Evaluation of the Track 2 Tri-state EPSCoR project

Evaluator:

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Project Goals and Objectives

Project Goal: Promote knowledge transfer to scientists, educators, students, and citizens within and beyond the Consortium by enhancing state CI, and to enable the community science that is required to address regional to global scientific and societal challenges.

- **Objective 1 - Increase connectivity and bandwidth to increase collaboration**
- **Objective 2 – Enhance data and model interoperability to improve research outcomes**
- **Objective 3 - Utilize cyber infrastructure to integrate research with education to improve learning**

Track 2 Tri-state EPSCoR Logic Model

Project Goal - The Track 2 project will promote knowledge transfer to scientists, educators, students, and citizens within and beyond the Consortium by enhancing state to enable the community science that is required to address regional to global scientific and societal challenges.

Inputs	Outputs		Outcomes		
	Activities	**Participants**	**Short-term**	**Medium-term**	**Long-term**
NSF Track 2 EPSCoR funding Educational institutions • DRI • UNR • UNLV • UI • ISU • BSU • UNM • NMT Community colleges High schools Middle schools Businesses Industry Networks - DataONE - CUAHSI - NOAA - neon	• Purchase, develop and/or use equipment and tools • Establish facilities • Establish cyber-infrastructure including data portals, software, hardware, connectivity, bandwidth, inter-operability, and data access • Conduct collaborative and/or interdisciplinary research • Use new knowledge, facilities, equipment, and cyberinfrastructure • Communicate findings through papers and presentations • Outreach to community /businesses/agencies • Develop plans, programs, centers, instructional materials • Conduct and/or attend trainings and meetings - Tri-state consortium meeting - Summer institutes for teachers - CI training workshops - CI for industry training - Interdisciplinary working groups - Cyberlearning Summit - Interdisciplinary Modeling course - Develop curricular materials - Extracurricular CI activities • Hire/train/mentor people • Influence individuals educational and career opportunities/choices	• Scientific researchers • Middle school teachers • High school teachers • Community college and university faculty • Middle school students • High school students • Community college and university undergraduate students • Graduate students • Postdocs • Business owners • Policymakers	**Objective 1 - *Increase connectivity and bandwidth to increase collaboration***		
			Increase the*: • Number of improved speed connections • Number of connections/site • Number of connections/machine • Utilization into the state • Utilization with in the state • Utilization by institutions • Number of portals • User satisfaction with network improvements	• Increase the quality of long distance, web based communication and conferencing • Increase the frequency of long distance, web based communication and conferencing • Increase access and use of web-based tools and software • Increase access and use of web-based information	• Increase and sustain connectivity and ban • Increase communicat collaboration betwee researchers, educato owners, and policyma • Improve research competitiveness, STE education, and econc development
			Objective 2 – *Enhance data and model interoperability to improve research outcomes*		
			• Develop a standardized model to assimilate, manage, visualize and analyze data and models • Invite data submissions • Assess usability of data portal and data products • Increase usability of data portal • Increase usability of data products • Improve interoperability between models and other software components • Integrate portal with national networks	• Increase the number of data submissions to expand data archive • Increase the number of researchers whose data is represented in the data portal • Publicize the data portal • Increase the number of people who access the data portal • Increase the number of people who download and use the data products • Reduce need for training and assistance with data portal use	• Develop and sustain and data interoperab framework • Build and sustain an interoperability data • Integrate with nation • Increase data intensi • Increase research cap • Increase the number of research outcome • Increase data sharing • Improve research competitiveness
			Objective 3 - *Utilize CI to integrate research with education to improve learning*		
			• Improve the quality of educational information and tools • Increase access to educational information and tools • Present data in user friendly formats - spreadsheets and tables • Present information in user friendly formats- maps, models, and graphs • Train students, researchers, educators, business owners, and policymakers in	Increase educators, students, industry: • Access to scientific information • Ability to store scientific information • Use of and interaction with scientific information • Understanding of scientific information • Knowledge and skills necessary to use cyberinfrastructure	• Integrate research wi and formal educatio • Build human capacity • Support students in t pipeline • Improve STEM curric instructional strategi • Increase student lear • Improve ability to ma knowledge based dec

Measuring long-term impacts

Impact Areas

- **Collaboration**
- **Productivity**
- **Quality of results**

- **Data intensive research**
- **Research capabilities**
- **Research outcomes**
- **Data sharing**
- **Research competitiveness**

- **STEM curriculum**
- **Instructional strategies**
- **Student learning**
- **Knowledge**
- **Make knowledge based decisions**
- **Address societal issues**
- **Economic development**

Measurements

- Program **evaluation** forms containing impacts questions
  - Project **post-survey**
- Impacts interviews and **video clips**

Sample Questions

- What impact has the EPSCoR program had on development of your educational/career opportunities?
- How has the EPSCoR program increased your understanding and use of cyberinfrastructure?
- What types of STEM research outcomes have you been able to achieve because of the improved cyberinfrastructure?
- In what ways have you used the knowledge you have acquired and transferred it back into the classroom, university, community?
- In what ways has your office, department, school, university changed as a result of this program?

Example impacts response

This EPSCoR grant has provided my lab with increased network speed and bandwidth.

This has enabled me to conduct analyses of ecological communities using non-metric multi-dimensional scaling, which I wasn't able to do before the network improvements.

My findings have resulted in publishing a paper in the Journal of Ecology and in a successful proposal to the NSF.

I believe these findings will lead to more informed decision-making by our local policy-makers because they will provide a clearer understanding of how climate change is affecting our region.

Evaluation Tasks

- Revised program surveys to align questions with goals and include demographics and impact questions
- Piloted impacts survey
- Created table of outputs attributed to EPSCoR
- Developed Logic Model including short, medium, and long-term outcomes

- Set-up impacts interviews to be videotaped by UNLV TV
- Developed data portal submission questionnaire and user survey
- Pilot data portal and conduct user survey with scientists

TO DO

- Pilot data portal and conduct user survey with non-scientists
- Conduct impacts post-survey
- Continue to conduct impacts interviews and create videoclip


Thank you
ありがとう
Bbl
merci
σας ευχαριστούμε
obrigado
danke
gracias
dank u
당신을 감사하십시오