



SCIENCE ADVISE TO THE PRESIDENT AND THE ROLE OF PCAST

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The President's Council of Advisors on Science and Technology

- ▶ Background Information
 - ▶ What is PCAST? And why is it important?
- ▶ History of PCAST
 - ▶ WWII through the Cold War
 - ▶ 'Modern' PCAST: Presidents George H.W. Bush to Obama
- ▶ PCAST membership and activities
- ▶ Recommendations

PCAST

- ▶ Advisory committee appointed by the president
- ▶ High profile leaders in science, engineering, and industry
- ▶ Provides independent S&T advice to the president
- ▶ Identify and encourage new S&T opportunities

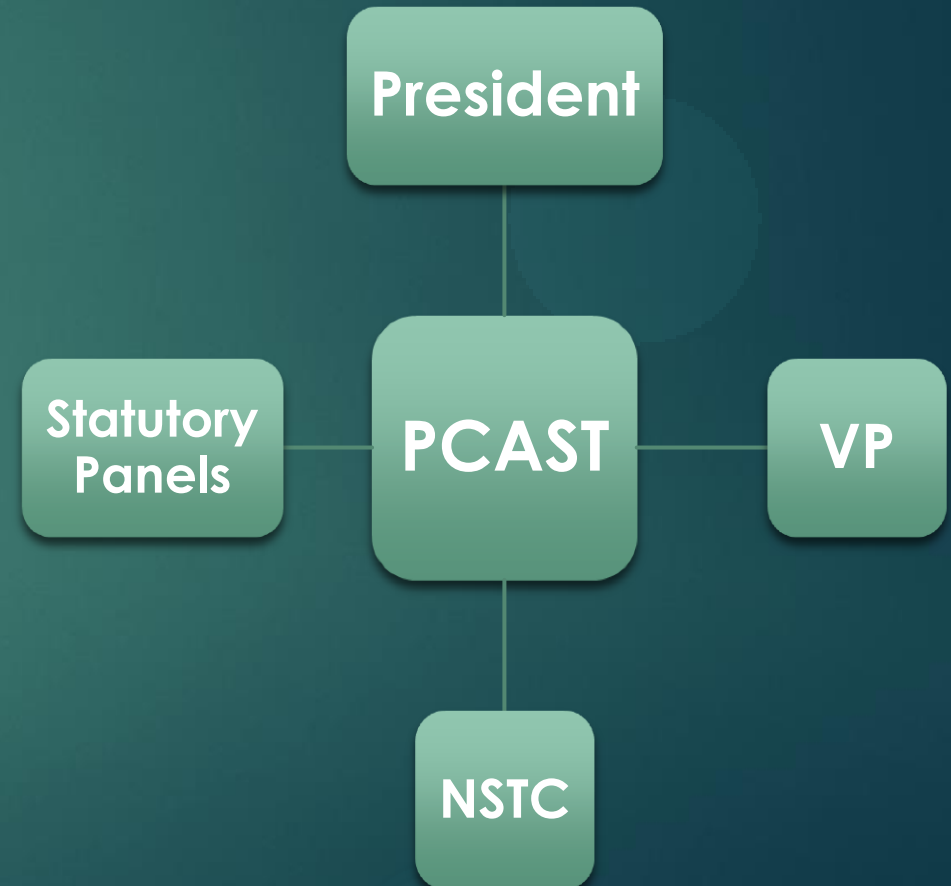
[I]t may mean that we've decided to help out somebody's good idea. But I would hope in other areas, we will have been able to come up with an idea that's better than what anybody can offer.

– H. Shapiro [G.H.W. Bush]



PCAST Operations

- ▶ Advise Executive Branch
- ▶ Serves as two other statutory panels:
 - ▶ National Nanotechnology Advisory Panel
 - ▶ President's Innovation and Technology Advisory Committee
- ▶ Managed by the Office of Science and Technology Policy
 - ▶ Co-led by OSTP director - the president's "science advisor"
- ▶ Produces reports and letters to the president and Congress



History of PCAST

- 
- ▶ 1951, Truman's "Science Advisory Committee"
 - ▶ 1957, Elevated to "President's Science Advisory Committee" (PSAC) by Eisenhower
 - ▶ 1972, FACA passed
 - ▶ 1973, disbanded by Nixon
 - ▶ 1976, OSTP legislation passed
 - ▶ 1990, Reinstated by G.H.W. Bush

Modern Era - PCAST

- ▶ Presidents G.H.W. Bush through Obama (1989-2016)
 - ▶ Officially co-led by director of OSTP
 - ▶ Non-federal co-chair
 - ▶ Reagan and Carter administrations committees reported to the science advisor and not to the president
 - ▶ FACA regulations – the committee's work is open to the public
- ▶ Study reviewed :
 - ▶ Membership by gender, ethnicity, career experience and expertise
 - ▶ Meetings and other activities
 - ▶ Report topics and timeline
 - ▶ Note influential reports

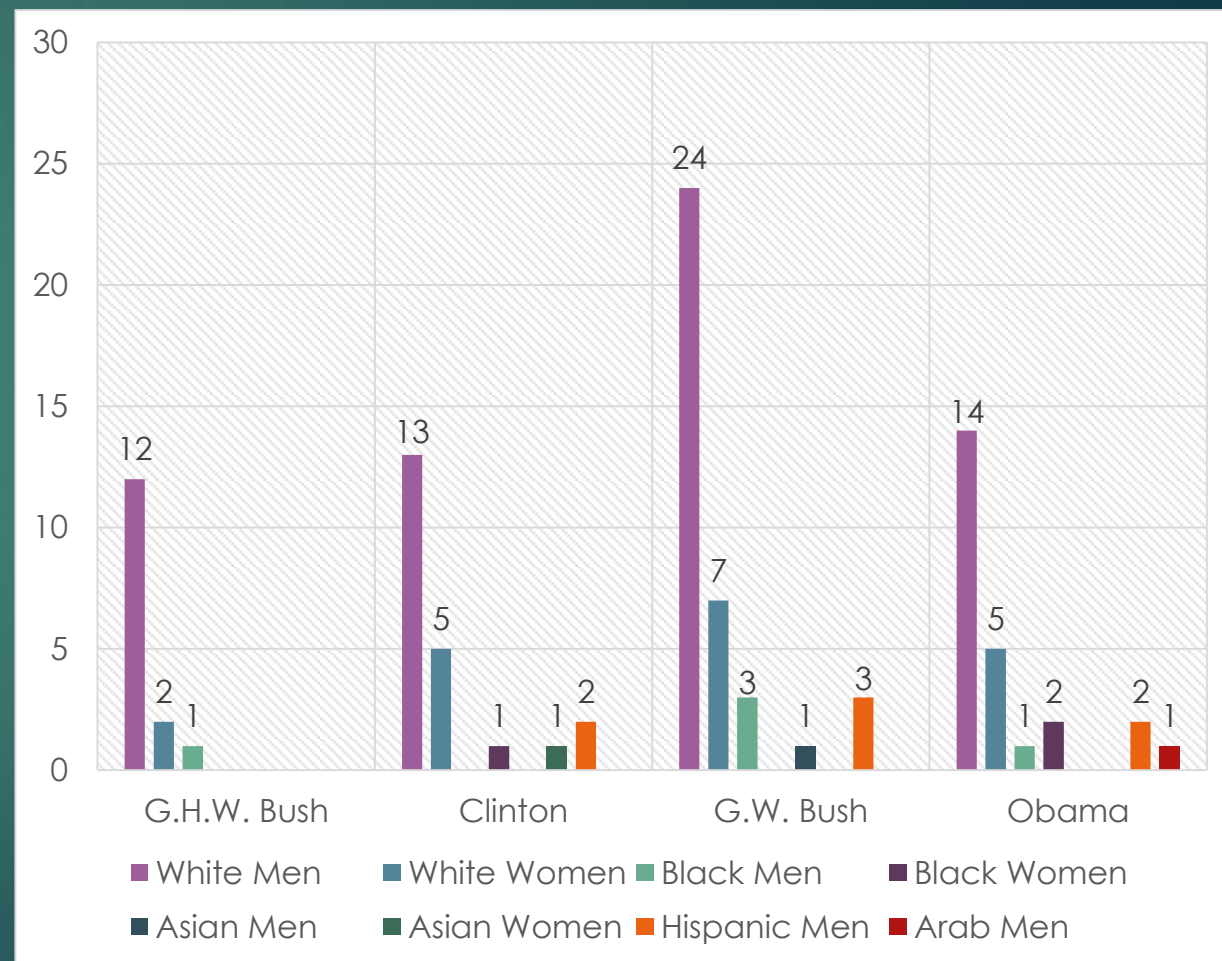
Demographic Diversity of PCAST Members

- ▶ Total number of members
 - ▶ Race/Ethnicity
 - ▶ Gender
 - ▶ Areas of expertise
 - ▶ Work Experience (Academia, Government, and/or Industry)

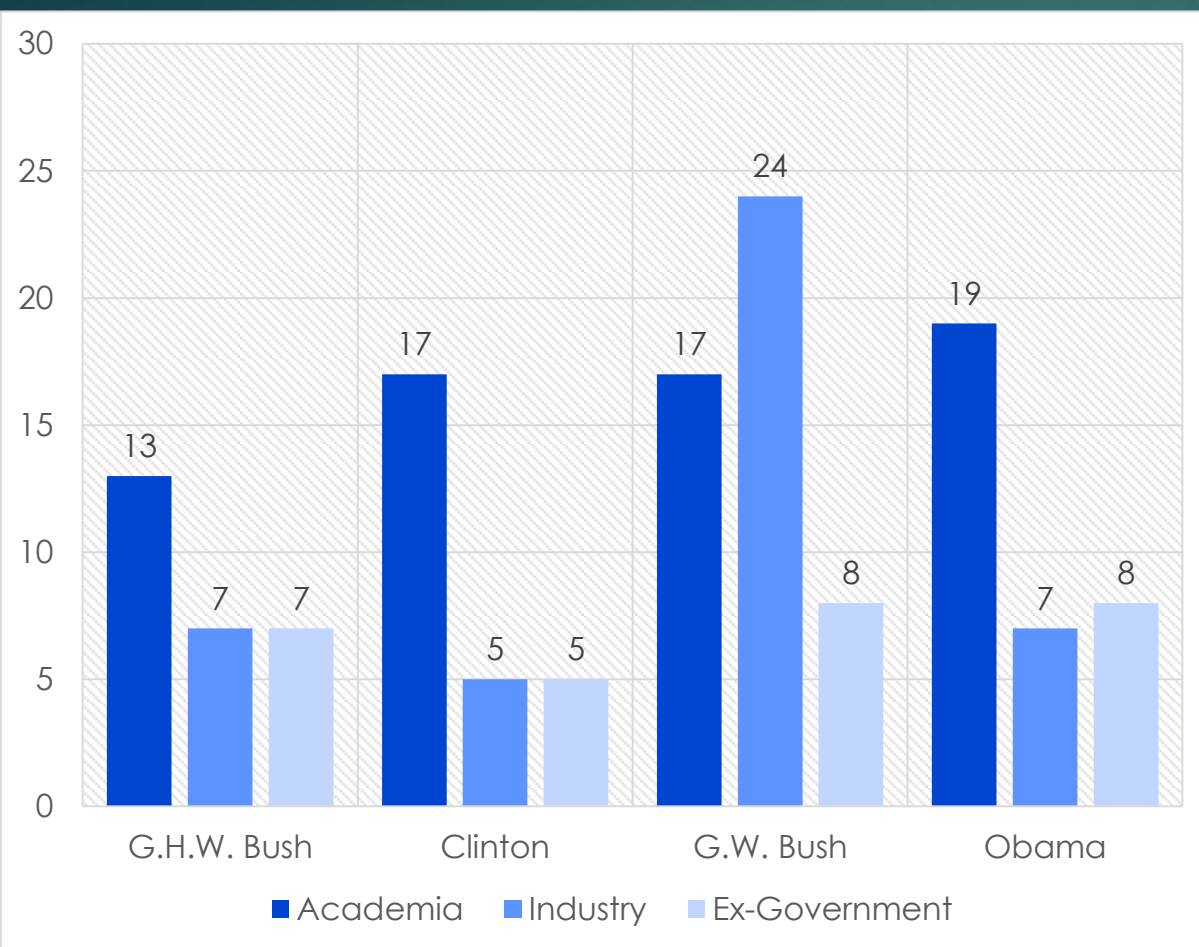
Members per Admin	
G.H.W. Bush	15
Clinton	22
G.W. Bush	38
Obama	25

Demographic Diversity of PCAST Members

- ▶ Membership dominated by white men
- ▶ Diversity in gender and ethnicity has increased in each administration
- ▶ No Hispanic or Arab women



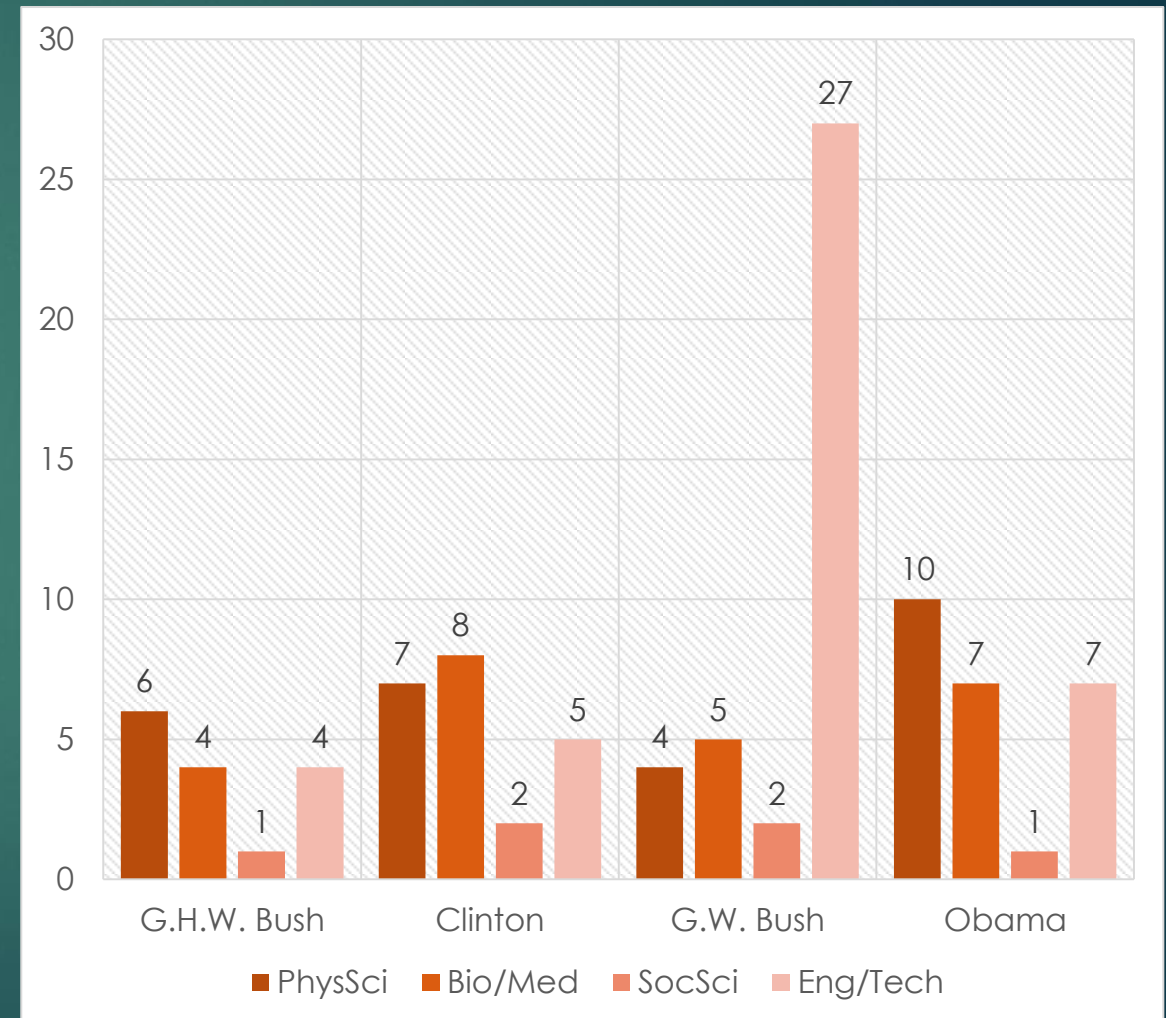
Experience of PCAST Members



- ▶ Members largely from academia
- ▶ President G.W. Bush's is a notable exception, many from industry

Experience of PCAST Members

- ▶ PhysSci: physics, chemistry, astronomy, and environmental sciences
- ▶ SocSci: education, law, economics and psychology
- ▶ G.W. Bush majority Eng/Tech
 - ▶ Large industry representation
- ▶ SocSci under-represented



PCAST Activities

- ▶ Meetings
- ▶ Reports and Letters
- ▶ Private Communications
 - ▶ Unpublished communications
 - ▶ Advice to the president

“The ability [for PCAST] to have informal dialogue with the president It was absolutely unfiltered information--the topics were unfiltered ahead of time.”

– John McTague [G.H.W. Bush]

“PCAST members ought to be able to bring their points of view directly to the President when the Administration hasn’t gotten something right.”

– William G. Wells, Jr. [OSTP]

PCAST Activities - Meetings

▶ Meetings

- ▶ Operates under Federal Advisory Control Act (FACA)
- ▶ Meetings must be held in public unless justified by the president for national security reasons
- ▶ G.H.W.B.: meetings private
- ▶ Clinton and G.W.B.: almost all meetings were public
- ▶ Obama: most meetings had private and public session
- ▶ G.H.W.B. PCAST met most frequently (30 meetings in 4 years)
- ▶ Obama started the soonest (Aug 2009)

Meetings per Admin	
G.H.W. Bush	30
Clinton	21
G.W. Bush	20
Obama	46

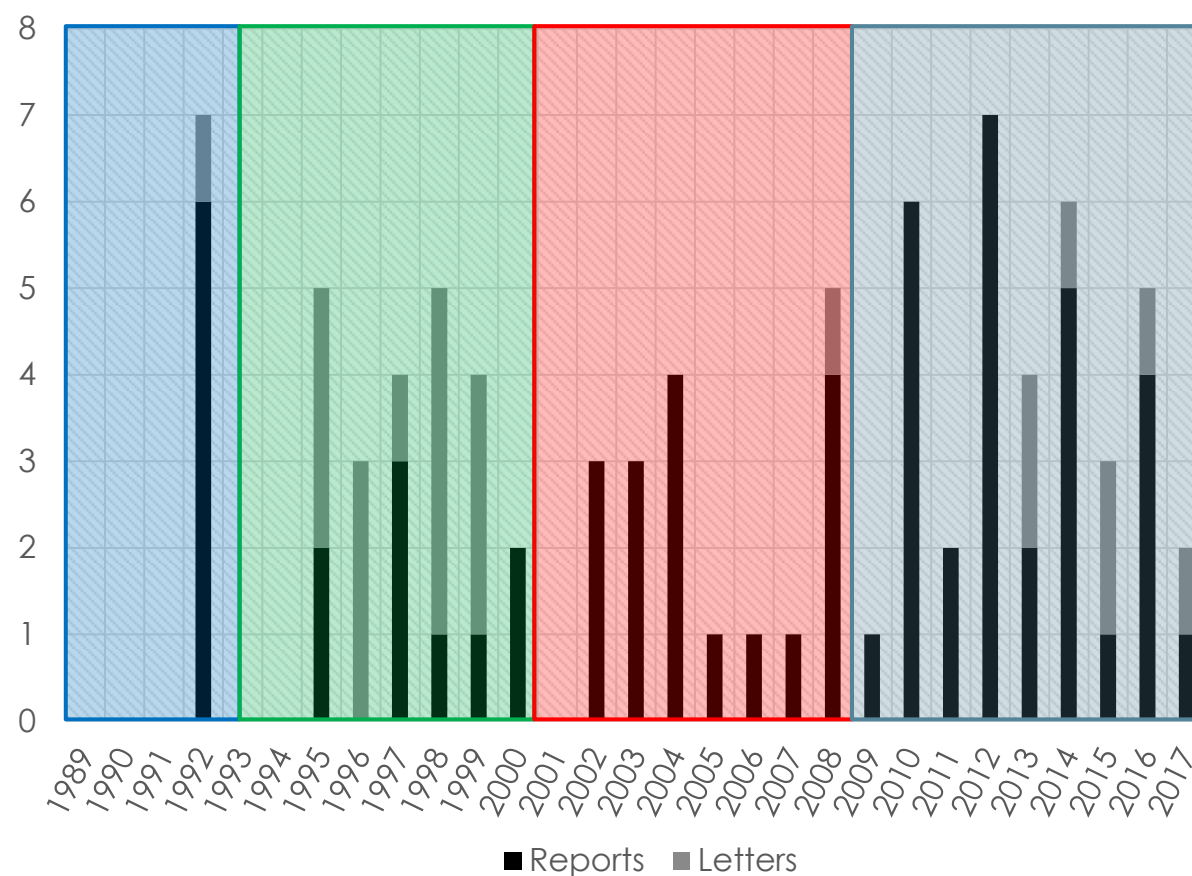
PCAST Activities - Reports

- ▶ Meetings
- ▶ Reports and Letters

Reports per Admin	
G.H.W. Bush	7
Clinton	23
G.W. Bush	18
Obama	36

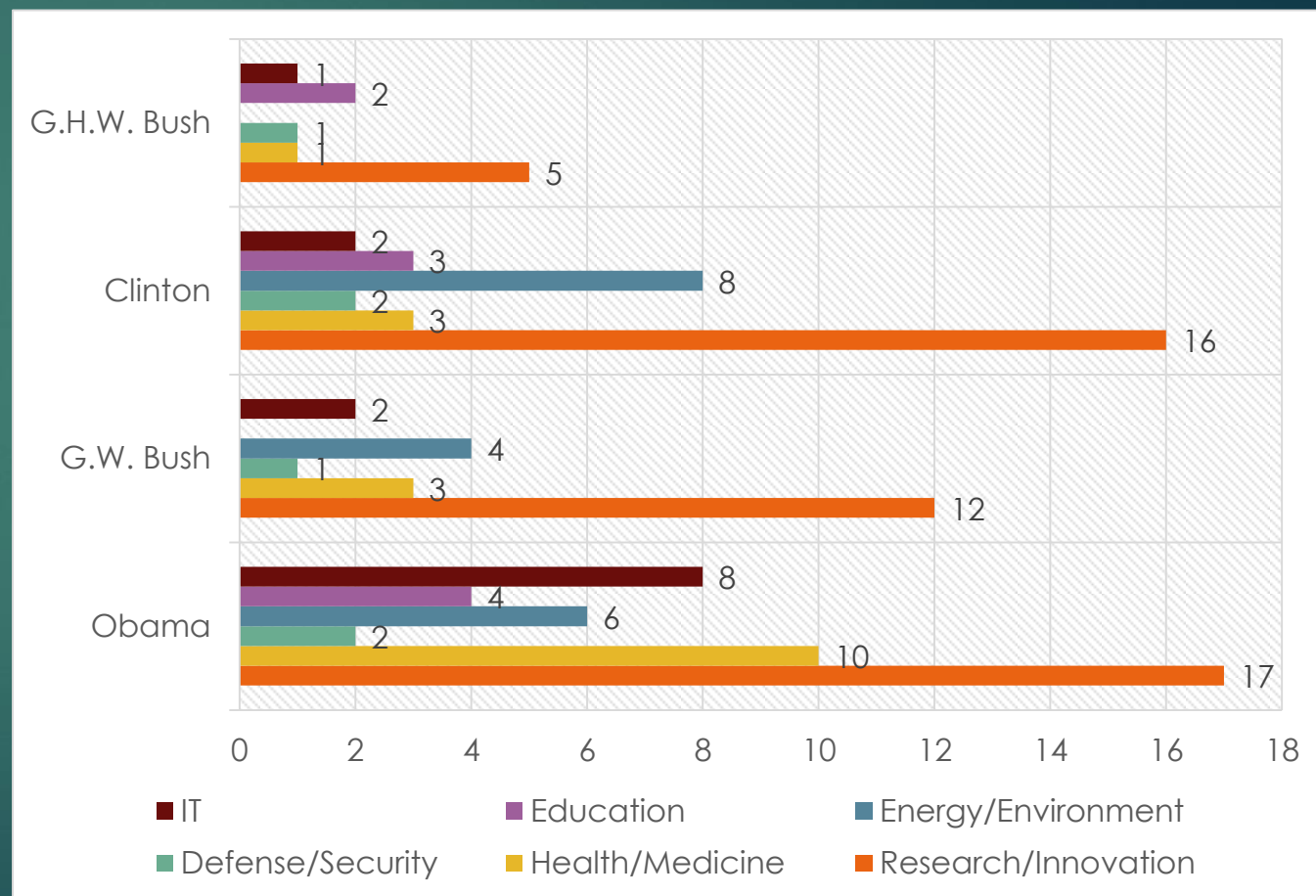
PCAST Publications, by Year

- ▶ G.H.W. Bush: all reports at once
- ▶ Clinton: focused on shorter reports and letters
- ▶ G.W. Bush: met less produced fewer letters
- ▶ Obama: produced most reports and quickest start



PCAST Publications by Category for Each Administration

- ▶ Most focused on 'Research and Innovation'
 - ▶ National Nanotechnology Initiative
 - ▶ Sustaining the National's Innovation Ecosystem
 - ▶ Precision Medicine
- ▶ Reports reflected
 - ▶ Breadth of S&T policy portfolio
 - ▶ President's priorities



Trump's PCAST

- ▶ Executive Order 13811 “Continuance of Certain Federal Advisory Committees”
- ▶ No PCAST appointments
- ▶ No OSTP director
 - ▶ Acting director, Ted Wackler [Obama OSTP deputy chief of staff]
 - ▶ US Deputy CTO, Michael Kratsios [Former Silicon Valley financier, B.A. in Pol Sci]
 - ▶ Trump OSTP focusing on “T” rather than “S”, ie. drones, government IT
- ▶ Absence of strong S&T voice reflected in budget request

Policy Recommendations

- ▶ OSTP director to co-lead PCAST
 - ▶ National recognition and respect as leader in S&T
 - ▶ Knowledge of the federal government
 - ▶ Strong connections to the S&T community
- ▶ Importance of PCAST
 - ▶ Engages high profile leaders in ST community
 - ▶ Quick turn around for studies on topics the administration is interested in.
 - ▶ Independent voice on government policies

President [G.H.W] Bush very enthusiastically presented to PCAST his new idea on a particular topic. David Packard... said, "Mr. President, that is the stupidest damn idea I ever heard." And the President said, "Really?"

It is vitally important that someone with David Packard's stature have direct access to the President. And it was important that Packard was prepared to spend time to get up to speed on key issues.

– Bromley [G.H.W. Bush]

Policy Recommendations

- ▶ Membership
 - ▶ Keep membership to under 20-25 individuals
 - ▶ Council should reflect growing diversity of S&T workforce
 - ▶ Expertise should reflect administration priorities
 - ▶ Rolling members off
 - ▶ Security clearances

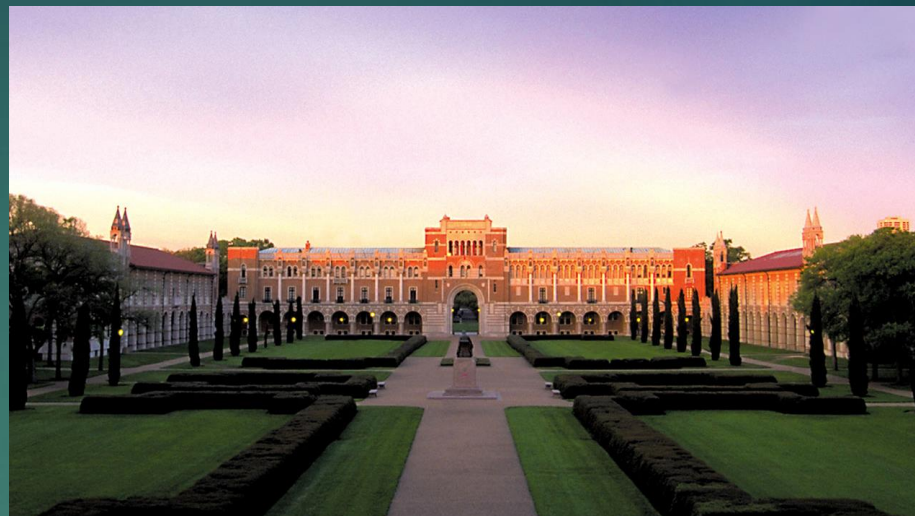
Policy Recommendations

▶ Activities

- ▶ Should be funded and staffed
- ▶ President needs to empower PCAST by tasking it
- ▶ Reports will have greater impact with interaction with stakeholders in agencies, White House, and Congress
- ▶ PCAST should review S&T initiatives but avoid advocating for the president's budget

▶ Future work

- ▶ Capturing how this committee works



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