



# Radarsat Constellation Mission (RCM)

Canada's next generation  
of Earth Observation  
Satellites

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Agence spatiale  
canadienne

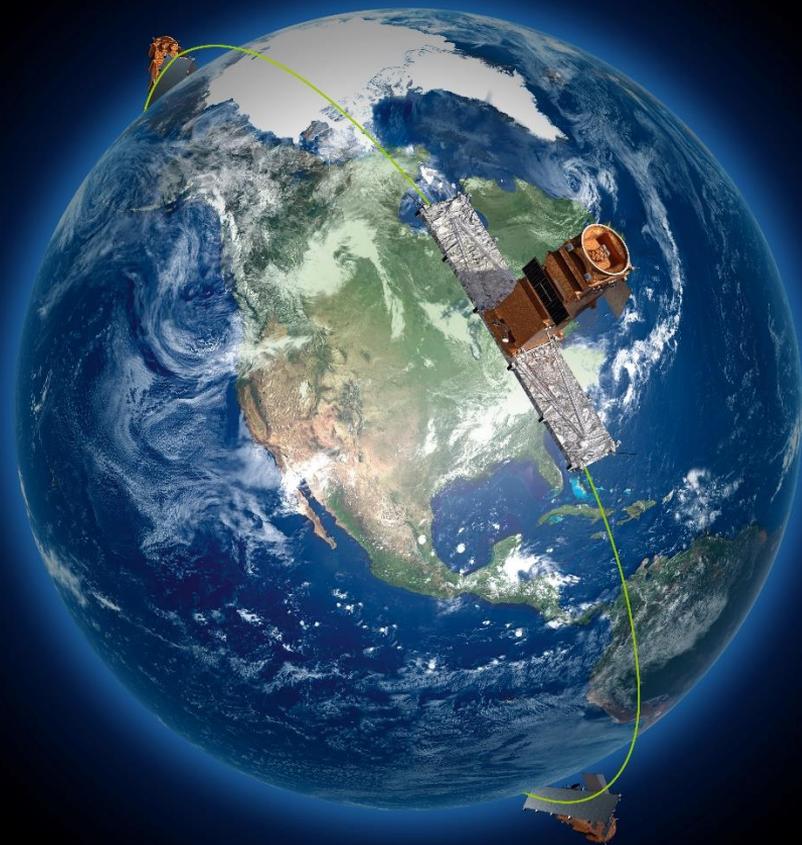
Canadian Space  
Agency

Canada

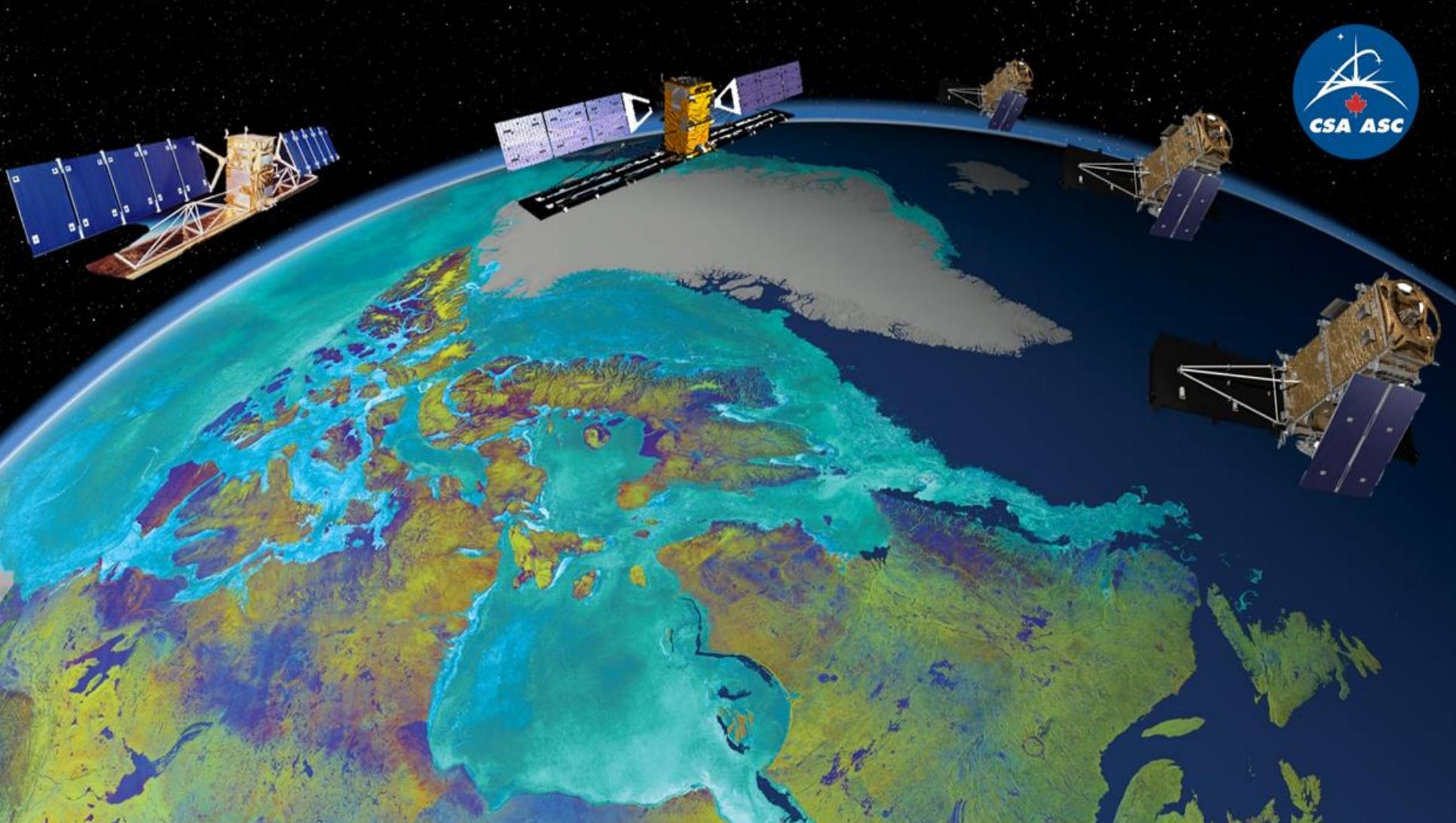




# The RADARSAT CONSTELLATION MISSION (RCM)



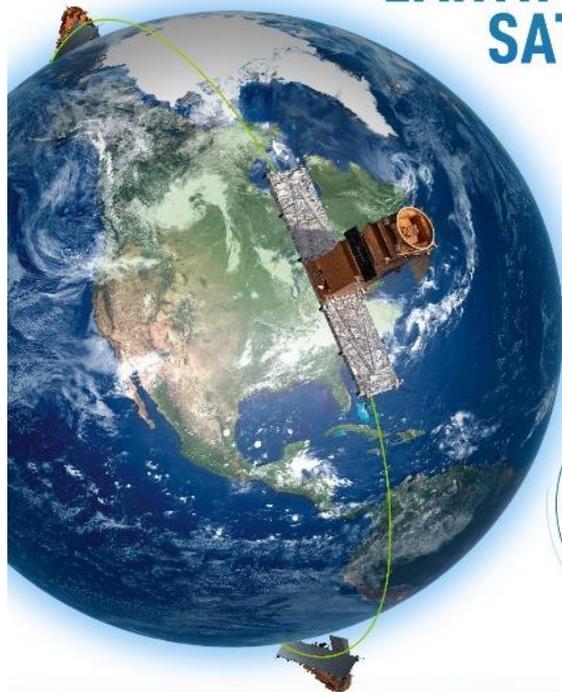






RADARSAT Constellation Mission:

# CANADA'S NEW GENERATION OF EARTH OBSERVATION SATELLITES



### MAIN USES:



Monitor the environment, oceans and ice; support emergency teams during natural disasters; detect ships

### LAUNCH:

Spring 2019 aboard a SpaceX Falcon 9 rocket

**3 IDENTICAL SATELLITES** working together



**ALTITUDE:**  
**600 km**



**APPROXIMATELY 250,000 IMAGES PER YEAR** will be used



**SPEED:**  
**27,200 km/h**

One Earth orbit every **96 minutes**



**50 times more** than the first generation of RADARSAT

**1.1 m**  
**3.6 m**  
**6.98 m**



**MASS:**  
**1,430 kg each**  
(like a black rhino)



# SOLUTIONS TO KEY CHALLENGES





# RCM data will be used in innovative applications including:

- Monitoring **climate change**, land use evolution and even human impacts on the environment by highlighting changes over time through composite images.
- Detecting and **tracking ships**, including those conducting illegal fishing, and [helping emergency teams](#) save lives during natural disasters.
- Creating ice maps for [safer ship navigation](#) and commercial maritime transportation.
- Monitoring the **integrity of infrastructure** like highways, bridges and railway corridors.
- Measuring changes in permafrost and ground movement to **support northern communities**, build houses and infrastructure safely, and plan airport runways and their operation and maintenance.
- **Maximizing crop yields** [for farmers](#) while reducing energy consumption and the use of potential pollutants.
- Supporting the operations of the Canadian Armed Forces to further **global peace and security**.



# 7 WAYS TO FIGHT CLIMATE CHANGE WITH SATELLITES

**O<sub>3</sub>**  
Assess the state of the ozone layer in order to continue protecting it

  
Monitor air quality and measure pollution

  
Track changes in ice and permafrost conditions

  
Provide the authorities with scientific data so that they can make the best possible decisions for the health of our planet

  
Verify the effectiveness of clean-up initiatives

  
Monitor soil moisture on a global scale

  
Protect the integrity of forests and ecosystems



**"We need high-quality data to make evidence-based decisions. The RADARSAT Constellation Mission will provide improved data for the critical services our government provides to Canadians, including monitoring climate change, protecting the health of our oceans, forests and crops; and supporting our first responders' disaster relief efforts."**

- The Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development



# Canadian suppliers\*



## NOVA SCOTIA

- Bradean's Tool and Die - Amherst
- MDA, a Maxar company - Dartmouth
- IMP Group - Halifax
- STELIA Aerospace - Lunenburg

## QUEBEC

- F.J. Machine Shop - Baie-D'Urfé
- C&R Développement - Gatineau
- CMR Summit Technologies - Pointe-Claire
- MDA, a Maxar company - Sainte-Anne-de-Bellevue
- Mecachrome - Mirabel
- Apex Precision - Saint-Lazare
- JLM - Saint-Augustin-de-Desmaures
- Sonaca - Mirabel
- Atelier d'usinage - Vaudreuil-Dorion
- Pierre Fortier

## BRITISH COLUMBIA

- MDA, a Maxar company - Richmond

## MANITOBA

- Magellan Aerospace - Winnipeg

## ONTARIO

- COM DEV - Cambridge
- Hi-Rel Alloys - Niagara Falls
- Filtran - Kanata
- Wejay - Kingston
- ITL Circuits - Markham
- FTG - Scarborough
- A-Line/Muru - Toronto

\*Companies listed on the illustration are the main suppliers in terms of contract dollars spent. In total, there are over 125 suppliers in seven Canadian provinces.





Canadian Space Agency



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