Panel 2 Observations

◆ **General Observations:**

- There was convergence on L1/L2 based missions as achievable, affordable, and applicable to a lunar scenario.

- The Moon offers unique commercial promise compared to other destinations

- Good exploration value, including science on the Moon

- Good test bed for sustainability and long durations

Panel 2 Findings

- ◆ **Message**
  - Improve overall Moon Next message (Why the Moon? Why humans? Why robots? How does it lead to Mars?) What type of commercial markets are enabled? Short-term(10 yr) versus long-term (25 yr) strategy for the Moon?
  - And how do robotic and/or commercial endeavors fit those horizons?
- ◆ **Cost**
  - Issue: Moon seems to be a location that we can get to early, affordably and is extensible to deep space operations for many capabilities, but the surface scenario as depicted is perceived as unaffordable
  - Impact to the GER:
    - Reevaluate the surface elements and their cost/necessity
- ◆ **Early opportunities**
  - Issue: We need to accelerate ISS testing and first lunar missions
  - Impact to the GER:
    - Use assets on hand to do some early near-term missions
    - Assess L1/L2 missions as ways to accomplish early missions including operating assets on the Moon (tele-presence?)

Panel 2 Findings

◆ **Habitat at L1/L2**

- Should deployment of a habitat and L1/L2 be included in the GER?

◆ **ISRU**

- Consensus that ISRU was important and relevant. Is worthy of demonstration to provide the data for further evaluation.
- Consider being more explicit with respect to ISRU in the GER and how it will be tested/proven

◆ **Alternate assets**

- Assess alternative/additional capabilities for programmatic resiliency, e.g., transportation, ground-based assessments of existing core samples
  - Smaller CPS
  - Reusable landers
  - SEP for cargo