OSTP and U.S. Federal Science and Technology Policy

Kei Koizumi
Assistant Director for Federal R&D,
White House Office of Science & Technology Policy
What is science and technology policy?

Policy for science
vs.
Science for policy

(also technology for policy vs. policy for technology)

OSTP does it all!
Office of Science and Technology Policy (OSTP)

- OSTP provides S&T advice to the president and other White House offices, leads federal S&T policymaking, coordinates interagency S&T efforts and R&D spending, and consults with non-federal stakeholders on S&T matters.

- Director John Holdren is also President Obama’s science advisor.

- OSTP manages National Science and Technology Council (NSTC) interagency groups.

- OSTP supports the President’s Council of Advisors on Science and Technology (PCAST).
The place of science in the White House...

...is centered in the Office of Science and Technology Policy (OSTP)

EOP also includes Offices of: Vice President, Chief of Staff, Cabinet Affairs, Communications, Intergovernmental Relations, Public Engagement, Social Secretary, US Trade Representative, White House Counsel, and more.
OSTP: two major responsibilities

1. Policy for science and technology
   Analysis, recommendations, and coordination with OMB and other White House offices on R&D budgets & related policies, S&T education & workforce issues, inter-agency S&T initiatives, broadband, open government, scientific integrity. Oversight of NSF and NASA.

2. Science and technology for policy
   Independent advice for the President about S&T germane to all policy issues with which he is concerned
“We know that the nation that goes all-in on innovation today will own the global economy tomorrow. This is an edge America cannot surrender. Federally funded research helped lead to the ideas and inventions behind Google and smartphones... There are entire industries to be built based on vaccines that stay ahead of drug-resistant bacteria, or paper-thin material that’s stronger than steel.”

- President Barack Obama

January 28, 2014
The 2015 Budget:

- Sustains a world-leading science and research enterprise
- Spurs innovation
- Makes America a leader in advanced manufacturing
- Advances cleaner, American energy
- Improves our understanding of and response to global climate change
- Supports research to improve the health of all Americans
- Prepares Americans with science, technology, engineering, and mathematics skills
- Calls for an Opportunity, Growth, and Security Initiative
- Improves America’s long-term fiscal health
Total R&D by Agency: 2015 Budget
Budget Authority in billions of dollars

DOD, $64.4
HHS (NIH), $31.1
NASA, $11.6
DOE, $12.3
NSF, $5.7
USDA, $2.4
DOC (NIST & NOAA), $1.6
All Other, $6.2

Total R&D = $135.4 billion

MARCH 2014 OSTP
FY 2009 figures include Recovery Act appropriations.
Research includes basic research and applied research.
MARCH 2014 OSTP
“We also have the chance, right now, to beat other countries in the race for the next wave of high-tech manufacturing jobs. My administration has launched two hubs for high-tech manufacturing in Raleigh, North Carolina and Youngstown, Ohio, where we’ve connected businesses to research universities that can help America lead the world in advanced technologies.”

- President Barack Obama

January 28, 2014
“Now, one of the biggest factors in bringing more jobs back is our commitment to American energy. The all-of-the-above energy strategy I announced a few years ago is working, and today, America is closer to energy independence than we have been in decades... Taken together, our energy policy is creating jobs and leading to a cleaner, safer planet.”

- President Barack Obama
January 28, 2014
“Over the past eight years, the United States has reduced our total carbon pollution more than any other nation on Earth. But we have to act with more urgency -- because a changing climate is already harming Western communities struggling with drought, and coastal cities dealing with floods... The shift to a cleaner energy economy won’t happen overnight, and it will require some tough choices along the way. But the debate is settled. Climate change is a fact. ”
- President Barack Obama
January 28, 2014
US Global Change Research Program, by Agency
(budget authority in millions of constant FY 2014 dollars)

FY 2009 figures include Recovery Act funding.
MARCH 2014 OSTP
Health Research in the 2015 Budget

Supporting research to improve the health of all Americans

- The 2015 Budget provides $30.2 billion for the National Institutes of Health (NIH).
- The Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative will continue with a Federal commitment of approximately $200 million from NIH, DARPA, and NSF.
“Teachers and principals in schools from Tennessee to Washington, D.C. are making big strides in preparing students with the skills for the new economy — problem solving, critical thinking, science, technology, engineering, math.”

- President Barack Obama
  January 28, 2014
FY 2015 President's Budget Request, Federal STEM Education Investments by Agency ($2,920 million)

111 Investments
14 Agencies
MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Sylvia Mathews Burwell
Director
Office of Management and Budget

Dr. John P. Holdren
Director
Office of Science and Technology Policy

SUBJECT: Science and Technology Priorities for the FY 2015 Budget

July 26, 2013

M-13-16
President’s Strategy for American Innovation
Securing Our Economic Growth and Prosperity

Catalyze Breakthroughs for National Priorities
- Unleash a clean energy revolution
- Accelerate biotechnology, nanotechnology, and advanced manufacturing
- Develop breakthroughs in space applications
- Drive breakthroughs in health care technology
- Create a quantum leap in educational technologies

Promote Market-Based Innovation
- Accelerate business innovation with the R&E tax credit
- Promote investments in ingenuity through effective intellectual property policy
- Encourage high-growth and innovation-based entrepreneurship
- Promote innovative, open, and competitive markets

Invest in the Building Blocks of American Innovation
- Educate Americans with 21st century skills and create a world-class workforce
- Strengthen and broaden American leadership in fundamental research
- Build a leading physical infrastructure
- Develop an advanced information technology ecosystem

Source: [http://www.whitehouse.gov/innovation/](http://www.whitehouse.gov/innovation/)
THE NATIONAL NANOTECHNOLOGY INITIATIVE

Research and Development Leading to a Revolution in Technology and Industry

NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT

Supplement to the President's Budget

February 2011
Scientific Collections:
Mission-Critical Infrastructure for Federal Science Agencies

A Report of the Interagency Working Group on Scientific Collections (IWGSC)
America COMPETES Reauthorization Act of 2010

H.R. 5116

One Hundred Eleventh Congress
of the
United States of America

AT THE SECOND SESSION

Began and held at the City of Washington on Tuesday,
the fifth day of January, two thousand and ten

An Act

To invest in innovation through research and development, to improve the competitiveness of the United States, and for other purposes.

SECTION 1. SHORT TITLE: TABLE OF CONTENTS.

(a) SHORT TITLE.—this Act may be cited as the “America COMPETES Reauthorization Act of 2010” or the “America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Reauthorization Act of 2010”.

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Definitions.
Sec. 3. Budgetary impact statement.

TITLE I—OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Reauthorizes NSF, DOE Science, NIST, DOE ARPA-E 2011-2013
Enacted January 2011; also provides guidance to OSTP’s activities
THANK YOU

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