

VISITING COMMITTEE ON ADVANCED TECHNOLOGY

National Institute of Standards and Technology

March 4, 2021

The Honorable Gina Raimondo
Secretary
Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

Dear Secretary Raimondo:

On behalf of the Visiting Committee on Advanced Technology (VCAT), the principal advisory board for the National Institute of Standards and Technology (NIST), we would like to congratulate you on your confirmation as the Secretary of Commerce. We look forward to supporting the administration and your efforts to combat COVID-19, accelerate a U.S. economic recovery, confront racial inequity, and address significant challenges associated with climate change. NIST will be integral in advancing the priorities of the Biden Administration.

NIST has an outsized impact on the Nation's economy, quality of life, and national security. The institute is one of the highest-impact S&T agencies in the United States, with programs covering the entire technology development cycle from fundamental research to engaging directly with industrial stakeholders to improve efficiency and performance. NIST has a long track record of delivering significant achievements for the nation with examples ranging from the NIST Cybersecurity Framework that is used by organizations around the world, including giants like the Bank of America, Walgreen's, and Kaiser Permanente, to developing and maintaining the world's most precise atomic clocks that underpin modern navigation, communications, and finance.

NIST is working to ensure that the US remains a world leader in the technologies and industries that will be critical to economic prosperity and national security, including quantum science, Artificial Intelligence, engineering biology, and advanced communications, to name a few. NIST is a world-leading hub of expertise in quantum science, with efforts ranging from Nobel prize-winning fundamental research to work on the component technologies for viable quantum networks. NIST is working with partners in industry and academia to develop the measurements and standards that will underpin the trustworthiness and reliability of Artificial Intelligence systems. The institute's research efforts in engineering biology are enabling more cost-effective and reliable manufacturing of biological systems and therapeutics, providing capabilities that will strengthen our ability to combat COVID-19 and future pandemics. NIST's investments in advanced communications provide industry and government partners with one-of-a-kind testing facilities. NIST has the expertise needed to ensure the most efficient use of the available spectrum and is working on the measurement technologies necessary to build the foundation for 6G and beyond communications technologies.

Furthermore, NIST programs have a unique focus on the innovation sector that is best positioned to translate new technology to economic growth: **advanced manufacturing**. For over 100

VISITING COMMITTEE ON ADVANCED TECHNOLOGY

National Institute of Standards and Technology

years, NIST's Laboratory Programs have provided technical support to the Nation's manufacturing industries as they strive to out-innovate and outperform their global competition. They do that by conducting research in manufacturing processes and advanced materials to ensure industry has the standards, guidance, and other measurement tools they need to succeed. NIST's Hollings Manufacturing Extension Partnership (MEP) and Manufacturing USA programs help U.S. industry develop and implement new technology and develop robust supply chains. In FY 2019 alone MEP served over 28,000 manufacturers, providing assistance that resulted in 114,650 jobs created and retained, \$1.5 B in cost savings, and \$15.77 B in new and retained sales.

With the country facing significant economic and national security challenges from China, combined with the existential threat of a changing climate, a renewed commitment and investment of resources in the Nation's scientific and technological capabilities is essential. In addition to investing in the programs at NIST, its facilities and infrastructure must not be left behind. Currently 58% of NIST facilities are in *poor to critical condition* according to Department of Commerce standards, and NIST's maintenance budget is insufficient to address its crumbling infrastructure. This has a direct impact on program efficiency and effectiveness. Multiple economic studies conducted over several years have demonstrated that NIST has been able provide a direct benefit to cost ratio of 47:1 for every tax dollar invested in NIST, even with its current facilities being less than optimal. Imagine the impact they could have if properly resourced.

The Committee appreciates the Department's past support and, as always, offers our assistance. We look forward to working with you and your team as you embark on the Administration's bold agenda.

Sincerely,

E. Allen Adler
Chair
Visiting Committee on Advanced Technology for NIST

Katharine Ku
Vice Chair
Visiting Committee on Advanced Technology for NIST

cc: James Olthoff
Jason Boehm
Stephanie Shaw