



smartEarth

Sept. 21, 2020



Canadian Space
Agency

Agence spatiale
canadienne

Canada



What is smart**Earth**

smart**Earth** is the Canadian Space Agency's (CSA) renewed funding initiative related to Earth observation applications development. It fosters a smart use of satellite data to develop solutions to key challenges on Earth and in our everyday lives.

Our Vision

*In ten years, smart**Earth** aims to establish and foster the Canadian downstream sector to a world class leadership level. It will develop a Canadian industry that is competitive internationally, a research community with world-leading HQPs, Canadian users that make daily use of consumer apps embedding space resources and governments that take best advantages of the digital world in exploiting space capacities.*

Description

smart**Earth** value proposition builds on more than two decades of acquired experience in the development of EO applications, a thorough environmental scan and extensive consultations conducted in 2018 and 2019 with stakeholders from the government, industry and academia

smart**Earth** objectives:

- Foster the development of a Canadian downstream ecosystem
- Accelerate innovation
- Support development of capacities within industry and academia
- Enhance competitiveness of Canadian industry and economic benefits for Canadians
- Deliver on national priorities

smart**Earth** succeeds to former CSA programs: EOADP, GRIP and SOAR

ACCELERATOR

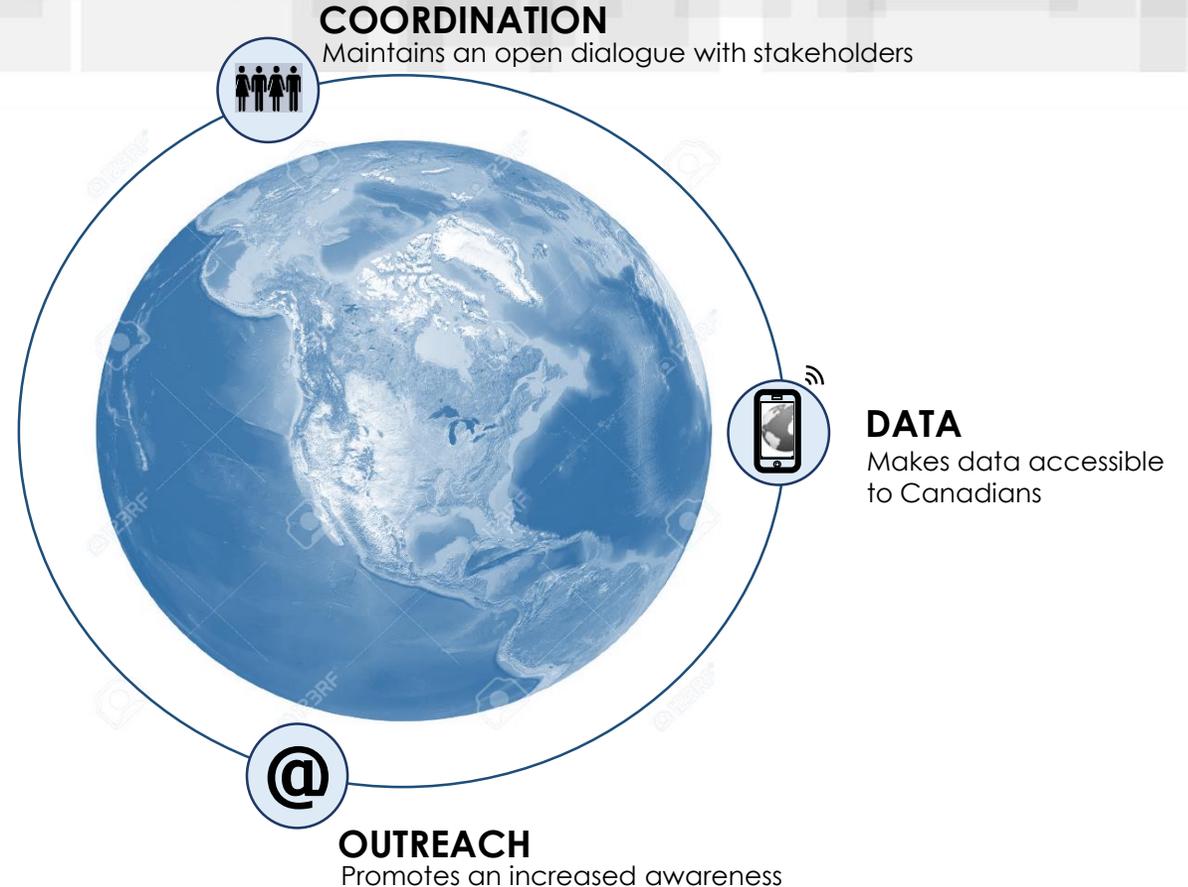
Accelerating innovation

INTEGRATOR

Stimulating uptake of Space Capabilities

ENABLER

Developing Capacities



Contribution to Canada's Space Strategy

- HARNESS SPACE TO SOLVE EVERYDAY CHALLENGES FOR CANADIANS
- POSITION CANADA'S COMMERCIAL SPACE SECTOR TO HELP GROW THE ECONOMY AND CREATE THE JOBS OF THE FUTURE
- ENSURE CANADA'S LEADERSHIP IN ACQUIRING AND USING SPACE BASED DATA TO SUPPORT SCIENCE EXCELLENCE, INNOVATION AND ECONOMIC GROWTH

Accelerator Track

Integrator Track

Enabler Track

Focus

Innovation challenges,
rapidly turn ideas into
new products and services

Canadian Policy Priorities
Space as a CORE component

Using Space data for Emerging
Opportunities

Who



Channels

Contracts

Contracts, Agreements

Grants & Contributions

Project value

\$, \$\$, \$\$\$

\$\$\$

From \$ to \$\$\$

Project cycle

Multi-stage project
process over 4 years

Projects on
3-5 year horizon

1-3 years projects

Outcome

Increase ARL towards
Pre-operational level

Increase collaboration and
alignment among sectors

Increase capacity
Support investment and trades

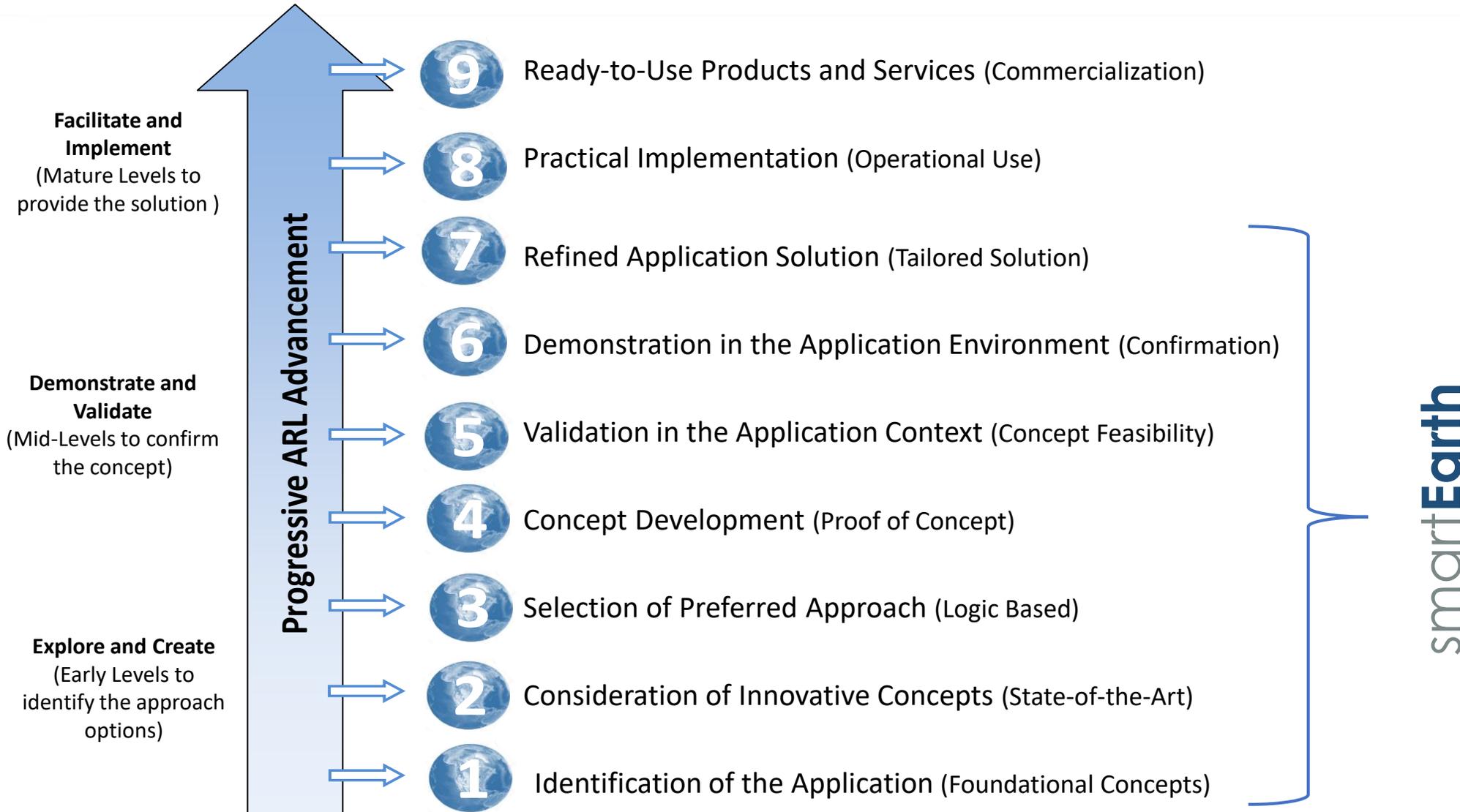
Downstream Industry

smartEarth aims to help Canadian entrepreneurs take full advantage of efficiency and growth opportunities from geo-sensing data/signals, develop new business and HQPs, foster competitiveness and create well-paying jobs

Opportunities for downstream industry to lead or participate in projects within the three **smartEarth** tracks

Accelerator	Speed-up maturation of space-based applications, products and services along the Application Readiness Ladder up to the <i>demonstration</i> stage
Integrator	Lead or participate in consortia projects for the development of innovative solutions to meet national priorities and enhance federal government operations and service delivery to Canadians
Enabler	Advance and upscale capacities in the use of space-based data and signals to foster competitiveness and growth

Application Readiness Level (ARL) Scale



Investments

Heritage programs: EOADP and GRIP

Published 2018-2019

- RFP (industry) and LOI (GoC): "Climate Change Impacts & Ecosystem Resilience"
- 20 projects (50/50 industry and GoC dept.)
- \$5.7M, 24-36 months duration

smartEarth

Published - January 2020

- AO-1 (Enabler track): "*Bridging the Information Gap with Space-Based Analytics*"
- 17 projects - industry lead
- \$4.7M, 24 months duration

Published - June 2020

- RFP (Integrator track): "*smartWhales - Development of Space-Based Solutions for the Monitoring and Protection of the North Atlantic Right Whale (NARW)*"
- 5-6 contacts - industry lead consortia
- \$5.4M (co-investment with Dept. Fisheries and Oceans), 36 months duration

In preparation - Fall/Winter 2020-21

- AO-2 (Enabler track): "*Canadian Downstream Space Sector Delivering on Canada's Better Future*" (TBC)
- 20+ projects (TBC) – industry lead
- 30-36 months duration (TBC)

Downstream Growth

- smart**Earth** will collect information to assess the impact of the initiative funding on recipients' economic growth and competitiveness.
- Indicators that will be measured
 - 1. Acceleration of the application maturation process**
 - 2. Cost efficiency growth**
 - 3. Revenue growth**
 - 4. Team growth**
 - 5. Business growth**

Backup

GRIP-EOADP-SOAR

- Structured in sectoral silos
- Not Policy driven
- Variable project support cycles
- Federal Government, Industry and Academic sectors
- EO data
- RADARSAT focused
- Limited to Canadian supported missions
- Purpose focus communications
- Occasional community meetings
- Sporadic news



smartEarth*

Structure

Process

Customer

Data

Collaboration

- Tracks: Accelerator, Integrator, Enabler
- Compasses: Data, Outreach, Coordination
- Top-down approach to selection of themes
- User-pull
- Predictable call-up cycles/advance notice
- Scalable and flexible
- Encourage collaboration
- Engage emerging sectors – expand pool
- Ease of access
- Include EO, GNSS, AIS, SATCOM – integration
- Open to all data
- Community of practice and thematic clusters
- Regular dialogue meetings
- Advisory group
- Continuous and targeted outreach

** Some activities currently under implementation*