

GeoConnections

MAPPING THE FUTURE TOGETHER ONLINE

CARTOGRAPHIONS L'AVENIR EN LIGNE

GéoConnexions

**How GeoConnections supports
projects that enable decision-makers
to use location-based information to
benefit Public Health and Public
Safety/Security**



Canadian
Geospatial
Data
Infrastructure



Infrastructure
canadienne
de données
géospatiales

August, 2009

Canada

› Outline

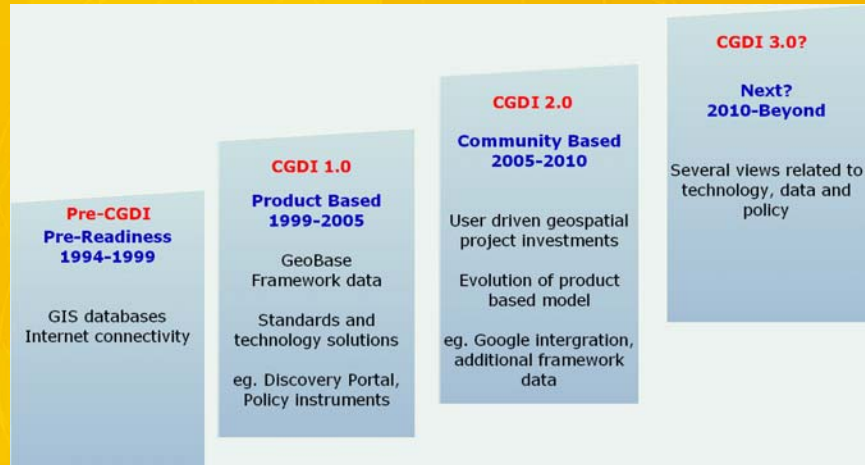
- **GeoConnections Program**
- **Public Health Community**
- **Public Safety/Security Community**
- **Closing thoughts**

GeoConnections

2

Canada

GeoConnections Canadian Geospatial Data Infrastructure (CGDI) Continuum

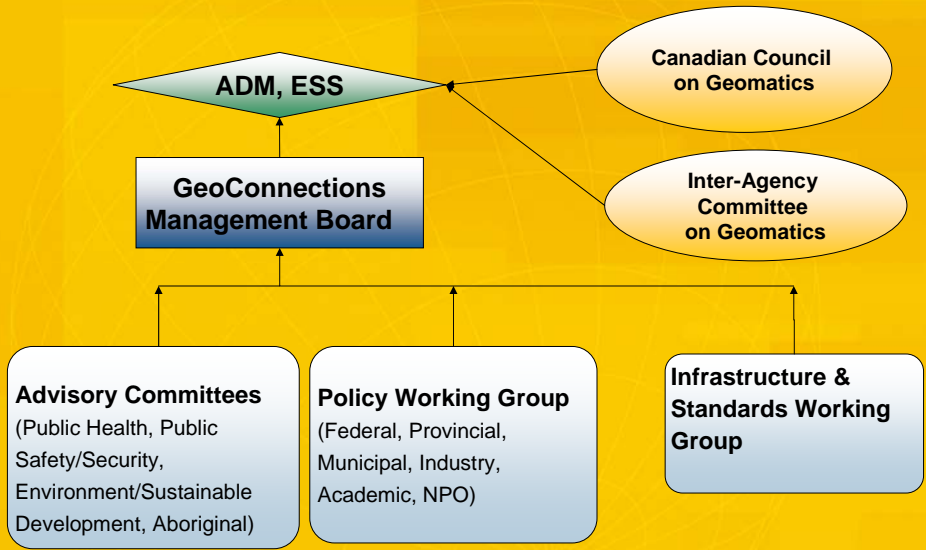


GeoConnections Program

\$60M Government of Canada Program to run from (2005-2011 that the program delivers (partnerships, information sharing, interoperability and other qualitative enhancements) has lent a sense of purpose and cohesion to the interaction among program stakeholders



➤ GEOCONNECTIONS - GOVERNANCE



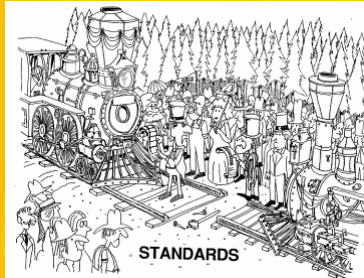
➤ Canadian GeoSpatial Data Infrastructure Principles



GeoConnections supports core infrastructure and community projects based on these principles.

Program Principle: Inter-agency Interoperability

The need for standards



Endorsed standards



GeoConnections endorses International standards for visualizing, accessing and describing geospatial data to facilitate information sharing between agencies.

Core Infrastructure Project: Expansion of National Data through Collaboration

A screenshot of the GeoBase website. The "Data" menu is open, showing a list of national data products. A red arrow points from the "Data" menu to the list. A red arrow points from the word "FREE" to the text "no fee access to quality geospatial data!". A red arrow points from the text "New & Planned" to the list of data products.

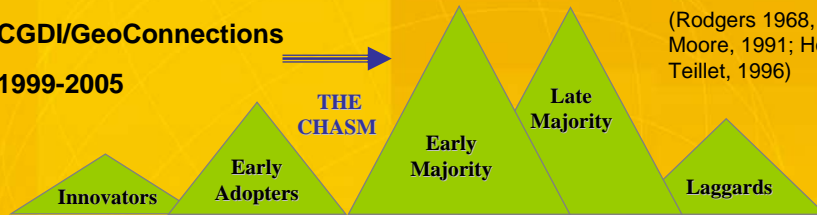
FREE

New & Planned

Data
Digital Elevation Data
Geodetic Network
Geographical Names
Geopolitical Boundaries
National Hydro Network
National Road Network
Satellite Imagery
Aboriginal Reserves
Municipal Boundaries
Land Cover
Power Lines
Railways

➤ Innovation Diffusion Challenge: “Crossing the Chasm”

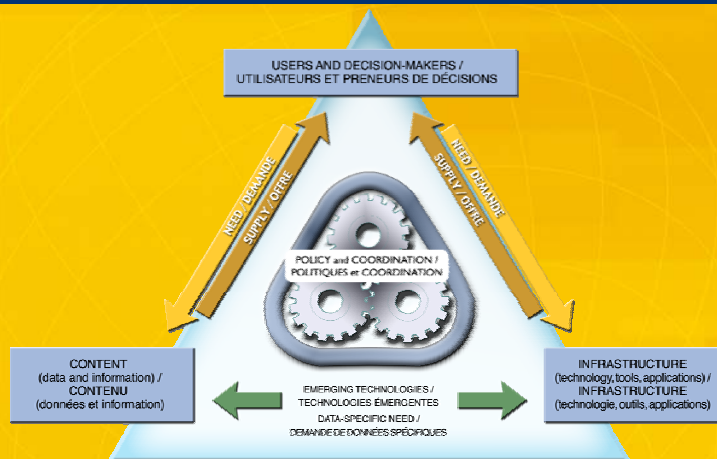
CGDI/GeoConnections
1999-2005



(Rodgers 1968,
Moore, 1991; Horler and
Teillet, 1996)

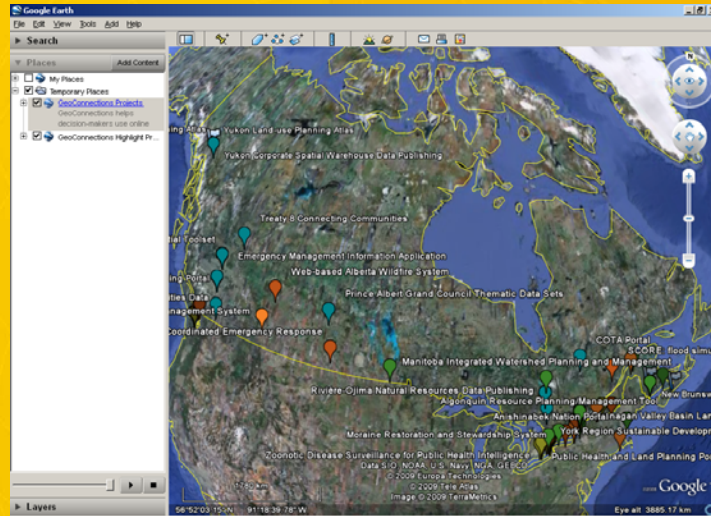
- Innovators and early adopters need vision
- Majorities need business plan (value proposition) to effect adoption/culture change
- Laggards need guarantees

➤ Program Principle: User Community Driven...



- Data, technology and policy requirements driven by user business requirements

Program Principles: Invest in Projects that address community issues



Public Health in GeoConnections

- **Public Health** is a priority for GeoConnections due to:
 - The significance of health and well being in the everyday lives of Canadians.
 - The potential to improve the efficiency of interaction between different health jurisdictions and levels of government across the country.
 - The location-based (or geospatial) component to the majority of health data, and the appreciation of associating health data with other types of data (e.g. environmental data, socio-economic data).

› Community Challenges

- Varying levels of knowledge and expertise in geospatial analysis, including its utility in public health practice;
- The abundance of data needed to address public health issues, and the lack of awareness in addressing basic data issues.
- Lack of a consistent and sustainable communication strategy, in particular for the sharing and development of statistical techniques and methodologies.

› Public Health Community Priority Areas

- 1. Population Health Surveillance**
- 2. Health Emergency Response and Inter-Emergency Planning**

With emphasis on projects that:

- Develop awareness and understanding of geospatial analysis within the public health community
- Increase training and build capacity – in both human and financial resources – for geospatial analysis
- Build tools that allow for the secure sharing of geospatial information between organizations and across multiple jurisdictions

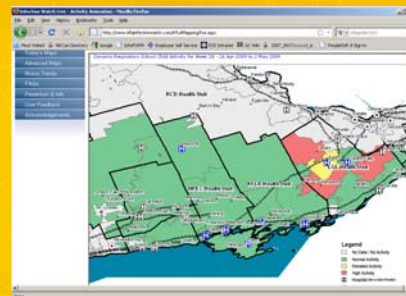
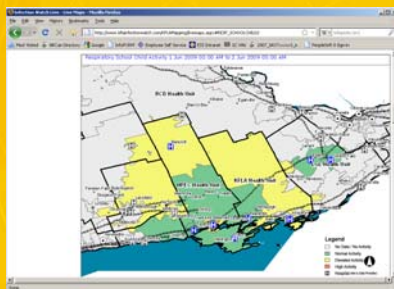
Community Project: Advancing Health Geomatics Analysis Capacity



Project, developed and delivered education and resource material to all researchers and analysts in British Columbia on the application of geomatics to questions concerning population health, including the determinants of health and small area variations in health.

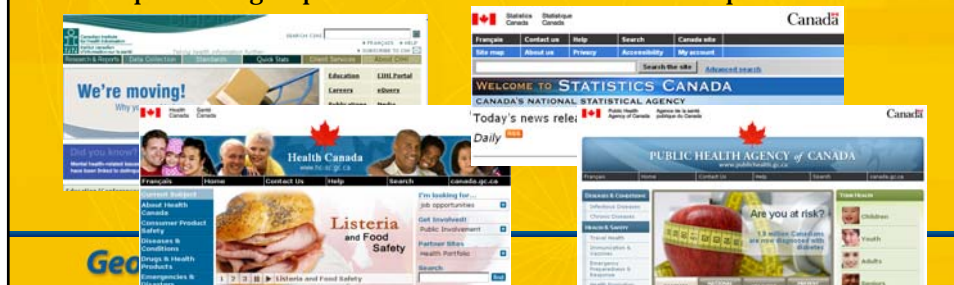
Community Project: Infection Watch Live

Prompt detection of respiratory and gastrointestinal related diseases are of particular importance due to the rapid transmission and potential burden such illnesses have on the community. Threat of a pandemic raises significant concern which necessitates the early spatial detection of an outbreak for appropriate public health action



➤ Community Project: GeoSpatial Foundation for Public Health

- **Components: User Readiness Guide, Analytic Framework, Data Study**
- **Purpose:** To identify, examine, and provide baseline information on the use of geomatics and geomatics practices and methodologies in the public health community.
- To develop a governance framework that highlights the roles and responsibilities within the federal government related to the public health community and its use of common geomatics practices.
- To provide a geospatial data reference framework for public health.



➤ Public Safety/Security in GeoConnections

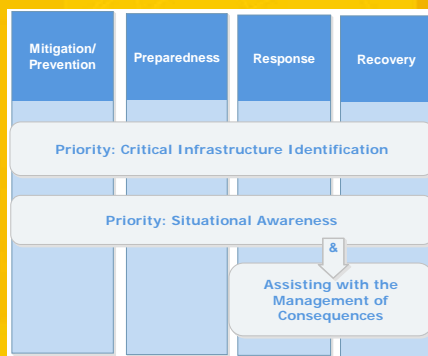
- **Public Safety/Security** is a priority for GeoConnections due to:
 - Threats and hazards have the potential to undermine the security and safety of Canadians.
 - The potential to improve the efficiency of interaction between different emergency management jurisdictions and levels of government across the country.
 - Location-based (or geospatial) information is a key resource for coordinating and helping agencies make crucial decisions that are related to public safety and security

Community Challenges

- **Security Policies and Systems:** Critical Infrastructure policy challenges related to information exchange; and trust that information will be used only for its intended purpose.
- **Risk Assessment:** For Critical Infrastructure, awareness is lacking in the role that geospatial information and systems can play in risk identification and mitigation.
- **Capacity:** Several provinces lack the human, financial or technical capacity to integrate location-based information into their operations.
- **Collaboration:** Although geospatial information has a long history in the Public Safety, few systems support information exchange across agencies.

Public Safety Security Program Focus

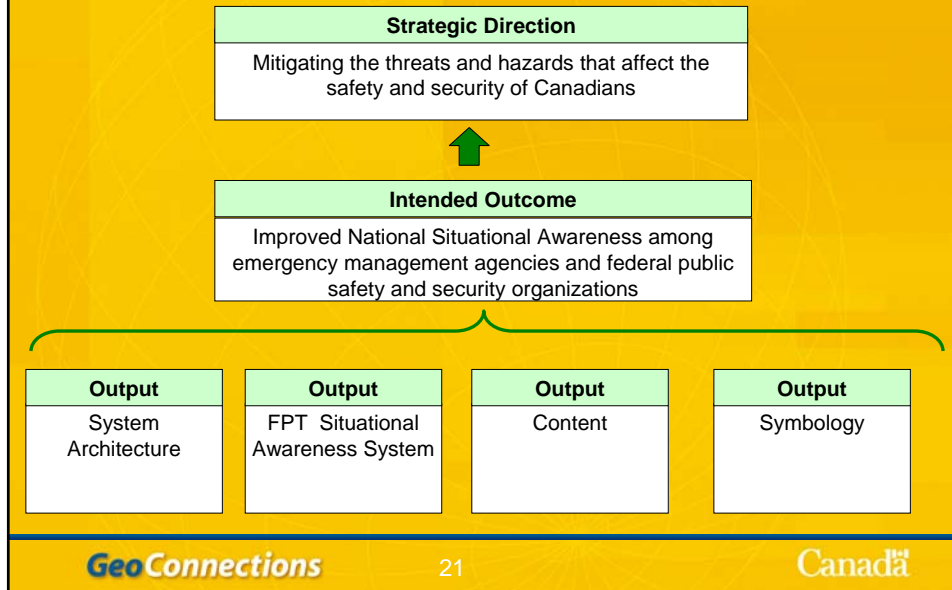
Priority Focus Areas



Advisory Committee Sectors

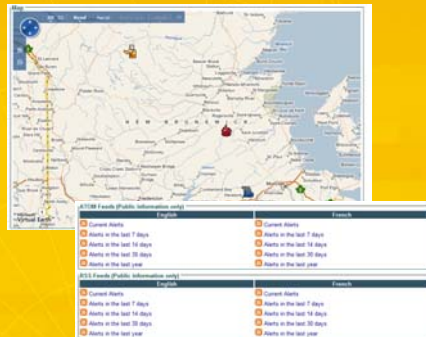


Community Project: Multi-agency Situational Awareness Initiative



Community Project: New Brunswick Multi-Agency Situational Awareness System

New Brunswick experience a major flood in 2008, and it became clear that improvements to situational awareness during large scale events was required to improve decision making within the Emergency Measures Organizations and supporting agencies.



➤ Community Project: National Infrastructure Identification

- Scope: National Strategy and Action Plan for Critical Infrastructure Protection: 10 sectors of CI
- Strategic data – based on what emergency managers require for Situational Awareness and what infrastructure operators (may) be willing to exchange
- Provides common terminologies and attribution, or a common language and understanding of infrastructure in emergency situations
- Use as foundation of project implementations

Energy & Utilities
Communications and Information Technology
Finance
Health care
Food
Water
Transportation
Safety
Government
Manufacturing

➤ Closing Remarks

- The government's investment to date has created many of the collaborations that have developed new applications of geospatial information.
- GeoConnections has successfully supported projects through the project lifecycle (strategic/business plans, user need assessments, implementations).
- Public Health and Public Safety/Security user community focus has showcased the benefits of applying Spatial Data Infrastructures principles to address priority community issues.

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