

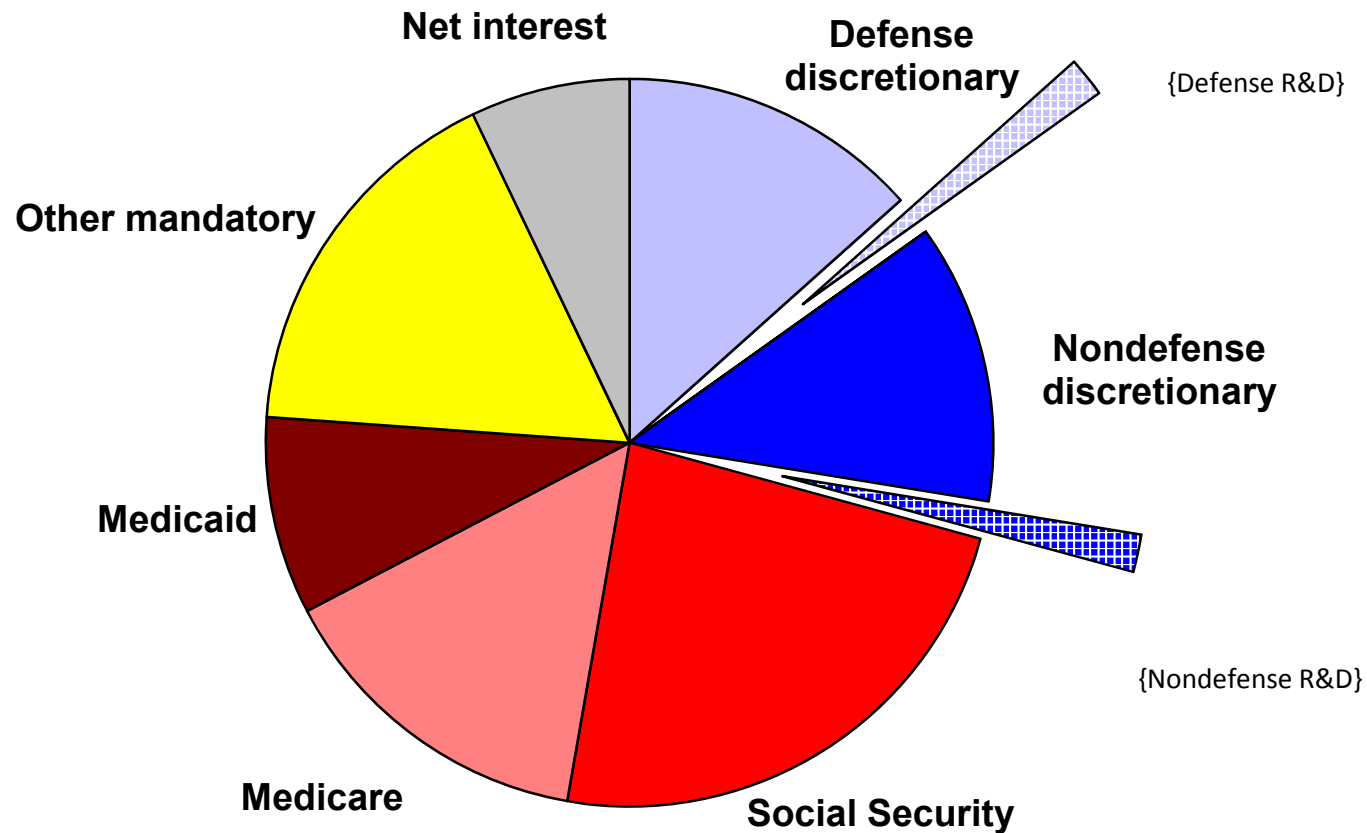


Science and Technology in the Federal Budget

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White House Office of Science & Technology Policy
Spring 2015

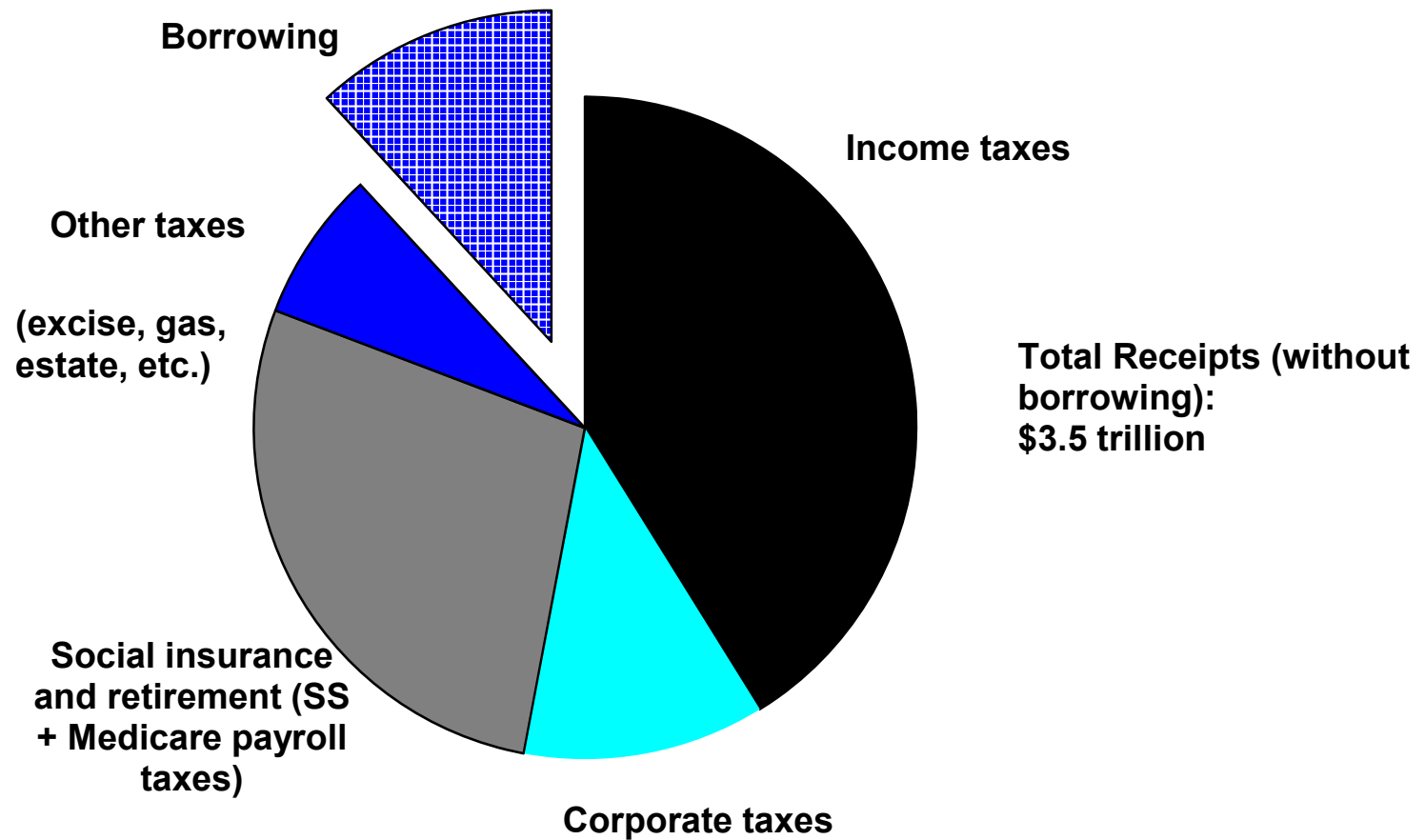
Composition of the Proposed FY 2016 Budget

Total Outlays = \$4.0 trillion

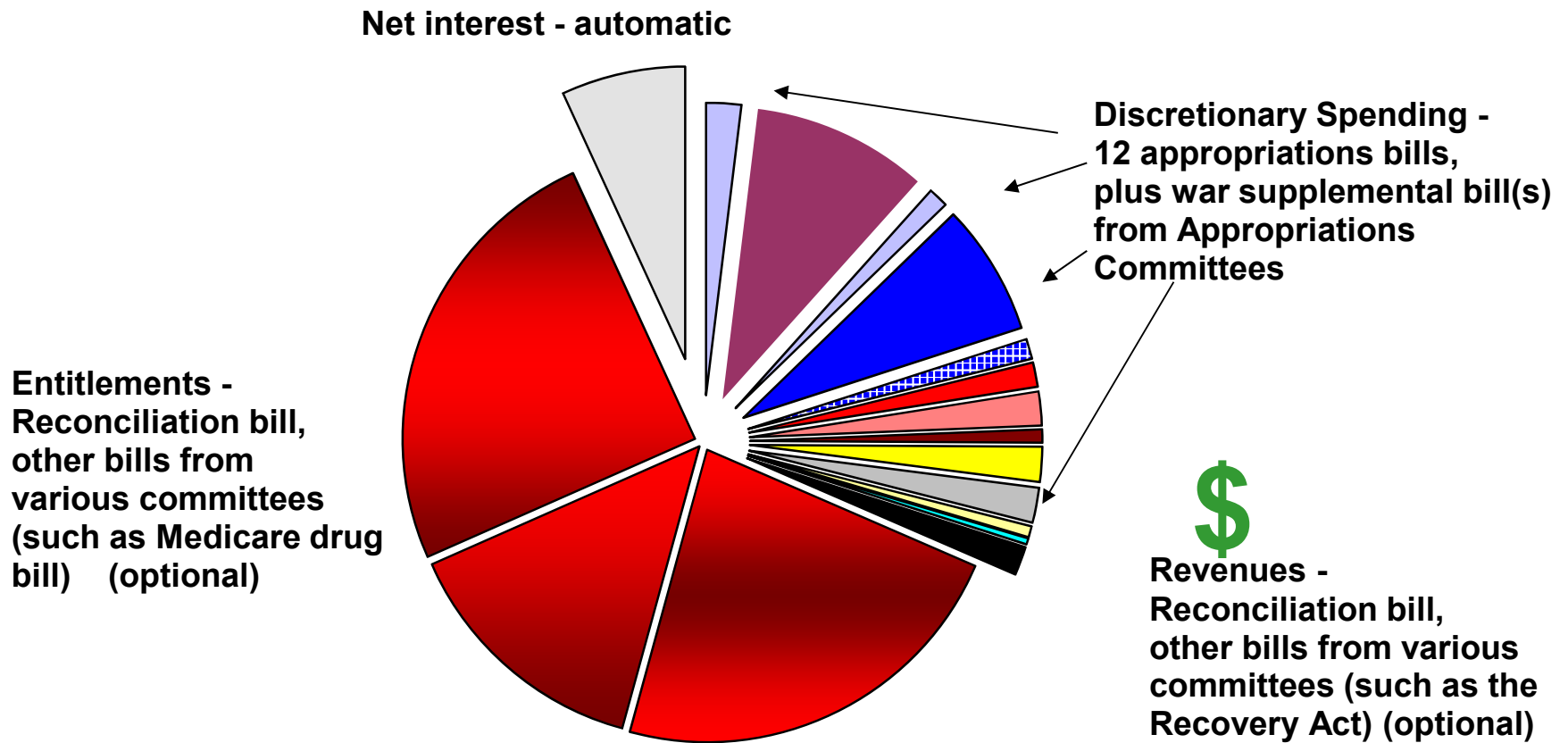


Composition of the Proposed FY 2016 Budget by Source of Funds

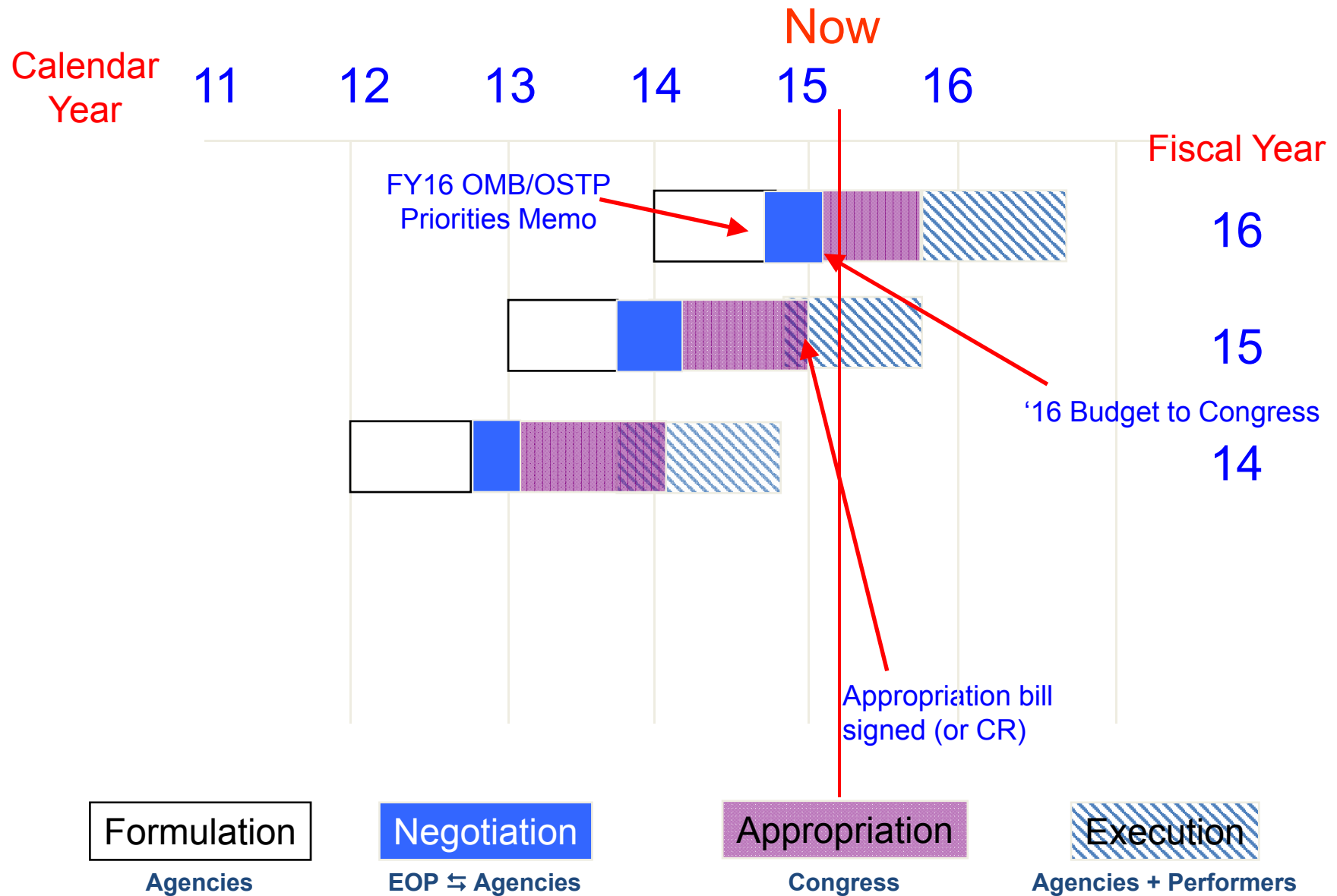
Total Outlays = \$4.0 trillion



How the Budget Becomes Law FY 2016 Proposal = \$4.0 trillion



Budget Timeline



Is there an official definition for R&D?

- Yes. NSF keeps it. OMB and others' definitions of R&D follow it, and the definitions are coordinated internationally.
- “S&T” is not defined officially; neither is “innovation.”
- NSF does annual surveys to measure U.S. R&D
- OMB asks agencies to submit R&D funding data as part of the budget process

4. *Research, development, and R&D plant.* Amounts for R&D and R&D plant include all direct, incidental, or related costs resulting from, or necessary to, performance of R&D and costs of R&D plant as defined below, regardless of whether the R&D is performed by a federal agency (intramurally) or by private individuals and organizations under grant or contract (extramurally). R&D excludes routine product testing, quality control, mapping and surveys, collection of general-purpose statistics, experimental production, and the training of scientific personnel.

a. *Research* is defined as systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied according to the objectives of the sponsoring agency.

Basic research is defined as systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.

Applied research is defined as systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.

b. *Development* is defined as systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

To better differentiate between the part of the federal R&D budget that supports science and key enabling technologies (including technologies for military and nondefense applications) and the part that primarily supports testing and evaluation (mostly of defense-related systems), NSF collects from the DOD development dollars in two categories: advanced technology development and major systems development.

DOD uses service codes 6.1 through 6.7 to classify data into the survey categories. Within DOD's research categories, basic research is classified as 6.1, and applied research is classified as 6.2. Within DOD's development categories, advanced technology development is classified as 6.3. Major systems development is classified as 6.4 through 6.7 and includes component developmental prototypes, demonstration and development of management support, and operational system development.



The FY 2015 Budget Process (1)

Spring 2013 – Agencies begin to formulate their FY 2015 proposals.

Summer 2013 – Agencies formulate their FY 2015 proposals based on broad strategic guidance from OMB (Office of Management and Budget) (and OSTP for science agencies).

September 2013 – Agencies deliver their budgets to OMB. Agencies brief OMB (and OSTP, and other WH offices) on their budgets.

Fall 2013 – Agencies negotiate with OMB over their FY 2015 proposals. OSTP has an advisory role. Agencies respond to OMB (and OSTP) questions.

January 2014 – PASSBACK (decisions on agency budgets, including additions or subtractions to the original agency proposals; delayed from November).

January– February 2014 – Appeals. If agencies are unhappy with their passbacks, they can appeal. OMB resolves appeals. (Appeals can go to the OMB Director, the West Wing, and in a few cases to the President.)

February 2014 – Settlement. Agencies finalize their requests. OMB, OSTP, and agencies then work on finalizing budget documents.

March 2014 – President releases his proposed FY 2015 budget and transmits it to Congress.



The FY 2015 Budget Process (2)

Spring 2014 – Agency officials (including OSTP) and public witnesses testify at congressional budget and oversight hearings; authorizing committees try to write and pass authorization bills or offer formal ‘views and estimates’ on budgets. Appropriations committees also hold hearings.

Spring-Summer 2014 – Congress approves its FY 2015 budget resolution, its big-picture budget plan. (Deadline: April 15. Not met.)

- Appropriations committees receive 302(a) allocations from the budget resolution: total discretionary spending.

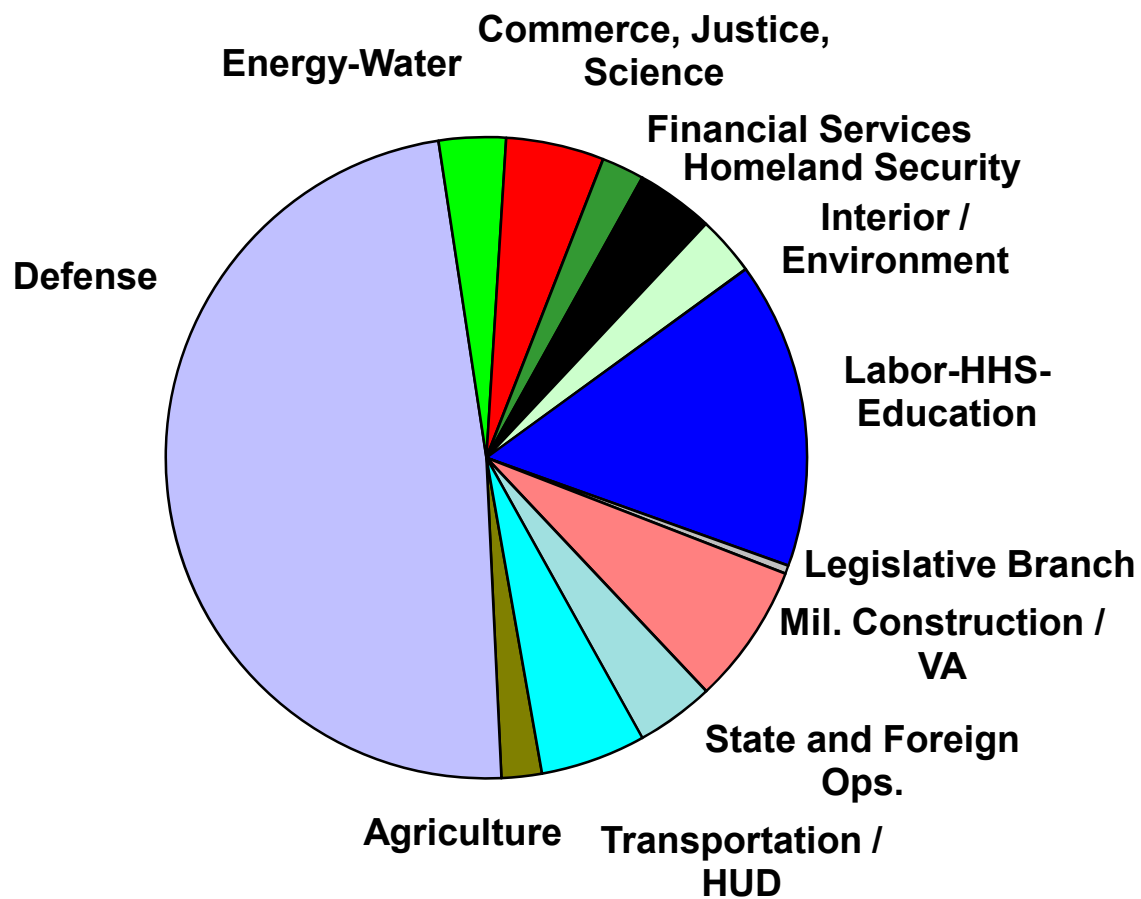
- Appropriations committees determine 302(b) allocations dividing total discretionary spending among 12 bills.

- House and Senate try to draft, debate, approve, and conference (compromise between House and Senate versions) 12 appropriations bills.



Discretionary Spending by Appropriations Bill

FY 2015 Appropriations = \$1.0 trillion



The FY 2015 Budget Process (3)

October 1, 2014 – FY 2015 begins. Discretionary programs must have a signed appropriations bill, or shut down. To allow more time, lawmakers pass continuing resolutions (CR's). The 1st CR extends through December 11. There is a 2nd CR through December 13, and a 3rd CR through December 17.

December 13, 2014 – Congress approved a 'cromnibus' bill (an 11-bill omnibus appropriations bill plus a CR through February 27 for DHS, plus an Ebola emergency supplemental appropriations bill).

December 16, 2014 - President Obama signs the bill into law. All agencies except DHS receive their final FY 2015 appropriations.



Bill language: (legal text in the bill)

19 OFFICE OF SCIENCE AND TECHNOLOGY POLICY
20 For necessary expenses of the Office of Science and
21 Technology Policy, in carrying out the purposes of the Na-
22 tional Science and Technology Policy, Organization, and
23 Priorities Act of 1976 (42 U.S.C. 6601–6671), hire of
24 passenger motor vehicles, and services as authorized by

•HR 2847 RH

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1 5 U.S.C. 3109, not to exceed \$2,800 for official reception
2 and representation expenses, and rental of conference
3 rooms in the District of Columbia \$7,154,000

Report language : (explanatory statements in an accompanying report)

EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Fiscal Year 2009 enacted	\$5,303,000
Fiscal Year 2010 request	6,154,000
Recommended in the bill	7,154,000
Bill compared with:	
Fiscal Year 2009 enacted	+1,851,000
Fiscal Year 2010 request	+1,000,000

The Office of Science and Technology Policy (OSTP) is essential to the restoration of science to its proper place in the formulation of policy and the operations of the federal government. The Committee recommendation is \$1,851,000 above the amount appropriated for fiscal year 2009 and \$1,000,000 above the budget request. This increase is provided to ensure that OSTP has adequate staff to fulfill key requirements in the coming year.

OSTP is directed to develop a plan for achieving and sustaining global Earth observations in collaboration with NOAA, NSF, NASA, USGS, the Department of Energy and other appropriate

agencies and in consultation with the Earth science community, and to direct implementation of this Earth observations plan as called for in the National Academy of Sciences report *Earth Science and Applications from Space: National Imperatives for the Next Decade and Beyond*. This plan should include satellite, suborbital, ground- and ocean-based observations and be delivered to the Committees on Appropriations of the House and Senate no later than April 1, 2010.

The Committee anticipates that OSTP will need to provide leadership and active coordination on hydrology research and water resources, understanding terrestrial managed and unmanaged ecosystems and their role in climate change, nanotechnology, including its societal dimensions, and science, technology, engineering and mathematics (STEM) education. Each of these areas involves significant activities of multiple departments and agencies.





“Twenty-first century businesses will rely on American science and technology, research and development.”

- President Barack Obama
January 20, 2015



The 2016 Budget:

- Continues our commitment to world-class science and research
- Invests in innovation
- Improves Americans' health
- Makes America a magnet for jobs
- Invests in homegrown clean energy
- Takes action on climate change
- Prepares students with STEM skills

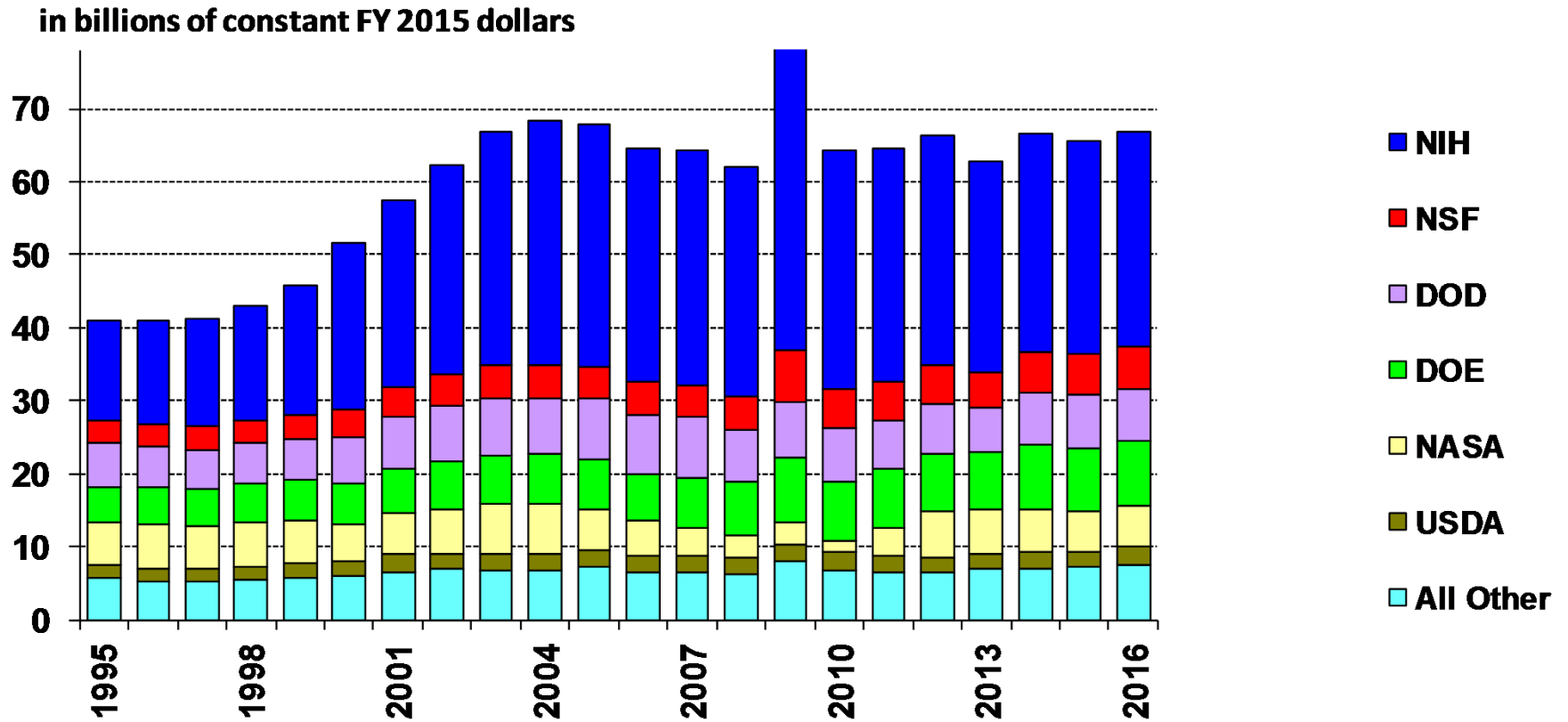


Continuing our commitment to world-class science and research

- \$68.8 billion for non-defense R&D.
- \$76.9 billion for defense R&D.
- \$66.9 billion for (basic and applied) research.
- \$7.7 billion for the National Science Foundation (NSF).
- \$5.3 billion for the Department of Energy (DOE) Office of Science.
- \$755 million for the National Institute of Standards and Technology (NIST) laboratories.
- \$18.5 billion for NASA.
- \$550 million for U.S. Department of Agriculture competitive grants, including \$450 million for competitively-awarded extramural research grants.



Federal Research by Agency, FY 1995-2016



FY 2009 figures include Recovery Act appropriations.
Research includes basic research and applied research.
February 2015 OSTP

THE NETWORKING AND
INFORMATION TECHNOLOGY
RESEARCH AND DEVELOPMENT
PROGRAM

SUPPLEMENT TO THE PRESIDENT'S BUDGET

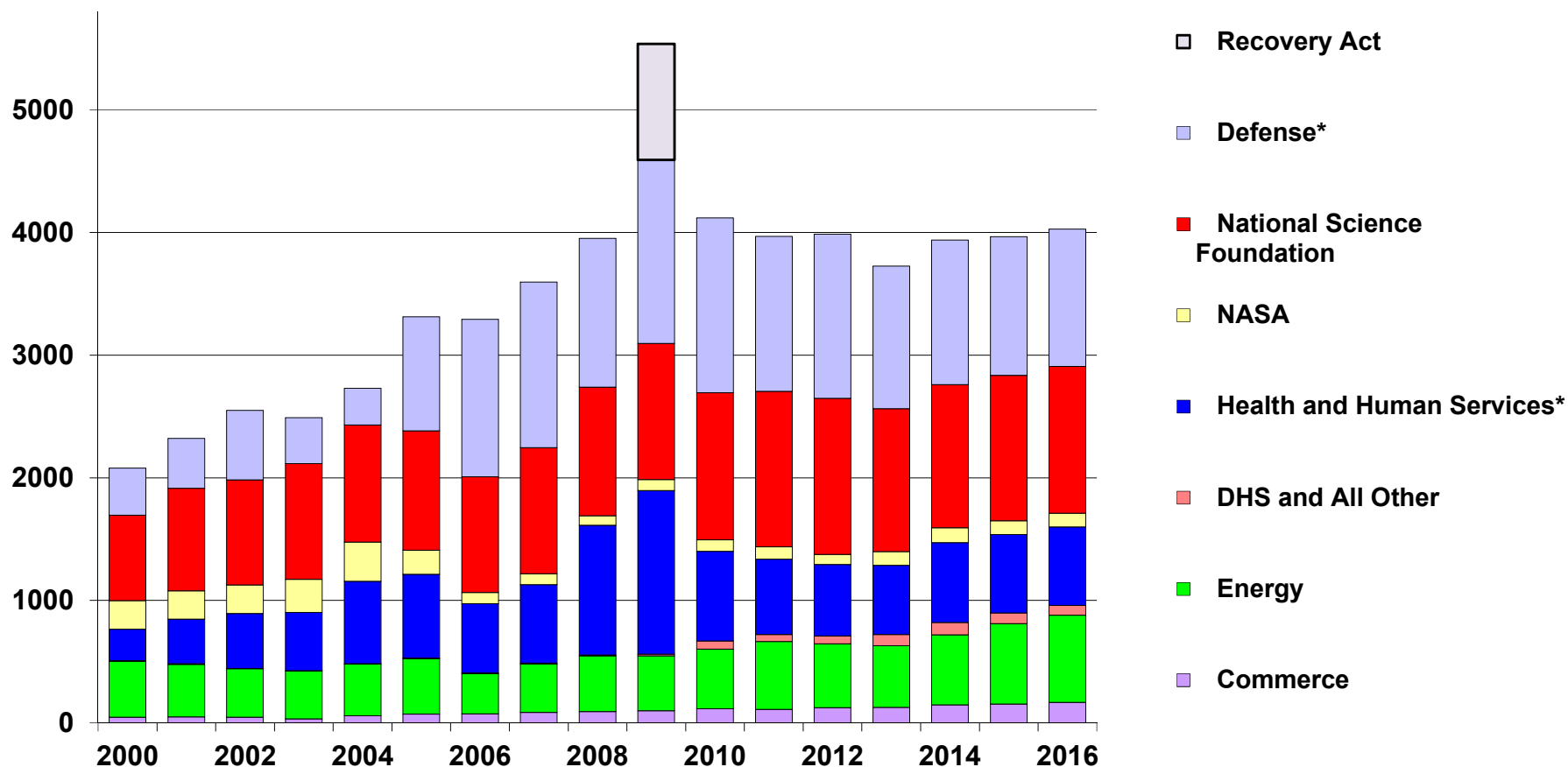
FY 2016



FEBRUARY 2015

Networking and Information Technology R&D, by Agency

(budget authority in millions of constant FY 2015 dollars, FY 2000-2016)



* DOD changed its accounting starting in 2005, HHS changed its accounting starting in 2010.

February 2015 OSTP

THANK YOU
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