



Extravehicular Activity and Human Surface Mobility Program (EHP)



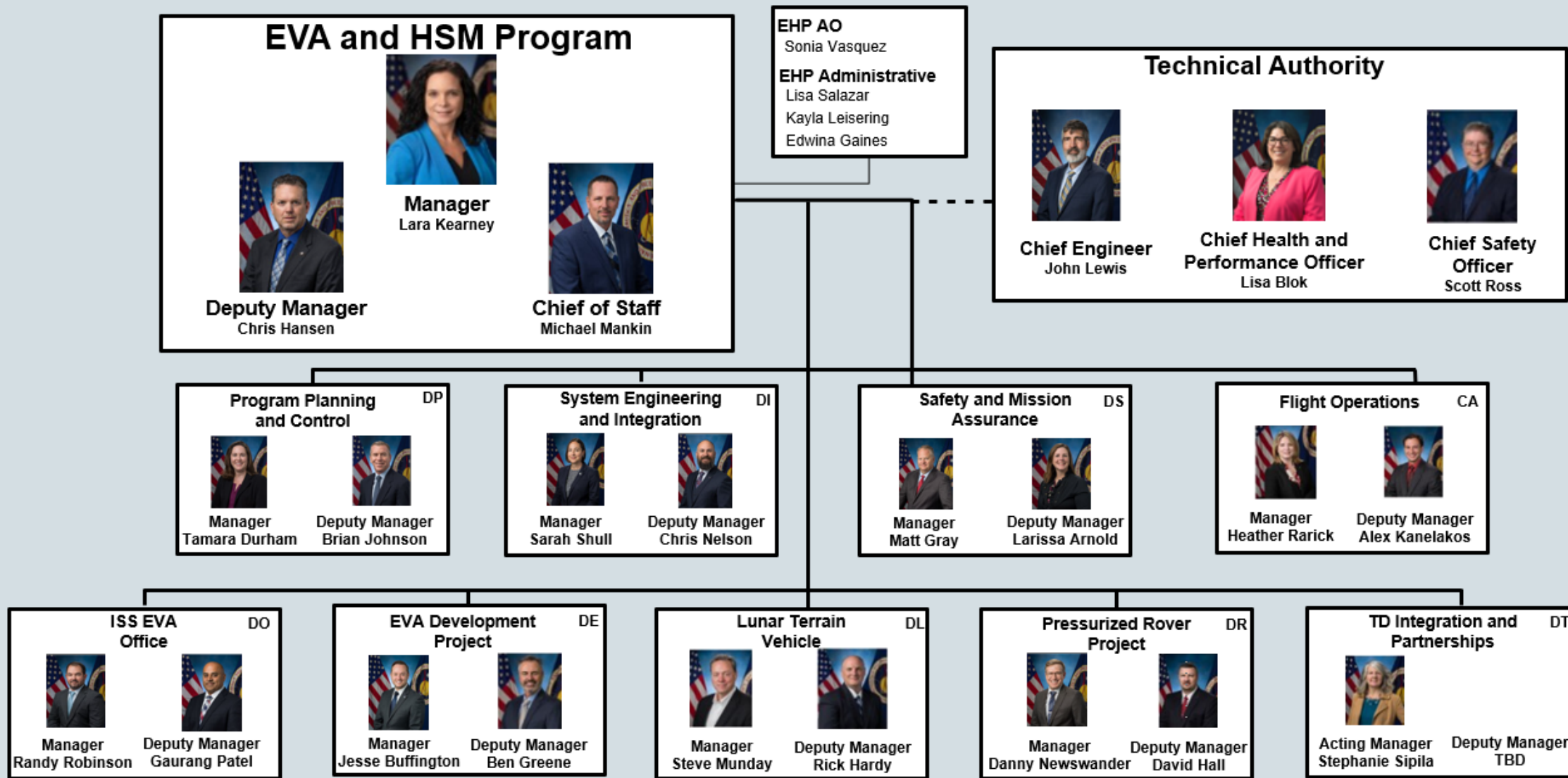


- New NASA program established 2022
- One of six Artemis Programs
- Spacesuits, EVA Tools, and Rovers
- Early stages of Artemis surface exploration begin with EHP
- Also responsible for Artemis surface integration

Image: Artist's render of an Artemis astronaut collecting a sample on the lunar surface.

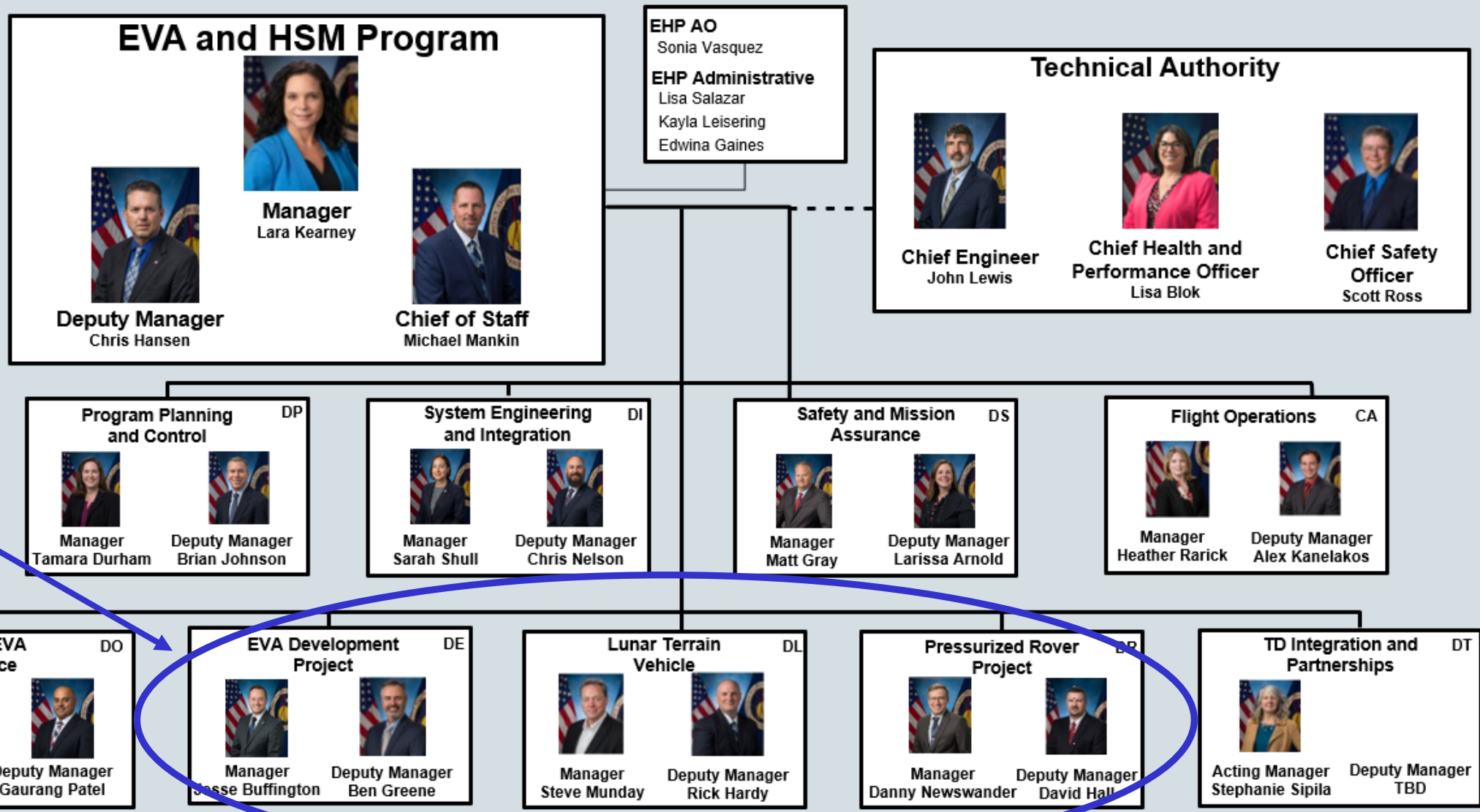


EHP Organization Chart

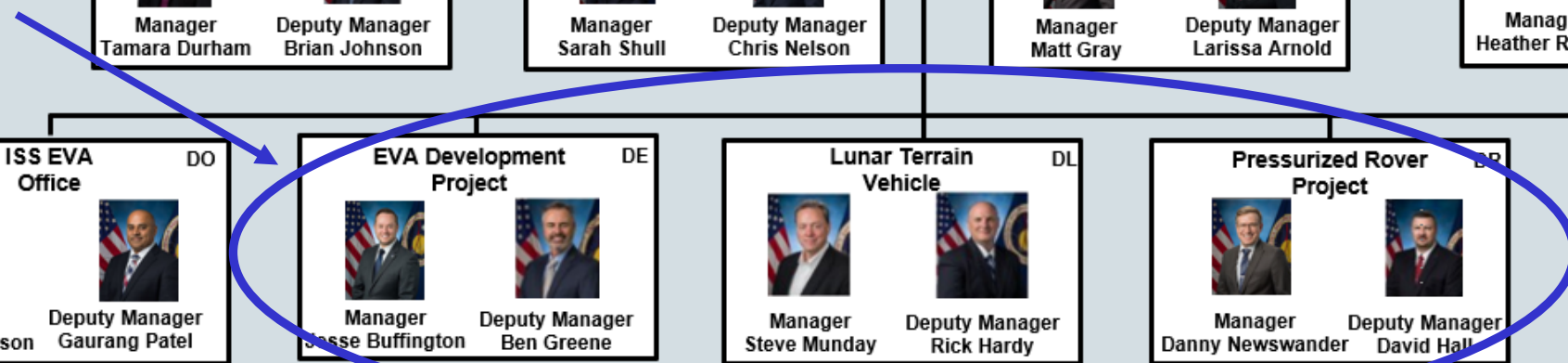




EHP Organization Chart



Surface
Element
Development
Projects

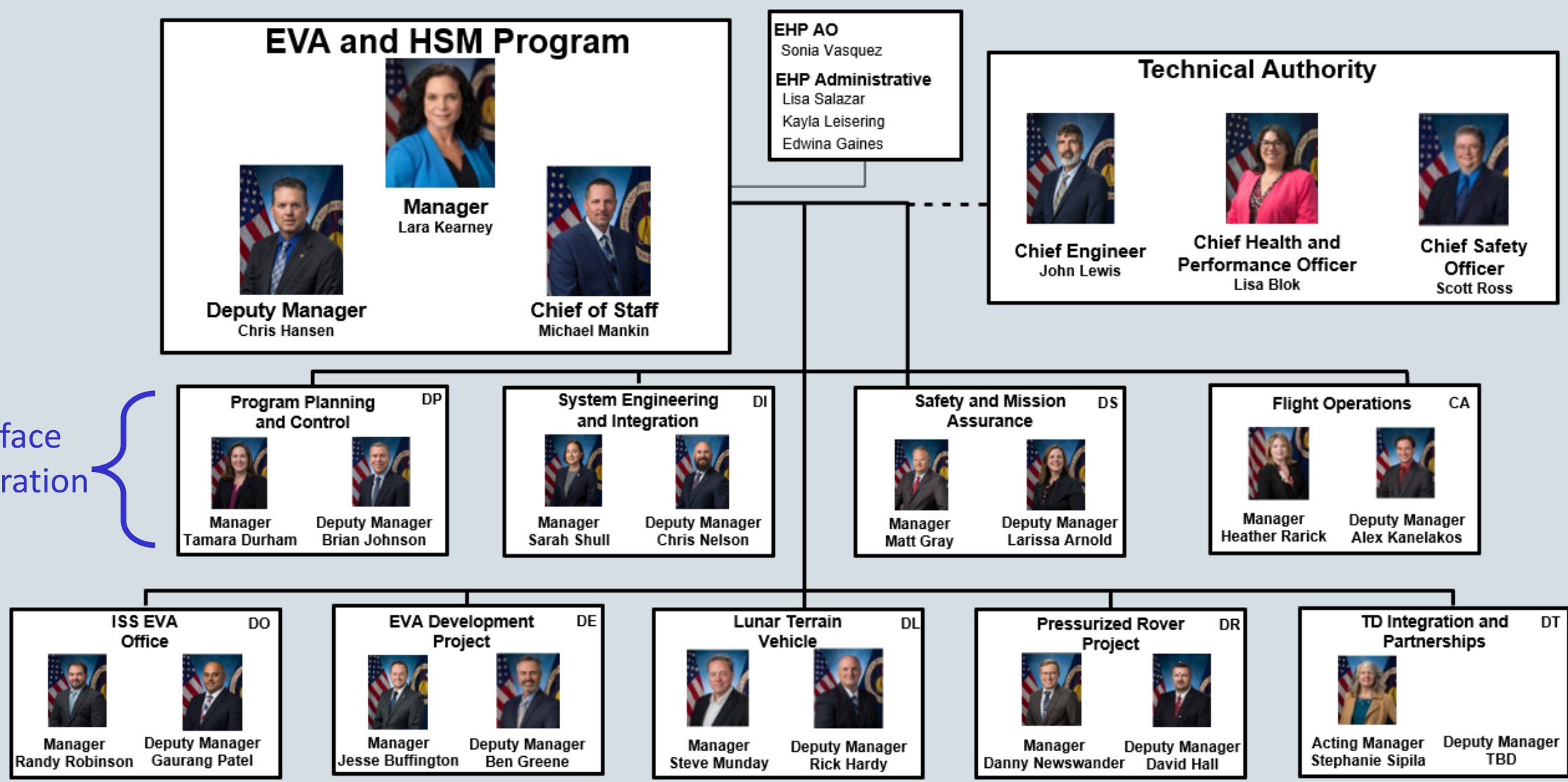




EHP Organization Chart



Surface Integration





Next-Generation Spacesuit

- Supports Artemis III+ missions
- Increased flexibility and mobility for exploring new regions more efficiently
- Increased size range and modular design to accommodate a wider range of crew members
- Rechargeable systems enable more spacewalks and longer stays on surface
- Specialized tools to collect samples and returned them safely to Earth
- Contract awarded May 2022
- AxEMU completed PDR February 2024

Axiom Extravehicular Mobility Unit (AxEMU)



Lunar Terrain Vehicle

- Initial surface transportation system for Artemis V+
- Significantly extends the range of crew excursions
- Enables more science, resource prospecting, and exploration on the lunar surface
- Tele-operation performs remote science during the non-crewed periods
- Transports and deploys small payloads and logistics
- Robotic manipulator supports science activities
- Provides video and imagery of landings, points of interest, and crew activities
- Supports multiple missions over 10-year lifetime
- Contract awarded April 2024
- PDR planned for summer 2025

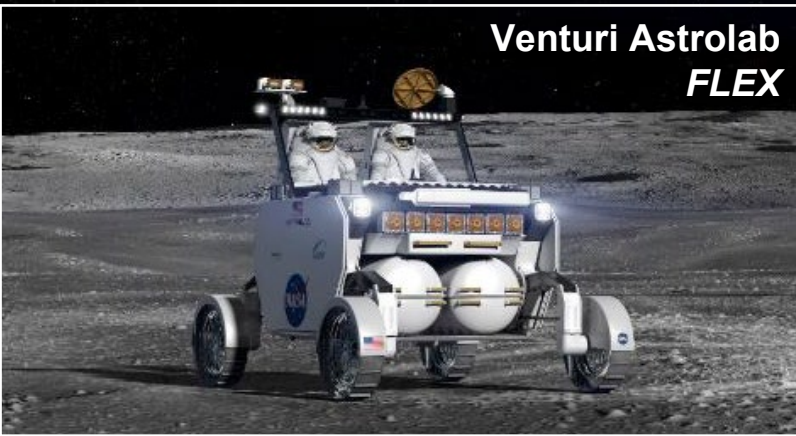
Intuitive Machines
Moon RACER



Lunar Outpost
Lunar Dawn



Venturi Astrolab
FLEX





Pressurized Rover



- Enables long-range surface exploration in shirtsleeve environment for Artemis VII+
- Provides
 - Habitation for 2 crew
 - Volume for spares and logistics
 - Dust and radiation protection
 - Science sample collection and transportation
 - 24 hours of EVA per week
- Tele-operation performs remote science during the non-crewed periods
- Supports multiple missions over 10-year lifetime
- Implementing Arrangement signed April 2024
- Joint SRR/SDR planned for December 2024



Surface Integration

- Integrated Concept of Operations
- Integrated Requirements
- Integrated System Design and Analysis
- Integrated Hazard Analysis
- Integrated Crew Survival and Contingency Analysis
- Payload Integration
- Integrated Test and Verification
- Surface Mission Development and Operations
- First Lunar Surface Phase Sync Review held May 2024

Image: Artist's render of an Artemis astronaut collecting samples on the lunar surface.





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