

**From:** Furtek, Edward [efurtek@ucsd.edu]  
**Sent:** Monday, September 15, 2003 3:42 PM  
**To:** NSTC\_RBM  
**Subject:** FW: Re: FW: OSTP Seeking Input from Science Community

Dear Colleagues,

Perhaps it is the end of summer exodus from campus, but we received little response to this interesting survey. Attached is a composite of answers. I hope it is useful.

We host an organization, the San Diego Science and Tech Council = a 501(c)(3), that sponsors s&t policy events. If you are looking for a western site for one of your workshops, we would be happy to assist.  
Ed

A. Accountability. What constitutes accountability for the Federally-supported research enterprise? How can performers best demonstrate results or return on Federal research investments? Please suggest mechanisms whereby research managers can more transparently

demonstrate responsible use of public resources.

*Accountability algorithms are endlessly appealing to "research managers" and their political masters, and endlessly chimerical. The big payoffs, at least in basic research, come in serendipitous ways, not ROI calculations. Attempts to fine-tune the outcomes and measure some sort of ROI are a great deal of wasted effort at best, obstructive at worst. Broad-based support of research that is highly rated by experts who are in a position to make critical scientific judgements is the best course; let brains, hard work and serendipity take over from there. The record of past decades shows how today's "returns on investments" are traceable, in ways unforeseen at the time, to that sort of support given long ago. But detailed forward predictions are likely to be a fool's errand by and large.*

*Of course it is quixotic to say such things in an era when the "business model" is idolized as the proper way to organize all things, including scientific imagination.*

B. Inconsistency of policies and practices among Federal agencies. Can you identify specific Federal policies and practices that if simplified would improve the efficiency and cost effectiveness of the research enterprise? Can the impact of inconsistent policies and practices among Federal agencies on the research environment be quantified? Among the variations in policies and practices, which practices appear to be the best? Why?

*For sheer counterproductiveness, the DoD insistence on spending rates, such that PIs have had to skew their work in order to spend money at some more or less canonical pace instead of spending at programmatically sensible times, takes first place. NOAA's apparent inability to cope with the*

*fiscal year boundary contrasts sharply with, say, NSF, and threatens to torpedo NOAA projects that require funds early in the new FY. It's in second place, right behind DoD. For ease of managing funds to suit projects, NSF seems to be the best one to emulate. Not perfect, but better than others.*

C. Inconsistency of policies and practices among universities. Can you identify specific university policies and practices that if simplified would improve the efficiency and cost effectiveness of the research enterprise?

D. State and Institutional requirements. What is the prevalence and impact of state and institutional requirements that are added to Federal requirements for research funding?

*Largely reactive. Most of the infuriating state and university rules and restrictions would not exist if not driven by federal requirements. And the university's necessary overhead to administer funds in compliance with rules would be much less. Further, it is much easier to attack, and sometimes defeat, counterproductive rules that are self-inflicted at the state or university level than it is to attack such rules with roots in federal requirements.*

E. Regulatory requirements. Is there a more efficient approach to meeting the intent of the current suite of administrative requirements and regulations? Please provide examples.

*The solution, obtainable only at the federal level, is to rely less on regulations to ensure good use of public funds, and more on the strong intrinsic feedback: that PIs who waste funds end up not producing good research, and are therefore subject to being unfunded in the future if critically reviewed.*

*There is always a tendency, after every headline instance of fiscal mismanagement - whether simple error or outright embezzlement (rare) - to lay on more rules. The political attractiveness of this course - fighting against "waste, fraud and abuse" - is almost irresistible. The logical limit is dozens of regulations and steps to do something as simple as buying paper clips. In such an environment, no useful work would be done; all funds would be eaten up in paying for fund administration and rule compliance. On the other hand, with all controls lifted, there would be zero expense for administration/compliance efforts, but funds would indeed be misused - scientists are human, after all. Somewhere in the middle is an optimum point. The repeated laying on of more rules over many years has taken us well past that optimum.*

*To rebalance, get rid of a lot of the micromanagement rules; just wipe them out. Retain severe penalties for GENUINE fiddling - diversion of public funds to private use, etc. - and retain enough checking/enforcement to make this credible. But beyond that, allow considerable latitude for use of funds. Then the real check: use programmatic - not accounting - reviews to weed out*

*investigators who have accomplished little with previous funding. Given the enormous competition for grants, the huge ratio of proposals submitted to proposals funded, etc., there is tremendous pressure on every PI to use funds wisely and get results. Those who fritter away money on ill-advised purchases or even on personal items won't last long under such reviews. I submit that this intrinsic pressure is far more effective than any number of fiscal control volumes and rooms full of auditors.*

F. Research support. How can public funding mechanisms and policies encourage or discourage innovative approaches to research? Does the

current process for research funding encourage or discourage innovative research? How do support mechanisms influence the mix of investigators supported (e.g., principal investigators, research scientists, postdoctoral scholars, graduate students, or technicians)? How can changes in the conduct of science and engineering necessitate modified funding models? Are data available to help decide these questions?

*In general terms, the more open and flexible the mechanisms and policies, the more likely they are to ignite really novel research. There's a reason, after all, why REALLY flexible pieces of funding such as those attached to major prizes or endowed chairs flow to the cream of the crop.*

G. Multidisciplinary/collaborative research. Are any funding organizations, either inside or outside of government, employing funding mechanisms or strategies that are particularly effective in encouraging multidisciplinary work, collaborative activities, and other innovative approaches? Are there any data available relevant to these questions?

H. Research Infrastructure. What information is available to examine policies at the Federal, State, local or institutional level that affect research infrastructure and the costs of building, maintaining and/or operating the research infrastructure? What factors influence performers' investments in research infrastructure? What data are available to demonstrate that? What information is available on the mix of sources used to finance research infrastructure?

I. Information Technology. How has information technology impacted the efficiency, performance, or costs of research management? Are there data to demonstrate any effect?

J. Technology transfer optimization. Are data available to examine whether intellectual property and patent agreements have changed relationships among universities, industry, and the government?

## 1) OSTP Seeking Input from Science Community

A subcommittee of the President's Office of Science and Technology

Policy (OSTP) is seeking input from the scientists and officials to send in suggestions and criticisms so that government agencies can improve their policies and practices for funding research. A series of regional

workshops will be held later this year to develop recommendations based on these comments. Your comments are due by Sept. 22.

White House science adviser John H. Marburger directed OSTP's National Science and Technology Council to conduct a "high-level, cross-agency" review of funding policies and practices. The assessment will target three main areas, including identifying common practices among various federal granting agencies to make life easier for researchers and managers at their institutions. Aligning funding mechanisms with the changing ways in which research is conducted, especially involving teams working on large scientific projects, is another goal, as is improving the accountability and cost-effectiveness of research.

Here is a direct link to the Federal Register notice.

[http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo  
..gov/2003/03-19935.htm](http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/2003/03-19935.htm)

Comments can be emailed to: [nstc\\_rbm@ostp.eop.gov](mailto:nstc_rbm@ostp.eop.gov).

Links for the Office of Science and Technology Policy

<http://www.ostp.gov/>

Three regional workshops will be held starting in late October to explore issues involving each of these areas. In December, a fourth workshop will be held in Washington, D.C., to review the results and to come up with overall policy recommendations.

<http://www.biomedcentral.com/news/20030826/01>