NASA shares newest results of Moon to Mars Architecture Concept Review

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Credit: NASA

NASA released on Tuesday the outcomes of its 2023 Moon to Mars Architecture Concept Review, the agency's process to build a roadmap for exploration of the solar system for the benefit of humanity.

The moon to Mars architecture approach incorporates feedback from U.S. industry, academia, international partners, and the NASA

workforce. The [2023 Architecture Concept Review](#) refined the existing architecture and strategies for the first crewed missions to Mars, including identifying seven key decisions in development that need to be made early in the process of establishing a plan to send astronauts to the red planet.

"Our new documents reflect the progress we've made to define a clear approach to exploration and lay out how we'll incorporate new elements as technologies and capabilities in the U.S. and abroad mature," said Catherine Koerner, associate administrator, Exploration Systems Development Mission Directorate at NASA Headquarters in Washington. "This process is ensuring that everything we are doing as an agency and together with our partners is focused on achieving our overarching exploration goals for the benefit of all."

Newly released documents include the 2023 Architecture Definition Document, a detailed, technical look at NASA's moon to Mars architecture approach and process; an executive overview; and 13 white papers about frequently raised topics on NASA's exploration path.

"Over the last year we've been able to refine our process for moon to Mars architecture concept development to unify the agency," said Nujoud Merancy, deputy associate administrator for strategy and architecture, NASA's Exploration Systems Development Mission Directorate. "Our process in the coming months will focus on addressing gaps in the architecture and further reviewing the decisions the agency needs to make to successfully mount crewed Mars missions."

In April 2023, NASA [shared](#) the inaugural Architecture Definition Document with detailed information about how [NASA's Moon to Mars Objectives](#), which serve as guideposts for [exploration](#), map to specific architecture elements. The agency hosted workshops to obtain feedback and held an internal [concept review](#) late in the year, during which leaders

from across NASA came together to discuss architecture needs and refinements. NASA will continue this cadence going forward, refining the architecture each year.

Under NASA's Artemis campaign, the agency will establish the foundation for long-term [scientific exploration](#) at the moon, land the first woman, first person of color, and its first international partner astronaut on the [lunar surface](#), and prepare for human expeditions to Mars for the benefit of all.

Provided by NASA