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Surveyor General Branch

Beyond Boundaries

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Canada's Arctic Spatial Data Infrastructure & Marine Cadastre



ACZISC #67, Sept 19-20, 2012
Fredericton, N.-B.

Canada



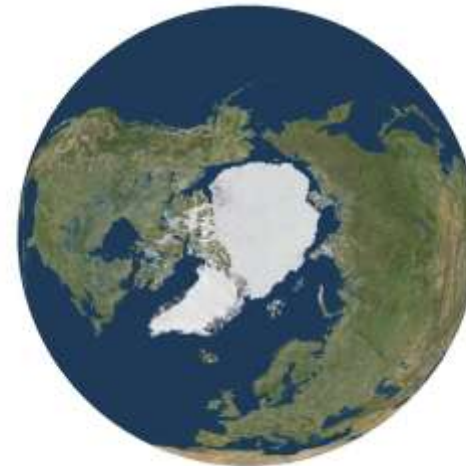
Drivers of Change in the Arctic...

Drivers:

- Governance
- Demand for resources
- Changing climate
- Geopolitical attention

Impact:

- Intense scrutiny

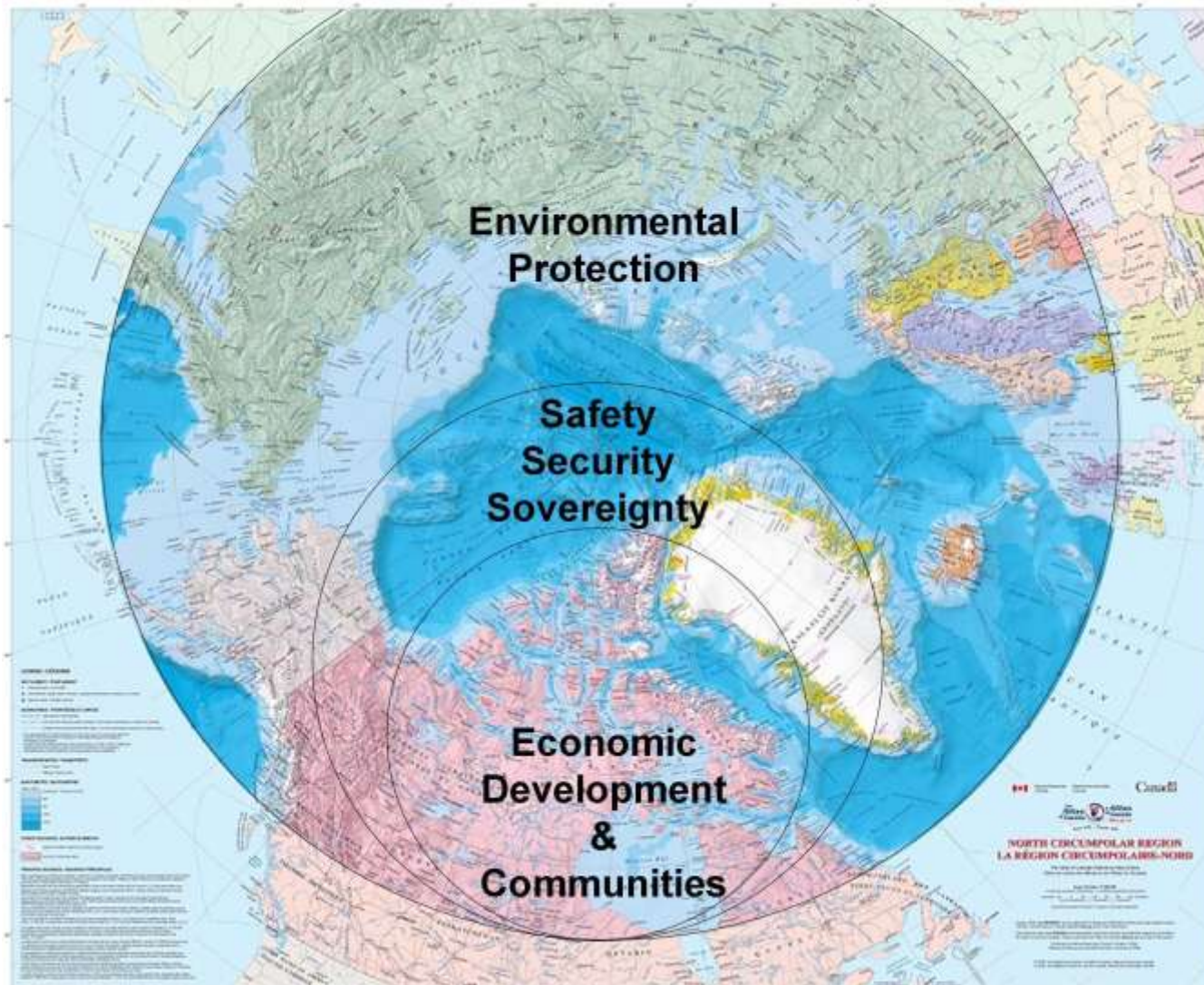


Result:

- Considerable information has been generated which is [spatial/geographic](#) in nature. The approach to managing much of this information has largely been disparate within separate agencies or programs.
- As a result it is difficult to find a common environment where this diverse information can be combined and analysed together.



Proposed Priority Areas

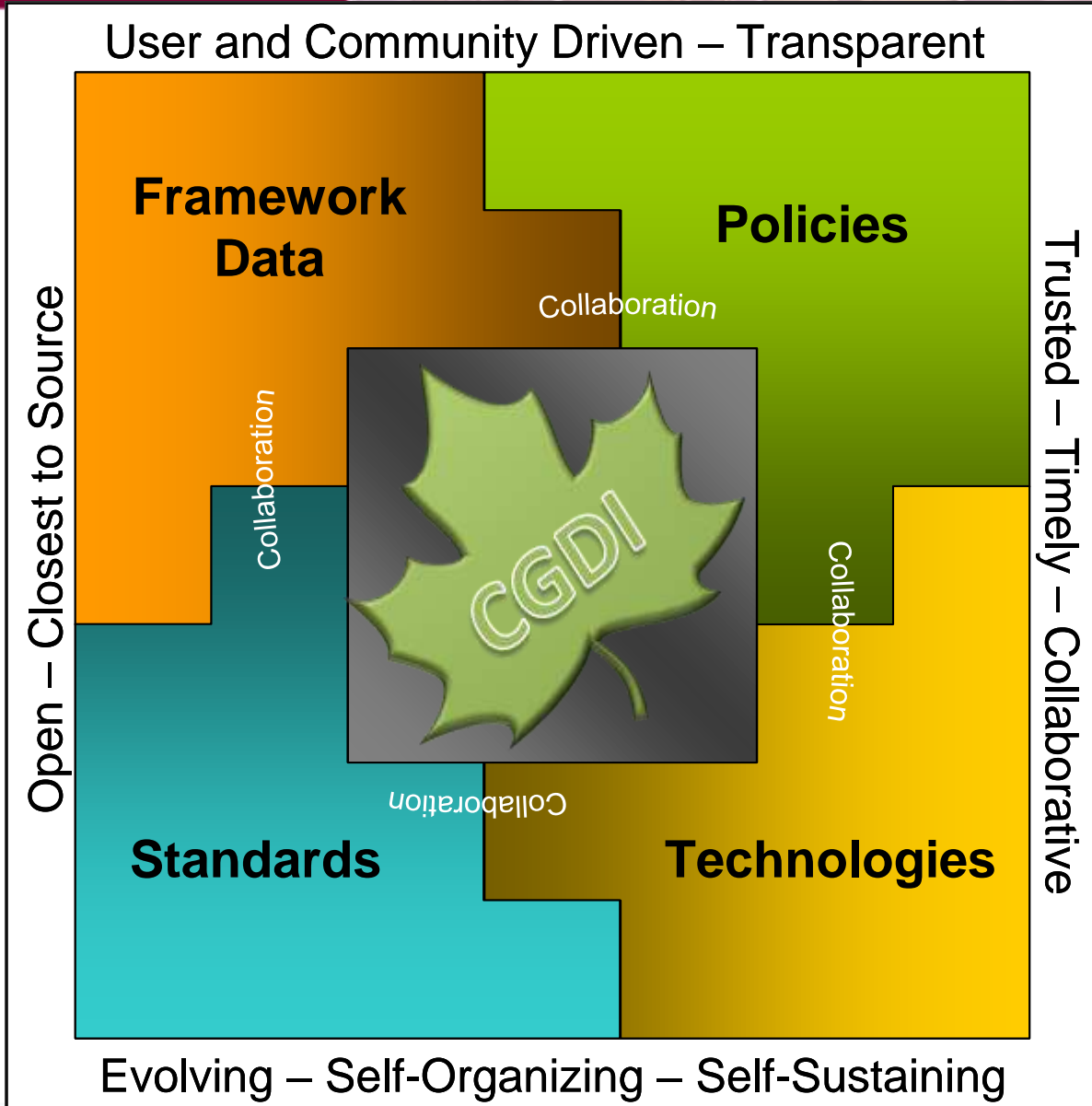




Canadian Geospatial Data Infrastructure

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

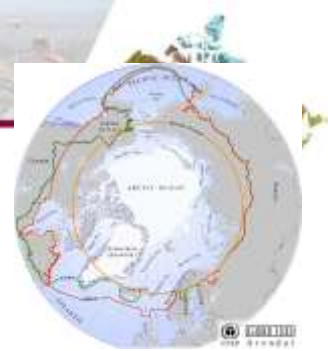
- **GeoConnections** is a national program to coordinate the development of the CGDI





Canadian Arctic SDI

- The Canadian Geospatial Data Infrastructure includes the development of an Arctic Spatial Data Infrastructure
 - Need a better understanding of how the CGDI can be developed and applied to support Arctic priorities



International Arctic SDI Vision

- **A set of technology, policy and partnership capabilities that will enable pan-Arctic science and societal decision support**
- **Based on sustainable co-operation between mandated national mapping organisations –will provide for access to spatially-related reliable information over the Arctic to facilitate monitoring and decision making.**
- Arctic SDI Project Plan: www.arctic-sdi.org

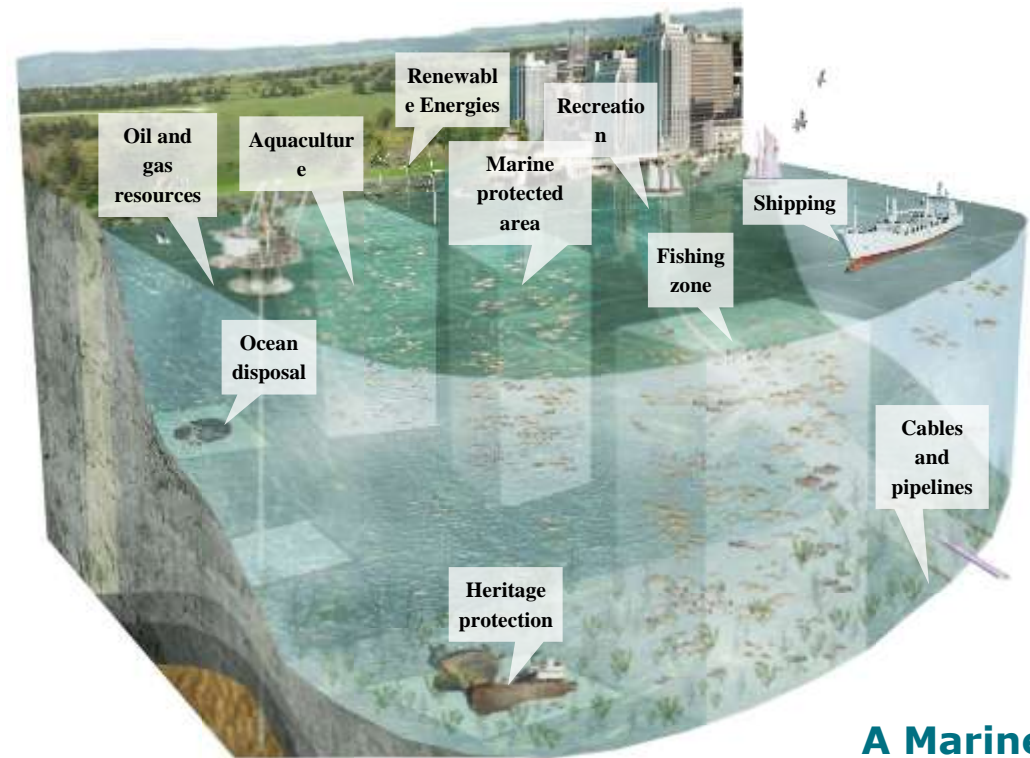


Marine Cadastre

- geospatially representative
- the unifying element to fully enable the integrated management
- the basic geographic and legal boundary infrastructure

Definition:

A marine cadastre is an integrated system of registries that allows for the systematic public recording of all recognized legal rights, responsibilities and restrictions related to the ocean space (legislative base, people, data infrastructure).
(NRCan/DFO task group, 2010)



A Marine Cadastre



The needs for Marine Cadastre

- information that could inform a marine cadastre :
 - Legally recognized rights in the offshore
 - Rights Grantees
 - Extent of those rights
 - Information related to restrictions
 - Information related to responsibilities

- Assess geographical information available that are used to describe the extent of those rights.



Understanding challenges...

- Many priorities & initiatives
(economic, environmental, sovereignty, security...)
- Multiple diverse stakeholders
 - Northern Communities
 - YT, NWT & NU Territories
 - Industry and Science Community
 - Government of Canada
 - Arctic Council member nations
- Information infrastructure
- Data, technology, policies, governance, capacity building, systems, connectivity, communications
- Resources, \$



Next Steps for Canada's Arctic Spatial Data Infrastructure and Marine Cadastre

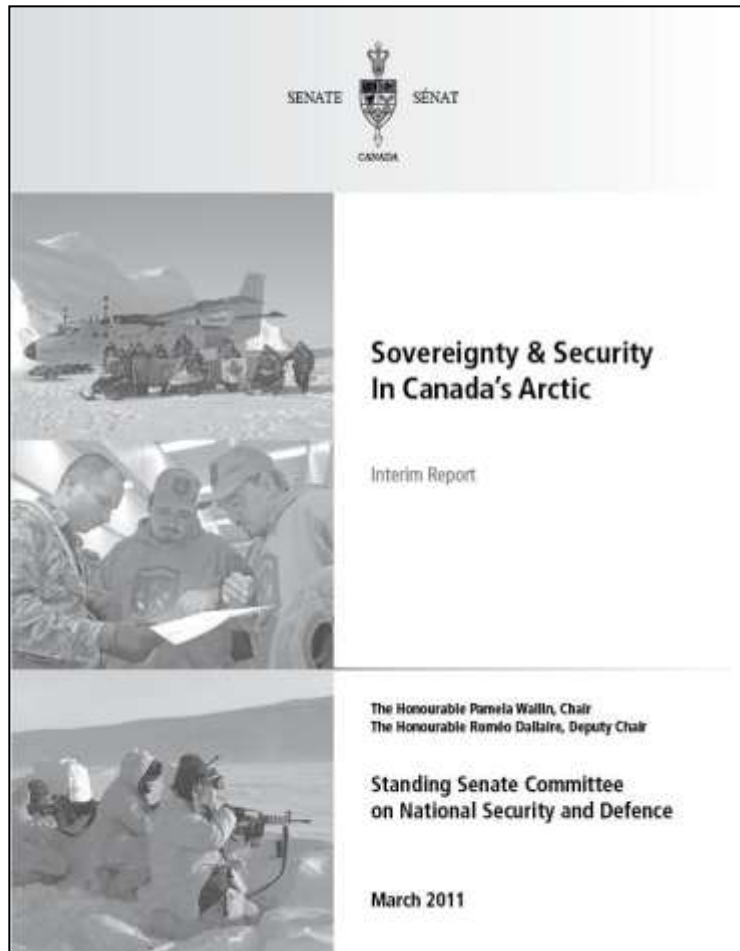
A Project: STRATEGIC PLAN AND ROADMAP DEVELOPMENT

- Led by GeoStragy (MIB), Surveyor General Branch and Canadian Hydrographic Service of DFO, and funded by GeoConnections (NRCan)
- Awarded to Fujitsu Consulting
- Objectives:
 - Establish a comprehensive account of policy priorities and related *initiatives* and their possible links to SDI in order to provide further understanding of relevance as well as guide further analysis, strategic planning and action planning.
 - Establish a baseline indication of the status and quality of geospatial information required to support Arctic initiatives and *identify gaps*.
 - Develop a strategy and *roadmap* required to address these gaps and develop an Arctic SDI with Marine Cadastre.
 - Determine opportunities for *pilot projects* to support and justify broader implementation of an Arctic SDI and Marine Cadastre.



Main Expected Deliverables

- Environmental scan results document
- Stakeholder requirements
- Validation and gap analysis results document
- Final Report, with the following sections:
 - Strategic plan document
 - Roadmap document (including action items, roles, responsibilities, deliverables and timelines)
 - Canadian Arctic SDI Pilot Implementation Recommendations document



*“In the end, the battle for the Arctic will be fought by scientists and lawyers. The weapons will be information and scientific data, and the battleground will be conference rooms and **courtrooms.**”*

Stephen Carmel, Maersk Line Limited



Thank you

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