

National Aeronautics and Space Administration

Office of the Administrator
Washington, DC 20546-0001



June 14, 2021

Dr. Patricia Sanders
Chair
NASA Aerospace Safety Advisory Panel
Washington, DC 20546

Dear Dr. Sanders:

Enclosed is NASA's response to the recommendation resulting from the Aerospace Safety Advisory Panel's First Quarterly Meeting that was held virtually on February 18, 2021 entitled, Recommendation 2021-01-01: Develop a Top-Level Plan for the Size and Composition of the NASA Workforce and Infrastructure. Please do not hesitate to contact me if you or the Panel would like further background on this response.

I look forward to receiving continued advice from the ASAP that results from your important Quarterly and Insight fact-finding meetings.

Sincerely,

A handwritten signature in blue ink that reads "Bill Nelson".

Enclosure:

2021-01-01: Develop a Top-Level Plan for the Size and Composition of the NASA Workforce and Infrastructure.

NASA Aerospace Safety Advisory Panel Recommendation

2021-01-01: Develop a Top-Level Plan for the Size and Composition of the NASA Workforce and Infrastructure

Findings:

NASA has stated that the size and composition of the NASA workforce should be shaped by strategic guidance, rather than by independent hiring plans developed at the Center and organizational level. However, based on the information the Panel has received to date, it appears that key decisions related to workforce needs are being made tactically by individual Centers, rather than in collaboration with Headquarters, or in response to top-down guidance.

The NASA Human Capital Office has also developed a number of principles intended to guide its workforce management efforts, such as, “NASA’s total workforce is agile and mission-driven, not supply-driven in all workforce segments.” Although that may be the ultimate goal, it does not appear to be an accurate assessment of the current situation, and the Panel is not aware of a coordinated strategy to achieve such a state of affairs.

Depending on how NASA answers the questions regarding its role and workforce, they have an opportunity to align their infrastructure to their long-term strategy. That is, by taking a top-down approach to align all Centers to Agency priorities, they should identify and close facilities that are not critical to Agency programs. This will contribute directly to reducing fixed costs and freeing resources for NASA’s programs.

Recommendation:

2021-01-01 Develop a Top-Level Plan for the Size and Composition of the NASA Workforce and Infrastructure

NASA should develop a top-level plan for the size and composition of its workforce and infrastructure that takes into account its aspirations for future missions, innovation and technology development, and potential partnerships with industry, academia, and the international community. The plan should be developed in collaboration with the Centers, and should clearly articulate roles and responsibilities for maintaining the necessary expertise and experience. The plan should also be communicated with key stakeholders and updated on a regular basis.

Rationale:

The existence of a skilled and experienced workforce has always been critical for NASA to safely accomplish its mission. Because of rapid changes in technology and an increased reliance on commercial and international partners, it is more important than ever for NASA to think strategically about its future workforce and infrastructure needs. Such an effort will be challenging, and it will certainly take time to complete, but because it will likely have significant and immediate benefits, it should be initiated as soon as possible.

NASA Response:

NASA concurs with the recommendation to develop a top-level plan for workforce and infrastructure. Such plans are currently underway with a progression of steps. These plans are delineated for workforce, with the Office of Chief Human Capital Officer (OCHCO) leading the development; and for infrastructure, with the Office of Strategic Infrastructure (OSI) leading the development. NASA agrees with the ASAP's opinion that "such an effort will be challenging, and it will certainly take time to complete." Given the scope of the effort, this NASA response does not commit to a delivery date, however, leadership is amenable to providing periodic briefings to the ASAP to assess progress.

OCHCO Workforce Planning

NASA is firm in the Agency's commitment to the three tenets of strategic workforce planning, shared in a recent ASAP presentation: being demand driven, achieving greater agility in our supply, and strategically shaping the supply. Workforce planning has been a featured topic at the annual NASA leadership meeting Agency Strategic Implementation Planning (ASIP) dedicated to strategic institutional issues. At the fall/winter 2021 ASIP, the results of a workforce tiger team will be discussed, with the intent of setting the Agency on a path toward top-down strategic workforce planning, driven by Mission Directorate demand.

During 2020 and 2021, NASA has focused on gaining agility in supply. The Agency's civil service workforce tends to be fixed with low attrition, so at any time there is small opportunity to adjust the composition. Leadership has realized that agility is the key to future mission success and have taken steps to increase it in our civil service workforce by reducing the number of permanent civil servant positions at all Centers, while encouraging the use of term limited appointments. Exercising this approach will also help the Agency be demand-driven, as it will allow our Centers to adjust their workforce size and composition more rapidly, as changes in demand materialize in the nearer term horizon, and requirements are better understood.

With regard to demand-driven workforce plans, there is inherent uncertainty in defining workforce requirements beyond a limited time horizon due to a number of factors including Administration direction, changeable annual budgets and NASA's acquisition strategy decisions that unfold over time. These acquisition decisions have a heavy influence on what work is performed "in house" at NASA Centers versus what NASA relies on industry partners to perform. Moreover, NASA does not have a fixed civil service labor budget to optimize. The "full cost" approach to budgeting provides Programs and Centers with a great deal of flexibility for decisions about civil service versus contractor labor expenditures, but adds another variable into the decision-making about workforce demand at the Center level.

While leadership recognizes the difficulties of workforce demand planning, NASA is nonetheless making an effort this year to characterize the uncertainty in our missions and the impact of Agency acquisition strategies on our workforce demand. The Agency is considering a range of approaches in how mission demand is forecasted so Centers can hire the right skill sets to meet that demand, especially in the permanent, fixed civil service workforce population. The challenge will be to develop a strategic workforce plan with an Agency perspective, while hiring authorities remain at a local level, with each NASA installation filling positions according to immediate staffing needs.

Such a plan is at least two years out, but incremental steps are underway, with the intent of building an agile, multi-sector workforce able to achieve NASA's mission goals now and in the future.

OSI Infrastructure Planning

In 2017, the Business Services Assessment (BSA) Deep Dive for OSI declared that OSI, with Center assistance, would develop an Agency Master Plan (AMP) (Decision memo: MSC 2017-03-002). In addition, the NASA Transition Authorization Act of 2017 provided details that further informs the development of the AMP. In 2019 the AMP Team was formed, which included Headquarters and Center Master Planners. The Mission Support Council (MSC) chair directed the team to develop an AMP with a mission driven top-down approach to illustrate strategic data-driven vectors to inform a long-term strategy (investment, divestment, and sustainment). In response, the AMP Team is developing an AMP that will provide optimal management of the Agency's assets to meet mission objectives to include:

- A mission-driven business case that considers Agency and Center mission priorities, including future missions and potential partnerships.
- Ongoing collaboration with Mission Directorates, Portfolio Managers, and Centers.
- An affordable portfolio proposal to efficiently sustain NASA's infrastructure and advocate for funding.
- Clear ongoing communication on AMP goals to all Stakeholders and sufficient Agency-level guidance for Center master planners.
- Agency-wide standards to measure progress and performance.

The AMP is being developed through a two phased approach. The first phase focused on the top-down mission driven strategy, with clear goals and objectives. This was presented and approved by the MSC in December 2020. The second phase, in process, is focusing on data-driven recommendations for sustainment, investment, and divestment based off of analyses of Center, Mission Directorate, and Technical Capabilities priorities, input, and data. This will ultimately inform a proposed Agency Master Planning Strategy that will be presented in the fall/winter 2021. Once approved, the Agency Master Plan will be updated every four years, to ensure alignment with the NASA Strategic Plan.