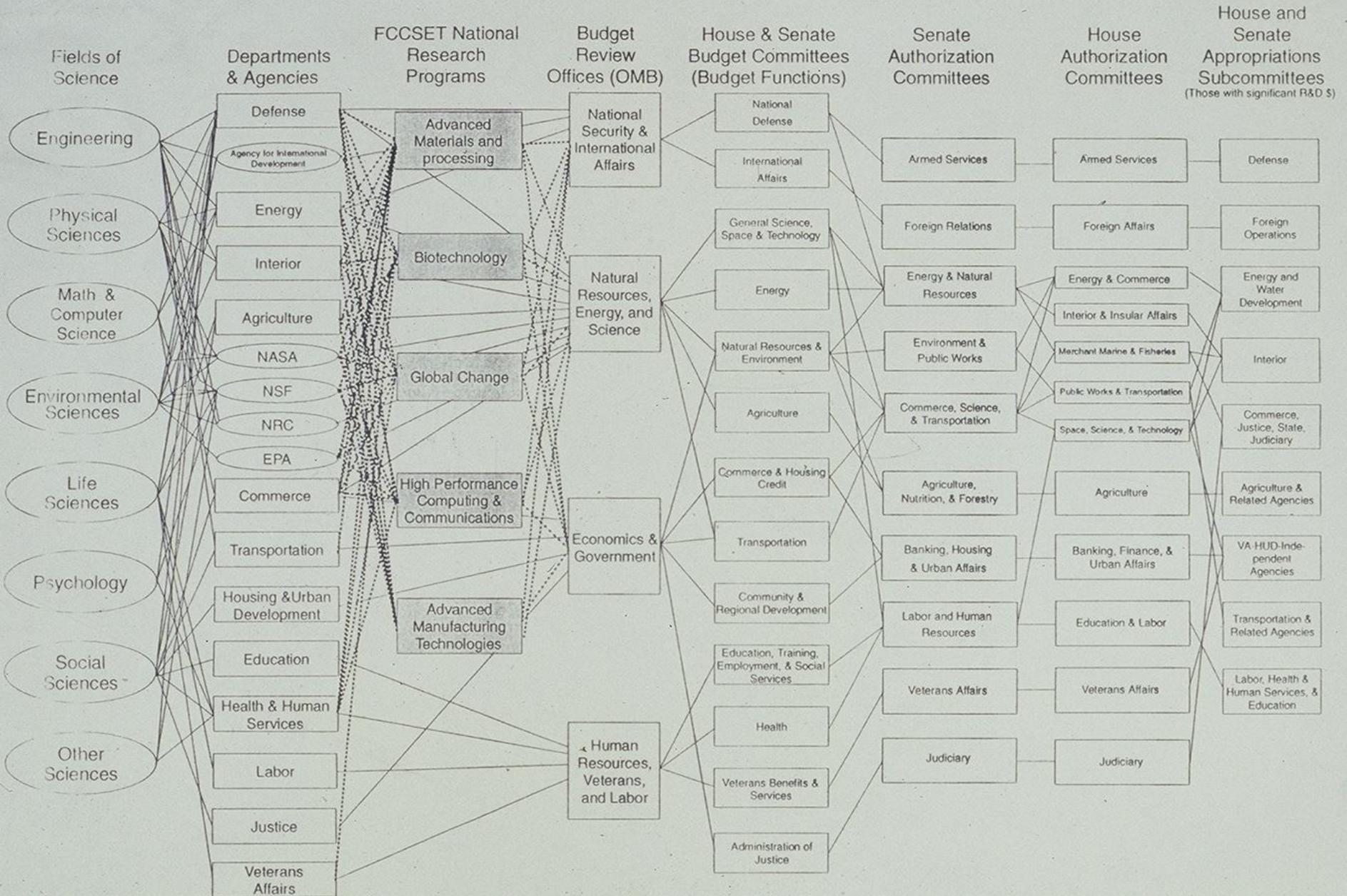


# Federal Government Update: BUILDING BUDGETS

Credit Synapse The Synapse  
Revealed  
Graham Johnson  
2005 S&E Visualization  
Challenge Winner

# Development of the Federal R&D Budget

Showing Fields of Science and Executive and Legislative Decision Units  
 Connecting lines indicate location of agency budget decisions, but not decision sequences.



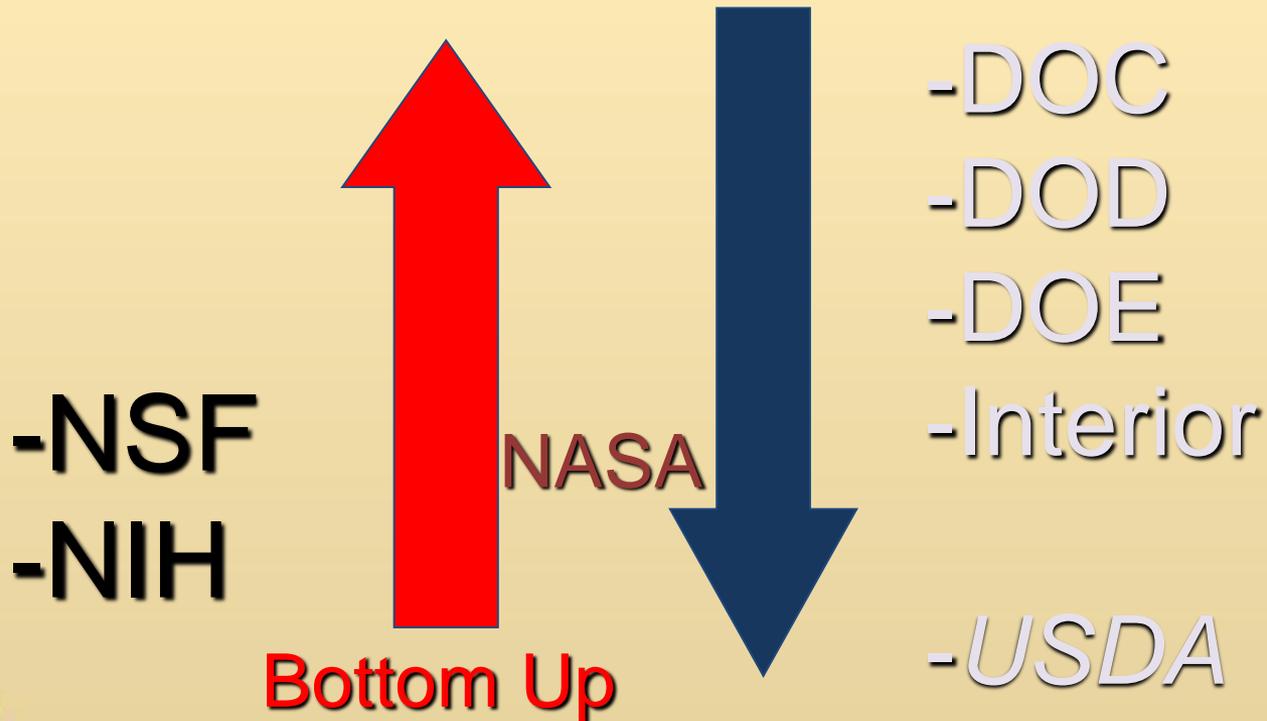


# Timeline of Budget Preparation

- OMB sends guidance letter in Spring
- OSTP/OMB sends priority memo for R&D in Spring
- Agencies prepare budget submissions-Aug/Sept
  - » EMBARGOED DISCUSSIONS
- Agencies submit budgets to OMB/EOP (OSTP) in Sept
- Thanksgiving OMB letter to agencies
- Rebuttal
- Christmas final numbers are locked
- Preparation of budget justifications, et al.
- President's budget submitted in February
  - Agency required to support in public
- Congress holds hearings and passes authorization bill by Sept 30!
- Agencies began new budget process gathering ideas in March and April

# Agency Primary Process

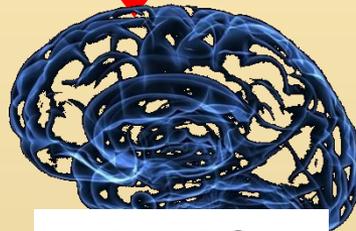
**Top Down**  
(OSTP, OMB, Agency Management, Congress)



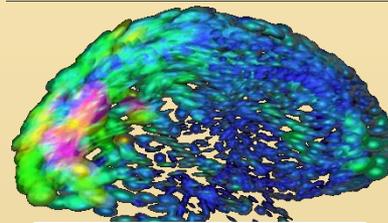
**Bottom Up**  
(Academia, Industry,  
Agency S&E Personnel)

# Targeting New Frontiers: “Top Down” and “Bottom”s” Up”

Administration, Agency, OMB, Congress  
PRIORITIES, STRATEGY & BUDGET

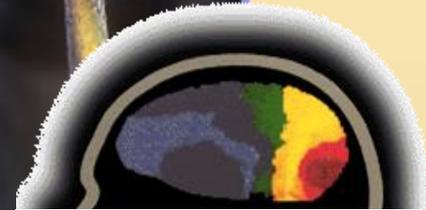
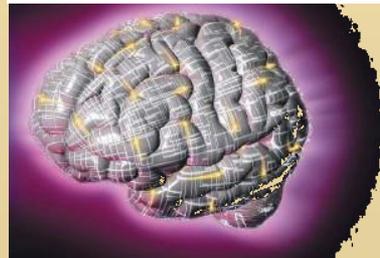


IDEAS



CONCEPTS

WORKSHOPS



ACADEMIA  
& INDUSTRY

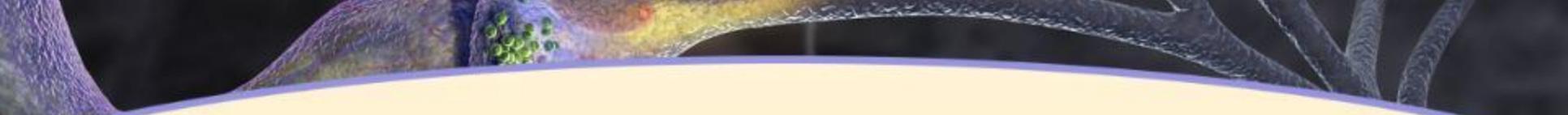


MEETINGS

Alignment with mission  
vision, goals & objectives

- Budget
- Integration of research with education
- Leveraging collaborations
- Potential for impact and transformation
- Urgency and readiness





## Emerging Frontiers in Research and Innovation (EFRI)

- Dr. Sohi Rastegar
- Established in FY2006 to support traNSFormative opportunities, potentially leading to:
  - New areas for fundamental or applied research;
  - New industries or capabilities that result in a leadership position for the country;
  - Significant progress on a recognized national need or grand challenge
- Ideas for Research Area come from “continual” input from Engineering Community
  - Workshops,
  - Advisory committees,
  - Technical meetings,
  - Professional societies,
  - Proposals and awards,
  - NSF committees of visitors,

***PERIODIC CALLS FOR EFRI TOPIC IDEAS***

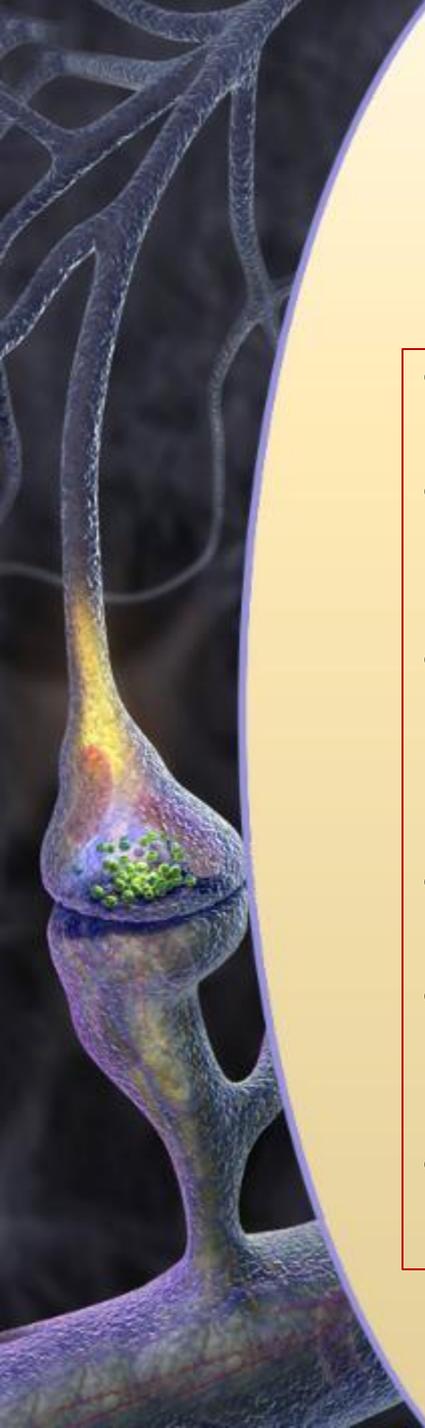
## From this Comprehensive Input

*Engineering Directorate identifies, evaluates, and prioritizes those frontier topics that best match the EFRI criteria:*

- holds potential for transformative outcomes,
- addresses a national need or grand challenge,
- involves multi- or interdisciplinary research,
- includes a community who is poised to respond,

***and***

- offers a clear leadership role for Engineering
- and/or significant progress on a recognized national need or grand challenge.



# ***How Can Engineers/Scientists Help Shape Budgets & Policy***

- Review of Grant Proposals
  - What gets funded
- Advice for Federal Agencies
  - Service on Advisory Committees or Councils
  - Leading Workshops
- Advice to the President
  - *National Science Board*
  - President's Council of Advisors for Science & Technology (PCAST)
  - Presidential Commission *for the* Study of Bioethical Research
- National Academies: Science, Engineering, Institute of Medicine
  - Reports
- Professional Societies and Organizations
  - Policy papers
  - Reports: e.g. Grand Challenges, etc
- Global Arena

# How To Read the Tea Leaves?

Predicting  
the Future  
of...

Federal  
Funding



Image: Gunnar Creutz, Falbygden's museum

# The President Proposes



Agencies shall stand by the proposed budget  
Agencies shall not ask you to lobby



## Congress Disposes

Congress listens to their constituents

Critical to Understand That,  
in the Federal Government...

What Goes Around

Comes Around

