

441 G St. N.W.  
Washington, DC 20548

July 8, 2021

The Honorable Eric Lander  
Director  
Office of Science and Technology Policy  
1650 Pennsylvania Ave. NW  
Washington, DC 20501

### **Priority Open Recommendations: Office of Science and Technology Policy**

Dear Director Lander:

The purpose of this letter is to provide the overall status of the Office of Science and Technology Policy's (OSTP) implementation of GAO's recommendations and to call your personal attention to areas where open recommendations should be given high priority.<sup>1</sup> In November 2020, we reported that on a government-wide basis, 77 percent of our recommendations made 4 years ago were implemented.<sup>2</sup> OSTP's rate of implementing recommendations that we made in fiscal year 2017 is higher, reflecting implementation of 16 of 17 recommendations made in two fiscal year 2017 reports. We appreciate OSTP's efforts. As of June 2021, OSTP had 11 open recommendations made across seven reports. Fully implementing these open recommendations could significantly improve OSTP's operations.

This is the first year that we are providing a priority recommendation letter to OSTP. We are identifying three recommendations from our prior work as priorities for implementation by OSTP in this initial letter. (See the enclosure for the list of recommendations.) These three recommendations relate to strengthening interagency collaboration on science and technology issues and are as follows:

- In November 2019, we recommended that OSTP, as co-chair of the National Science and Technology Council's Subcommittee on Open Science, take steps in coordination with the other co-chairs and participating agencies to fully implement leading practices that enhance and sustain collaboration. OSTP initially disagreed with the recommendation. Since our report, OSTP has provided information, including most recently in May 2021, on the Subcommittee's efforts to bring agencies together to address issues associated with public access to federally funded research results. We will consider this recommendation implemented when OSTP provides information

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<sup>1</sup>Priority recommendations are those that GAO believes warrant priority attention from heads of key departments or agencies. They are highlighted because, upon implementation, they may significantly improve government operation, for example, by realizing large dollar savings; eliminating mismanagement, fraud, and abuse; or making progress toward addressing a high-risk or duplication issue.

<sup>2</sup>GAO, *Performance and Accountability Report: Fiscal Year 2020*, [GAO-21-4SP](#) (Washington, D.C.: Nov. 16, 2020).

demonstrating how the Subcommittee's efforts implement the leading practices we identified.

- In September 2018, we recommended that OSTP, as co-chair of the National Science and Technology Council's Subcommittee on Quantum Information Science, take steps in coordination with the other co-chairs and participating agencies to fully implement leading practices that enhance and sustain collaboration. OSTP agreed with the recommendation. As of May 2021, OSTP has taken some steps to work with the other Subcommittee co-chairs to implement the recommendation. For example, OSTP has worked with the other Subcommittee co-chairs and participating agencies to define and articulate goals and common outcomes in key priority areas. We will consider this recommendation implemented when OSTP provides information demonstrating how the Subcommittee's efforts more fully implement the leading practices we identified.
- In September 2016, we recommended that the National Science and Technology Council's Subcommittee on Critical and Strategic Mineral Supply Chains (now the Subcommittee on Critical Minerals), which OSTP co-chairs, take the steps necessary to assess potentially critical materials in addition to minerals. OSTP neither agreed nor disagreed with the recommendation but subsequently stated that it saw the value in analyzing more minerals and non-minerals to help inform policy decisions. In May 2021, OSTP stated that the Subcommittee is actively exploring opportunities to broaden its focus beyond the raw material and mineral challenges that have been its focus the past several years. We will consider this recommendation implemented when OSTP works with Subcommittee member agencies to develop a plan to coordinate federal efforts and resources to address data limitations that hinder assessing potentially critical materials, in addition to minerals, in a screening methodology developed by Subcommittee member agencies.

In our prior reporting, we have identified several practices that can help to enhance and sustain interagency collaboration.<sup>3</sup> Such practices include defining and articulating a common outcome; establishing mutually reinforcing or joint strategies; identifying and addressing needs by leveraging resources; agreeing on roles and responsibilities; and developing mechanisms to monitor, evaluate, and report on results. Building on these practices, we have also identified a number of key considerations for implementing interagency collaborative mechanisms, such as whether participating agencies have articulated and agreed to a process for making and enforcing decisions, how leadership will be sustained over the long term, and whether they have documented their agreements regarding how they will be collaborating.<sup>4</sup>

As the challenges of the 21st century grow, it is increasingly important for executive agencies to consider how the federal government can maximize performance and results through improved collaboration. Our prior work has shown that many issues, including those in science and technology, cut across multiple agencies. In this regard, OSTP plays a critical role in bringing agencies together under the committees and subcommittees of the National Science and Technology Council. This mechanism provides a valuable opportunity for agencies to coordinate

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<sup>3</sup>GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, [GAO-06-15](#) (Washington, D.C.: Oct. 21, 2005).

<sup>4</sup>GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms*, [GAO-12-1022](#) (Washington, D.C.: Sept. 27, 2012).

on implementing an administration's research and development priorities and to address cross-cutting science and technology issues, such as scientific integrity, public access to federally funded research results, reliability of research results, supply chains for critical materials, and others. Strengthening interagency coordination in these areas could help amplify the synergistic effects of related research conducted by different agencies, avoid unnecessary overlapping or duplicative research and development efforts, and facilitate the sharing of lessons learned or coordinating actions to address science and technology issues.

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In March 2021, we issued a biennial update to our [High-Risk List](#), which identifies government operations that are especially vulnerable to fraud, waste, abuse, and mismanagement; and outlines the need for transformation to address economy, efficiency, or effectiveness challenges.<sup>5</sup> Several government-wide high-risk areas may have direct implications for OSTP and its operations. These include (1) [improving the management of IT acquisitions and operations](#), (2) [improving strategic human capital management](#), (3) [managing federal real property](#), (4) [ensuring the cybersecurity of the nation](#), and (5) [improving government-wide personnel security clearance processing](#). We urge your attention to these government-wide high-risk issues as they relate to OSTP. Progress on high-risk issues has been possible through the concerted actions and efforts of Congress, OMB, and the leadership and staff in agencies, including within OSTP.

Copies of this report are being sent to the Director of the Office of Management and Budget and appropriate congressional committees including the Committees on Appropriations; Budget; Commerce, Science, and Transportation; and Homeland Security and Governmental Affairs, United States Senate, and the Committees on Appropriations; Budget; Oversight and Reform; and Science, Space, and Technology, House of Representatives. In addition, the report will be available on the GAO website at <http://www.gao.gov>.

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<sup>5</sup>GAO, *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: Mar. 2, 2021).

I appreciate OSTP's continued commitment to these important issues. If you have any questions or would like to discuss any of the issues outlined in this letter, please do not hesitate to contact me or John Neumann, Managing Director, Science, Technology Assessment, and Analytics, at 202-512-6888 or [neumannj@gao.gov](mailto:neumannj@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Our teams will continue to coordinate with your staff on all of the 11 open recommendations. Thank you for your attention to these matters.

Sincerely yours,

A handwritten signature in black ink that reads "Gene L. Dodaro". The signature is written in a cursive style with a large, prominent "D" and a long horizontal flourish extending to the right.

Gene L. Dodaro  
Comptroller General  
of the United States  
Enclosure – 1

cc: The Honorable Shalanda Young, Acting Director, Office of Management and Budget

## Enclosure

### Priority Open Recommendations to the Office of Science and Technology Policy (OSTP)

#### Strengthening Interagency Collaboration on Science and Technology Issues

*Federal Research: Additional Actions Needed to Improve Public Access to Research Results.* [GAO-20-81](#). Washington, D.C.: Nov. 21, 2019.

**Recommendation:** As the Subcommittee on Open Science moves forward, the Office of Science and Technology Policy co-chair, in coordination with other co-chairs and participating agencies, should take steps to fully implement leading practices that enhance and sustain collaboration.

**Action Needed:** OSTP initially disagreed with the recommendation stating that the Subcommittee had already taken steps to implement the leading practices we identified in our report. However, OSTP officials did not provide documentation of these efforts, and we were unable to determine whether these leading collaboration practices were being fully implemented. OSTP has provided information on several occasions, including most recently in May 2021, on steps the Subcommittee has taken to address issues associated with public access to federally funded research results, including certain areas we identified in the November 2019 report as presenting challenges to implementing public access plans. However, the information OSTP provided has generally not included details or relevant documentation on how the Subcommittee's efforts incorporate the leading practices we identified in our report. To fully address our recommendation, OSTP should work with Subcommittee member agencies to implement the leading practices we identified and provide information on how the Subcommittee's efforts incorporate these practices.

**Director:** Candice Wright, Science, Technology Assessment, and Analytics

**Contact Information:** [wrightc@gao.gov](mailto:wrightc@gao.gov) or (202) 512-6888

*Science and Technology: Considerations for Maintaining U.S. Competitiveness in Quantum Computing, Synthetic Biology, and Other Potentially Transformational Research Areas.* [GAO-18-656](#). Washington, D.C.: Sep. 26, 2018.

**Recommendation:** As the Subcommittee on Quantum Information Science moves forward, the Office of Science and Technology Policy co-chair, in coordination with other co-chairs and participating agency officials, should take steps to fully implement leading practices that enhance and sustain collaboration.

**Action Needed:** OSTP agreed with the recommendation but expressed some concerns about required resources. As of May 2021, OSTP has taken some steps to work with the other Subcommittee co-chairs to implement the recommendation. These efforts include creating several interagency groups focused on key priority areas and producing several reports, such as a January 2021 report that identified examples of agency activities in the area of quantum networking research as well as high-level challenges and goals. According to information OSTP provided in May 2021, other Subcommittee efforts are following a similar approach.

These efforts represent important steps toward implementing certain leading collaboration practices such as defining and articulating a common outcome. However, it is less clear how these efforts address other leading collaboration practices, such as identifying and addressing

needs by leveraging resources; agreeing on roles and responsibilities; and developing mechanisms to monitor, evaluate, and report on results. To fully address our recommendation, OSTP should work with Subcommittee member agencies to implement the leading practices we identified and provide information on how the Subcommittee's efforts incorporate these practices.

**Director:** Candice Wright, Science, Technology Assessment, and Analytics

**Contact Information:** [wrightc@gao.gov](mailto:wrightc@gao.gov) or (202) 512-6888

*Advanced Technologies: Strengthened Federal Approach Needed to Help Identify and Mitigate Supply Risks for Critical Raw Materials.* [GAO-16-699](#). Washington, D.C.: Sep. 7, 2016.

**Recommendation:** To enhance the ability of the Executive Office of the President to coordinate federal agencies to carry out the national materials policy outlined in the National Materials and Minerals Policy, Research and Development Act of 1980, and to broaden future applications of the early warning screening methodology, the Subcommittee on Critical and Strategic Mineral Supply Chains (now the Subcommittee on Critical Minerals) should take the steps necessary to include potentially critical materials beyond minerals, such as developing a plan or strategy for prioritizing additional materials for which actions are needed to address data limitations.

**Action Needed:** OSTP neither agreed nor disagreed with our recommendation. Subsequently, OSTP stated that it saw the value in analyzing more minerals and non-minerals to help inform policy decisions but that fulfilling this need would require additional dedicated personnel and financial resources. In May 2021, OSTP stated that the Subcommittee is actively exploring opportunities to broaden its focus beyond the raw material and mineral challenges that have been its focus the past several years. OSTP further stated it anticipates that federal agencies will work together through the Subcommittee to prioritize activities and leverage efforts and limited resources. To fully address our recommendation, OSTP should work with Subcommittee member agencies to develop a plan to coordinate federal efforts and resources to address data limitations that hinder assessing potentially critical materials, in addition to minerals, in a screening methodology developed by Subcommittee member agencies.

**Director:** Candice Wright, Science, Technology Assessment, and Analytics

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