



FOR ALL MANKIND

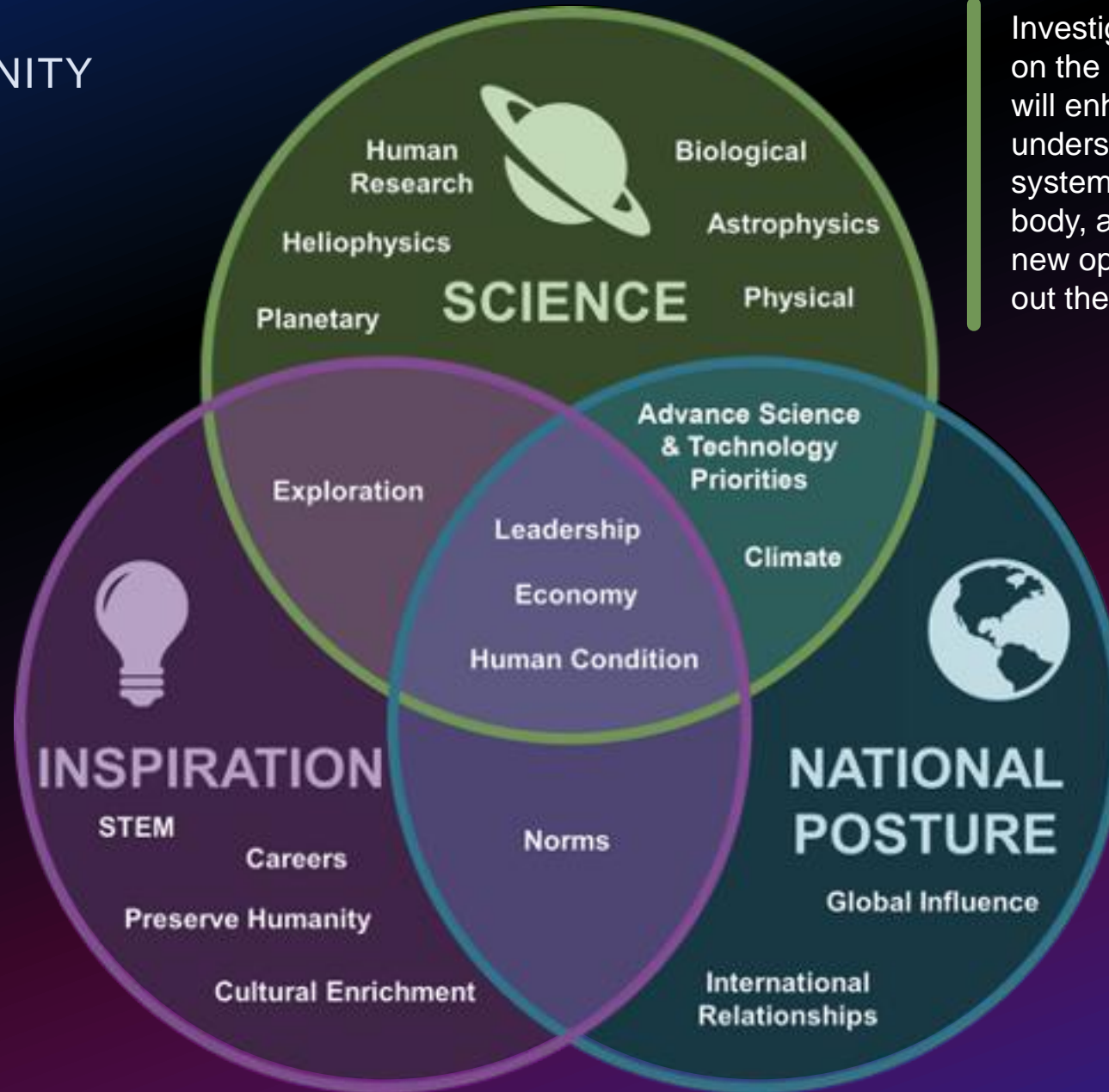
Communications' Role In Responsible and Sustainable Exploration

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NASA's Space Communications and Navigation Program

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WHY GO?

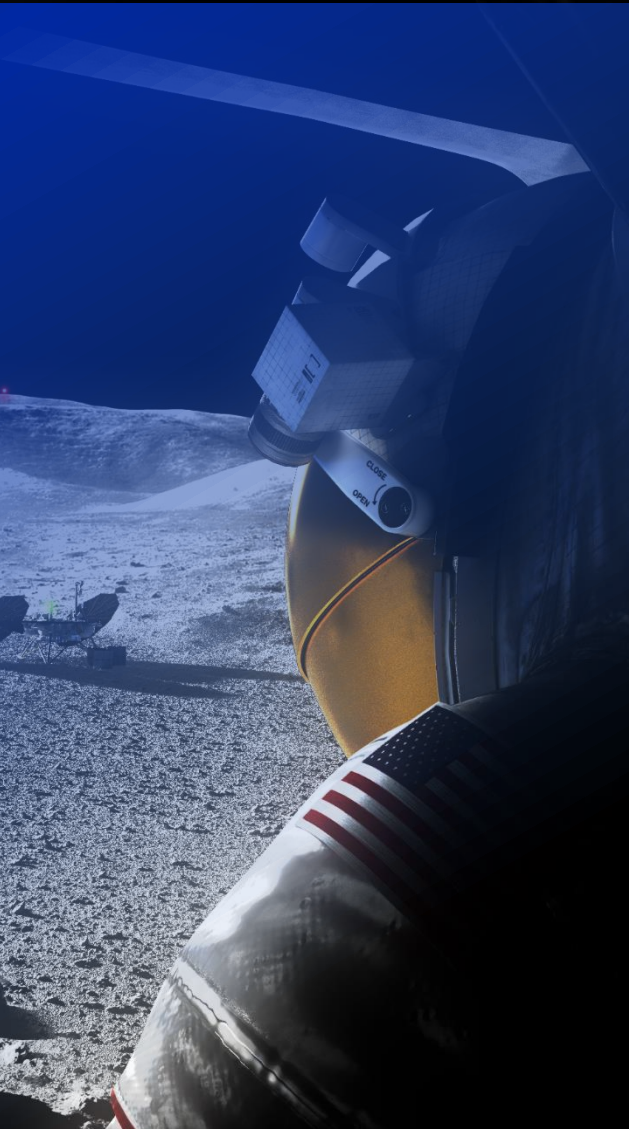
BENEFITS TO HUMANITY



Investigations in deep space, on the Moon, and on Mars will enhance our understanding of the solar system, Earth, the human body, and how to perform new operations while we are out there exploring.

Accepting audacious challenges and succeeding through perseverance and tenacity in the face of adversity motivates current and future generations to dare mighty things.

What we choose to do, how we do those things, and who we do them with greatly impacts our place in the world today, our quality of life, and our possibilities for the future.



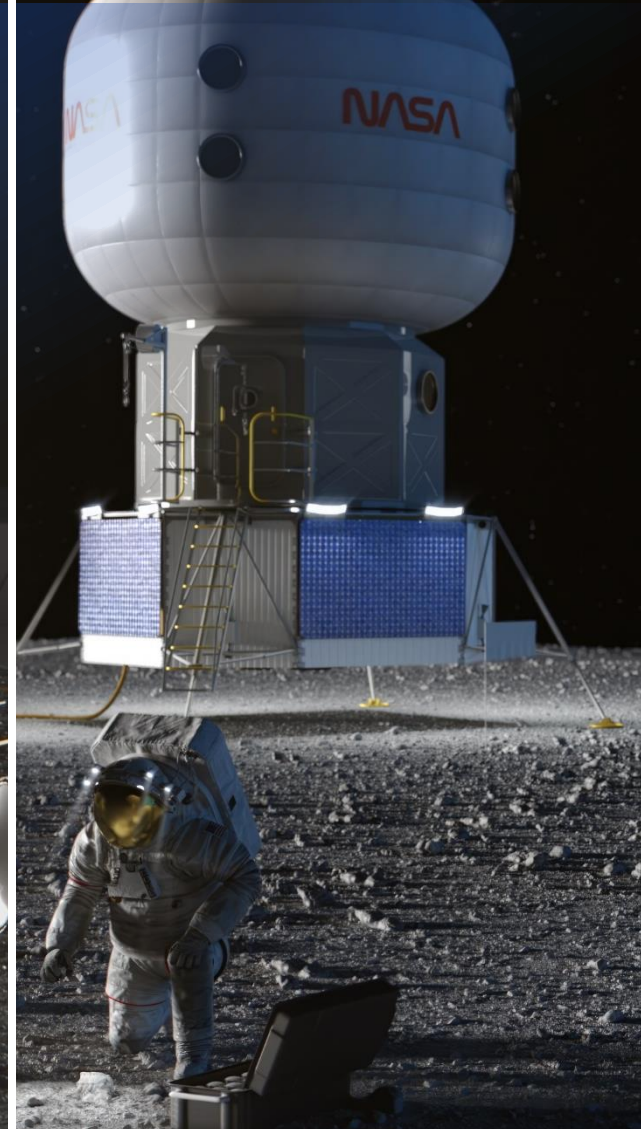
Human Lunar Return

Initial capabilities, systems, and operations necessary to re-establish human presence and initial utilization (e.g., science) on and around the Moon.



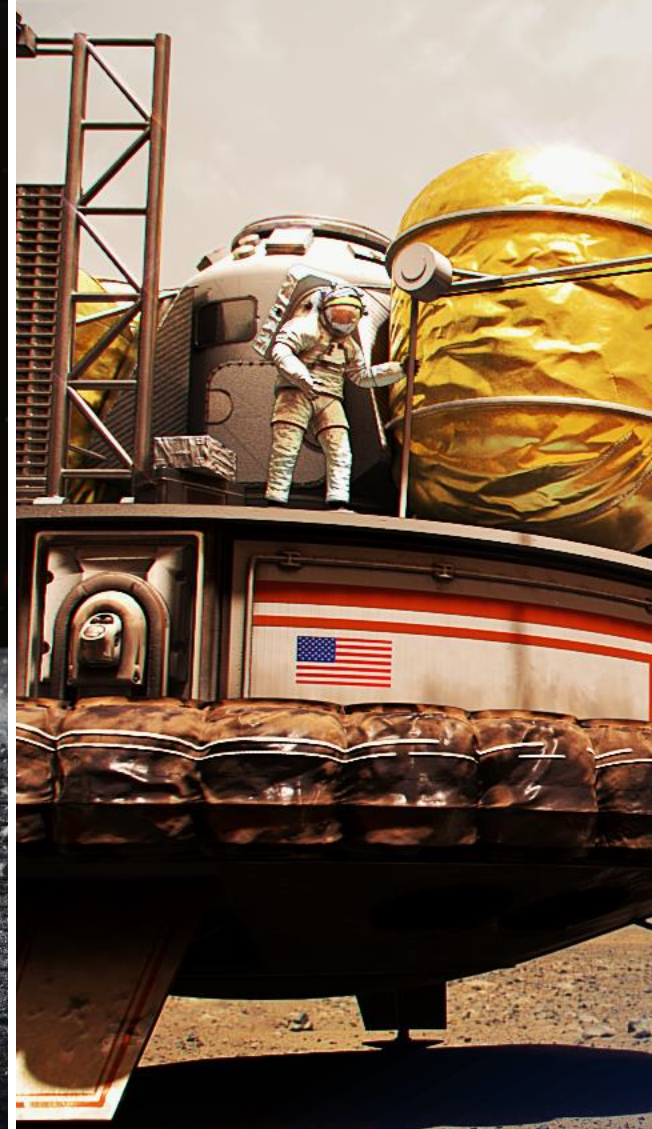
Foundational Exploration

Expansion of lunar capabilities, systems, and operations supporting complex orbital and surface missions to conduct utilization (e.g., science) and Mars-forward precursor missions.



Sustained Lunar Evolution

Enabling capabilities, systems, and operations to support regional and global utilization (e.g., science), economic opportunity, and a steady cadence of human presence on and around the Moon.

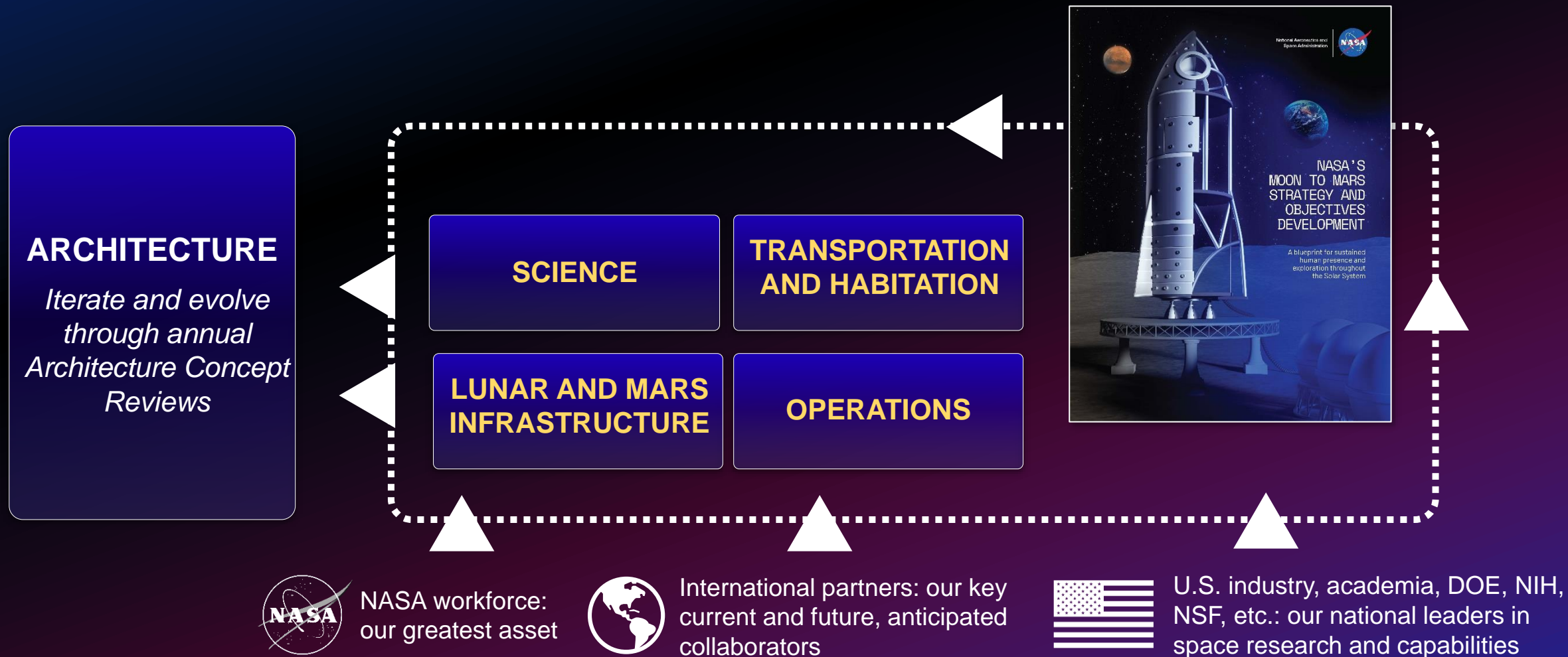


Humans to Mars

Initial capabilities, systems, and operations necessary to establish human presence and initial utilization (e.g., science) on Mars and continued exploration.

NASA'S MOON TO MARS OBJECTIVES

A BLUEPRINT FOR FUTURE HUMAN EXPLORATION



COMMUNICATION & NAVIGATION FOUR POINT PLAN



Deep Space Network (DSN) Lunar Exploration Upgrades (DLEU)



Lunar Exploration Ground Segment (LEGS) (18-Meter Class Antenna Subnet)

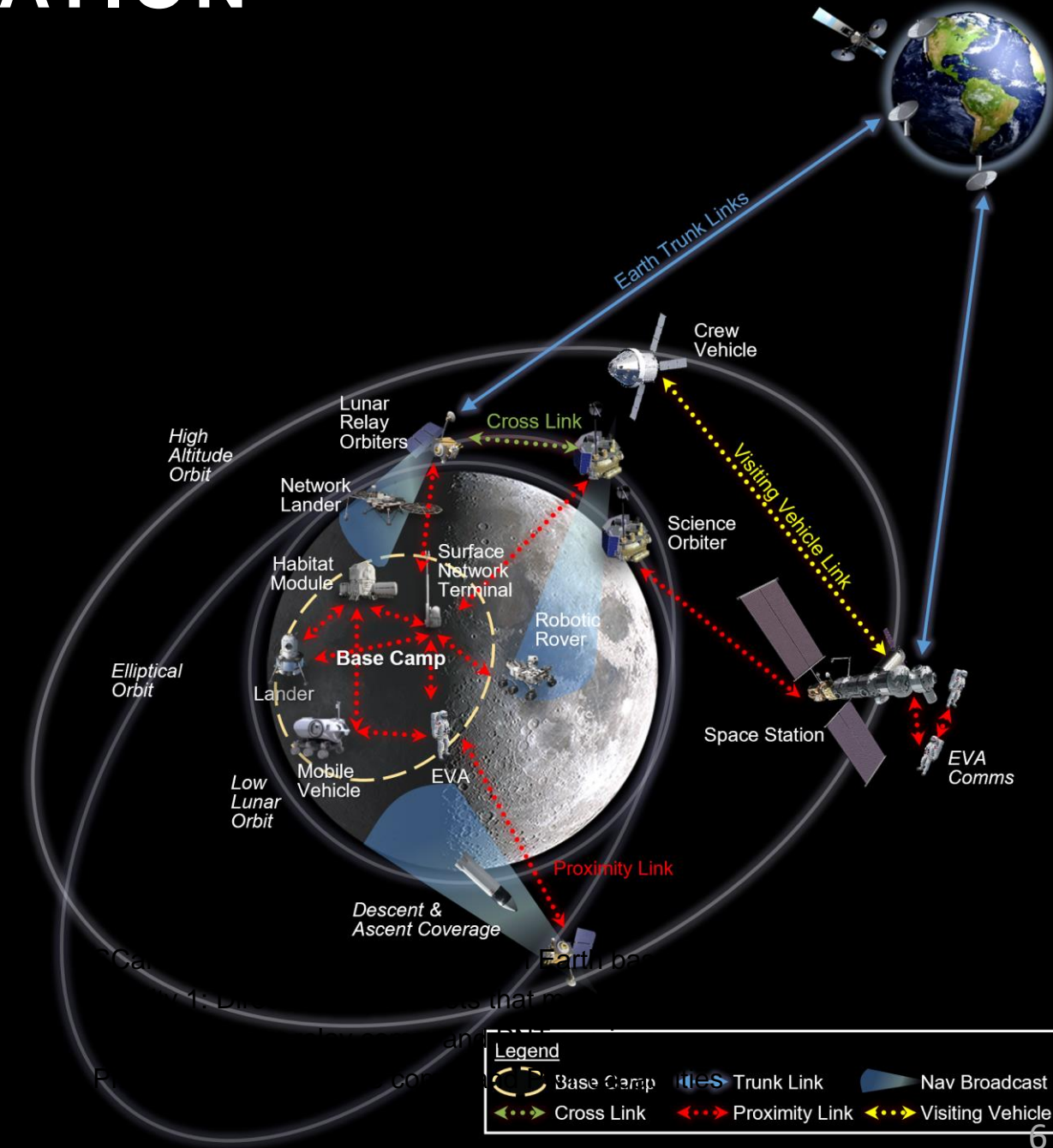


Lunar Communications and Navigation Relay Services

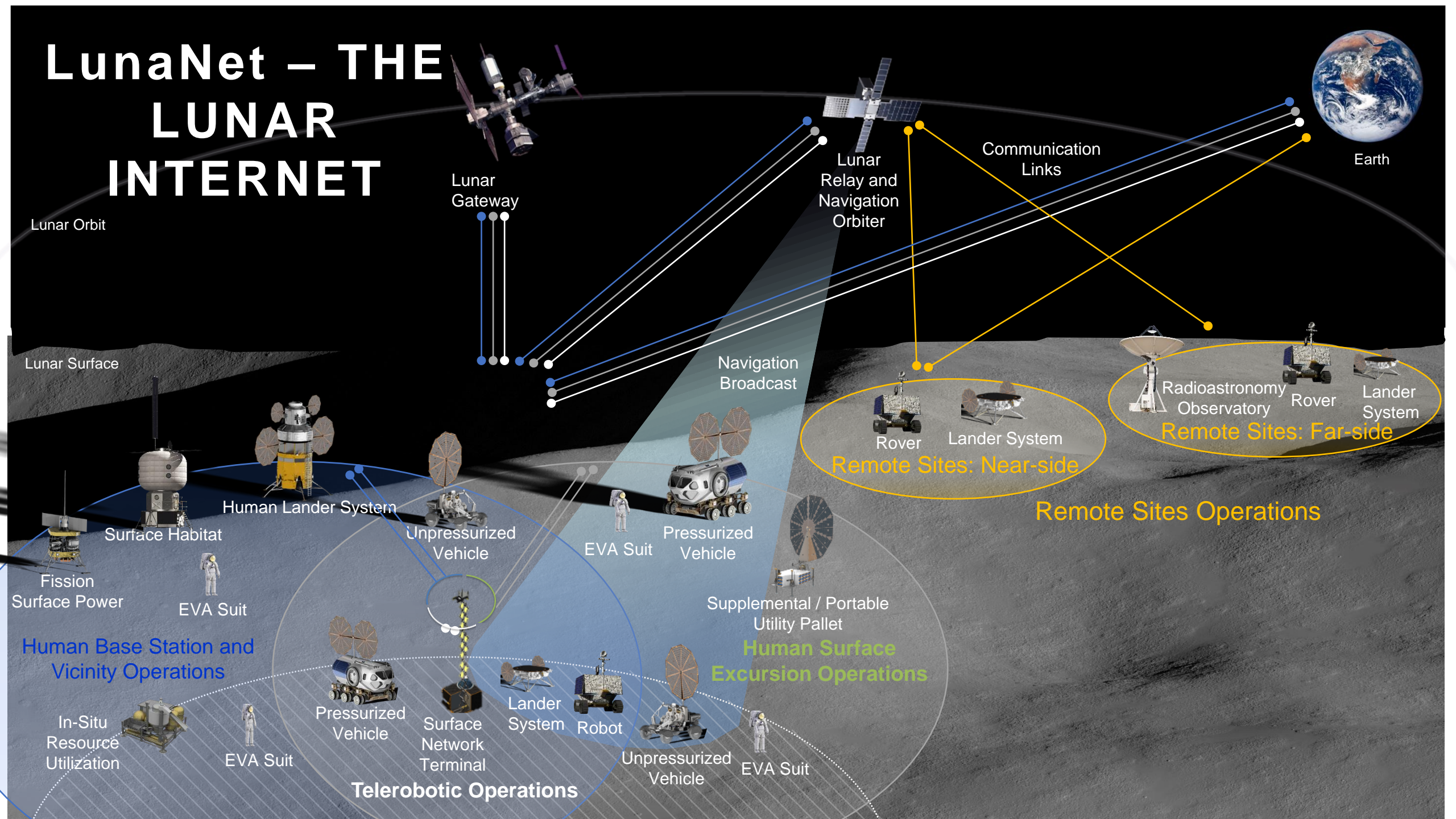


International Partnerships and Contributions

Commercial Ground Stations or Earth Relays



LunaNet – THE LUNAR INTERNET



We came in peace.

We go for all humanity.

