



# CSA Consultation in View of the 2019 ESA Ministerial

18 June 2019

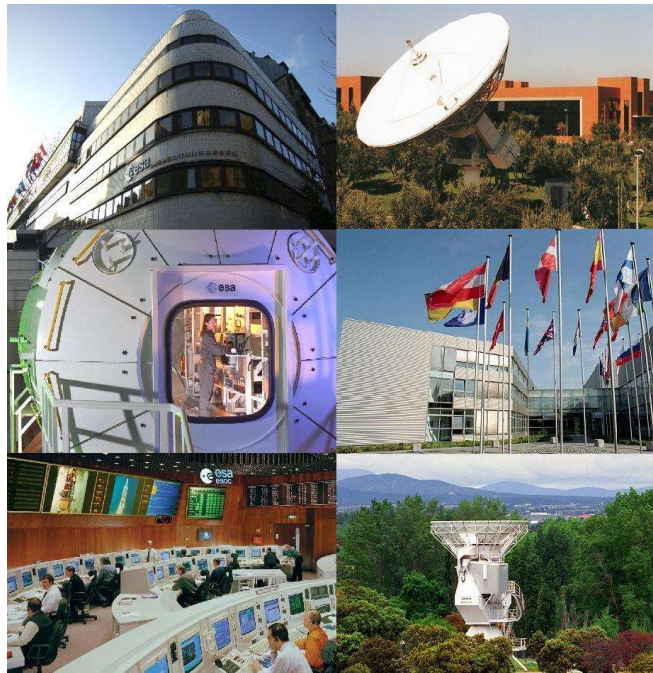
ERIC MARTIN

 Canadian Space Agency / Agence spatiale canadienne

 Canada



# European Space Agency



An international intergovernmental space organisation since 1975

Similar mandate as CSA

22 Member States (MS)

2200 staff in 9 facilities & establishments

Budget 2019: ~5.7 billion €

Industrial policy : Juste retour

**Canada – a Cooperating State for 40 years**

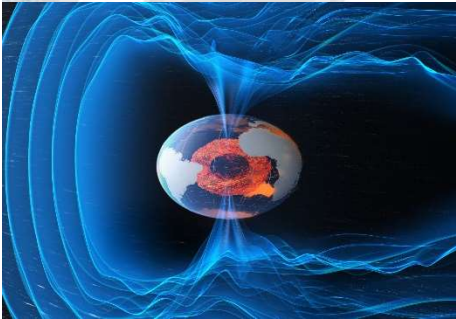


# Canada-ESA Cooperation Agreement

- Canada has been cooperating with ESA since 1975 and the first formal agreement was signed in 1979
  - Canada contributes to the General Budget;
  - Canada participates to Optional Programs.
- The Canada-ESA Collaboration Agreement is implemented in Canada through a contribution program: the ESA Program. Ts&Cs of the Program are approved by Treasury Board and include the following main objectives:
  - Increase the competitiveness and capabilities of the Can. space sector by giving them access to ESA opportunities to develop, demonstrate and fly space applications, technologies and systems;
  - Facilitate access to the European and global markets.
- Alignment with ESA Program objectives is a key factor in selecting Canadian participation in ESA optional programs

## ESA Program Results – 2 Examples

- Satcom – OneWeb Mega constellation – MDA
  - Co-funded contract from ESA to design, manufacture, assemble and test two Ka steerable antennae per satellite for 9 initial satellites
  - OneWeb Plans are for building a constellation of 900+ Satellites – Would be a direct contract from OneWeb
  - Other potential business for the supply of antennae in other megaconstellations
- EO – SWARM mission – Comdev
  - ESA contract to developed the Canadian Electric Field Instrument(CEFI)
  - Involvement of Canadian scientists in this very successful scientific mission
  - Flight heritage led to numerous follow-on contracts, e.g. contract from JAXA for a Cloud Profiling Radar (CPR) instrument



Source : ESA

# Space Capacity Development Program

*Innovation Support for Industry and Academia*

To position the Canadian Space sector for global opportunities





## **ESA Council Meetings at Ministerial Level and Space19+**

- Opportunity for ESA to
  - announce new programs
  - get financial subscriptions from Member States and Canada
  - agree on political statements
- Occur typically every 3 to 4 years
- Opportunity for Canada to:
  - Join new programs
  - Make additional contributions to existing programs
- Next meeting (Space19+) November 27-28, 2019



## External Consultation for Space19+

- Broad consultation with industry, universities and OGDs initiated on May 3, 2019
- Performed by emails in two steps
  - First email to seek interest in completing survey
  - Second email with relevant program info and surveys
    - 2<sup>nd</sup> email sent on May 24<sup>th</sup>
    - Answers to survey due to CSA by June 28, 2019
  - If you did not receive the emails, please contact [Eric.Martin@canada.ca](mailto:Eric.Martin@canada.ca)
- Inputs received will be used as part of CSA decision-making process to select programs and level of subscription for Space19+

# Optional Programs Included in Consultation

Program Domain	Programs / Program Elements			
<b>Earth Observation</b>	Future Earth Observation Program Period 1 (FEO-1)	Copernicus Space Component – Segment 4.0 (CSC-4)	Earth Watch – Global Development Assistance (GDA)	Earth Watch – InCubed+
<b>Telecommunication and Integrated Applications</b>	ARTES 4.0 Future Preparation	ARTES 4.0 Core Competitiveness	ARTES 4.0 Partnership Projects (PP)	ARTES 4.0 Business Applications – Space Solutions (BASS)
	ARTES 4.0 Space for 5G	ARTES 4.0 Space Systems for Safety and Security (4S)	ARTES 4.0 Optical Communications - ScyLight	
<b>Navigation</b>	NAVISP Element 2 – Phase 2			
<b>Microgravity, Human Spaceflight and Exploration</b>	European Exploration Envelope Program - Period 2 (E3P2)			
<b>Space Situational Awareness</b>	Space Safety Program (S2P) – Period 1			
<b>Technology Development</b>	General Support Technology Program (GSTP) “Develop” Element	GSTP “Make” Element	GSTP “Fly” Element	



# Canadian Space Agency



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# Agence spatiale canadienne