

## Policy Update: Biden Administration Announces FY 2025 Research and Development Priorities

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The Biden Administration has released its memorandum for multi-agency research and development (R&D) priorities for fiscal year (FY) 2025. The memo is developed annually by the White House Office of Management and Budget (OMB) and Office of Science and Technology Policy (OSTP), and is used as guidance for science agencies as they develop the FY 2025 budget request. This most recently released memo comes a bit later than usual and thus may have less impact than usual on agency budget requests that are already far along in their drafting, however, it is still a guide to where the Administration will focus its request priorities. Because the FY 2025 budget will need to comply with the flat funding agreed to in the debt ceiling deal, the priorities in this memo may determine what areas can see new investments or small increases while other areas may face cuts.

This year's memo is significantly shorter than previous memos under the Biden Administration, but the themes and priorities are mostly consistent with prior years, highlighting the importance of federally supported R&D to address societal grand challenges affecting the nation. The memo discusses the need for investment in "public science, technology, and innovation" to achieve the lofty goals of the Biden Administration and sustain the United States' position as a global leader in science and technology. Consistent with the Biden Administration's focus on catalyzing innovation, the memo also emphasizes the need to translate federal R&D into new jobs and industries as well as the importance of bringing the power of innovation to non-traditional R&D sectors, including workforce development and K-12 education.

Below are the multi-agency R&D priorities identified in the memo (**new areas of emphasis in bold**):

- **Advance trustworthy artificial intelligence (AI) technology**
  - **"Build tools, methods, and community engagement to guide the design of regulatory and enforcement regimes for mitigating AI threats to truth, trust, and democracy; safety and security; privacy, civil rights and civil liberties; and economic opportunity for all"**
  - **Develop methods for the use of AI to improve government functions**
- Maintain global competitiveness, national security, and stability
  - "Advance critical and emerging technology areas such as microelectronics, biotechnology, quantum information science, advanced materials, high-performance computing, and nuclear energy"
  - Mitigate biosafety and biosecurity threats
  - "Address the national security impacts of autonomous systems and artificial intelligence"
  - Advance technologies from demonstration to deployment via advanced manufacturing, digital engineering, and robotics
  - Create a process for benchmarking U.S. competitiveness
- Tackling climate change through resilient infrastructure and environmental justice
  - "Support R&D efforts that will help the nation achieve net-zero greenhouse gas emissions by 2050, including priorities identified in the Net-Zero Game Changers Initiative, goals articulated in the Ocean Climate Action Plan and the U.S. Global Change Research Program's Decadal Strategic Plan, and investments that enhance the Nation's ability to measure and monitor greenhouse gas emissions and removal"

- Advance climate observations in preparation for the 6<sup>th</sup> National Climate Assessment and lean on Indigenous knowledge and social science to achieve those long term planning goals.
- Develop and deploy actionable climate services at national and local levels
- “Fund R&D efforts to improve analysis for difficult-to-monetize or -quantify policy options and technologies such as ecosystem services, track natural assets through the emerging national system of environmental and economic statistics, support the National Nature Assessment, and advance recommendations in the Nature-Based Solutions Roadmap”
- Achieve better health outcomes for all populations
  - Fund Cancer Moonshot activities
  - Address current and future health threats such as antimicrobial resistance, and infectious disease
  - **Support behavioral health including for at-risk communities**
  - Improve health equity, public health, and innovation
  - Advance clinical trials, nutrition, rare diseases, and neurodegeneration, among other high-priority areas
  - Address environmental health including cumulative impacts, harmful chemical exposure, and health effects of climate change
- Reduce barriers and inequities in science and regional innovation
  - Support regional workforce development in STEM especially in underserved communities
  - Design evaluations, data-sharing mechanisms, and prototyping to address national goals via policy
  - Increase and broaden public participation in regulatory and civic processes and in R&D
- **Use R&D to build economic growth**
  - **Support applied research, pre-commercialization, and standards for adoption of new technologies**
  - **Support emerging industries that have the potential to spur regional development and job creation**
- Support the entire research enterprise from basic to applied
  - **Assist emerging research institutions**
  - **Provide support for industry and academia to address research security**
  - “Support the infrastructure and capacity for providing free, immediate, and equitable public access to federally-funded research results, while developing mechanisms to incentivize and reward open, reproducible, and secure research practices, in ways that benefit individuals, industry, and innovators everywhere.
  - Experiment with funding processes to better achieve agency R&D missions by designing, trying, and assessing new approaches such as streamlining processes to minimize administrative burdens, engaging new R&D performers, exploring new R&D methods, and forging new partnerships”

The FY 2025 memo includes several of the same priorities as in FY 2024, though in many cases they are organized in broader categories than previous years with less detail on sub-priorities. For example, instead of having a specific priority focused on the need to create an equitable STEM ecosystem, OSTP and OMB included increasing equity of STEM under the umbrella category of “reducing barriers and inequities.” There is not other detail in the memo on the Administration’s education and workforce goals. Similarly, the Biden Administration’s promotion of open science is included under the priority related to supporting the entire research enterprise and cancer related goals receive one bullet under the improving health priority instead of being listed as standalone priorities with more detailed sub-priorities, as both were in the FY 2024 memo.

It is not clear if the reduction in detail about these topics reflect reduced prioritization relative to other topics or is more of a stylistic choice to highlight broader issues.

The FY 2025 memo does not include specific language surrounding support for Historically Black Colleges and Universities (HBCUs) and other Minority-Serving Institutions (MSIs), which is a departure from the Biden Administration's long-standing call to provide more resources to these institutions. However, it should be noted that support for emerging research institutions was newly included in the R&D memo and many MSIs are also considered emerging research institutions. While not a new concern to the federal government, the prioritization of support to academic and industry to address research security is newly highlighted in the FY 2025 memo and demonstrates that discussions about federally funded research security will continue in the coming years. While climate change is a priority that was carried over from the FY 2024 memo, the areas emphasized within the climate change priority have shifted. Unlike the FY 2024 memo, there is no specific mention of the need for innovation and technology transfer of climate change science and less of an emphasis on building resilient infrastructure when compared to the FY 2024 memo. The FY 2025 memo includes new mentions of the need to advance environmental justice, equity, and public health through climate change R&D investments.

The two major additions to the FY 2025 memo are the inclusion of AI as a top priority and innovation as a driver of economic development. The advancement of trustworthy AI is in line with the growing interest of Congress and the Biden Administration. The Biden Administration has been convening with leading AI companies over the summer to discuss the technology and recently secured commitments from industry to assist the federal government in the development of safe and ethical AI.<sup>1</sup> The Administration also plans to develop an executive order related to AI and pursue bipartisan legislation in Congress surrounding the technology.<sup>2</sup> Secondly, using R&D to spur economic growth is new to the memo, but continues an established Biden Administration priority surrounding regional innovation and ensuring access to "good jobs."<sup>3</sup> Examples of previous efforts by the Biden Administration to support R&D-facilitated economic development include the National Science Foundation Regional Innovation Engines Challenge and the Economic Development Administration Regional Technology Hubs Program.

The memorandum directs federal agencies to include an addendum to their budget submissions detailing how the requested FY 2025 funding level by the agencies addresses these priorities within the discretionary budget caps enacted by the June 2023 debt ceiling deal. The discretionary budget caps are expected to cause flat funding or cuts at many of the federal agencies that fund scientific research in FY 2024 and 2025. This will be a departure from the large increases in federal funding for scientific research and innovation that have become the norm the past few years.

*Sources and Additional Information:*

- The memo is available at <https://www.whitehouse.gov/ostp/news-updates/2023/08/17/multi-agency-research-and-development-priorities-for-the-fy-2025-budget/>.

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<sup>1</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2023/07/21/fact-sheet-biden-harris-administration-secures-voluntary-commitments-from-leading-artificial-intelligence-companies-to-manage-the-risks-posed-by-ai/>.

<sup>2</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/09/biden-harris-administration-launches-artificial-intelligence-cyber-challenge-to-protect-americas-critical-software/#:~:text=The%20Biden%20Harris%20Administration%20today,internet%20and%20our%20critical%20infrastructure>.

<sup>3</sup> <https://www.dol.gov/general/good-jobs/principles#:~:text=Job%20Security%20and%20Working%20Conditions,adequate%20hours%20and%20predictable%20schedules>.