



Innovative Insights: Program Evaluation for NSF ERCs

Background

In 2018, CISTAR, an NSF Engineering Research Center (ERC), led by Purdue University, with partner universities the University of Notre Dame, Northwestern University, University of New Mexico, and the University of Texas–Austin, was established with the goal of advancing engineering innovations and fostering an academic and industry ecosystem. The center is funded by the National Science Foundation (NSF.) In addition to convergent research and technology transfer, the center focuses on workforce development and lab experiences for middle and high school teachers, high school students, undergraduate and graduate students. CISTAR sought a comprehensive evaluation strategy to assess these key dimensions to measure the effectiveness and impact of its programs.

Problem

While the staff at the ERC were skilled at developing and implementing programs aimed at enhancing engineering education and workforce development, an external evaluator was needed to measure the effectiveness of these initiatives. In addition, tracking progress toward goals and identifying impact and areas for improvement was essential for reporting to the National Science Foundation.

Solution

Everett Evaluation developed and implemented a comprehensive evaluation framework for CISTAR's unique needs. This framework was designed to:

- Assess educational programs
- Evaluate workforce development efforts

The framework included surveys, interviews, focus groups, observations, and review of program records, to gather meaningful data.

Outcome

Everett Evaluation has worked closely with the CISTAR team since 2018. The evaluation provided them with critical insights into the strengths and weaknesses of its programs. Based on these findings, Everett Evaluation provided recommendations to enhance program effectiveness. The annual evaluation reports not only affirmed the value of the ERC's work but also equipped the leadership with the evidence needed to refine their approaches and secure ongoing NSF support.