Humans are going to the Moon in the next decade and we are going to stay.

We will use what we learn on the Moon to take the next giant leap…

Sending astronauts to Mars and destinations beyond.
We’ve been launching humans into space for more than 50 years
We’ve carried the dreams of nations
We’ve transcended international borders to build the most sophisticated in-space technology the world has ever known.
A testbed for deep space exploration, there are six astronauts from three different countries living and working on station.

David Saint-Jacques, CSA
Anne McClain, NASA
Oleg Kononenko, Roscosmos
Alexey Ovchinin, Roscosmos
Nick Hague, NASA
Christina Koch, NASA
On Earth, there are many things that pull us apart – it is wonderful to find things like exploring space to pull us together.
International Interoperability Standards
Preparing for deep space exploration

- Avionics
- Communications
- Environmental Control and Life Support Systems
- Power
- Rendezvous
- Robotics
- Thermal

www.InternationalDeepSpaceStandards.com
Open Architecture Creates Opportunity

**ISS as a Model**

**COMMERCIAL CARGO & CREW**
- Cygnus (Northrop Grumman)
- Dragon (SpaceX)
- Dream Chaser (SNC)

**INTERNATIONAL**
- Soyuz & Progress (Roscosmos)
- H-II Transfer Vehicle (JAXA)
- Orion/European Service Module (ESA)

**Gateway**

**Lunar Surface**

Multiple providers expected in lunar orbit and on the surface
“Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and to bring back to Earth new knowledge and opportunities.

Beginning with missions beyond low-Earth orbit, the United States will lead the return of humans to the Moon for long-term exploration and utilization, followed by human missions to Mars and other destinations.”
Deep Space Exploration System

Building the right system for deep space exploration
Gateway

Designing a strategic and sustainable presence in cislunar space
Developing a New Approach

1. Open to multiple destinations and missions
2. Allows human exploration to advance at sustainable pace
3. Leverages commercial and international partnerships

International Space Station
- Testing and demonstration of Exploration Systems
- Open Interoperability Standards
- Commercial cargo and crew

Space Launch System – For transportation augmented with commercial capability
Orion – To carry the crew to space and sustain astronauts during long-duration missions
Gateway – Enabling reusable in-space operations and opening up commercial opportunities in deep space
Human Landing System – Providing crew access to explore the surface of Earth’s Moon
Mars
Vistas of opportunity and discovery

Earth