The U.S. President appoints the NSF Director
NSF champions research and education across all fields of science and engineering.
We build partnerships to address global scientific problems.
Why an NSF International Strategy Now?

Scientists and Engineers per Million People

R&D Spending (% of GDP)

Size of circle reflects the relative amount of annual R&D spending by the indicated country.
R&D expenditures as a share of economic output, selected countries/regions: 2000-13

Source: SEI 2016: Cross-National Comparisons of R&D Performance, Chapter 4.
Global R&D expenditures, by region: 2011

World total = $1.435 trillion

North America: $462 (32.2%)
Central America and Caribbean: $0.6 (< 0.1%)
Europe: $345 (24.0%)
Middle East: $31 (2.1%)
Africa: $11 (0.8%)
South America: $36 (2.5%)
Central Asia: $35 (2.5%)
East and Southeast Asia: $456 (31.8%)
Australia and Oceania: $24 (1.6%)

Source: SEI 2016: Cross-National Comparisons of R&D Performance, Chapter 4.
Global R&D expenditures, by region: 2013

World total = $1.671 trillion

Source: SEI 2016: Cross-National Comparisons of R&D Performance, Chapter 4.
NSF collaborates internationally to advance the frontiers of knowledge and address global scientific problems

International collaboration

Transformative science and engineering

Impacts

Drive the economy
Enhance security
Advance global leadership
Increase global understanding
How does NSF engage internationally?

**By Investing in PEOPLE**
- To work with the best minds around the world
- To create a globally-engaged workforce
- Examples: International Research Experiences for Undergraduates, International Research Experiences for Students Program

**By Driving RESEARCH**
- To participate in cutting-edge research occurring internationally
- To ensure access to real-time events and phenomena
- Examples: Belmont Forum, Partnerships in International Research and Education Program, RAPIDs

**By Partnering on FACILITIES and INFRASTRUCTURE**
- To collaborate on the construction and use of world-class facilities and infrastructure
- Examples: Atacama Large Millimeter Array, CERN, Research Data Alliance

**By Leading Through International Forums**
- To engage with international science leaders and share norms and practices
- Examples: Global Research Council, OECD Global Science Forum, Joint Commission Meetings
NSF’s global presence
NSF INFEWS
Innovations at the Nexus of Food, Energy, and Water Systems
NSF big ideas for future investment

**RESEARCH IDEAS**
- Harnessing Data for 21st Century Science and Engineering
- Shaping the New Human – Technology Frontier
- Understanding the Rules of Life: Predicting Phenotype
- The Quantum Leap: Leading the Next Quantum Revolution
- Navigating the New Arctic
- Windows on the Universe: The Era of Multi-messenger Astrophysics

**PROCESS IDEAS**
- Growing Convergent Research at NSF
- Mid-scale Research Infrastructure
- NSF INCLUDES
- NSF 2050
Harnessing data for 21st century science and engineering
Shaping the new human — technology frontier
Understanding the rules of life
Predicting phenotype
The quantum leap
Leading the next quantum revolution
Navigating the new Arctic
Windows on the universe
The era of multi-messenger astrophysics
Growing convergent research at NSF
Mid-scale research infrastructure
NSF INCLUDES

Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science
NSF 2050

INTEGRATIVE FOUNDATIONAL FUND
NSF’S RESEARCH PRIORITIES AND INTERNATIONAL STRATEGY

Dr. Rebecca Spyke Keiser
Head, Office of International Science and Engineering

July 20, 2016