

Broadening Participation Initiatives



NSF and Beyond

Alicia J. Knoedler, CEOSE Liaison
University of Oklahoma

Committee on Equal Opportunities in Science and Engineering



- ❧ CEOSE
- ❧ Congressionally mandated advisory committee to the NSF
- ❧ <http://www.nsf.gov/od/iaa/activities/ceose/index.jsp>
- ❧ 16 members, mostly from universities
(<http://nsf.gov/od/iaa/activities/ceose/members.jsp>)
- ❧ Diverse in gender, race/ethnicity, position; discipline, region, age, disabilities
- ❧ We each serve as a CEOSE liaison to another advisory committee within NSF

What does CEOSE do?

2011-2012 Report



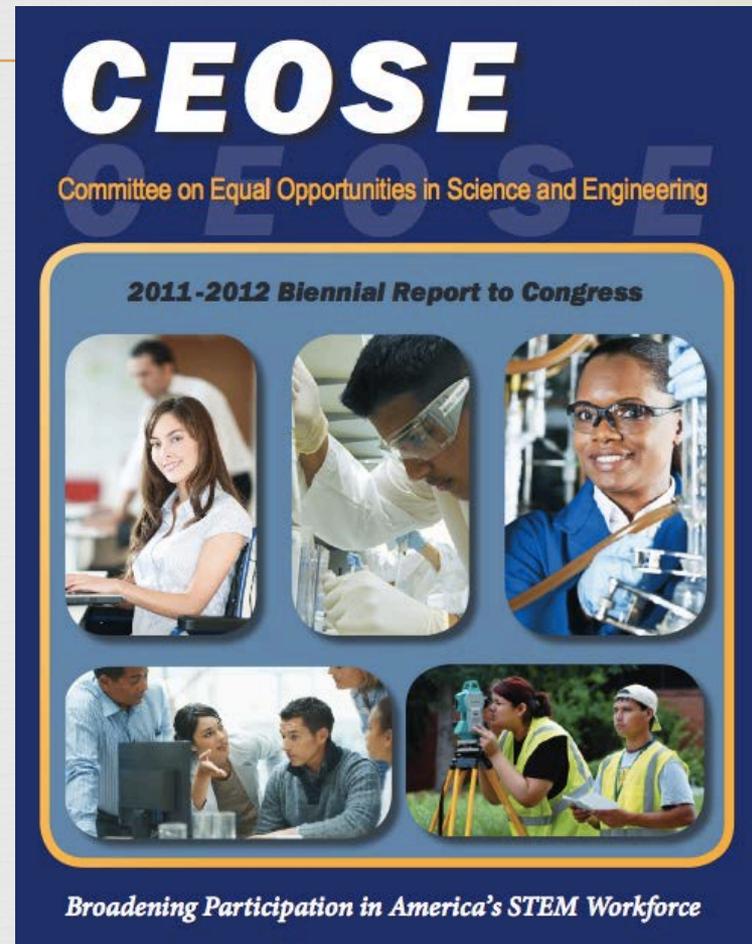
Every two years, the Committee prepares and transmits to the NSF Director a report on its activities during the previous two years and proposed activities for the next two years.

The Director transmits to Congress the report, unaltered, together with such comments as the Director deems appropriate.

2013-2014 Report is currently being drafted.

Reports from 1996-2012:

<http://www.nsf.gov/od/iia/activities/ceose/index.jsp>



2011-2012 CEOSE Report



To better address **emerging challenges** and the **limited progress being made** in improving broadening participation in STEM, as well as the findings in this report and other national reports, the Committee on Equal Opportunities in Science and Engineering recommends that **NSF implement a bold new initiative**, focused on broadening participation of underrepresented groups in STEM, similar in concept and scale to NSF's centers, that emphasizes **institutional transformation and system change**; collects and makes accessible **longitudinal data**; defines **clear benchmarks** for success; supports the translation, replication and expansion of **successful broadening participation efforts**; and provides significant **financial support to individuals** who represent the very broadened participation that we seek.

What is NSF doing with Broadening Participation?



- ❧ Broadening Participation Working Group
- ❧ 2014 Framework for Action for Broadening Participation
- ❧ NSF INCLUDES - Inclusion across the Nation of **C**ommunities of **L**earners that have been **U**nderrepresented for **D**iversity in **E**ngineering and **S**cience

Broadening Participation Working Group

- ❧ Array of options for NSF to augment its ongoing activities in broadening participation in STEM and respond to the 2011-2012 CEOSE recommendation
- ❧ Near term, low cost activities
- ❧ Mid-scale activities
- ❧ Large-scale activities

 BOLDNESS		POTENTIAL IMPACT		
		LOW	MEDIUM	HIGH
FY16	High	<ul style="list-style-type: none"> Call for Community Design Projects in response to the 2011-2012 CEOSE recommendation Provide funding for BP infrastructure that PIs could "plug in" to for meaningful BP Broader Impacts 	<ul style="list-style-type: none"> Call for BP Institutes/Centers conducting BP research and increasing the number of UR scientists and engineers Call for Partnerships/Centers that can translate BP research into scalable programs for widespread dissemination¹ 	<ul style="list-style-type: none"> Call for large-scale BP partnerships that cover research, implementation and scaling across preK-20+, focusing on institutional and systemic outcomes²
FY15	Medium	<ul style="list-style-type: none"> Increase the availability of BP Supplements via DCLs from directorates Make available BP data by subfields Encourage PIs/faculty to participate in diversity meetings Form a Rotator Corps for BP Expand Science: Becoming the Messenger Workshop to have a BP focus 	<ul style="list-style-type: none"> Support additional replication of successful implementations³ or additional partnering with model BP programs⁴ Leverage efforts like REU, I-Cubed (I³), PULSE, etc. Make supplemental funding available to <u>all</u> NSF research centers for BP goals (contingent on strong existing efforts) Engage STEM Diversity Organizations and have an NSF BP presence at their national meetings 	<ul style="list-style-type: none"> Increase in number of Emphasis and other programs reaching the 50% threshold⁵ Offer support for mid- and large-scale BP theoretical studies with potential for large scale implementation Identify strategic goals for BP for NSF that address all directorates. Increase the prominence of BP language in the merit review criteria and in Annual and Final reporting
	Immediate Implementation	<ul style="list-style-type: none"> Provide BP Memo to NSF Staff from the Director Enhance BP website with best/promising practices More systematically inform NSF staff about best practices in BP Form an agency-wide BP advocacy group to increase communication and identify cross-agency BP goals 	<ul style="list-style-type: none"> Provide Important Notice to Community about BP Establish BP Policies for Workshops Agency-wide (see BIO) More systematically inform panelists and reviewers about best practices in BP Support NSF-wide workshops on BP from experts in the BP field 	<ul style="list-style-type: none"> Increase the prominence of BP language in solicitations, on NSF website and via social media used by OLPA Use community blogs to promote BP discussions Create BP IdeaShare for gathering ideas/input, etc.

2014 Framework for Action for Broadening Participation

NSF Broadening Participation Working Group

Bernice Anderson, Co-Chair

Scott Edwards, Co-Chair



NSF BP Working Group

DIR/Office	BPWG Co-Chairs/Members
OD/IIA	Dr. Wanda E. Ward (Cognizant Office Head)
BIO	Dr. John Wingfield (Cognizant Assistant Director)
OD/IIA	Dr. Bernice Anderson (Co-Chair)
BIO	Dr. Scott Edwards (Co-Chair)
CISE	Dr. Janice Cuny
EHR	Dr. Sylvia James
ENG	Dr. Bevlee Watford
GEO	Dr. Julie Palais
MPS	Dr. Kathleen McCloud
SBE	Dr. Sally Dickerson





2008 Priorities

- NSF BP Portfolio
- Diversity of the Reviewers
- Internal BP Training
- BP Guidance and Best Practices
- Accountability/Tracking
- Evaluation for Relevance and Effectiveness
- Implementation Schedule



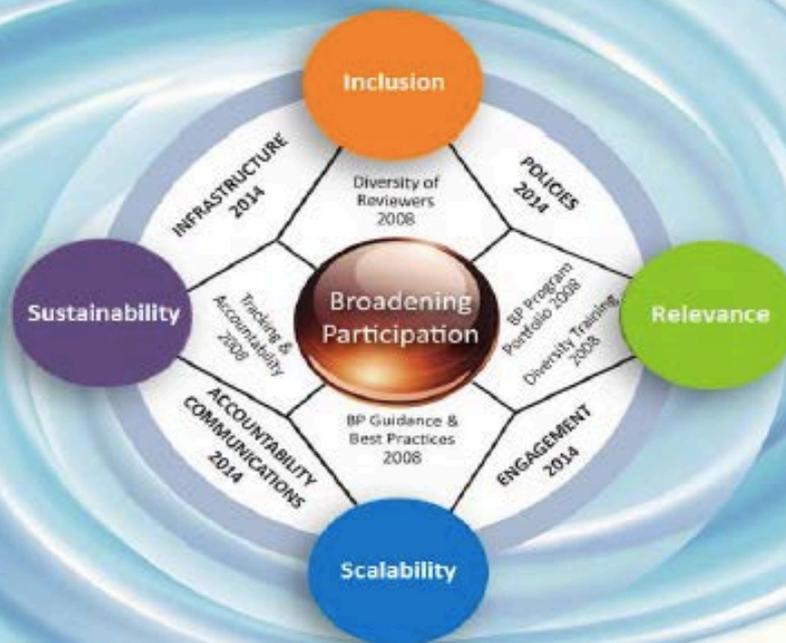
2014 Priorities

- Polices
- Systems and Infrastructure
- Engagement via Partnerships
- Accountability
- Communication Technologies



Working Together For Solutions

**Working Together for Solutions to an inclusive STEM Enterprise:
Systemic Change and Transformation to Solve the Underrepresentation Challenge**



NSF INCLUDES



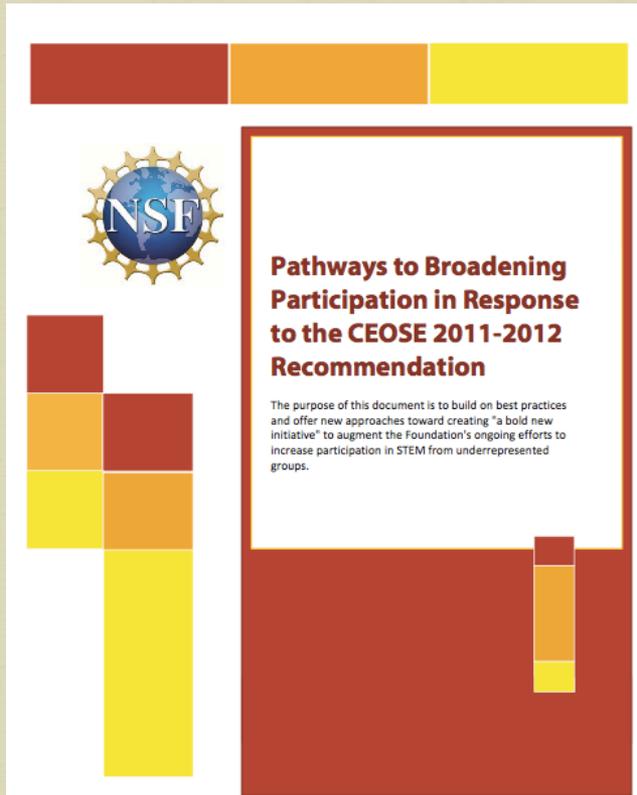
- ❧ Inclusion across the Nation of Communities of Learners that have been Underrepresented for Diversity in Engineering and Science
- ❧ FY16 Budget Request - \$15 million
- ❧ Mobilize the STEM communities to bring renewed focus to solving broadening participation (BP) challenges by addressing a set of “bold visions for inclusion” at the national level, collectively.

NSF INCLUDES



- ❧ The initiative will support two of NSF's Strategic Goals and associated objectives:
 - ❧ Goal 1: Transform the Frontiers of Science and Engineering – Objective 2: Integrate education and research to support the development of a diverse STEM workforce with cutting edge capabilities and
 - ❧ Goal 2: Stimulate Innovation and Address Societal Needs through Research and Education – Objective 1: Strengthen the links between fundamental research and societal needs through investments and partnerships.
- ❧ Pilot 2 new models:
 - ❧ The first (Network Pilot) will impact inclusion at large-scale via professional and social networks and effective technologies designed for collective impact.
 - ❧ The second (Youth Empowerment Pilot) will create a new approach to empowering youth by engaging them directly in STEM, and will catalyze innovative discipline-specific initiatives.
- ❧ External Evaluation

Special Thanks to Dr. Wanda Ward, Dr. Bernice Anderson, Joan Burrelli, Vickie Fung, and my CEOSE colleagues



https://www.nsf.gov/od/broadeningparticipation/PathwaysToBroadeningParticipationInResponseToCEOSE2011-2012Recommendation_Nov2014.pdf