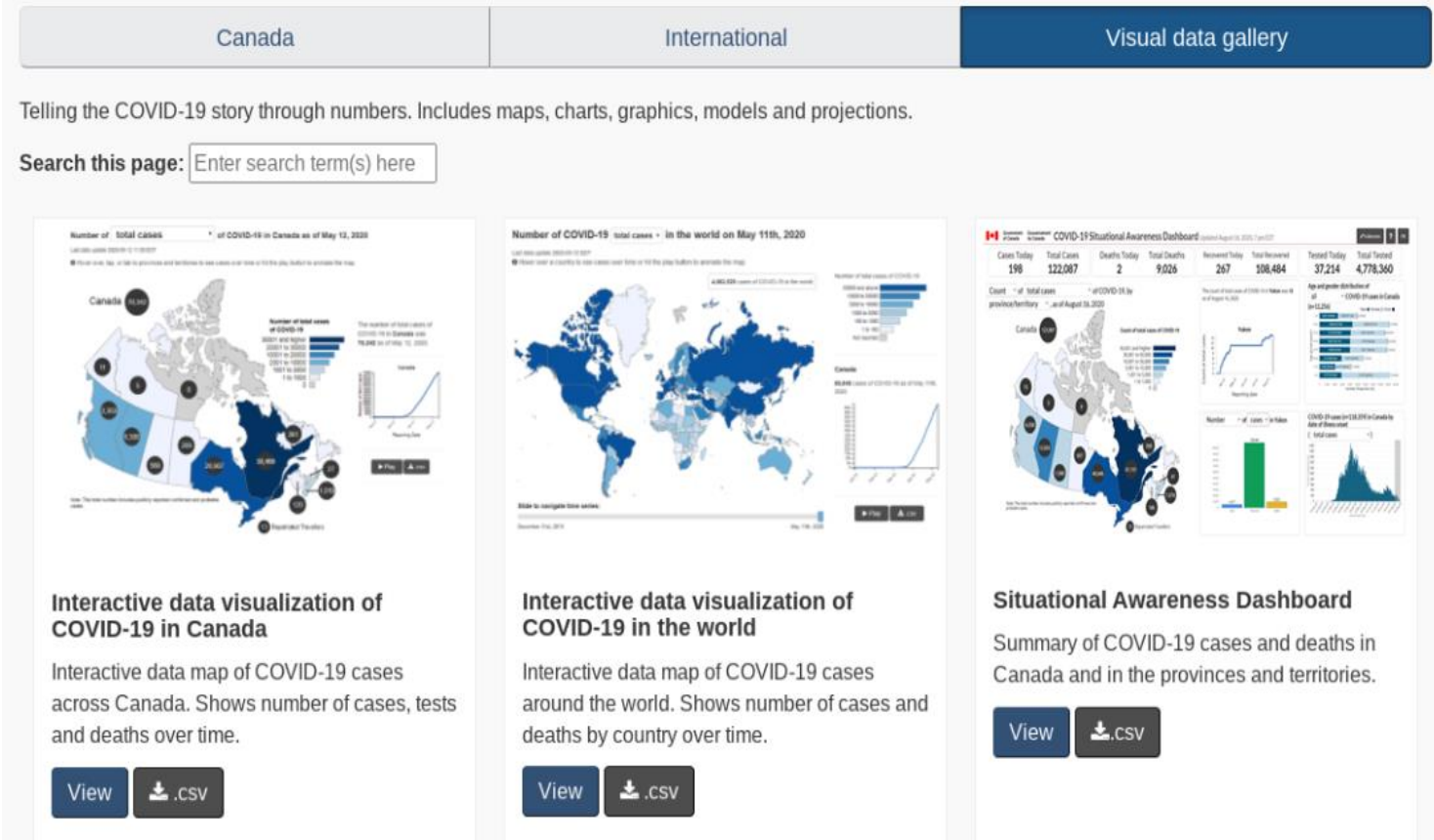
Given Canadians Authoritative Information

Canadians have access to epidemiologically-sound, current situational awareness data from the best sources possible

Canada's leading geospatial experts from public and private sector have been mobilized, with new partnerships forged

Canadians rely on these products for daily communications by Officials

Interactive data visualizations of COVID-19



Supporting Future Emergency Response

We are paving the way for better outcomes.

- ✓ We have demonstrated the way governments should work together.
- ✓ We must pave the way to realize the efficiencies that are achievable.
- ✓ We must fully deploy a geospatially enabled, multi-jurisdictional enterprise cloud infrastructure as a highly efficient, reliable technology for use by all decision makers.
- ✓ We need to be able to geo-enable organizations involved in emergency management.
- ✓ We need to transfer our knowledge and expertise to decision makers to more effectively mobilize geospatial capability at a moment's notice.
- ✓ We need to do this now, before the next emergency

Conclusion

A Whole of Government Approach for the Win

By collaborating with the federal geospatial community, organisations contribute to a government-wide approach to managing and sharing geospatial information.

This approach **has several key advantages:**

- **One investment, many users:** For the first time ever, the government has a reliable, geospatially enabled cloud environment that can be used by public servants in any department.
- **One source of data for all:** Through this environment, data is automatically “cleaned,” standardized and shared from a single location in the cloud. Regularly updated authoritative data can be accessed from a single location!
- **A valuable multi-use investment:** Rather than users acquiring multiple licences for time-specific data from multiple sources during the pandemic and wasting taxpayers’ money, the cloud environment enables access to on-demand analytics from a broad range of data.

We are looking forward to seeing how this approach can be leveraged to improve our collective ability to support other federal emergency response situations.

Questions for Discussion

- How can the Federal Geospatial Platform help the Risks and Hazards community from an open data and standard perspectives?
- How can the Platform help the Risks and Hazards community from geo technology, infrastructure and data dissemination perspectives ? What are your needs ?

Thank you to UR BC 2020 Sponsors!



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