

Oklahoma EPSCoR Track 1 (S³OK)

Laying the Groundwork for Project Impacts

Office of Educational Innovation and Evaluation (OEIE)

May 25th, 2021

Evaluation Plan Process

Aligning objectives, outcomes, metrics, evaluation questions, and data sources

Strategic Plan

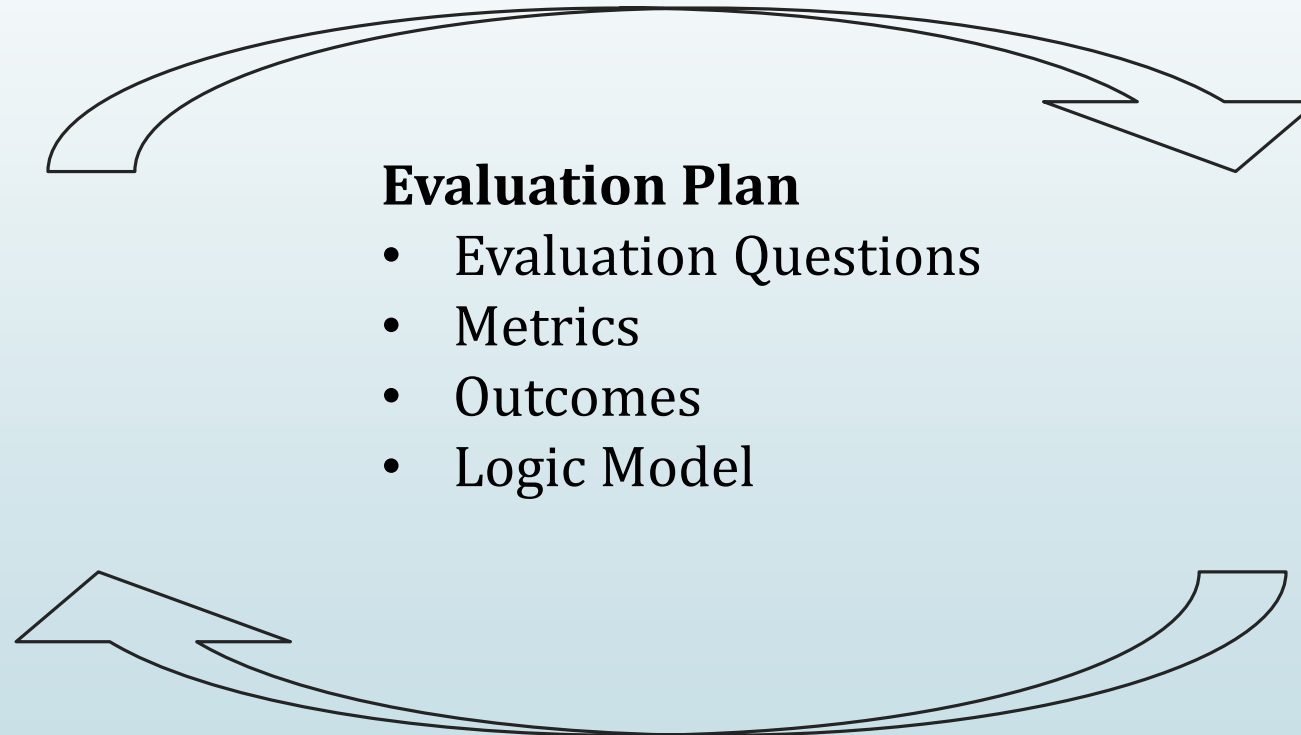
- Objectives
- Milestones
- Outputs
- Outcomes

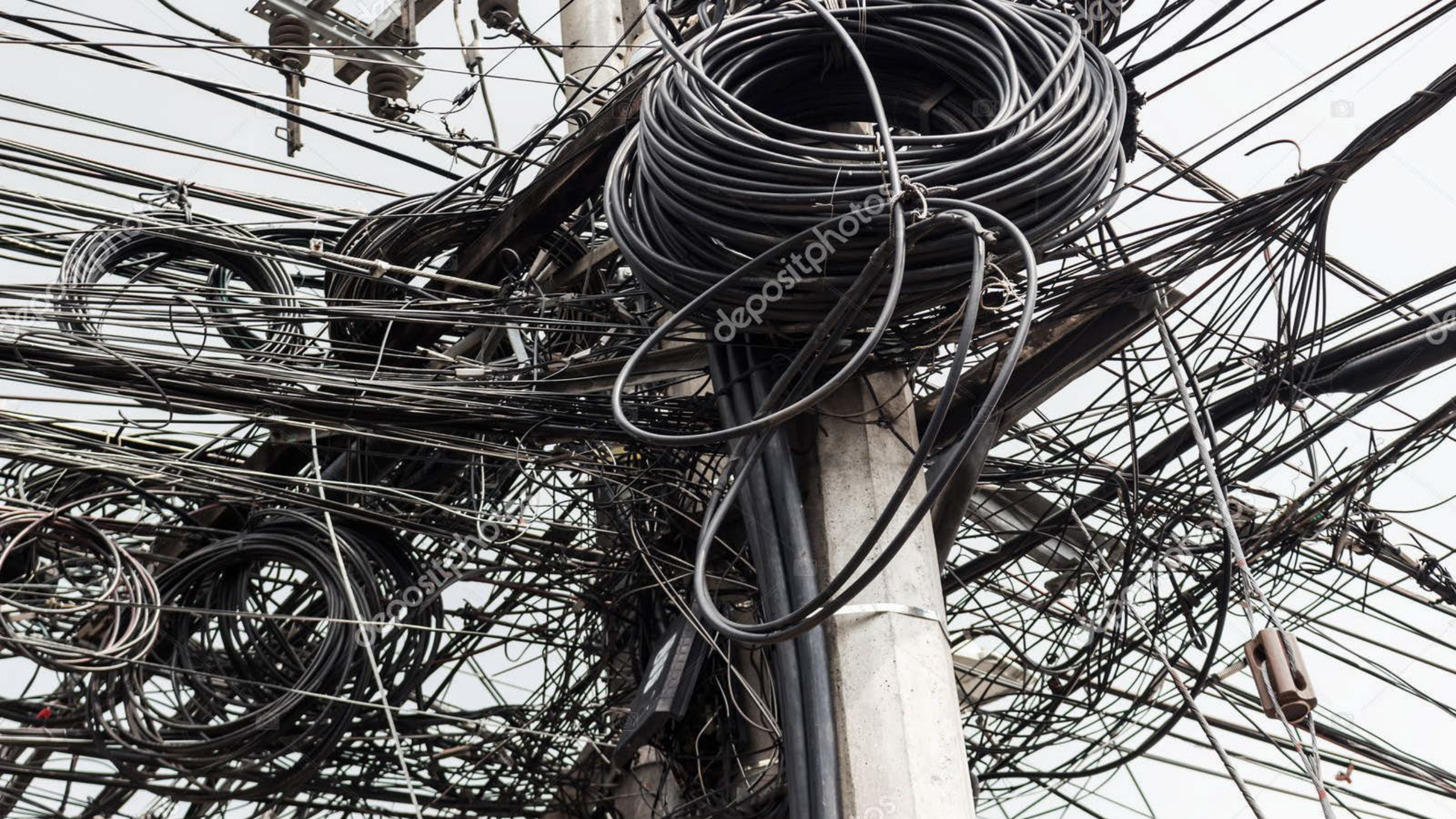
Evaluation Plan

- Evaluation Questions
- Metrics
- Outcomes
- Logic Model

Data Sources

- DAISy
- OEIE Data Collections
 - Surveys
 - Interviews
 - Focus Groups





Evaluation Plan

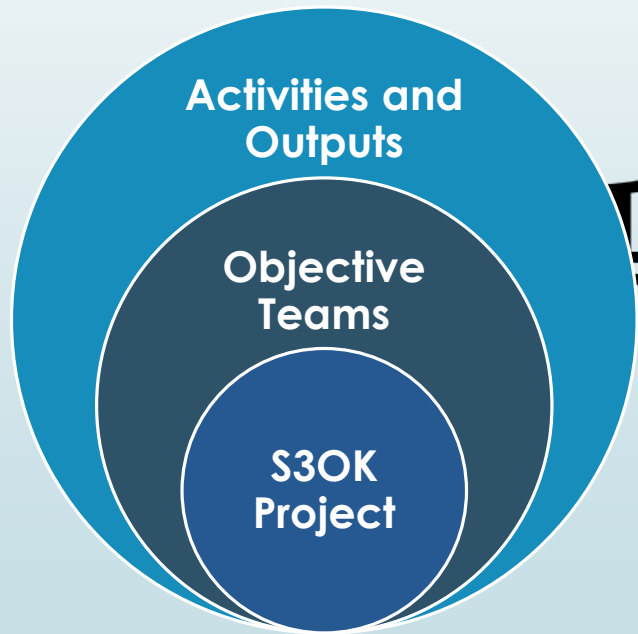
Evaluation Question

3. What are the short-term and long-term impacts of project activities?

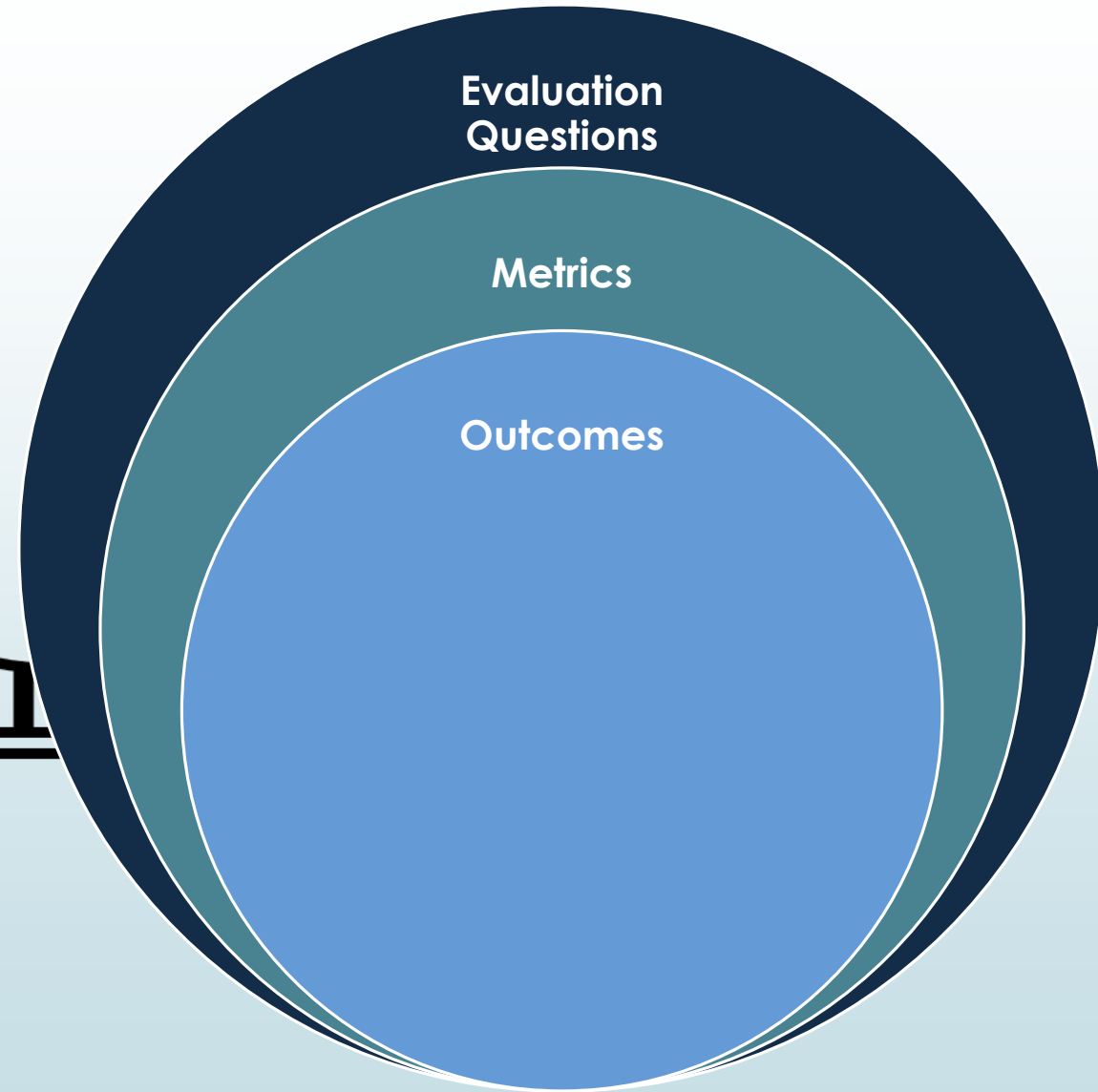
- a. To what extent has research generated from the project advanced multi-objective solutions for managing threats to water, terrestrial ecosystems, and infrastructures in OK?

Outcome(s)	Evaluation Metric(s)/Indicator(s)	Data Analysis	Method/Data Source	Data Collection Responsibility	Data Collection Schedule
New knowledge creation	Research products (new tool kits, data sets, models, database technical report, etc.)	Content analysis	Project Report	S3OK DAISy	Annually
Adoption/ Implementation	Applications/use in policy and decision making (e.g., use of science-based evidence and knowledge gained)	Content analysis	Project Report	S3OK DAISy	Annually
Increased knowledge/awareness	Faculty and professional staff project members' perceptions of key research outcomes	Content analysis, descriptive statistics	Annual survey with faculty and professional staff	OEIE	Annually
Transfer of knowledge	Number and location of authors citing project researchers	Bibliometric analysis	List of publications reported in NSF EPSCoR Table E	OEIE	Years 4-5





DAISy Reporting



Outcome

Expanding Collaboration Structures

Number and type of collaborations with non-project entities

Shared equipment, personnel, and facilities

Changes in types/frequencies of collaborations

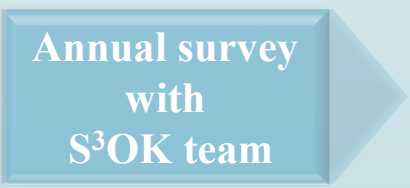
Increases in collaborative work on publications, presentations, proposals, products

Project members' reported collaboration network (SNA)

Metrics



DAISy

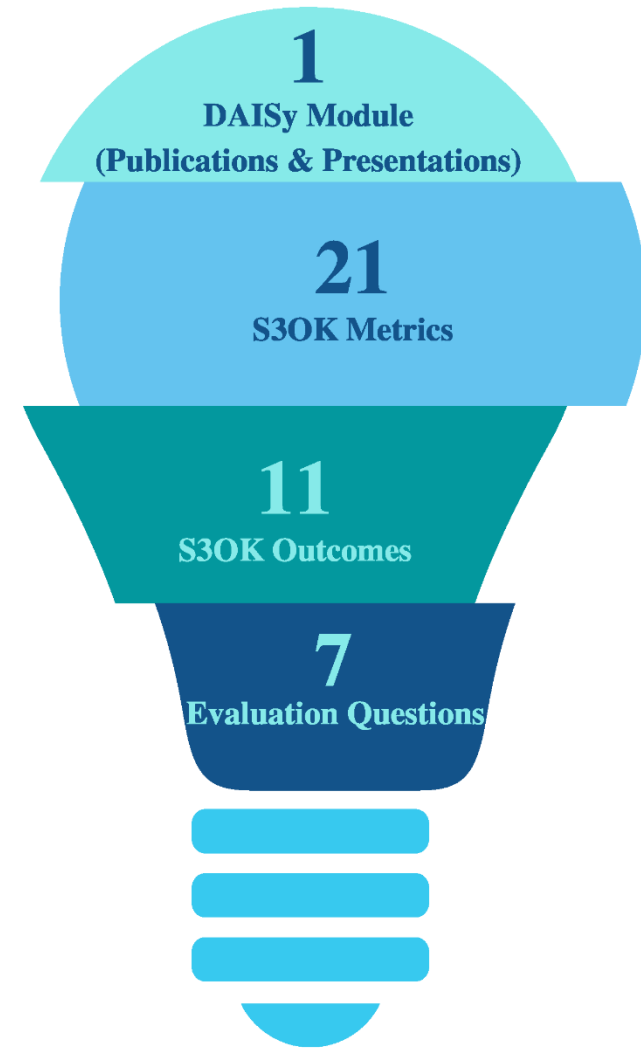


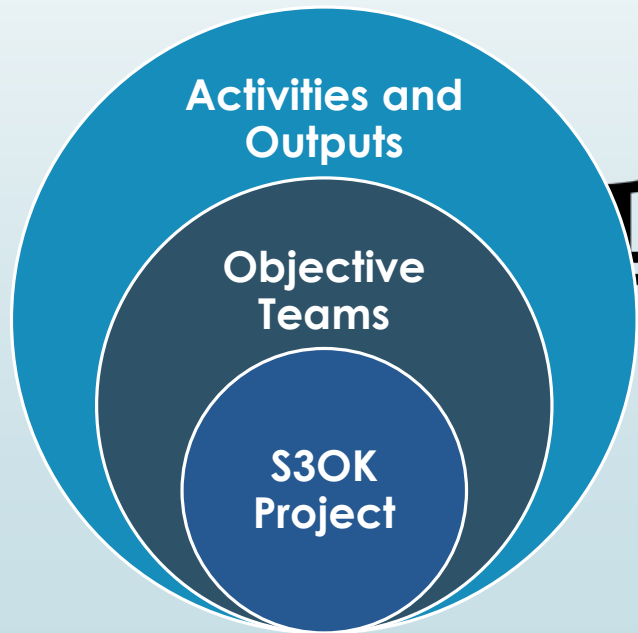
OETIE

S³OK Report

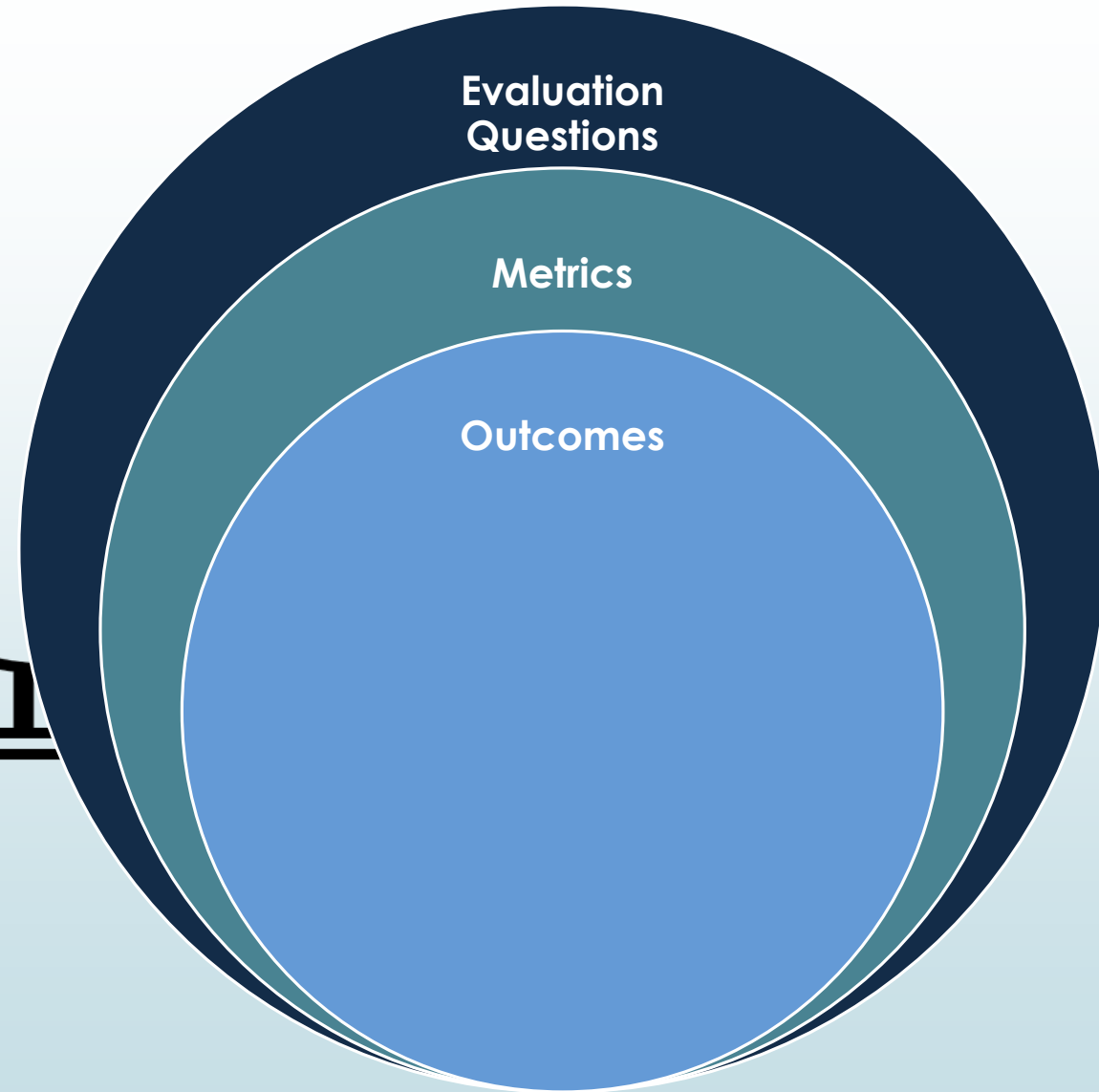
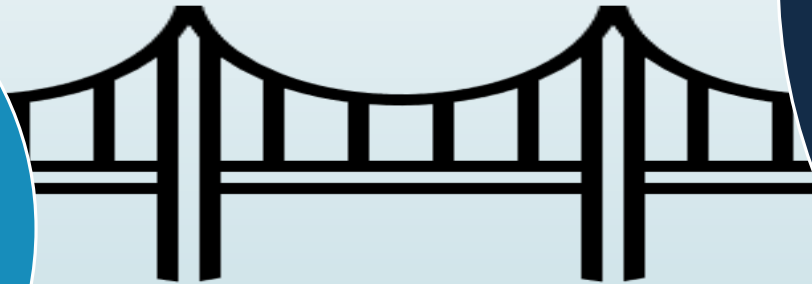


External Evaluation Report





OEIE Data Collections



Outcome

Expanding Collaboration Structures

Number and type of collaborations with non-project entities

Shared equipment, personnel, and facilities

Changes in types/frequencies of collaborations

Increases in collaborative work on publications, presentations, proposals, products

Project members' reported collaboration network (SNA)

Metrics

- Publications & presentations
- Noteworthy activities
- Collaborations & partners
- Building networks

DAISy

Annual survey with S³OK team

OEIE

S³OK Report



External Evaluation Report

External Evaluation Data Collections

42

Annual Data Collections

Surveys, Interviews, Focus Groups

Fall (Researcher Retreat)

- S3OK Faculty and Staff (Survey)

Summer (Annual Meeting)

- Graduate and Undergraduate Student Researchers (Survey or Focus Group)

Fluid

- Seed Grant Recipient (Interviews or Survey)
- External Partners (Interviews, Focus Groups, or Survey)

Other Data Collections:

Fall (from DAISy)

- Bibliometrics/Altmetrics

Periodic Data Collections

Surveys, Interviews, Focus Groups

Early Spring

- New Hire Interviews

Other Data Collections:

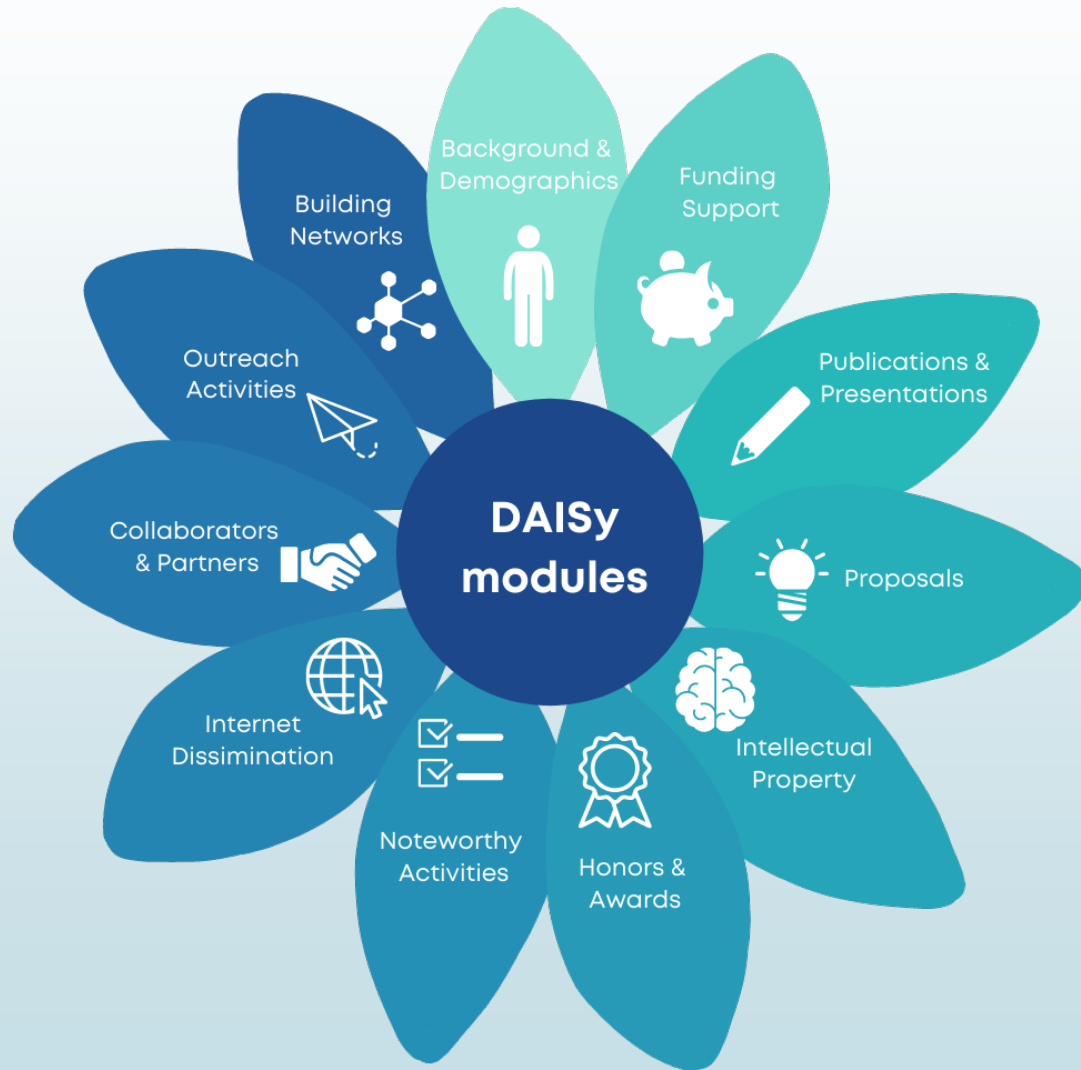
Fall (from surveys & DAISy)

- Social Network Analysis

Summer (Annual Meeting)

- Ripple Effects Mapping
- Asset Mapping

That's a Lot!



The Details Matter

What difference was made?

**Manuscripts
Not Published**

Proposals

Who does this impact?

**Published
Manuscripts**

**Submitted
Manuscripts**

Funding Support

What are the effects?

**Magazine or News
segment Interview**

**Manuscripts
Under Review**

Why is it significant?

**Collaboration with
Students**

Blog

Presentations

**Collaboration with
other Researchers**

What changes are occurring?

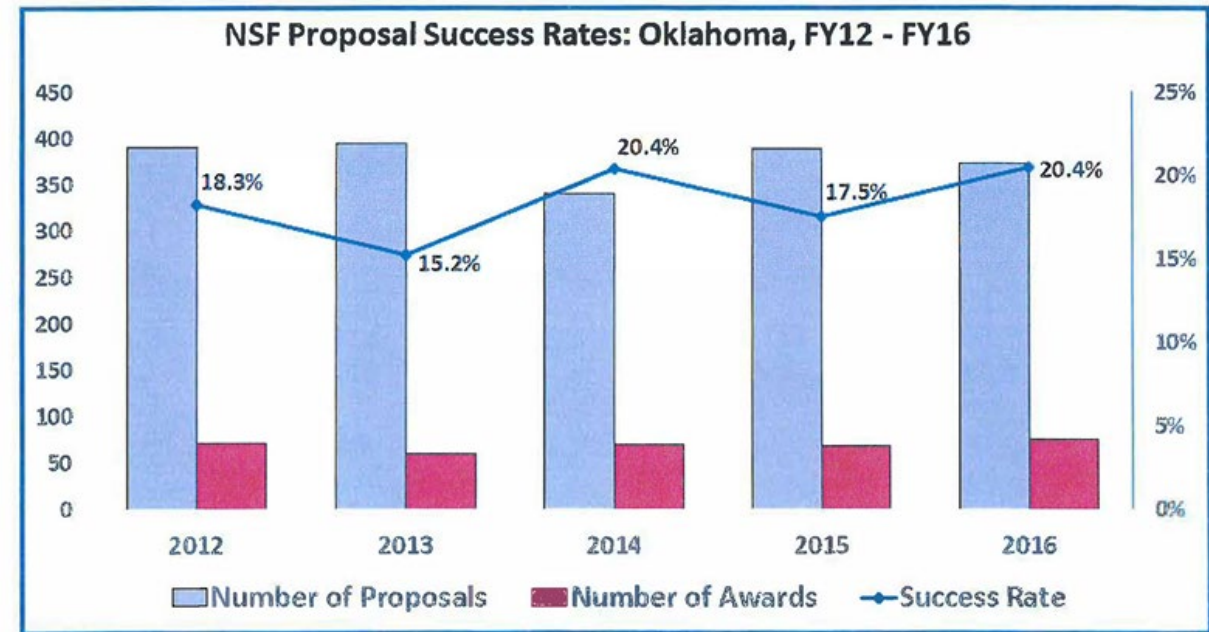
**Collaboration with
City/Government Agency**

NSF

FY 2016 Oklahoma EPSCoR Key Outcomes

RII Track-1 Template Data	EPSCoR Total	Oklahoma EPSCoR	Co-funding
Patents Awarded	14	0	<ul style="list-style-type: none"> Proposals awarded: 12 Project Totals: \$4,488,618 Project Leverage: 2.27 <p>Note: You can look up individual co-funded projects using the program element code 9150 in the NSF awards search database.</p>
Patents Pending	34	0	
Proposals Submitted	1539	39	
Proposals Awarded	675	22	<p>Spend-out Data as of 05/08/17</p> <p>Award: 1301789, Year 4 Amount Obligated: \$16M Amount Expended: \$13,447,486 Unliquidated Balance: \$2,552,514 (15.95%) Ave. Year 4 unliquidated balance is 18.73%</p>
Publications	1336	25	
New Faculty Hired	84	1	
Undergrads Graduated	404	5	
Graduates Graduated	258	4	
Post-docs Involved	167	14	

What **YOU** report in **DAISy** is used by NSF EPSCoR to demonstrate **Key Outcomes** for your project and the EPSCoR program overall



What **YOU** report to **OEIE** is used by NSF EPSCoR to help ensure the project engages in continuous improvement (**Recommendations**) and to gain evidence that support **Key Outcomes**



Socially Sustainable Solutions for Water, Carbon and Infrastructure Resilience in Oklahoma (S³OK)
Executive Summary

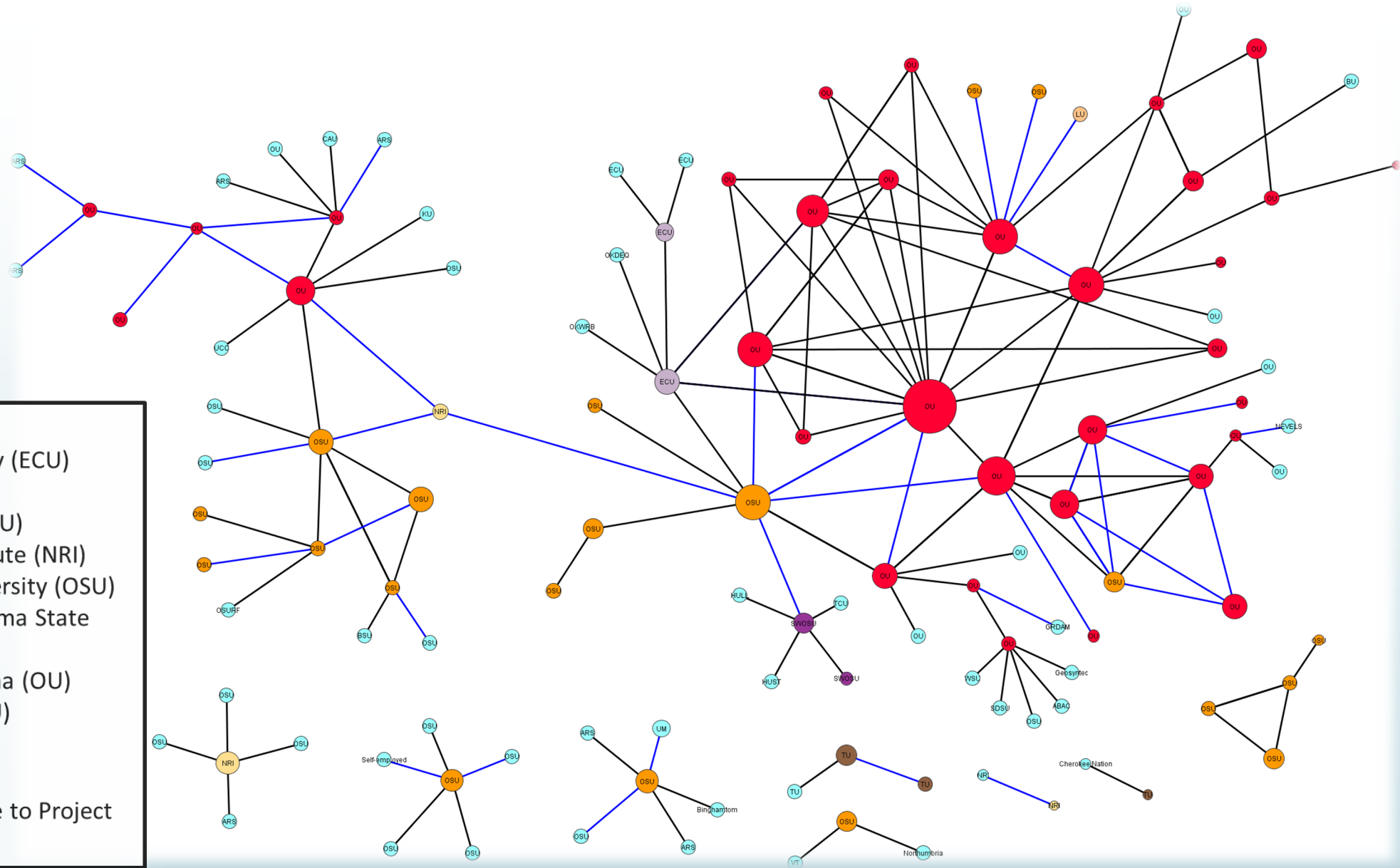
Results by Evaluation Question

1. **To what extent are activities defined in the strategic plan being accomplished in the specified timeline?**
 - Key Highlights reported from Years 1 and 2
 - Reported progress, satisfaction, successes, challenges,
 - Mentoring experiences
2. **To what extent is NSF EPSCoR broadening participation [institutional, disciplinary, female, and URM]?**
 - Key Highlights reported from Years 1 and 2
 - Reported engagement of underrepresented groups/individuals at partnering institutions (OSU, OU, Tulsa, Southwestern OK State, Langston, Noble)
3. **What are the short-and long-term impacts of the project activities?**
 - a. **To what extent has research generated from the project advanced multi-objective solutions for predicting S2 events, managing threats to water, terrestrial carbon storage, and infrastructures in OK?**
 - Key Highlights reported from Years 1 and 2
 - Reported research activities, honors/awards, use of project work in society/for decision making
 - Bibliometrics and Altmetrics on publications
 - b. **To what extent have researchers established interdisciplinary and interinstitutional collaborations?**
 - Key Highlights reported from Years 1 and 2
 - Reported collaborations and partnerships
 - Why collaborations enhance project work
 - c. **To what extent has the project contributed to a well-prepared, competitive and diverse STEM workforce?**
 - Key Highlights reported from Years 1 and 2
 - Reported gains in student participants knowledge, skills, interest, educational/career goals.
 - Project work/products involving students
 - Early career researchers reported gains
 - d. **To what extent has the project information been disseminated to the public?**
 - Key Highlights reported from Years 1 and 2
 - Increase in awareness and knowledge for key stakeholder groups (team members, students, external partners [OLAN, EPSAN, M-SISNet, External Advisory Committee, outreach partners], etc.)
 - Publications, presentations, newsletters/blogs, website, social media
4. **How has transdisciplinary collaboration and co-production of knowledge informed/ influenced project research and engagement?**
 - Key Highlights reported from Years 1 and 2
 - Reported integrated collaboration across disciplines/objective teams and with students, partners, and external partners (OLAN, EPSAN, M-SISNet, External Advisory Committee, outreach partners)
 - Reported gains and outputs/products from co-production of knowledge efforts
 - Reported effective collaboration and engagement strategies by stakeholder groups
5. **What mechanisms have been put in place to sustain initiatives after NSF EPSCoR funding?**
 - Key Highlights reported from Years 1 and 2
 - Reported funding opportunities
 - Reported assets that enhance project work

Recommendations

The external evaluation gained stakeholders' perspectives on the project, including its progress, strengths, potential areas for improvement, as well as some initial outcomes. OEIE recommends:

- Recommendations based on Years 1 and 2 reported data by stakeholder groups
 - Team members, student participants, outreach participants, external partners (OLAN, EPSAN, M-SISNet, External Advisory Committee, outreach partners)



Institution

- East Central University (ECU)
- External
- Langston University (LU)
- Noble Research Institute (NRI)
- Oklahoma State University (OSU)
- Southwestern Oklahoma State University (SWOSU)
- University of Oklahoma (OU)
- University of Tulsa (TU)

Collaboration History

- New - Established Due to Project
- Existed Prior

b. To what extent have researchers established interdisciplinary and interinstitutional collaborations?

- Key Highlights reported from Years 1 and 2
 - Reported collaborations and partnerships
 - Why collaborations enhance project work

Intentionally working across disciplinary boundaries

- *We're doing to really neat things together, working across disciplinary boundaries. The collaboration part of these projects is fantastic! You have to have people who are willing to be transdisciplinary, and willing to work across those boundaries.*

Providing opportunities for students to present research

- *The opportunities provided to the students in Oklahoma is incredibly important. We do our best to make sure they present at Oklahoma Research Day.*

Embedding project research into outreach events

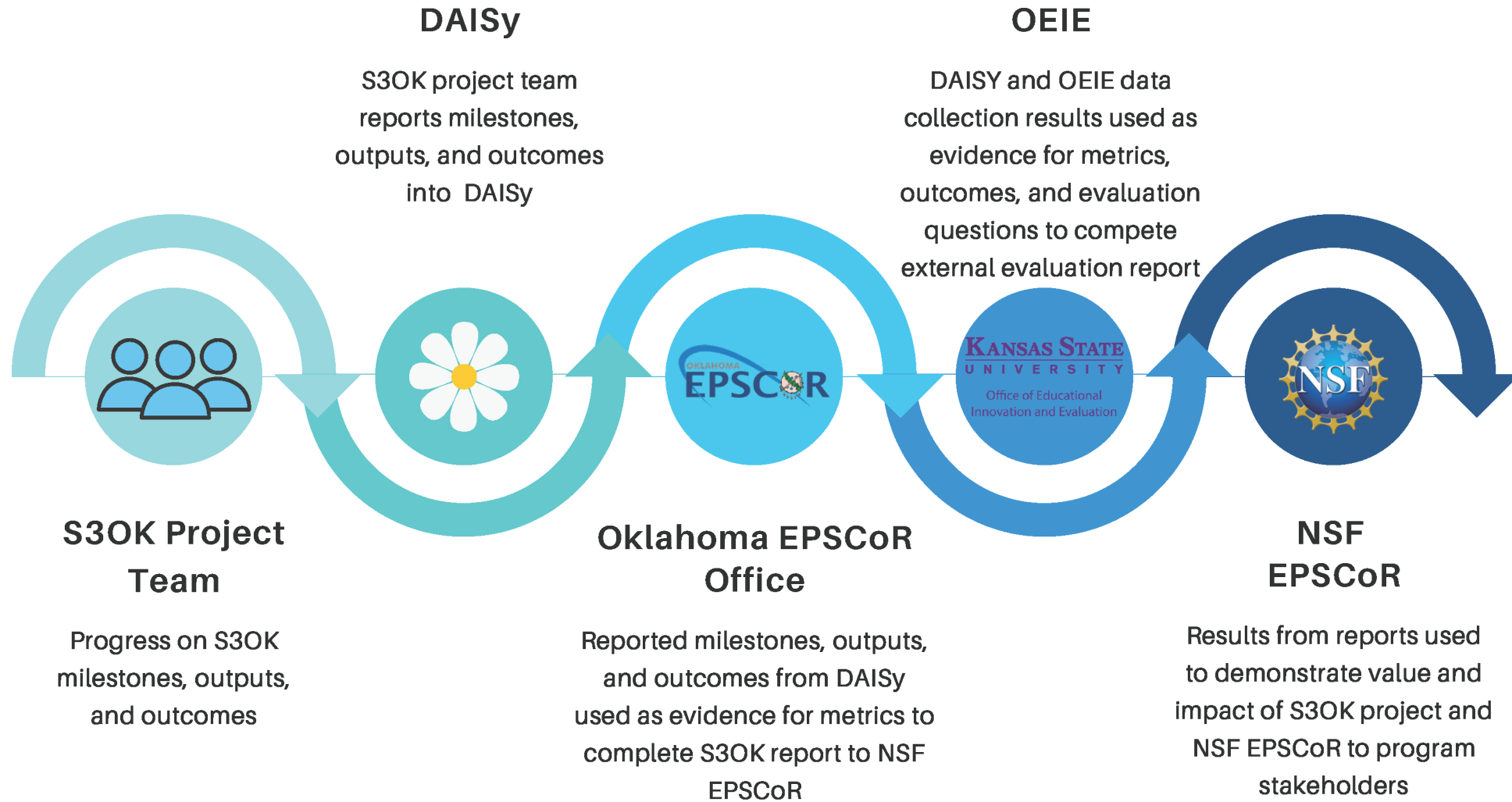
- *We are re-imagining the next couple of Women in Science Conferences to highlight project research, and make STEM a little more real and accessible.*

4. How has transdisciplinary collaboration and co-production of knowledge informed/ influenced project research and engagement?

- Key Highlights reported from Years 1 and 2
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 - Reported gains and outputs/products from co-production of knowledge efforts
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S3OK REPORTING FLOW CHART



Questions?

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