

MAKING A FEDERAL CASE FOR COMPUTING

- Moderator: Fred Schneider
- Peter Harsha, CRA
- Greg Hager, Johns Hopkins, CCC past-Chair
- Kent Foster, Microsoft
- Martha Pollack, University of Michigan

MAKING A FEDERAL CASE FOR

Peter Harsha
Director of Government Affairs
CRA

Snowbird Conference 2016

CRA GOVERNMENT AFFAIRS



Me



Brian Mosley
Policy Analyst



Satoe Sakuma
Eben Tisdale
Policy Fellow

CRA COMMITTEE ON GOVERNMENT AFFAIRS

Stephanie Forrest, University of New Mexico — Chair

Ed Lazowska, Washington — Co-Chair

Sarita Adve, Illinois

Annie Antón, GeorgiaTech

David Bader, GeorgiaTech

George Cybenko, Dartmouth

David Ebert, Purdue

Joel Emer, NVIDIA and MIT

Mary Fernández, MentorNet

James Foley, GeorgiaTech

Eric Grimson, MIT

Dan Grossman, Washington

Greg Hager, Johns Hopkins

Jeff Hollingsworth, Maryland

Mary Jane Irwin, Penn State

Farnam Jahanian, Carnegie Mellon

Bob Kahn, CNRI

John King, Michigan

Margaret Martonosi, Princeton

Andrew Moore, Carnegie Mellon

J Moore, University of Texas

Martha Pollack, Michigan

Dan Reed, Iowa

Bobby Schnabel, Indiana

Fred Schneider, Cornell

Marc Snir, UIUC and Argonne

Eugene H. Spafford, Purdue

Valerie Taylor, Texas A&M

David Tennenhouse, VMWare

Jeff Vitter, University of Mississippi

Jeannette M. Wing, Microsoft

- 
- 1. WHY DOES CRA DO POLICY?**
 - 2. THE CHALLENGES WE FACE**

**GOAL: PAINT A CLEAR PICTURE OF THE
SITUATION IN DC**

WHY DO WE “DO” POLICY?

CRA MISSION

CRA's mission is to enhance innovation by joining with industry, government and academia to strengthen research and advanced education in computing.

CRA executes this mission by leading the computing research community, informing policymakers and the public, and facilitating the development of strong, diverse talent in the field.

COMPUTING RESEARCH ASSOCIATION

We're part of an active computing policy community

- ACM Ed Policy/USACM
- code.org, CSEC
- IEEE-CS/IEEE-USA
- SIAM
- CASC
- EDUCAUSE
- AAAI
- NCWIT
- Industry Groups
- EFF, EPIC, CDT...

“ENSURING THE HEALTH OF THE R&D ECOSYSTEM”

- Access to Talent
- Impediments to Research
- Research Funding and Priorities

CHALLENGES

Armistead America
An Achievable Dream Inc
Andre Agassi Charitable Foundation
Appalachia Service Project
Aquarium of the Pacific
Arison Family Trust
Arizona Science Center
Asphalt Green
Assn for Homeowners Across America
Assn of Critical Care Transport
Assn of Fundraising Professionals
Attic Correctional Services
August Wilson Cntr/African Amer Culture
Austin Hill Country Conservancy
Benetech Initiative
Big Brothers/Big Sisters of America
Bipartisan Advocacy Center
Bipartisan Policy Center
Bipartisan Policy Ctr Advocacy Network
Boston Museum of Fine Arts
Boston Museum of Science
Boy Scouts of America
Boys & Girls Clubs of America
Boys & Girls Town of Missouri
Boysville
Brooklyn Botanical Garden
California Academy of Sciences
California Center for Land Recycling
California Science Center Foundation
CARE Action Now
Care Coalition
Career Gear
Carnegie Institute
Carnegie Library of Pittsburgh
Center for Civic Education
Center for Individual Freedom
Center for Inquiry
Center for Rural Affairs
Center for Science in Public Interest
Certified Financial Planner Brd of Stds
Chabot Space & Science Center
Chadd Inc
Chicago Botanic Garden
Chicago Zoological Society
Children's Discovery Museum of San Jose
Children's Museum of Houston

Discovery Science Center
Duane Morris Government Affairs
Duluth Children's Museum
ECMC Group
Envision
Families of Flight 93
Federation of State Humanities Councils
Feminine Research Alliance
Field Museum
Figge Art Museum
Fight Crime: Invest In Kids
First Candle
Folklore & Folklife Library
Fort Wayne Allen County Economic
Foundation for Better Oregon
Fraternal Order of Eagles
Friends of Charities Assn
Friends of the Griffith Observatory
Friends of the World Food Program
From the Top
Future of Music Coalition
GAVI Fund
Georgian Bay Forever
Girl Scouts of the USA
Gordon E. Brown National Education Center
Good Love We Deliver
Goodwill Industries International
Goodwill Industries/norfolk service
Grammy Foundation
Great River Economic Development Fdtn
Green for All
Greenway Foundation
Guardian Angel Holdings
Habitat for Humanity International
Harbor Heritage Society
Healey Family Foundation
Heartland Family Services
Henry Ford Museum & Greenfield Village
Hillside Family Agencies
Homeownership Preservation Foundation
HONORreform
Houston Advanced Research Center
Houston Zoo
Immunodeficiency Foundation
Independent Sector
Institute for Student Achievement

Miramir Project to Cure Paralysis
Michigan Research Institute
Midpeninsula Regional Open Space Dist
Military Child Education Coalition
Missouri Botanical Garden
Missouri Public Transit Assn
Montgomery Aquarium
Mott Marine Laboratory
Muscular Dystrophy Assn
Museum of Flight
Museum of Latin American Art
Museum of Science & Industry
Museum of the City of New York
My Turn Inc
Mystic Marine Life Aquarium
Mystic Seaport Museum
National Aquarium in Baltimore
National Aviary
National Building Museum
National Center for State Courts
National Center for Victims of Crime
National Coalition for History
National Community Action Foundation
National Community Renaissance
National Down Syndrome Society
National Fire Protection Assn
National Geographic Society
National Middle School Assn
National Museum of Industrial History
National Museum of Women in the Arts
National Safety Council
National Women's History Museum
National Young Farmers Education Assn
Natl Assn Exchange of Industrl Resources
Natl Assn of Foster Grandparents
Natl Assn of Local Housing Finance Agenc
Natl Assn/Univ Forest Resource Programs
Natl Cln for Women with Heart Disease
Natl Commodity Supplemental Food Progra
Natl Conf of Cmsrs on Uniform State Laws
Natl Immigration Forum Action Fund
Natl Museum of American Jewish History
Natl Underground Railroad Freedom Center
Naval Aviation Museum Foundation
Nehemiah Corp of America
New Detroit Science Center

of Lobbyists (FY15)

11,520

Lobbying Expenditures

\$3.22 billion

Working "S&T"

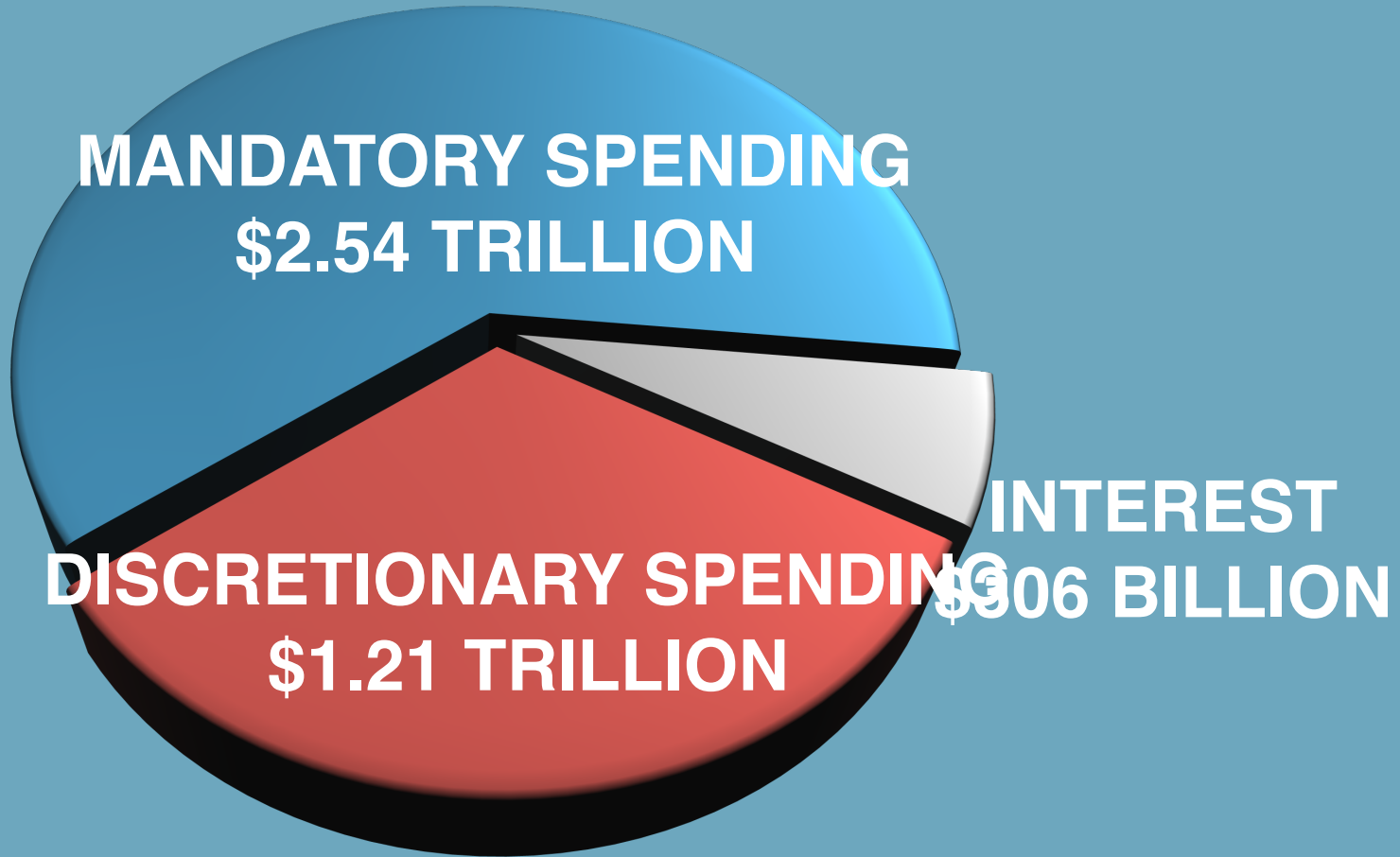
404

FY 2017 FEDERAL BUDGET



\$4.0 TRILLION

FY 2017 FEDERAL BUDGET



FY 2017 FEDERAL BUDGET



DISCRETIONARY SPENDING
\$1.21 TRILLION

FY 2017 FEDERAL BUDGET



DISCRETIONARY SPENDING
\$1.21 TRILLION

Agriculture

CJS

Defense

Energy and Water

Financial Services

Homeland Security

Interior and Environment

Labor/HHS/Education

Legislative Branch

Military/Veterans

State/Foreign Ops

Transportation/HUD

APPROPRIATIONS IS A ZERO-SUM GAME

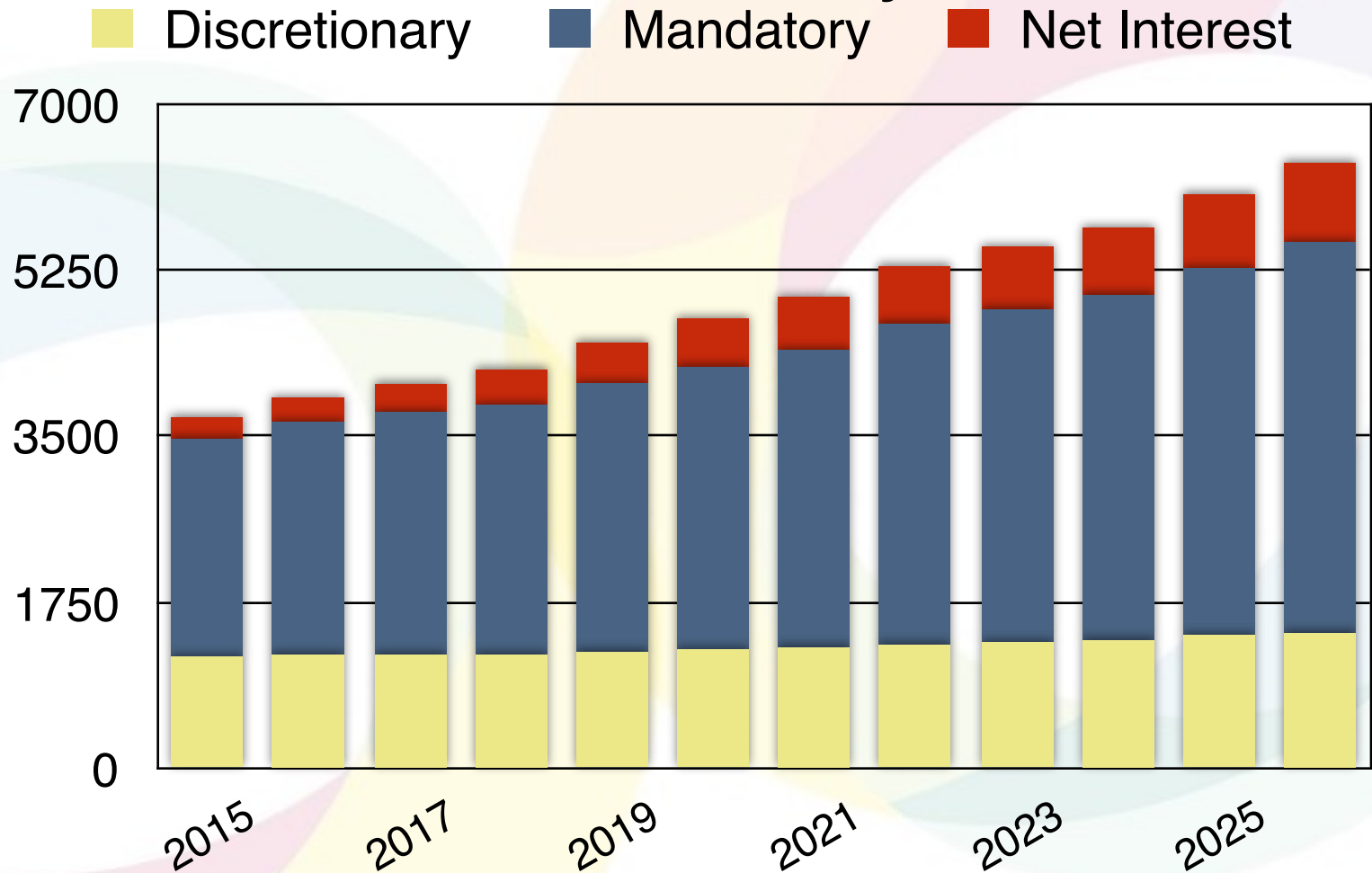
Commerce, Justice, Science Bill

- National Science Foundation
- NIST
- NOAA
- NASA
- FBI / Dept. of Justice
- Census

NSF, COPS OR SPACESHIPS?

LONG-TERM FISCAL CHALLENGES

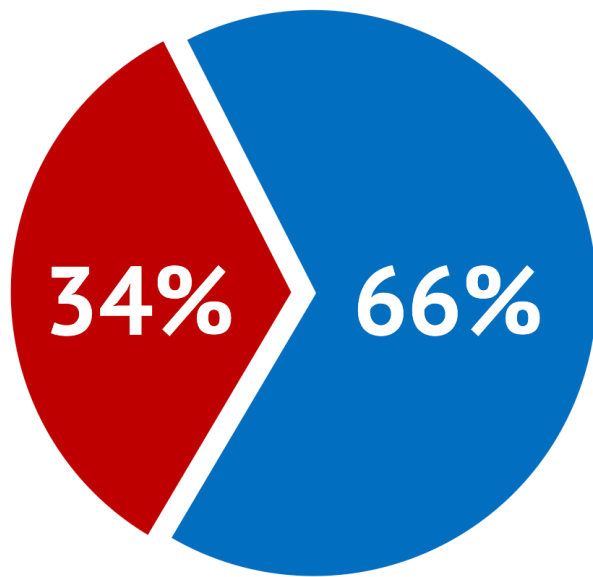
Growth in Mandatory Spending vs. Discretionary



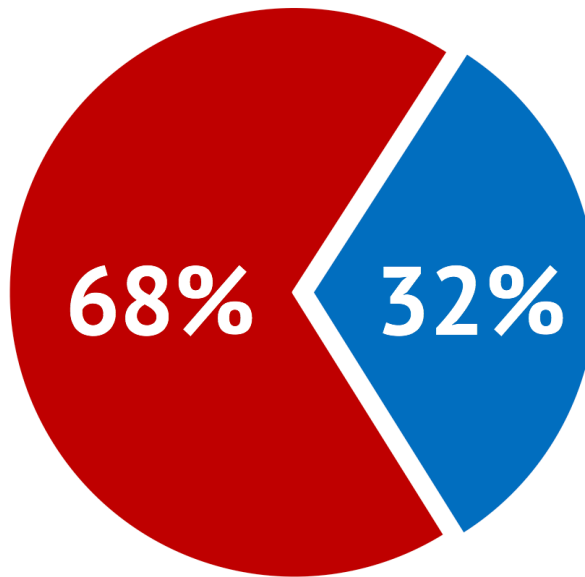
Source: Congressional Budget Office projection

AUTOMATIC SPENDING GROWS OVER TIME

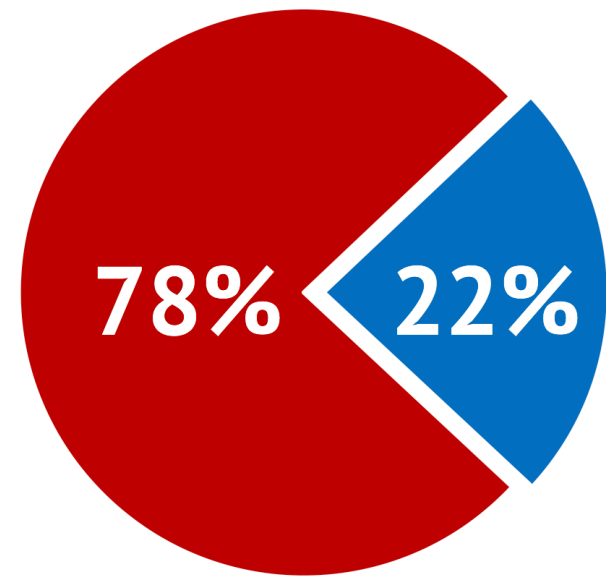
■ Automatic Spending
■ All Other Spending



1965



2015



2026

INTEREST VS. OTHER SPENDING

(In 2026 Under Current Law)

NET INTEREST

\$830 Billion

DEFENSE

\$719 Billion



MEDICAID

\$642 Billion



EDUCATION

\$125 Billion



TRANSPORTATION

\$109 Billion



SCIENCE, SPACE, TECH

\$38 Billion



ATTITUDES HAVE CHANGED

CONGRESS IS MORE POLARIZED THAN EVER

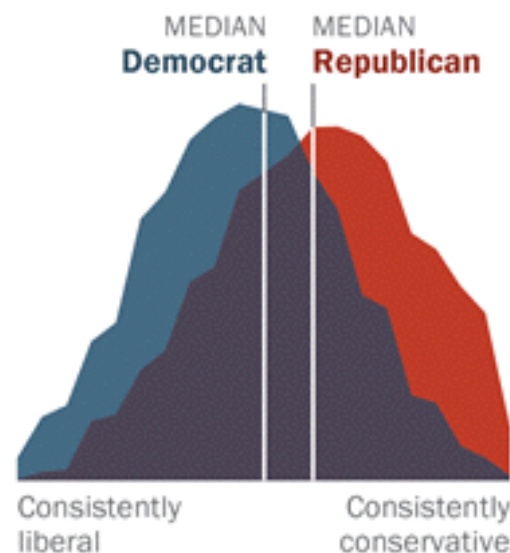
- **Not a single** Democratic Senator was more conservative than any GOPer. Not a single GOP Senator is more liberal than any Dem.
- The House is equally polarized, with **only five GOPers** ranking more liberal than the most conservative Dem, and only four Dems more conservative than the most liberal Republican.

From a 2011 National Journal Study of the 2010 election cycle.

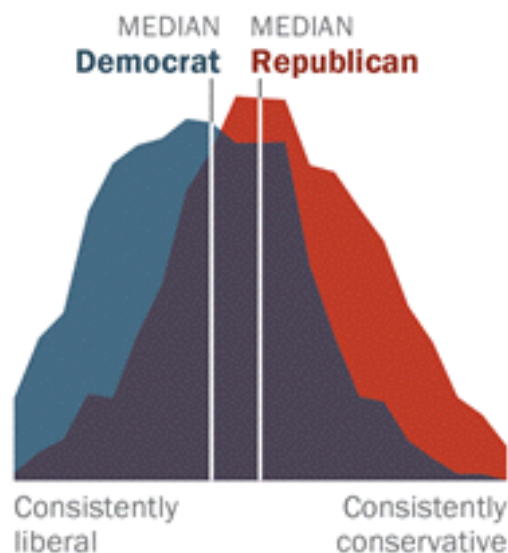
Democrats and Republicans More Ideologically Divided than in the Past

Distribution of Democrats and Republicans on a 10-item scale of political values

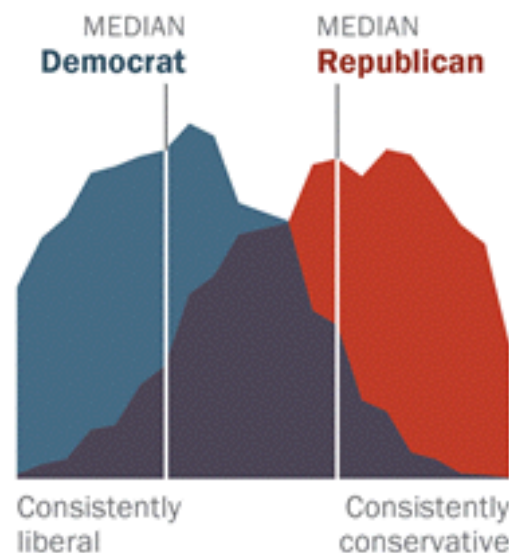
1994



2004



2014



Source: 2014 Political Polarization in the American Public

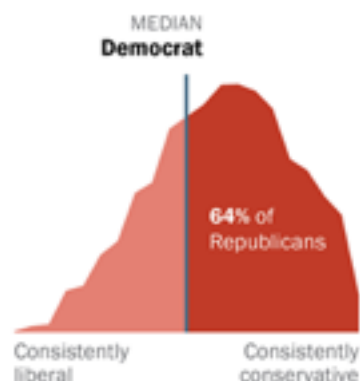
Notes: Ideological consistency based on a scale of 10 political values questions (see Appendix A). The blue area in this chart represents the ideological distribution of Democrats; the red area of Republicans. The overlap of these two distributions is shaded purple. Republicans include Republican-leaning independents; Democrats include Democratic-leaning independents (see Appendix B).

PEW RESEARCH CENTER

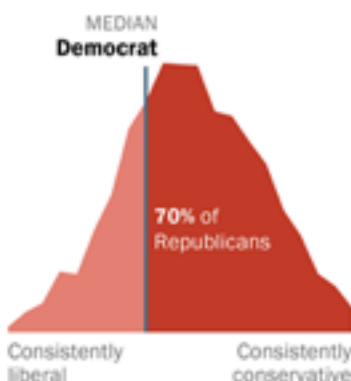
Republicans Shift to the Right, Democrats to the Left

Distribution of Republicans and Democrats on a 10-item scale of political values

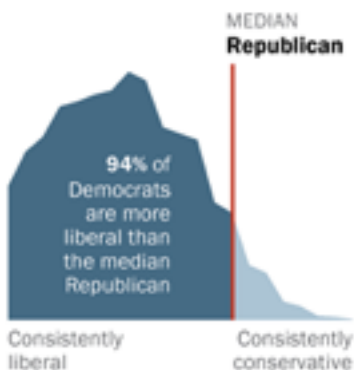
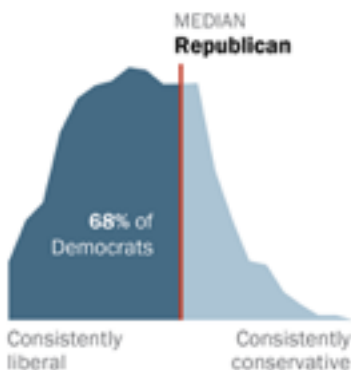
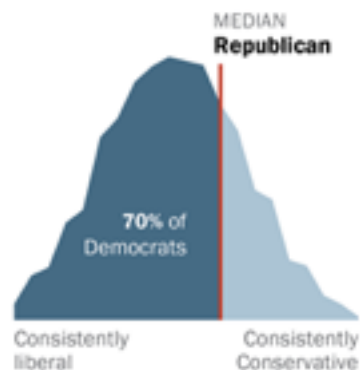
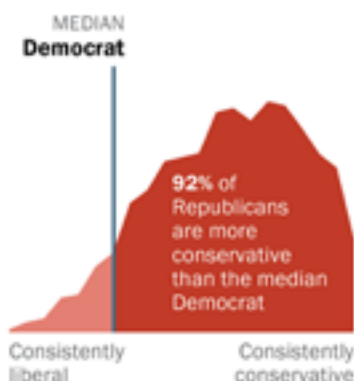
1994



2004



2014



Source: 2014 Political Polarization in the American Public

Notes: Ideological consistency based on a scale of 10 political values questions (see Appendix A). Republicans include Republican-leaning independents; Democrats include Democratic-leaning independents (see Appendix B).

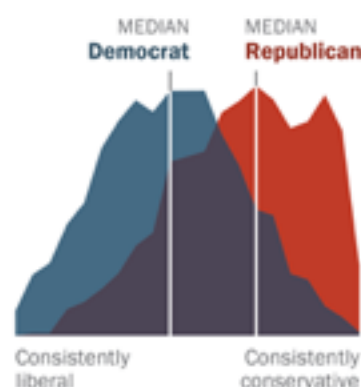
PEW RESEARCH CENTER

Polarization Surges Among the Politically Engaged

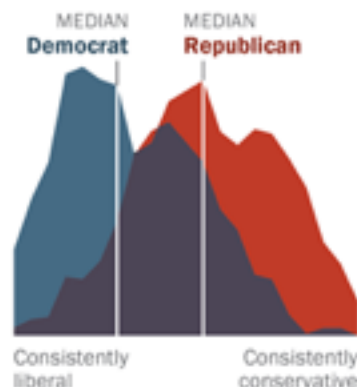
Distribution of Democrats and Republicans on a 10-item scale of political values, by level of political engagement

Among the politically engaged

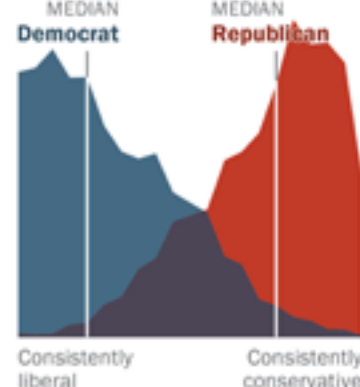
1994



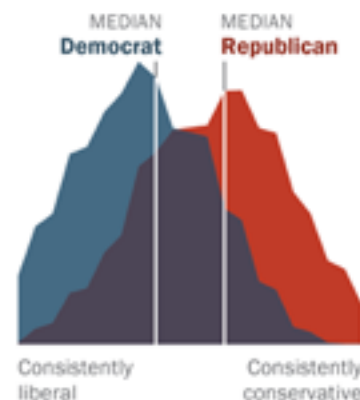
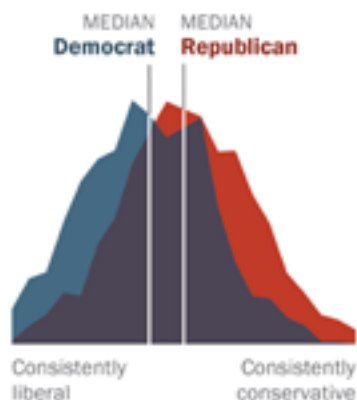
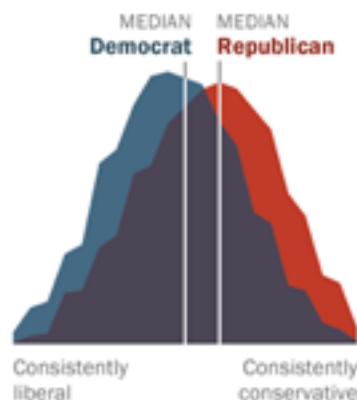
2004



2014



Among the less engaged



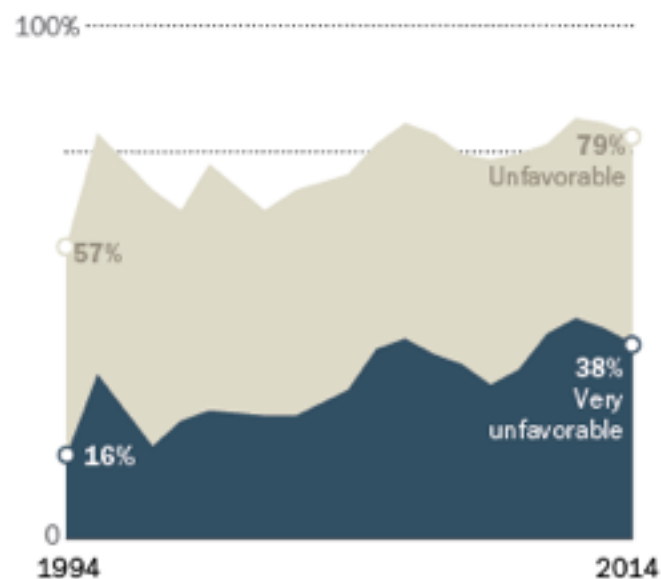
Source: 2014 Political Polarization in the American Public

Notes: Ideological consistency based on a scale of 10 political values questions (see Appendix A). Republicans include Republican-leaning independents; Democrats include Democratic-leaning independents (see Appendix B). Politically engaged are defined as those who are registered to vote, follow government and public affairs most of the time and say they vote always or nearly always.

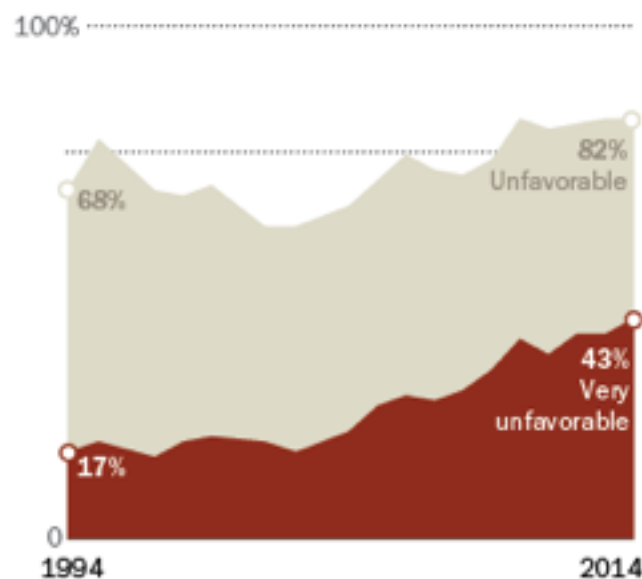
PEW RESEARCH CENTER

A Rising Tide of Mutual Antipathy

Democratic attitudes about the Republican Party



Republican attitudes about the Democratic Party



Source: 2014 Political Polarization in the American Public

Notes: Republicans include Republican-leaning independents; Democrats include Democratic-leaning independents.

PEW RESEARCH CENTER

THIS POLARIZATION HAS CHANGED ATTITUDES ABOUT SCIENCE



DON'T DIPPED INTO THE FUTURE, FAR AS HUMAN
EYES COULD SEE
SAW THE VISION OF THE WORLD AND ALL THE
WONDER THAT WOULD BE.

ISAIAH 2:17

WHERE THERE IS NO VISION, THE PEOPLE PERISH.
ISAIAH 29:18

- Comity and bipartisanship on the committee probably peaked in about 2007-8 with *Gathering Storm* and the America COMPETES Act
- Breakdown started in earnest in 2010, during reauthorization of COMPETES
- GOP tried to kill bill to deny Dems a win in an election year

- In 2012, Sen. Tom Coburn attacked NSF as wasteful for “silly-sounding” research
- In 2013, Coburn/McCain and Cantor/L. Smith attacked NSF over political science and social science funding
- 2014 L. Smith attacks Dept. of Energy over Climate Change and Sustainability research
- 2015 L. Smith amends CJS to target SBE

FIRST ACT/AMERICA COMPETES REAUTHORIZATION OF 2015

- Reauthorization of 2007 COMPETES Act
- NSF “Accountability”
- Reduced funding overall
- Specific cuts to SBE
- CRA opposed the bill (along with 43 other groups)
- Bill passed House on party-line vote

RECAP

- Increasingly polarized Congress
- Increasingly polarized Electorate
- The only congressional committee with Science as its sole jurisdiction becoming more polarized...

THIS THING IN NOVEMBER



THIS THING IN NOVEMBER

- Clinton's views on science policy are fairly well-established
- Published a 15 page issue brief on her Science and Technology platform: <http://cra.org/blog>
- First priority is “Invest in Computer Science and STEM Education”
- Likely to be a lot of continuity from the Obama administration.

THIS THING IN NOVEMBER

- Trump's views are less well known.
- Trump on Tech Policy:
 - “We’re losing a lot of people because of the internet.

THIS THING IN NOVEMBER

- Trump's views are less well known.
- Trump on Tech Policy:
 - “We're losing a lot of people because of the internet. We have to see Bill Gates and a lot of different people that really understand what's happening.

THIS THING IN NOVEMBER

- Trump's views are less well known.
- Trump on Tech Policy:
 - “We're losing a lot of people because of the internet. We have to see Bill Gates and a lot of different people that really understand what's happening. We have to talk to them about, maybe in certain areas, closing that internet up in some ways.

THIS THING IN NOVEMBER

- Trump's views are less well known.
- Trump on Tech Policy:
 - “We're losing a lot of people because of the internet. We have to see Bill Gates and a lot of different people that really understand what's happening. We have to talk to them about, maybe in certain areas, closing that internet up in some ways. Somebody will say, ‘Oh freedom of speech, freedom of speech.’ These are foolish people.”

THIS THING IN NOVEMBER

- Trump on Science Funding:
 - [in answer to a question about his support for NASA] “Right now, we have bigger problems — you understand that? We've got to fix our potholes. You know, we don't exactly have a lot of money.”
- So, there are certainly opportunities for education.
- Transition papers will be useful in either case.

THIS THING IN NOVEMBER

- Trump does have an advisor for Energy policy:
 - Rep. Kevin Cramer (R-ND)
- Three policy advisors, but none focused on science policy
- Chris Christie would manage the transition team

ELECTION EFFECT ON CONGRESS

- Does either candidate have coattails?
- Does Trump have anti-coattails?
 - Does Trump at the top of the ticket suppress GOP votes? Does it hurt GOP candidates down-ticket?
- A Clinton win and a GOP majority in the House and Senate = essentially status quo
- Any other scenario changes the policy calculus....

SO THE CHALLENGES ARE DAUNTING

AND WE HAVE A MUCH MORE LIMITED TOOL BOX...

FORTUNATELY, WE'VE GOT A PRETTY GOOD STORY

TALKING POINTS



INFORMATION TECHNOLOGY R&D AND U.S. INNOVATION

- **Advances in information technology are transforming all aspects of our lives:** commerce, education, employment, health care, manufacturing, government, national security, communications, entertainment, science, and engineering.
- **Advances in information technology also drive our economy** – both directly (the growth of the IT sector itself) and in productivity gains across the economy. Advances in computing are enabling innovation in all fields.
- **The history of innovation in computing is impressive, but the future opportunities are even more compelling:** the future of networking, revolutionizing transportation, personalized education, powering the smart grid, empowering the developing world, improving health care, enabling advanced manufacturing, driving advances in *all* fields of science and engineering.

It's impossible to imagine a field with greater opportunity to change the world.

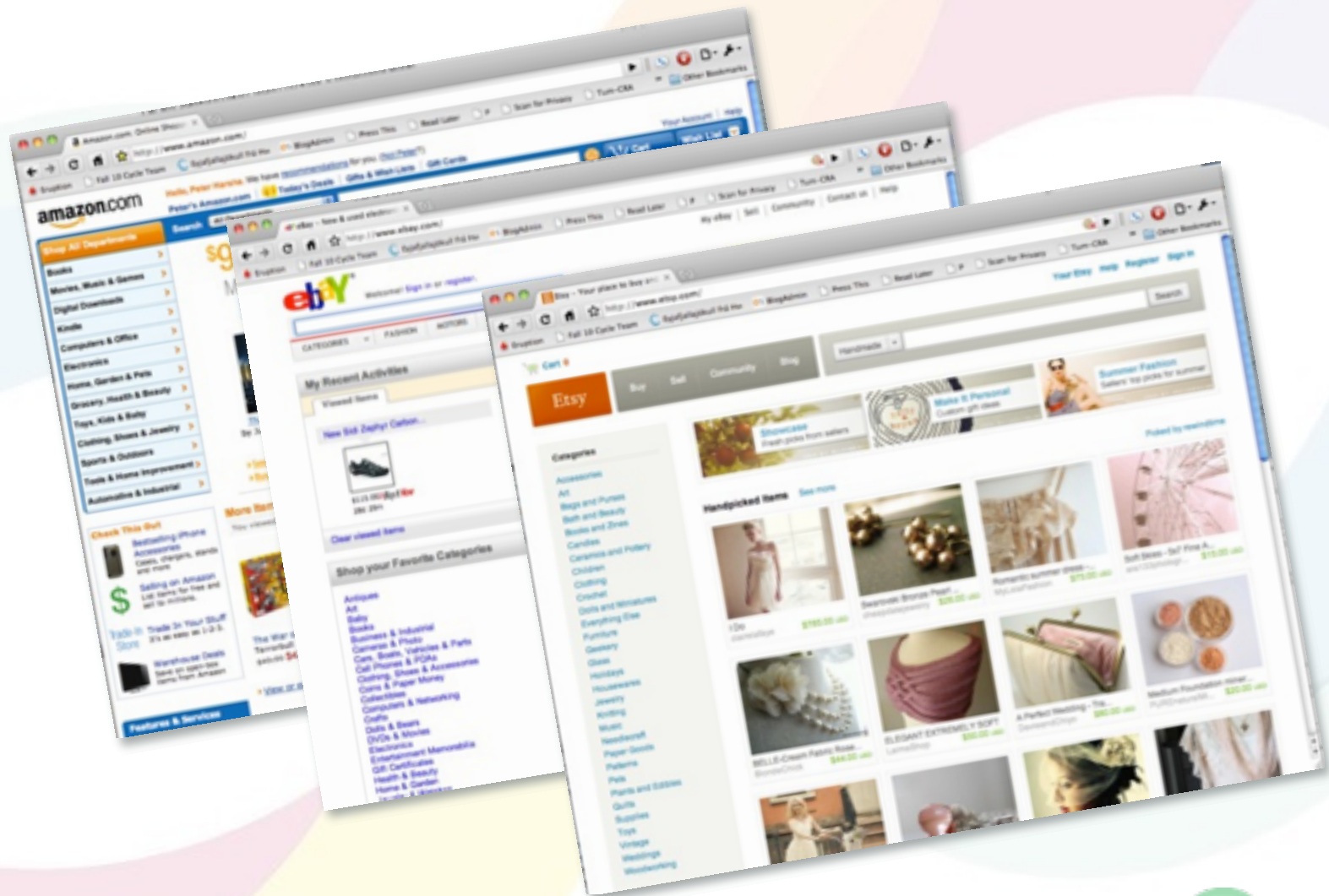
- **The IT R&D ecosystem is crucial to continued innovation in IT, and federal support is at the heart of that ecosystem.** Essentially every aspect of IT upon which we rely today bears the stamp of federal support.

"In order to sustain and improve our quality of life, it is crucial that the United States continue to innovate more rapidly and more creatively than other countries in important areas of IT. Only by continuing to invest in core IT science and technology will we continue to reap such enormous societal benefits in the decades to come."

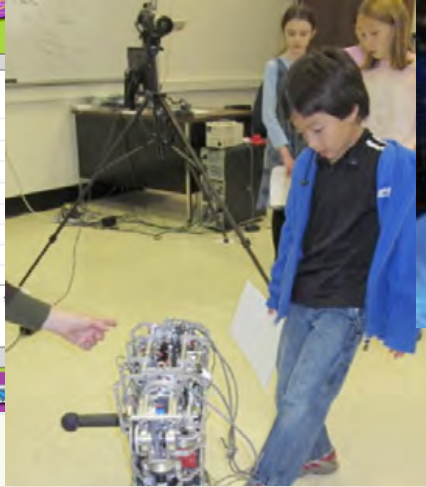
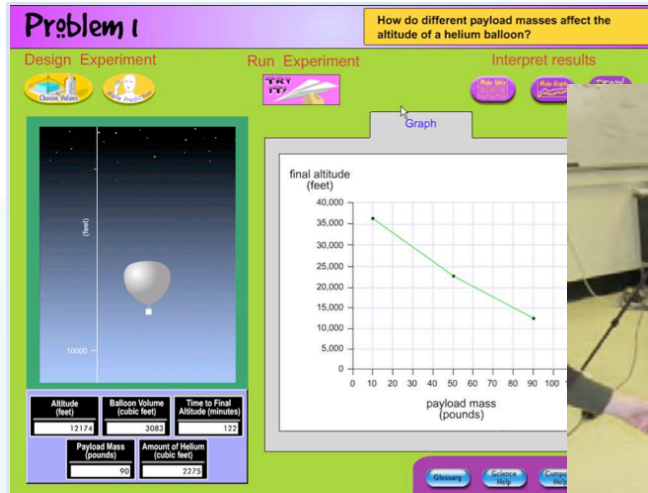
– President's Council of Advisors for Science and Technology
(in *Designing a Digital Future*, December 2010)



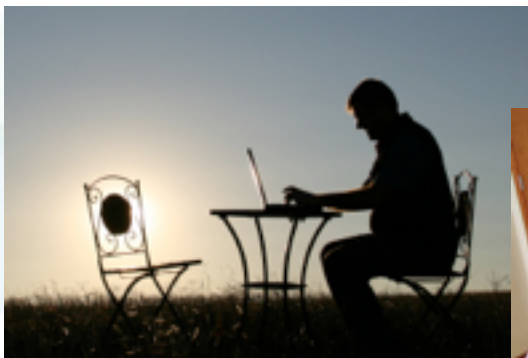
Advances in IT are transforming
all aspects of our lives



Conduct commerce...

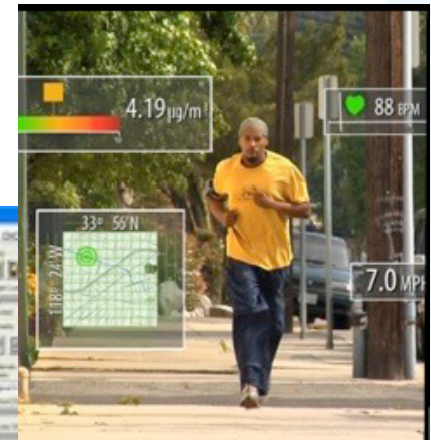
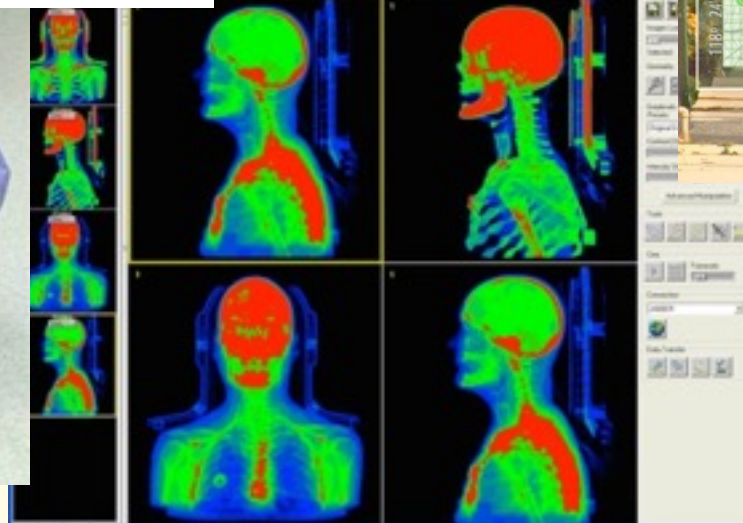


...how we learn...

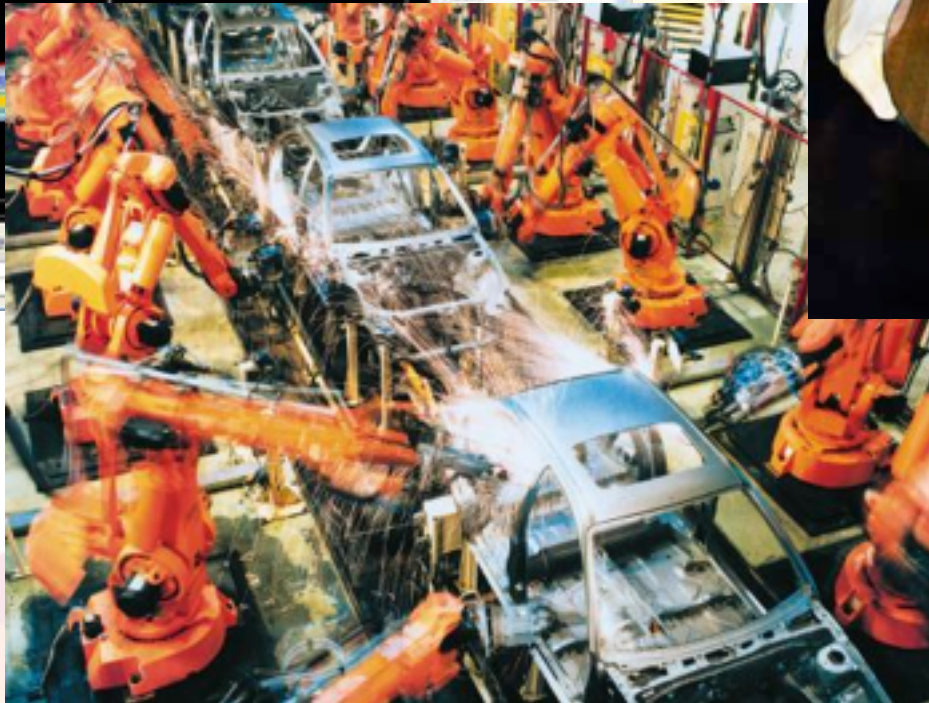
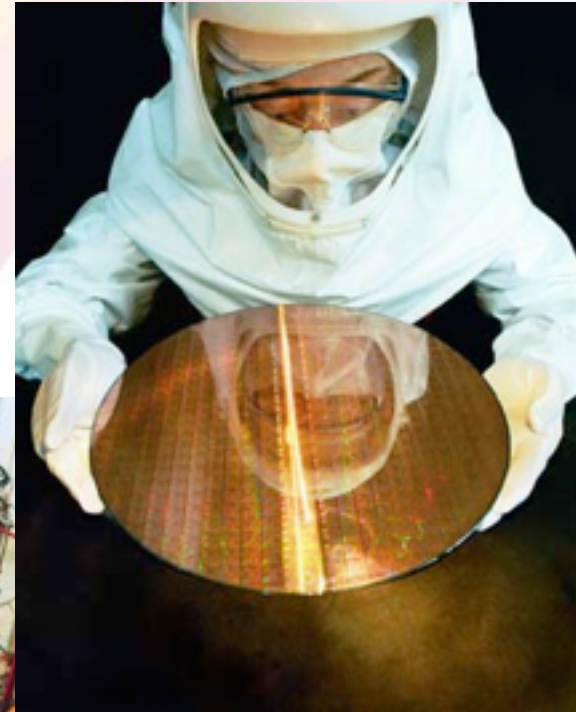
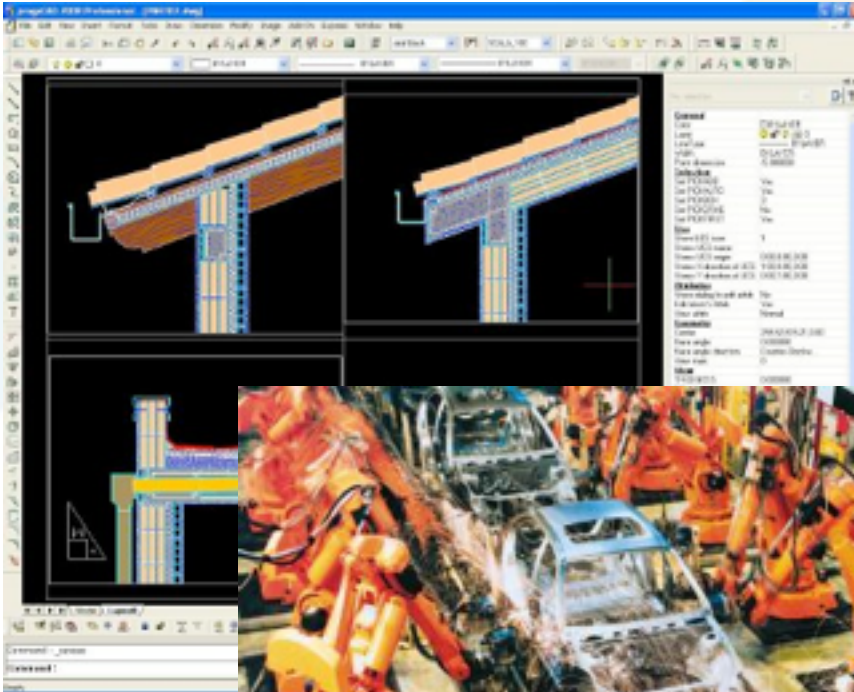


...our employment...

...our health care...



...how we manufacture...



Twitter
White House Office
Get short, timely messages from OSTP.
Twitter is a rich source of instantly updated information. It's easy to stay on top of incredibly wide...
Sign Up >

NSF FastLane Home
FastLane is an interactive real-time system used to conduct NSF business over the Internet. FastLane is for official NSF use only. [More About FastLane...](#)

OpenSecrets.org
Center for Responsive Politics
Politicians & Elections | Influence & Lobbying | News & Analysis | About Us | Action Center
OpenSecrets.org is your nonpartisan guide to money's influence on U.S. elections and public policy. Whether you're a voter, journalist, activist, student or interested citizen, use our free site to shine light on your government. Count cash and make change.
The Center for Responsive Politics and Public Citizen have released a new report detailing the intimate ties between Congress and Wall Street lobbyists. [View it here.](#)

Discover how oil company BP plays politics

Quick Links

- ★ Members of Congress
- ★ Congressional Races
- ★ Get Local!
- ★ Donor Lookup
- ★ Lobbying
- ★ 527 Committees
- ★ PACs
- ★ Personal Finances

<http://www.opensecrets.org/about/index.php>

OpenSecrets Blog
Subscribe to the OpenSecrets Blog feed
New Democratic Senator from West Virginia Has Scant Record of Federal Campaign Contributions
Published on July 19, 2010 11:43 AM
Cate Goodwin, the 36-year-old attorney and former gubernatorial aide nominated by Democratic West Virginia Gov. Joe Manchin to temporarily fill the seat of the late Sen. Robert Byrd (D-W.Va.), may be a rising political star, but he hasn't left a long trail of federal-level campaign contributions in his wake... [\(Continue\)](#)
Bachmann Forming Tea Party Caucus, DISCLOSE Act Gets No GOP Love and More in Capital Eye Opener, July 19
Published on July 19, 2010 10:30 AM
Rep. Michele Bachmann (R-Minn.) last week announced her intention to form a "Tea Party Caucus" in the House of Representatives, with herself as the chair. Bachmann's rising profile has bode well for her campaign coffers this year. Through June 30, she has raised more than \$4 million -- including \$1.7 million between April and June alone (the most among all House incumbents and challengers)... [\(Continue\)](#)

Most Popular Searches
01810 barbara boxer Boustany, Charles W Jr
65401 Campbell Coburn, Tom Davis, Artur 07374 08055 Green, Al Harkin, Tom harris Jordan, vernon Johnson Johnson, robert Johnson, Jamie Tucker Johnson, Timothy V Johnson, Sam Williams

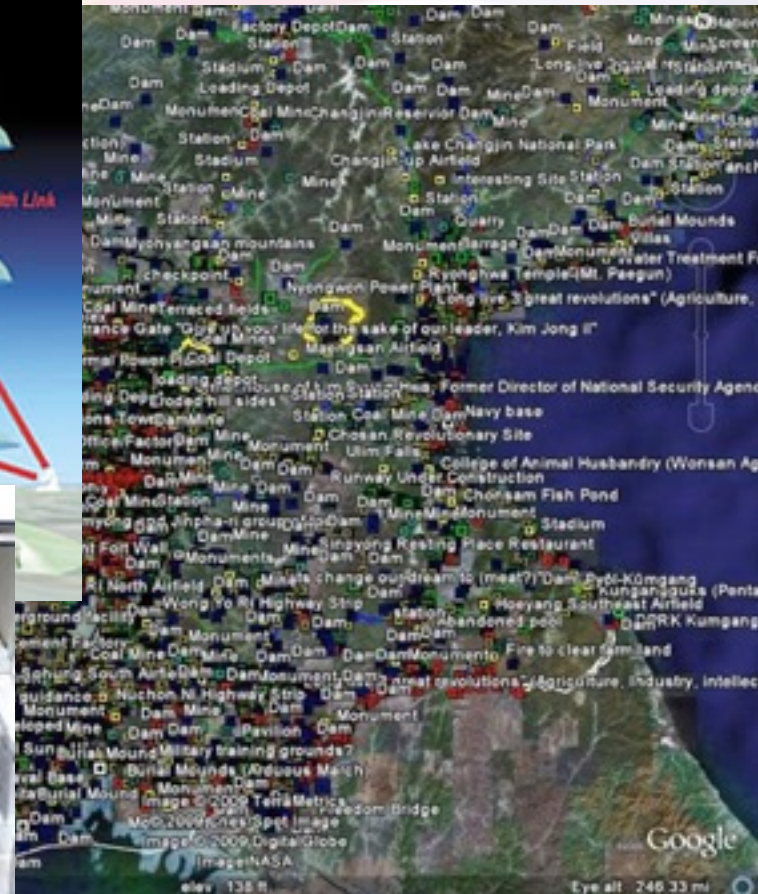
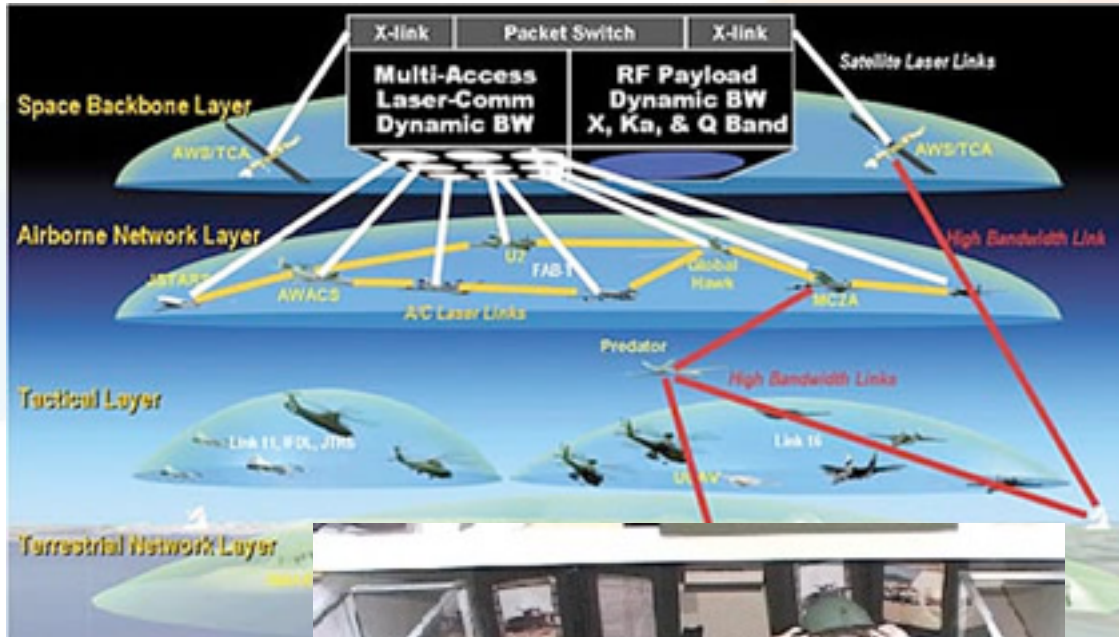
BLUE PAGES
Vote with your wallet using The Blue Pages, Second Edition
Featuring Center for Responsive Politics data and analysis

MyOpenSecrets
Watching what you watch

System Use Notification
This Government Computer System is provided as a public service by the National Science Foundation. It is intended for use by the public for viewing, submission and retrieval of authorized information only. All usage of information retrieved from this Computer System should follow the guidelines in Computer Fraud and Abuse Act of 1996. Unauthorized attempts to upload information, change or access information on this service are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1996. Please refer to: <https://www.fastlane.nsf.gov/>

...how government functions...

...how we preserve our national security...





...how we communicate...

...and how we're entertained.



Advances in IT also drive our economy

- Computing drives our economy, not just through the growth of the IT industry, but also through productivity gains across the entire economy
- Remarkable economic growth between '95 and '02 was spurred by productivity growth enabled almost completely by factors related to IT¹
- IT enables productivity growth, enables the economy to run at full capacity, enables goods to be allocated more efficiently and the production of higher quality goods and services?

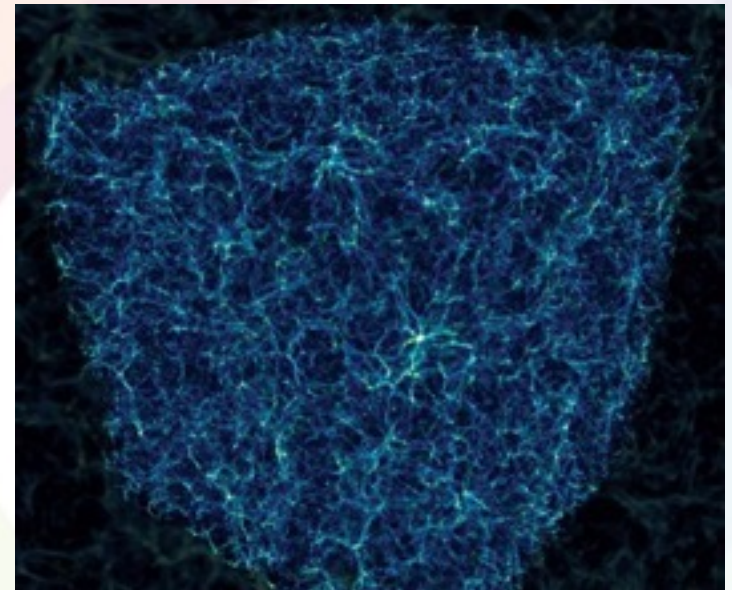
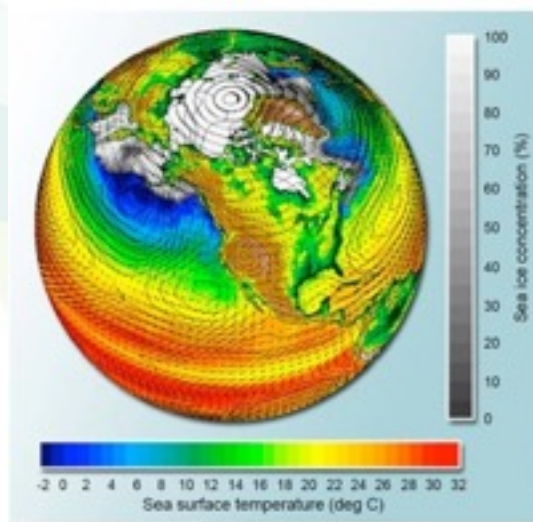
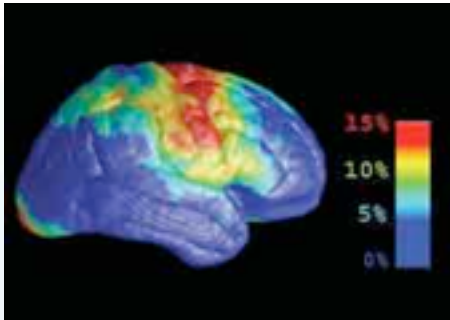
1. Jorgenson, Dale W., Mus S. Ho, and Kevin J. Stiroh. Productivity, Volume 3: Information Technology and the American Growth Resurgence. MIT Press. 2005.

2. Atkinson, Robert D., Andrew S. McKay. Digital Prosperity: Understanding the Economic Benefits of the Information Technology Revolution. Information Technology and Innovation Foundation. 2007.



Advances in computing are enabling
innovation in all other fields...

In Science and Engineering...



Created by Matthew Hall of NCSA's Advanced Visualization Laboratory

Computer modeling, visualization and data analysis have joined observation, theory, and experiment as the drivers of scientific discovery.

The history is impressive, but the
future is even more compelling

- The future of networking
- Revolutionizing transportation
- Delivering personalized education
- Enabling the smart grid
- Empowering the developing world
- Improving health care
- Driving advances in *all* fields of S&E

It's impossible to imagine a field with greater
opportunity to change the world

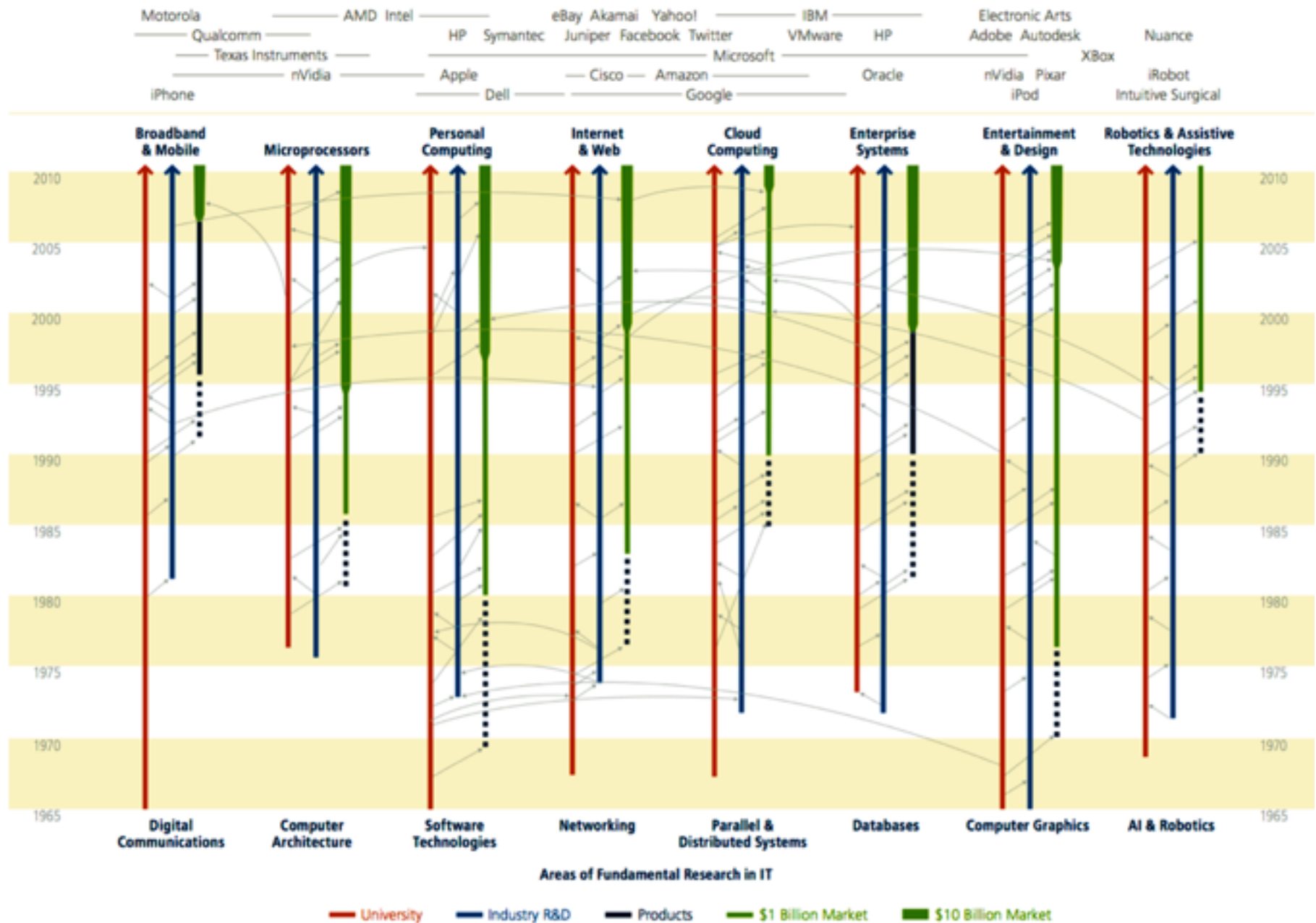
It's impossible to imagine a field with greater
opportunity to provide amplification to the forces
of change in the world

The IT R&D ecosystem is **crucial** to innovation in IT, and federal support is **at the heart** of that ecosystem

“ [An] extraordinarily productive interplay of federally funded university research, federally and privately funded industrial research, and entrepreneurial companies founded and staffed by people who moved back and forth between universities and industry.”

-NRC on the federal IT R&D Program

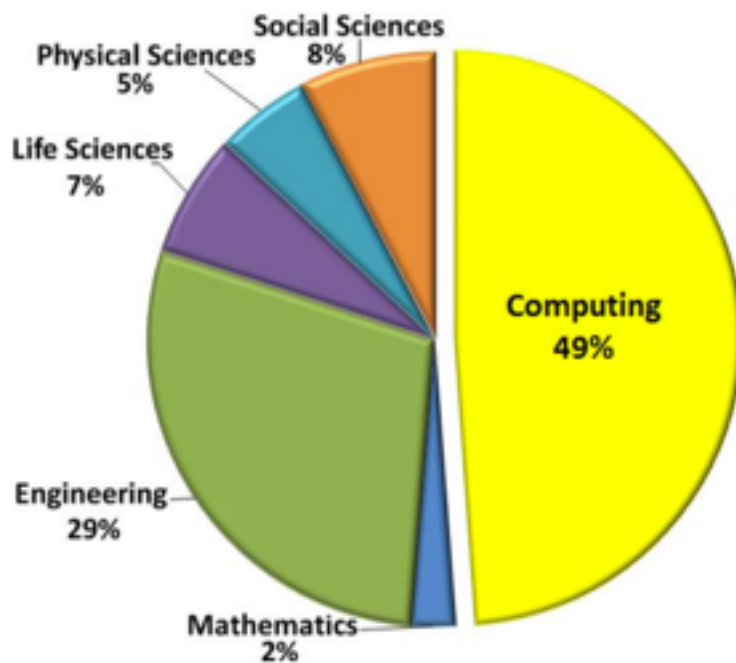
IT Sectors With Large Economic Impact



**ESSENTIALLY EVERY ASPECT OF INFORMATION TECHNOLOGY ON
WHICH WE RELY TODAY BEARS THE STAMP OF FEDERAL SUPPORT.**

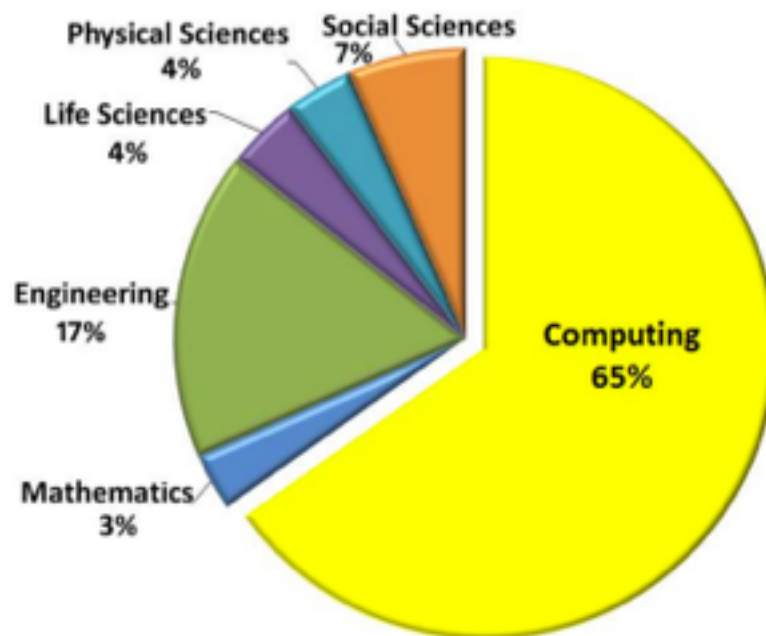
Where the STEM Jobs Will Be

Projected Annual Growth of Total STEM Job Openings 2012-2022



Where the STEM Jobs Will Be

Projected Annual Growth of **NEWLY CREATED** STEM Job Openings 2012-2022



Source: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2012-2022, available at <http://www.bls.gov/emp/>.
Courtesy of Association for Computing Machinery (acm.org).

WE'RE OPPORTUNISTIC...

- Congressional testimony

House Committee on Science, Space and
Technology
Subcommittee on Research and Science Education
Hearing on the NITRD Program
October 28, 2015



WE'RE OPPORTUNISTIC...

- Congressional testimony
- We host our own events and partner with others

CRA CONGRESSIONAL FALL FLY-IN SEPTEMBER 13-14, 2016!



CRA Fall Fly-in Participants, September 2015



Task Force
on American
Innovation

Deconstructing The iPad

How Federally Supported Research Leads to
Game-Changing Innovation





WE'RE OPPORTUNISTIC...

- Congressional testimony
- We host our own events and partner with others
- We've developed a good “brand”
- We strive to engage the community in policymaking — LiSPI

LiSPI 2017

CRA/CCC Leadership in Science Policy Institute



November 2017
Washington, DC

Nominations
Sept 2017

WE'RE OPPORTUNISTIC...

- Part of a broader science advocacy community that's looking for good stories to tell
- Join coalitions around our interests
 - CNSF, CNSR, TFAI, ESC, CSEC
- We leverage our interactions with the press

We leverage social media (or try to...)



<http://cra.org/blog>

On Facebook

@CRATweets

AND WE'VE HAD SOME SUCCESS...

“This is our generation’s Sputnik moment. Two years ago, I said that we needed to reach a level of research and development we haven’t seen since the height of the Space Race. In a few weeks, I will be sending a budget to Congress that helps us meet that goal. We’ll invest in biomedical research, information technology, and especially clean energy technology – an investment that will strengthen our security, protect our planet, and create countless new jobs for our people.”



If we want America to stay on the cutting edge, we need young Americans to master the tools and technology that will change the way we do just about everything.

- President Obama in a video on behalf of the Hour of Code

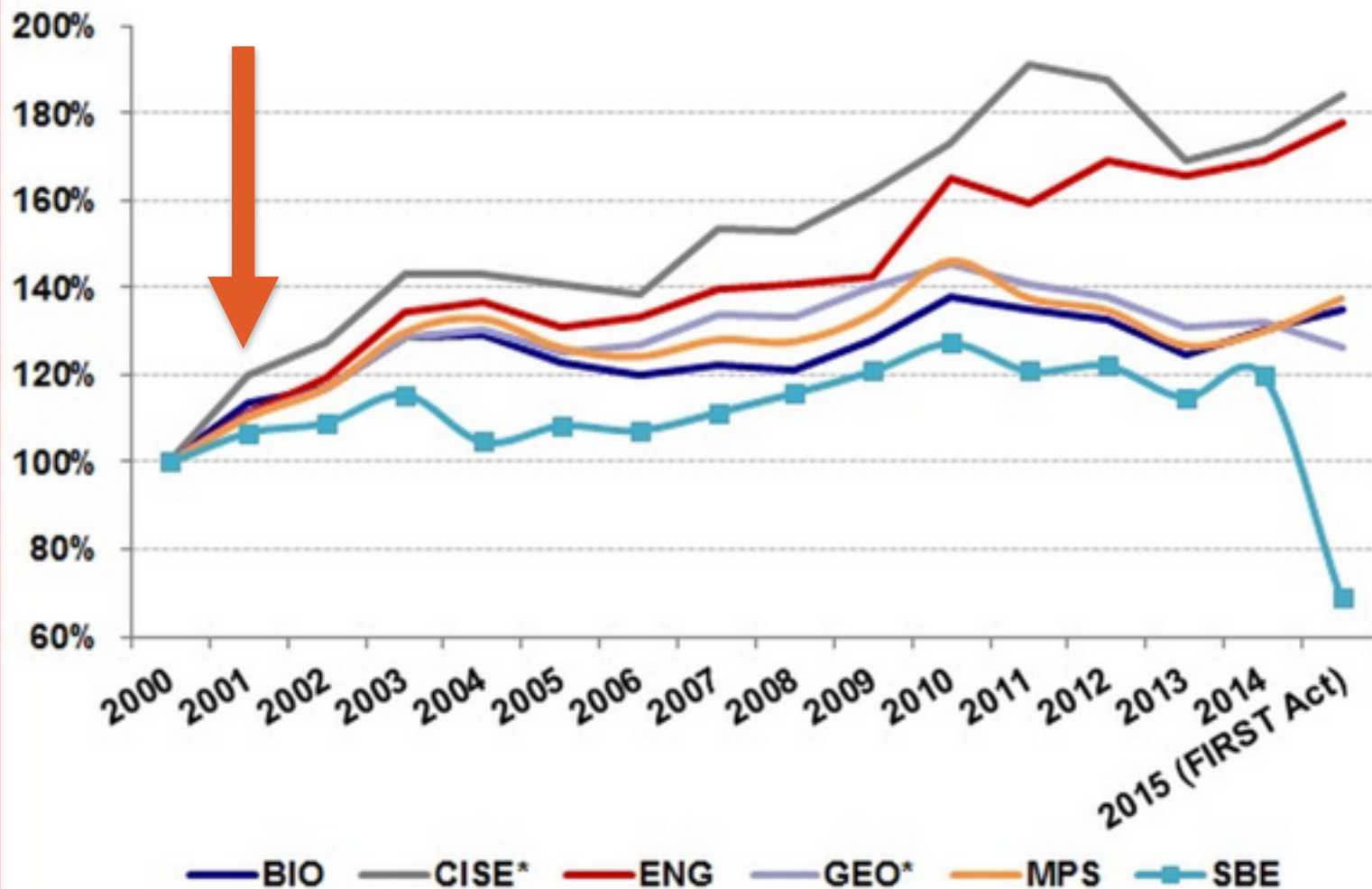


NSF's entire increase is provided to core research and education activities, which are critical to innovation and U.S. economic competitiveness, including funding for an advanced manufacturing science initiative and for research in **cyber-security and cyber-infrastructure**.



NSF Directorate Budgets and the FIRST Act

Percent change from FY 2000 funding levels, constant dollars



*Adjusted for comparability. Based on historical agency data and proposed authorizations in the FIRST Act. © 2014 AAAS

MORE RECENT “SUCCESSES”

- Sought for input on DIGIT Act
- NITRD Reauthorizations
- STEM Ed Act, Senate COMPETES

HOW CAN WE DO MORE?

- We want to do a better job of making the case to other agencies
 - CCC is incredibly useful here
- We want to get the community more engaged in making policy
 - Congressional dysfunction means agency processes are even more important!

LiSPI 2017

CRA/CCC Leadership in Science Policy Institute



Fall 2017
Washington, DC

Nominations
September 2017

CRA'S NEXT CONGRESSIONAL FALL FLY-IN



- September 13-14, 2016

**MAKE THE CASE FOR COMPUTING
IN YOUR OWN SPHERES OF INFLUENCE!**

**WITHOUT A STRONG CASE AND SUPPORT FROM
A BROAD COMMUNITY – INDUSTRY, HIGHER
EDUCATION, SCIENTIFIC SOCIETIES – THE NEED
FOR RESEARCH FUNDING WILL FACE A CHILLY
RECEPTION AMONG POLICYMAKERS**

Thanks!

Peter Harsha
Director of Government Affairs

harsha@cra.org

@peterharsha and
@CRATweets

p: 202.556.4335