



COMMITTEE ON

## SCIENCE, SPACE, AND TECHNOLOGY

REPUBLICANS Frank Lucas, Ranking Member

### Opening Statement of Science Committee Ranking Member Frank Lucas Full Committee Hearing: Losing Ground: U.S. Competitiveness in Critical Technologies January 29, 2020

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Thank you, Chairwoman Johnson for holding this important hearing on U.S. Competitiveness in Critical Technologies.

American superiority in science and technology is foundational to our economic competitiveness, our national security, and our way of life. But the U.S. is facing two fundamental challenges to our competitiveness and growth as a nation.

First, foreign countries, especially China, are threatening to outpace us in scientific research and development. Second, we must respond to a changing climate and develop next-generation technologies to understand it, address it, and mitigate it.

To meet these two generational challenges, we must accelerate our investments in basic research, as well as invest in the tools and infrastructure needed to support that research. That's why yesterday I introduced the "Securing American Leadership in Science and Technology Act."

I'm proud to be joined by many of my Republican colleagues on the Science Committee on this bill, which creates a long-term strategy for growing our nation's investment in basic research and research infrastructure, while cutting red tape to improve the taxpayers' return on investment. The bill directs the development of a National Science and Technology Strategy for the United States and a quadrennial review process. This will provide a more strategic, whole-of government effort, for setting national priorities and improving coordination between federal agencies.

The bill prioritizes investment in federal basic research. It authorizes a doubling of basic research funding over the next 10 years at the Department of Energy, the National Science Foundation, the National Institute of Standards and Technology, and the National Oceanic and Atmospheric Administration. The bill also prioritizes research infrastructure. From light sources, to supercomputers - if we want to do big things and compete for the best scientists and companies in the world to work here in the U.S., we need world-class facilities.

The bill promotes the development of an American STEM-capable workforce. To support the industries of the future, we need workers with STEM skills at all levels – from the skilled technical workforce to Ph.D. level scientists.

Finally, the bill includes regulatory reform to improve the effectiveness of taxpayer investments in R&D. The bill updates technology transfer laws to get research out of the lab and into private industry for development, and makes it easier for private industry to collaborate with the federal government on research.

I recognize that we are the minority party and that we do not get to set the agenda. But I believe we have many shared priorities and I hope this legislative package will start a bipartisan conversation about what we need to do to ensure America lead's the technological revolution of the 21<sup>st</sup> Century.

China has made it an explicit goal to surpass the U.S. in critical technologies. Their "Made in China 2025" initiative is a bold plan, which outlines their intent to become the global leader in areas like quantum information science, advanced robotics, aerospace and biotechnology. China is making real investments in R&D—increasing government-funded R&D by 56 percent between 2011 and 2016. At the same time, U.S. investment in basic civilian research has stagnated, falling by 12 percent in absolute terms. As we will hear today, there are indications that China may have already surpassed the U.S. total research investment this year. China is also pushing a strategy of promoting foreign acquisitions, forced technology transfer agreements, and, in many cases, commercial cyber-espionage to gain cutting-edge technologies and know-how.

We must protect our nation's research and intellectual property. The Trump Administration has taken good steps towards protecting American IP from Chinese aggression. But we must do more to protect sensitive American research, while maintaining the spirit of open science that has fueled generations of discoveries. As any good football coach will tell you, the best defense is a good offense.

American industry is the driver of investment in R&D spending in our country, accounting for 70% of U.S. R&D. But those investments are fueled by the ideas that come out of government-funded basic research, the type of research that industry doesn't undertake because it's too risky and too early-stage. Since World War II, the successful partnership between government, academia and industry, has made our research enterprise the envy of the world. It's time to renew that enterprise.

Americans are pioneers and this spirit has always driven our support for science. But I believe we need to collectively do a better job of providing a vision for why science matters to all Americans. I look forward to hearing from our distinguished panel of witnesses about how we can work together to meet this challenge and ensure America continues to lead in science and technology.

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