



Office of Integrative Activities and OneNSF



Office of Integrative Activities:

Who We Are

- An Office within the Office of the NSF Director
- Coordinates many programs and activities that span NSF
- Supports the NSF Director's Office through policy and special projects that address NSF priorities



Office of Integrative Activities: *Programs and Activities*

- EPSCoR
- Evaluation and Assessment
- INSPIRE
- Science and Technology Centers
- Major Research Instrumentation
- Academic Research Infrastructure
- Developing STEM Talent
- Merit Review





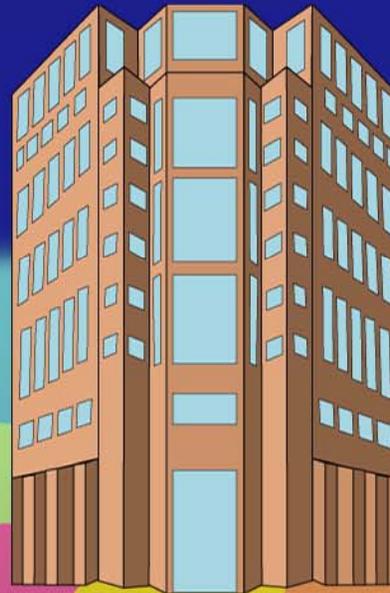
OneNSF



catalyze human capital development



improve
organizational
efficiency



create
networks and
infrastructure
for the nation



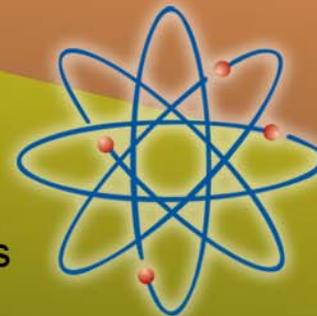
spark greater innovation
and opportunity for
scientific discoveries



address
multidisciplinary
challenges of
national/global significance



support
fundamental
research in
all disciplines



OneNSF

Through Integrative Activities

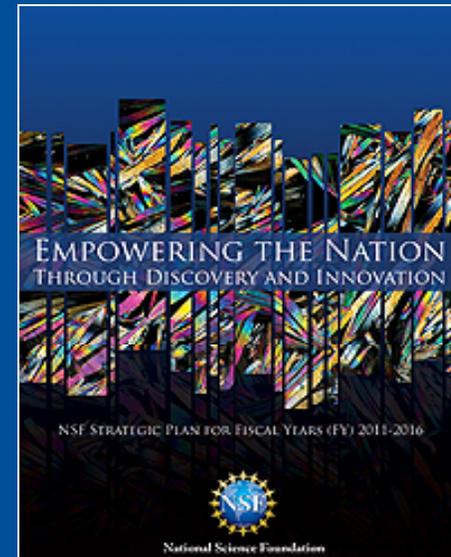
Cross-Cutting Research and Education Programs

- Catalyzing Interdisciplinary/Multidisciplinary Activities
- Fostering Potentially Transformative Research
- Developing Next Generation STEM Leaders and Workforce
- Strengthening Nation's Research Infrastructure
- Building Sustainable/Geographically Diverse Capacity
- Promoting a Scientifically Literate General Public
- Improving the Sustainability of NSF's merit review process
- Enhancing Program Evaluation/Performance Measurement



OIA Alignment with Strategic Plan

- Transform the Frontiers
 - ✓ INSPIRE
 - ✓ STCs
 - ✓ EPSCoR
 - ✓ CEOSE
 - ✓ Human Capital Programs
- Innovate for Society
 - ✓ STCs
 - ✓ EPSCoR
- Perform as a Model Organization
 - ✓ Merit Review
 - ✓ Evaluation



Evaluation

- Program Improvement...How do we know a program is successful
- Justification of program support to OMB, Congress, and the public
- Provide a Foundation-wide Capability
 - ✓ Tools
 - ✓ Data sets
 - ✓ Expertise
 - ✓ Coordination
 - ✓ Best Practices



INSPIRE

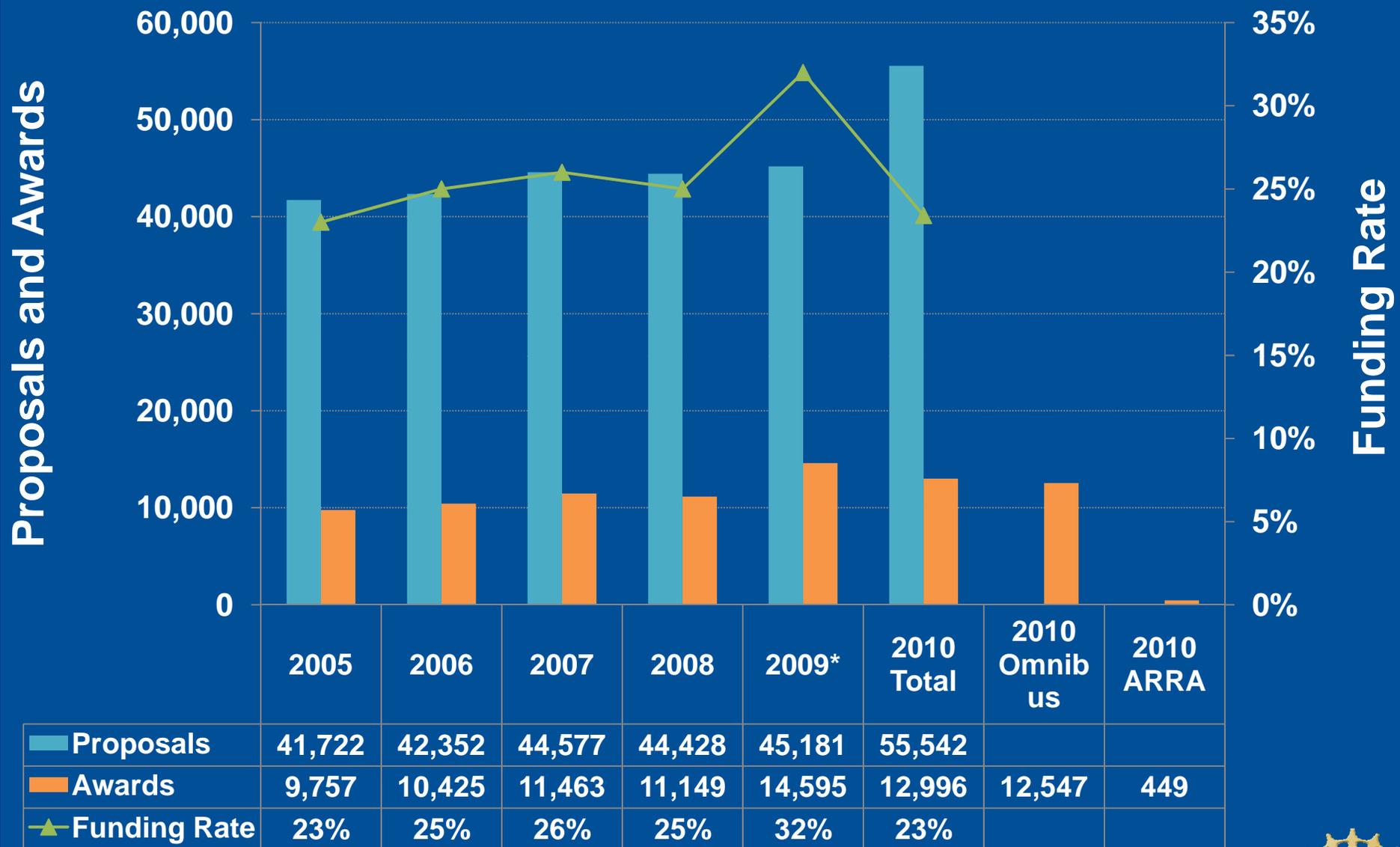
*Integrated NSF Support Promoting Interdisciplinary
Research and Education*

- **Two Track Approach**
 - New INSPIRE Awards Program
 - Facilitate IDR within NSF, within U.S. research community
 - Reduce/eliminate barriers
 - Augment staff and reviewer training
 - Foster best practices

Program evaluation is a key component



NSF Proposals, Awards, and Funding Rates



*2009 Data includes 4,620 ARRA Awards



Merit Review

- How do we make NSF's Merit Review Sustainable?
 - Greater use of technology, Virtual Panels?
 - More efficient ways to solicit proposals?
 - More efficient ways to review proposals?
 - Develop pilots, experiments
 - Outreach to the community



Merit Review

- Need to improve the sustainability of merit review while:
 - ✓ Maintaining or improving the quality of the review
 - ✓ Guarding against overly conservative funding decisions
 - ✓ Facilitating Interdisciplinary research
 - ✓ Facilitating potentially transformative research



Developing STEM Workforce

- STCs
- EPSCoR
- Coordinate AAAS Fellowships
- Summer Internship Programs
- Graduate Research Fellowships



Major Research Instrumentation

Invest in cutting-edge research instrumentation to empower Nation's scientists, engineers, and students

- **Innovative Instrumentation Awards**
 - Anticipate making ~175 awards in FY 2012
 - Success rate: ~15-20%
 - Mean award size: ~\$660,000 (vs \$450,000 in 2008)
- **Contributions to Key Priorities**
 - CIF21, SEES, nanotechnology
- **Program Features**
 - Submission limit: 3 (if one is for development)
 - Cost-sharing
 - Directorates and OIA co-manage the program



EPSCoR MRI in FY2010

- 193 proposals from EPSCoR jurisdictions were submitted, accounting for 20.5% of all proposals
- 37 awards we made, accounting for 21.9% of the awards
- success rate of EPSCoR proposals was 19.2%, which exceeded the success rate (18.0%) for the FY10 completion overall



Science and Technology Centers

Enable potentially transformative, complex research requiring large-scale, long-term efforts; develop next generation scientists and engineers; promotes partnerships / knowledge transfer

- **11 STCs in FY 2012**
 - Diverse research foci
 - Geographically wide-spread
- **Directorates and OIA co-manage the program**
 - \$49M invested in 11 STCs in FY 2012 via directorates
 - \$1.3M for site visits, reviews, workshop admin costs
- **New competition (11-522)**
 - Preproposals due: May 30, 2011
 - Full proposals due: February 3, 2012
 - New awards in FY 2013



Other Cross Foundation Activities

SEES

- OIA will support SEES by funding energy and climate-related research, education, or infrastructure activities in EPSCoR

CIF21

- OIA will invest in CIF21 by funding new computational infrastructure, including computing clusters and advanced computing architectures in MRI



Backup Slides



EPSCoR

29 Jurisdictions; Improve R&D capacity / competitiveness

- **Research Infrastructure Improvement**
 - Track 1 Awards (Up to \$4M per year / Up to 5 years)
 - ▶ Academic research capacity and infrastructure
 - Track 2 Awards (\$2M per year / Up to 3 years)
 - ▶ Innovation-enabling cyberinfrastructure
 - C2 Awards (\$1M for up to 2 years)
 - ▶ Inter- or intra-campus cyber connectivity
- **Co-Funding**
- **Outreach and Workshops**



Science, Engineering, and Education for Sustainability (SEES)

- Goal: Generate discoveries and build capacity to achieve an environmentally and economically sustainable future
- FY 2012 priorities:
 - *Advance a clean energy future*
 - *Nurture the emerging SEES workforce*
 - *Expand research, education, and knowledge dissemination*
 - *Engage with global partners*
- NSF-wide effort addresses complex problems at the energy, economy, and environment nexus



Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21)

- Cyberinfrastructure to transform research, innovation and education
- Coherent program building on other CI investments across NSF
 - *eXtreme Digital (XD), Software Infrastructure for Sustained Innovation(SI2)*
- Four major components
 - *Data-enabled science*
 - *New computational infrastructure*
 - *Community research networks*
 - *Access and connections to cyberinfrastructure facilities*

