



REPORT TO THE PRESIDENT TRANSFORMATION AND OPPORTUNITY: THE FUTURE OF THE U.S. RESEARCH ENTERPRISE

Executive Office of the President
President's Council of Advisors on
Science and Technology

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EXECUTIVE OFFICE OF THE PRESIDENT
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President Barack Obama
The White House
Washington, DC 20502

Dear Mr. President,

We are pleased to send you this new report from your Council of Advisors on Science and Technology, *Transformation and Opportunity: The Future of the U.S. Research Enterprise*. This report comes at a critical time for the United States. The Nation once led the world in investments in research and development (R&D) as a share of gross domestic product (GDP), but more recently, the United States has been investing less in R&D than other leading and emerging nations invest. Moreover, U.S. industry has been shifting its investments toward applied R&D, narrowing the support for basic and early-stage applied research, which is crucial to transforming innovation. Without adequate support for such research, the United States risks losing its leadership in invention and discovery—the driving force behind the new industries and jobs that have propelled the U.S. economy over the past century.

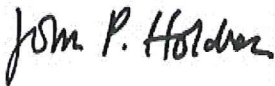
This report therefore addresses the two objectives of (1) enhancing long-range U.S. investment in basic and early-stage applied research and (2) reducing the barriers to the transformation of the results of that research into new products, industries, and jobs.

In this report, PCAST describes a series of specific opportunities for the Federal Government, universities, and industry to strengthen the U.S. research enterprise. These opportunities fall into three categories: the Federal Government's role as the foundational investor in basic research; a better policy environment to encourage industry investment in R&D; and the new role of research universities as hubs of the innovation ecosystem.

Among the actions that PCAST recommends, three stand out in scope and importance: (1) that you reaffirm your stated goal that U.S. total R&D expenditures (across the public and private sectors) should achieve and sustain a level of 3 percent of GDP; (2) that actions be taken, some achievable entirely by Executive decision, to increase the stability and predictability of Federal research funding; and (3) that Congress not only make the R&D tax credit permanent, but increase it to at least 17 percent, as you have already advocated.

The full PCAST discussed and approved this report at its public meeting on July 19, 2012. We are grateful for the opportunity to serve you and the country in this way and hope that you find this report useful.

Best regards,



John P. Holdren
Co-chair, PCAST



Eric S. Lander
Co-chair, PCAST



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