



Canada's Use of Geographical Information Systems for Transportation

INTERNATIONAL TRANSPORTATION FORUM

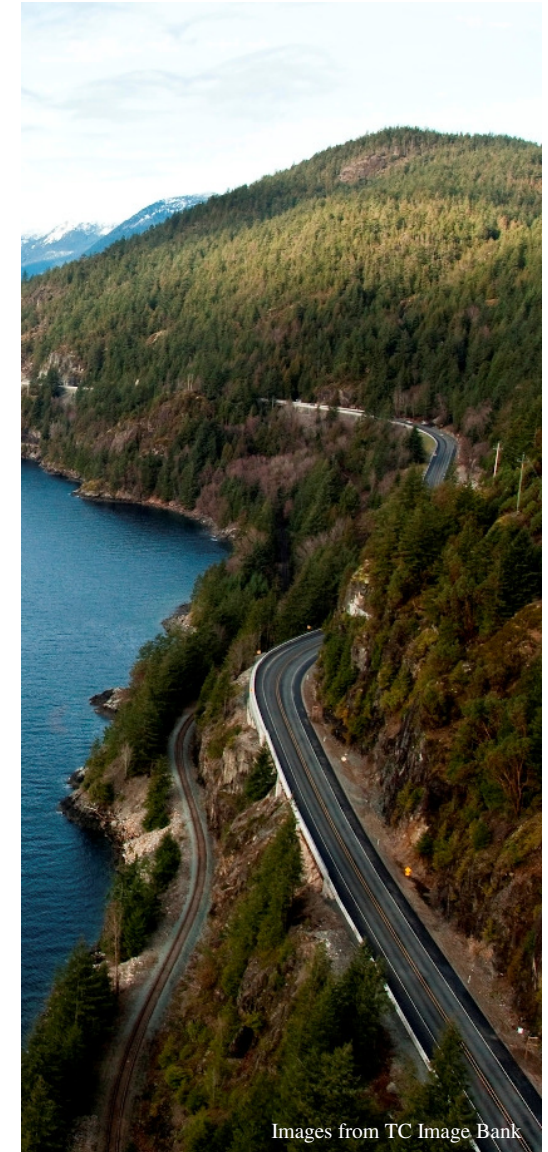
April, 2018





CONTEXT

- Transport Canada policy agenda expands requirements for information and analysis:
 - Transportation 2030
 - Oceans Protection Plan
 - Trade and Transportation Information System
- Principle of building enterprise solutions based on existing tools
- Federal Geospatial Platform (FGP) established as a collaboration among federal government Departments to:
 - be the authoritative source of data for federal government departments and the public
 - facilitate standardization of layers across the Government of Canada for multiple uses



Images from TC Image Bank



APPLICATIONS OF GIS FOR TRANSPORT CANADA

Emergency Response

- Operation Center support / Emergency symbology

Efficient Transportation

- Supply Chain / Capacity / Vulnerability (Recovery) / Performance

Clean Transportation

- Location of emissions and health impacts
- Abandoned vessel locations & identification / Oil spill detection (marine)

Safe & Secure Transportation

- Risk analysis (e.g., movement of Dangerous Goods)
- Obstacle mapping for Canada (aviation)
- Navigation safety (marine)

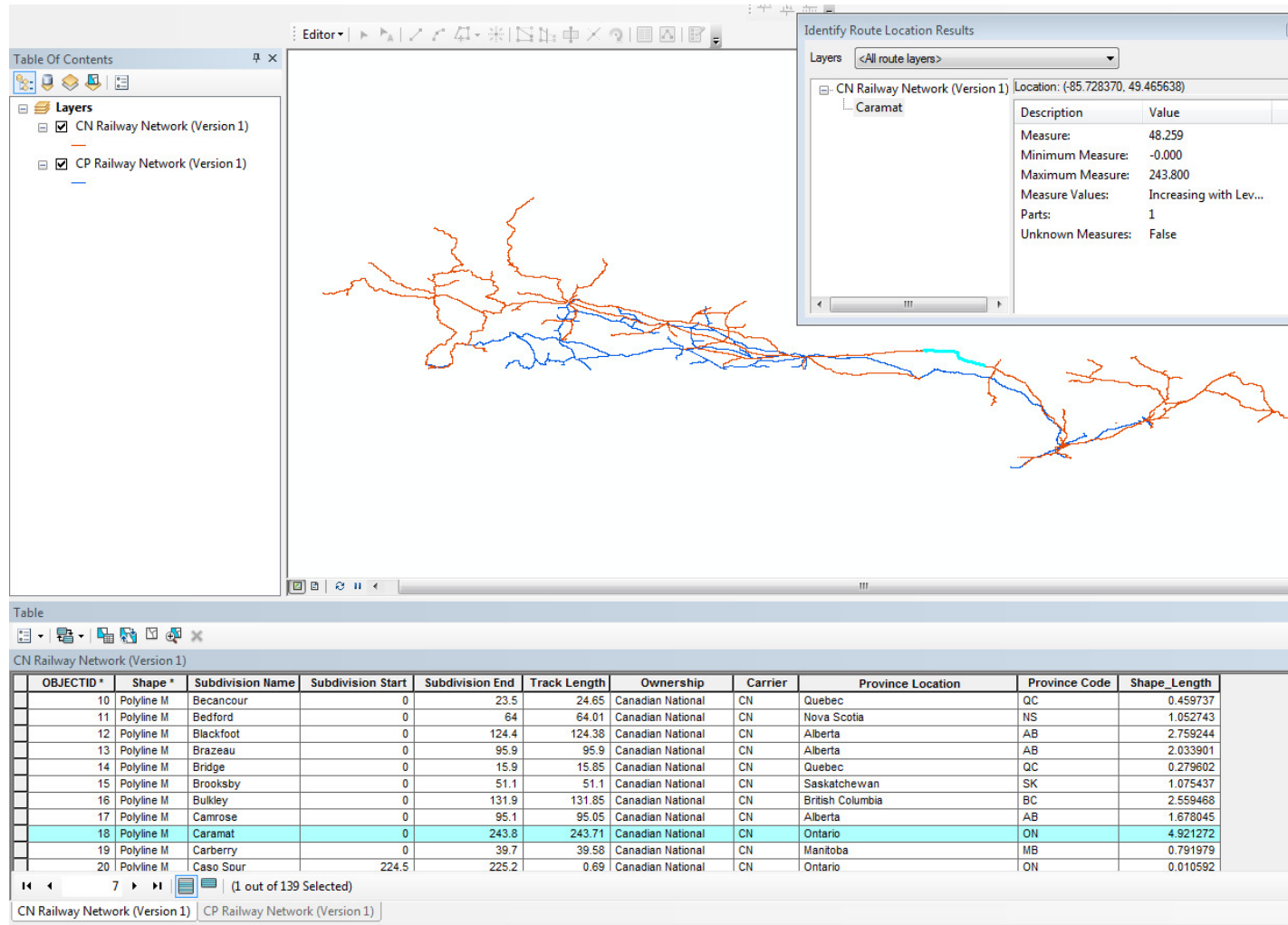
Management

- Real Property / Environmental Information for Property
- Asset management of bridges and major highways

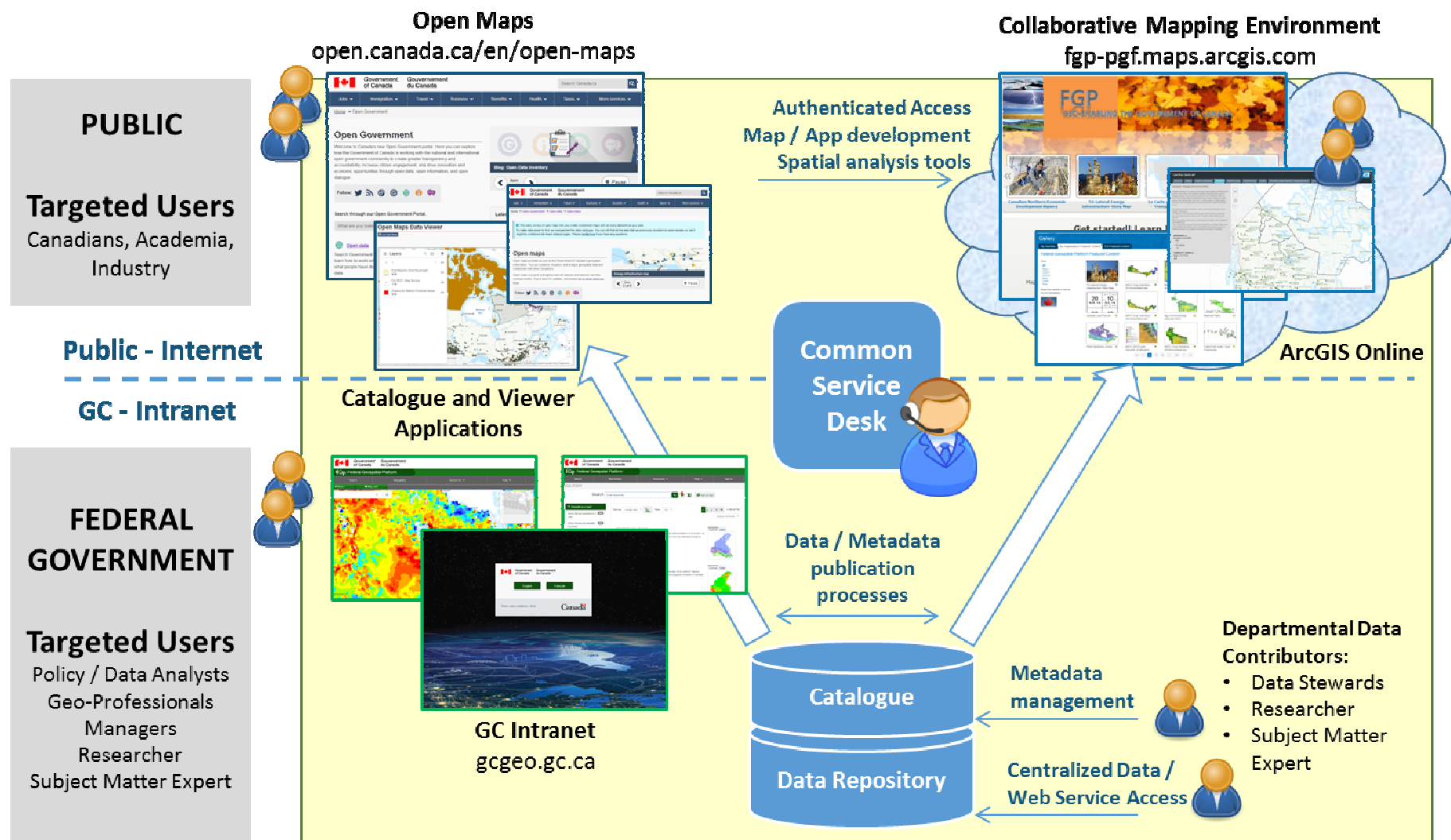
Areas with Multiple Applications

- Earth Observation based collection and analysis (infrastructure state, pollution monitoring and other uses)
- Forecasts / modeling (support planning, investment, monitoring)
- Traffic Flows / Congestion (looking at efficiency or safety/risk)

Example: Railway Linear Referencing System (LRS) Networks



Federal Geospatial Platform - Architecture





Canadian Centre on Transportation data

- New partnership between Transport Canada and Statistics Canada
- The Transportation Data and Information Hub is an authoritative source of transportation data for federal government and the public
- Uses Open Maps from the FGP for access to geospatial data

Resources

Data

Explore the data on transportation by mode.

- [Canadian Freight Analysis Framework](#)
- [Canadian transportation economic account](#)
- [Open Data](#)
- [Statistics by subject - Transportation Data](#)
 - [Transportation by air](#)
 - [Transportation by rail](#)
 - [Transportation by road](#)
 - [Transportation by water](#)

Analysis

Find analysis on Canada's transportation system.

- [Activity indicators](#)
- [Canada and the World Statistics Hub](#)
- [Statistics by subject - Transportation Analysis](#)

Performance

See how Canada's transportation system is performing.

- [Performance indicators](#)
- [Infographic: Canada's Transportation System - Better understanding its performance and capacity](#)

About The Transportation System

Learn more about transportation and explore the system.

- [Selected components of the transportation system in Canada](#)
- [Open Maps](#)

Collaboration

Learn more about the partners who support Canada's efficient, safe, secure and green transportation system.

- [International](#)
- [Industry](#)
- [Provinces and territories](#)
- [Research](#)

Questions about our products?

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THANK YOU!

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More to discover on this topic:

Available resources include:

The Open Maps site

<https://open.canada.ca/en/open-maps>

A short introduction video narrated by the
Honourable James Carr, Minister of Natural
Resources

<https://open.canada.ca/en/content/geography-awareness-week-video>

Canadian Centre on Transportation Data

<https://www144.statcan.gc.ca/tdih-cdit/index-eng.htm>

