NSF and Lifelong Learning

Presentation & Roundtable Discussions

October 5, 2010

ASSOCIATION OF SCIENCE-TECHNOLOGY CENTERS INCORPORATED

Session Agenda

- ISE Program Overview & Solicitation
- Changes and Trends in ISE
- Current ISE Program Portfolio
- Developing a Competitive Proposal
- Other DRL Programs & Resources
- Program Contact Information

ISE Program Overview

ISE Program Overview

Supports innovation in anywhere, anytime, lifelong learning through investments in research, development, infrastructure, and capacity-building for STEM learning outside formal school settings.

ISE Audiences

- Public Audiences
- Professional Audiences

ISE Program Solicitation

- The ISE Program Solicitation Number is: **NSF 10-565.**

- **Preliminary proposal submission is required** for consideration in the full proposal competition. (Deadline was 7/22/10)

Examples of ISE Deliverables

- Permanent and traveling exhibits
- Film, radio, and TV
- Cyber-enabled learning, emerging technologies, and educational games
- Citizen science projects
- Youth and community projects
- Research and development in the field
- Professional development
- Consortia and collaborations
- Virtual networks

Project Types

- Research (<$1.5 million)
- Pathways (<$250 k)
- Full-Scale Development (<$3 m)
- Broad Implementation (<$3 m)
- Communicating Research to Public Audiences ($150k)

And

- Rapids (<$200 k)
- EAGER's (<$300 k)
- Workshops / conferences

Not Funded by ISE

- Capital or operating expenses
- Major or office equipment
- Vehicles
- Undergraduate tuition
- Paid advertising
- Admission fees

- Operating expenses for school field trips / camps / competitions
- Projects that focus primarily on health or medicine
- Publications and curricula as the primary deliverable

Six Strengths and Challenges

- Ubiquity---------- How to bridge for continuity
- Equity ---------- How to capitalize on potential
- Compelling Experiences------ How to support broad learning
- Flexible Assessment---------- How to demonstrate learning
- Abundance of Educators----- How to support PD for all
- Nimbleness---------- How to get coherence of effort

Main Changes in Solicitation

- Posing of 6 field-wide challenges
- Call for stronger infrastructure
- Softening of the formal/informal boundary
- Expansion of professional audience to include volunteers and care-givers
- Some STEM topics emphasized
- Supplementary docs rules have changed

Trends in the ISE Field

- Participatory ("democratization of ISE")
- Relevant, modular, where learners are
- Multiple media
- Curriculum development for new technologies
- STEM portals to the public
- Broadening participation
- Strategic partnerships
- Learning outcomes
  - assessments, 21st C skills, evaluation framework

ISE Project Portfolio

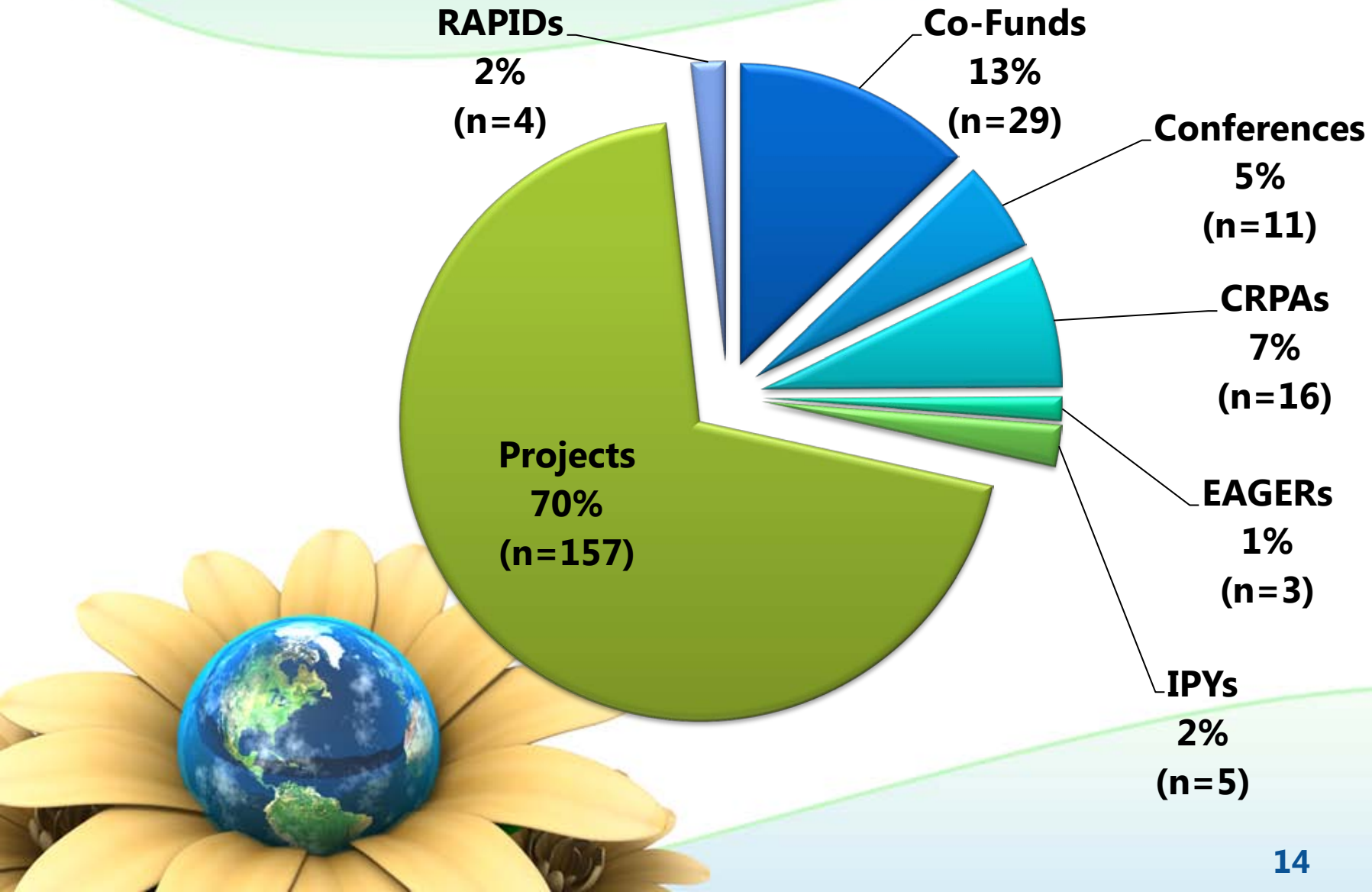
Active ISE Award Across NSF

As of 9/30/10, 225 projects were supported by the ISE Program Across NSF

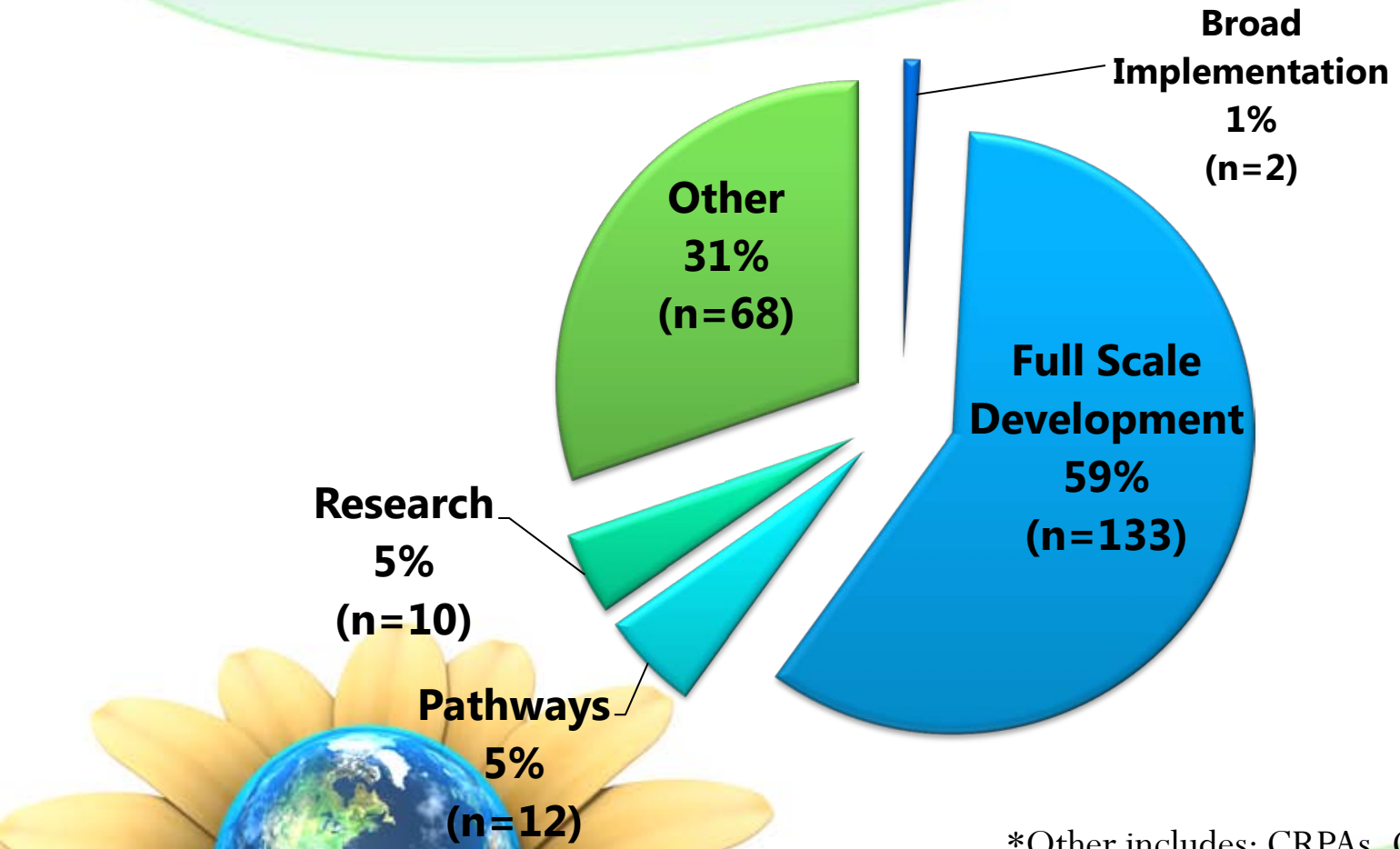
Projects outside of ISE 13% (n=29)

Projects within ISE 87% (n=196)

Active ISE Award By Award Type

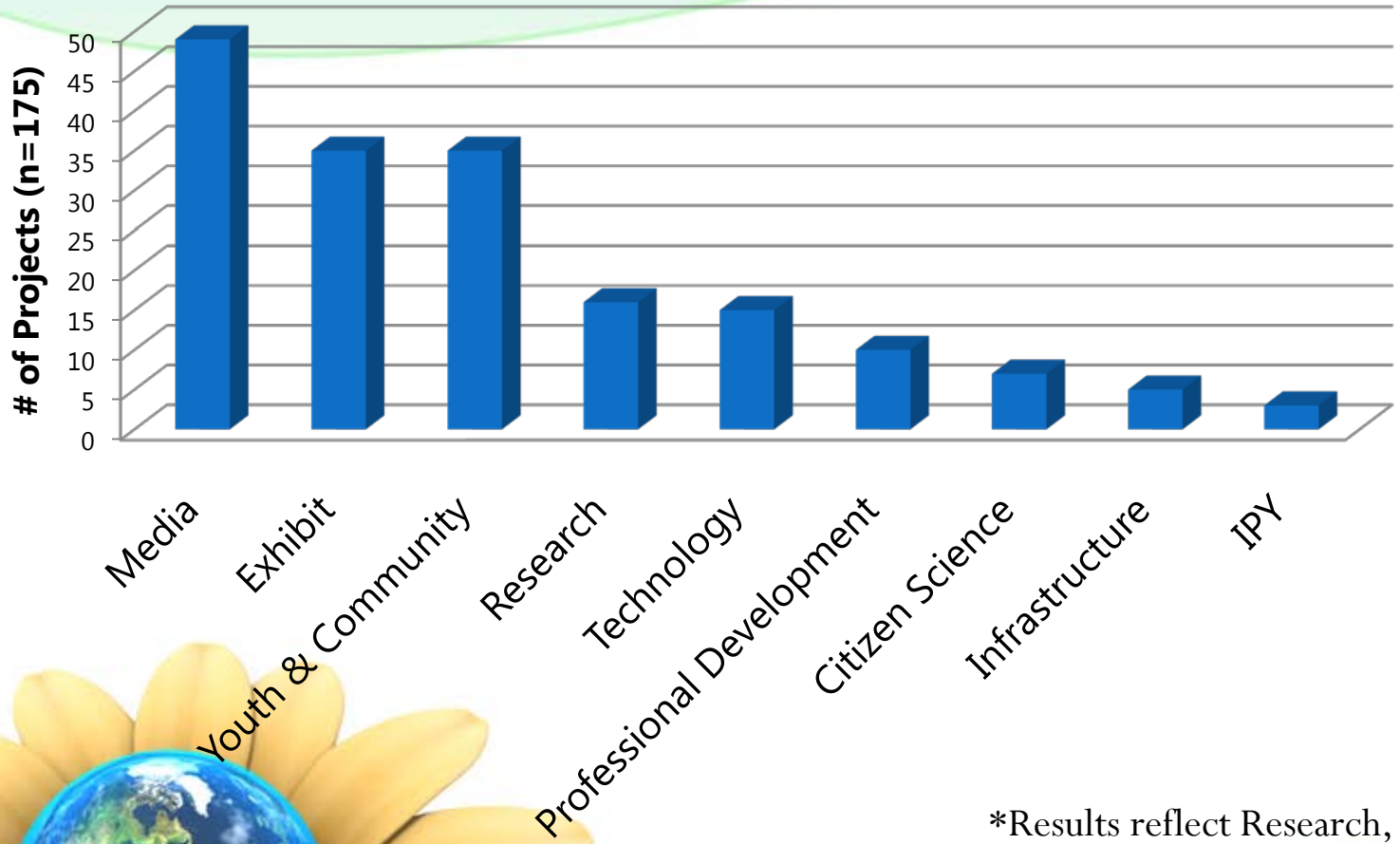


Active ISE Awards By Project Type



*Other includes: CRPAs, Conferences, IPYs, EAGERS, RAPIDS, Co-funded projects outside of ISE

Active ISE Awards By Format

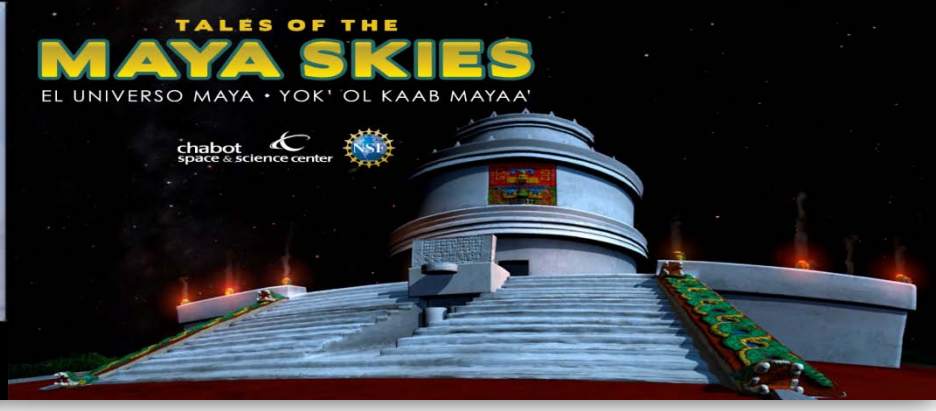


*Results reflect Research, Pathways, Full Scale Development & Broad Implementation projects only.

ISE Funding Projections FY11

- **Anticipated Funding Amount:** $25 million **for new awards, pending availability of funds.**

- **Estimated Number of Awards:** 46 awards, including ~10 CRPAs (does not include supplements, conferences, etc.)



Preparing & Submitting Competitive Proposals

DESIGN SQUAD
as built on TV

Develop a Strong Innovative Idea & Rationale

- Know the literature & research base
- Know related past & present NSF work
  - NSF website
  - Resource Centers (e.g., CAISE, informalscienc.org, ITEST Learning Resource Centers
- Identify the STEM content & innovation
- If possible, conduct a pilot study or assessment and/ test model

Consider the NSF Merit Criteria

Intellectual Merit

How important is the proposed activity to **advancing knowledge and understanding** within its own field or across different fields?

Broader Impacts

How well does the activity advance discovery and understanding while **promoting teaching, training, and learning**? How well does the proposed activity broaden the participation of **underrepresented groups** (e.g., gender, ethnicity, disability, geographic, etc.)?

Intellectual Merit

- **Significance of Issue**
- **Audience & Approach** *(strategic, appropriate)*
- **Project Design, Methods, & Deliverables** *(quality)*
- **Innovation** *(sources, degree)*
- **Qualifications** *(team, partners, and their collaborative process)*
- **Prior NSF Work** *(nature and quality, if applicable)*

Broader Impacts

- **Advancement** *(research and/or practice)*
- **Evaluation** *(learning impacts, thorough, realistic, and appropriate to goals)*
- **Dissemination** *(breadth, plausibility, specificity)*
- **Participation** *(of underrepresented groups)*
- **Capacity/Infrastructure** *(builds)*
- **Other Benefits to Society** *(if applicable)*
- **Post-doctoral Mentoring Plan** *(if applicable)*

Other Considerations

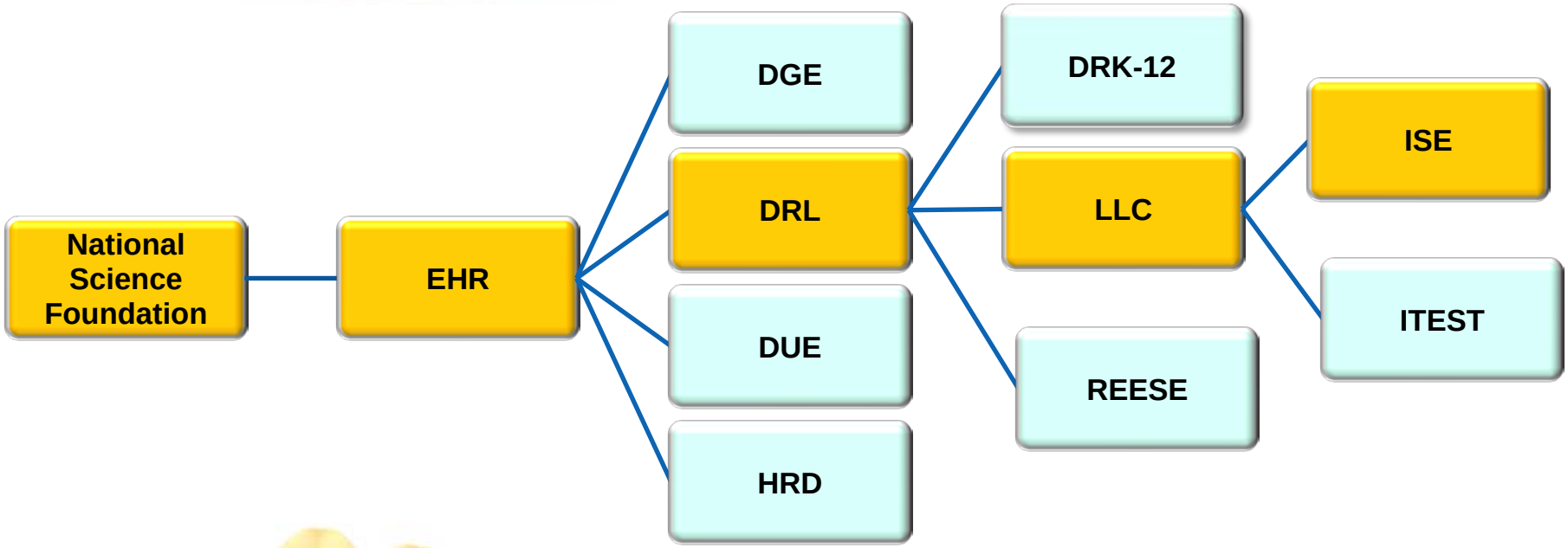
- Talk with Program Officers (POs)
- Clearly articulate the who, **what**, when, where, **why**, and **how** of your project.
- Link to STEM content should be strong & explicit
- Build a strong team of collaborators.
- The project evaluation and the expertise of the evaluator(s) are important.
- Spell check; Check grammar,& punctuation (professional editor?)
- Take follow-up questions from NSF seriously

Rating System

- **Excellent (E)** – Outstanding proposal in all respects
- **Very Good (VG)** –High quality proposal in nearly all respects
- **Good (G)** – A quality proposal, worthy of support
- **Fair (F)** – Proposal lacking in one or more critical aspects
- **Poor (P)** –Proposal has serious deficiencies

Other DRL Programs

Organizational Structure



Other Programs to Consider…

- ITEST
- ATE
- DRK-12
- REESE
- CAREER

- TSL
- Cyberlearning
- PRIME
- CCEP
- SEES

Contact Information

If you have additional questions, please email us at drlise@nsf.gov.