

United States Senate

WASHINGTON, DC 20510

January 14, 2020

President Donald Trump
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

Dear Mr. President:

As your administration prepares its Fiscal Year (FY) 2021 Budget Request, I write to request that you ensure that both the National Science Foundation (NSF) and National Institute of Standards and Technology (NIST) receive significant funding increases. More specifically, I urge you to consider providing no less than \$10 billion to NSF and no less than \$1.5 billion to NIST in the upcoming fiscal year.

For over 70 years, the United States has been the unequivocal global leader in scientific and technological innovation, and as a result the American people have benefited through good-paying jobs, economic prosperity, and a higher quality of life. Today, however, this leadership position is being eroded and challenged by foreign competitors, some of whom are stealing American intellectual property and trade secrets and aggressively investing in fundamental research and commercialization to dominate the key technology fields of the future.

For example, China has indicated its intent to dominate high-technology fields and industries through its strategic “Made in China 2025” plan and other industrial policies. China has surpassed the U.S. in cited publications on some critical aspects of artificial intelligence, and has already developed the internal capacity to make independent progress in other high-technology research areas. While these advances pose challenges for American industry and economic security, we must also recognize the national security implications if the Chinese Communist Party gains an advantage over the U.S. in critical technologies with dual-use applications.

Meanwhile, at home, the U.S. Government – across Administrations – has failed to adequately ramp up investment in emerging science and technology fields in a meaningful way comparable to the scale and scope of China-led programs. This disparity will have dire consequences across almost all sectors of American society, including transportation and infrastructure, energy, health care, manufacturing, and agriculture, as well as our nation’s defense.

Without significantly increased investment in research and development, education, and other core pillars of the American innovation ecosystem, it is only a matter of time before America’s foreign competitors overtake the U.S. in terms of technological primacy: whichever country wins the race in key technology fields – such as artificial intelligence, quantum computing, advanced communications, and advanced manufacturing – will lead the 21st Century.

America has been, and must continue to be, trailblazing the future. A NSF budget of \$10 billion and a NIST budget of \$1.5 billion in FY 2021 would represent a marked increase above previous requests, and would lay the necessary groundwork to inspire a new generation of researchers and innovators. Most importantly, this decision would send a clear signal to the world that the United States intends to retain its preeminent position as the global leader in science and technology.

Such an effort is not without precedent. After the Soviet Union launched Sputnik in 1957, the United States responded by creating NASA and DARPA, while significantly increasing investments in scientific research and education. Likewise, in the 1980's, the U.S. government funded a range of programs aimed at the commercialization of semiconductor discoveries to better compete with Japan. I believe that we now find ourselves at a similar inflection point, where substantial federal investment is needed in order to remain ahead of our closest competitors.

As you know, I am working on a proposal that would significantly increase funding for science and technology research in a number of critical areas. I believe your request for additional funding would help advance our shared interest in ensuring American leadership in science and technology for generations to come.

Thank you for your consideration of this request. I look forward to working on a bipartisan basis to advance scientific and technological innovation in support of our economic and national security.

Sincerely,



Charles E. Schumer
United States Senator

Cc
The Honorable Mark T. Esper
Secretary of Defense

Robert C. O'Brien
Assistant to the President for National Security Affairs