

Policy Recommendations

America needs to strengthen foundational research, make strategic investments in science and technology, and deploy enabling infrastructure to sustain dominance in underlying technologies, such as artificial intelligence, quantum computing, advanced robotics, aerospace and advanced medicine.

The ripple effects of strategic, long-term investment in science and technology are pervasive. The country needs a national innovation strategy to pursue ambitious, exploratory and ground-breaking projects to solve the toughest challenges in fields as varied as health, energy, transportation, education and national security.

Boost federal funding for R&D, with a focus on strategic investments in basic research.

RECOMMENDATION 1

Develop and implement whole-of-government strategic planning for R&D. The federal government should develop and execute a whole-of-government approach for strategic R&D investment, including a clear articulation of near-, medium- and long-term research priorities. A whole-of-government strategic plan should include clear and specific objectives and benchmarks, results-driven planning and execution, a predictable funding stream, and effective coordination and collaboration across agencies and federal labs.

RECOMMENDATION 2

Increase funding for basic R&D. The federal government should build on last year's increase in funding for basic research to sustain a 4 percent annual growth rate, adjusted for inflation, in federal spending on basic research in the coming years. Such a trajectory would be consistent with long-term historical growth rates in federal spending on basic research that were sustained from the 1970s through the 1990s.

Improve collaboration among federal research labs, universities and the private sector.

The federal government should improve and expand collaboration to accelerate the transition of promising technologies from the laboratory to commercialization in the marketplace.

RECOMMENDATION 3

Incentivize and support regional cluster initiatives.

The federal government should support regional cluster initiatives by funding grants and innovation challenges that promote local community development, incentivize industry-aligned workforce preparedness programs, and strengthen information-sharing and monitoring efforts around cluster initiatives. This effort should include:

- a. Focusing federal support on providing robust, long-term and predictable funding streams to help scale up innovation clusters and advance a forward-looking vision for local economic growth through innovation.
- b. Maintaining and expanding existing federal funding channels, including competitive matching grant programs. Examples include the Economic Development Agency's i6 and Seed Fund Support programs, which serve as useful "one-stop shops" for funding, information exchanges and expert assistance for local innovators and entrepreneurs.

RECOMMENDATION 4

Expand collaborative research partnerships. The federal government and federal research agencies should promote industry-university collaborative research partnerships to ensure that advances in early-stage research can proceed through the commercialization pipeline. The government should expand programs such as the National Science Foundation's Engineering Research Centers and Industry-Cooperative Research Centers, which leverage public-private partnerships to achieve these objectives.

Incentivize private-sector R&D in the United States.

RECOMMENDATION 5

Preserve a tax code without systemic barriers to U.S. R&D. The federal government should preserve a competitive corporate tax rate and international tax rules that foster U.S. innovation and R&D.

RECOMMENDATION 6

Ensure tax credit competitiveness. The United States should maintain a tax incentive structure for private-sector R&D investment that equals or exceeds that of other developed economies. This structure should continue to include the ability to expense research expenditures (currently set to expire after 2021) and should streamline the process for claiming R&D tax credits.

RECOMMENDATION 7

Incentivize a long-term view of value creation and R&D. The government should also partner with the business community by supporting corporate governance initiatives to enable companies to focus on long-term growth and risk management rather than pursue short-term gains, a critical condition for undertaking long-term and often-uncertain R&D ventures.

RECOMMENDATION 8

Ensure the fitness of the patent system. The federal government should strengthen the U.S. patent system by promoting the reliability, certainty and quality of patent rights to encourage innovation, business investment and emerging industries.