Research and Education Partnerships across the Globe

ASEE ERC Meeting, Washington, DC  March 2010

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Outline
--Context – NSF and OISE
--Partnerships – the PIRE model
--Insights into building and sustaining partnerships
--Global dimensions of partnerships
NSF context for international partnerships

Domestic agency- but international essential!
- access to expertise, equipment, place-based phenomena
- collaborative advantage
- globally engaged workforce
- science diplomacy

Funding for international across NSF- not just OISE!

Constraint – NSF only pays for US side of the partnership!!

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PIRE Awards 2005 & 2007

5-year awards, up to $500K/yr

2005 competition – 12 awards
2007 competition – 20 awards

PIRE 2009/2010

529 preproposals, limit 3/institution
83 full proposals
12-15 awards likely this spring
No budget cap!

All Directorates → review, oversight

Next competition likely end of 2010 – changes possible

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**Partnerships**
Build strong partnerships with foreign counterparts

**Research Excellence**
Support focused science and engineering research at the frontiers, international collaboration essential

**Students**
Provide strong international research experiences for U.S. students

**Institutions**
Engage resources, catalyze change above level of PI’s research group
The Global Reach Of PIRE
PIRE & Partnerships

> 65% awards involve more than one foreign country
> 85% involve more than one U.S. institution

PIRE building networks
   of diverse geographic combinations
   many with additional support leveraged

A new mode of science!
Building and Sustaining Partnerships

- integration of international research & education

US needs a globally engaged workforce
Sigma Xi workshop 2007*
Newport Declaration 2008**

Overcome curricular barriers
Provide strong mentoring
Provide culture & language training
Enable sufficient time for international engagement

New skills/approaches
Greater flexibility
Greater cultural sensitivity
Lasting collaborations
Leadership abilities

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*Embracing Globalization: Meeting the Challenges to US Scientists and Engineers, Assuring a Globally Engaged Science & Engineering Workforce; [www.sigmaxi.global](http://www.sigmaxi.global)

**Educating Engineers as Global Citizens: A Call for Action [http://digitalcommons.uri.edu/ojgee/vol4/iss1](http://digitalcommons.uri.edu/ojgee/vol4/iss1)

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• **institutional support**
  - networks

PI

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Building and Sustaining Partnerships

- strong management & flexibility
- appropriate evaluation
- leveraging for impact and sustainability

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Global partnerships

Beyond 1:1 Collaborations

Transformational Global Phenomena

Developing Countries*

Interdisciplinary approaches

*Engineering Solutions for the Base of the Pyramid, ASME, June 30, 2009
http://www.asme.org/Governance/StrategicManagement/Issues/Solutions_Base_Pyramid_2.cfm
Thank you!