



## **PRESIDENT TRUMP'S FY 2021 BUDGET COMMITS TO DOUBLE INVESTMENTS IN KEY INDUSTRIES OF THE FUTURE**

**ACCELERATING United States R&D:** In a time of great power competition, President Trump's FY 2021 Budget puts America in position to maintain its global leadership in science and technology for generations to come.

- President Trump's FY 2021 Budget invests \$142.2 billion in Federal research and development (R&D), a 6 percent increase over his FY 2020 budget.
- The President's Budget prioritizes the Industries of the Future, and commits to double R&D spending in nondefense artificial intelligence (AI) and quantum information science (QIS) by 2022
  - President Trump is the first President in American history to include AI and QIS as Administration R&D priorities. Since his inauguration, the Trump Administration has supported historic investments in R&D, bold national strategies, a pro-growth regulatory agenda, and a commitment to the American workforce.
- Beyond R&D, the FY 2021 Budget includes investments in education and job training that will help create a diverse and highly skilled American workforce to support the Industries of the Future.
  - At the National Science Foundation, an additional \$50 million will go towards AI and QIS workforce development, with a focus on community colleges, Historically Black Colleges and Universities, and Minority Serving Institutions.

**ARTIFICIAL INTELLIGENCE:** The President's FY 2021 Budget includes a significant increase in nondefense AI R&D compared to the FY 2020 Budget and is on a path to double nondefense AI R&D by 2022.

- This increase brings spending for AI R&D and interdisciplinary research institutes at the National Science Foundation to more than \$850 million, which represents a more than 70 percent increase over the FY 2020 budget.
- The Department of Energy's Office of Science will invest \$125 million in AI research, a \$54 million increase over FY 2020.
- The U.S. Department of Agriculture will provide \$100 million for the Agriculture and Food Research Initiative competitive grants program to enhance application of advanced technology, including AI, in agricultural systems.
- The National Institutes of Health will invest \$50 million for new research on chronic diseases using AI and related approaches.
- DARPA is investing \$459 million in AI R&D, an increase of \$50 million from FY 2020, and the Department of Defense's Joint AI Center is increasing its budget from \$242 million in FY 2020 to \$290 million in FY 2021.

- **BACKGROUND:** President Trump launched the American AI Initiative, the United States national strategy for AI leadership, in February 2019.
  - The American AI Initiative directed Federal agencies to prioritize artificial intelligence in their annual budget requests. The FY 2021 budget delivers on this request.
  - The Initiative also called for the development of the first ever agency-by-agency report of nondefense AI R&D spending. This report identified \$1 billion in nondefense R&D for FY 2020, establishing a benchmark for measuring nondefense AI R&D budgets in the future.

**QUANTUM INFORMATION SCIENCE:** President Trump’s FY 2021 Budget greatly bolsters Federal QIS R&D funding with aggregate investment across key agencies increasing by more than 50 percent relative to the FY 2020 Budget, putting QIS R&D on the path to double by 2022.

- National Science Foundation investment in QIS research will double to \$210 million, an additional \$105 million over FY 2020.
- The Department of Energy Office of Science spending on QIS research will increase to \$237 million, which will boost QIS efforts at the national laboratories and in academia and industry. This represents a nearly \$70 million increase over FY 2020.
- The President’s Budget includes \$25 million for the Department of Energy Office of Science to support early stage research for a quantum internet.
  - The development of a network of quantum computers and quantum devices holds promise for creating new technologies, improving the security of our communications and allowing dramatic advances in computing.
  - The White House Office of Science and Technology Policy’s National Quantum Coordination Office issued a [\*Strategic Vision for America’s Quantum Networks\*](#), which provides the QIS research community with specific recommendations to focus quantum internet R&D activities.
- **BACKGROUND:** In December 2018, President Trump signed into law the bipartisan National Quantum Initiative Act, which greatly accelerated QIS R&D investment and coordination.
  - The FY 2020 Budget jumpstarted the R&D spending called for by the legislation with at least half a billion dollars for QIS R&D across the Federal Government.
  - As directed by the legislation, the White House established the National Quantum Coordination Office to harmonize QIS efforts across the Federal agencies.

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