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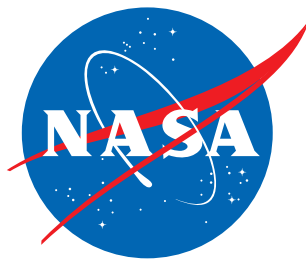
NASA's Mission Support Future Architecture Program

Office of Inspector General

RESULTS IN BRIEF

NASA's Mission Support Future Architecture Program

WHY WE PERFORMED THIS AUDIT

NASA seeks to send humans to the Moon and Mars, perform scientific research across the solar system and universe, study Earth, develop groundbreaking technology, build the next generation of air travel, and educate the nation's future explorers. The Agency's mission support services are essential business functions that serve as the foundation for achieving these goals and include capabilities such as information technology, financial resources, human resources, legal services, and infrastructure management. Over the past decade, the cost for these services have increased due to program demands, while the budget for mission support services as a percentage of NASA's budget has decreased. This budget reality was a driving factor for the Agency to reevaluate its operating model for mission support services.

In 2017, NASA launched the Mission Support Future Architecture Program (MAP), an organizational realignment of mission support services. Led by a Program Executive and core team, MAP aimed to create a more efficient operating model that maintains critical capabilities and meets current and future mission needs. The program sought to enhance operational efficiency, increase standardization across the Agency, and share capabilities across centers. Prior to MAP, mission support services were funded through and managed individually by NASA's 10 centers, which created duplicative business offices in each of those centers. The MAP initiative had five main objectives: (1) engage stakeholders, (2) realign budget authority, (3) establish a more efficient operating model, (4) share capabilities across NASA, and (5) evolve mission support services. As part of the MAP initiative, NASA realigned budgets, the workforce, and services provided by 12 of the Agency's mission support organizations (collectively referred to as Mission Support Enterprise Organizations or MSEOs).

Over the past decade, NASA has conducted similar efforts to realign capabilities and mission support services, and our prior work has shown limited success. In this audit, we assessed NASA's efforts to strategically manage its mission support services through the MAP initiative. To complete our work, we reviewed NASA policies and analyzed MAP documentation including planning documents, implementation plans, and decision documents for each of the 12 MSEOs. We interviewed Agency senior leadership and managers of the 12 MSEOs. Lastly, we surveyed 4,721 employees in the MSEOs to gauge their experience and perceptions of the MAP transformation.

WHAT WE FOUND

MAP aimed to establish an enterprise-wide operating model to enhance operational efficiency of mission support services across the Agency. The MAP initiative consolidated mission support services, enabled a more strategic view of these services, and provided a clearer understanding of Agency requirements. Every MSEO that underwent the MAP initiative reported positive impacts to their operations such as improvements to data integration, communication and collaboration, and the unification of business processes. However, implementation for some MSEOs is not complete. While some MSEOS are still actively working to implement MAP-related initiatives, others have scaled back, revised decisions, or reverted to their pre-MAP operating structures. In addition, NASA has not conducted a formal evaluation to measure whether MAP achieved its intended objectives and there are no Agency-wide metrics to measure MAP's success or overall impact. Even though all MSEOs are required to report on their organization's performance to NASA leadership quarterly, the metrics are not designed to specifically measure MAP-related activities.

Several factors hindered NASA's ability to fully implement MAP including leadership turnover, insufficient resources, and an overly burdensome process not intended or designed for organizational change. Originally designed as a 6-year initiative lasting from 2017 to 2023, senior leadership declared the program complete 2 years earlier than planned. Turnover at the senior leadership level including three different NASA Associate Administrators shifted priorities, taking the momentum and focus away from implementing MAP, which led to some mission support offices accelerating their timeline to bring MAP to a close.

The MAP initiative was implemented against a backdrop of mission support services budget reductions and a lack of dedicated staff and funding. MAP relied heavily on personnel assigned on temporary details to conduct the work and the Agency did not specifically fund critical elements of an organizational transformation such as information technology tools, retraining of personnel, and travel. Each MSEO designated a project manager responsible for guiding its transition to an enterprise model. However, because MSEOs had to implement MAP using existing personnel and budgets, resources were significantly strained. MAP followed the guidelines outlined in NASA Procedural Requirements (NPR) 7120.7, which provides a structured framework with clearly defined tasks, decision points, and rigorous reviews. Numerous MSEO officials reported the NPR 7120.7 process was overly burdensome requiring extensive presentations and documentation that further strained their limited workforce. MSEO officials were also of the opinion that NPR 7120.7 was not the right tool for implementing MAP since it was designed to formulate and execute information technology and institutional infrastructure programs with defined requirements and not for change management and organizational restructuring.

The changes resulting from the MAP initiative limited flexibility across the Agency. MAP was originally designed for flexibility, with each MSEO tailoring their end state based on their operational needs. However, as MAP implementation progressed, the operating model shifted from flexibility to centralization. This approach limited flexibility to shift resources across business functions and made collaboration and trade-offs more difficult. There was also limited evaluation of how the MAP changes affected other MSEOs and operations at the centers. Center leadership expressed that operational realignment caused an imbalance on resource distribution, making it harder to complete routine tasks and maintain service levels at their locations. Taken together, these challenges have hindered the Agency's ability to fully realize the MAP initiative's intended outcomes. Moving forward, the Agency has a unique opportunity to apply lessons learned from MAP to future organizational realignment efforts.

WHAT WE RECOMMENDED

As NASA continues to take steps to consolidate mission support services, transition to an enterprise-wide model, and operate more efficiently, we recommended the NASA Associate Administrator: (1) develop a process to measure desired outcomes and efficiencies for future organizational changes and (2) develop a program and project management framework or roadmap for organizational change.

We provided a draft of this report to NASA management who concurred with our recommendations and described planned actions to address them. We consider management's comments responsive; therefore, the recommendations are resolved and will be closed upon completion and verification of the proposed corrective actions.

For more information on the NASA Office of Inspector General and to view this and other reports visit https://oig.nasa.gov/.

TABLE OF CONTENTS

Acronyms

CECR	Construction and Environmental Compliance and Restoration
KDP	Key Decision Point
MAP	Mission Support Future Architecture Program
MSD	Mission Support Directorate
MSEO	Mission Support Enterprise Organization
NPR	NASA Procedural Requirements
OCFO	Office of the Chief Financial Officer
OCHCO	Office of the Chief Human Capital Officer
OCIO	Office of the Chief Information Officer
OGC	Office of the General Counsel
OIG	Office of Inspector General
OSI	Office of Strategic Infrastructure
SSMS	Safety, Security, and Mission Services
STEM	Science, Technology, Engineering, and Math

INTRODUCTION

NASA seeks to send humans to the Moon and Mars, perform scientific research across the solar system and universe, study Earth, develop groundbreaking technology, build the next generation of air travel, and educate the nation's future explorers. The Agency's mission support services are essential business functions that serve as the foundation for achieving these goals and include capabilities such as information technology, financial resources, human resources, legal services, and infrastructure management. In 2017, NASA launched the Mission Support Future Architecture Program (MAP), an organizational realignment of mission support services. The overarching goal of MAP was to establish a more efficient operating model that maintains critical capabilities and meets current and future mission needs.

As part of the MAP initiative, NASA realigned budgets, the workforce, and services provided by 12 of the Agency's mission support organizations. The transition occurred over several years with the goal of optimizing NASA's business functions by moving from a more center-focused approach to an interdependent, enterprise—or Agency-wide—model. This change was intended to invest in information technology, infrastructure, and other capabilities necessary for achieving NASA's missions. In 2021, NASA reported that MAP was complete.

Over the past decade, NASA has conducted similar efforts to realign capabilities and business functions, and our prior work has shown limited success. In this audit, we assessed NASA's efforts to strategically manage its mission support services through the MAP initiative. Details of the audit's scope and methodology are outlined in Appendix A.

Background

NASA operates at 10 geographically dispersed centers across the United States and is headquartered in Washington, DC.[1] The Agency also has six mission directorates—Aeronautics Research, Exploration Systems Development, Mission Support, Science, Space Operations, and Space Technology. The Mission Support Directorate (MSD) is responsible for enterprise-wide services that enable the Agency's business and technical operations. MSD provides technical expertise and services in areas such as information technology, financial resources, human resources, and physical infrastructure. MSD was the only directorate reorganized through the MAP initiative.

The mission support community includes MSD core offices, direct reports and partner offices (collectively referred to as Mission Support Enterprise Organizations or MSEOs), Technical Authorities, and business and technical professionals at NASA centers. MSD, led by an Associate Administrator, has six core offices—Aircraft Capability Management Office, Mission Support and Headquarters Operations Office, Mission Support Integration Office, Mission Support Resources Management Office, Partnership Office, and Program Management and Support Office. These offices provide overall

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[1] NASA's centers include Ames Research Center, Armstrong Flight Research Center, Glenn Research Center, Goddard Space Flight Center, the Jet Propulsion Laboratory, Johnson Space Center, Kennedy Space Center, Langley Research Center, Marshall Space Flight Center, and Stennis Space Center.

direction and alignment of the mission support enterprise, as well as technical and professional support services and capabilities for NASA missions to help ensure the health, safety, and security of NASA personnel and property and the public. MSD is also supported by center teams located across the United States to ensure laboratories, critical capabilities, and associated specialized equipment are mission-ready and positioned to meet NASA standards.

In addition, MSEOs work with MSD to provide mission support services. This includes three direct report offices—the NASA Shared Services Center, Office of Protective Services, and Office of Strategic Infrastructure (OSI).[2] These offices directly report to the MSD Associate Administrator and are responsible for providing security, facility, real estate, environmental, contract, and human resources services for all NASA organizations.

MSEOs also include 11 partner offices—Office of the Chief Financial Officer (OCFO), Office of the Chief Human Capital Officer (OCHCO), Office of the Chief Information Officer (OCIO), Office of Communications, Office of Equal Opportunity, Office of the General Counsel (OGC), Office of International and Interagency Relations, Office of Legislative and Intergovernmental Affairs, Office of Procurement, Office of Small Business Programs, and Office of Science, Technology, Engineering, and Math (STEM) Engagement. While these MSEOs do not directly report to the MSD Associate Administrator, they partner with MSD to provide professional expertise and services to NASA organizations in areas such as information technology, financial resources, and legal services.

Lastly, three Technical Authorities—the Office of the Chief Engineer, Office of the Chief Health and Medical Officer, and Office of Safety and Mission Assurance—provide mission-enabling technical expertise in safety and engineering to all of NASA. The Technical Authorities were not included in the MAP initiative. See Figure 1 for the MSD's organization structure, its core offices and MSEOs, and the Technical Authorities.

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[2] The NASA Shared Services Center is not a MSEO but was established as an Enterprise Service Support Center in 2006 to perform select business and technical services in a single, shared environment. The center provides consolidated services in the areas of financial management, human resources, procurement, enterprise services, and agency business support.

Figure 1: Mission Support Directorate and Mission Support Community Organization Structure (as of March 2025)

Mission Support Directorate Core Offices
provide funding, alignment, and integration

- Aircraft Capability Management Office
- Mission Support and Headquarters Operations Office
- Mission Support Integration Office
- Mission Support Resources Management Office
- Partnership Office
- Program Management and Support Office

Funding for direct report offices and partner offices flows down from the Mission Support Directorate

Direct Report Offices
report to the Mission Support Directorate Associate Administrator and deliver essential services to support all NASA business

- NASA Shared Services Center[a]
- Office of Protective Services
- Office of Strategic Infrastructure

Partner Offices
collaborate with the Mission Support Directorate and provide essential services and professional expertise to the Agency

- Office of the Chief Financial Officer
- Office of the Chief Human Capital Officer
- Office of the Chief Information Officer
- Office of Communications
- Office of Equal Opportunity
- Office of the General Counsel
- Office of International and Interagency Relations[b]
- Office of Legislative and Intergovernmental Affairs
- Office of Procurement
- Office of Small Business Programs
- Office of STEM Engagement[c]

Technical Authorities
provide mission-enabling technical expertise to the Agency

- Office of the Chief Engineer
- Office of the Chief Health and Medical Officer
- Office of Safety and Mission Assurance

Source: NASA Office of Inspector General (OIG) presentation of Agency information.

Note: Direct report offices and partner offices, denoted by the light blue box, are MSEOs.

[a] NASA Shared Services Center is not a MSEO but provides mission support services.
[b] The Office of International and Interagency Relations did not complete MAP.
[c] The Office of STEM Engagement is not funded through MSD and is instead funded through a separate congressional appropriation.
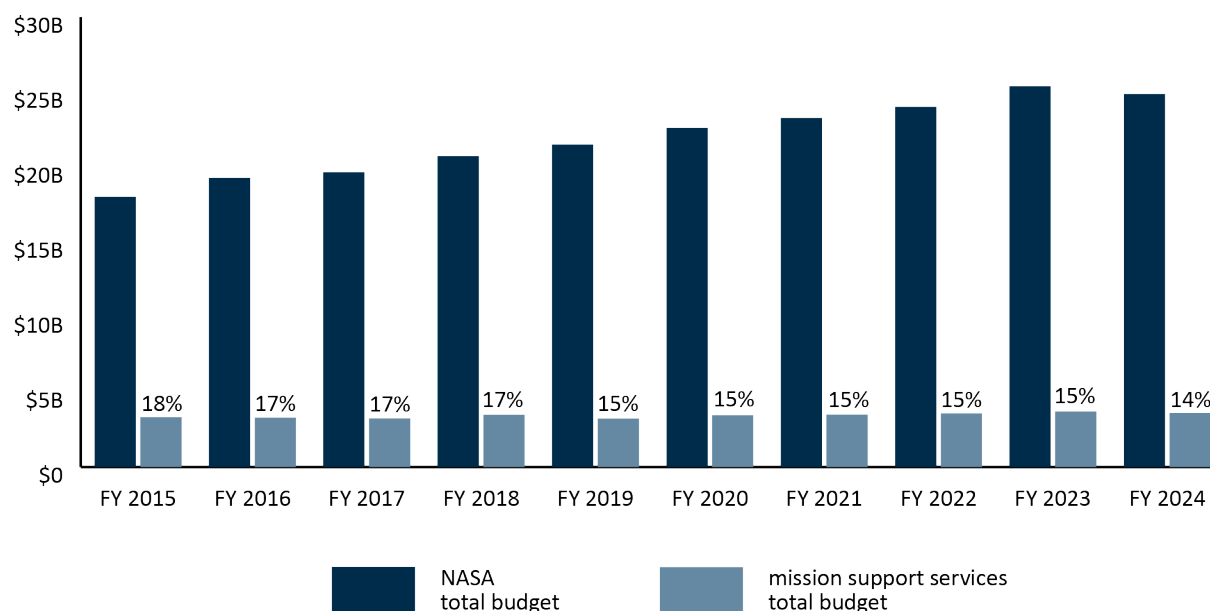
Mission Support Services Budget

In NASA's fiscal year 2024 budget, mission support services totaled just over $3.6 billion and were funded by three separate congressional appropriations: Safety, Security, and Mission Services (SSMS), Construction and Environmental Compliance and Restoration (CECR), and STEM Engagement.[3] All MSEOs, except for the Office of STEM Engagement, are funded through SSMS and CECR. While most of

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[3] SSMS funds mission services and capabilities and the Technical Authorities. CECR funds capital repairs and improvements to NASA's infrastructure, and restoration and environmental activities. STEM Engagement funds efforts to attract, engage, and educate students, and support educational institutions.

the MSEOs do not report directly to the MSD Associate Administrator, the Associate Administrator distributes SSMS and CECR funds to the core offices, MSEOs (direct report offices and partner offices), and the Technical Authorities.

Over the past 10 years, from fiscal years 2015 to 2024, funding for the Agency and mission support services has fluctuated. Although NASA's budget has seen a 38 percent increase during this time, going from $18 billion to $24.8 billion, the budget for mission support services as a percentage of NASA's budget has decreased from 18 percent to 14 percent (see Figure 2). According to NASA leadership, costs for mission support services have risen due to growing program demands, such as those from the Artemis campaign, but over the same 10-year period, the total mission support services budget has not kept pace and went from $3.3 billion to $3.6 billion, about a 9 percent increase.[4] This budget reality was a driving factor for the Agency to reevaluate its operating model for mission support services.

Figure 2: Comparison of NASA and Mission Support Services Budgets from Fiscal Years 2015 to 2024

Source: NASA OIG analysis of mission support services budget.

Note: Fiscal year (FY). The percentages represent how much of the mission support services' budget makes up NASA's total budget. The mission support services total budget includes SSMS, CECR, and STEM Engagement funds.

In 2024, the National Academies of Sciences, Engineering, and Medicine (National Academies) reported that NASA's science and exploration missions are consuming an increasing share of NASA's budget.[5] The report recommended NASA receive sufficient funding to maintain its workforce, technology, and

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[4] The Artemis campaign seeks to return humans to the Moon's surface, establish a permanent Moon base, and send crewed missions to Mars in the 2030s.

[5] National Academies, *NASA at a Crossroads: Maintaining Workforce, Infrastructure, and Technology Preeminence in the Coming Decades* (2024). The National Academies provide independent advice and facilitate solutions to complex challenges by mobilizing expertise, practice, and knowledge in science, engineering, and medicine.

infrastructure capabilities to achieve its long-term strategic goals, even if that requires rebalancing funding allocations between mission work and mission support services.

Prior Realignments of Agency Capabilities and Business Functions

NASA made several attempts to realign its capabilities and business functions prior to MAP. In 2012, the Agency established the Technical Capabilities Assessment Team to identify and assess the technical capabilities—the facilities, infrastructure, equipment, tools, and civil servant and contractor workforce— needed for current and future missions. The team was tasked with making recommendations on investing in, consolidating, or eliminating capabilities. In a March 2017 report, the Office of Inspector General found the Agency had established a framework to better manage its technical capabilities. However, 4 years into the process, NASA had yet to make many concrete decisions such as consolidating or disposing of assets. Instead, most actions were decisions regarding the management of capabilities and plans for how they would be utilized in the future versus actual determinations to divest or consolidate capabilities. The report concluded the Agency's efforts had been slow to create meaningful results.[6]

In 2015, NASA conducted the Business Services Assessment to determine how to provide essential mission support services within relatively flat resource levels. NASA formed teams to evaluate the health of the Agency's mission support services and identify areas for improvement. Like the Technical Capabilities Assessment Team, the Business Services Assessment reached varying levels of implementation. Although NASA reported that the Business Services Assessment led to some positive changes aimed at improving operational effectiveness and efficiencies, those decisions were constrained by the organizational structure in place at the time.

Mission Support Future Architecture Program

Building on the results of and lessons learned from the Business Services Assessment, NASA initiated MAP in 2017 due to ongoing and anticipated future budget decreases. According to MAP's overall program plan, budget pressures resulted in increased deferred maintenance of facilities, reduction to employee services, limited funds available for investment in information technology, and challenges in most mission support services.[7] Additionally, the MAP program plan detailed the need for alternative approaches to providing mission support services with the ultimate outcome of more agile, flexible, and lower cost services.

Prior to MAP, mission support services were funded through and managed individually by NASA's 10 centers, which created duplicative business offices in each of those centers. For instance, NASA operated 10 separate human resources and communications offices, with each one conducting center-specific tasks. MAP aimed to establish an enterprise-wide operating model to enhance operational efficiency, increase standardization across the Agency, and share capabilities across centers rather than sustaining individual business and mission support services at each center. The MAP initiative had five main objectives:

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6 NASA Office of Inspector General (OIG), *NASA'S Efforts to "Rightsize" Its Workforce, Facilities, and Other Supporting Assets* (IG-17-015, March 21, 2017).

7 Deferred maintenance is the total essential but unfunded maintenance work necessary to bring facilities and related equipment to acceptable maintenance standards.

- **Objective 1:** Engage NASA Headquarters, center, and mission directorate leadership throughout the program life cycle.

- **Objective 2:** Realign mission support structures to include budget authority and lines of reporting.

- **Objective 3:** Establish a more efficient operating model that maintains critical capabilities and meets current and future mission needs.

- **Objective 4:** Share capabilities across centers rather than sustaining business and mission support services at each center.

- **Objective 5:** Evolve mission support services consistent with evolving roles and work assignments at centers and strategic Agency objectives.

MAP was originally intended to last 6 years, from 2017 through 2023, but the Agency declared it complete in 2021. Between 2017 and 2021, 13 MSEOs participated in the MAP initiative, with the offices beginning the transition process to an enterprise model over four phases. The Office of International and Interagency Relations was subsequently removed from the MAP initiative during a transition update, reducing the number of participating MSEOs to 12 and the number of phases to three. See Figure 3 for the 12 MSEOs scheduled to transition during each of the three phases.

Figure 3: MAP Phases with Corresponding MSEOs

PHASE 1	• Office of the Chief Financial Officer (Financial Management) • Office of the Chief Human Capital Officer • Office of Legislative and Intergovernmental Affairs
PHASE 2	• Office of Communications • Office of Equal Opportunity • Office of Procurement • Office of Protective Services • Office of Small Business Programs • Office of STEM Engagement
PHASE 3	• Office of the Chief Information Officer • Office of the General Counsel • Office of Strategic Infrastructure

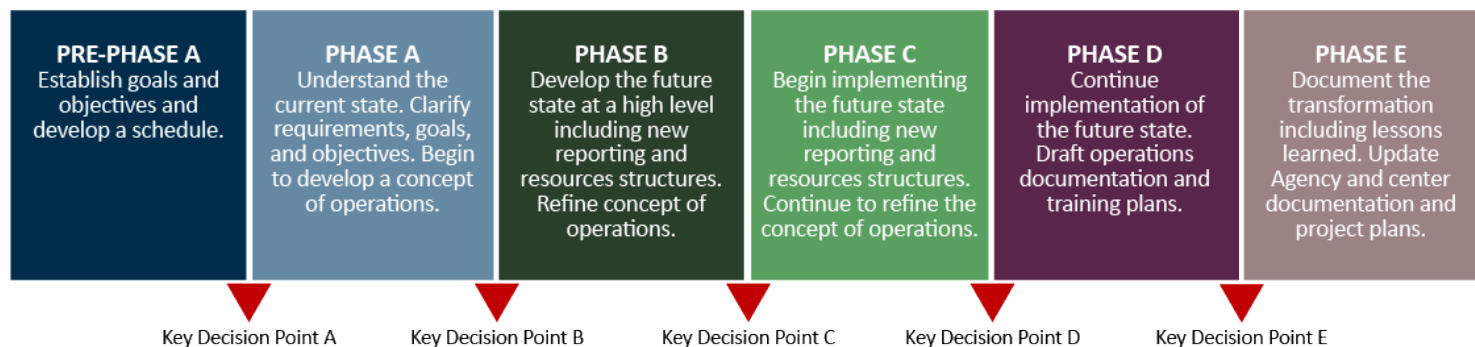Source: NASA OIG presentation of Agency information.

MAP also realigned reporting lines and budget authority across the MSEOs. Specifically, the 12 organizations were realigned into an enterprise model, with center mission support offices reporting to the head of the MSEO, generally located at NASA Headquarters, instead of local center management as was the case under previous operating models.[8] Funding for mission support services were removed from center operations budgets and realigned with the enterprise MSEO organization.

MAP Governance and Implementation Process

MAP was executed as a program under MSD, led by a Program Executive and core team that varied between 6 and 10 people. Each MSEO designated a project manager tasked with formulating and implementing their office's transformation to an enterprise model as an individual project under MAP. The Mission Support Council serves as the Agency's senior decision-making body for the mission support portfolio, which includes all mission support services, and was the ultimate decision authority for MAP. Although the overarching MAP program plan outlined core principles and general guidelines, such as strategic workforce planning and the use of standardized tools, each MSEO was responsible for developing its own tailored project plan specific to its functional area. The intended end state for each MSEO ranged from a decentralized model to a fully centralized enterprise operating model, based on appropriateness for each function.

MAP followed the guidelines outlined in NASA Procedural Requirements (NPR) 7120.7, which governs the management of information technology and infrastructure programs and projects.[9] The NPR 7120.7 process provides a structured framework with clearly defined tasks, decision points, and a standardized methodology for managing programs and projects. NPR 7120.7 requires both program and project level reviews throughout the transformation life cycle. The program and project life cycle is divided into Phases A through E and requires Key Decision Points (KDP), which provides leadership with oversight authority and ensures program and project progress aligns with Agency management and budgetary expectations. See Figure 4 for a general description of the phases outlined in NPR 7120.7 and the KDPs.

Figure 4: Tailored NPR 7120.7 MAP Process

PRE-PHASE A	PHASE A	PHASE B	PHASE C	PHASE D	PHASE E
Establish goals and objectives and develop a schedule.	Understand the current state. Clarify requirements, goals, and objectives. Begin to develop a concept of operations.	Develop the future state at a high level including new reporting and resources structures. Refine concept of operations.	Begin implementing the future state including new reporting and resources structures. Continue to refine the concept of operations.	Continue implementation of the future state. Draft operations documentation and training plans.	Document the transformation including lessons learned. Update Agency and center documentation and project plans.
Key Decision Point A	Key Decision Point B	Key Decision Point C	Key Decision Point D	Key Decision Point E	

Source: NASA OIG presentation of information from NPR 7120.7.

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[8] MSEOs are led by an Associate Administrator, Assistant Administrator, or Chief.

[9] MAP followed NASA Interim Directive 7120.99, *NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements* (December 22, 2011). This directive was the interim version to NPR 7120.7, *NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements* (November 3, 2008). The directive was then replaced with NPR 7120.7A, *NASA Information Technology Program and Project Management Requirements (Updated with Change 2)* (August 17, 2020).

Specifically, KDPs serve as formal checkpoints where Decision Authorities assess whether a program or project is ready to proceed to the next phase, providing a clear "go" or "no go" decision.[10] The MAP team established entrance and exit criteria for KDPs A through E that required project plans, stakeholder engagement plans, risk management assessments, schedules, employee training, and concept of operations. Under this framework, the Program Control Board was the primary management board for MAP to evaluate each MSEO project and provide integration across mission support function areas. Chaired by the MAP Program Executive, the Program Control Board was responsible for approving project plans, schedules, risk acceptance, and readiness for KDPs. The Mission Support Council reviewed the KDP documentation from each MSEO and decided when the MSEO was ready to proceed into the next phase. Details of each KDP decision was formalized in a memorandum signed by the Mission Support Council and MSEO leadership.

In addition to the KDPs, NASA conducted a series of independent assessments throughout the NPR 7120.7 process to ensure accountability and readiness. These independent review teams reported the results of MAP and individual MSEO project readiness at the KDP phases to the Mission Support Council.

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[10] The Decision Authority determines a program's or project's readiness to proceed to the next life-cycle phase and approves key program or project content, cost, schedule, and content parameters for the life cycle, which are documented at each KDP.

NASA MADE PROGRESS TRANSITIONING MISSION SUPPORT SERVICES TO AN ENTERPRISE SERVICE MODEL BUT IMPLEMENTATION IS INCOMPLETE

MAP aimed to establish an enterprise-wide operating model to enhance operational efficiency of mission support services across the Agency. While the MAP initiative consolidated Agency mission support services, enabled a more strategic view of Agency operations, and provided a clearer understanding of Agency requirements, implementation remains incomplete. Moreover, the Agency lacks comprehensive metrics to assess MAP's overall impact and success. Several factors influenced the scope and breadth of MAP implementation including leadership changes that shifted the original vision of the initiative and pressure to finalize MAP. Additionally, the initiative was executed with insufficient resources using a burdensome process that was not designed for organizational change. Some MAP changes occurred in silos, which limited operational flexibility across the Agency. Taken together, these challenges have hindered the Agency's ability to fully realize the MAP initiative's intended outcomes. Moving forward, the Agency has a unique opportunity to apply lessons learned from MAP to future organizational realignment efforts.

NASA Consolidated Business Functions under MAP

NASA has made progress in its transition to an enterprise service model that centralizes mission support services across the Agency. MAP intended to streamline and consolidate mission support services conducted individually at centers to an enterprise service model where collaboration is promoted, resources are realigned, and centers share capabilities in support of Agency-wide objectives.

Each of the 12 MSEOs that underwent the MAP initiative reported positive impacts to their operations including improvements to data integration, communication and collaboration, and the unification of business processes. For example, the Office of Procurement realigned operations from 11 separate buying organizations into a single enterprise office, which streamlined communication, created a centralized repository of procurement data, and enabled resource sharing among procurement employees across the MSEO. Among center Chief Financial Officers, the MAP initiative enabled the establishment of cohort teams to share best practices and strengthen cross-Agency support. For instance, employees from one center provided surge support—additional resources, personnel, and expertise—to another center that had been short-staffed for 6 months.

Likewise, OSI is in the process of replacing a patchwork of tools used to track acquisition, storage, and disposal of hazardous materials ranging from commercial databases to Excel spreadsheets with a centralized database. OSI officials credit MAP for enabling this change, which followed a December 2020 recommendation the Office of Inspector General made to establish an Agency-wide system.[11] The Agency also consolidated 10 separate center-managed internship programs into a single enterprise-wide

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[11] NASA OIG, *NASA's Management of Hazardous Materials* ([IG-21-006](#), December 3, 2020)*.*

initiative. Additionally, MSEO officials agreed that the MAP initiative better positioned their organizations to deal with constrained budgets.

Implementation of MAP Is Incomplete

While MAP helped consolidate mission support services and facilitate a more strategic view of Agency operations, implementation for some MSEOs is ongoing and not complete. MSD officials explained some of the smaller offices were easier to transition due to their size, whereas larger, more complex offices faced greater challenges. According to MAP's original Program Executive, some mission support services were better suited to transition to an enterprise model, while others struggled due to their unique mission needs.

For example, OSI—one of the last organizations to undergo MAP—in accordance with its MAP implementation project plan, reduced its full-time workforce by approximately 10 percent over the past 4 years and adapted the enterprise service model to suit its operational needs. However, OSI is still in the process of implementation and expects to continue its efforts over the next 5 to 6 years using a strategic plan as a guide. Similarly, OCIO has partially implemented MAP and acknowledged work remains. For example, they are continuing to manage the transition by migrating center services to the new enterprise service model as existing contracts reach their expiration or option years. According to OCIO officials, in 2023 OCIO consolidated over 30 contracts by functional area, which significantly reduced the number of individual center contracts, but the consolidation process remains ongoing.

While some MSEOs are still actively working to implement MAP-related initiatives, others have scaled back, revised decisions, or reverted to their pre-MAP operating structures. For instance, OCHCO has scaled back or reversed some enterprise-related changes due to shifting management priorities. OCHCO reported each step of their transition was completed incrementally based on whether centralizing or decentralizing business functions made more sense. In some instances, center specific control proved more effective than a fully centralized enterprise service model. For example, OCHCO determined each center should maintain its own bargaining labor units and negotiate union agreements independently, rather than centralizing the functions under MAP. According to OCHCO officials, each center's bargaining labor units reflect historical precedents, making it practical to preserve the current collaborative structure. Unifying these functions was not a top priority for OCHCO under MAP.

In addition, OGC revised some of its MAP decisions. In 2020, OGC implemented an initiative to provide legal services by core legal function such as procurement, litigation, or intellectual property. Executive champions assigned to each core legal function were charged with, among other duties, proposing ways to transform legal services strategically across the Agency as one legal enterprise and determining the most effective method of delivering these services within an assigned core legal function. In 2023, the Acting General Counsel rescinded this direction based on employee feedback and reverted to delivering legal services primarily based on a combination of geographic location, practice area, and program. OGC retained reporting lines and budget at NASA Headquarters.
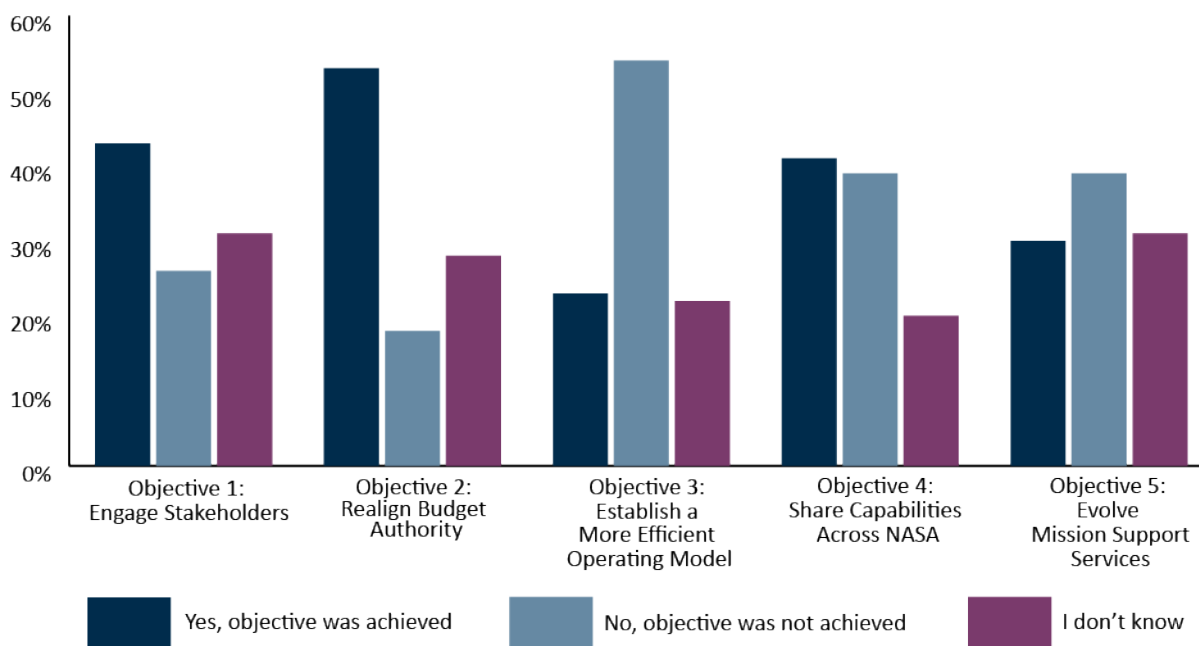
We surveyed employees working in the MSEOs to gauge their experiences and perceptions of the MAP initiative.[12] Of the 1,579 responses we received, 66 percent stated that MAP was fully implemented in their organization while 22 percent reported the implementation was still ongoing.

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[12] We emailed the survey to 4,721 employees assigned to MSEOs and received 1,579 responses. For more information on the survey, see Appendix A.

When asked if MAP achieved its five key objectives—(1) engaging stakeholders, (2) realigning budget authority, (3) establishing a more efficient operating model, (4) sharing capabilities across the Agency, and (5) evolving mission support services—respondents largely agreed that MAP achieved its first two objectives, engaging stakeholders and realigning budget authority. However, most agreed the third objective, establishing a more efficient operating model, was not achieved. Responses on whether MAP improved the sharing of capabilities across the Agency and evolving mission support services were mixed (see Figure 5 for the MAP objectives survey results).

Figure 5: MAP Objectives Achievement as Reported in OIG Survey Results

Source: NASA OIG presentation of responses to the OIG MAP survey from October 2024.

Lack of Metrics to Measure MAP's Success

NASA did not define or collect metrics and has not conducted a formal evaluation to measure whether MAP achieved its intended objectives. Performance metrics are critical for tracking progress, assessing efficiency, and identifying areas of improvement. Federal guidance emphasizes that performance measurement and evaluation should generally be viewed as two of the key tools available to help policymakers and program managers develop systematic evidence to support decision-making, understand how well policies and programs are working, and identify or promote possible changes to improve performance.[13]

The MAP program plan did not identify how the Agency would measure its success with this initiative, and there are no Agency-wide metrics to measure MAP's success in achieving operational improvements. While some MSEOs evaluated MAP's impact on their individual operations, the lack of reliable

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[13] Office of Management and Budget Circular No. A-11, *Preparation, Submission, and Execution of the Budget* (August 29, 2025).

performance data has been a recurring issue in assessing MAP's impact. During interviews with MSEO and MSD officials, leadership provided feedback about positive impacts the MAP initiative had on their individual operations. However, they also acknowledged there were no metrics directly tied to the overall MAP initiative that would allow them to measure MAP's success across the Agency.

Although all MSEOs are required to report on their organization's performance to the Mission Support Council and NASA leadership quarterly, the metrics are not designed to specifically measure MAP-related activities.[14] For instance, OGC tracks time spent on legal services and the Office of Communications monitors their newsletter unsubscribe rate. However, these narrowly scoped indicators do not reflect the broader Agency impact of MAP. Likewise, several MSEOs reduced the number of their employees as part of their MAP implementation project plans, but they only tracked employee counts in terms of general workload distribution or organizational reporting and not as part of MAP performance measurement. While the employee reductions aligned with the original MAP goals, the Agency did not track these changes in a way that could link them to increased efficiency. For example, the number of employees in a MSEO may fluctuate due to natural attrition and not due to reductions because of MAP.

In our survey, only 19 percent of respondents indicated their organizations assessed the outcome of MAP, while 62 percent were unsure if any evaluations had been conducted. Additionally, 54 percent of respondents said MAP failed to establish a more efficient operating model while maintaining critical capabilities. When asked whether MAP achieved its objective to share capabilities across NASA for more effective mission support services, 57 percent of NASA Headquarters respondents agreed the objective was achieved in comparison to 36 percent of center respondents.

In a 2021 House of Representatives report, the Committee on Appropriations directed NASA to report on efficiencies gained through MAP as well as impacts and operating losses experienced at the centers.[15] In response, NASA reported in 2022 that centers have not experienced operating losses and MAP continues to improve business functions, reduce costs, and seek efficiencies in the MSEOs.[16] For example, NASA reported on the development of the first Agency-wide master plan that incorporated center plans into an Agency-wide strategy. Additionally, the Office of Procurement consolidated 163 engineering contracts down to 120. They also consolidated seven acquisition support services contracts to one that the Agency estimated will result in $7.9 million in savings over 5 years. Likewise, the report outlined OCHCO employing more consistent hiring practices and using data analytics to reduce the average time to hire new employees by 29 days. Lastly, the Agency identified OCIO saving an estimated 125,000 workhours over 4 years by implementing robotic process automation tools for routine tasks.

While we acknowledge the efficiencies reported by NASA, some of these activities were in development prior to MAP and relate to individual MSEOs rather than the success and impact of MAP overall. Although the MAP program plan laid out a vision for the enterprise-wide delivery of mission support services, in our view, without more specific or measurable metrics or a formal evaluation of MAP's impact and outcomes as a program, it is difficult for NASA to conclude the extent to which MAP succeeded.

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[14] The quarterly reporting is part of the baseline performance reviews, which are independent assessments to inform senior leadership of performance and progress toward the Agency's mission and program and project performance. The baseline performance reviews encompass a review of crosscutting mission support issues and all NASA mission areas.

[15] H. Rep. No. 117-97 (2021).

[16] NASA, *Report regarding Mission Support Future Architecture Program (MAP) pursuant to House Report 117-97 accompanying H.R. 4505, FY 2022 Commerce, Justice, Science Appropriations Bill* (April 2022).

Several Factors Hindered NASA's Enterprise Approach

Leadership Turnover

MAP was originally designed as a 6-year initiative and expected to last from 2017 through 2023. Despite this long-term vision, Agency senior leadership declared the program complete in 2021, 2 years earlier than planned. Senior leadership turnover shifted priorities, taking the momentum and focus away from implementing MAP, which led to some mission support offices accelerating their timeline to bring MAP to a close. Between 2017 and 2021, three different NASA Associate Administrators oversaw MAP.[17] In 2018, with the departure of NASA's Associate Administrator, who was the original MAP advocate, momentum for the MAP initiative began to falter, and over time, MSEO officials explained they experienced change fatigue.

In 2020, after 5 of the 12 MSEO MAP projects completed their last KDP, the MAP Program Executive took a new position in the Agency. Additionally, senior leadership for 7 of the 12 MSEOs left within 6 months of KDP-C or had an acting leader at the time of their final KDP. While the KDP-C deliverable marks the beginning of implementation, it does not mean the project is complete.

According to MSEO officials, with senior leadership turnover and MAP being declared complete, there was pressure to bring the MAP initiative to a close. In the original MAP program plan, organizations in Phase 1 were scheduled to complete KDP-C in fiscal year 2018, with the remaining organizations completing KDP-C in fiscal year 2022, and all organizations set for completion in fiscal year 2023. However, MAP was declared finished in 2021 even though implementation remained incomplete throughout the Agency. Ultimately, 5 MSEOs completed KDP-D—when the project is approved to move to the next phase and the MSEO can document their MAP transformation—while the other 7 MSEOs were only able to progress through KDP-C. None of the MSEOs completed the entire NPR 7120.7 process, which includes KDPs A through E.

After MAP was declared complete in 2021, all program level MAP meetings ceased and it was left to individual MSEOs to choose whether to continue MAP implementation with little accountability to complete the project. Survey respondents echoed these sentiments stating that momentum for MAP implementation significantly slowed when MAP was declared complete. It was noted that many of the leaders involved in MAP retired or moved to new roles within the Agency, leaving little institutional knowledge. Many survey respondents mentioned feeling left in the dark during MAP implementation and that their concerns were not taken seriously.

Organizational Change with Insufficient Resources

MAP was implemented against a backdrop of mission support services budget reductions and a lack of dedicated staff and funding. The MAP Program Executive led the effort and was supported by a core team of 6 to 10 people. This team relied heavily on personnel assigned on temporary details to conduct the work. The Agency recognized that its lack of funding for items crucial to an organizational transformation, such as information technology tools, retraining of personnel, and travel, was a risk to the overall MAP initiative.

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[17] The NASA Associate Administrator works in the Office of the Administrator and acts as the Agency's chief operations officer.

Likewise, each MSEO was tasked with implementing MAP using existing personnel and budgets, which significantly strained resources. Many MSEOs felt that conducting MAP strained the limited time of their existing personnel since employees managed the additional responsibilities of implementing MAP alongside their regular duties. For example, OCFO managed the reassignment of over 200 full-time employees from MSEOs at the centers. OCFO oversaw the realignment of these personnel and their associated budgets without any additional staff or funding while maintaining ongoing financial services across the Agency. An OCFO official emphasized that staff and funding were directly impacted by every organization implementing MAP. External experts were not hired to assist with MAP execution, and while some MSEO implementation projects benchmarked against other government agencies and commercial companies, benchmarking did not occur at the MAP program level.

Additionally, many MSEOs still face unfinished tasks in their transformation process and MSEO officials have identified funding challenges as the most critical barrier to completing MAP implementation. For instance, the Office of Procurement reported budget constraints lessen their ability to streamline the collection, integration, and analysis of data. Similarly, OCHCO officials explained that, despite implementing MAP, there is still a long list of tasks to complete, such as expanding the use of task management software because they did not receive the necessary initial investment funding. While OCIO is migrating existing contracts to enterprise level contracts that have been in place for up to 10 years, they are concerned about higher contractual rates compared to those awarded a decade ago due to inflation.

Survey respondents also generally agreed that a lack of dedicated resources made it difficult to implement MAP. Respondents emphasized that enterprise strategies take dedicated resources and time to be effective and many of the MSEOS did not have the resources to make MAP-related changes.

Overly Burdensome Process

MAP followed the project plan requirements of NPR 7120.7 and tailored the policy as needed. According to the MAP Program Executive, NPR 7120.7 was chosen for its disciplined approach including sequential steps. Before each of the MSEOs went through their individual KDP process, MAP as a program went through the process. In October 2017, MAP received decisional authority from the Mission Support Council to proceed into implementation, which was the start of the KPD process for the MSEOs individual MAP implementation projects. The KDP review process defined the sequential planned interaction between the MAP Program Executive, the MSEOs, and the stakeholders (e.g., mission directorates and centers) to ensure customer and stakeholder advocacy. Officials within the MSEOs, mission directorates, and centers had the opportunity to review proposed organizational changes, ask questions, and provide comments, which resulted in a lengthy review and response process.

Utilizing the NPR 7120.7 process was overly burdensome. Numerous MSEO officials reported the process imposed excessive administrative burdens, requiring extensive presentations and documentation that further strained their limited workforce. Comments from individual MSEO officials included the following:

- NPR 7120.7 was overly complex for straightforward tasks and very time consuming.

- Over 22 hours were spent with an independent review team to address specific issues during MAP implementation.

- With only 80 civil servants in their organization, more people reviewed MAP documents than performed their typical job functions.
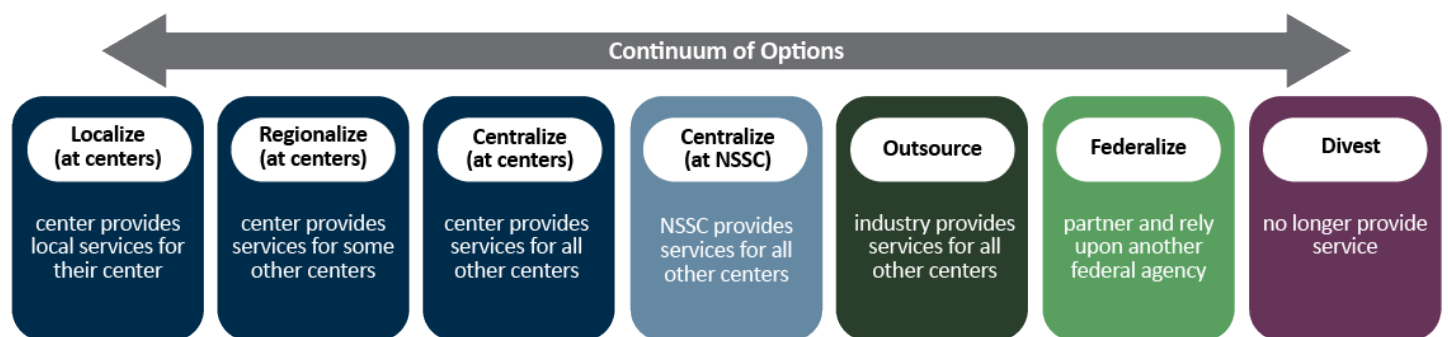
- Documents were created that were never used again.

- Had to review and respond to over 700 comments in a MAP presentation.

MSEO officials were also of the opinion that NPR 7120.7 was not the right tool for implementing MAP since it was designed to formulate and execute information technology and institutional infrastructure programs with defined requirements, life-cycle costs, prototypes, and incremental development, and not for change management and organizational restructuring. The Deputy Associate Administrator acknowledged that the static nature of NPR 7120.7 made it poorly suited for reorganization efforts, and the framework needs modernization to align with evolving methodologies, such as digital engineering. Additionally, most MSEOs had no previous experience managing an NPR 7120.7 project so teams had to learn how to conduct the KDP process while actively going through it. Survey respondents echoed these concerns, describing wasted effort and disruption caused by the misapplication of NPR 7120.7. Many respondents also agreed that a huge amount of labor was expended to comply with the requirements, with little to show for it.

MAP Limits Operational Flexibility

The changes resulting from the MAP initiative limited flexibility across the Agency. During MAP's implementation, leadership changes shifted the original vision of how MSEOs would deliver mission support services moving forward. MAP's program documents emphasized that the program was not a "one-size-fits-all" approach. Within each mission support service, the end state could vary with a spectrum of service delivery options available for MSEOs to consider including centralization, outsourcing, federalization, and divesting (see Figure 6 for details on the options). Each MSEO was tasked to work within the mission support service to transition from the center-centric model to an enterprise operation for delivering their mission support services to the Agency.

Figure 6: MAP Service Delivery Model Options

Source: NASA OIG depiction of Agency MAP information.

Note: NASA Shared Services Center (NSSC).

The realignment of MSEO personnel and resources across various centers through a three-phased process occurred largely concurrently across multiple business functions. However, as MAP implementation progressed, the operating model shifted from flexibility to centralization. Center leaders we spoke to agreed that MAP was a top-down initiative led by NASA Headquarters through MSD. Survey respondents noted that centralizing operations and decision-making at Headquarters became the default option for many MSEOs. Similarly, Agency leaders observed that MSEOs became more siloed from each other as most of their budgets were now controlled by Headquarters and not at the centers.

This approach limited flexibility to shift resources across business functions and led each MSEO to protect its own share, making collaboration and trade-offs more difficult.

As the 12 MSEOs implemented changes to their internal operations and structures, there was limited evaluation of how these changes affected other MSEOs and operations at the centers. Center officials described goals as stove piped, which created a separation between the organizations. For example, center officials explained that MSEOs might report positive trends in one area without recognizing they did not align with the center's priorities or operational objectives, which creates tension between the center and MSEO. Center officials also noted that MAP created new layers of management that previously did not exist. For example, OSI created new infrastructure and technical roles to support center integration as part of its MAP implementation. However, some center leaders stated that in their view this added complexity, slowed decision-making, and weakened authority at the center level. The dual reporting structures can create delays as work flows in both directions from the MSEO and the center. The need to align both center and Agency-wide priorities and dual reporting structures created operational challenges.

Center leadership generally agreed that operational realignment has reduced flexibility and caused an imbalance on resource distribution, making it harder to complete routine tasks and maintain service levels at their locations. Prior to MAP, mission support services funding was controlled by individual centers, allowing center leaders to reallocate resources based on their unique priorities. Previously, when a center organization was under resourced, funds could be reallocated to address critical needs elsewhere. After MAP was implemented, that flexibility was reduced as funding for mission support services were removed from center budgets and realigned to MSEO budgets based at Headquarters, leaving centers with less capital to respond to operational challenges. Some center officials expressed concerns that with the move to enterprise control over business functions like information technology and infrastructure maintenance, it can be challenging to address local needs quickly. The center officials noted that personnel and other resources are often reassigned reactively during a crises rather than proactively to meet evolving demands. Conversely, as noted previously, MAP also enabled resource and personnel sharing across centers to address mission demands.

These concerns were also expressed in the survey results of the center-based employees' perceptions of MAP. Center personnel generally view MAP's impact more negatively than their counterparts at Headquarters. We found that 52 percent of center respondents reported that MAP had negatively affected their positions, compared to only 28 percent of Headquarters respondents. In contrast, 43 percent of Headquarters respondents reported a positive impact on their roles, while only 14 percent of center respondents agreed. Finally, only 19 percent of center respondents agreed that MAP established a more efficient operating model that maintained critical capabilities, compared to 41 percent of Headquarters respondents who felt the same.

Although the transition to an enterprise service model has streamlined certain processes, improved consistency, and promoted standardization across the Agency, NASA's Deputy Associate Administrator acknowledged the ongoing challenge of advancing enterprise-wide strategies while simultaneously addressing the distinct operational needs of individual centers. The Deputy Associate Administrator emphasized that successful execution still requires a degree of operational flexibility at the center level and NASA must allow centers to tailor solutions to their unique missions while upholding Agency-wide strategies.

While MAP aimed to streamline and unify NASA's business functions, its implementation has introduced significant challenges for Agency operations, particularly in terms of flexibility and responsiveness. The National Academies report noted that centralizing decision-making at NASA Headquarters slowed business processes and had unintended negative consequences on the agility of the Agency. The report authors recommended NASA management establish a timely mechanism to evaluate and support center operational needs.[18]

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[18] National Academies, *NASA at a Crossroads*.

CONCLUSION

MAP laid the groundwork for consolidating NASA's mission support services. The initiative has resulted in a more strategic approach, including a clearer understanding of Agency requirements and integration of some mission support services. Nonetheless, work remains to fully transition to an enterprise-wide operating model, and it is uncertain whether this transition will be realized. When MAP was declared complete in 2021, there was limited accountability to ensure it was fully implemented to an enterprise service model. The success of MAP is largely dependent on each MSEO and whether leadership remains committed to continuing and finalizing the efforts started under the MAP initiative. Many mission support services still do not fully operate as an enterprise model, and due to a lack of metrics and an evaluation of the overall program, it is unclear whether MAP was successful in achieving its objectives.

Moving forward, the Agency will continue to refine mission support services and operations as the resources for these business functions become more constrained. We anticipate that future multi-year exploration, science, and aeronautics missions will require significant mission support services and there are many lessons from MAP that can be applied to these efforts.

RECOMMENDATIONS, MANAGEMENT'S RESPONSE, AND OUR EVALUATION

As NASA continues to take steps to consolidate mission support services, transition to an enterprise-wide model, and operate more efficiently, we recommended the NASA Associate Administrator:

1. Develop a process to measure desired outcomes and efficiencies for future organizational changes.

2. Develop a program and project management framework or roadmap for organizational change.

We provided a draft of this report to NASA management who concurred with our recommendations and described planned actions to address them. We consider management's comments responsive; therefore, the recommendations are resolved and will be closed upon completion and verification of the proposed corrective actions.

Management's comments are reproduced in Appendix B. Technical comments provided by management and revisions to address them have been incorporated as appropriate.

Major contributors to this report include Tekla Colón, Mission Support Audits Director; Julia Eggert, Assistant Director; Tara Halt; Jobenia Parker; and Jaidan Williams. Lauren Suls provided editorial and graphics support.

If you have questions about this report or wish to comment on the quality or usefulness of this report, contact Laurence Hawkins, Financial Oversight and Audit Quality Director, at 202-358-1543 or laurence.b.hawkins@nasa.gov.

Robert H. Steinau
NASA OIG Senior Official

APPENDIX A: SCOPE AND METHODOLOGY

We performed this audit from July 2024 through September 2025 and issued the draft report in December 2025 due to the government shutdown. The audit was performed in accordance with generally accepted government auditing standards, which require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The scope of this audit included assessing NASA's efforts to strategically manage its mission support services through the MAP initiative. To complete our work, we reviewed NASA policies and analyzed MAP documentation including planning documents, implementation plans, and KDP documents. For each of the 12 MSEOs, we analyzed the organization's final KDP documents for cost savings, governance changes, performance metrics, contracts, workforce, and stakeholder engagement.

We interviewed the MSD Associate Administrator and MSD Deputy Associate Administrator and the senior managers of each of the 12 MSEOs subject to MAP. We also interviewed NASA's Deputy Associate Administrator, the MAP Program Executive, and three Center Directors. We selected these Center Directors based on the number (small, medium, large) of mission support employees and regions in which they were located. We also surveyed employees in the MSEOs subject to MAP related to the implementation of MAP, objectives, metrics, and workload impacts to gauge their experience and perceptions of the MAP initiative. We also reviewed MAP outcomes for two MSEOs—OGC and OSI— to identify MAP-specific performance metrics, budget or resources changes, consolidation of polices or processes, workforce impacts, and reporting structure realignments.

Assessment of Data Reliability

We relied upon computer-generated data to identify and verify the population of civil service employees within the MSEOs that underwent MAP and extracted those employee names, organizations, and email addresses from the SAP Business Objects system of record. We compared the SAP Business Objects population selection data against the OCHCO 'Workforce at a Glance' dashboard to validate that the counts per organization and by center were accurate. We developed a survey to gauge employee experiences with the MAP initiative. We emailed the survey to 4,721 employees assigned to MSEOs who then had 3 weeks to respond. We received 1,579 responses or a 33 percent response rate. We determined that the data was sufficiently reliable for the purposes of this report.

Review of Internal Controls

We assessed internal controls and compliance with laws and regulations necessary to satisfy the audit's objectives. Specifically, we assessed how the Agency is managing the MAP initiative from a center-centric, decentralized management structure to one that is enterprise wide. We interviewed NASA officials and reviewed relevant criteria and the KDP process documents for each of the 12 MSEOs subject to MAP. We assessed how changes were communicated with stakeholders and the impact on Agency operations. We identified weaknesses in the process as discussed in the report. Our recommendations, if implemented, will improve those weaknesses. However, because our review was

limited to the MAP process, it may not have disclosed all internal control deficiencies that may have existed at the time of this audit.

Prior Coverage

During the last 9 years, the NASA Office of Inspector General has issued five reports of significant relevance to the subject of this report. Reports can be accessed at https://oig.nasa.gov/audits/.

NASA's Cybersecurity Readiness (IG-21-019, May 18, 2021)

NASA's Management of Its Acquisition Workforce (IG-21-002, October 27, 2020)

NASA'S Security Management Practices (IG-20-001, October 21, 2019)

NASA'S Efforts to Improve the Agency's Information Technology Governance (IG-18-002, October 19, 2017)

NASA'S Efforts to "Rightsize" Its Workforce, Facilities, and Other Supporting Assets (IG-17-015, March 21, 2017)

APPENDIX B: MANAGEMENT'S COMMENTS

National Aeronautics and Space Administration

Office of the Administrator
Mary W. Jackson NASA Headquarters
Washington, DC 20546-0001

January 20, 2026

TO: Deputy Assistant Inspector General for Audits

FROM: Associate Administrator

SUBJECT: Agency Response to OIG Draft Report, "NASA's Mission Support Future Architecture Program" (A-24-11-00-MSD)

The National Aeronautics and Space Administration (NASA) appreciates the opportunity to review and comment on the Office of Inspector General (OIG) draft report entitled, "NASA's Mission Support Future Architecture Program" (A-24-11-00-MSD), dated December 1, 2025.

In this draft report, the OIG found (1) the implementation of the Mission Support Future Architecture Program (MAP) for some of the Mission Support Enterprise Organizations (MSEO) is not complete, (2) NASA did not conduct a formal evaluation of whether MAP met its objectives, and (3) that there are no Agency-wide metrics for MAP to measure success or overall impact.

The OIG makes two recommendations addressed to the NASA Associate Administrator. Specifically, the OIG recommends the NASA Associate Administrator:

Recommendation 1: Develop a process to measure desired outcomes and efficiencies for future organizational changes.

> **Management's Response:** NASA concurs with this recommendation.
>
> NASA will review this recommendation with incoming Agency leadership to align with the Administrator's vision and Agency priorities. A process to measure desired outcomes and efficiencies for organizational changes will be developed based on this determination, as warranted.
>
> **Estimated Completion Date:** December 31, 2026.

Recommendation 2: Develop a program and project management framework or roadmap for organizational change.

> **Management's Response:** NASA concurs with this recommendation.

The Agency recognizes the need for a robust framework to facilitate organizational change. NASA will review this recommendation with incoming Agency leadership to align with the Administrator's vision and Agency priorities. A program or project management framework for organizational change will be developed based on this determination, as warranted.

Estimated Completion Date: December 31, 2026.

We have reviewed the draft report for information that should not be publicly released. As a result of this review, we have not identified any information that should not be publicly released.

Once again, thank you for the opportunity to review and comment on the subject draft report. If you have any questions or require additional information regarding this response, please contact Stacy Houston at (832) 551-4777.

Amit Kshatriya

cc:
Associate Administrator for Mission Support Directorate/Mr. Mitchell

APPENDIX C: REPORT DISTRIBUTION

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Senate Committee on Commerce, Science, and Transportation
    Subcommittee on Aviation, Space, and Innovation
    Subcommittee on Science, Manufacturing, and Competitiveness

Senate Committee on Homeland Security and Governmental Affairs

House Committee on Appropriations
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House Committee on Oversight and Government Reform
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House Committee on Science, Space, and Technology
    Subcommittee on Investigations and Oversight
    Subcommittee on Research and Technology
    Subcommittee on Space and Aeronautics

    (Assignment No. A-24-11-00-MSD)