

# THE VITAL ROLE OF THE WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY IN THE NEW ADMINISTRATION



## EXECUTIVE SUMMARY

Recommendations from Rice University's Baker Institute for Public Policy  
Science and Technology Policy Program

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Innovation, a hallmark of 21st century private industry in the U.S. and around the world, relies on a skilled and diverse workforce and advances in science and technology (S&T). These advances are made possible by strong public and private investments in research and development (R&D). The influence and products of S&T are present in almost every aspect of daily life. To ensure the future prosperity of all Americans—particularly those who have been left behind in recent decades—the next administration will be challenged to create new S&T-related policies and initiatives to improve science, technology, engineering and math (STEM) education and training at all levels; support pathbreaking science and engineering research; and unleash the power of private sector innovation through partnerships with states, universities, national laboratories, and private industry.

The President's decisions that relate to S&T rely, in large part, on information—data and analysis—from the Office of Science and Technology Policy (OSTP) and, specifically, on advice from the President's Science Advisor. The presidential transition is a critical period for ensuring S&T is responsibly and effectively represented in policymaking in the White House.

In this report, we offer 10 recommendations in two categories: advice for the President in selecting a Science Advisor, establishing the OSTP, and developing federal S&T policies; and advice for the President's Science Advisor in the dual roles as Assistant to the President for S&T and Director of OSTP.

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*Since the new administration will immediately be faced with a host of challenges requiring timely S&T advice, it is important that the President move quickly to appoint a Science Advisor and put together a team for OSTP, ensure that OSTP has the support and access to other White House offices and councils it requires, establish S&T policy priorities, and navigate the ongoing budget process for federal R&D investment.*

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## Recommendations to the President of the United States

**Recommendation 1:** Select, early in the post-election transition period, a nationally respected scientist or engineer to serve as Science Advisor and Assistant to the President for S&T. Once in office, the President should nominate her or him for the position of Director of OSTP.

**Recommendation 2:** Direct the Office of Presidential Personnel to seek the advice of the Science Advisor in filling the many sub-Cabinet and other senior agency positions that relate to S&T and other presidential appointees with major S&T-related responsibilities in the federal government, including S&T-related senior positions in the White House Office of Management and Budget (OMB).

**Recommendation 3:** Ensure that OSTP has the leadership, access, structure, and resources to enhance the integration of S&T advice in federal policymaking within the Executive Office of the President (EOP) and across the federal agencies.

- a. Continue to house the OSTP Director and staff in the Dwight D. Eisenhower Executive Office Building.
- b. Nominate four OSTP Associate Directors (ADs) and determine the focus and structure of OSTP. The President may wish to also appoint OSTP ADs as Deputy or Special Assistants to the President so they can immediately begin to work full-time at OSTP as they await Senate confirmation.
- c. Clarify the role and responsibilities of the Chief Technology Officer (CTO).
- d. Ensure the Science Advisor is included in all Cabinet meetings attended by other Assistants to the President, particularly when issues related to S&T are likely to be discussed.
- e. Direct all White House budget and policymaking entities to collaborate closely with OSTP on a broad range of policies that have an S&T component.
- f. Include in the annual budget request to Congress adequate funding for OSTP to retain the number of knowledgeable and well-trained full-time staff members necessary to handle the increased workload as well as ensure continuity between administrations.

**Recommendation 4:** Consult with the Science Advisor to quickly appoint a diverse membership for the President's Council of Advisors for Science and Technology (PCAST). Early in the administration, the President should establish a practice of regularly meeting with PCAST and charging PCAST to carry out studies and issue reports on topics that the President considers particularly important to the nation.

**Recommendation 5:** Renew the existing Executive Order for National Science and Technology Council (NSTC), or develop a presidential directive detailing its operations, and charge OSTP, in consultation with OMB, PCAST, and the NSTC Cabinet Secretaries and agency heads, to:

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### Qualifications for the Role of Science Advisor

- National recognition and respect as a leader in science and engineering
  - Extensive knowledge of the federal government and global S&T policy experience
  - Strong connections to the S&T community
  - Established leadership, communication, diplomatic, political, and management skills
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- a. Draft a strategy paper outlining the administration's S&T and innovation goals to be released in the first 100 days.
- b. Organize and oversee a multi-year planning process to monitor progress.
- c. Prepare action agendas for biannual meetings of the NSTC principals, chaired by the President, to review progress.
- d. Develop policy options for the President's consideration, including interagency initiatives; convene meetings of S&T agencies and non-government experts; and draft relevant Executive Orders and presidential directives to move the President's S&T and innovation agenda forward.

## Recommendations to the President's Science Advisor

*As the Assistant to the President for Science and Technology:*

**Recommendation 6:** Provide confidential, unbiased advice to the President that is based on current scientific evidence and technological capability. In the role of Assistant to the President for S&T, he or she must garner the trust and respect of not only the President, Vice President, Chief of Staff, but also the many other senior advisors and White House staff members.

*As Director of OSTP:*

**Recommendation 7:** Draft the administration's strategy paper for federal S&T and innovation policy for release in the first 100 days and oversee an S&T planning effort to ensure that the President's priorities and objectives are met.

- a. Organize and oversee a multi-year (2-5 years) planning process.
- b. Focus the S&T planning effort on regulatory changes and management issues as well as R&D funding.
- c. Develop a roadmap, as a part of the S&T planning process, for regulatory changes and a process to assess progress.
- d. Enlist the active involvement of NSTC Cabinet Secretaries and agency heads in the S&T planning process.
- e. Emphasize flexibility in multi-year planning for R&D funding, given the vagaries of the appropriations process as well as unexpected events and opportunities.

**Recommendation 8:** Work with the OMB Director to ensure that in developing the President's annual budget, proper attention is given to the President's S&T strategy and priorities as well as those of the individual Executive Departments and agencies. Also ensure the President has a sense of the priority that the budget, in any given year, places on S&T, specifically R&D investments, perhaps by sending the President a memorandum that summarizes the collective R&D requests of all agencies.

- a. Continue to issue joint annual memorandums with the Directors of OSTP and OMB for the heads of Executive Departments and agencies describing the President's priorities at the start of the budgeting process.
- b. Participate in OMB budget/management reviews to help coordinate efforts and improve the transparency of the budget process.
- c. Coordinate OSTP staff and their OMB counterparts to help analyze the agency requests and develop agency R&D recommendations for the President.

**Recommendation 9:** Serve as the President's public face for S&T, nationally and globally, to ensure that the public and the Congress, as well as foreign leaders, understand the U.S. perspective on current challenges that relate to S&T policy and the reasons for the choices the President makes.

- a. Work closely with the President's media, communications, and legislative staff.
- b. Represent the President with the international scientific community on issues related to S&T.

**Recommendation 10:** Ensure that OSTP has the expertise and appropriate access to other federal agencies and officials in OMB and other White House offices to enable the most effective execution of the President's S&T priorities and other activities that are consistent with the agency's statutory responsibilities.

- a. In staffing OSTP, recruit experts who understand how the federal government works, have specific technical expertise, and are familiar with the major S&T policy issues.
- b. In recommending OSTP Associate Directors, place a high priority on appointing established experts in science, engineering, and technology who not only are well-established in their fields and professions but also are experienced managers.
- c. Consider the creation of the position of chief economist within OSTP to engage with other White House policy councils.
- d. Appoint a senior staff member in OSTP with the responsibility of ensuring the effectiveness of federal government-university-industry partnerships.
- e. Direct OSTP staff to work closely with OMB and other White House offices and agency heads to ensure that the President has timely information on key S&T-related issues; to coordinate the development of S&T initiatives, ensuring they are aligned with the President's S&T strategy; and to seek the help of non-government organizations to conduct studies in support of the work of OSTP.

## Conclusion

Science, technology, and innovation are vital to America's economy, workforce, and the competitiveness of U.S. industry. They assure our nation's security, the quality of our environment, and the safety, health and overall well-being of the American people. Considering the many policy challenges that relate to S&T and the accelerating pace of scientific discovery and technological innovation around the globe, it is critically important that the President move quickly to appoint the Science Advisor and organize a capable OSTP that can begin to engage the many Executive Departments and agencies that support R&D and rely on advances in S&T to carry out their missions. It is in this spirit that the above recommendations, based on the informed views of a large number of experts, are offered to underscore sound practices, help identify opportunities for the new administration, and ensure appropriate attention is given to fast-changing S&T and innovation knowledge to ensure its utilization in federal policy decision-making.

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*For the full report and recommendations, please see [www.bakerinstitute.org/OSTP2016](http://www.bakerinstitute.org/OSTP2016).*