



Health Beyond Initiative

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COMMITTEE ON THE PEACEFUL
USES OF OUTER SPACE
Scientific and Technical Subcommittee
Sixtieth session
Vienna (hybrid), February 10, 2023

Health – A **strategic priority** at the Canadian Space Agency





Next Chapters of Human Spaceflight



THE MOON

384,467 km

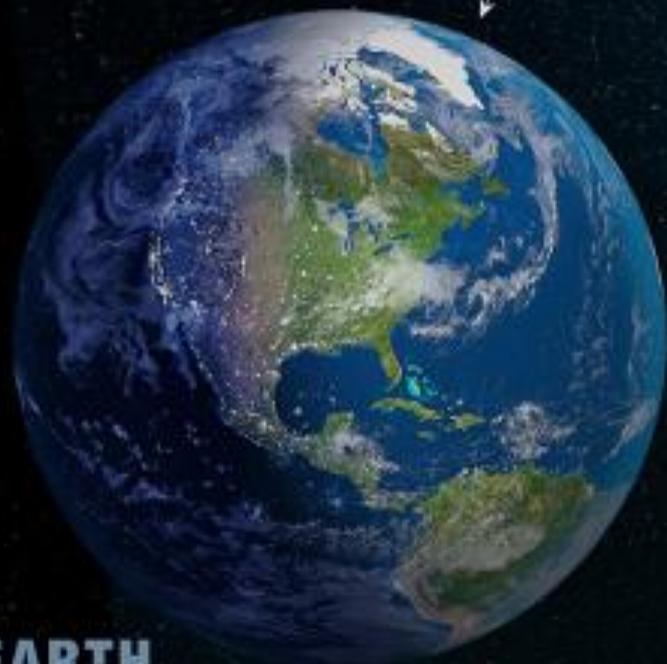
2.6 sec



MARS

55.7 - 401.3 million km

40 minutes



ISS

400 km

EARTH

↑ Distance from Earth:

↑ communications delays

↑ mission duration

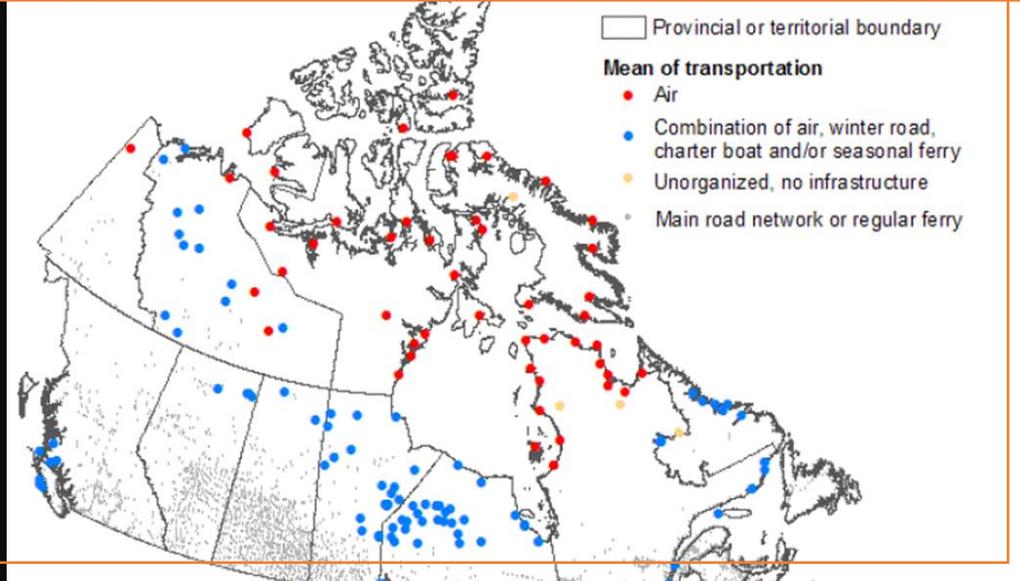
↑ isolation

↓ resupply

↓ evacuation

Shared Challenges

Shared Solutions



HEALTH BEYOND INITIATIVE



To leverage the ambitious vision for human space exploration and the healthcare needs of astronauts to contribute to remote healthcare delivery in Canada.



Vision and Mobilization



Capacity Building

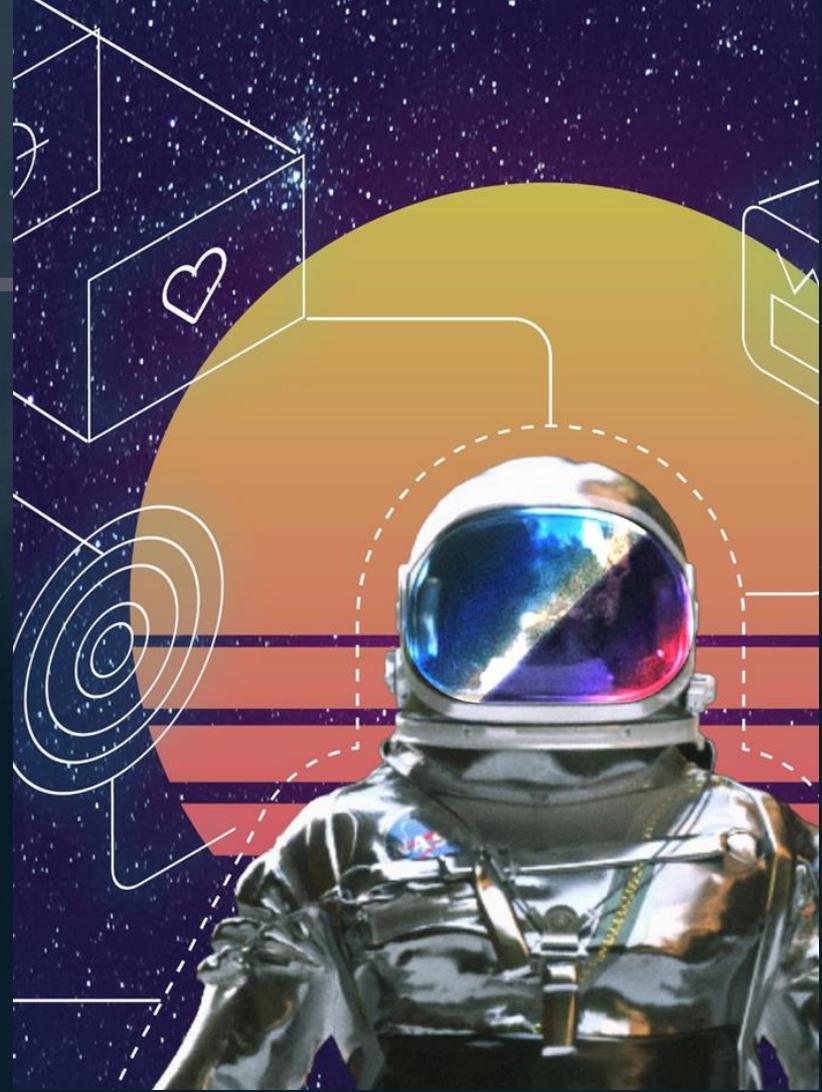


Demonstration and Deployment



Ongoing/Upcoming Activities

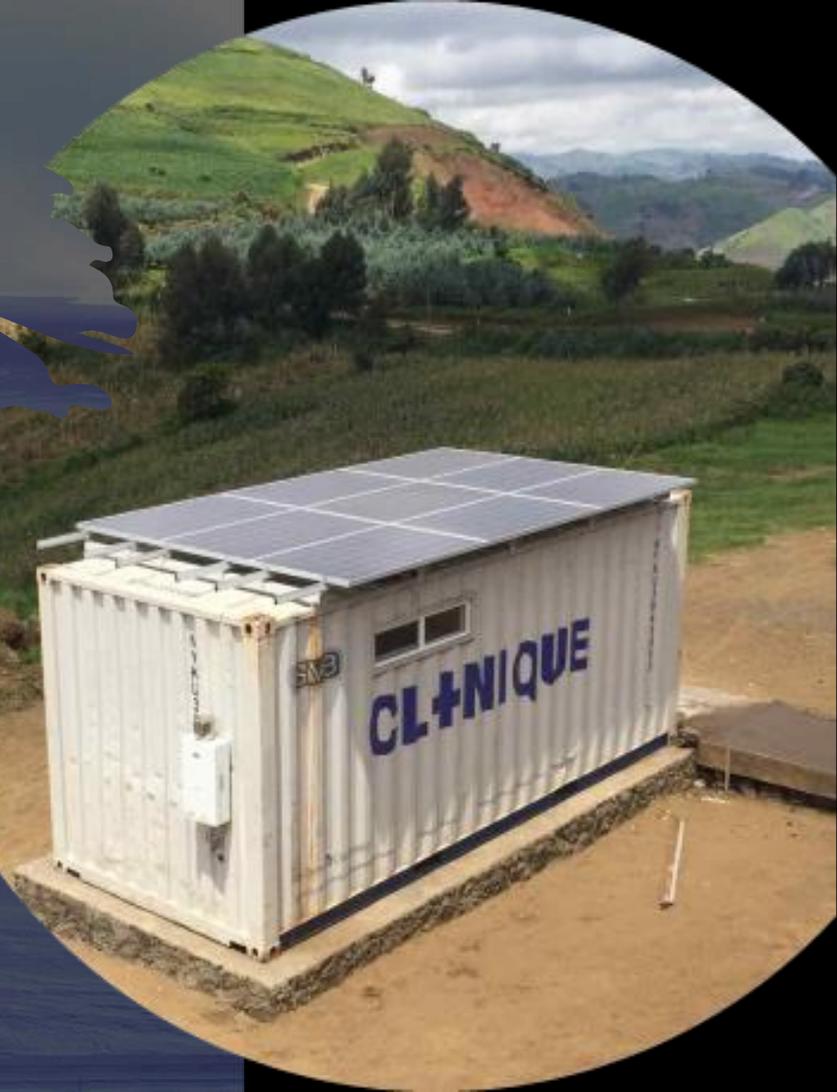
- Connected Care Medical Modules
- Deep Space Healthcare Challenge
- Innovation Lab at CSA HQ
- Innovation Fund for Remote Healthcare in Space and on Earth
- Engagement Activities
 - Workshops
 - Health Beyond Summit, Fall 2023

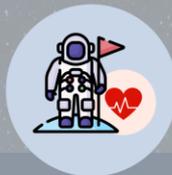


Connected Care Medical Module

Core computer-based system that facilitates the incorporation, interconnection (i.e., flow of information), and usage of the latest medical technologies

Enable agile, rapid prototyping and iterative operation on Earth, with the ultimate objective of operation in space





Countermeasures



Treatment Strategies



Training and simulation



Environmental Monitoring



Crew Health Monitoring



Point-of-care diagnostics



Integration Data Platform



User Interface



Decision Support System



AI Modules

Five Winners for the 1st C²M² Prototype

CGI



Creating the future together

Revolutionizing healthcare
on Earth and in space





Next Steps

Agence spatiale canadienne



Canadian Space Agency

