**CANADIAN GEOSPATIAL DATA INFRASTRUCTURE
INFORMATION PRODUCT 30e**

Canadian Geospatial Data Infrastructure
Performance Project - Overview

GeoConnections

2013

Canada

GeoConnections Program area of activity

GeoConnections will work with the geomatics community to advance the necessary operational policies and standards, in order to complete the CGDI. The development of tools and resources will help organizations integrate the CGDI into their business practices. GeoConnections will continue to work with partners to build the CGDI, develop policies to support use of geospatial information, encourage standards adoption, and provide geomatics leadership and coordination in Canada.

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CGDI Performance Project

Supporting the development, operation and use of CGDI

| CGDI Performance |

- CGDI Definition
- CGDI Vision, Mission and Roadmap
- CGDI Assessment

➢ define the CGDI and report on its status
➢ determine priorities for investment in the CGDI that lead to its completion

Output -	*Updated vision, mission and roadmap for CGDI with assessment of performance and development*
Objective -	*Keep Canada at the leading edge of accessing, sharing and using geospatial information over the Internet*
Long term - Outcome	*Canada has an effective geographic foundation, the CGDI, which enables the sharing and use of geospatial information about Canada's lands, peoples and natural resources to support economic, social and environmental priorities.*

➢ Towards CGDI Sustainability

CGDI Performance Project

The CGDI Performance project has 5 phases planned over 5 years

Phases	Status
1. Modernize CGDI definition	▪ Completed 2010
2. Update CGDI Vision, Mission and Roadmap	▪ Completed Summer 2012
3. Develop CGDI Assessment Framework	▪ Completed Fall 2011
4. 2012 CGDI Assessment	▪ Completed Summer 2012
5. 2015 CGDI Assessment	▪ To be completed by Winter 2015

CGDI Sustainability Planning

Modernized CGDI Definition

Objective:

To create a modernized definition of CGDI and components to underpin and drive CGDI development and inform awareness and outreach activities.

Project involved:

➢ Researching various definitions in use for SDIs

➢ Looking at various CGDI components and how they have evolved

➢ Building on the work related to defining and researching the various CGDI components during the 2008-2009 sustainability exercise to produce a more succinct document to define the CGDI (stand alone document)

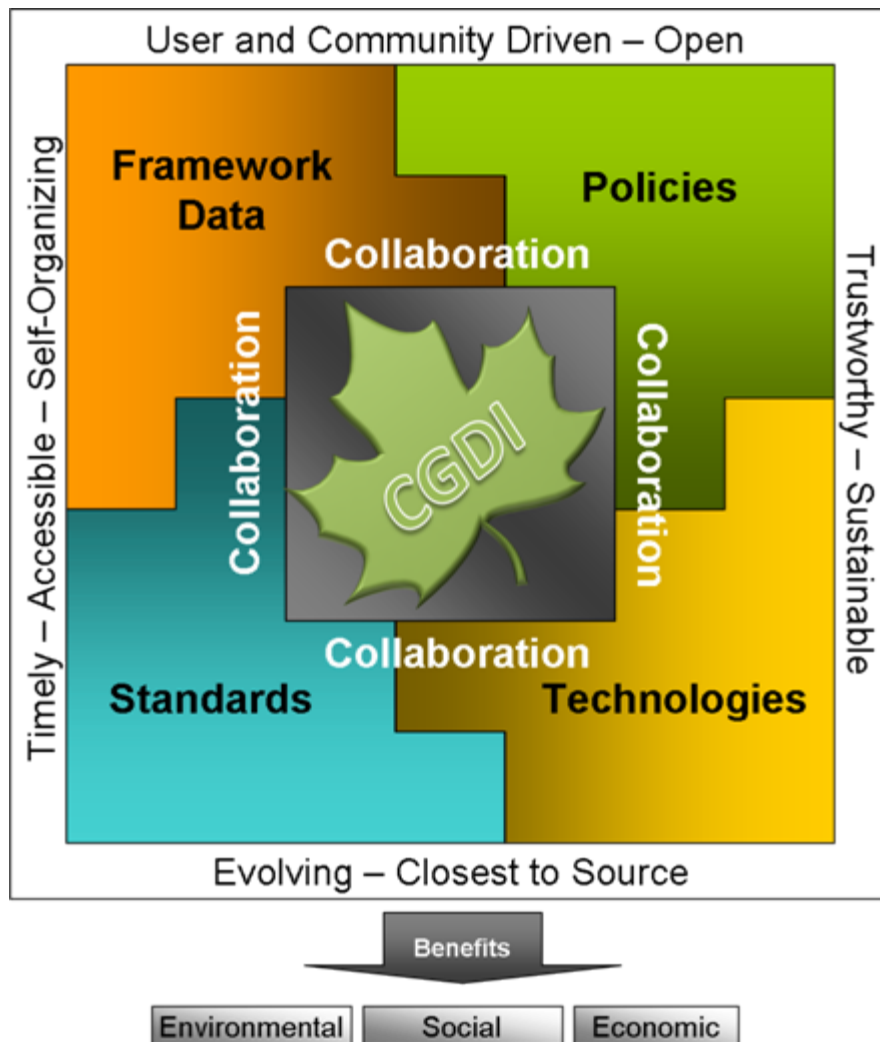Natural Resources Canada   Ressources naturelles Canada

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Modernized CGDI Definition

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; non-government organizations; 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.

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CGDI Components and Guiding Principles

User and Community Driven – Open
Timely – Accessible – Self-Organizing
Trustworthy – Sustainable
Framework Data
Policies
Collaboration
Collaboration
Collaboration
CGDI
Collaboration
Standards
Technologies
Evolving – Closest to Source
Benefits
Environmental | Social | Economic

The CGDI key components (realized through **collaboration**):

- **Framework data**, the foundation upon which location-based information becomes spatially relevant to users; **Operational policies** that are essential to eliminating barriers and enabling users to exchange of location-based information effectively and efficiently;
- **Technical and data standards** allow diverse data sources, services, applications and systems to operate with each other; and
- **Technologies** that provide a functional and accessible environment, which enables the development of systems and applications that integrate location-based information.

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Vision, Mission and Roadmap

Objective:

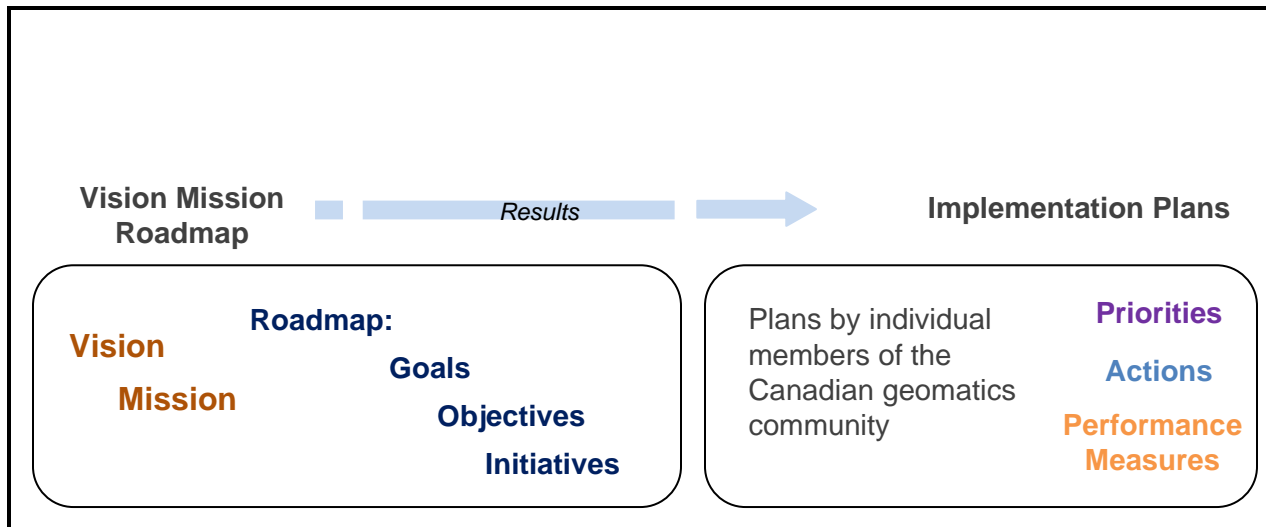**Clearly and plainly articulate to Canadians the future direction for the CGDI.**

Project involved:

➤ Updating and articulating a new vision and mission for the CGDI;

➤ Consultations with stakeholders;

➤ Advisory committee input and validation;

➤ Producing a clearly focused, comprehensive roadmap to achieve the updated vision that will include short to medium term goals;

➤ Editing and translation and publication.

VMR Key Elements

How the Vision, Mission and Roadmap link to Implementation

Vision
Mission
Goals
Objectives
Initiatives
Roadmap

Vision Mission Roadmap

Results

Implementation Plans

Vision

Mission

Roadmap:

Goals

Objectives

Initiatives

Plans by individual members of the Canadian geomatics community

Priorities

Actions

Performance Measures

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Vision, Mission and Roadmap for the CGDI

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.

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CGDI Assessment

Objective:

To define 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 involves:
➢ 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.

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GeoConnections/CGDI Assessment History

GeoConnections Program

➢ Various program evaluations completed since 2002 focusing on different components of the program

➢ There have been 3 program logic models that have evolved with each phase of the program

➢ Stakeholder surveys have been conducted to support program activities, annual reports and departmental PAA reporting

CGDI

➢ Some aspects of the CGDI were assessed through the program evaluations

➢ External evaluations of SDI's conducted internationally have included Canada

➢ ROI's and cost/benefit analysis have been conducted

➢ Vision, Mission and Roadmaps have served as a key instruments for framing the assessment goals and success factors

Methodology

The assessment framework objectives:

➢ realistic and cost-effective to conduct
➢ linked to the GeoConnections program evaluation and reporting for NRCan
➢ focused on the minimum needed for a functional SDI
➢ focused on the CGDI itself not the GeoConnections program
➢ focused on the core components of the CGDI as outlined in the modernized CGDI definition (Policies, Standards, Technologies and Framework Data) as well as Leadership / Coordination
➢ designed to demonstrate progress
➢ Include both qualitative and quantitative approaches
➢ focused on tangible criteria, with available data, relating to the core components of the CGDI
➢ supplemented with case studies to demonstrate impacts, benefits and interconnections

Research, Identification, Development, Execution

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CGDI Assessment – Performance category Collaboration

A complete and performing CGDI means that there is an identified leader/champion with a mandate to lead, with the appropriate resources, including the commitment and engagement of stakeholders, to deliver on a vision and long-term strategy for the CGDI.

Overall, the study concluded that the criteria have been largely met in this area, with some exceptions.

8 criteria were fully met, 5 partially met

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CGDI Assessment – Performance category Operational Policies

A complete and performing CGDI means that there are policy resources in place that address common geospatial operational issues within Canada with linkages to international operational policy issues. CGDI stakeholders are able to access these policy resources.   There are mechanisms and a clear process established for the introduction, development, review and adoption of geospatial operational policies. Also, there are mechanisms in place to monitor the adoption and implementation of the established operational policy resources.

Overall, the study concluded that the criteria have been largely met in this area, with some exceptions

5 criteria were fully met, 6 partially met

CGDI Assessment – Performance category Technical and Data Standards

A complete and performing CGDI means that there are common technical and data standards in place that allow diverse data sources, services, applications and systems to operate with each other within Canada and internationally. CGDI stakeholders are able to access information and guidance on the implementation of these standards. There are mechanisms and a clear process established for the introduction, development, review and adoption of technical and data standards and there are institutional organizations in place to manage these mechanisms and processes. Also, there are mechanisms in place to monitor the adoption and implementation of the established technical and data standards.

Overall, the study concluded that the criteria have been largely met in this area; however, some areas need additional effort.

5 criteria were fully met, 8 were partially met

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CGDI Assessment – Performance category Technology

A complete and performing CGDI means that there are technology tools in place that facilitate the discovery, integration, management, sharing, dissemination, visualization and access to Canada's location-based information where CGDI stakeholders able to access information and guidance on the implementation of these tools. Also, there are mechanisms in place to monitor the adoption and implementation of the established technical tools.

Overall, the study concluded that the criteria have been substantially met in this area with some exceptions.

3 criteria were fully met, 3 were partially met

CGDI Assessment – Performance category Framework Data

A complete and performing CGDI means that a defined set of quality data themes are available and are complete, current and able to be integrated.
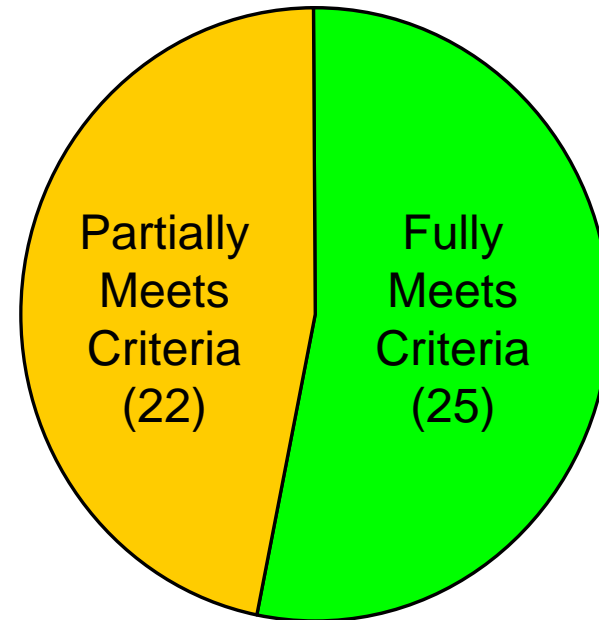
Overall, the study concluded that the criteria have been substantially met in this area.

All 4 criteria were fully met

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Summary of Assessment Results

Overall, of the 47 criteria, the assessment found that there was evidence to fully meet or partially meet performance indicator expectations with 25 fully meeting the criteria and 22 partially meeting the criteria

Partially Meets Criteria (22)

Fully Meets Criteria (25)

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

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CGDI in Context – Project Considerations

The CGDI exists and functions in the real world.

This context includes:

- Strategy and effort to sustain the CGDI
- Responding to GoC priorities and initiatives
- Supporting national geospatial initiatives
- Provincial, territorial, regional concerns
- International opportunities
- The Internet and the geo-marketplace

Where and how will CGDI and GeoConnections:

- Provide leadership?
- Ensure alignment?
- Contribute?
- Influence?

How do we measure this?

What indicates success?

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CGDI Sustainability

Depends on:

- Governance and leadership
- Collaboration and partnerships
- Policies
- Adaptability and innovation
- Awareness and understanding
- Standards and interoperability
- Geospatial framework data
- Human resources
- Effective communication of the value of geomatics

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