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Defense Research and Engineering: Action Needed to Improve Management and Oversight of Technology Investments

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Defense Research and Engineering: Action Needed to Improve Management and Oversight of Technology Investments

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Abstract

The Department of Defense (DOD) seeks to outpace foreign adversaries' capabilities by quickly adopting innovative technologies. The Office of the Under Secretary of Defense for Research and Engineering (OUSD[R&E]) has responsibility for managing, overseeing, and improving technology development efforts across DOD to help reach that goal. In the President's fiscal year 2026 budget submission, DOD requested nearly $180 billion for research, development, test and evaluation (RDT&E) activities aimed, in part, at developing technologies that meet both the short-term and long-term needs of current and future warfighters. This request included more than $20 billion for science and technology (S&T) activities and more than $40 billion for advanced component development and prototyping efforts, funding for which OUSD(R&E) is responsible for providing management and oversight.

OUSD(R&E) and the Office of the Under Secretary of Defense for Acquisition and Sustainment were established in February 2018 following the dissolution of DOD's Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD[AT&L]). OUSD(R&E)'s duties and responsibilities include serving as DOD's Chief Technology Officer; establishing policies on, and supervising, all defense research and engineering, technology development, technology transition, prototyping, and experimentation activities and programs; and designating senior officials for critical technology areas supportive of the National Defense Strategy, among others.

OUSD(R&E) Is Generally Implementing Programs and Processes Consistent with Its Authorities to Manage and Oversee Technology Investments

In response to its statutory and policy authorities, OUSD(R&E) enacted programs and processes to manage and oversee technology investments. For example, the office developed and released the 2023 National Defense Science and Technology Strategy aligned with the 2022 National Defense Strategy, as required by statute. The strategy is anchored by 3 strategic pillars—mission focus, foundation building, and succeeding through teamwork—which were then translated into three strategic lines of effort to establish the ways to sharpen DOD's competitive edge: (1) focus on the Joint Mission; (2) create and field capabilities at speed and scale; and (3) ensure the foundation for research and development. The military departments developed their own science and technology strategies, but these strategies do not fully align with DOD's strategy. There is no requirement, in policy or statute, for the military departments to update their science and technology strategies or to align their strategies to the National Defense S&T Strategy. We found several areas where the military departments' strategies do not align with DOD's overarching strategy. Updating and aligning the military departments' S&T strategies to the maximum extent practicable with the National Defense S&T Strategy would allow the military departments and OUSD(R&E) to ensure a common vision for technology development across DOD.

In addition, consistent with its authorities, OUSD(R&E) also designated senior officials who oversee critical technology areas (CTA), and it initiated processes for conducting

technology reviews and collecting technology transition data. OUSD(R&E) is also administering several prototyping programs, meant to quickly deliver technologies to the warfighter.

OUSD(R&E) Faces Challenges Managing and Overseeing Military Department Technology Efforts

OUSD(R&E) faces challenges in managing and overseeing military department technology development efforts. For example, it has yet to ensure that CTA roadmaps consistently provide sufficient information for military departments to invest in technologies for the joint fight. The roadmaps vary, in part, because OUSD(R&E) has not developed formal guidance for the CTA Principal Directors—the senior officials designated to coordinate research and engineering activities and develop research and technology development roadmaps for each CTA—to use in developing the roadmaps. By not issuing guidance for roadmap development, OUSD(R&E) lacks reasonable assurances that the military departments are focusing on and investing in technologies considered critical to meeting the NDS and maintaining technological superiority against its adversaries. In addition, OUSD(R&E) officials acknowledged they have not provided guidance for roadmap development to the military departments. For example, this would include not identifying the level of military department investments that OUSD(R&E) would consider necessary to ensure alignment to the maximum extent practicable with each CTA. Without directing the level of investment needed in each CTA, OUSD(R&E) lacks reasonable assurance that sufficient investments are being made towards progress in any given CTA to ensure timely delivery of future capabilities. Further, OUSD(R&E) risks insufficient investments being made in the technologies it has identified as being critical to countering the threats of our adversaries.

OUSD(R&E) also lacks statutory authority to confirm that the military departments' technology investments, as expressed in their annual budget submissions, align with OUSD(R&E) priorities, and is limited in its ability to influence military department RDT&E budgets to ensure they align with department-wide priorities. Without proper authority and time to review and assess RDT&E budget submissions as part of the budget process, DOD risks the military departments not investing in technologies that warfighters need both for the current and future fight, especially to support the joint force. In addition, having a complete understanding of the full breadth of technology efforts undertaken by the military departments will enable OUSD(R&E) to provide effective management and oversight of these efforts as well as enable it to provide information to Congress as part of the budgeting process.

This is an excerpt from a full-length report. See GAO-26-107664 for additional details, including additional report contributors: https://www.gao.gov/assets/gao-26-107664.pdf.


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