

April 1, 2019

The Honorable Richard Shelby  
Chairman  
Senate Appropriations Committee  
Washington, DC 20510

The Honorable Patrick Leahy  
Vice Chairman  
Senate Appropriations Committee  
Washington, DC 20510

The Honorable Nita Lowey  
Chairwoman  
House Appropriations Committee  
Washington, DC 20515

The Honorable Kay Granger  
Ranking Member  
House Appropriations Committee  
Washington, DC 20515

Dear Chairman Shelby, Vice Chairman Leahy, Chairwoman Lowey and Ranking Member Granger:

On behalf of the scientific and engineering societies, industry associations, companies and universities listed below, we write to express our strong support for the National Institute of Standards and Technology (NIST), an agency vital to solving the technical challenges faced by U.S. businesses and academic researchers.

We urge you to provide strong funding support for NIST's Scientific and Technical Research and Services (STRS) programs and construction account within fiscal year 2020 (FY20) appropriations. We recommend that Congress increase **STRS funding 4% real growth or a minimum increase of \$41 million above FY19** to further advance research projects in key areas, including cybersecurity, disaster resilience, internet of things, artificial intelligence and measurement science. We also request additional resources to fully fund the authorized amount of **\$80 million for quantum science and technology activities** at NIST included in the bipartisan National Quantum Initiative Act. Finally, due to the ongoing need for repairs and maintenance at NIST facilities and its direct impact on NIST's ability to provide critical services to industry, we request **\$150 million for the NIST construction account** for FY20.

NIST works with our nation's businesses and universities to drive American economic growth and job creation. Companies, academic institutions and other federal agencies rely on STRS programs to provide foundational research and material development for their products and programs. NIST supports America's global competitiveness by aiding businesses to overcome technical obstacles— fulfilling a vital function that companies cannot do themselves. NIST's core measurement science programs, for example, provide calibrations and standards for industry broadly – from oil and gas to aerospace and medicine.

NIST is also critical to maintaining U.S. national security, with cybersecurity a top priority. Through its National Cybersecurity Center of Excellence, NIST partners with industry to advance the rapid adoption of secure technologies. Additionally, there is an ever-increasing need for the disaster reliance research at NIST. Recent natural disasters illustrate the need for investment in post-disaster impact research-and pre-impact mitigation, whether it is from high-winds, fire or flood.

The agency also plays an essential role in emerging industries, such as quantum technology, that require foundational measurements to enable U.S. dominance. The National Quantum Initiative Act, which passed with overwhelming bipartisan support in 2018, includes NIST as one of three key agencies that will help ensure the U.S. remains a global leader in quantum. The bill also authorizes the Quantum Economic Development Consortium (QED-C), a jointly funded government and private sector collaboration designed to tackle some of the challenges of moving quantum technologies from the lab to market.

Lastly, modern, functional facilities are required for NIST to remain the world-leader in measurement science. Currently, NIST's aging infrastructure cannot consistently support the temperature, humidity, and power requirements for world-class measurements. Recurring failures of these utility systems in recent years has resulted in lost work and costly damage to laboratory facilities. In FY18, Congress strongly supported

NIST infrastructure projects and provided additional funds in FY19. While these funds were extremely helpful in addressing some of these issues, NIST still has many urgent, unmet maintenance needs.

For FY20 appropriations, we urge increased investment in NIST's core laboratory research programs at 4% real growth or a minimum increase of \$41 million above FY19. Additionally, we request \$80 million toward quantum activities already underway at NIST, an increase of \$50 million over FY19, and urge Congress to appropriate \$150 million for NIST facilities and construction.

Thank you for your consideration, and we look forward to working with you and your colleagues as the appropriation process continues.

Sincerely,

The American Association of Physicists in  
Medicine (AAPM)

American Association of Physics Teachers  
(AAPT)

American Chemical Society (ACS)

The American Institute of Physics (AIP)

American Physical Society (APS)

Acoustical Society of America (ASA)

AstraZeneca Pharmaceuticals LP

Corning Research and Development Corporation

IEEE-USA

Keysight Technologies

M-7 Technologies

Materials Research Society (MRS)

Microsoft Corporation

HyTrust Inc.

The Optical Society (OSA)

Rockwell Automation

The Science Coalition

Semiconductor Industry Association (SIA)

The international society of optics and photonics  
(SPIE)

The Taskforce for American Innovation (TFAI)

University of Colorado, Boulder

University of Maryland, College Park

cc: The Honorable Jerry Moran, Chair of the Senate Appropriations Subcommittee for Commerce, Justice and Science

The Honorable Jeanne Shaheen, Ranking Member of the Senate Appropriations Subcommittee for Commerce, Justice and Science

The Honorable Jose Serrano, Chair of the House Appropriations Subcommittee for Commerce, Justice and Science

The Honorable, Robert Aderholt, Ranking Member of the House Appropriations Subcommittee for Commerce, Justice and Science