On Creating Agency, Inter-agency and National Initiatives

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Outline

*What* is an initiative?  
*Why* does one get started?  
*How* does one get started?  
Reflections
What is an “Initiative”? 

- New, “named” program, typically with new solicitation
- Different scopes:
  - completely/mostly within NSF/CISE
  - across NSF
  - national initiatives
- Different funding mechanisms
- Different lifetimes

all may have inter-agency collaboration
2018 CISE Programmatic Overview

Initiatives happen here

- CISE multi-division
- NSF-wide, CISE-leading role

Core Programs

NSF-wide, CISE participating

$960M (area)
Why is a new initiative started?

- Need for “named” program to increase emphasis/attention/awareness, funding for research topic area
  - particular importance to CS field
  - national importance
- Community consensus
  - within research community, NSF
- Consistent with NSF mission: “To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense...”
How is a new initiative started?

Within CISE, and some NSF-wide initiatives:

**The idea!**
- Research community
- CISE PDs, DDs, DAD, AD

**Community building**
- Technical: workshops, reports (NSF, CCC, NASEM)
- Advisory committees (e.g., CISE-AC)
- Identifying partners

**Budget commitments**
- Scope, partners
- Typically from existing budget (e.g., from core programs, returned to core programs)

**Funding opportunity**
How is a new initiative started?

**National initiatives**: (e.g., CSforAll, Smart Cities/Smart & Connected Communities, AI for America)

- **Existing Agency Programs**
- **Community**
- **Politics!**

“existing” funding

Funding opportunities

new funding, or via “language”

Via OMB PBR
Thoughts, observations

The importance of people

• Ideas always start somewhere – *someone* has to step forward!
• Passionate champion needed within organization (agency, OSTP, industry). Others must also care (or become convinced to care)
• Soft skills needed for community/consensus building and “selling”: good/great ideas don’t “win” on their own
• Community consensus (e.g., NRI white papers)

Need for thoughtful, scientifically-talented, well-spoken, “aggressive” (in a good way) people to “move the needle” and lead CISE research community (in many different ways) nationally
*(this is why we have LISPI)*
**Thoughts, observations**

- Understanding the larger value proposition: progress of science (yes), but also national economic competitiveness, national health, security, defense, welfare
- Active research community support/leadership critical
  - providing technical foundations/rationale
  - “circling wagons and shooting in” can kill
- Again: it’s all about people!
Looking forward

Important: CISE science leadership – dedicated, creative IPA/Fed mix
Looking forward

Important: strong academic computing presence in agencies, White House
Backups
CISE programs address national priorities

AI and Big Data
Cybersecurity
Robotics & Manufacturing
Quantum Information Sciences
Advanced Cyberinfrastructure
Smart Communities
Computer Science Education
Advanced Wireless Research