



Strategic Activities to Support Sustainability of Canada's Geospatial Data Infrastructure

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Outline

- The Canadian Geospatial Data Infrastructure
- Coordination and Governance
- Geospatial Standards
- Geospatial Policies
- Technology and Data
- Conclusion





Canadian Geospatial Data Infrastructure (CGDI)

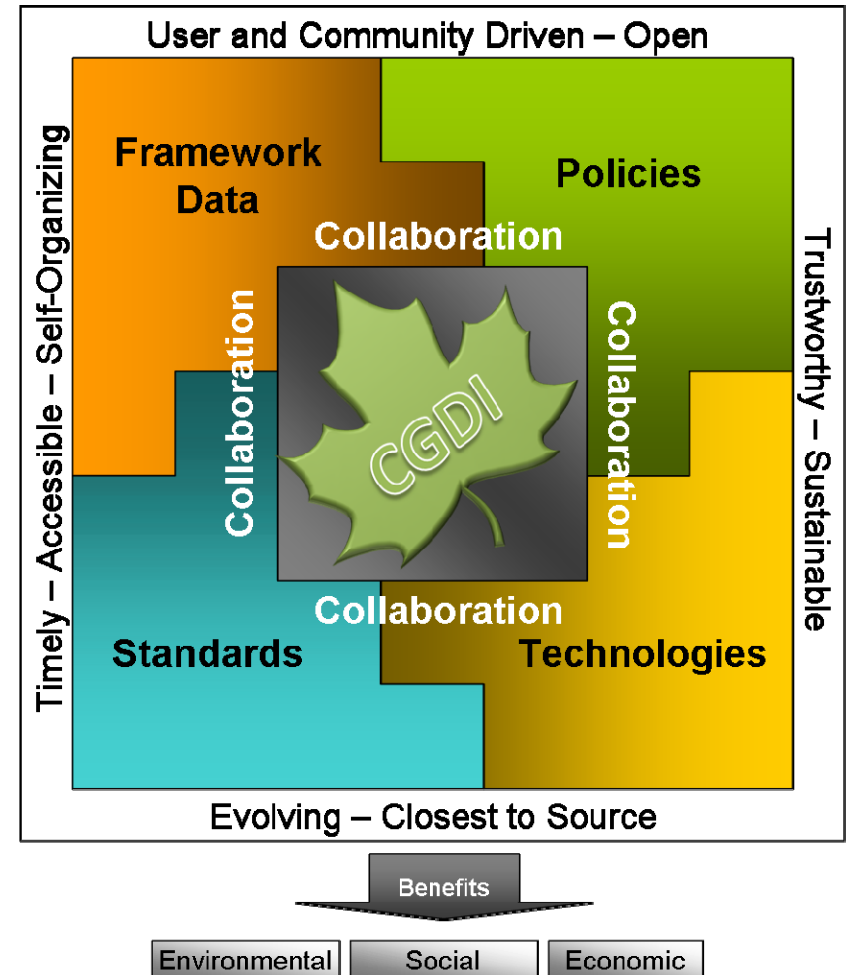


Canadian Geospatial Data Infrastructure

The CGDI helps Canadians gain new perspectives into social, economic and environmental issues, by providing an online network of resources that improve the sharing, use and integration of information tied to geographic locations in Canada.

Collaboration and partnerships between federal, provincial, territorial and regional governments; the private sector; and academia ensure interoperability for the CGDI. This interoperability is achieved by the convergence of framework data, policies, standards and technologies necessary to harmonize Canada's location-based information.

Components and Guiding Principles





Coordination and Governance



Coordinating Role

The Canada Centre for Mapping and Earth Observation at Natural Resources Canada works to facilitate access to and use of authoritative geospatial information in Canada.

Relevant Key Activities include :

Geospatial Strategy and Leadership – continued coordination of geomatics activities in Canada, requiring the development and implementation of long-term national geomatics strategies and policies, in partnership with CGDI stakeholders

Canadian Geospatial Data Infrastructure – work with the geomatics community to advance the operational policies and standards needed to complete the CGDI and support the use of geospatial information



Vision, Mission and Roadmap

Articulate to Canadians the future direction for the CGDI.

Project involved:

- Updating and articulating a new vision and mission for the CGDI in consultations with stakeholders.
- Producing a clearly focused, comprehensive roadmap to achieve the updated vision that include short to medium term goals
- Completed in 2012



Vision

Canadians have open, secure and continually available access to comprehensive location-based information about Canada through the community-sustained Canadian Geospatial Data Infrastructure in support of prosperity and well-being for all.

Mission

- Communicate the benefits of maintaining a national geospatial data infrastructure.
- Encourage and inspire all Canadians to manage, access, share and contribute comprehensive Canadian location-based data.
- Support the continued evolution and enhancement of data availability within the CGDI through the development of innovative and robust policies, standards and technologies.

Roadmap

- **VALUE** – A need exists for renewed focus on what the CGDI ultimately provides: its value to Canadians. This goal emphasizes the requirement to communicate this value.
- **PERFORMANCE** – There is a need to refine how the CGDI behaves, thus improving its performance. To produce these results, the CGDI must be adaptable, flexible and accessible.
- **GROWTH** – While much progress has been made, there is a need to continue evolving and enhancing the CGDI to increase the quantity and type of data and services available.



CGDI Assessment

A practical and cost-effective assessment framework for the Canadian Geospatial Data Infrastructure (CGDI) in order to measure the progress, performance and level of completion of the CGDI.

Project involved:

- research into various SDI assessment models internationally
- development of a CGDI focused assessment framework
- consultation with international SDI assessment experts
- retention of an impartial evaluation consultant to perform the assessment
- utilizing assessment results to help determine priorities for investment in the CGDI that will lead to its completion
- completed 2012

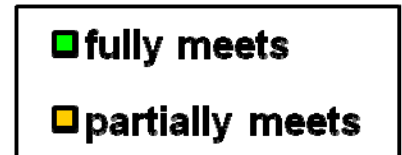
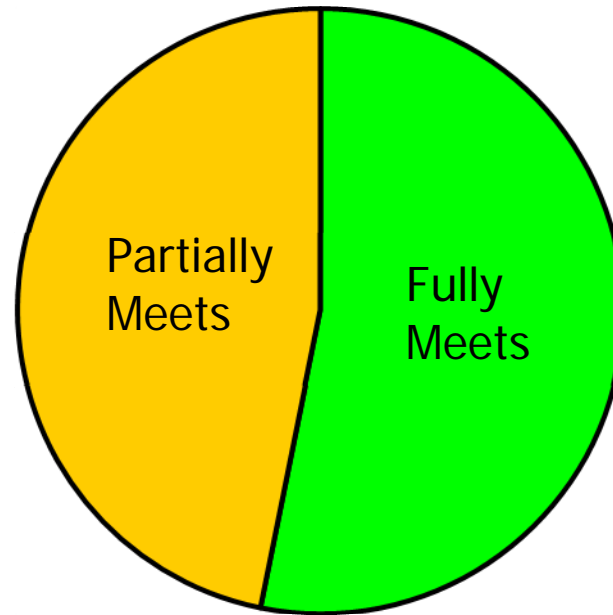


Summary of Assessment Results

Assessment included 47 criteria to address:

- Collaboration
- Policies
- Standards
- Technology
- Framework Data

Findings showed 25 criteria fully met and 22 partially met.



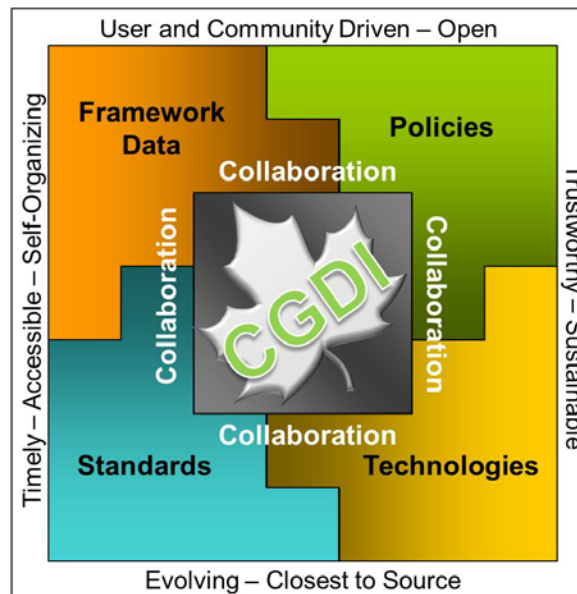
- CGDI Assessment Report with Case Studies
- Highlights Canadian SDI initiatives
- Lessons learned and recommendations
- Supplemental Case Studies



Canada's Geospatial Governance and Institutional Arrangements

Federal Committee on Geomatics and Earth Observation establishing strategic direction on federal policy, interoperability, and infrastructure relating to geomatics and Earth observation.

Geographical Names Board of Canada provincial, territorial and federal National coordination providing authoritative, standardized geographical names.



Canadian Geomatics Community Round Table Multi-stakeholder engagement for the development and implementation of a Pan-Canadian Geomatics Strategy.

Canadian Council on Geomatics federal, provincial, territorial cooperation to facilitate data collection, interoperability and integration between jurisdictions.

... fostering innovation through collaboration of 21 federal departments, 13 provincial and territorial partners, private and academic sector partners



Governance - Federal

Federal Committee on Geomatics and Earth Observation (FCGEO)

Established in 2012, the FCGEO represents the merger of the federal geomatics and Earth observation communities in support of Government of Canada priorities.

- to provide proactive, whole-of-government leadership in geomatics and Earth observations to better support government priorities
- to collectively enhance the responsiveness, efficiency and sustainability of the federal geomatics and Earth observations infrastructure
- to improve access, sharing and integration of geospatial data at all levels



Governance – Federal/Provincial/Territorial



Canadian Council
on Geomatics



Conseil canadien
de géomatique

Canadian Geomatics Accord: the framework for federal-provincial-territorial collaboration and cooperation via CCOG has been provided by the ministerial level Canadian Geomatics Accord. A third iteration of the Geomatics Accord is presently in development and is expected to be ratified in 2014.

GeoBase: A portal offering nine (9) thematic layers of open, high quality geospatial information covering Canada's landmass, made possible through federal-provincial-territorial cooperation and built upon shared principles, policies and procedures.



Governance - National

Canadian Geomatics Community Round Table

Established in 2010 to strengthen the Canadian Geomatics Community and provide input and feedback on the strategic dimensions required to develop a community strategy.

Pan-Canadian Geomatics Strategy: Over-arching strategic direction and action plan for Canada's geomatics sector to 2020, encompassing identity, markets, business model, governance/ leadership, human resources, data, and legal and policy framework; shared responsibility for securing the sector's future. Solid policy foundation for decision-making, fostering innovation and competitiveness, and generating social, economic and environmental benefits.

- roles and responsibilities, Community vision and goals, foundation for cooperation, enhanced efficiencies and reduced duplication, coordinated communication, increased awareness and profile of the geomatics sector



International Cooperation



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Ensuring the usability of our geospatial information to better support decision-making.



...will require inter-jurisdictional collaboration, co-operation and innovation.





Geospatial Standards



Strategic Framework for Geospatial Standards

An updated strategy and roadmap for geospatial interoperability in the CGDI.

- Established Strategic Context for geospatial standards through an environmental scan (review of trends and international best-practice), user and stakeholder needs and requirements, standards inventory and gap analysis, and organizational profiling and analysis.
- Developed a Strategic Framework which includes a Strategy defining objectives and priorities, and a Roadmap that identifies the activities and initiatives required to ensure implementation of the Strategy.
- Completed 2013.



Strategic Framework for Geospatial Standards

The Strategic Framework for Geospatial Standards is useful to guide coordination, future investments, activities and plans for sustainability.

- Promote and raise awareness of importance and value of geospatial standards
- Facilitate access to geospatial data through standardization
- Advance CGDI interoperability of geospatial information, services, and systems and applications
- Support implementation
- Enable a coordinated future adoption approach
- Clarify relationships and leverage opportunities
- Address CGDI issues and requirements





Geospatial Policies



Trends Driving Policy Development

Key policy topics that impact spatial data infrastructure

Legal/Administrative

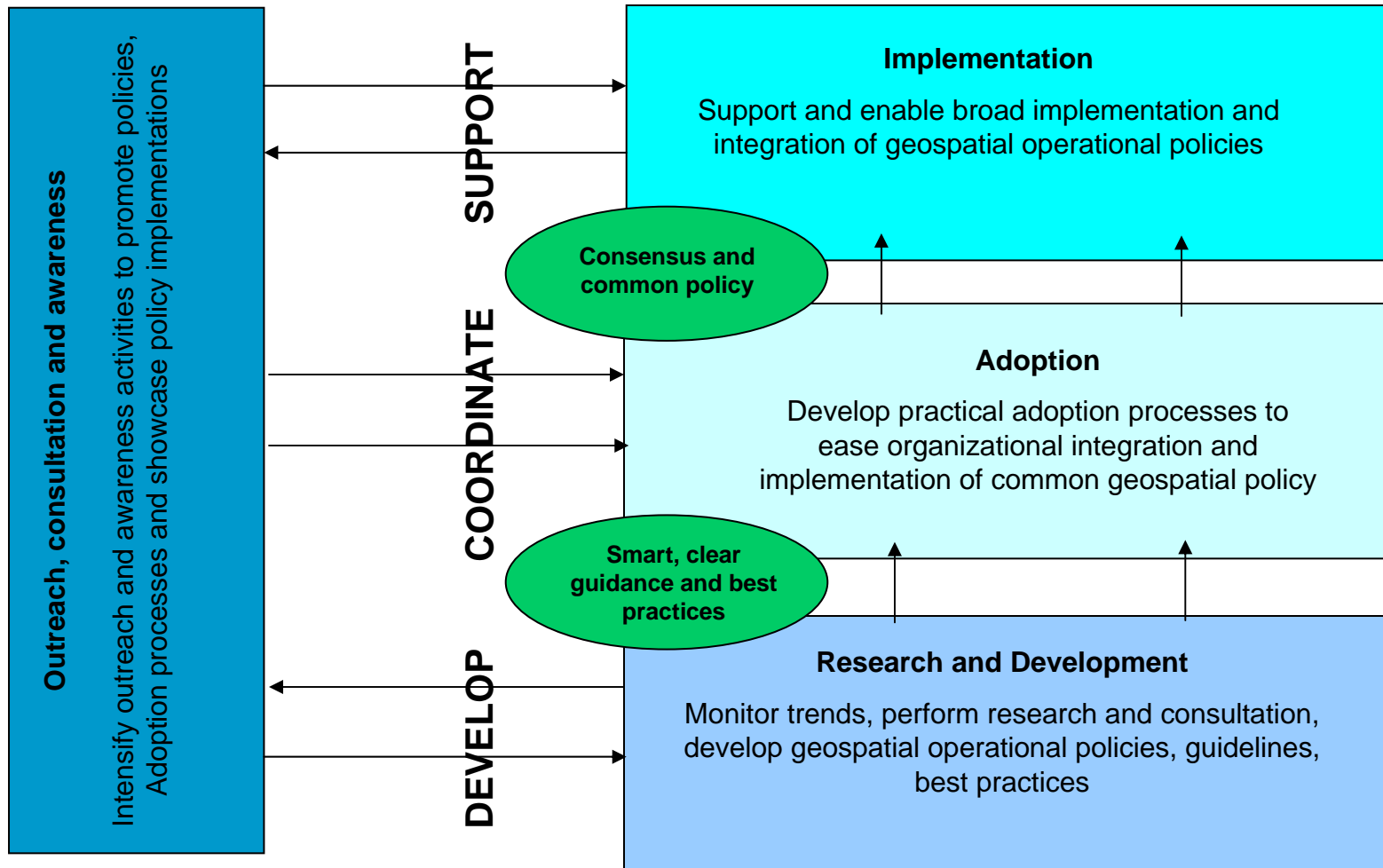
- Ethical Legal Practices
- Confidentiality, Security, and Sensitive Information
- Privacy
- Intellectual Property
- Copyright
- Licensing
- Data Sharing
- Liability
- Archiving and Preservation
- Data Quality

Technological/Trends

- Open Data
- Volunteered Geographic Information (VGI)
- Open Source
- Web 2.0 and the GeoWeb
- Cloud Computing
- Mobile and Location-based Services
- High Resolution Imagery
- Mass Market Geomatics
- Data Integration



CGDI Operational Policy Roadmap





Technology and Data



Federal Committee on Geomatics and Earth Observation Signature Project

Federal Geospatial Platform initiative to capitalize on the full potential of our geospatial assets.

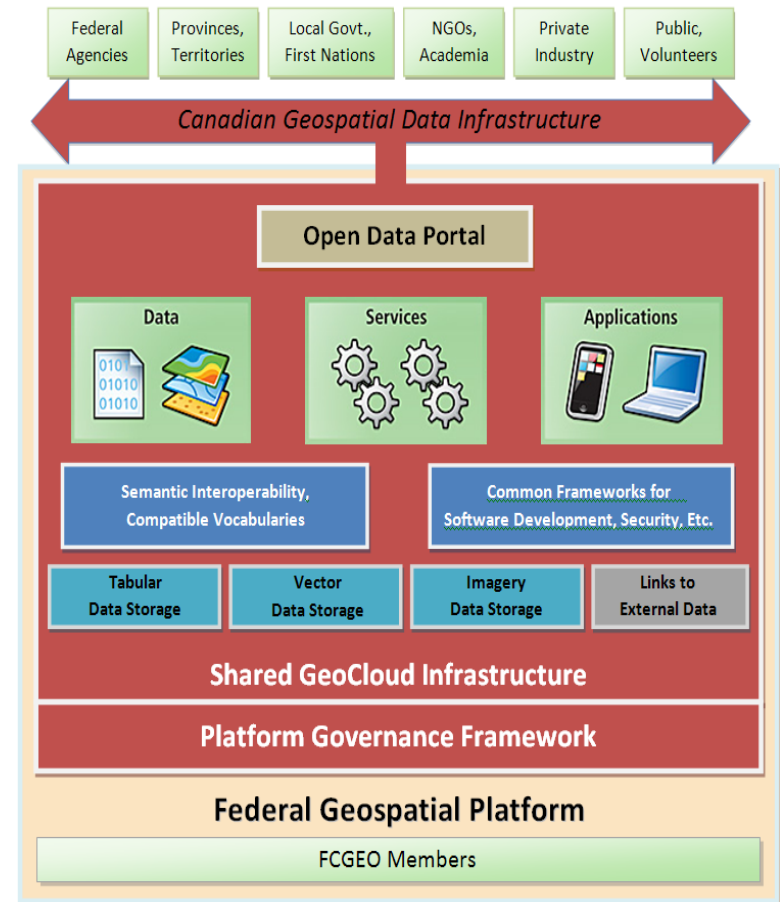


The Federal Committee on Geomatics and Earth Observation (FCGEO)	
Agriculture	Health
Aboriginal Affairs	Industry
Northern Development	Natural Resources
International Development	Parks
Food Safety	Public Health
Space	Public Safety
Fisheries and Oceans	Royal Canadian Police
Defence	Shared Services
Elections	Statistics Canada
Environment	Treasury Board
	Transport



Federal Geospatial Platform

- 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



Provide Ability to Access, Integrate, and Visualize Geospatial Information

Accurate

Authoritative

Accessible

Northern community and land claim information

Resource development info (e.g. mining starts)

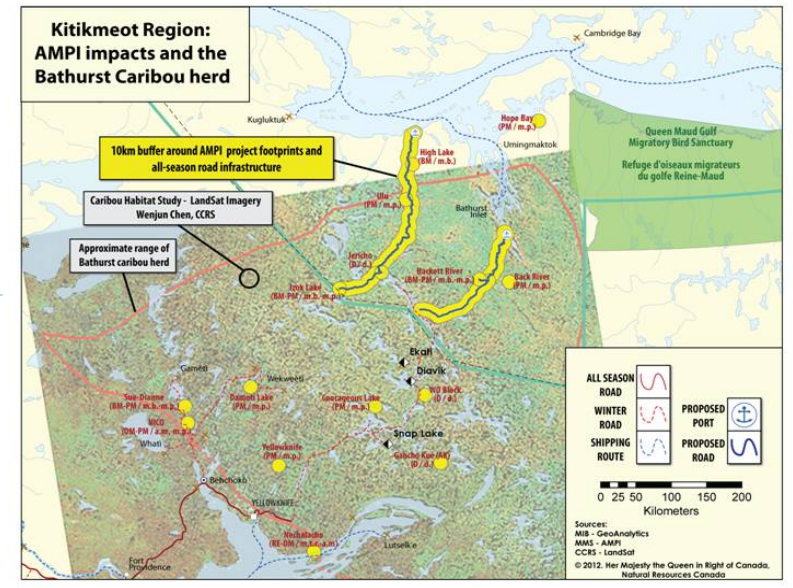
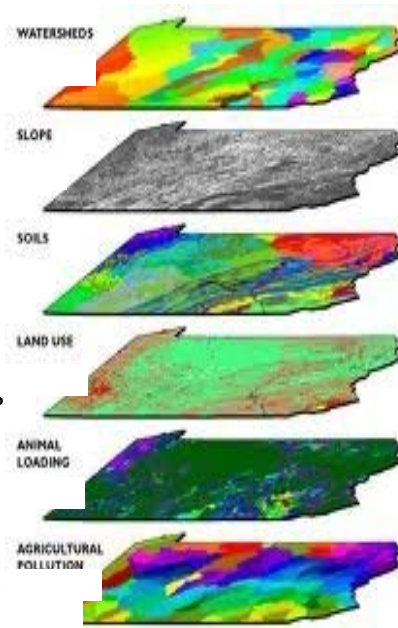
Infrastructure

Conservation + sensitive ecosys (e.g. Caribou areas)

Census, Population

Base map

(Road, Rail, Hydro Networks)
(Administrative Boundaries, Borders)



“data and integrated analysis for which you search once and find everything”

...to support decision-making within and across departments, and among stakeholders, and stimulate downstream applications development



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Conclusion



Conclusions

- Canada has an operational SDI which is being used to support organizational operations and decision-making.
- Over the past 15 years, since the inception of CGDI, Canada's approach has evolved – build, use, sustain.
- The CGDI continues to sustain itself through the collaborative activities and initiatives of its stakeholder community.
- There is an effort to sustain the CGDI, while allowing us to respond to priorities and initiatives, address stakeholder needs, align with the Internet and the geo-marketplace, and leverage international opportunities.



Thank you

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