



Government
of Canada

Gouvernement
du Canada

Canada's Approach to Statistical and Geospatial Integration

UNGGIM / UNECE Workshop



Telling Canada's
story in numbers

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Canada 



Purpose / Objectives

- To provide an overview of Canada's historical practices in mapping and statistical information
- To show how Canada is responding to the challenge of statistical and geospatial data integration in the 21st century
- To identify integration lessons that could be useful to other countries



Historical information context

- Census of Canada since 1666
- Producing the Atlas of Canada since 1906
- Natural Resources Canada's Canada Centre for Mapping and Earth Observation and Statistics Canada both regarded as world leading organizations, having conducted capacity building around the world



For Canada, mapping is nation-building

- Canada has been mapping and photographing its territory since its inception, often for mineral exploration. The Geological Survey of Canada was established as a government institution in 1842.
- Statistics Canada has been crucial to shaping our understanding of the nation. The Dominion Bureau of Statistics was established in 1918.
- Since 1906, mapping and statistical organizations have collaborated to produce paper on the Canadian land mass, its infrastructure, and its population.





Current Canadian context and challenges

- Citizen-centred service delivery
- Towards an increased digital economy and even more open data
- Incorporating new and emerging technologies, especially those related to Earth Observation, investments in satellite-based instrumentation, etc.
- Modernization across departments
- StatCan – NRCan leadership

Canada has now adapted to the digital era

- Statistics Canada publishes its data through the CAMSIM portal, containing data on a wide range of topics and maintains the Government of Canada Open Data Portal

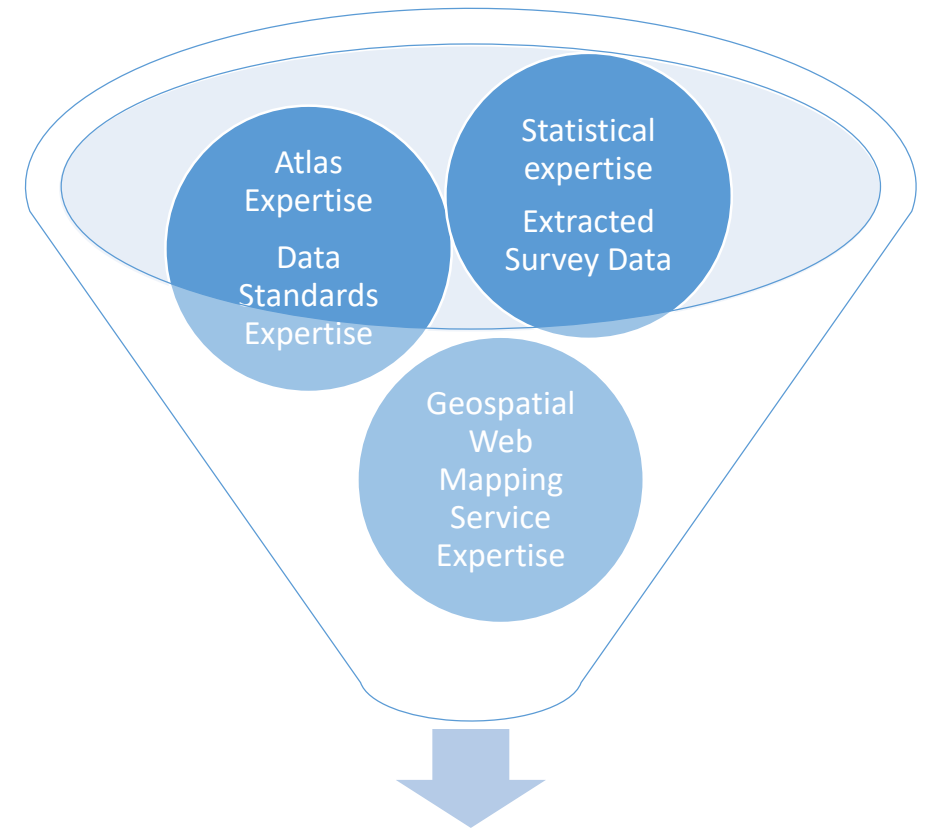
2017-11-15

Sales and resale	2012	2013	2014	2015	2016
Total greenhouse sales⁴	2,438,112,058	2,641,809,715	2,710,593,553	2,789,813,483	2,850,439,921 ^E
Fruit and vegetable sales^{1, 3}	1,079,260,279	1,238,242,350	1,266,979,078	1,297,089,016	1,343,624,704
Flower and plant sales and resale^{2, 4}	1,358,851,779	1,403,567,365	1,443,614,475	1,492,724,467	1,506,815,216
Flower and plant sales³	1,146,890,364	1,192,944,938	1,224,578,087	1,271,942,992	1,307,721,515
Flower and plant resale	211,961,415	210,622,427	219,036,387	220,781,475	199,093,702

- The Canada Centre for Mapping and Earth Observation (CCMEO) works with 21 federal departments and agencies to deliver Canada Open Maps: an enterprise system for finding, accessing and viewing federal geospatial data, from satellite to handhelds, and aligned to international standards

Deepening the collaboration

- CCMEQ and Statistics Canada have put in place a Memorandum of Understanding to work together more closely, aligned with the UNGGIM direction.
- As a first step, CCMEQ is lending its geo-mapping expertise to help Statistics Canada produce Web Map Service visualizations of Census data. (E.g. Environment).
- Statistics Canada is also exploring how to leverage Earth observation methods to support and modernize statistical methodologies. (E.g. Crop surveys).



Interoperable geo-enabled data



The power of integrating data from various sources

- Data visualization through multiple layers of data (Geo and Stats)
- Enhanced analysis
- Making decisions on resource development
- Disaster response (BC efforts against fires)



Future direction

- Increasing data availability (through partnerships, provinces, municipalities, private sector, organisations).
- Increase the extent of community-specific content such as applications, collaboration space, analytics, dynamic data services (queriable and adaptable to any variable)
- Other partnerships (WCCD) for data collection
- Furthering the StatCan - NRCan partnership to enhance information output and...



... deliver a Canadian Geospatial Data Ecosystem

Initiative Pages

Showcase focused collaborations

Jurisdictions can have their own "space" to rally around their Initiatives: Socio-economic data, Climate Change, First Nations engagement, Environmental Assessments, Oceans Protection, etc.

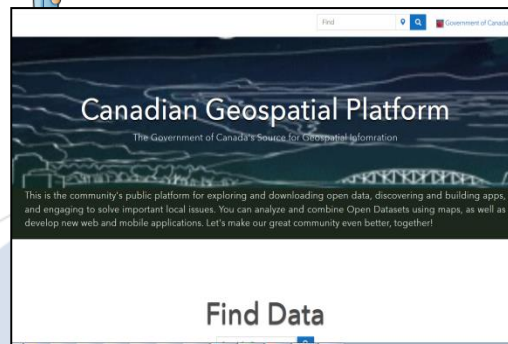


Information Products for Canadians
Connecting satellites, handhelds and all Canadians to facts and evidence

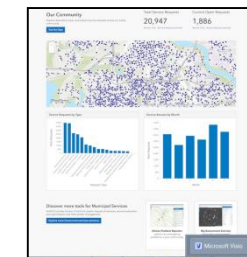
Public Engagement Experience

Hub Site - Online map applications using web services

Ready-to-use content configured for public engagement
Immersive web presence providing answers and data driven knowledge to public issues



Innovation Space



Public engagement on multi-jurisdiction geospatial issues

Internal Collaborative Mapping Platform

Find, build, share, innovate and collaborate

Government of Canada and trusted Provincial/Territorial Partners collaborate on multi-jurisdictional issues and data

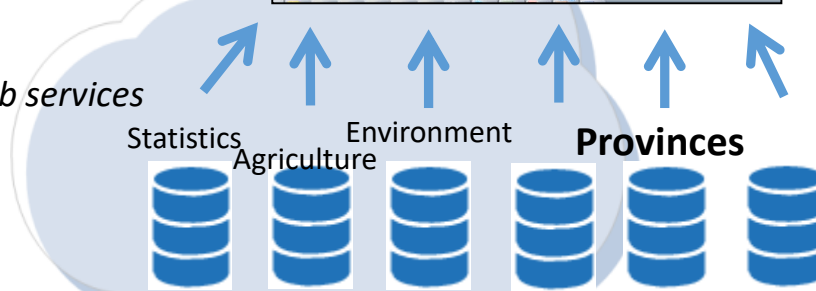


Curated Maps Gallery

Geospatial Infrastructure and Standards

Co-located or linked Federal & Provincial GIS data and web services

Performant, compliant and efficient infrastructure provisioning (PaaS)





Integration / partnership lessons learned

- Pre-conditions
 - Societal context
 - Management support
 - Demand
- Formal structures
 - Memorandum of understanding
 - Explicit governance (within + across departments)
- Mechanisms
 - Joint international participation
 - Frequent bi-lateral meetings
 - Capacity building (between geospatial and statistics)
- Conducive data themes
 - Environment
 - Agriculture
 - Transportation
 - Energy



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