Rob Dimeo
Assistant Director
Physical Science and Engineering

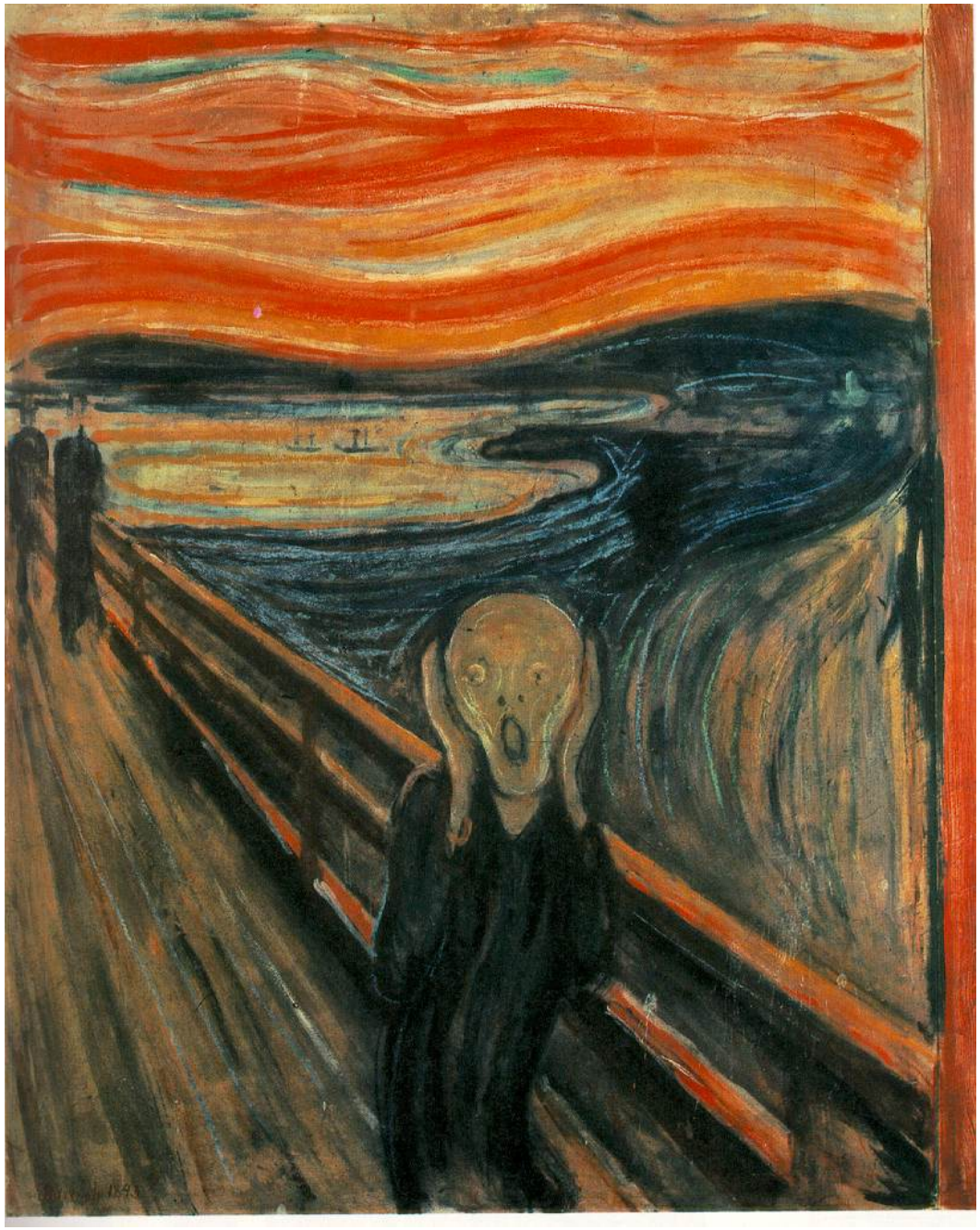
Office of Science and Technology Policy
Executive Office of the President of the United States
February 28, 2006

The National Science and Technology Council (NSTC)

- Coordinate the S&T decision-making process
- Ensure S&T policy decisions and programs are consistent with the President's stated goals
- Integrate the President's S&T policy agenda across the Federal Government
- Ensure S&T are considered in development and implementation of Federal policies and programs
- Further international cooperation in S&T

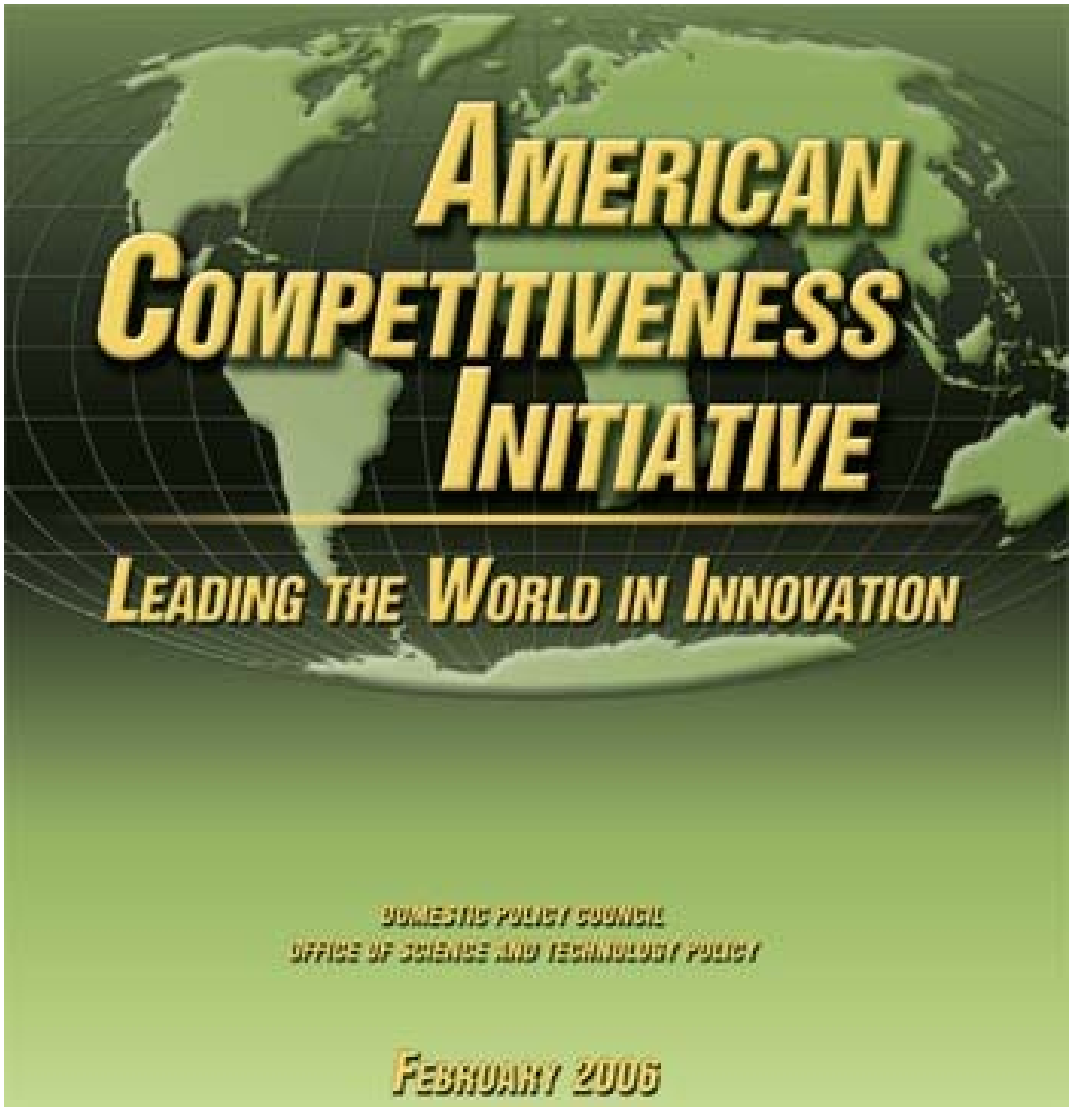
The Office of Science and Technology Policy

- Advise the President and others within the Executive Office of the President on the impacts of science and technology on domestic and international affairs;
- Lead an interagency effort to develop and implement sound science and technology policies and budgets;
- Work with the private sector to ensure Federal investments in science and technology contribute to economic prosperity, environmental quality, and national security;
- Build strong partnerships among Federal, State, and local governments, other countries, and the scientific community;
- Evaluate the scale, quality, and effectiveness of the Federal effort in science and technology.




ITER

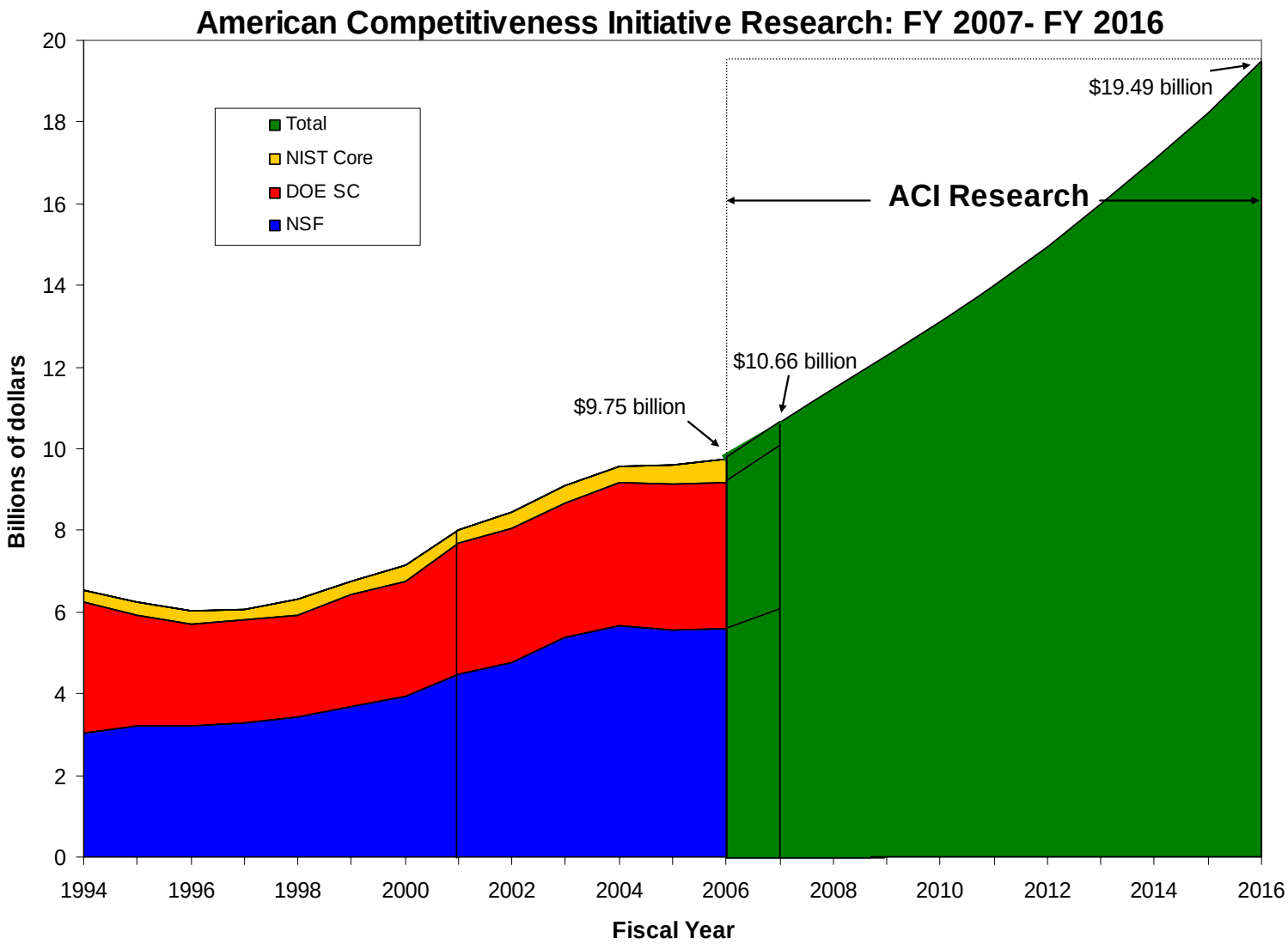
Challenges in controlling a many-particle system


AMERICAN COMPETITIVENESS INITIATIVE
LEADING THE WORLD IN INNOVATION
DOMESTIC POLICY COUNCIL
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
FEBRUARY 2006

Keeping America Competitive

America's economic strength and global leadership depend on innovation. A comprehensive strategy will sustain U.S. economic competitiveness, including:

- **Federal investment in R&D;**
- **Education system that equips Americans with a strong foundation in technical subjects;**
- **Universities that provide world-class education and research opportunities;**
- **Immigration policies that attract the best and brightest to enhance entrepreneurship, competitiveness, and job creation in America;**
- **Favorable environment for private sector R&D; and**
- **Business environment that encourages entrepreneurship and protects intellectual property.**


American Competitiveness Initiative Research: FY 2007- FY 2016
Billions of dollars
Fiscal Year
Total
NIST Core
DOE SC
NSF
ACI Research
$9.75 billion
$10.66 billion
$19.49 billion
0
2
4
6
8
10
12
14
16
18
20
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016

…that field has the most scientific merit which contributes most heavily to and illuminates most brightly its neighboring disciplines.

Alvin Weinberg, Physics Today, March 1964.


THE WHITE HOUSE
WASHINGTON

Backup

NSTC Structure November 2005

NSTC Director, OSTP

Committee on Environment & Natural Resources

WH: Sharon Hays
DOC: Conrad Lautenbacher
EPA: George Gray

- Global Change Research
- Air Quality Research
- Disaster Reduction
- Ecosystems
- Toxics & Risks
- Water Availability & Quality
- US Group on Earth Observations

Committee on Science

WH: Sharon Hays
NSF: Arden Bement
NIH: Elias Zerhouni

- Research Business Models
- Education & Workforce Dev.
- Aquaculture
- Human Subjects Research
- Physics of the Universe
- Plant Genome
- Dom. Animal Genomics
- Prion Science
- Trans-Border Research Materials
- Scientific Collections
- Multinational Orgs*
- R&D Investment Criteria**

Committee on Technology

WH: Richard Russell
DOC: Ben Wu

- Networking & Information Technology
- Nanoscale Science, Engineering & Technology
- Advanced Technologies For Education & Training
- Manufacturing Research & Development

Committee on Homeland and National Security

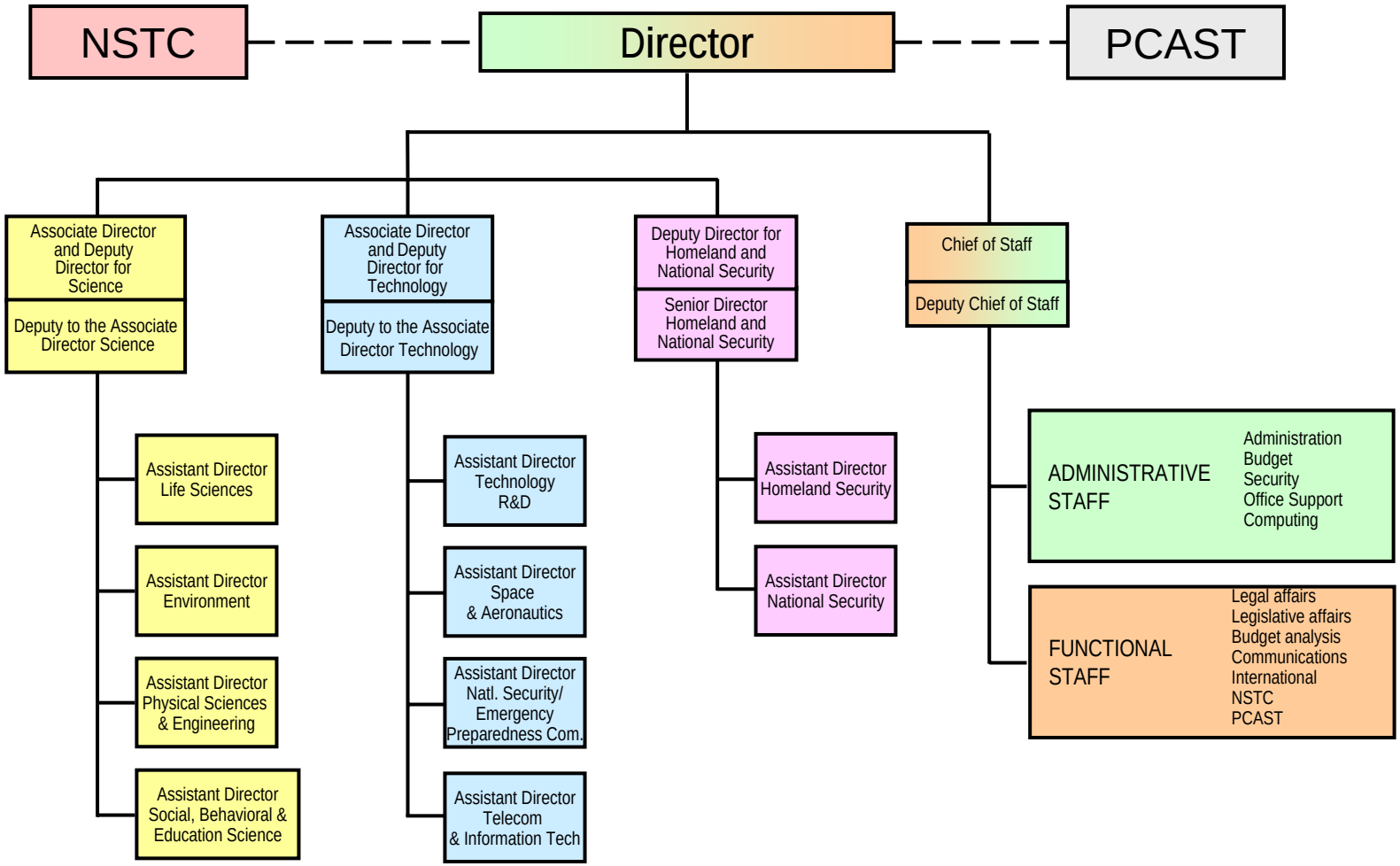
WH: Sharon Hays
DOD: Ken Krieg
DHS: Charles McQueary

- National Security R&D
- International*
- Regional Stability and Nation Building
- WMD Medical Countermeasures
- Standards
- Decontamination Standards and Technologies
- Foreign Animal Disease Threats

- IWG on Dioxin
- Oceans S & T
- Biotechnology
- Biometrics
- Infrastructure
- Aeronautics S& T
- Social, Behavioral & Econ.
- Export Controls for S&T

*in development
**Informal

OSTP FUNCTIONAL ORGANIZATION

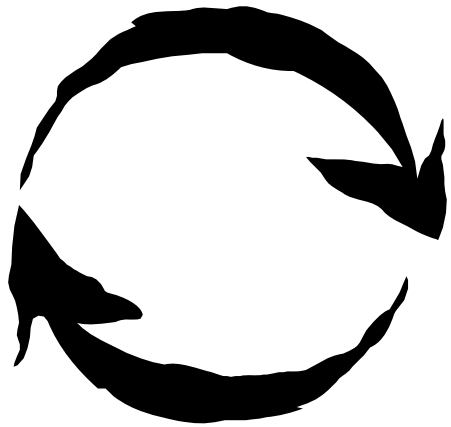


R&D Budget Process

1. OSTP & OMB issue guidance memorandum on R&D priorities

2. Agencies prepare and submit proposed budgets to OMB

3. Passback, negotiations, & appeals between agencies and EOP



4. President makes final decisions and sends Budget Request to Congress

5. Congress reviews, considers, & approves *overall* Budget Request

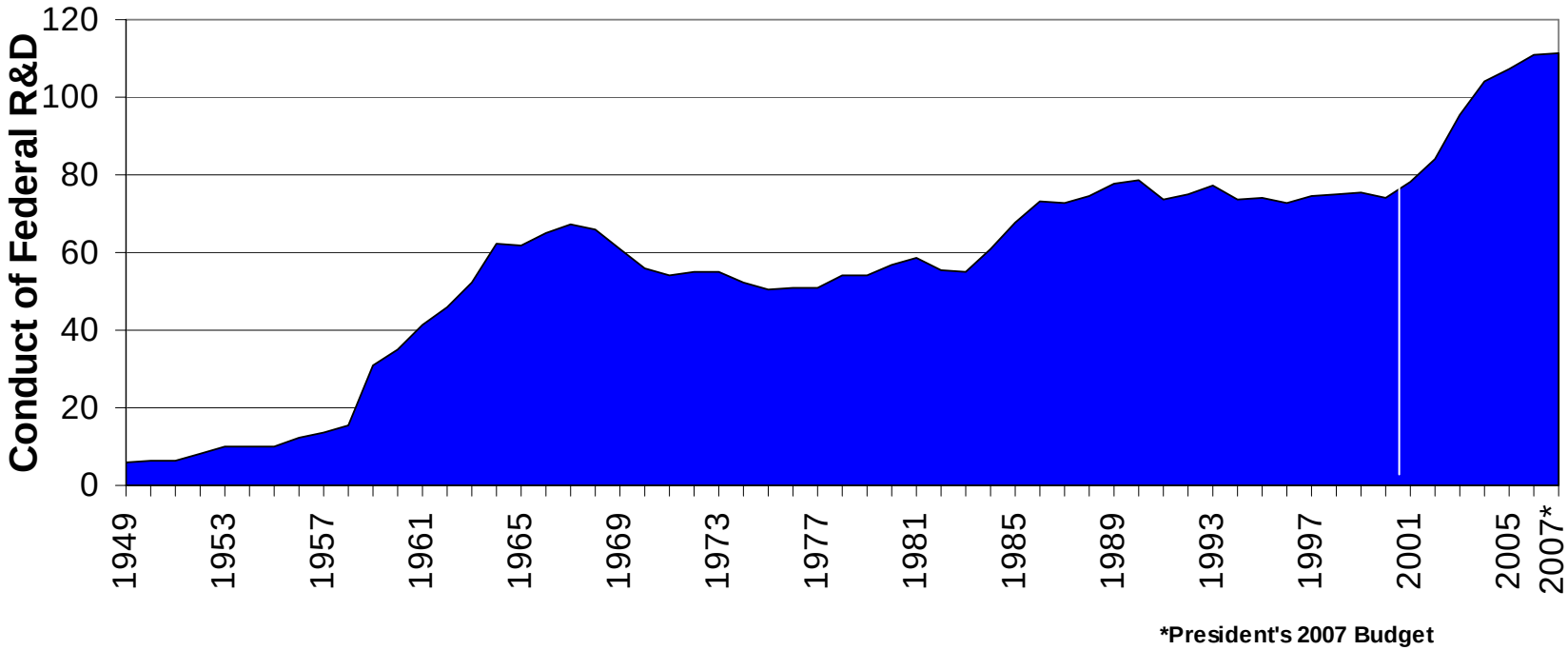
6. Appropriations hearings with agencies & EOP on individual programs

7. Congress marks up & passes agency appropriations bills

8. President signs or vetoes appropriations bills

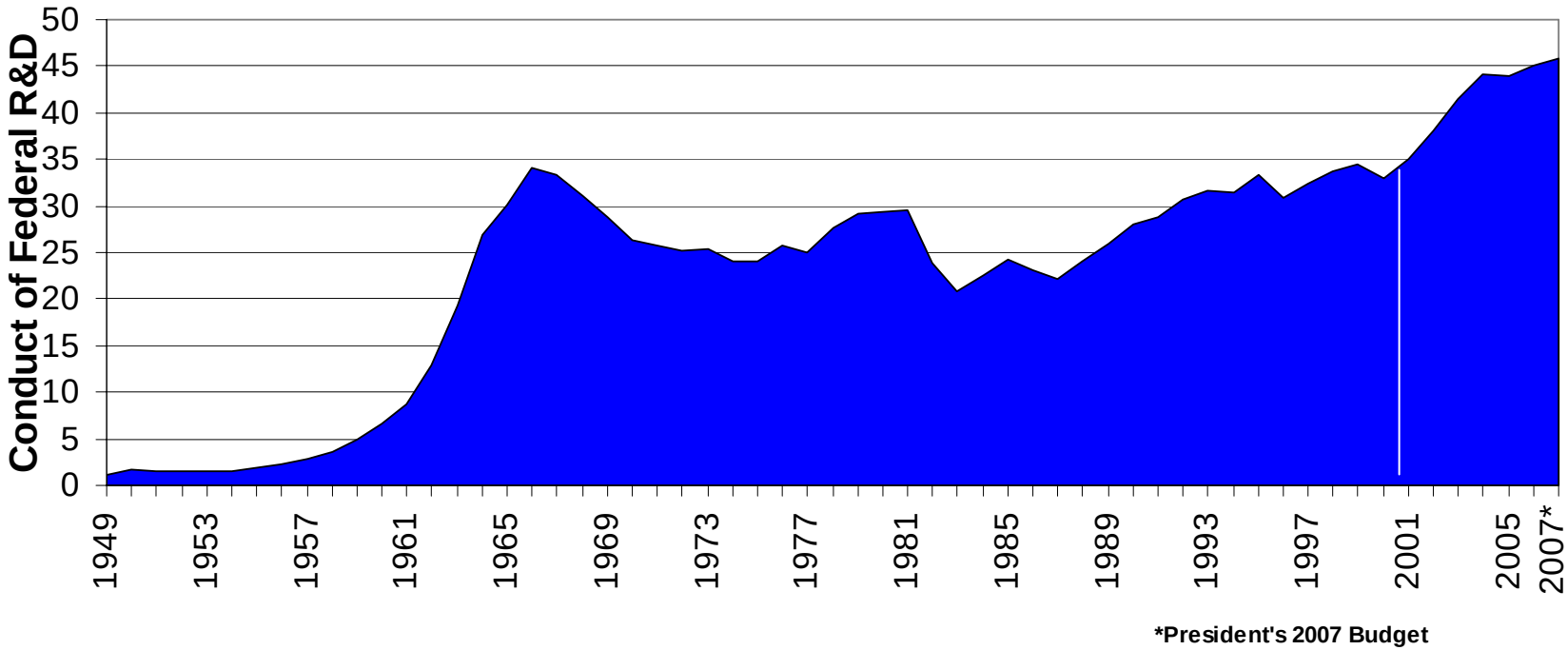
9. Agencies make decisions on allocation of resources consistent with enacted appropriations and program plans

Federal R&D Spending
(Outlays in billions, constant 2000 dollars)



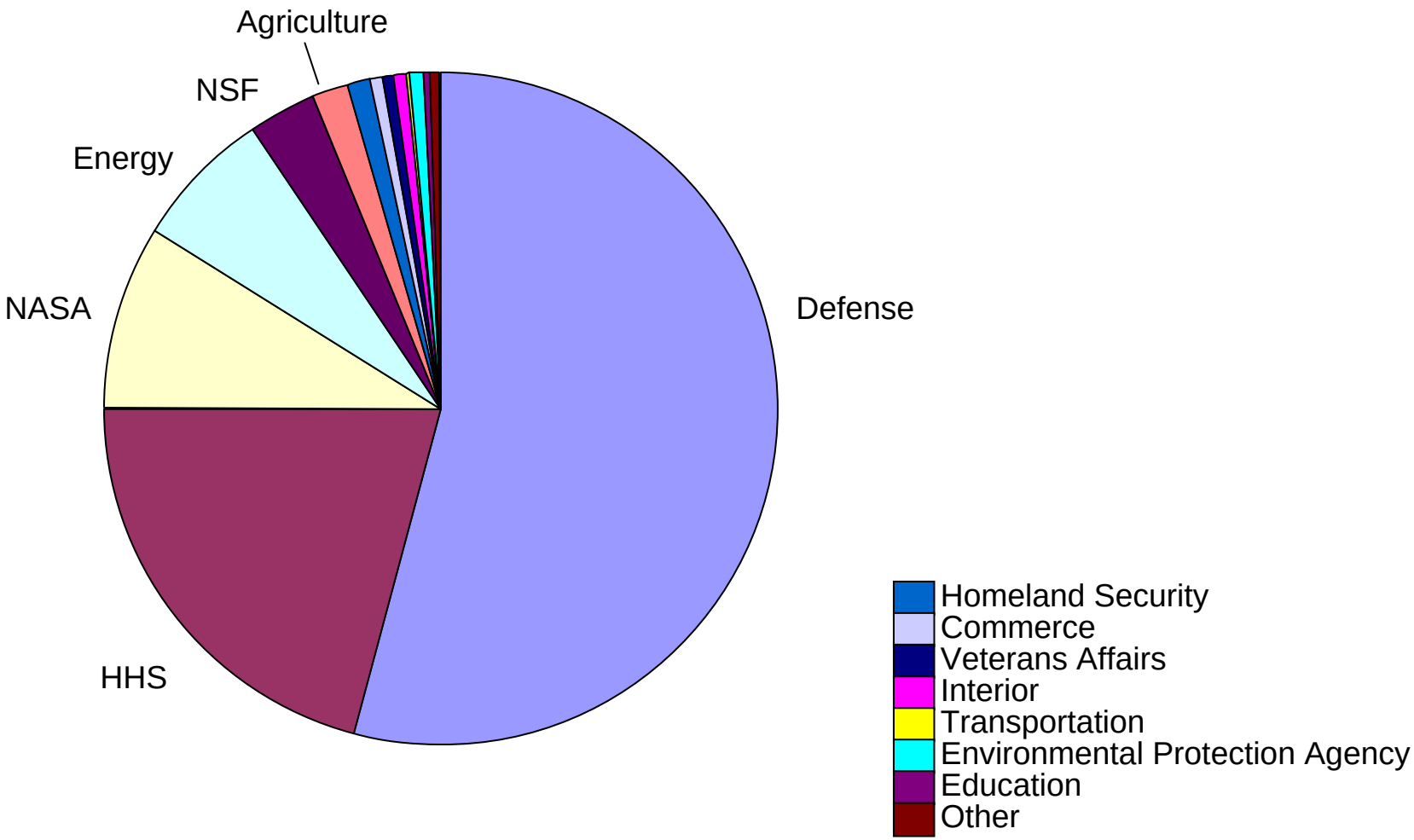
*President's 2007 Budget

Federal Non-Defense R&D Spending
(Outlays in billions, constant 2000 dollars)

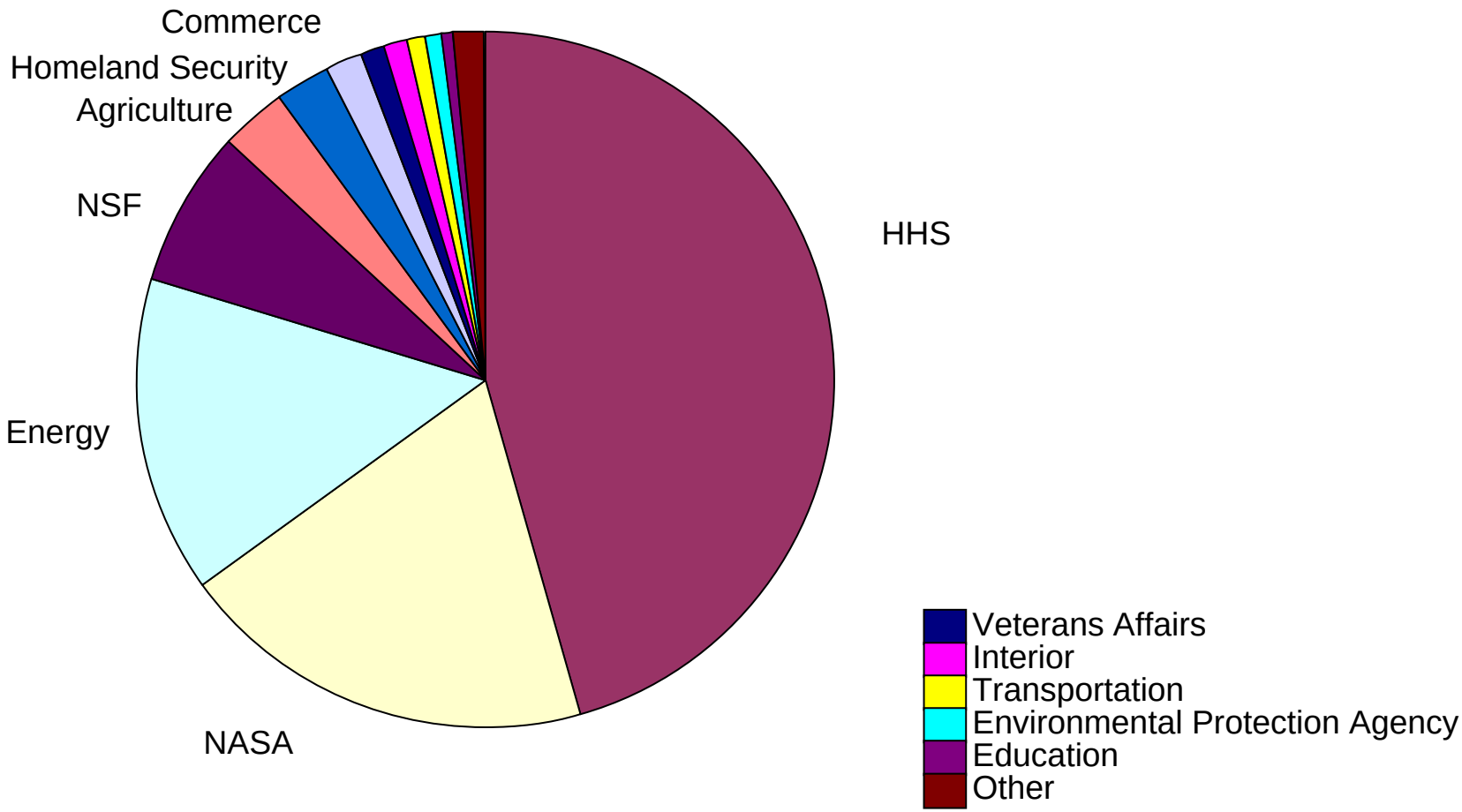


*President's 2007 Budget

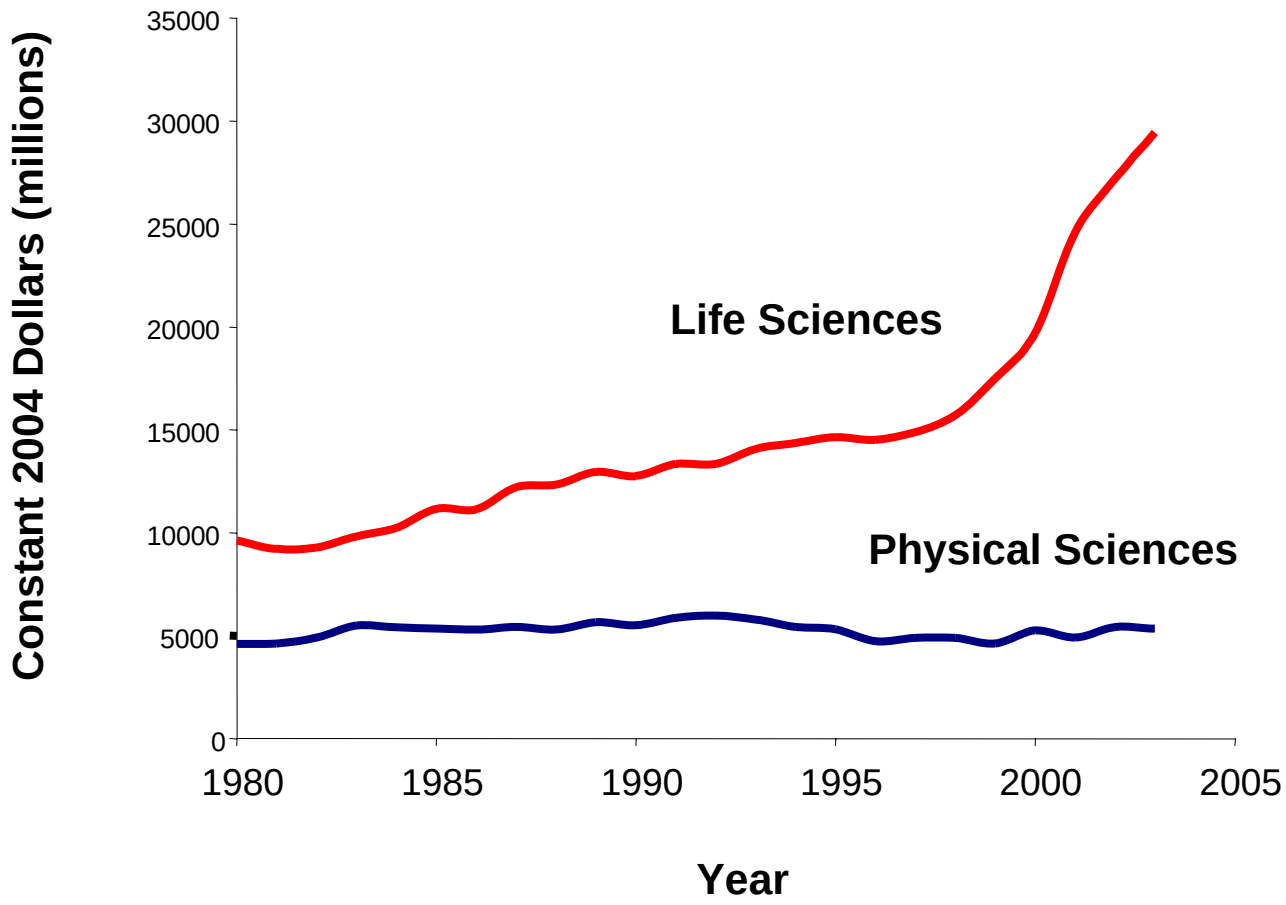
Total R&D by Agency FY07 proposed



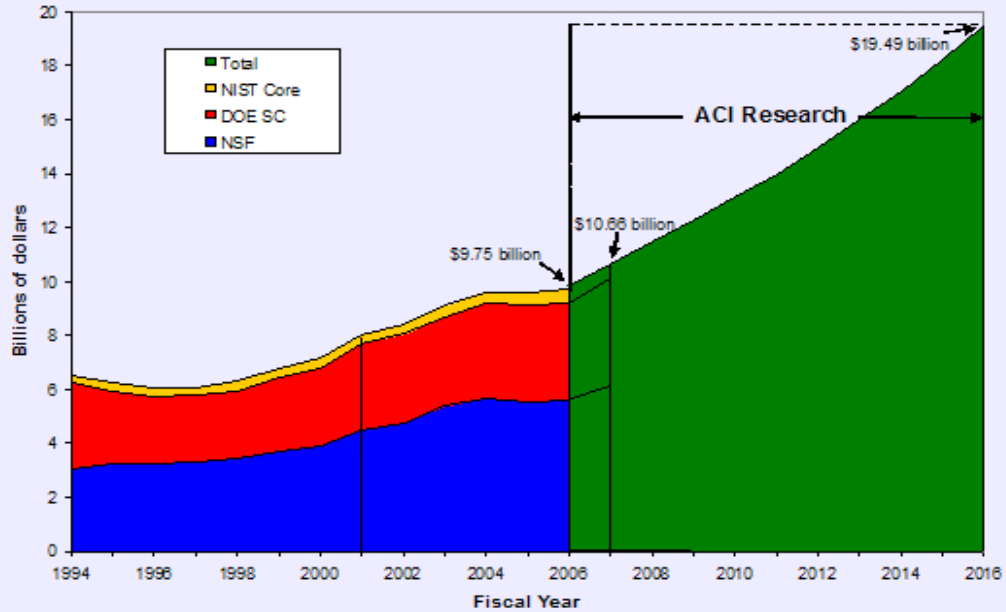
Total Non-Defense R&D FY07 proposed



Federal Spending on Life Sciences and Physical Sciences Research 1980-2005



American Competitiveness Initiative Research: FY 2007- FY 2016



	FY 2006 Funding	ACI Research FY 2007		ACI Research FY 2016	
	(billions of dollars)	(billions of dollars)	% increase	(billions of dollars)	% increase over FY06
NSF	$5.58	$6.02	7.8	$11.16[1]	100.0
DoE SC	$3.60	$4.10	14.0	$7.19[1]	100.0
NIST Core[2]	$0.57[3]	$0.54	-5.8[4]	$1.14[1]	100.0
TOTAL	$9.75	$10.66	9.3	$19.49	100.0

[1] ACI doubles total research fund; individual agency allocations remain to be determined.
[2] NIST core consists of NIST lab research and construction accounts.
[3] The 2006 enacted level for NIST core includes $137 million in earmarks.
[4] Represents a 24 percent increase after accounting for earmarks.

Leading the World in Talent and Creativity

Education: Enhancing understanding of student learning & applying that knowledge to train teachers, develop curricula, & improve learning.

- *Advanced Placement/International Baccalaureate Program* to expand access of low-income students to AP/IB by training additional teachers.
- *Adjunct Teacher Corps* to encourage math and science professionals to teach high school.
- *Math Now for Elementary School Students* to promote research-based practices in math instruction and to prepare students for more rigorous math courses.
- *Math Now for Middle School Students* to improve math instruction for students performing below grade level.

Workforce: Offering training opportunities to 800,000 workers annually, more than tripling the number of workers trained under the current system.

- Reform workforce training by making new *Career Advancement Accounts*— self-managed accounts that individuals use to obtain training and other services—available to 800,000 workers.

Immigration: Reforming immigration laws to attract & retain high-skilled workers.

- Enhance our ability to attract and retain high-skilled workers from abroad by passing comprehensive reform that helps our growing economy.

Supporting High Impact Research

Over ten years, the ACI commits **$50 billion** to increase funding for research and **$86 billion** in tax incentives for R&D. In FY07, ACI commits **$5.9 billion** for research, education, and tax incentives. ACI includes:

- **Doubling funding for research at NSF, DoE Office of Science, and DoC's National Institute for Standards and Technology;** ($910M in FY07, $50B over 10 years)

- **Making the research and experimentation (R&E) tax credit permanent and working with Congress to modernize it to make it more effective.**
  ($4.6B in FY07, $86.4B over 10 years)