Agency Priority Goal | Action Plan | FY 2023 – Q4

Artemis

Goal Leader(s):

Goal Leader: Amit Kshatriya, Deputy Associate Administrator, Moon to Mars Program Office, Exploration Systems Development Mission Directorate (ESDMD)

Deputy Goal Leader: Lakiesha Hawkins, Assistant Deputy Associate Administrator, Moon to Mars Program Office, Exploration Systems Development Mission Directorate (ESDMD)

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Goal Overview

Goal statement

- Advance America's goal to land the first woman and the first person of color on the Moon and pursue a sustainable program of exploration by demonstrating capabilities that advance lunar exploration. By September 30, 2023, NASA will launch Artemis I, deliver the Core Stage for Artemis II to Kennedy Space Center for processing, and have multiple companies under contract to develop systems for sustainable human lunar exploration.

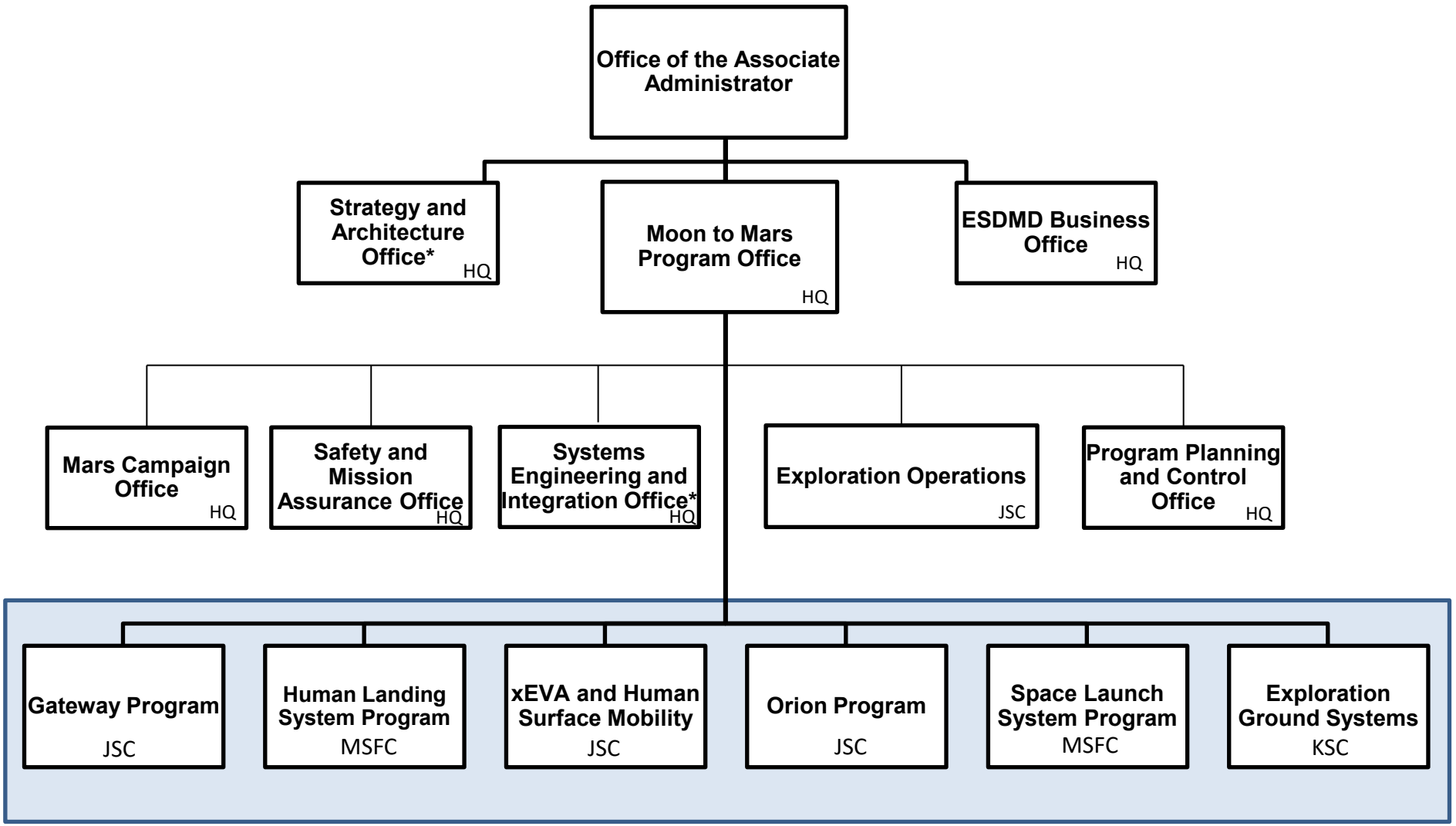
Problem to Be Solved

- Successfully execute long-duration space exploration missions – to the Moon and then on towards Mars – while developing new commercial launch capabilities, launch vehicles, spacecraft, and a lunar lander.

What Success Looks Like

- Launch Artemis I, the first integrated flight test of the Space Launch System (SLS) rocket and Orion spacecraft, with support from the upgraded Exploration Ground Systems at Kennedy Space Center (KSC)
- Deliver the SLS rocket Core Stage to KSC for processing in preparation for Artemis II, the first crewed Artemis mission
- Have multiple companies under contract to develop systems for sustainable human lunar exploration

Goal Team



*Strategy and Architecture and SE&I have direct integration with Science Mission Directorate and Space Technology Mission Directorate.

Goal Strategies

- The Moon to Mars Program Office will systematically progress through major qualification, testing, and production milestones to ensure the success of the Space Launch System (SLS) and Orion spacecraft on Artemis I (uncrewed test flight), Artemis II (crewed test flight), and Artemis III (crewed mission to the lunar surface).
- It also will use innovative procurement and management approaches to develop the core capabilities [Gateway, Human Landing System (HLS), and EVA & Human Surface Mobility] needed to conduct the lunar surface missions and enable multiple launch options for lunar missions.

Tracking the goal

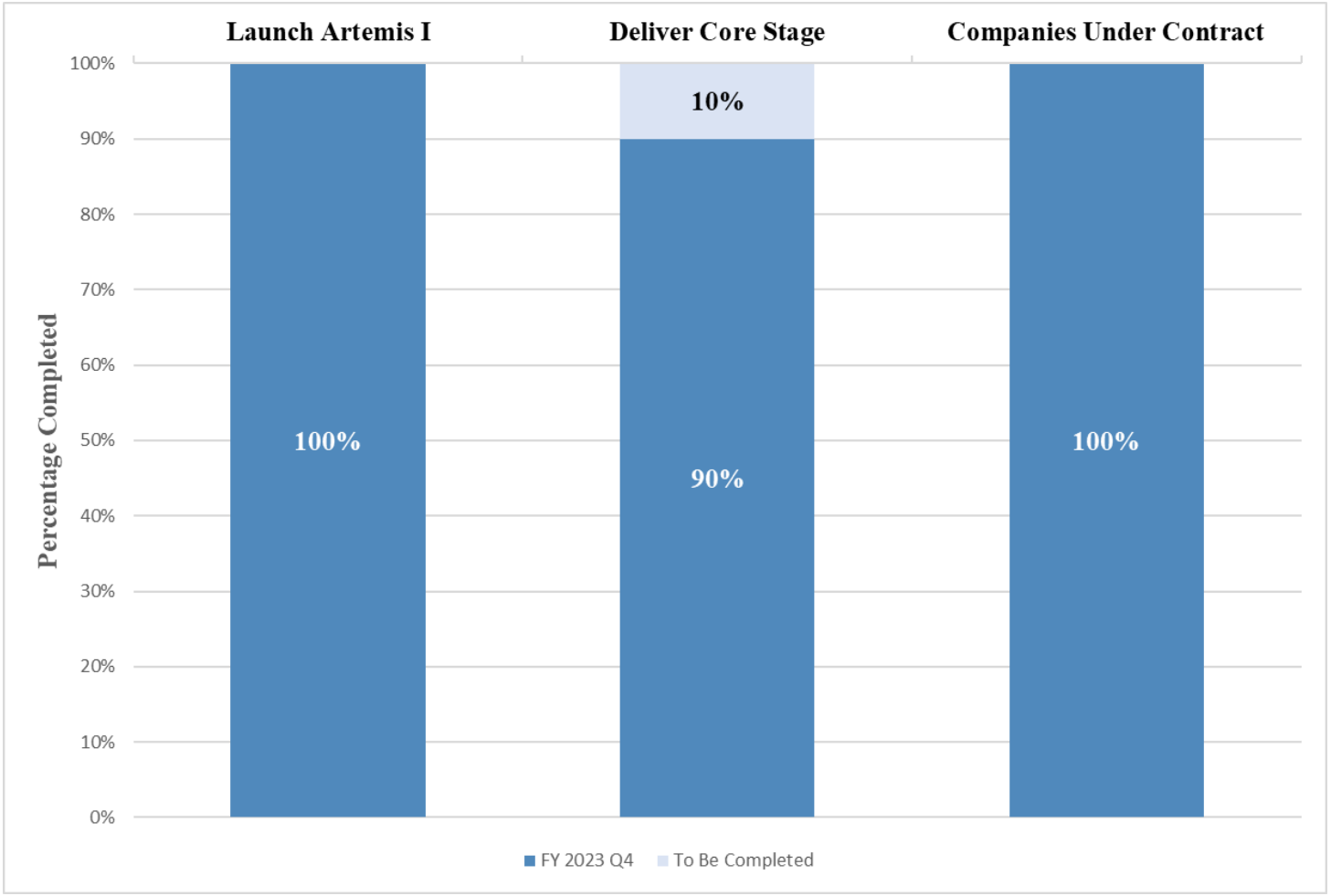
Goal target(s)

In the table below, please repeat the key metrics included in the goal statement (previous slide) that will be used to track progress.

Please update this column each quarter.

Achievement statement Repeat the achievement statement from the goal statement on the previous slide		Key indicator(s) A "key performance indicator" measures progress toward a goal target	Quantify progress These values enable us (and you!) to calculate % complete for any type of target*			Frequency When is there new data?
By…	**We will…**	**Name of indicator**	**Target value**	**Starting value****	**Current value**	**Update cycle**
9/30/2023	Launch Artemis I • *Completed Orion/SLS stacking* • *Completed integrated Vehicle Interface verification tests* • *Conducted communications end-to-end test* • *Completed Countdown Sequence Test* • *Completed preparation roll-out to Pad B* • *Completed wet dress rehearsal* • *Completed Termination System tests* • *Completed roll-out to Pad B for launch* • *Launched Artemis I* • *Completed recovery operations*	Launch Artemis I	100%	0%	100% Complete Artemis I launched on November 16, 2022	quarterly
9/30/2023	Deliver the SLS rocket Core Stage (CS) to KSC for processing in preparation for Artemis II • *Completed mate/integration of CS Forward Section* • *Completed mate/integration of CS Hydrogen Tank to Forward Section (Top Four Fifths, TFF)* • *Completed full assembly with mate of CS Engine Section to TFF* • Complete CS Final Integration and Test • Deliver by barge to KSC • Transport from barge to VAB	Deliver Core Stage	100%	25%	**~90%**	quarterly
9/30/2023	Have multiple companies under contract to develop systems for sustainable human lunar exploration by announcing awards for sustaining lunar development • *Completed the HLS Option A award* • *Awarded contract(s) for xEVA* • *Awarded contract(s) for sustaining lander development*	Companies Under Contract	100%	0%	100% Complete	quarterly

Key indicators



Key milestones

Milestone Summary			
Key Milestone	**Milestone Due Date**	**Milestone Status**	**Comments**
Complete the Artemis II Crew Module Adapter/ Service Module mate	FY 2022 Q1	Completed	Completed in October 2021.
Complete the Artemis II Interim Cryogenic Propulsion Stage (ICPS)	FY 2022 Q2	Completed	Artemis II ICPS is complete and shipped to KSC.
Artemis III Forward Skirt Structural Weld Complete	FY 2022 Q3	Completed	The Artemis III Forward Skirt structural weld was completed in March 2022. This activity is on the critical path of the Core Stage Forward skirt delivery.
Launch Artemis I	FY 2022 Q4	Completed	Artemis I launched November 16, 2022.
Complete Artemis II Booster Segment stacking	FY 2023 Q1	Delayed	The Artemis II Booster Segment stacking was delayed due to Artemis I launch slips and is now expected to be completed in FY 2024 Q3. Booster segments for Artemis II are complete and are in storage. In consideration of the limit life constraint associated with booster stacking, the planned stacking date aligns with changes in Artemis II launch periods.
Announce awards for sustaining lander development	FY 2023 Q2	Completed	NASA awarded both Human Landing System (HLS) sustaining lander development (SLD) contracts in FY 2023. NASA awarded the HLS SLD contract targeted for Artemis V to Blue Origin in FY 2023 Q3. NASA had awarded SpaceX an HLS sustaining contract(s) (Option B) earlier in FY 2023.
Deliver the Artemis II Core Stage to Kennedy Space Center (KSC)	FY 2023 Q3	Delayed	The Artemis II Core Stage is fully mated and is in final integration and test; the Core Stage is expected to be completed and shipped to KSC in FY 2024 Q1.
Habitation and Logistics Outpost (HALO) systems Critical Design Review (CDR) closeout	FY 2023 Q4	Completed	HALO System CDR closeout completed by September 2023.

Narrative – FY 2023 Q4

NASA has completed this Priority Goal, advancing lunar exploration by launching Artemis I, taking significant steps towards delivering the SLS rocket Core Stage in preparation for Artemis II, and awarding contracts for lander development. Although not all milestones were met, NASA achieved performance improvement above the baseline. The programs in the Moon to Mars Program Office completed key milestones:

- Against the FY 2022 Q2 milestone, Artemis II Interim Cryogenic Propulsion Stage (ICPS) checkout and final testing operations completed at the Delta Operations Center. The RL-10 Engine has been completed and integrated in Artemis II ICPS. The ICPS has been delivered to Cape Canaveral Space Force Base and waiting delivery to Exploration Ground Systems in FY 2024 Q1.
- Against the FY 2023 Q1 milestone, the Exploration Ground Systems team continues to make progress on the Mobile Launcher (ML) refurbishments needed as a result of the Artemis I launch and integral to Artemis II launch activities. Successfully rolled the Mobile Launcher (ML) from the park site to LC39B in Q4 to begin integrated testing of the Emergency Egress System, new LH2 sphere, and upgrades made to Environmental Control Systems (ECS) and Ignition Over Pressure/Sound Suppression.
- All Gateway program elements continued making substantial development progress. HALO has completed all Critical Design Review (CDR) closeout activity.
- Artemis II Core Stage is fully mated and is in final integration and test. All four RS-25 engines have been integrated into the Artemis II Core Stage. Remaining integration and assembly activities to support a delivery of the Artemis II Core Stage to KSC in FY2024 Q1 are underway.

Narrative – FY 2023 Q4 (continued)

In addition, M2MPO completed other important milestones:

- In FY2023 Q3, the Extravehicular Activity (EVA) and Human Surface Mobility program (EHP) successfully completed the Systems Readiness Review (SRR)/Systems Design Review (SDR). Also, in Q3, NASA issued a request for proposals (RFP) for a next-generation Lunar Terrain Vehicle (LTV) for companies interested in developing and demonstrating the LTV. Proposals were submitted to NASA in Q3 with an award expected in FY 2024.
- Artemis II Orion Crew Module (CM) and Service Module (SM) mate completed, forming the Crew Service Module.

In terms of next steps, NASA and the M2MPO are continuing the Artemis Exploration Agency Priority Goal into the FY2024-2025 cycle, with updated milestones and timelines to be shared in 2024.

Data Accuracy & Reliability

Verification and Validation:

- NASA monitors and tracks its progress towards this goal using various Agency documents and reports, including Directorate Program Management Council materials, Quarterly Program Status Report packages, project schedules, and other program-internal documents.

Data Source(s):

- Press releases and program-internal documents indicating whether or not NASA has met its major quarterly development milestones such as Baseline Performance Review presentation.

Level of Accuracy Required for Intended Use:

- Using the documents and reports referenced above, the Agency is able to accurately report at the end of each quarter on whether or not it has met its planned milestones.

Data Limitations:

- NASA has not identified any data limitations that would preclude it from reporting accurate, reliable, and timely performance information.

How the Agency Compensates for Data Limitations:

- Not applicable.

Additional Information

Contributing Programs:

Organizations

- NASA, European Space Agency

Program Activities

- The principal contributor to this goal is the Moon to Mars Program Office, which manages the Orion, Space Launch System (SLS), Gateway, Human Landing System (HLS), xEVA and Surface Mobility, and Exploration Ground Systems programs.
- Other NASA organizations that contribute to the goal include the SOMD Space Communications and Navigation, Rocket Propulsion Test, and Exploration Research & Technology programs, and both the Space Technology and Science Mission Directorates.

Other Federal Activities:

- Other federal contributors include the United States Air Force, United States Navy, United States Army, and the United States Space Force. NASA also conducts tests at Department of Defense facilities.

Stakeholder / Congressional Consultations

- NASA provides regular status updates to Congress, including quarterly reports on SLS funding. NASA also provides regular progress briefings to Congressional staff.
- NASA supports regular audits by the Government Accountability Office (GAO) as part of both the annual “Assessment of Major Projects” report and other focused reviews.
- NASA provides status updates to the Aerospace Safety Advisory Panel and the NASA Advisory Council.