

## White House directs research and development priorities for FY 2020 agency budget

July 31, 2018

The Director of the Office of Management and Budget (OMB) Mick Mulvaney sent a memorandum on July 31 to heads of executive departments and agencies highlighting the administration's research and development (R&D) priorities and providing guidance to agencies as they formulate their fiscal year (FY) 2020 budget submissions. Agency R&D budgets are developed internally as part of each agency's overall budget development process and are then subject to review, revision, and approval by OMB before incorporation into the President's annual budget submission to Congress in early February.

The memorandum defined eight R&D priority areas, covering a wider range of interests than the five priorities outlined in last year's guidance for FY 2019. American security, energy dominance, and health resurfaced as FY 2020 priority areas, with more detail under those categories than the FY 2019 memorandum. Specifically, under the Security of the American People priority area, agencies are directed to invest in R&D to improve the security and resilience of the nation's critical infrastructure from natural hazards, and to enhance natural disaster decision-making by investing in geospatial decision support tools and innovative approaches to improve weather prediction. In addition to previous directives for American energy dominance, the memorandum instructs agencies to invest in user facilities to improve collaboration with industry and academia.

Two of the FY 2019 priority areas were dropped – American Military Superiority and American Prosperity – while five new federal priorities were added: American Leadership in Artificial Intelligence, Quantum Information Sciences, and Strategic Computing; American Connectivity and Autonomy; American Manufacturing; American Space Exploration and Commercialization; and American Agriculture. To support manufacturing, agencies are directed to invest in the development of advanced materials and associated processing technologies, including high-performance materials, critical materials, and additive manufacturing. The memorandum directs space research investments to focus on long-duration spaceflight. For American Agriculture, agencies are directed to prioritize R&D that enables advanced and precision agriculture and technologies, including the use of embedded sensors, data analytics, and machine learning techniques.

The FY 2020 directive also outlines five R&D priority practices. In line with the administration's recent focus on STEM education, apprenticeship, and [workforce](#), the first priority practice is Educating and Training a Workforce for the 21st Century Economy, which outlines the importance of experiential learning, instruction tied to real world challenges and future jobs, and inclusion of urban, rural, and underrepresented groups. Agencies are directed to work with the National Science and Technology Council to coordinate high priority science initiatives across the federal government as part of the Maximizing Interagency Coordination and Cross-Disciplinary Collaboration priority practice, which also includes supporting teams and novel programs that allow experts from a variety of disciplines to converge on shared challenges. Emphasizing collaboration beyond government agencies, the priority practices of Managing and Modernizing R&D Infrastructure, Transferring Technology from Laboratory to Marketplace, and Partnering with Industry and Academia focus on R&D practices that leverage and support a broad set of private sector and academic partners.

*Sources: Library of Congress; White House.*

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