



Please keep your microphone muted until the Q&A session

# NSF NRT PROGRAM: STRATEGIES FOR COMPETITIVE PROPOSALS

# RESEARCH AND FACULTY DEVELOPMENT FACULTY SUCCESS SEMINAR SERIES

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Please note that this session is being recorded

# OFFICE OF RESEARCH AND FACULTY DEVELOPMENT (RFD)



**Mission:** To provide the resources and services to University of Idaho faculty that enhance their success and productivity in their field of scholarly efforts, with the ultimate goal of growing the U of I's research enterprise.

- Alignment with U of I strategic plan
- Across <u>all</u> disciplines



# OFFICE OF RESEARCH AND FACULTY DEVELOPMENT (RFD)



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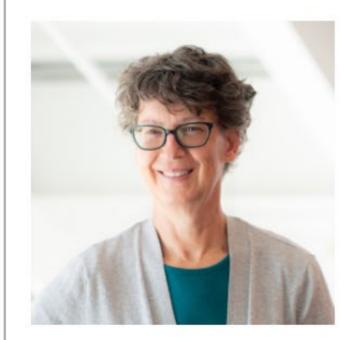
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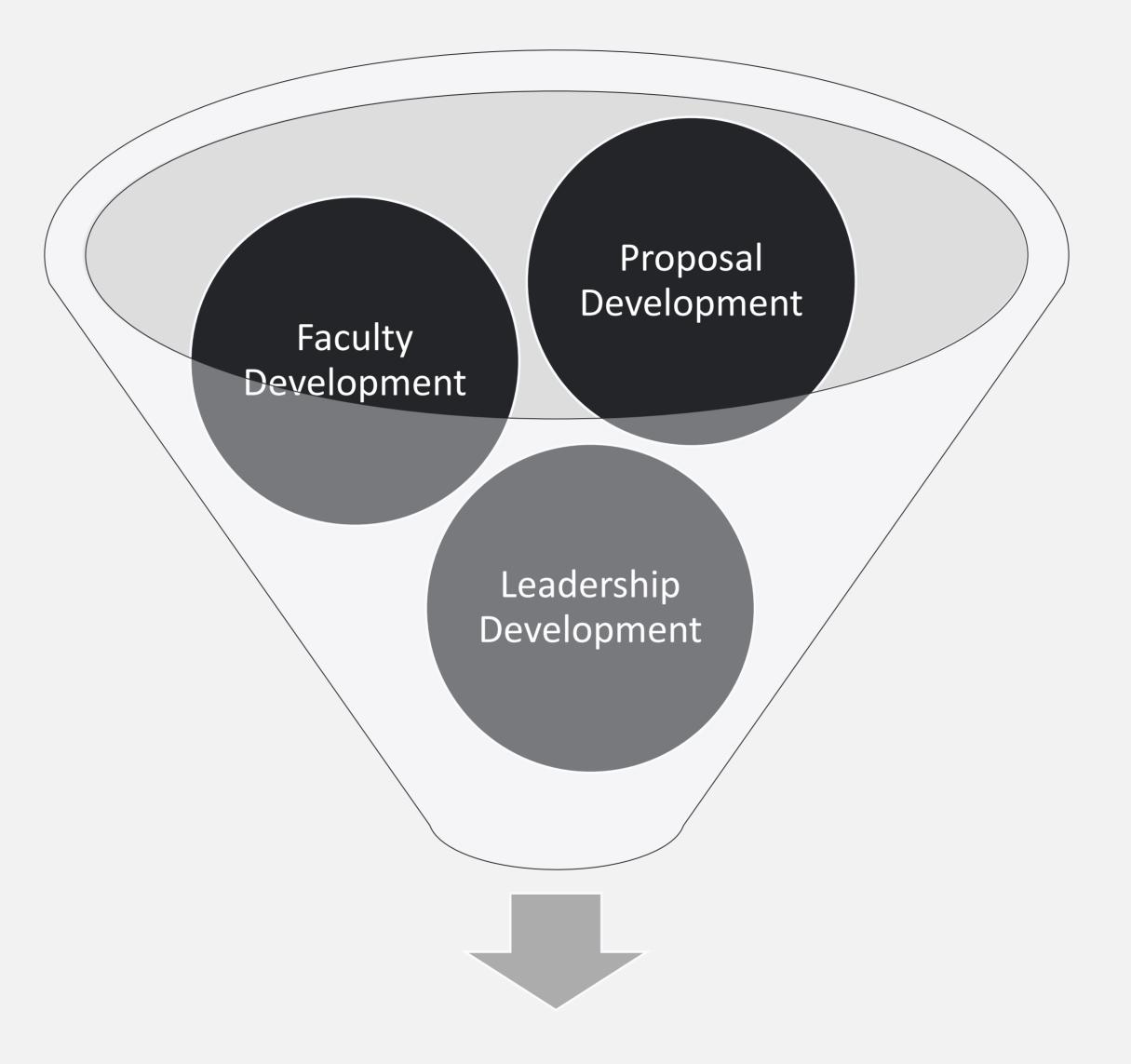
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## WHAT DOES RFD DO?





Successful, funded research leaders

## PROPOSAL DEVELOPMENT SERVICES



Level 0

- Brainstorming
- Strategic planning for submissions

Level 1

- Search for funding opportunities
- Training to use Pivot

Level 2

- Preparing to contact Program Officers
- Assessing "fit" of a proposed idea

Level 3

- Strategize for a resubmission
- Analyze reviews, develop responses

Level 4/5

 Ensure proposal and ancillary documents are clear, concise, cohesive & responsive to the solicitation

Level 6

- Support for large, complex proposals
- Center grants, infrastructure, etc.





REQUEST RFD SERVICES

All services are optional and are granted on a first come, first served basis





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## OBJECTIVES



IN THIS SESSION, WE WILL DISCUSS:

- Program basics
- Ul limited submission process and timeline
- NRT Goals, Architecture, Themes, Review Criteria
- Tips for competitive proposals
- Q&A Session Dr. Daniel Denecke, NSF NRT Program Director, 1:10 -1:30 p.m.

## NRT PROGRAM - BASICS



- **I** Two Tracks:
  - Track 1: Up to \$3 million for projects up to 5 years (R1 and non-R1 eligible)
  - Track 2: Up to \$2 million for projects up to 5 years (R1 *not* eligible)
- Full Proposal Deadline September 6, annually
- Budget requirement:
  - All awards include minimum \$34K for 12 months per trainee
- Limit on Number of Proposals per Institution = 2
  - An eligible organization may participate in only 2 proposals per NRT competition as lead or collaborative non-lead
  - RFD uses internal review process to determine which proposals will be submitted

## NRT PROGRAM - BASICS



## What's new in 21-536?

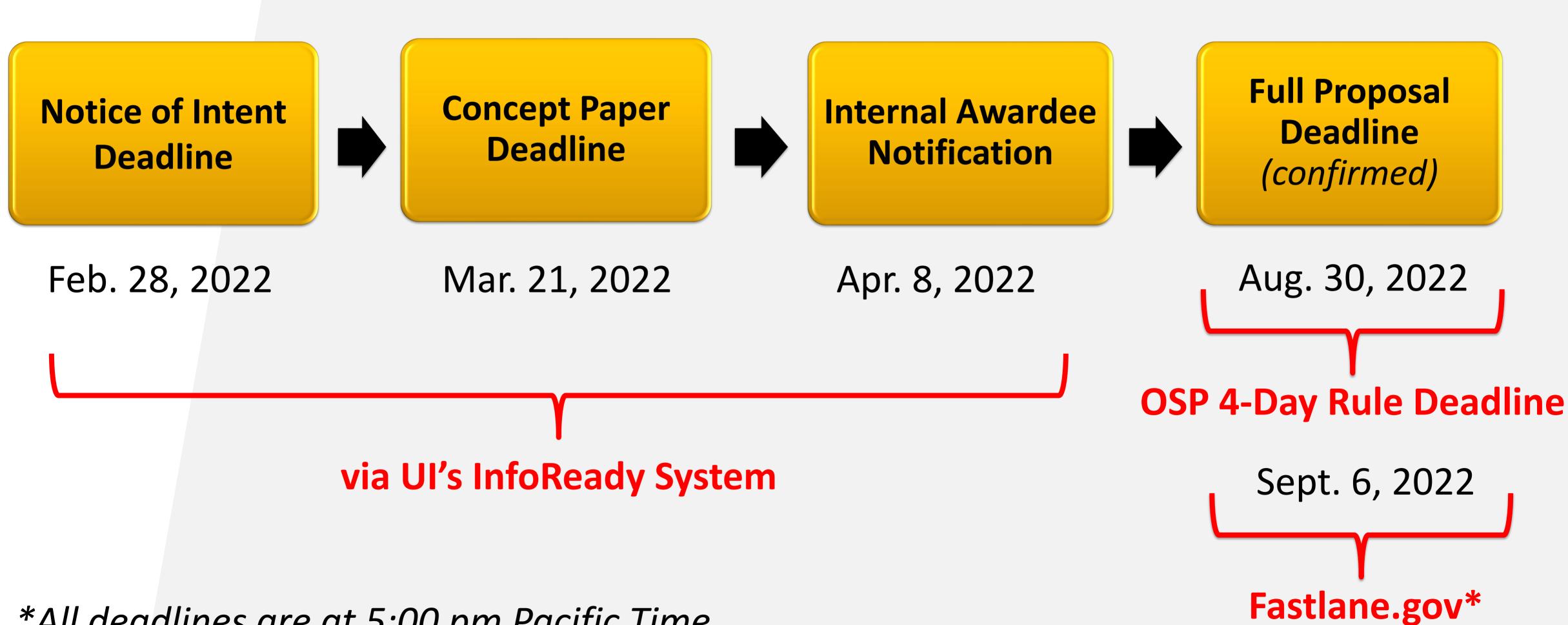
\*also see NRT FAQs

- Letter of Intent (LOI) no longer required
- All and QISE added to national priority areas
- Trainee support can be continuous or may be distributed over their traineeship tenure.
- Evaluators can be external or internal if internal, then project must justify how lack of bias is insured
- Proposers may opt to submit proposals in response to this Program Solicitation via FastLane or Grants.gov
- March 1 Start Date for FY2023 and subsequent competitions
- Project Description has updated subheaders and new required content (e.g., Demographic Table, Independent Advisory Committee)



## NRT - LIMITED SUBMISSION PROCESS

## **USING INFOREADY:**



<sup>\*</sup>All deadlines are at 5:00 pm Pacific Time.



## NSF RESEARCH TRAINEESHIP PROGRAM

Encouraging the development of innovative models for interdisciplinary/convergent STEM graduate training

## **Key Traineeship Elements**

- Interdisciplinary/Convergent Research and Training
- Inclusive Workforce Development (both broad and diverse)
- Institutional Transformation

## NRT PROGRAM - THREE GOALS



- Catalyze and advance cutting-edge interdisciplinary or convergent research in high priority areas
- Increase the capacity of U.S. graduate programs to
  - produce diverse cohorts of interdisciplinary STEM professionals
  - with technical and transferable professional skills
  - for research and research-related careers within and outside academia
- Develop new approaches and knowledge that will promote transformative improvements in graduate school





NRT Proposals should focus on:

- Technical and professional training of STEM graduate students that emphasizes:
  - Research training
  - Technical and professional skills development
  - Mentoring and vocational counseling
- Techniques, languages, and cultures of interdisciplinary or convergent research fields.

## CORE BUILDING BLOCKS OF AN NRT





INSTITUTIONAL CHANGE

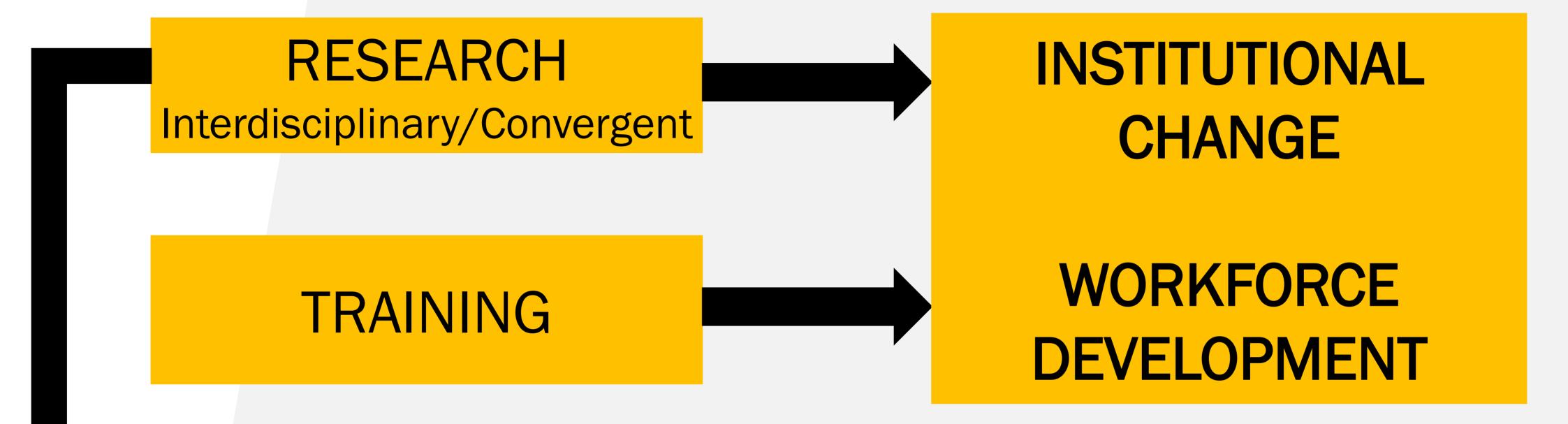
TRAINING



WORKFORCE DEVELOPMENT

## CORE BUILDING BLOCKS OF AN NRT





- Intradisciplinary
- Multidisciplinary
- Cross-disciplinary
- Interdisciplinary
- Transdisciplinary
- Convergence

## Interdisciplinary or Convergent\* Research Theme

as a key emphasis

\*Research driven by a specific and compelling problem where there is deep integration across disciplines, potentially leading to new frameworks, paradigms, or disciplines

# NRT CONVERGENT NATIONAL PRIORITY AREAS (21-536)



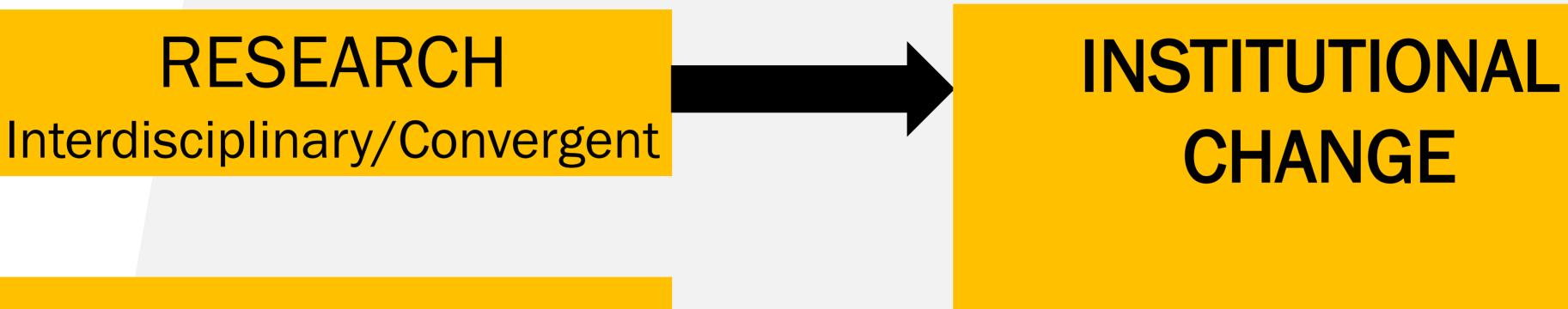
- Interdisciplinary research themes of national priority
- Special emphasis on
  - Artificial Intelligence (AI)
  - Quantum Information
     Science and Engineering (QISE)
  - Six research areas listed in NSF's 10 Big Ideas



Since 2017, NSF has been building a foundation for the Big Ideas through pioneering research and pilot activities. In 2019, NSF will invest \$30 million in each Big Idea and continue to identify and support emerging opportunities for U.S. leadership in Big Ideas that serve the Nation's future.

## CORE BUILDING BLOCKS OF AN NRT





TRAINING

WORKFORCE DEVELOPMENT

- Integrate training and research
- Do not extend time to degree
- Carefully consider the competencies you will develop
  - both content-area and career aligned career sets
- Who are trainees?

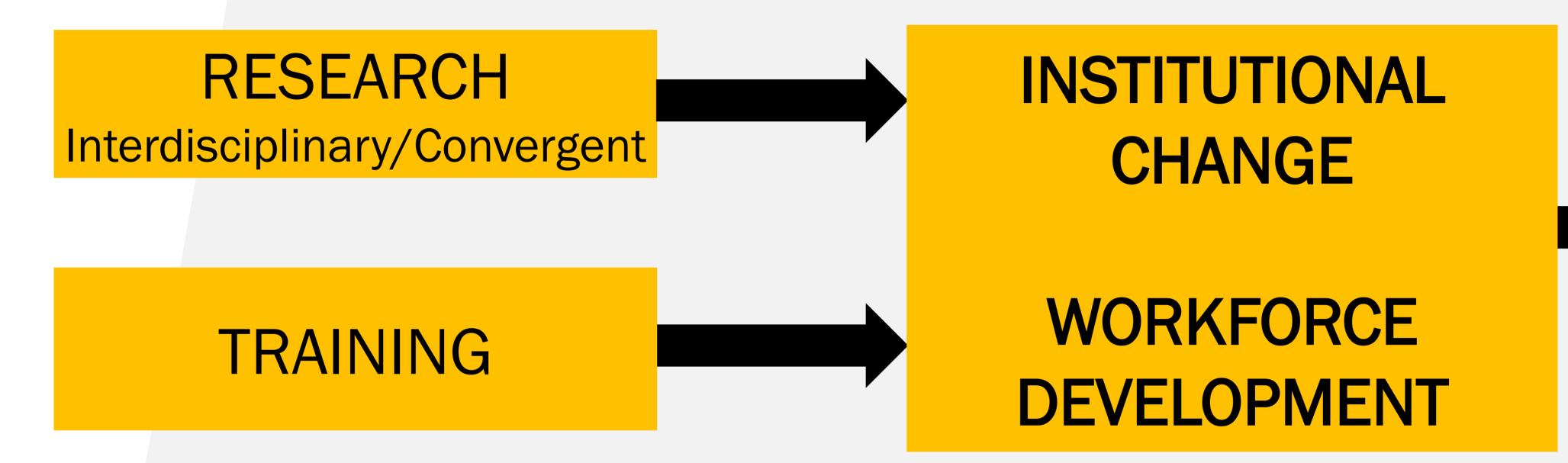
## WHO ARE TRAINEES?



- I STEM graduate students accepted into an institution's NRT program, irrespective of funding status, who complete required NRT elements (e.g., courses, workshops, projects, training activities).
- Must be master's and/or doctoral STEM students in a research-based degree program that requires a thesis or dissertation.
- Must be full-time students and hold U.S. citizenship or permanent resident status.

## CORE BUILDING BLOCKS OF AN NRT





- Workforce Development: Is this addressing a workforce need?
   Will students have opportunities to pursue a range of careers with their degrees?
- Institutional Change: Proposals should demonstrate the sustainability of successful elements beyond the funding period.

## EVALUATION & ASSESSMENT



- Critical project component should assess
  - Specific trainee competencies and outcomes
  - How NRT project affects faculty teaching and research
  - Institutional policies regarding interdisciplinary collaboration and STEM graduate education

## Evaluator - considerations

- Should offer unbiased and external perspective
- Can be an internal or external consulting entity
- Have potential to develop sustainable, in-house capacity
- Must be one of the listed 10 core participants
- Include evaluator in the proposal preparation \*tip

## NSF & NRT REVIEW CRITERIA

- Intellectual Merit\*
- Broader Impacts
- Additional NRT Review Criteria
  - Integration of Research and Education
  - Interdisciplinarity/Convergence
  - Professional Development and Training
  - Integrating Diversity into NSF Program, Projects, and Activities
  - Evaluation
  - Sustainability & Model Dissemination

<sup>\*</sup>Must address even though separate section labeled "Intellectual Merit" is <u>not required</u> for proposals to this solicitation.



## NRT Proposal Preparation Tips

- Follow the solicitation guidelines
- Heed all "musts" and check all checkboxes
- Allow sufficient time for submission by deadline
- Heed institutional and PI/co-PI limitations on number of submissions
- Pay attention to limits and guidelines on:
  - institutional letter of support and/or
  - Required letters of collaboration from other NRT-eligible organizations that appear in the budget and/or
  - Other, optional letters of support
- New NSF-wide PAPPG and Biosketch guidelines

## TIPS FOR COMPETITIVE NRT PROPOSALS



Review NRT Program webpage



- Familiarize yourself with <a href="NSF">NSF's 10 Big Ideas</a>, AI, QISE
- Review national reports on STEM graduate education 1,2,3,4,5,6,7
- I Get copies of funded NRT proposals (NSF Awards Advanced Search)
- Get help to contact Program Directors RFD Level 2 service request
- Request RFD services
  - Email: <u>ored-rfdteam@uidaho.edu</u>

Url: https://www.uidaho.edu/research/about/orfd

REQUEST RFD SERVICES



## GUEST SPEAKER Q&A

- Q & A with Dr. Denecke, Program Director in NSF Directorate for Education & Human Resources
  - Brief overview about NRT
  - NSF Preparation Tips
  - Q&A session
- Email: <a href="mailto:ddenecke@nsf.gov">ddenecke@nsf.gov</a>
- Phone: (703) 292-8072

