

**SMALL PROJECT EVALUATION**  
*Principles & Practices*

March 23, 2016

**INTRODUCTIONS**

|  |  |   |  |   |
|--|--|---|--|---|
|   |                       |    |  |  |
| <i>Miranda<br/>Lee</i>   | <i>Lori<br/>Wingate</i>  | <i>Elaine<br/>Craft</i>   | <i>Charlotte<br/>Forrest</i>   | <i>Russell<br/>Cannon</i>   |
| <br><br>WESTERN MICHIGAN<br>UNIVERSITY | <br>MENTOR<br>CONNECT | <br>UNIVERSITY of<br>WASHINGTON<br>BOTHELL |  |   |

This material is based upon work supported by the National Science Foundation under grant number 1204683.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the presenters and do not necessarily reflect the views of NSF.



## BEHIND THE SCENES



*Mike  
Lesiecki*



*Janet  
Pinkhorn*



*Tim  
Suchomski*



*Sharon  
Gushy*



*Dennis  
Faber*



# MATERIALS

The webinar will begin at 1 p.m. EDT

## SMALL PROJECT EVALUATION

### Principles & Practices

March 23, 2016

While you wait, please answer the poll question in the upper right corner of your screen.



Slides      Handout      Recording

[www.evaluate.org/webinars/2016-mar/](http://www.evaluate.org/webinars/2016-mar/)

- ## 1 SETTING THE STAGE

Tales from the Trenches      Question Break
- ## 2 EVALUATION SCOPE

Tales from the Trenches      Question Break
- ## 3 DATA COLLECTION & DIVISION OF LABOR

Tales from the Trenches      Question Break
- ## 4 WORKING WITH INSTITUTIONAL RESEARCH

Tales from the Trenches      Question Break
- ## 5 ATE PROGRAM & MENTOR-CONNECT


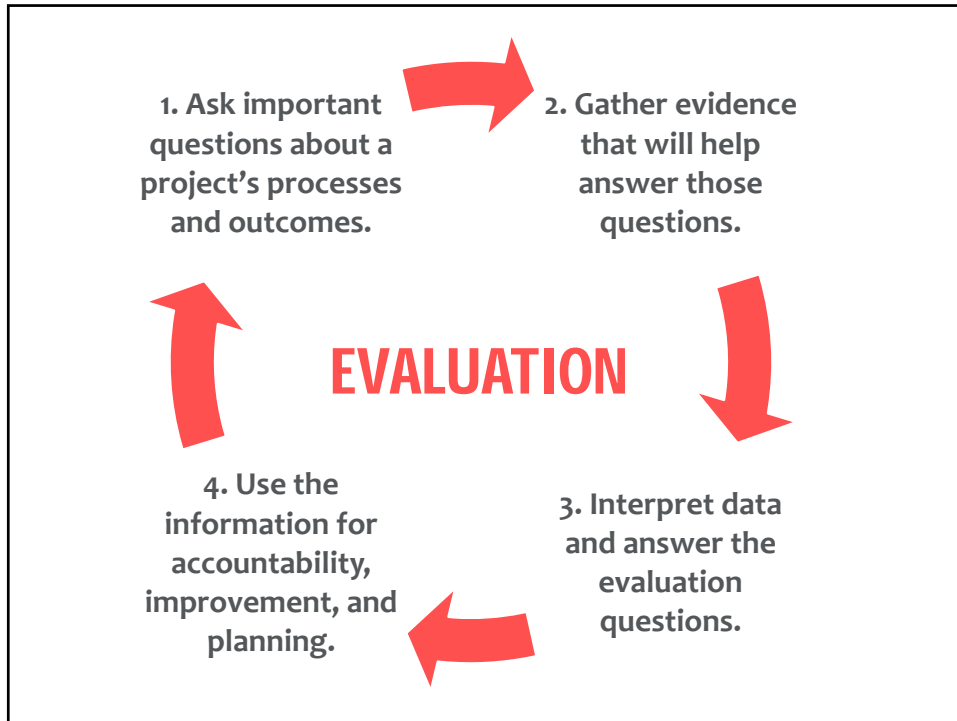
Tales from the Trenches



## SETTING THE STAGE

*Lori Ulingate*

*systematic* **EVALUATION**  
the determination of something's quality,  
value, or importance



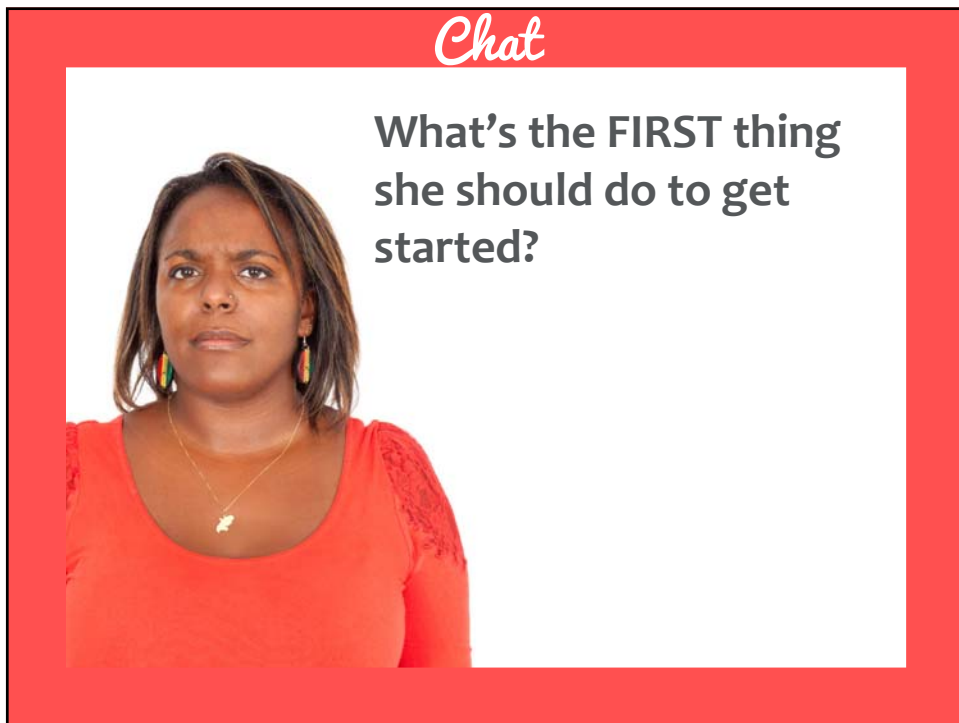
**Gwen Generickson**  
soon to be a new ATE project principal investigator

**Bio-Inspired Solutions to Human Challenges**  
\$198,913 | 2016-19

This is a fictional project. Any resemblance to actual persons or projects is purely coincidental.



**She's been asked to submit a revised evaluation plan.**



*Chat*

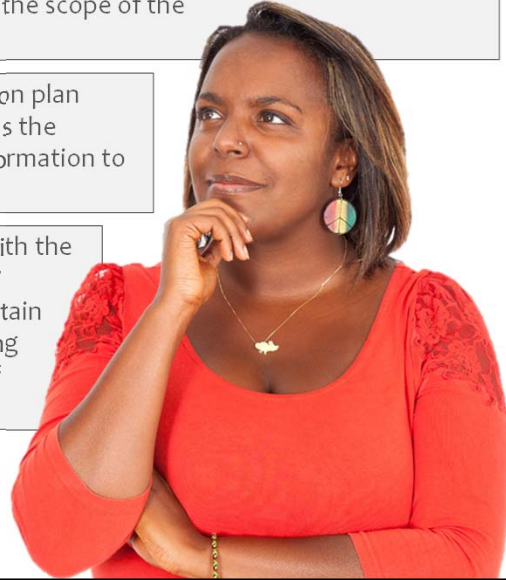
**What's the FIRST thing she should do to get started?**

**Read ATE program solicitation:**

**EVALUATION:** All projects and centers carry out evaluative activities. The funds to support an evaluator independent of the project or center must be requested, and the requested funds must match the scope of the proposed evaluative activities.

**INTELLECTUAL MERIT:** Is the evaluation plan clearly tied to the project outcomes? Is the evaluation likely to provide useful information to the project and others?

The Project Description must begin with the subsection on **Results from Prior NSF Support** ... This subsection must contain specific outcomes and results including metrics to demonstrate the impact of the project activities.



How much is it going to cost?







## Bio-Inspired Solutions to Human Challenges Project Budget

| Category                      | Cost             |
|-------------------------------|------------------|
| Salaries & Fringe Benefits    | \$103,500        |
| Equipment                     | \$12,000         |
| Materials                     | \$20,000         |
| Travel                        | \$3,600          |
| Other – Evaluation Consultant | \$13,910         |
| Modified Total Direct Costs   | \$153,010        |
| Indirect Costs (30%)          | \$45,903         |
| <b>TOTAL PROJECT COST</b>     | <b>\$198,913</b> |

*Total direct costs before external evaluation = \$139,100*  
*X 10% = \$13,910*

## Bio-Inspired Solutions to Human Challenges Project Budget

\$13,910 over 3 years = \$4,637 per year

➔ *But more effort will be required in Year 1 to set up the evaluation, so...*

Year 1: \$4,800

Year 2: \$4,000

Year 3: \$3,600

## Bio-Inspired Solutions to Human Challenges Project Budget

| Category              | Year 1  | Year 2  | Year 3  |
|-----------------------|---------|---------|---------|
| Consultant fees       | \$4,800 | \$4,000 | \$3,600 |
| Travel                | \$500   | \$500   | \$500   |
| TOTAL EVALUATION COST | \$5,300 | \$4,500 | \$4,100 |

*Annual site visits are important!*

## Bio-Inspired Solutions to Human Challenges Project Budget

| Category              | Year 1  | Year 2  | Year 3  |
|-----------------------|---------|---------|---------|
| Consultant fees       | \$4,800 | \$4,000 | \$3,600 |
| Travel                | \$500   | \$500   | \$500   |
| TOTAL EVALUATION COST | \$5,300 | \$4,500 | \$4,100 |

*@ \$100 per hour, how many days can the external evaluator devote to this project?*

## Bio-Inspired Solutions to Human Challenges Project Budget

| Category                     | Year 1         | Year 2         | Year 3         |
|------------------------------|----------------|----------------|----------------|
| Consultant fees              | \$4,800        | \$4,000        | \$3,600        |
| Travel                       | \$500          | \$500          | \$500          |
| <b>TOTAL EVALUATION COST</b> | <b>\$5,300</b> | <b>\$4,500</b> | <b>\$4,100</b> |

Year 1: \$4,800 = 48 hours or 6 days

Year 2: \$4,000 = 40 hours or 5 days

Year 3: \$3,600 = 36 hours or 4.5 days



## ENHANCING EVALUATION EFFICIENCY

- Match the scope of the evaluation to the scope of the project.
- Involve the project team in monitoring the project and implementing the evaluation.
- Use institutional data to the extent possible.

### TALES FROM THE TRENCHES *Elaine Craft*



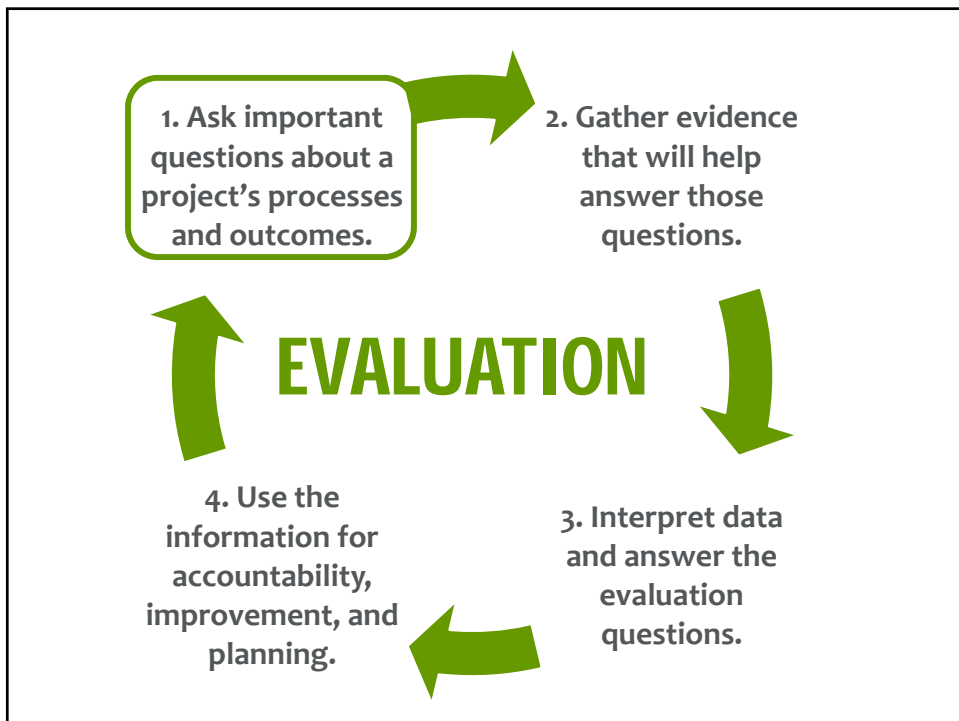


## EVALUATION SCOPE

*Lori Wingate*

## ENHANCING EVALUATION EFFICIENCY

- Match the scope of the evaluation to the scope of the project.
- Involve the project team in monitoring the project and implementing the evaluation.
- Use institutional data to the extent possible.



# EVALUATION QUESTIONS

should be

- ✓ **evaluative**
  - ✓ **pertinent**
  - ✓ **reasonable**
  - ✓ **specific**
  - ✓ **answerable**
- and the set of questions should be
- ✓ **complete**

**EVALUATION QUESTIONS CHECKLIST** for Program Evaluation  
Loft Wiggins, The Evaluation Center | Daniela Schweter, School of Public Affairs and Administration  
 Western Michigan University | 2015

Evaluation questions identify what aspects of a program will be investigated. They focus on the merit, worth, or significance of a program or particular aspects of a program. Unlike survey questions, they are *not* intended to derive single data points. Evaluation questions help to define the boundaries of an evaluation that are consistent with evaluation users' information needs, opportunities and constraints related to data collection, and available resources.

The purpose of this checklist is to aid in developing effective and appropriate evaluation questions and in assessing the quality of existing questions. It identifies characteristics of good evaluation questions, based on the relevant literature and our own experience with evaluation design, implementation, and use.

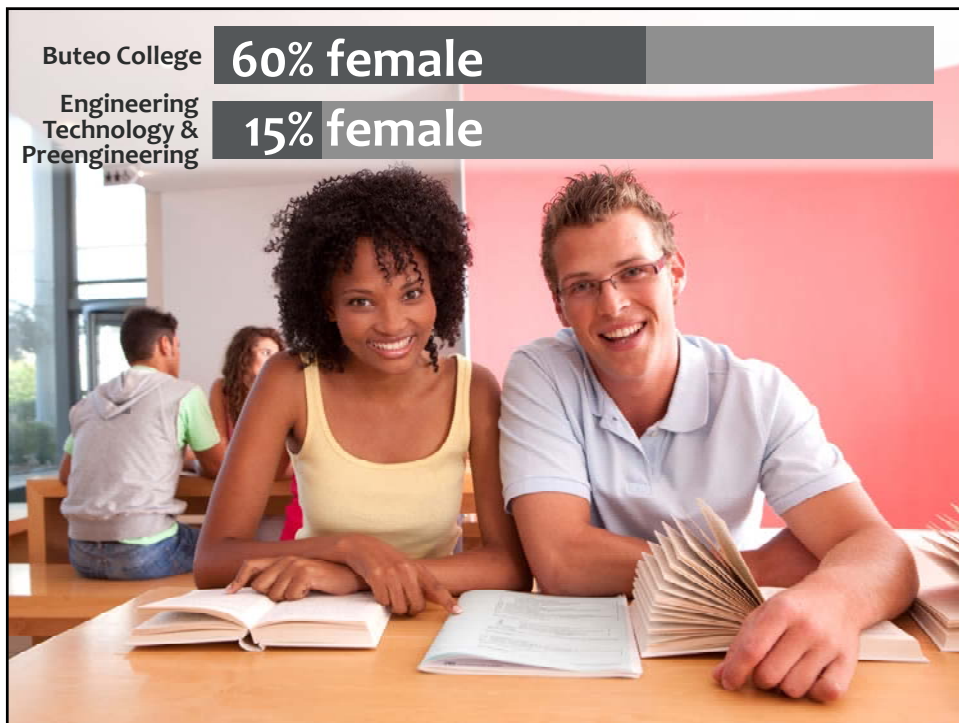
| Evaluation questions SHOULD be...  | Evaluation questions SHOULD NOT be...  |
|--|--|
| <p><b>□ EVALUATIVE</b><br/>                     Evaluative questions call for an appraisal of a program or aspects of it based on the factual and descriptive information gathered about it. Questions should be framed so they will yield answers that:</p> <ul style="list-style-type: none"> <li>- provide determinations of merit, worth, or significance, or enable evaluation users to readily reach such determinations on their own.</li> <li>- directly inform decisions about the program (e.g., how to improve or modify it; whether to continue, discontinue, expand, or reconfigure it).</li> </ul> | <p><b>NON-EVALUATIVE</b><br/>                     Non-evaluative questions call only for factual information or discrete data points that do not readily translate into determinations of program merit, worth, or significance. Answers to these types of questions have limited potential to influence decisions, because they do not provide a frame of reference in relation to merit, worth, or significance.</p> |
| <p><b>□ PERTINENT</b><br/>                     Pertinent questions are clearly related to the program's substance and evaluation users' information needs. Questions should be directly relevant to:</p> <ul style="list-style-type: none"> <li>- the program's design, purpose, activities, or outcomes.</li> <li>- the purpose of the evaluation.</li> <li>- what evaluation users need to find out from the evaluation.</li> </ul>  | <p><b>PERIPHERAL</b><br/>                     Peripheral questions are about minor, irrelevant, or superficial aspects of the program or stakeholder interests.</p>  |
| <p><b>□ REASONABLE</b><br/>                     Reasonable questions are linked to what a program can practically and realistically achieve or influence. Questions should be suitable with regard to the program's:</p> <ul style="list-style-type: none"> <li>- scope (reasonable limits of what or whom the program can influence).</li> <li>- maturity (the program's stage of development, such as whether it is just starting, fully developed and implemented, or preparing for closure).</li> <li>- resources (monetary and nonmonetary resources needed to implement and produce outcomes).</li> </ul>  | <p><b>UNREASONABLE</b><br/>                     Unreasonable questions are about things the program cannot realistically influence given its resources and the nature of the intervention.</p>   |

[www.wmich.edu/evaluation/checklists](http://www.wmich.edu/evaluation/checklists)



**Engineering technicians:  
High demand, low supply**









**Project Goal:**

Attract female students to the course and motivate them to pursue degrees in engineering technology or preengineering



Complete course curriculum



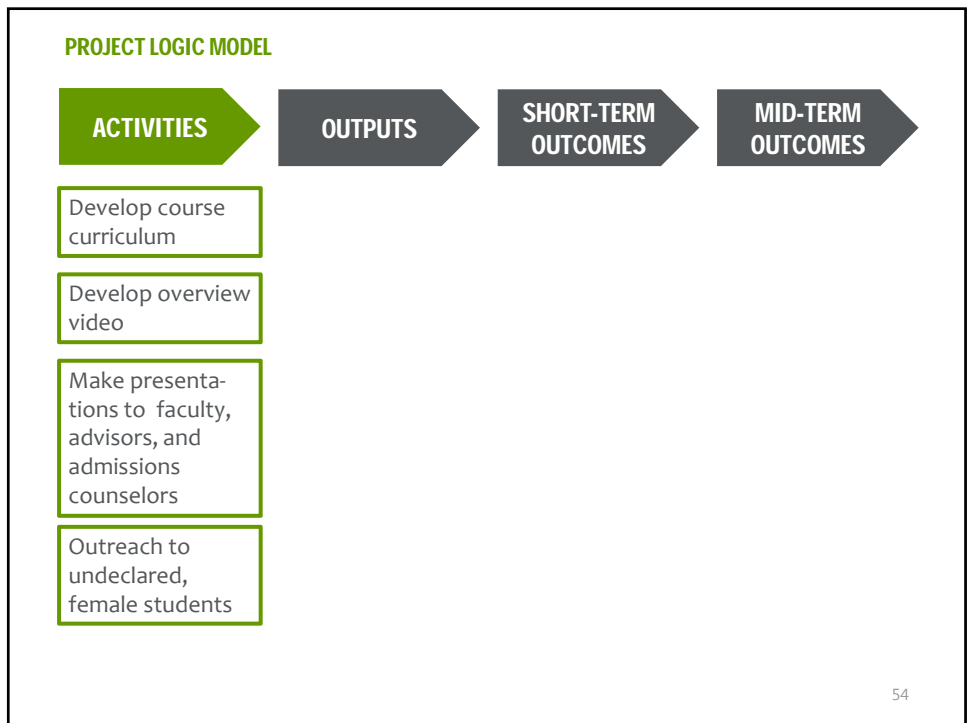
Develop promotional video

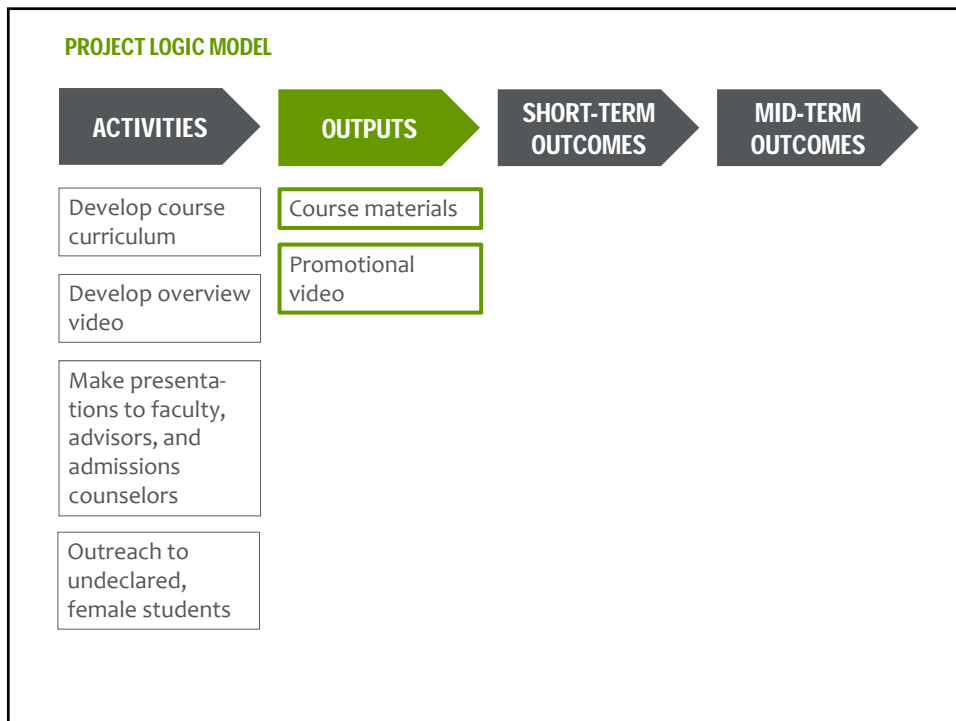
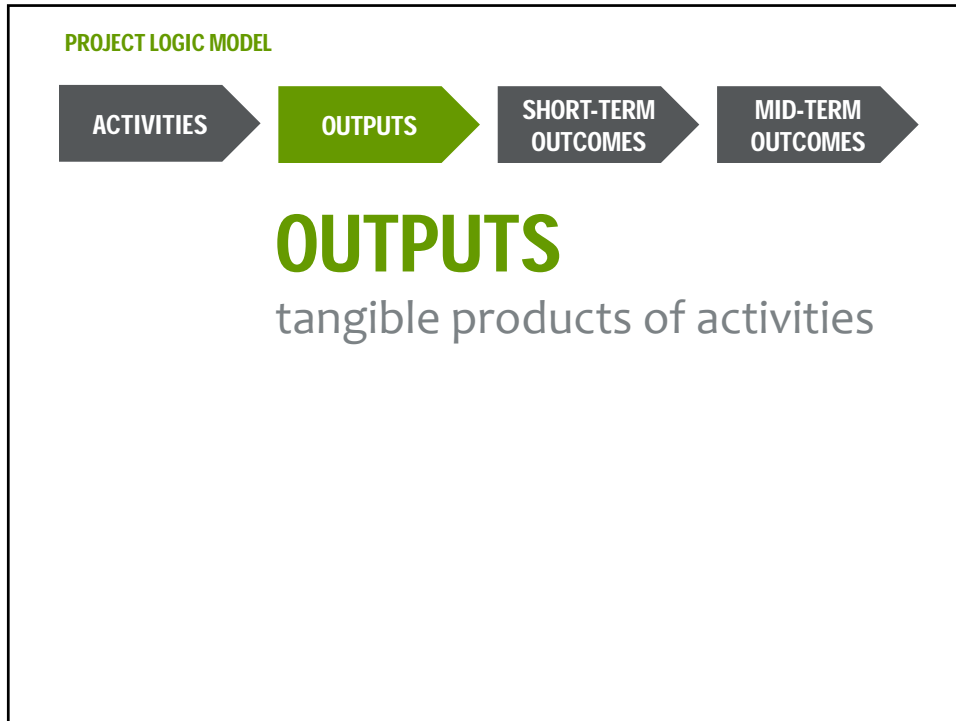


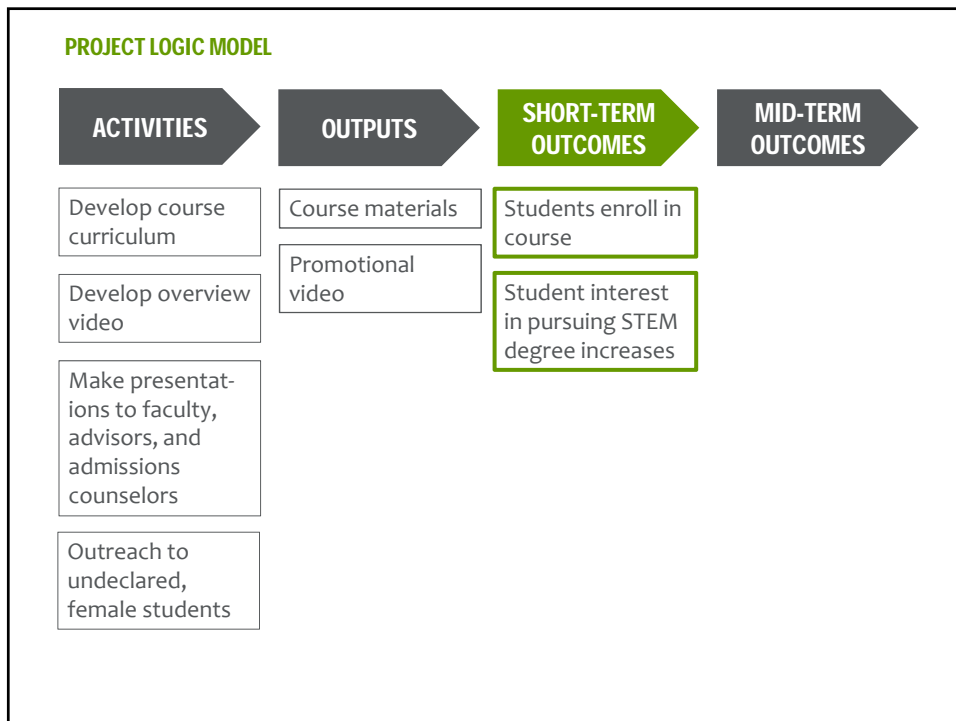
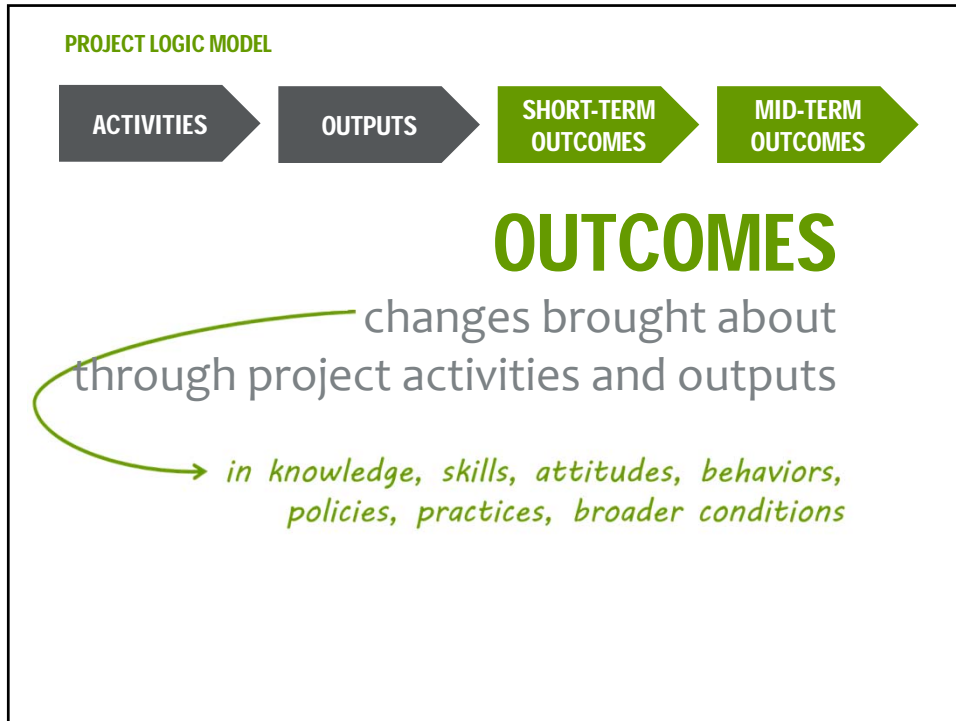
Raise awareness among college personnel

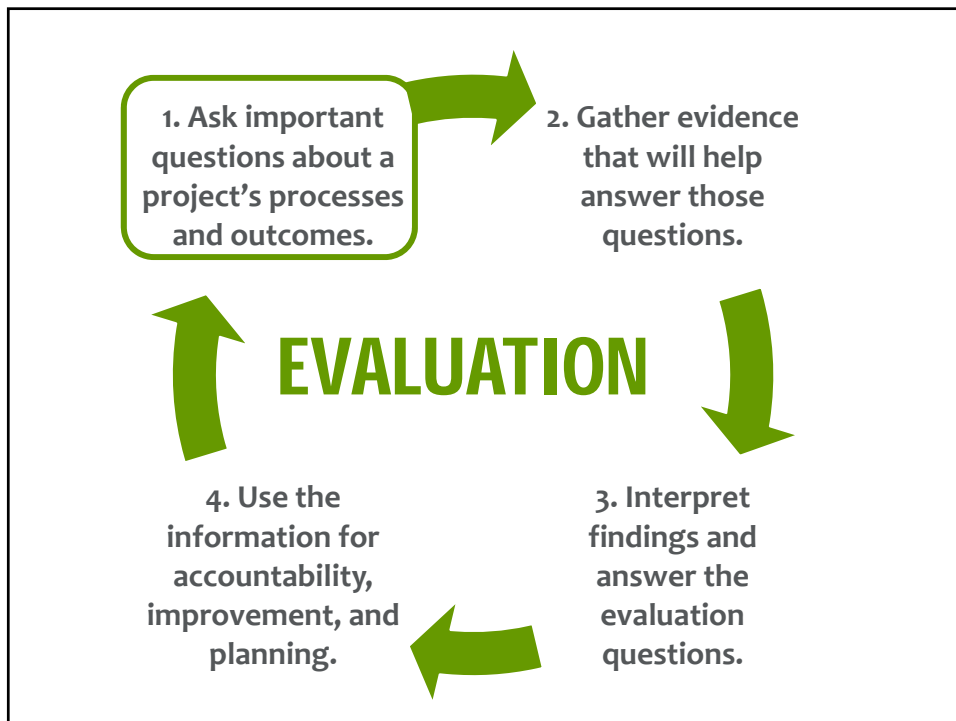
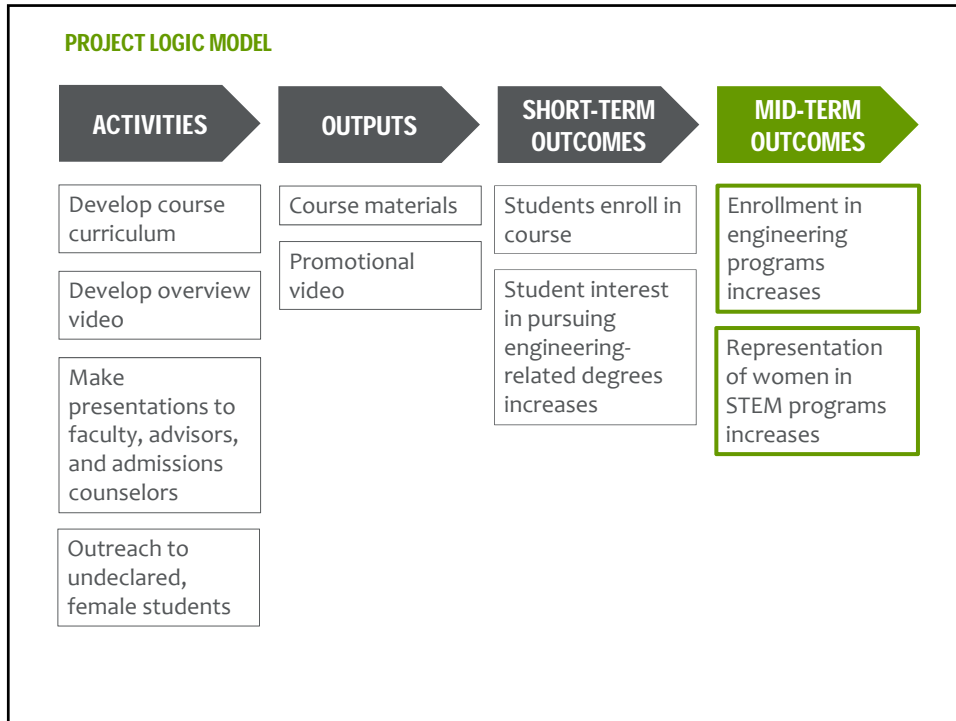


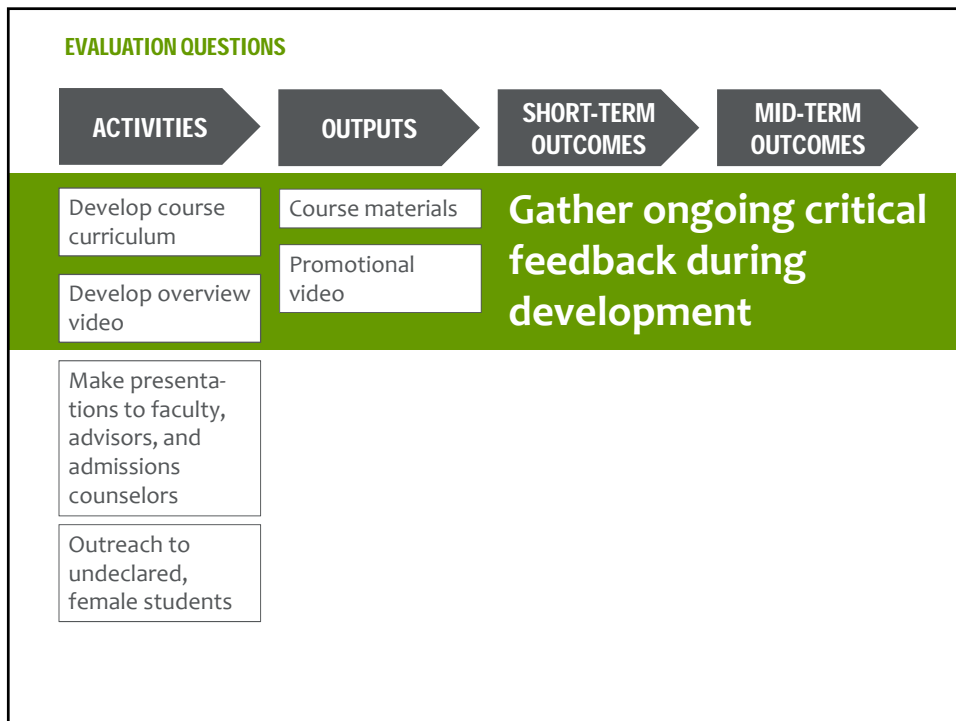
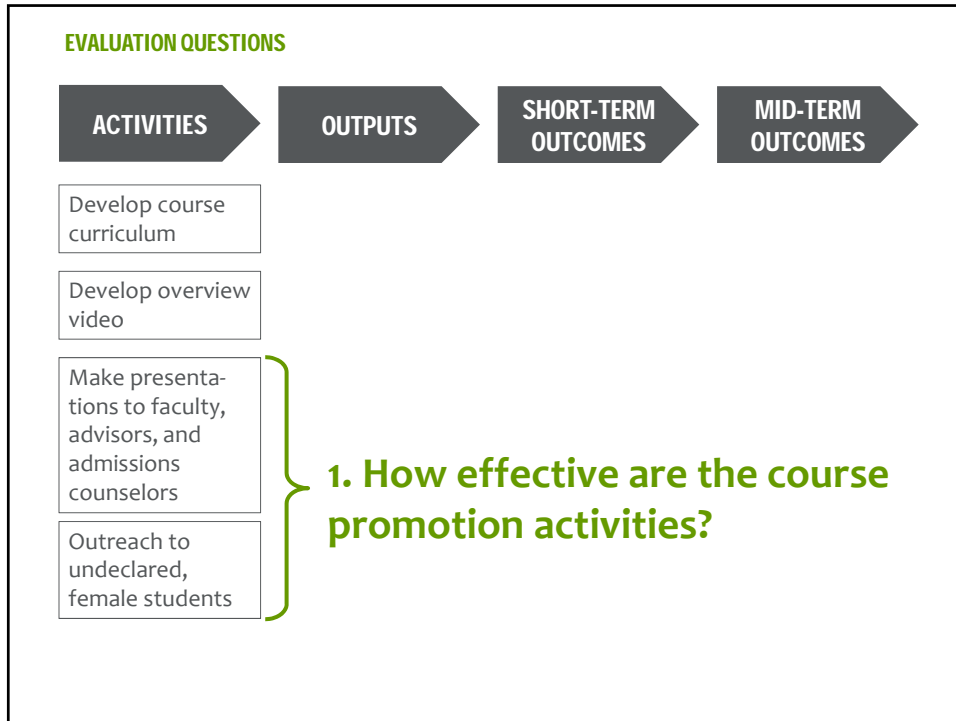
Outreach to female students with undeclared majors

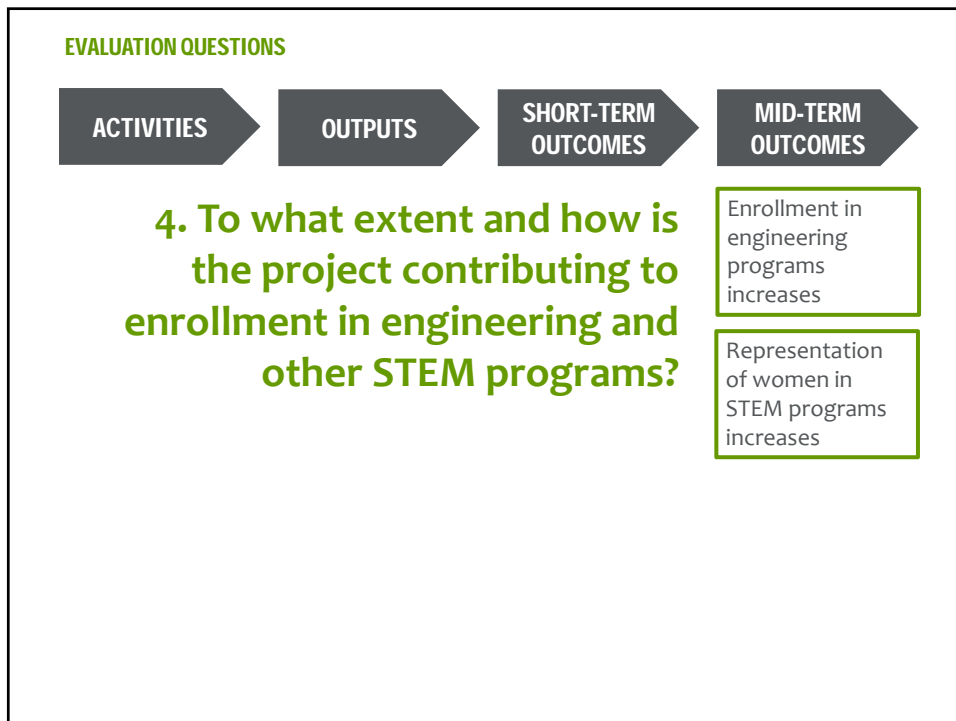
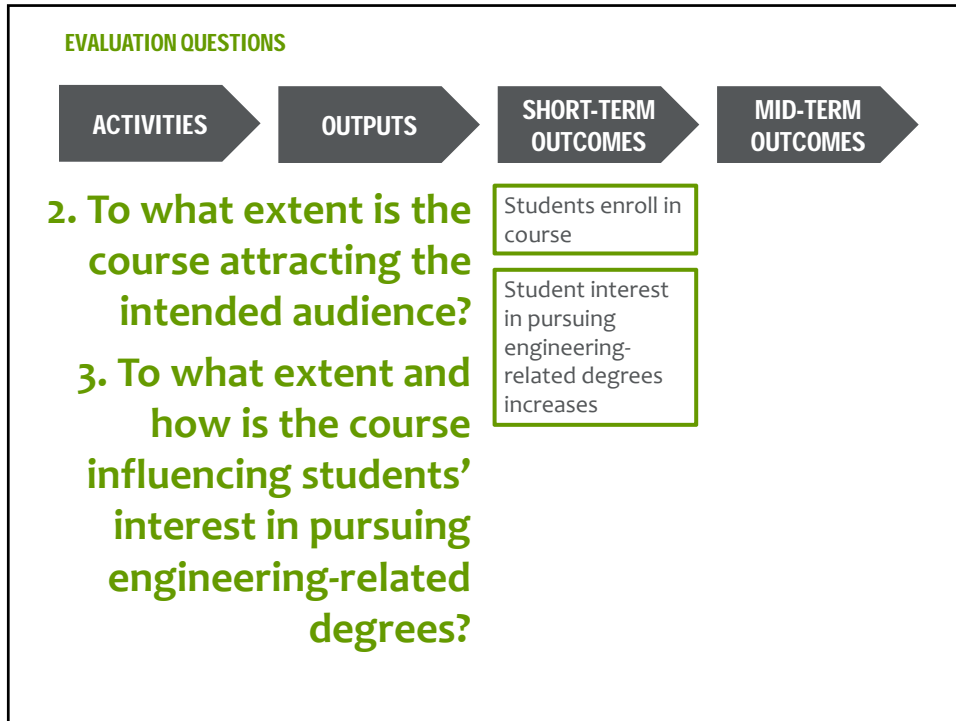












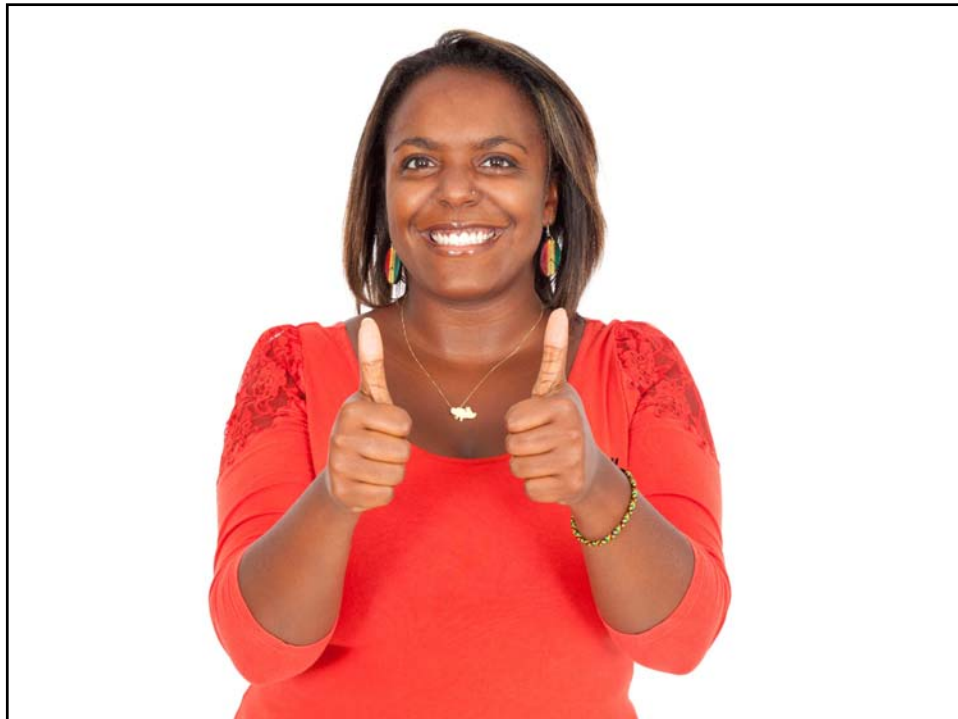
## EVALUATION QUESTIONS

### Bio-Inspired Solutions to Human Challenges Project

1. How effective are the course promotion activities?
2. To what extent is the course attracting the intended audience?
3. To what extent and how is the course influencing students' interest in pursuing engineering-related degrees?
4. To what extent and how is the project contributing to enrollment in engineering and other STEM programs?

Process

Outcome







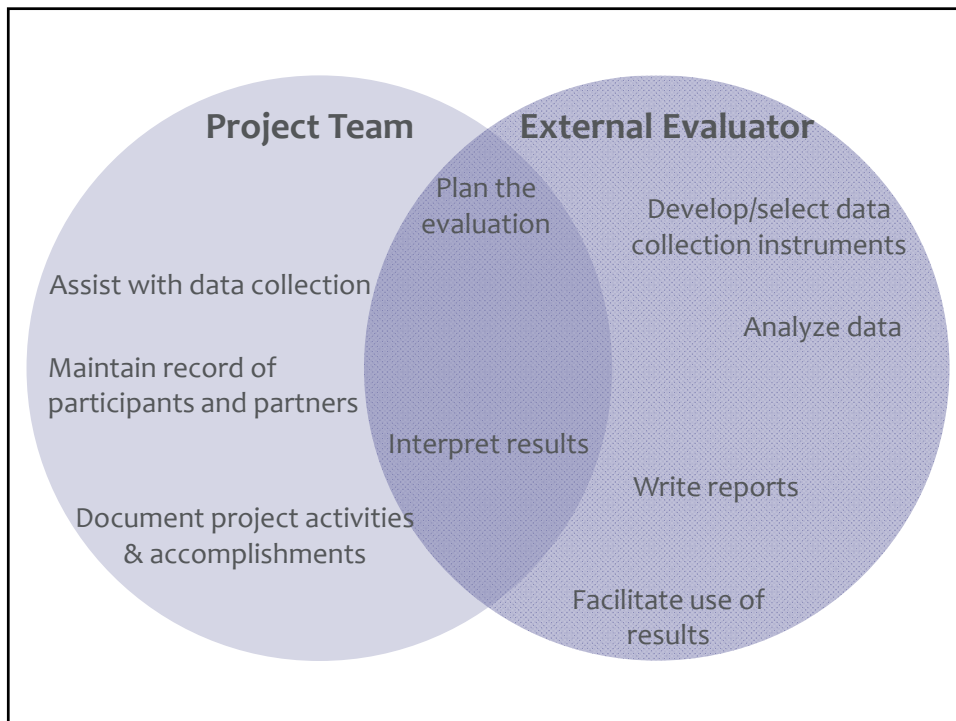
**TALES FROM  
THE TRENCHES**  
*Elaine Craft*

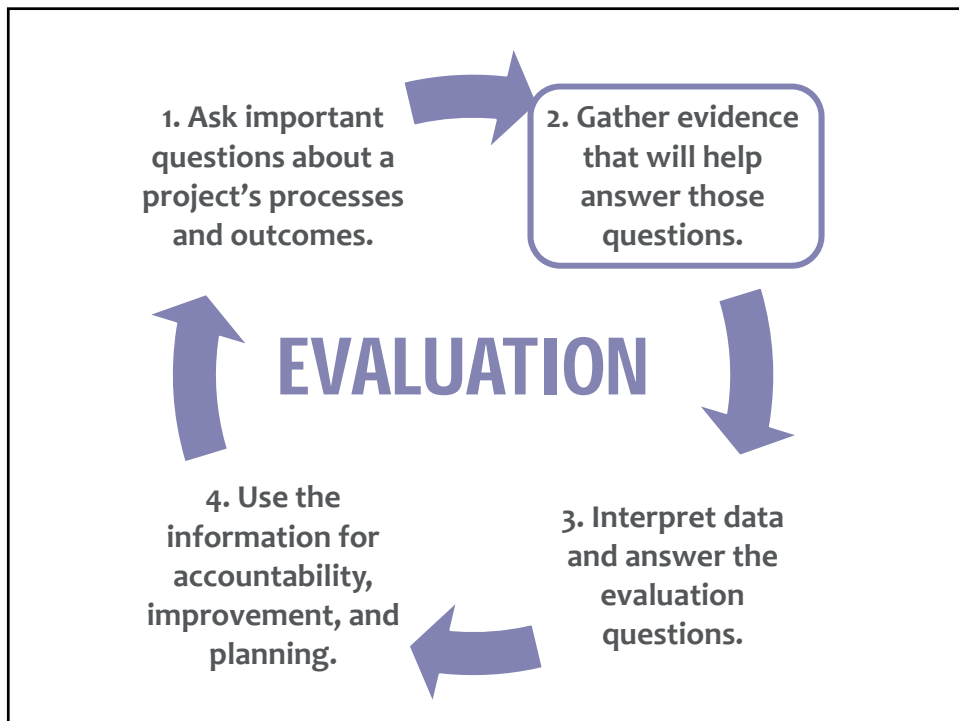
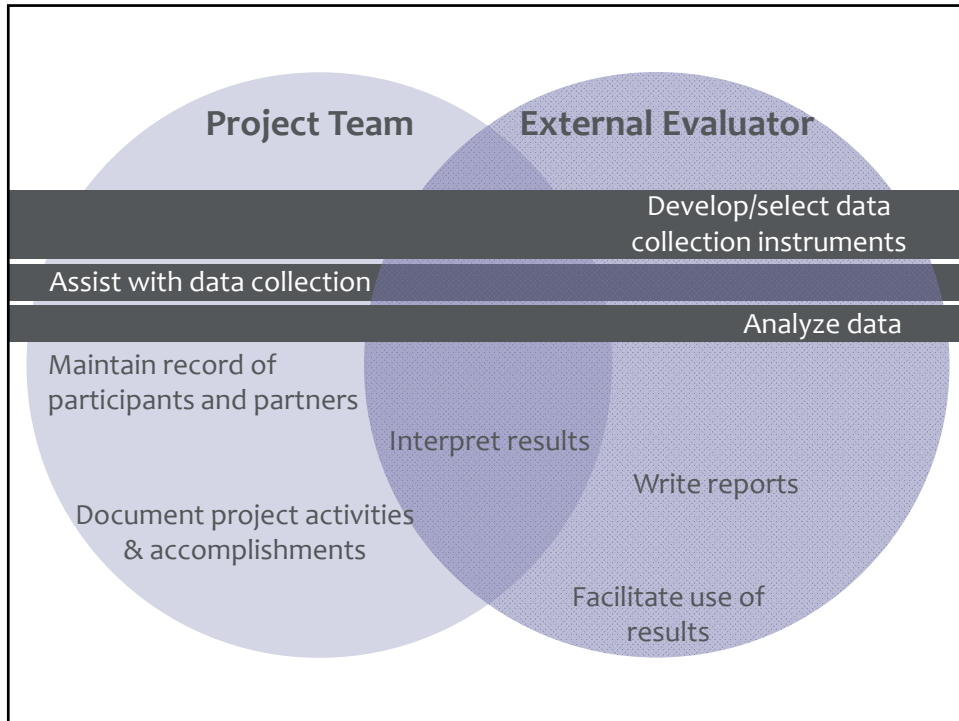


**DATA COLLECTION &  
DIVISION OF LABOR**  
*Lori Wingate*

## ENHANCING EVALUATION EFFICIENCY

- Match the scope of the evaluation to the scope of the project.
- Involve the project team in monitoring the project and implementing the evaluation.
- Use institutional data to the extent possible.





**Evaluation Question 1:**  
**How effective are the course promotion activities?**

| INDICATORS  | DATA SOURCES/<br>METHODS                | RESPONSIBILITY   |
|---|---|--|
| Course enrollment numbers (as proportion of capacity) | Institutional data                      | Obtained from college institutional research office by project team  |
| Students' reports of why they enrolled in the course  | Survey of students who enroll in course | <b>Survey development:</b> External evaluator with project team input<br><b>Survey administration:</b> Course instructors<br><b>Analysis:</b> External evaluator |

**Evaluation Question 2:**  
**To what extent is the course attracting the intended audience?**

| INDICATORS  | DATA SOURCES/<br>METHODS                | RESPONSIBILITY   |
|---|---|--|
| Number and percentage of students who are female and/or undeclared majors | Survey of students who enroll in course | <b>Survey development:</b> External evaluator with project team input<br><b>Survey administration:</b> Course instructors<br><b>Analysis:</b> External evaluator |

Evaluation Question 3:

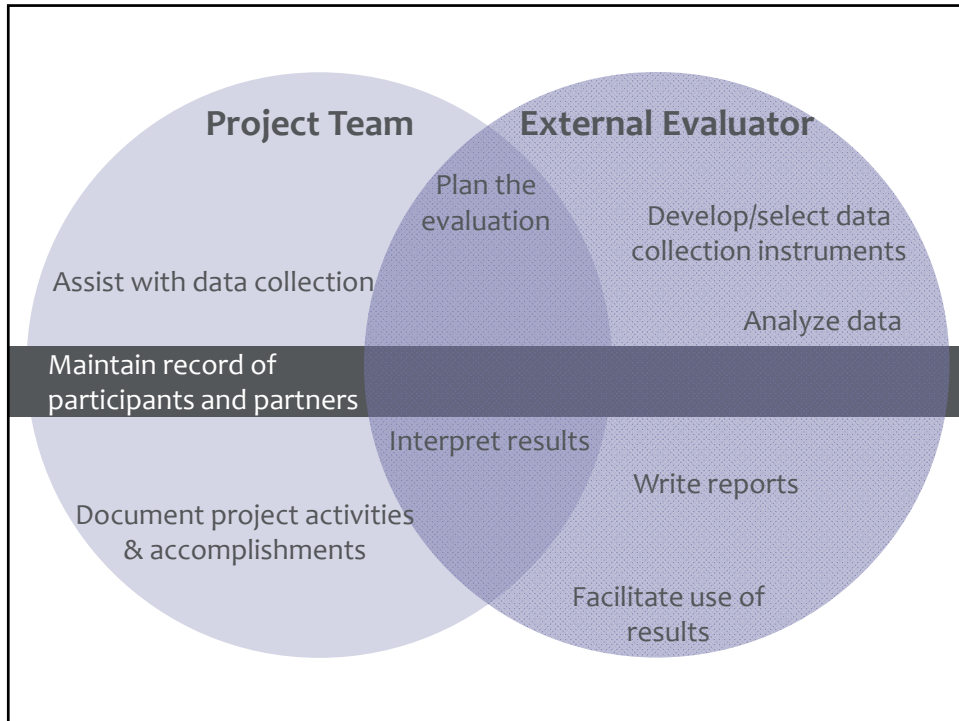
To what extent and how is the course influencing students' interest in pursuing engineering-related degrees

| INDICATORS  | DATA SOURCES/<br>METHODS                   | RESPONSIBILITY   |
|---|--|--|
| Number and percentage of students indicate intent to pursue STEM degree                                       | Survey of students who complete the course | <b>Survey development:</b><br>External evaluator with project team input<br><b>Survey administration:</b><br>Course instructors<br><b>Analysis:</b> External evaluator |
| Students' reports of the degree to which and how the course influenced their decisions about what to major in |  |  |

Evaluation Question 4:

To what extent and how is the project contributing to enrollment in engineering and other STEM programs?

| INDICATORS                  | DATA SOURCES/<br>METHODS | RESPONSIBILITY  |
|-----------------------------|--------------------------|---|
| Change in enrollment trends | Institutional data       | <b>External evaluator, project team, and IR office:</b> define needed data<br><b>IR office:</b> Supplies data to project team and evaluator |



## TRACKING REACH & ENGAGEMENT

Use spreadsheet or database software to keep a log of **WHO PARTICIPATED** and their

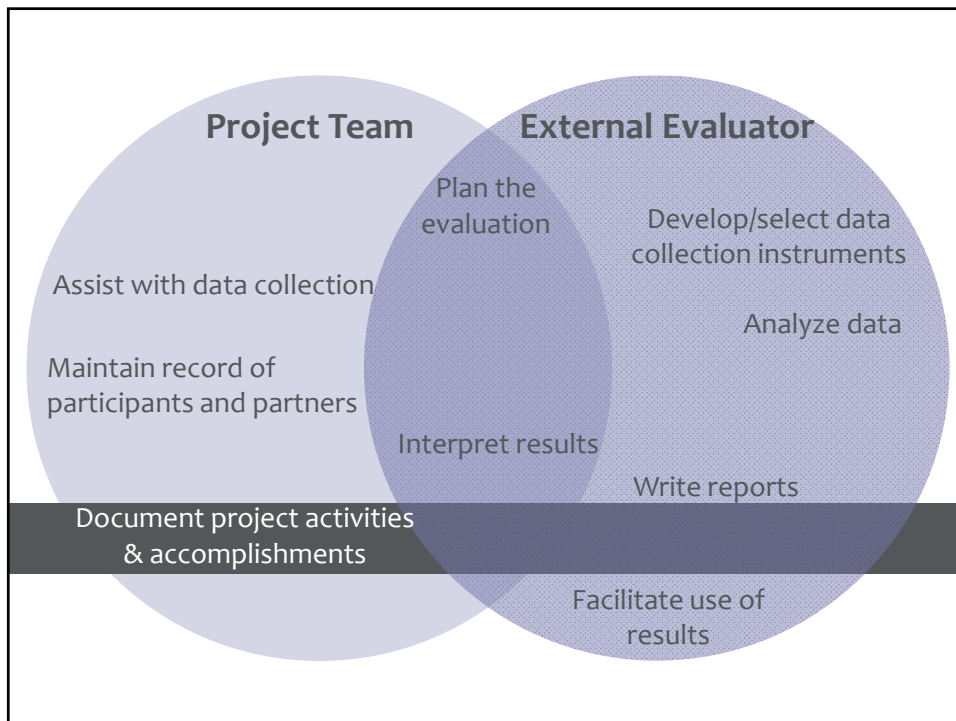
- ✓ key demographics
- ✓ contact information
- ✓ involvement in the project, including dates


**students – faculty – staff – partners – advisors**

## PARTICIPANT & PARTNER DATA

Also needed for

- NSF annual reports
- ATE annual survey








**ATE Evaluation Resource Center**  
Resume | February 2016

---

EvaluATE is located within The Evaluation Center at Western Michigan University in Kalamazoo, Michigan. We are supported by the National Science Foundation under Grant Nos. 0802245 and 1204683.

**Mission**

EvaluATE promotes the goals of the Advanced Technological Education (ATE) program by partnering with ATE projects and centers to strengthen the program's evaluation knowledge base, expand the use of exemplary evaluation practices, and support the continuous improvement of technician education throughout the nation.

**Goals**

- Ensure that all ATE PIs and evaluators know the essential elements of a credible and useful evaluation
- Maintain a comprehensive collection of online resources for ATE evaluation
- Strengthen and expand the network of ATE evaluation stakeholders
- Gather, synthesize, and disseminate data about ATE program activities to advance knowledge about ATE/technician education

**Funding**

July 2008-June 2013 (includes 1-year no-cost extension): \$2,069,415  
August 2012-July 2016: \$2,186,660

**Staffing**

~2.5 FTE, not including contracted work

**Activities**

Webinars (each webinar's presenters are listed alphabetically)

Lee, M., MacDonald, G., & Wingate, L. (2015, December). *The retrospective pretest method for evaluating training.*

Perk, E., & Wingate, L. (2015, August). *Evaluation: Don't submit your ATE proposal without it.*

MacDonald, G., Perk, E., & Wingate, L. (2015, June). *Checklists for improving evaluation practice.*

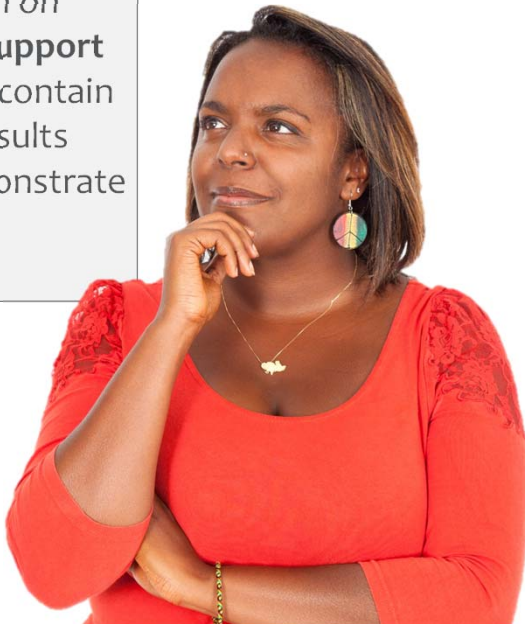
Burkhardt, J., Perk, E., & Wingate, L. (2015, May). *Naked reporting: Shedding the narrative.*

www.evaluate-ate.org | (269) 387-5922 | Western Michigan University

Create a project resume that includes a project profile and record of activities, products, people, etc.

To learn more, see [www.evaluate-ate.org/webinars/2015-may](http://www.evaluate-ate.org/webinars/2015-may)

The Project Description must begin with the subsection on **Results from Prior NSF Support** ... This subsection must contain specific outcomes and results including metrics to demonstrate the impact of the project activities.







**TALES FROM  
THE TRENCHES**  
*Elaine Craft*



**TIPS FOR WORKING WITH  
INSTITUTIONAL RESEARCH**  
*Russell Cannon*

## IR AS EVALUATION RESOURCE: ALWAYS ASK THE ARCHIVIST

**Who ARE they?**

**What do THEY know?**

- What's out there... and its limitations
- What ELSE is going on
- For many, social science methods and evaluation strategies feel like home

Source: Lucasfilm

Approach IR early




**“BEGIN  
WITH  
THE END  
IN MIND”**  
Covey 1989

Start the conversation with the goals of the evaluation, not just the data elements

Come bearing documentation

- plan
- requirements
- definitions
- dates

*If they aren't mandated, come to an agreement.*

A photograph of a man in a dark suit sitting at a desk, looking over a very tall, thick stack of papers that completely obscures his face. He has a slightly stressed or overwhelmed expression on his face.

## INSTITUTIONAL DATA: THE CLASSICS

### “Source of Record”

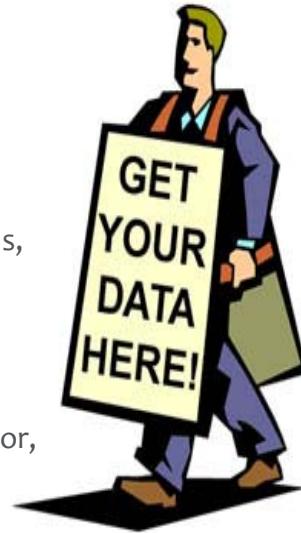
- IPEDS, External Reporting
- Imperfect, but as good as it gets

### Student Demographics

- Race/Ethnicity, Sex, Low-Income Status, Age, Veteran Status, Incoming Test Scores

### Enrollment

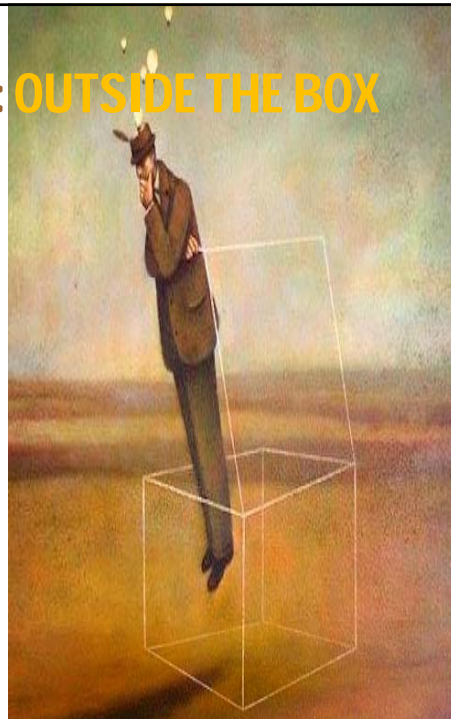
- Courses, FT/PT Status, GPA, Major/Minor, Retention, Graduation



## INSTITUTIONAL DATA: OUTSIDE THE BOX

### Surveys

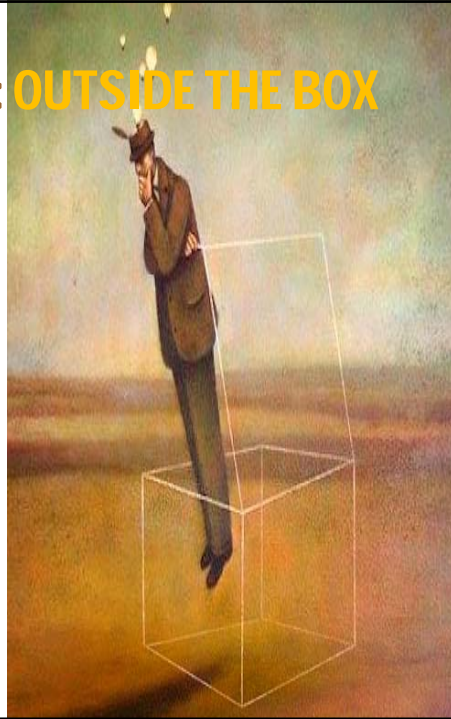
- May be tied to student ID or student groups
- Surveys focused on Admitted Students, New Students, First Year/Senior Engagement, Graduating Students, and Alumni are common



## **INSTITUTIONAL DATA:** OUTSIDE THE BOX

### **Lists of Student Support Services and Concurrent Interventions**

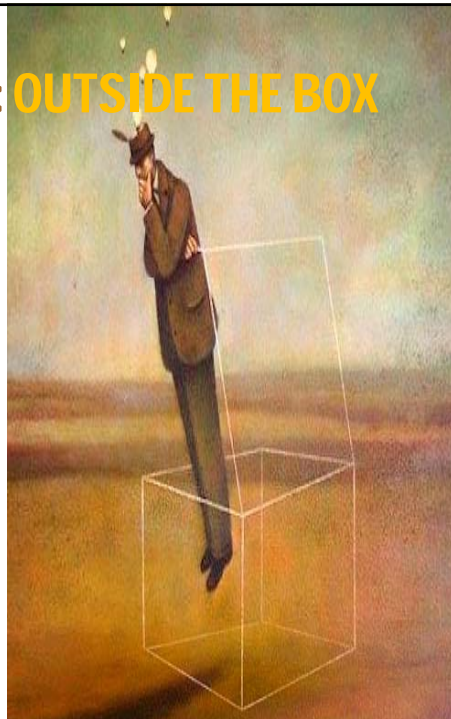
- Partners, confounders, opportunities for embedding and assessing



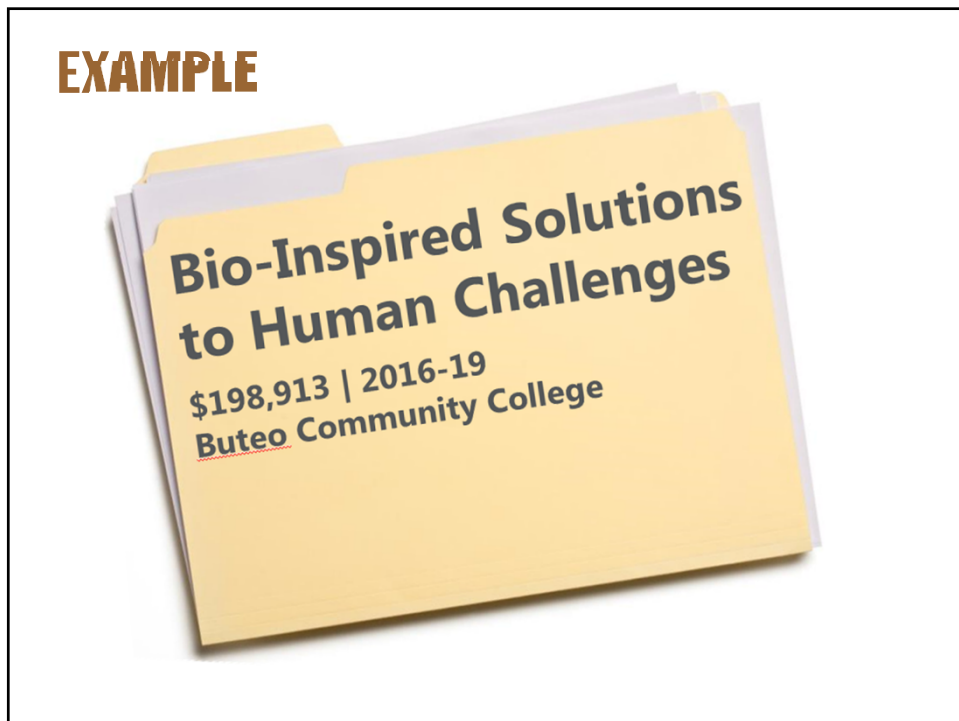
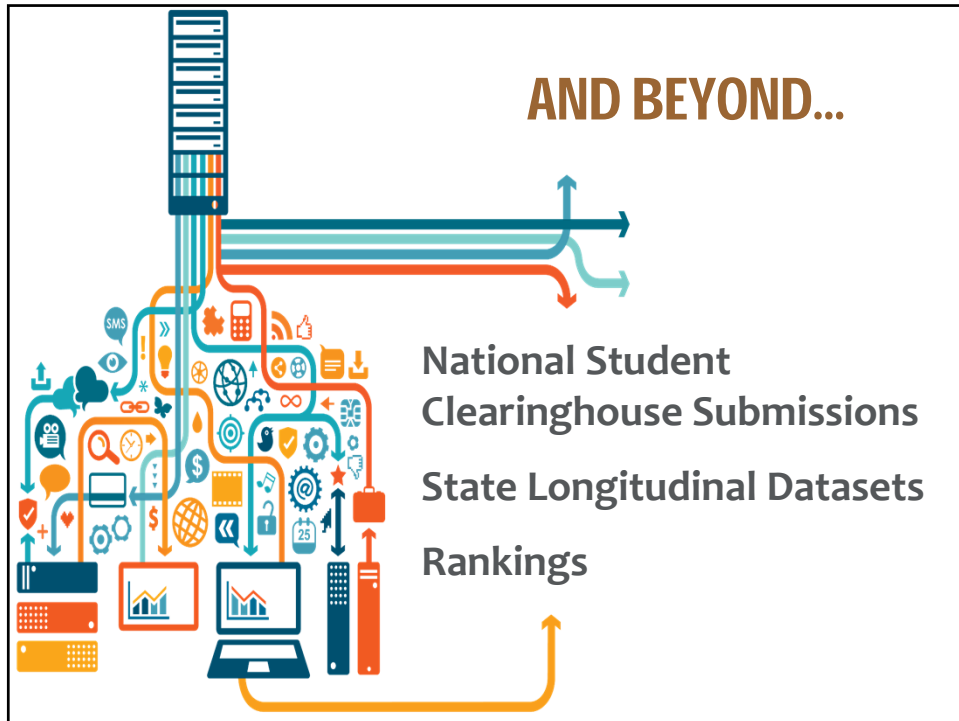
## **INSTITUTIONAL DATA:** OUTSIDE THE BOX

### **Data on Student Behavior**

- Card-swipe systems, club membership







## Demographics

- Campus, engineering, existing intro-courses? (baseline)
- Of new course (outcome of outreach)



## Retention



in course      at institution      to STEM major      to STEM degree

## Transfer

- National Student Clearinghouse or data sharing agreement



[www.studentclearinghouse.org](http://www.studentclearinghouse.org)

## Entering student beliefs, student activities, graduating student intent

- Campus survey paired with program survey
- Course evaluations?



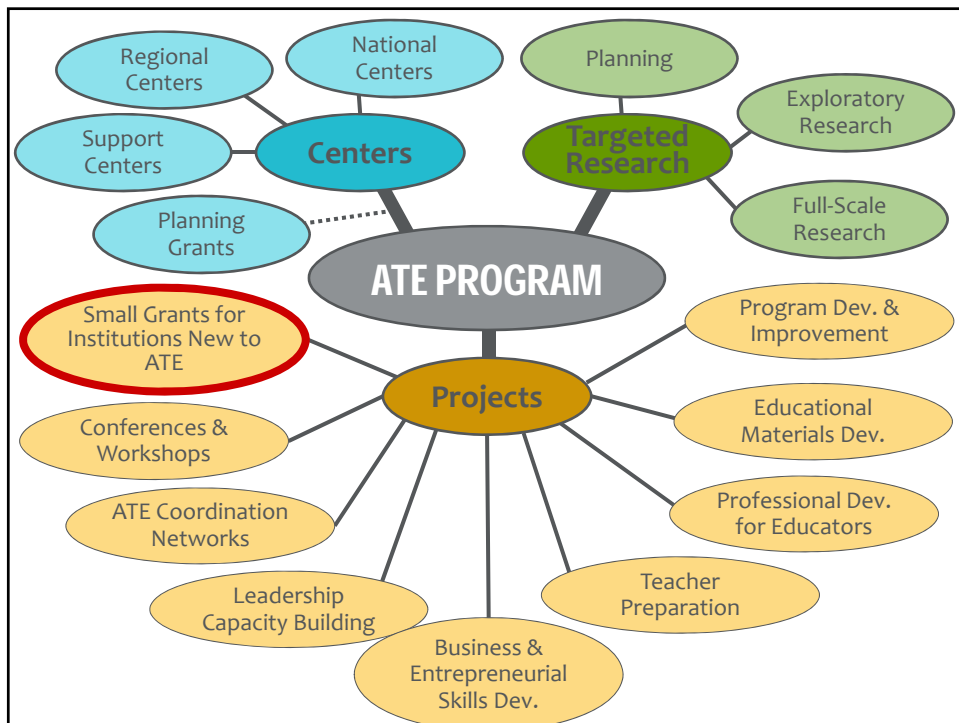
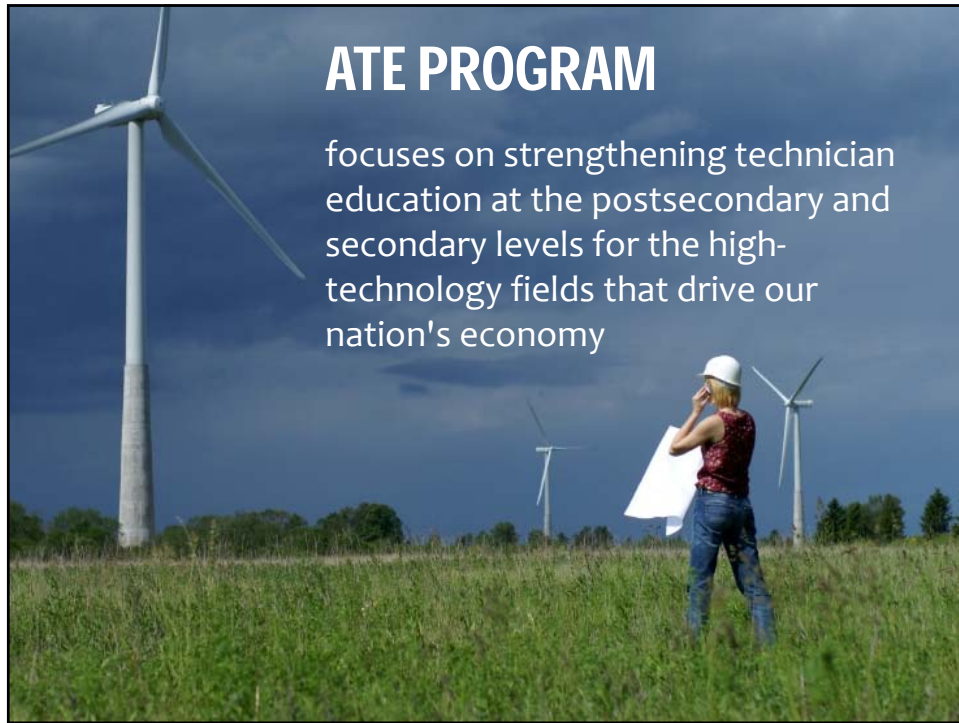




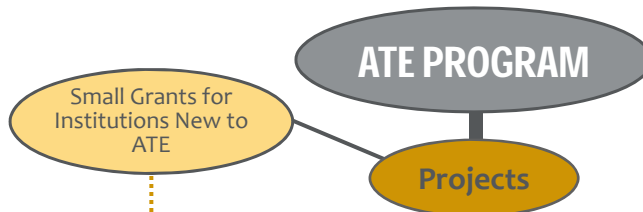
**TALES FROM  
THE TRENCHES**  
*Elaine Craft*



**THE ATE PROGRAM &  
MENTOR-CONNECT**  
*Charlotte Forrest*

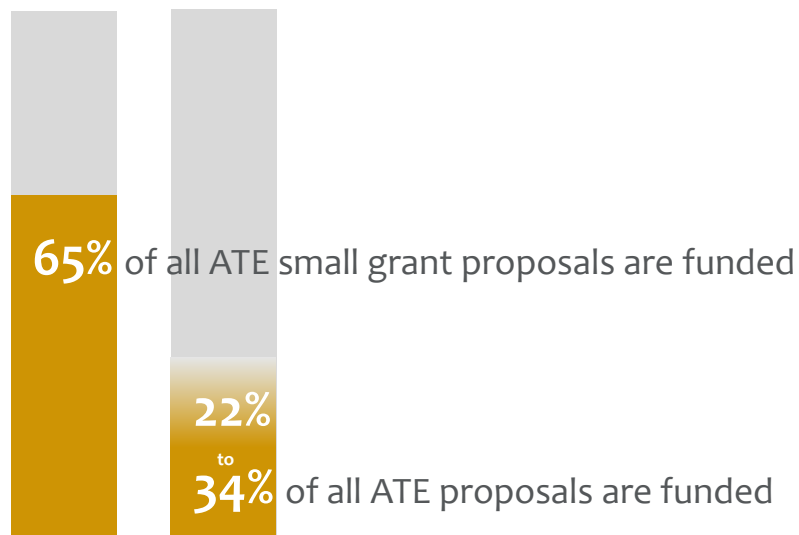


## BROADENING THE BASE OF COMMUNITY COLLEGES INVOLVED IN ATE



- ✓ Only community college campuses that have not had an ATE award in the past 10 years may apply
- ✓ \$200,000 over 3 years
- ✓ 12-20 awards made per year

## PROPOSAL SUCCESS RATES (APPROXIMATE)



Source: Celeste Carter (personal communication, 2016)

## **SOME FULL-SCALE PROJECTS EVOLVE INTO CENTERS**




## **MENTOR-CONNECT**



provides comprehensive and interactive support for leadership development and knowledge transfer by developing and supporting potential, current and former grantees

Applications available this summer at  
**[www.mentor-connect.org](http://www.mentor-connect.org)**

|        | GETTING HELP FROM MENTOR-CONNECT |          |
|---|----------------------------------|----------|
|   | Mentor-Connect Mentees           | Everyone |
| Worksheet to guide development of project focus and rationale                           | ✓                                |          |
| 2 workshops on grant writing and leadership skills                                      | ✓                                |          |
| ATE mentor for personalized assistance with grant development and submission            | ✓                                |          |
| 3 technical assistance webinars   |                                  | ✓        |
| Online resources (e.g., samples, checklists, guidelines, tutorials, webinar recordings) |                                  | ✓        |
| Help desk access (phone, email)   |                                  | ✓        |

## EVALUATE'S NEXT WEBINAR:



**Meeting Requirements, Exceeding Expectations: Understanding the Role of Evaluation in Federal Grants**

May 25 | 1-2:30 p.m.

*Register at [www.evalu-ate.org/webinars](http://www.evalu-ate.org/webinars)*

*Thank You!*



[www.evalu-ate.org](http://www.evalu-ate.org)



[www.mentor-connect.org](http://www.mentor-connect.org)