



Toward Learning Agendas at NSF: Supporting Implementation of Complex Initiatives



NSB Report
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Agenda

- Introduction to Learning Agendas
- NSF INCLUDES: A Case Study
- Toward Learning Agendas at NSF





A LEARNING AGENDA IS...

- ✓ A SET OF BROAD QUESTIONS
- ✓ DIRECTLY RELATED TO THE WORK
- ✓ WHEN ANSWERED, ENABLES THE AGENCY TO WORK MORE EFFECTIVELY
- ✓ PRIORITIZES QUESTIONS IN THE SHORT TERM and the LONG TERM



LEARNING QUESTIONS



PRIORITIZED AND OFTEN WITH "THEMATIC AREAS"

LEARNING ACTIVITIES



EFFORTS SUCH AS RESEARCH, EVALUATIONS, LITERATURE REVIEWS, MID-COURSE STOCKTAKING, PORTFOLIO REVIEWS, PAUSE+ REFLECT SESSIONS, ETC.

LEARNING PRODUCTS



OFTEN INNOVATIVE and TAILORED TO SPECIFIC AUDIENCES; CAN INCLUDE INFOGRAPHICS, TWO-PAGERS, WEBINARS, ETC.





Learning Agenda Actions





Evaluation and Assessment Capability Section





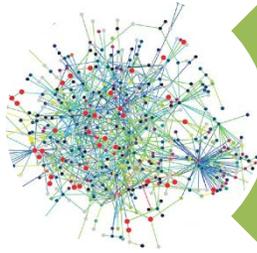
NSF INCLUDES: A Case Study

- Building infrastructure
- Organizational learning
- Evaluation Technical Team
- Theory of change





NSF INCLUDES Theory of Change



Bring together dedicated partners



Find and scale approaches
that work



Build a nation where everyone has
opportunities in STEM





The Five Elements of NSF INCLUDES

VISION

- Engage the community in a shared vision

PARTNERSHIP

- Provide a platform for collaborative action

GOALS & METRICS

- Allow for evidence-based decision making

LEADERSHIP & COMMUNICATION

- Increase communication and visibility

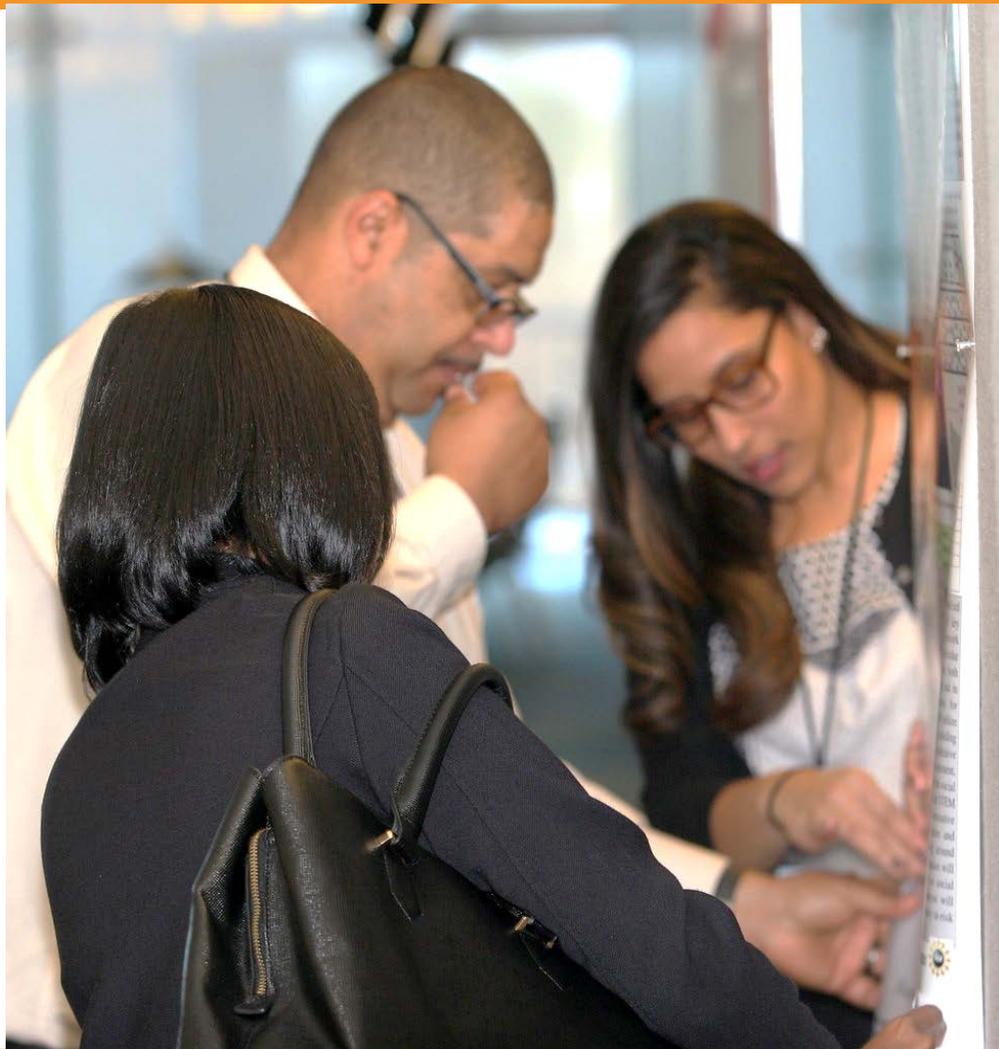
EXPANSION, SUSTAINABILITY, & SCALE

- Establish capacity for expansion, sustainability and scale





Theory of Change Hypothesis 1: Multi-sector Partnerships



758 partner organizations working to broaden participation in STEM through collaborative change, including...

4 local libraries and library systems

10 private foundations

49 professional and higher education organizations and their affiliates

62 corporations and corporate affiliates

94 K-12 schools and local or state school districts

107 non-profit and community organizations

13 federal/national labs and federally funded research and development centers

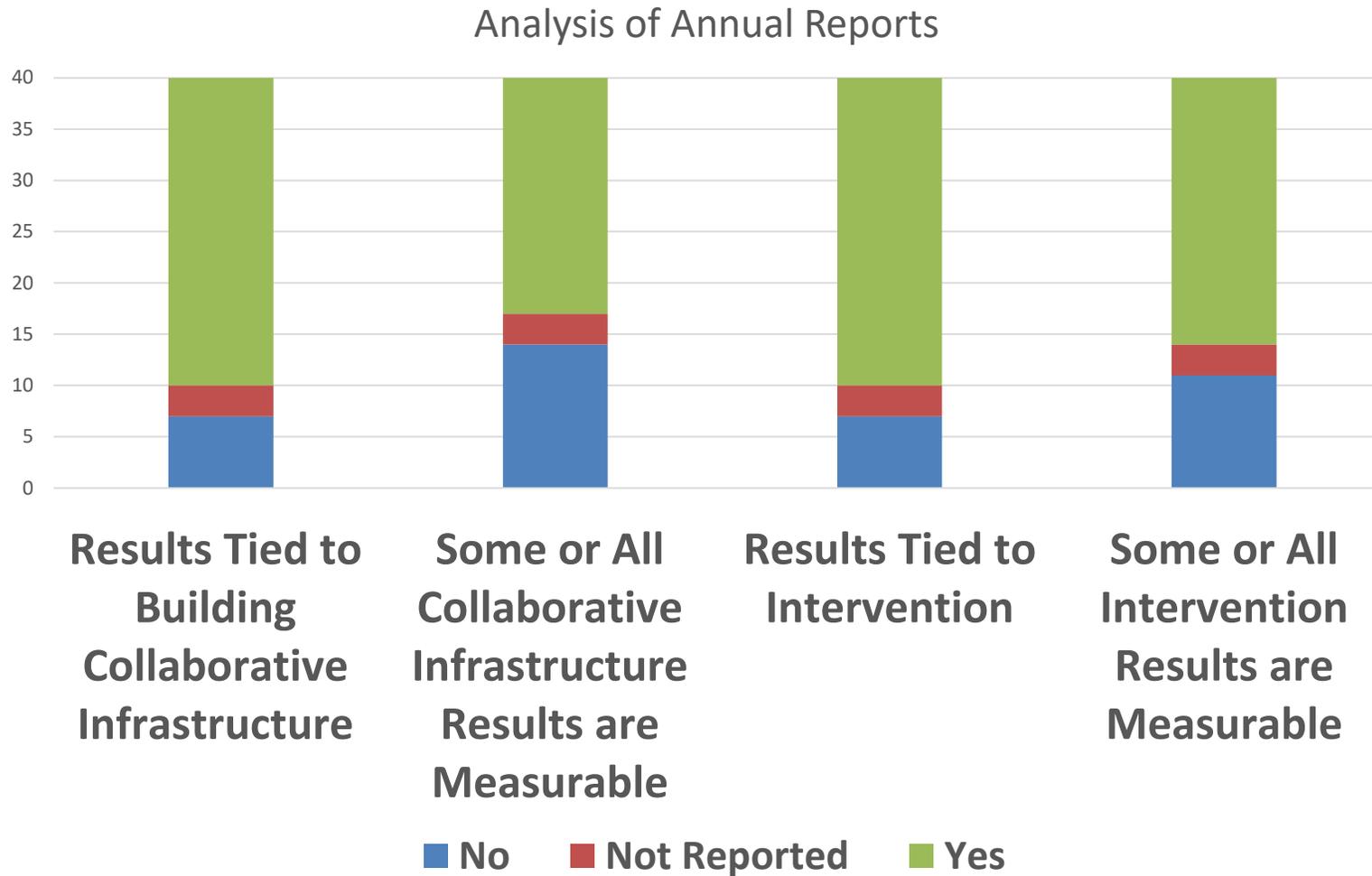
58 government agencies and their affiliates (local, state, federal)

313 colleges, universities, community college systems, and university affiliates





Theory of Change Hypothesis 2: Collaborative Infrastructure





Theory of Change Hypothesis 3: Expansion, Sustainability, and Scale



SMART

Stormwater Management Research Team

Award #1649346

**NSF INCLUDES Collaborative: Creating
a Diverse STEM Pathway with
Community Water Research**





Theory of Change Hypothesis 3: Expansion, Sustainability, and Scale

Award #1649310

**NSF INCLUDES Early Engagement in
Research**



Student-teacher teams collected and analyzed invasive species samples and launched their own restoration project at Piermont Marsh.





Theory of Change Hypothesis 3: Expansion, Sustainability, and Scale

Award #1649297

Inclusive Graduate Education Network



IGEN

Inclusive Graduate Education Network





Analysis of NSF INCLUDES Learning Processes

- Retrospective
 - Developmental Evaluation
 - Technical Evaluation Assistance
- Prospective
 - Timeline
 - Aligning evidence generation and use
 - Stakeholder Engagement and Communication





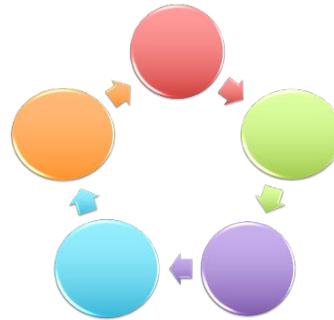
Recursive Analytic Process

nominate



reflect

| | | |
|----------|------------------|---------------|
| | Helpful | Harmful |
| Internal | Strength S | Weakness W |
| External | Opportunity O | Threat T |



nominate



test

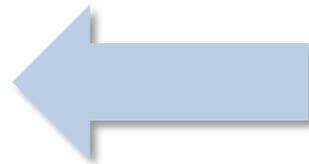


| | | |
|-------------|----------------|-----------------|
| | Low Difficulty | High Difficulty |
| High Impact | Implement I | Challenge C |
| Low Impact | Possible P | Kill K |

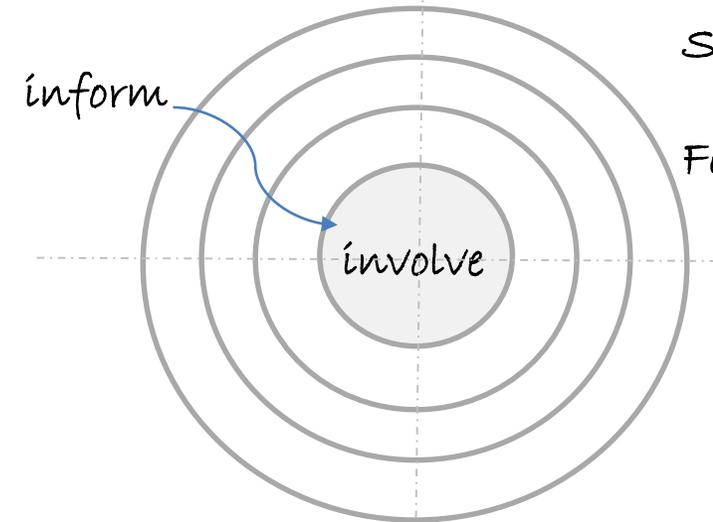
3-2-1
 3 Lessons Learned
 2 Next steps
 1 Recommendation

prioritize

reflect



inform



Strategy:

Focus:

consider stakeholders



Findings - Toward Learning Agendas at NSF

It is important to:

- Articulate a Theory of Change
- Build infrastructure for collaboration
- Build infrastructure for organizational learning
- Refine strategy with
 - Timely evidence
 - Usable evidence and
 - Stakeholder engagement





Findings - Toward Learning Agendas at NSF

It is important to:

- Conduct stakeholder analysis to inform strategy
- Use NSF's convening and catalytic power more strategically
- Balance prospective planning for organizational learning with ad hoc information demands
- Allow time for and facilitation of reflection on evidence





Discussion

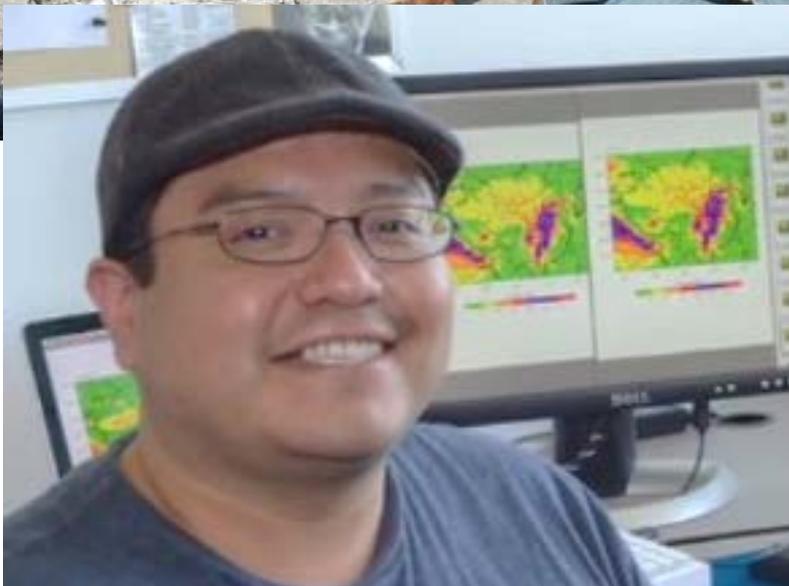




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Looking Forward to FY19

- In FY18, NSF INCLUDES will award five Alliances and the Coordination Hub
- In FY19, NSF INCLUDES is considering:
 - How to keep the current Launch Pilots engaged when funding expires
 - Engagement of Centers, the Broadening Participation portfolio, and other NSF projects
 - Potential use of the Convergence Accelerator model
- Evaluation and Assessment Capability Section will
 - Support the launch of the NSF INCLUDES Learning Agenda
 - Continue to socialize the learning agenda approach at NSF
 - Support the launch of learning agenda activities of Renewing NSF and select 10 Big Ideas





Learning Organizations

- “A learning organization is an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights.”
- “Learning organizations are skilled at five main activities: systematic problem solving, experimentation with new approaches, learning from their own experience and past history, learning from the experiences and best practices of others, and transferring knowledge quickly and efficiently throughout the organization. Each is accompanied by a distinctive mindset, tool kit, and pattern of behavior. ...By creating systems and processes that support these activities and integrate them into the fabric of daily operations, companies can manage their learning more effectively.”

Garvin, 1993, *Harvard Business Review*

