Enabling Canadian Innovation: Creating “geoSMART solutions” from satellite to mobile

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Canada Centre for Mapping and Earth Observation
Geography and natural resources are important to Canada ...
“Data is Canada’s new natural resource…”
- Treasury Board President, Tony Clement, July 2012

- Canada’s Open Government Action Plan 2.0 recognizes that the greatest value of data is found in its liberation and use. Elements:
  - Open Data - Open Dialogue - Open Information
  - Open Government License
  - Next Generation Open Data Portal (data.gc.ca)
  - Pan-Canadian Open Data Strategy (planned)

G8 Open Data Charter Principles:
• Open Data by Default
• Quality and Quantity
• Useable by All
• Releasing Data for Improved Governance
• Releasing Data for Innovation

"... the possibilities for using this data are as infinite as our imaginations."
- Tony Clement, June 2013
The Canadian Government is Transforming - it's all about working smarter...

- **Blueprint 2020**
  - “the best people working together with citizens, making smart use of new technologies and achieving the best possible outcomes with efficient, interconnected and nimble processes, structures and systems.”

- **Government-wide Policies, Standards and Directives**

- **Shared Services Canada**
  - For a “leaner, more efficient government and better value for taxpayers”

**Blueprint 2020 Public Service Vision**
- Open and networked, engaging citizens
- Whole-of-Government approach to service
- Modern workplace and smart use of technology
- High performing workforce

**Policies & Standards**
- Policy on Information Management
- Standard on Geospatial Data
- Metadata Standard
- Directive on Recordkeeping

**Shared Services**
- Data Centre Consolidation
- E-mail, Telecommunications and Workplace Technology Devices Transformation
...in a dynamic and challenging context.

- Rapid pace of technological change
- Budget constraints within the Government of Canada
- Rust-out of critical geospatial infrastructure
- No single source view of Canada’s authoritative geospatial data
- Barriers to sharing and integration of data – technology, standards, licensing
- Increasing demand for geospatial data – any time on any platform

94% of respondents in a survey of federal departments reported increasing demand for and use of geospatially-related data to meet business requirements.

Source: FCGEO Survey, May 2012
geoSMART solution:
Creation of the Canada Centre for Mapping and Earth Observation...

- Merger of Natural Resources Canada’s Canada Centre for Remote Sensing (CCRS) and Mapping Information Branch (MIB) on June 21, 2013. Rationale:
  - Convergence of technologies in mapping and remote sensing
  - Integration of EO and geo translates into more robust applications and analyses for government and business solutions
  - Greater efficiencies through streamlining of parallel imagery and GIS/GPS data value chains
... extracting more value, and finding efficiencies across the Authoritative – Accurate – Accessible (AAA) Geospatial Value Chain
geoSMART solution: Federal Committee on Geomatics and Earth Observation

Building a Government of Canada, enterprise-wide solution – the Federal Geospatial Platform...

- Comprehensive collection and sharing of authoritative data
- Common web-based environment enabling data integration, analysis, and visualization to support informed decision-making
- Shared governance and management of geospatial assets and tools that are built once and reused many times
- Underpinned by operational standards and policies

...to support Government of Canada priorities.
The FGP will reduce time and effort…

Today, using geospatial data to support decision-making can take weeks to months…

Tomorrow, the FGP will streamline this process down to hours…

- broader access to geospatial information, searching once and finding everything
- faster integration for report generation
- assured quality of authoritative data
- increased access to all through a single window

…moving us towards a modern, tech-enabled organization that manages its data assets more effectively and leverages our significant investments to date
geoSMART solution:
Investment in world class satellite ground station facilities

- 3 satellite stations; 4 antennas - strategically located to provide full coverage of Canada’s landmass

- Inuvik Satellite Station Facility is being established in collaboration with stakeholders:
  - EO data for public good
  - commercial opportunities – open for business
  - local economic benefits and capacity building
geoSMART solution: Moving science into operations for public service

- NRCan’s Emergency Geomatic Services:
  - Near-real time flood mapping in support of emergency response to seasonal flooding in Canada

Red River Valley, Manitoba, 2013
geoSMART solution: Continued collaboration and unified direction for a sustainable Canadian Geospatial Data Infrastructure

Federal Committee on Geomatics and Earth Observation

Geographical Names Board of Canada (federal, provincial, territorial)

Canadian Geomatics Community Round Table (multi-stakeholder, Pan-Canadian Geomatics Strategy)

Canadian Council on Geomatics (federal, provincial, territorial Geomatics Accord)
Now that’s **geoSMART**: Open Dialogue for Open Data

- Working collaboratively within the Government of Canada, and with other levels of government, the private sector, academia, and associations to achieve:
  - Horizontal integration of Earth observations and geomatics
  - Vertical integration of data sources to device (satellite to mobile)
  - Efficiencies (build/buy once – use many times)
  - State-of-the-art and sustainable geo-infrastructure
  - Open, “AAA” data for innovation and public good
For more information...

- NRCan Earth Sciences Sector [https://www.nrcan.gc.ca/earth-sciences/](https://www.nrcan.gc.ca/earth-sciences/)
- Pan-Canadian Geomatics Strategy [http://cgcrt.ca](http://cgcrt.ca)

- Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, [Brian.Gray@NRCan-RNCan.gc.ca](mailto:Brian.Gray@NRCan-RNCan.gc.ca)
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