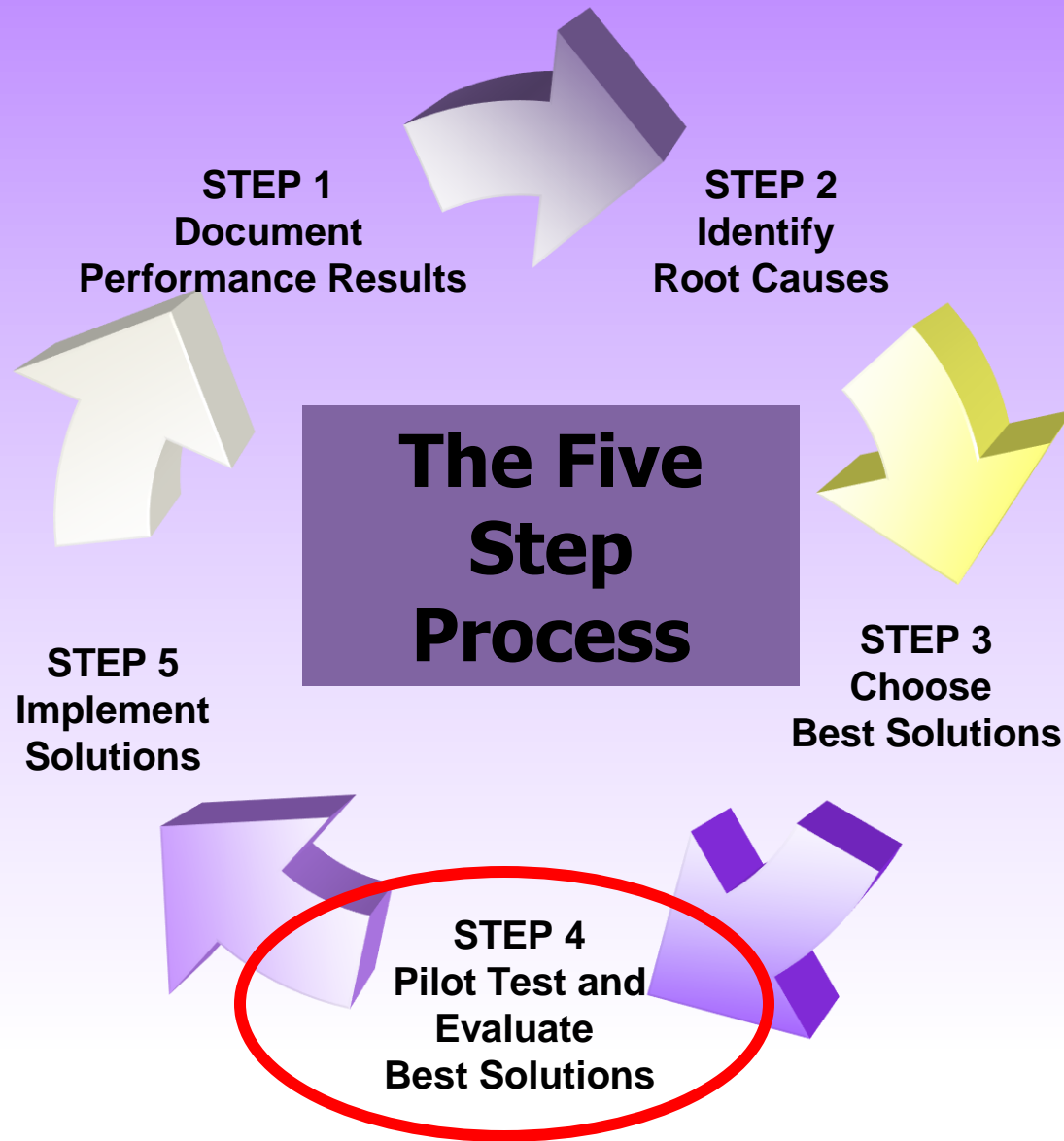


Ensuring Your Success

Project Management and Evaluation

Implementing the 5 Step Process

5-Step Program Improvement Process	STEM Equity Pipeline/MN New Look Implementation
Document performance results	Analyze local school information until you know what pathway or CIP's you will focus upon
Identify root cause	<ul style="list-style-type: none"> • Identify category of root cause and team members who can best help identify and intervene to fill gap • Devise and ask questions based upon <i>Nontraditional Career Preparation: Root Causes and Strategies</i>. • Gather information until you come as close as possible to the root cause of the “gap” in the pathway or CIP's that you chose to focus on.
Choose best solution	Select activity or activities that others have used to remedy a similar “gap.”
Pilot test and evaluation best solutions	<ul style="list-style-type: none"> • Set long-term goals and objectives based on Perkins Core Indicators or enrollment information • Set short-term goals and objectives based on the activity • Enact the activity • Analyze collected data
Implement Solutions	<ul style="list-style-type: none"> • Incorporate analysis into planning • Post summary of project to website



Evaluation

Types of Evaluations

- Formative Evaluation
 - Process measures
 - How well was the program implemented
 - “The cook tasting the soup”
- Summative Evaluation
 - Outcome measures
 - Did the program produce the desired results
 - “The guests taste the soup”

Goals and Objectives

- Goals are broad objectives are narrow.
- Goals are general intentions; objectives are precise.
- Goals are intangible; objectives are tangible.
- Goals are abstract; objectives are concrete.
- Goals can't be validated as is; objectives can be validated.

Write SMART Objectives

- Evaluation objectives must be
 - Specific
 - Measurable
 - Achievable
 - Relevant
 - Time-limited



Select Process Measures

- Attendance
- Response rate
- Satisfaction of implementers with process
- Satisfaction of participants with process
- On time accomplishment of tasks
- Quality evaluation of implementation services
- More

Process Objectives

- 75% of invitees will respond to the invitation by the RSVP date
- 60% of the invitees will attend the event
- 50% of the participants will bring at least one parent or guardian to the event
- 75% of the participants will score their satisfaction with the event as a 4 (very good) or 5 (excellent) on the exit evaluation instrument

Process Measurement Tools

- Invitation/Outreach records
- Registration/Response records
- Attendance records
- Participant demographics
- Evaluation instrument
- Planning timeline
- More

Select Outcome Measures

- Long-term goals
 - Enrollment
 - Achievement
 - Completion
 - Graduation
 - Transition

- Short-term goals
 - Increase in awareness
 - Increase in knowledge
 - Change in attitude
 - Change in behavior

Long-term goals

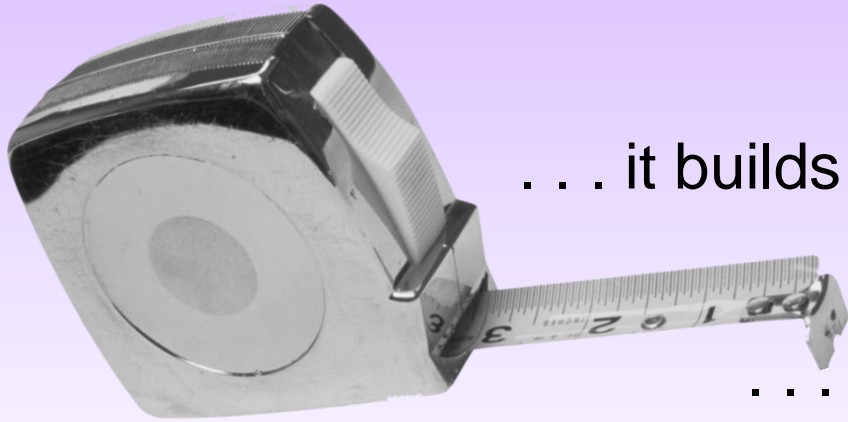
Start with long-term goals because . . .

. . . impacting enrollment and completion takes time.

. . . it builds the pipeline.

. . . it supports partnering

. . . it usually uses established measurement like performance indicators or institution-collected data.



Long-term Goals and Objectives

- Increase the participation of females in Ag
 - From FY09 to FY11, female enrollment in Ag 010101 will increase by 5 percentage points as measured by Overton Banner Data Collection System.
- Increase the participation of females in PLTW
 - The participation rate of girls in the Gateway to Technology course at the middle school will increase by 5 percentage points the year following the implementation of the Focus Your Future event as measured by Perkins reported enrollment data

Long Term Measurement Tools

Typically maintained by administration or institutional research office and reported to a funder, accrediting agency or system agency

- Student level demographic data
- Attendance records
- Achievement records
- Graduation records
- Perkins core indicator data

Select Outcome Measures

- Long-term goals
 - Enrollment
 - Achievement
 - Completion
 - Graduation
 - Transition

- Short-term goals
 - Increase in awareness
 - Increase in knowledge
 - Change in attitude
 - Change in behavior

Short-term Goals

- Align and support achievement of long-term goals.
- May be tied to a specific activity.
- Generated through research on effective methods to reach long-term goal.
- Measured through activity-specific tools.
- Contain same elements as good long-term goals.

Short-term Objectives

- 80% of participants in Female Farm Today workshop will increase their knowledge of farm business practices as measured in pre- and post-workshop survey.
- After participating in Focus Your Future event 50% of the participating students will show a one point (on a 5 point likert scale) increase in their willingness to consider enrolling in the pre-engineering program at the high school.

Short-term Measurement Tools

- Pre-post attitude assessment
- Pre-post knowledge assessment
- Evaluation instrument
- Post activity survey

Session Immediate Post Survey

<p>From this session, I learned about engineering</p> <p>Not a lot 1 2 3 4 5 A lot</p> <p>Some</p>	<p>This session increased my interest in engineering</p> <p>Not a lot 1 2 3 4 5 A lot</p> <p>Some</p>	<p>I thought this presenter / engineer was</p> <p>poor 1 2 3 4 5 excellent</p> <p>good</p>	
	<p>Additional comments may be written on back</p>		
	<p>Fun Meter</p> <p>boring 1 2 3 4 5 awesome</p> <p>ok</p>		

Pre-Post Knowledge Assessment

Topic/Objective	Column A Information/skills prior to workshop						Column B Information/skills after completing workshop						Column C Event or agenda item(s) which supported change
•Benefits of program improvement process	1	2	3	4	5	N/A	1	2	3	4	5	N/A	
•Steps of program improvement process	1	2	3	4	5	N/A	1	2	3	4	5	N/A	
•Benefits of self-study	1	2	3	4	5	N/A	1	2	3	4	5	N/A	
•Components of self-study	1	2	3	4	5	N/A	1	2	3	4	5	N/A	
•Root Causes of non-traditional completion and participation	1	2	3	4	5	N/A	1	2	3	4	5	N/A	
•Rationale for long and short-term goal setting	1	2	3	4	5	N/A	1	2	3	4	5	N/A	
•Components of good goals	1	2	3	4	5	N/A	1	2	3	4	5	N/A	

Develop an Evaluation Plan

Objective	Method	Person Responsible	Timeline/ Milestone
75% of invitees will respond to the invitation by the RSVP date	Response Rate	Henry	1
60% of the invitees will attend the event	Attendance Rate	Henry	2
50% of the participants will bring at least one parent or guardian to the event	Attendance Rate	Henry	2
75% of the participants will score their satisfaction with the event as a 4 (very good) or 5 (excellent) on the exit evaluation instrument	Evaluation survey	Susan	3
After participating in Focus Your Future event 50% of the participating students will show a one point (on a 5 point likert scale) increase in their willingness to consider enrolling in the pre-engineering program at the high school.	Evaluation survey	Susan	3

Summary

- Align short term goals with long term goals
- Tie long term objectives to existing data collection systems
- Tie short term objectives to activities
- Check for any required data
- Determine types of data needed—
quantitative, qualitative, or both?
- Decide on a data collection instrument
 - [Assessing Women in Engineering](#)
 - [ICSPS New Look Showcase](#)
- Develop an Evaluation Plan

Sample Plan

Cluster: Science Technology, Engineering and Mathematics

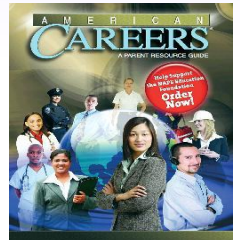
Pathway: Engineering and Technology

Root cause: Career Information Career information materials and practices that adhere to equitable standards can increase participation in classes that lead to non-traditional careers

Question: (For students) What would need to change for you to consider enrolling in the classes in the engineering pathway?

Strategy: Make other programs available such as after school activities, weekend programs and summer camps

Activity: Features: camp, marketing materials, parents newsletter, speakers panel, field trip



Goals

- Long Term Goal
 - Increase the participation of females in PLTW
- Short Term Goals
 - link the students from the high level courses into pre-engineering courses by
 - raising awareness for college credits and the employment opportunities available in the engineering pathway, and
 - address and educate the female students on how existing stereotypes hinder girls from progressing in this career field

Long-term objective

Increase the participation of females in Project Lead the Way courses to 25% by 2012.

Measured through high school attendance data and reported by _____ to the STEM Equity Pipeline team annually.

Activities

- Offer a Project Lead the Way Gateway Summer Camp
- Create and disseminate an article for a parents newsletter that describes how parents influence career choices of their children
- Create and disseminate informational literature about the pathways available for females in engineering.
- Organize a symposium for females during a luncheon that has a panel of female engineers discuss how they got into engineering and the careers that are available in this pathway.
- Offer a field trip to the University of Minnesota for females in engineering

Short-term Objectives

Summer camp activity:

50% of camp attendees will be female

80% of camp attendees will state that they have

- Increased awareness of college credits that are available to students.
- Increased information about employment opportunities available in engineering pathway.
- Increased information about overcoming existing stereotypes in engineering field.
- Intention to consider engineering career.

60% of camp attendees will enroll in one of these courses:

- Digital Electronics
- Principles of Engineering
- Introduction to Engineering Design

Measuring Short-term Objectives

Event-based Pre and Post Survey

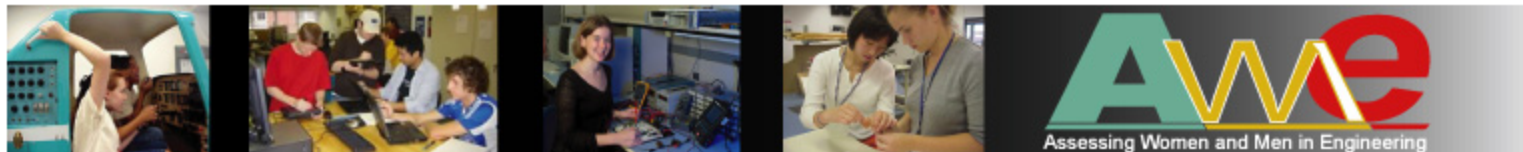
- Measure the objective before and after camp.
- Survey is objective-based, not activity-based.

Follow-up measurement

- Parent permission to retain names of participants and to share information about event.
- Retain names and compare to class enrollment annually for 2 years.
- Report findings annually to STEM Equity Pipeline committee

Assessment Resources

- STEM Equity Pipeline Webinars
 - May 21, 2008 Assessing Effectiveness: Do Your Program Activities Make a Difference?
 - June 16, 2008 Building Effective Program Assessments
 - Archived at www.stemequitypipeline.org
- [Assessing Women and Men in Engineering](http://www.aweonline.org) - www.aweonline.org



LOGON

Engineering Assessment Tools

What's New?

Revised ARP Resources now available!

[Mentoring Self-Efficacy in STEM Interest and Academic Self Concept](#)

Updated [AWE Data Entry Template](#) for AWE Pre-College Surveys now available for download.

We are looking for authors for AWE-CASEE Literature Overviews. [Click here](#) to find out more.

Register

One time registration is required to access various services.

Who Persists?

New survey develops profile of students who persist in engineering

Diversity Activity Surveys ▶

Retention Surveys ▶

Classroom Environment Surveys ▶

Pre-College Recruiting Surveys ▶

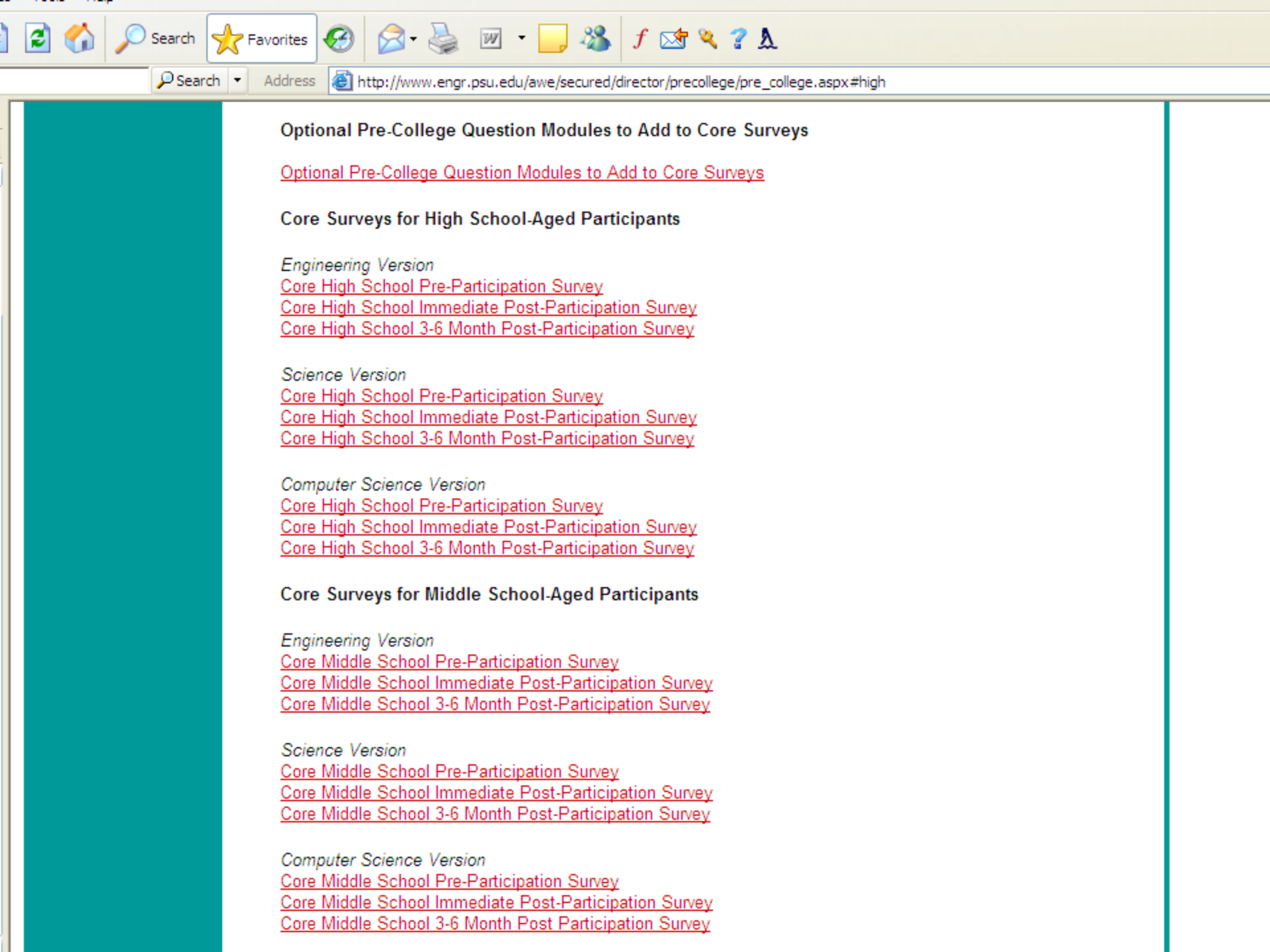
Applying Research to Practice ▶

Data Management ▶

Implementation Tools ▶

Other Services ▶





Optional Pre-College Question Modules to Add to Core Surveys

[Optional Pre-College Question Modules to Add to Core Surveys](#)

Core Surveys for High School-Aged Participants

Engineering Version

[Core High School Pre-Participation Survey](#)

[Core High School Immediate Post-Participation Survey](#)

[Core High School 3-6 Month Post-Participation Survey](#)

Science Version

[Core High School Pre-Participation Survey](#)

[Core High School Immediate Post-Participation Survey](#)

[Core High School 3-6 Month Post-Participation Survey](#)

Computer Science Version

[Core High School Pre-Participation Survey](#)

[Core High School Immediate Post-Participation Survey](#)

[Core High School 3-6 Month Post-Participation Survey](#)

Core Surveys for Middle School-Aged Participants

Engineering Version

[Core Middle School Pre-Participation Survey](#)

[Core Middle School Immediate Post-Participation Survey](#)

[Core Middle School 3-6 Month Post-Participation Survey](#)

Science Version

[Core Middle School Pre-Participation Survey](#)

[Core Middle School Immediate Post-Participation Survey](#)

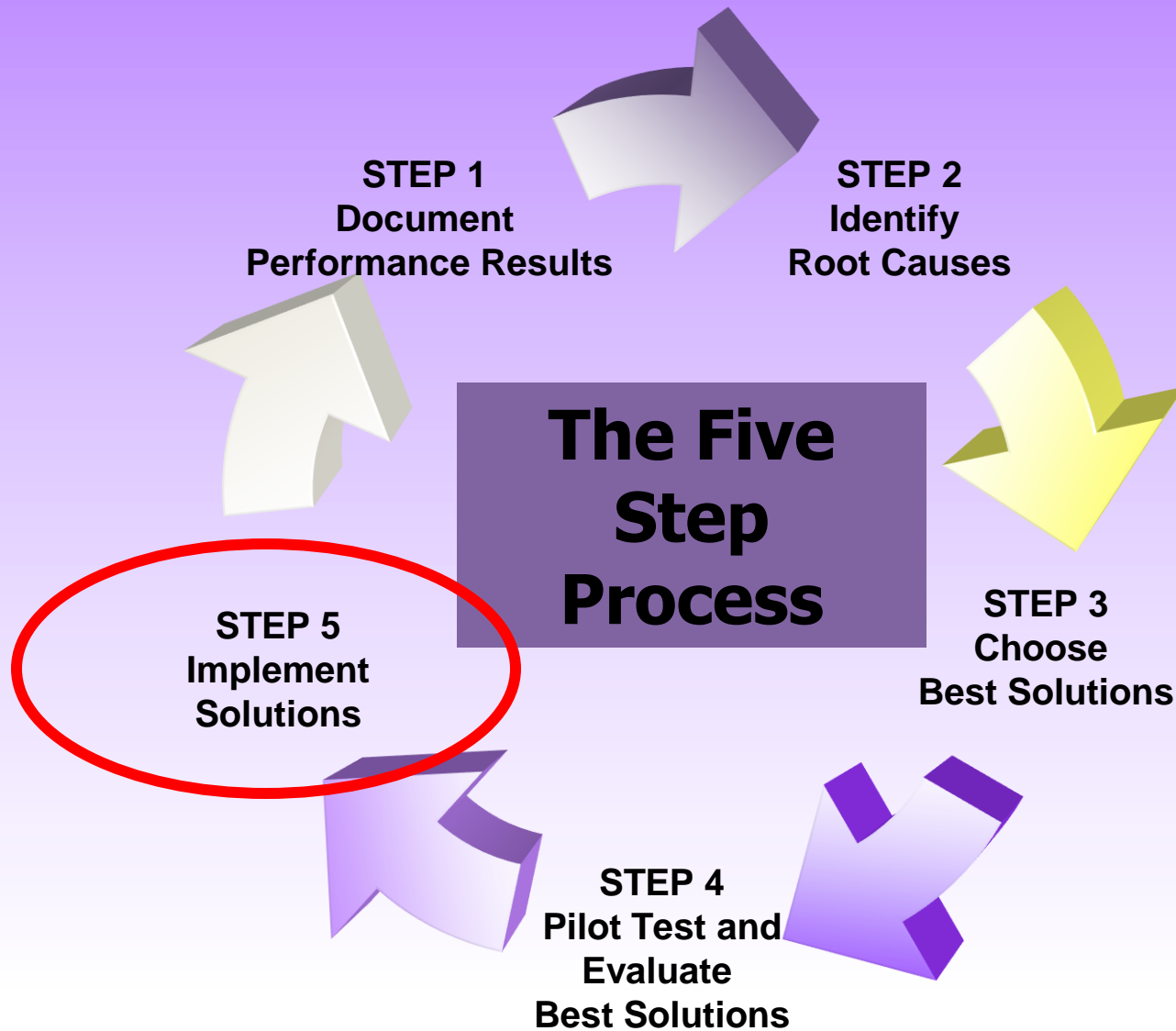
[Core Middle School 3-6 Month Post-Participation Survey](#)

Computer Science Version

[Core Middle School Pre-Participation Survey](#)

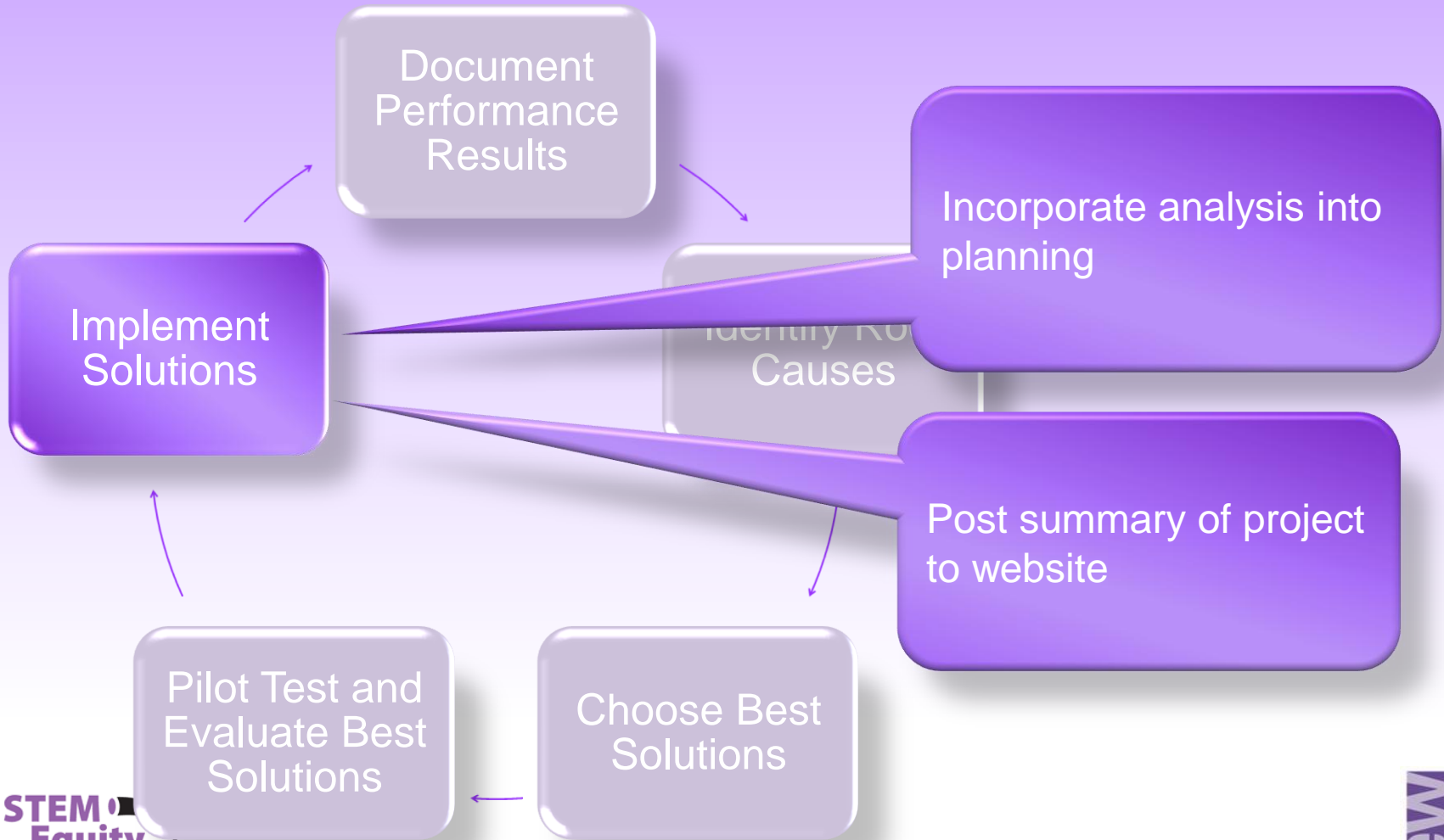
[Core Middle School Immediate Post-Participation Survey](#)

[Core Middle School 3-6 Month Post Participation Survey](#)

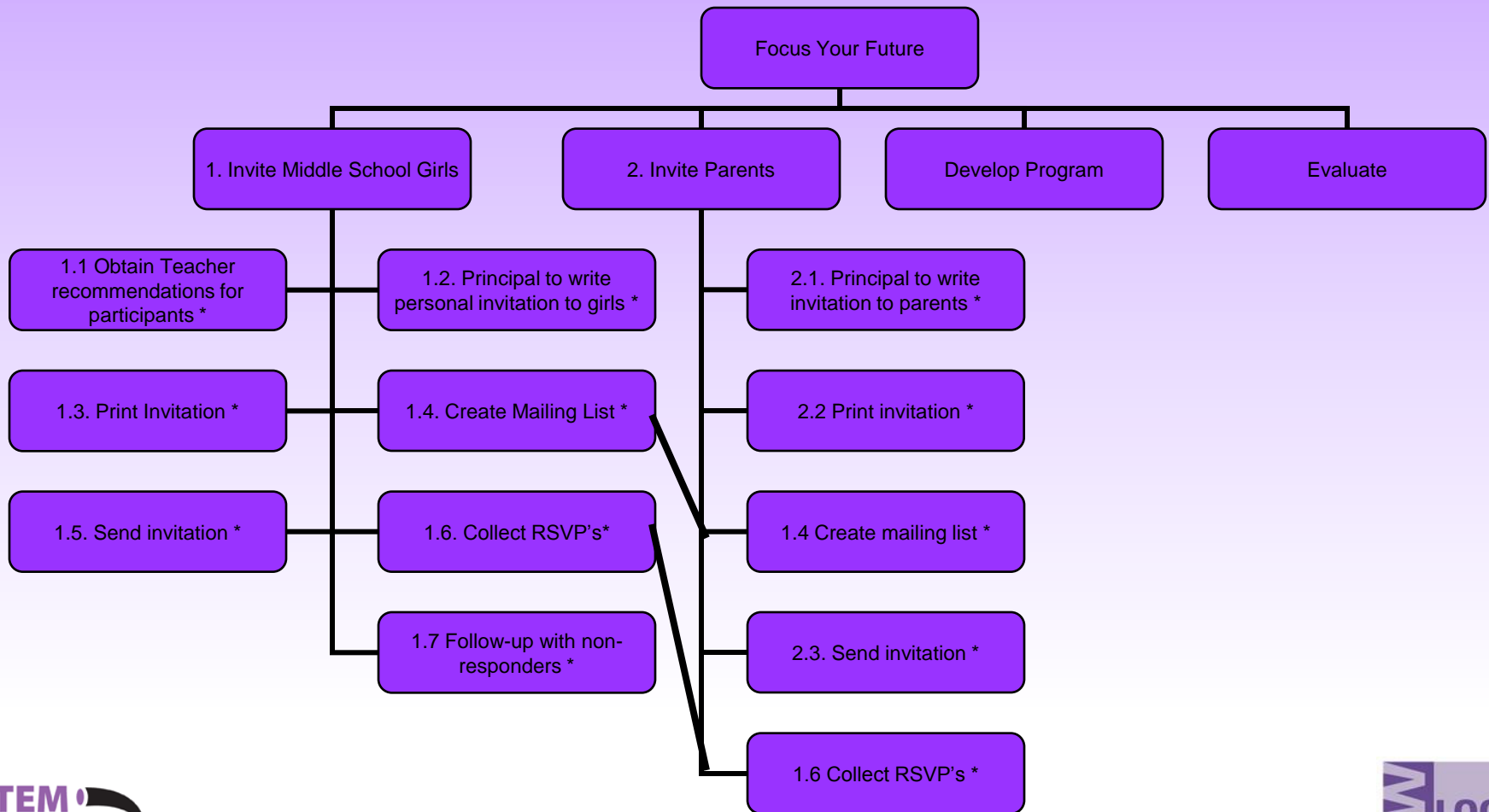


Project Management

Program Improvement Training Steps



Focus Your Future Work Breakdown Structure



Task List

Task	Length	Dependency
1.1. Obtain Teacher Recommendations	1 week	
1.2. Principal write invitation to girls	1 hour	
1.3. Print invitation to girls	3 hours	1.2
1.4. Create mailing list	1 day	1.1
1.5. Send invitation to girls	1 hour	1.2
1.6. Collect RSVP's	4 hours	1.5
1.7 Follow-up with non-responders	2 days	1.6
2.1. Principal write invitation to parents	1 hour	
2.2. Print invitation to parents	3 hours	2.1
2.3 Send invitation to parents	1 hour	2.2

Gantt Chart

Task	Week	1	2	3	4	5	6	M 1	7	8	9	10
1.1. Obtain Teacher Recommendations		█										
1.2. Principal write invitation to girls		█										
1.3. Print invitation to girls			█									
1.4. Create mailing list			█									
1.5. Send invitation to girls			█									
1.6. Collect RSVP's				█	█	█						
1.7 Follow-up with non-responders							█					
2.1. Principal write invitation to parents		█										
2.2. Print invitation to parents			█									
2.3 Send invitation to parents			█									

M1- 75% of invitees will respond to the invitation by the RSVP date

Budget Development

Task	Category	Cost
1.1. Obtain Teacher Recommendations		
1.2. Principal write invitation to girls		
1.3. Print invitation to girls	Copying	\$20.00
1.4. Create mailing list		
1.5. Send invitation to girls	Postage	\$50.00
1.6. Collect RSVP's		
1.7 Follow-up with non-responders	Phone	\$20.00
2.1. Principal write invitation to parents		
2.2. Print invitation to parents	Copying	\$20.00
2.3 Send invitation to parents	Postage	\$50.00



Project Tracking Spreadsheet

Task	Resources Needed	Person(s) Responsible	Date Due	Status
1.1. Teacher Recommendations	Teacher survey	Susan	Jan. 15	
1.2. Principal write invitation to girls		Jane	Jan. 15	
1.3. Print invitation to girls		Henry	Jan. 20	
1.4. Create mailing list	Addresses	Henry	Jan. 20	
1.5. Send invitation to girls		Henry	Jan. 21	
1.6. Collect RSVP's		Henry	Feb. 20	
1.7 Follow-up with non-responders	Contact info.	Henry, Susan	Feb. 27	
2.1. Principal write invitation to parents		Jane	Jan. 15	
2.2. Print invitation to parents		Henry	Jan. 20	
2.3 Send invitation to parents	Addresses	Henry	Jan. 21	

Evaluation Report

Objective	Method	Result
75% of invitees will respond to the invitation by the RSVP date	Response Rate	
60% of the invitees will attend the event	Attendance Rate	
50% of the participants will bring at least one parent or guardian to the event	Participant Demographics	
75% of the participants will score their satisfaction with the event as a 4 (very good) or 5 (excellent) on the exit evaluation instrument	Evaluation survey	
After participating in Focus Your Future event 50% of the participating students will show a one point (on a 5 point likert scale) increase in their willingness to consider enrolling in the pre-engineering program at the high school.	Evaluation survey	

Project Management Tool

Conduct Activity

- Utilize audience knowledge to prepare excellent marketing
- Align pre-and post surveys to objectives
- Record through pictures and video
- Publicize event through local media

Final Steps

- Analyze results
 - Compare to objectives
 - Adjust activity for next year based upon findings
 - Address new/related root causes
- Disseminate
 - Send summary for posting
 - Send lots of pictures!

Minnesota STEM Equity Pipeline and New Look Project Resources

[http://www.icsps.ilstu.edu/mn/New
Look/participant/index.html#SEPP](http://www.icsps.ilstu.edu/mn/NewLook/participant/index.html#SEPP)

Questions?

National Alliance for Partnerships in Equity

STEM Equity Pipeline

<http://stemequitypipeline.org/>

<http://www.napequity.org/>

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Illinois Center for Specialized Professional Support

Minnesota New Look Project

<http://www.icsps.ilstu.edu/mn/newlook/index.html>

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