THE WHITE HOUSE
WASHINGTON

Federal Research and Development Priorities for Fiscal Year 2025

August 22, 2023

The Office of Science and Technology Policy

- The Office of Science and Technology Policy's (OSTP) mission is to **maximize the benefits of science and technology to advance health, prosperity, security, environmental quality, and justice for all Americans**. OSTP is a component of the Executive Office of the President.
- The Director of OSTP, **Dr. Arati Prabhakar**, serves as the President's chief advisor on science and technology, as a member of the President's Cabinet and as co-chair of the President's Council of Advisors on Science and Technology (PCAST).
- OSTP's charge:
  - Drive **national policy processes** around science and technology issues across the Administration
  - Provide **technical advice** to steer the Administration's efforts in its top priorities
  - **Engage with external partners**, including industry and academia and civil society, on all aspects of science and technology
  - Jointly **advise the President with OMB on the Federal R&D budget**

The purpose of public science, technology, and innovation is to open doors to make our nations greatest aspirations possible

Key Federal Research and Development Priorities for FY 2025

1. Advance trustworthy **artificial intelligence** (AI) technology that protects people's rights and safety, and harness it to accelerate the nation's progress
2. Lead the world in **maintaining global security** and stability in the face of immense geopolitical changes and evolving risks
3. Step up to the global challenge of **meeting the climate crisis** by reimagining our infrastructures, renewing our relationship with nature, and securing environmental justice
4. Achieve **better health outcomes** for every person
5. **Reduce barriers and inequities**
6. Bolster the R&D and industrial innovation that will **build the nation's future economic competitiveness** from the bottom up and middle out
7. **Strengthen, advance, and use America's unparalleled research** to achieve our nation's great aspirations

1. Advance trustworthy artificial intelligence (AI) technology that protects people's rights and safety, and harness it to accelerate the nation's progress

- 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
- Design, pilot, and assess the results of new approaches to **apply AI to improve government functions and public services**
- **Develop trustworthy, powerful advanced AI systems** that help achieve the Nation's great aspirations

2. Lead the world in maintaining global security and stability in the face of immense geopolitical changes and evolving risks

- **Advance critical and emerging technology areas** such as **microelectronics**, **biotechnology**, **quantum** information science, **advanced materials**, **high performance computing**, and **nuclear energy**
- **Mitigate emerging and evolving national security risks**, including the risks associated with **biosafety, biosecurity, and nuclear weapons**
- **Mitigate cybersecurity risks** through resilient architectures; building in security by design; strengthening security and resilience for critical infrastructure, and integrating social, behavioral, and economics research
- Address the **national security impacts of autonomous systems and artificial intelligence**

2. Lead the world in maintaining global security and stability in the face of immense geopolitical changes and evolving risks (cont'd)

- Leverage R&D investments, including those focused on advanced manufacturing, digital engineering, and robotics, to **increase the capacity and agility of government and industry** to accelerate the **transition of new national security capabilities from demonstration to deployment at scale**
- **Harness science and technology intelligence** and analytic capabilities to assess and benchmark U.S. competitiveness

3. Step up to the global challenge of meeting the climate crisis by reimagining our infrastructures, renewing our relationship with nature, and securing environmental justice

- Support R&D efforts that will help the nation **achieve net-zero greenhouse gas emissions** by 2050
- Address **climate observations, monitoring, modeling, and research**, including in parts of our Nation beyond the contiguous United States; **address risks and opportunities for future generations**, including beyond 2100; and advance and **use indigenous knowledge and social science research** to achieve climate goals
- Advance the development of actionable climate services to **support communities, governments, and businesses** in enhancing resilience and taking action
- 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

4. Achieve better health outcomes for every person

- Support the **Biden Cancer Moonshot** to achieve its goal of **ending cancer as we know it**, including efforts in prevention, early detection, novel therapies, and care delivery and support
- Bolster the capacity to **mitigate current and emerging health threats**, including addressing antimicrobial resistance and identifying and eliminating infectious disease outbreaks before they become pandemics
- Support **behavioral and mental health for all Americans**, including at-risk communities like our veterans, caregivers, medical professionals, youth, and members of the LGBTQI+ community
- **Improve public health, health equity, and innovation in disease prevention**

4. Achieve better health outcomes for every person (cont'd)

- Achieve progress to **improve clinical trials, enhance nutrition, advance cures** for rare diseases, combat neurodegeneration, and address other high-need areas
- Reduce the cumulative impacts of environmental burdens and **advance environmental justice** by preventing exposures to harmful chemicals (such as lead and per- and polyfluoroalkyl substances), and **mitigating the health effects of climate change**, especially for communities that experience these burdens disproportionately

5. Reduce barriers and inequities

- **Support regional innovation** and workforce development in science, technology, engineering, mathematics, and medicine all across America with an emphasis on emerging research institutions and historically underserved communities
- Design and implement rigorous experiments and evaluations, data sharing agreements, and prototyping exercises to **answer critical policy questions** by generating comparative evidence about how well different approaches can help us reach national goals more equitably, effectively, and expeditiously, with appropriate privacy protections in place
- **Broaden public participation and community engagement** in regulatory and civic processes and in R&D

6. Bolster the R&D and industrial innovation that will build the nation's future economic competitiveness from the bottom up and middle out

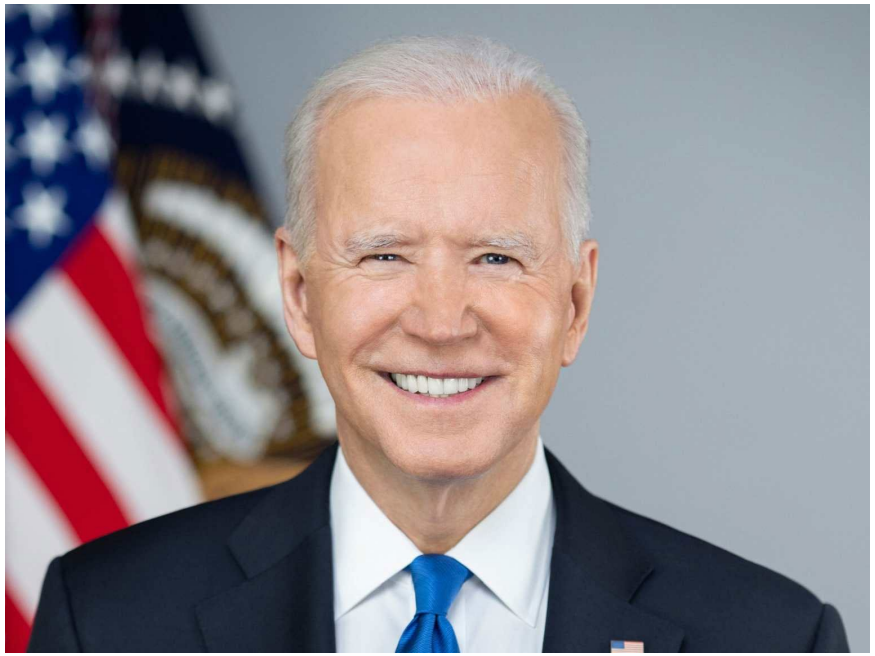
- Support **applied research, experimental development, pre-commercialization, and standards related efforts** that will facilitate the adoption of a broad range of new technologies
- Pursue regional innovation and resilience by **invigorating communities and traditional or emerging industries** to spark growth and create good-paying jobs

7. Strengthen, advance, and use America's unparalleled research to achieve our nation's great aspirations

- **Support and enhance the basic and applied research** that has been a hallmark of the American innovation enterprise and the envy of the world
- **Assist emerging research institutions** to compete effectively for federal funding
- Provide support to both the industrial and academic sectors in identifying and **addressing research security challenges**
- 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.

Driving Impact from Federal R&D Investment

- Federal R&D must **sustain America's leadership position in science and technology**
- Federal R&D must take **aim at and achieve bold, barely feasible goals**
- Federal R&D must **translate into new products and services, new industries and jobs, new policies and regulations, and new standards and practices**
- Federal R&D must **bring the power of innovation to important national missions that have not traditionally benefitted from R&D**—from K12 education and workforce training to construction and traffic safety



Your job is to ask how science and technology can expand our possibilities, solve our toughest challenges, and make the impossible possible

– President Joe Biden, 20 January 2022