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# Program Assessment and Evaluation

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UT SAN ANTONIO

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# Me and My Program Landscape



- Me
  - 40+ years of experience at a Minority Serving Institute
  - BS and MS in Biology; PhD Environmental Science and Engineering
  - Plants, Butterflies, and other cool stuff!
- UT San Antonio (UTSA)
  - 34,864 students
  - Hispanic Serving Institute, serving 20,739 Hispanic students (59%)
  - 45% are First Gen
- MS in Environmental Science
  - Demographics like University's



Advancing and Strengthening  
Science Identity through Systematic  
Training (ASSIST) Team

Gwen Young  
Jeffrey Hutchinson  
Sue Hum  
Kenneth Walker  
Amaury Nora  
Benjamin Tuggle  
Juliet Ray

President's Distinguished  
Achievement Award  
for Innovation & Impact (I<sup>2</sup>)

**UTSA**

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# Pre-assessment and evaluation



**IDENTIFICATION OF  
PROBLEM**



**REVIEW OF THE  
LITERATURE**



**ESTABLISHING THE  
CONCEPTUAL FRAMEWORK**

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# Steps in Assessment and Evaluation

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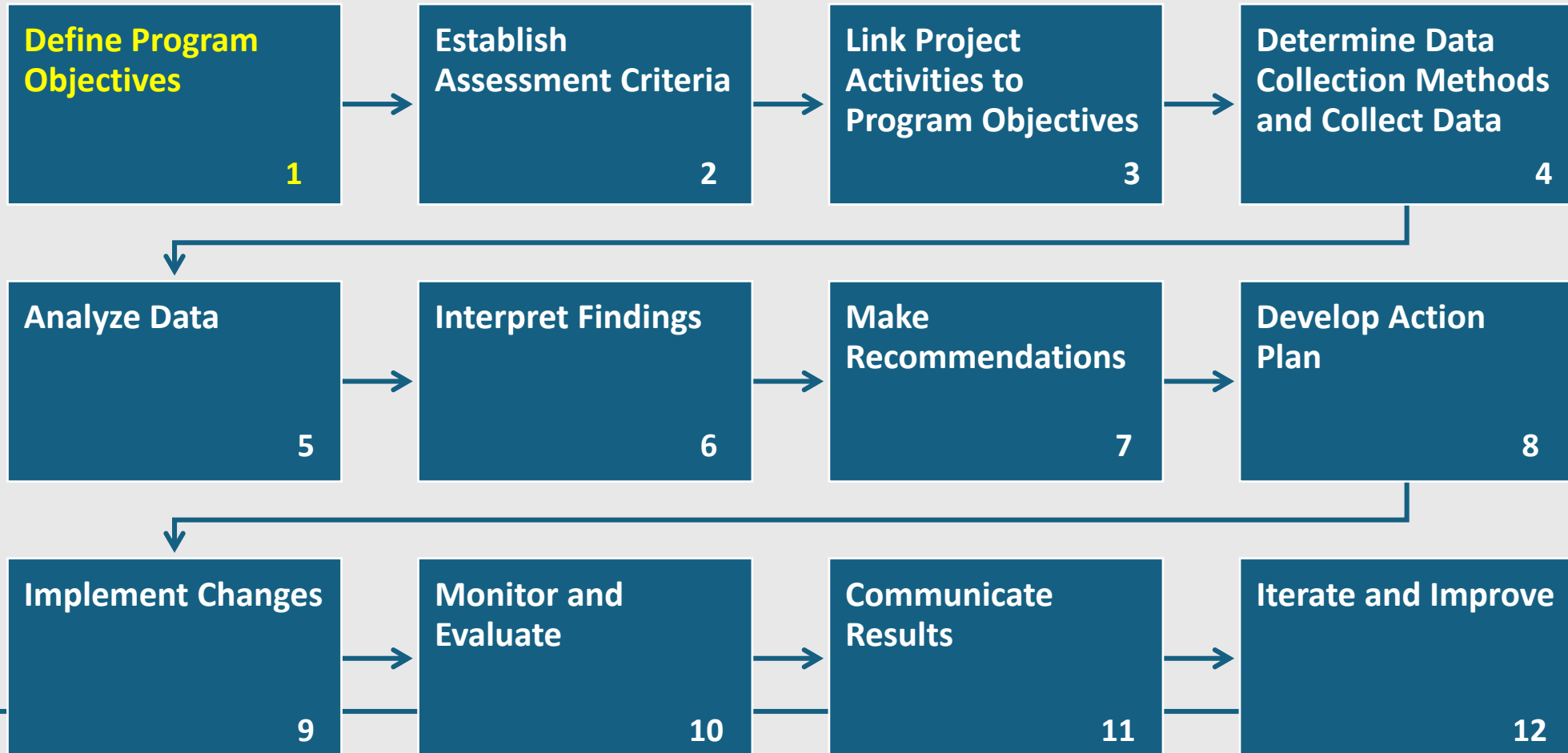




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# Steps in Assessment and Evaluation

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# Step 1 - Define Program Objectives

1) What are you aiming to achieve?

2) What outcomes are you hoping to see?

## Specific

- Increase student engagement
- Increase students' self efficacy
- Improve content learning
- Improve science communication
- Develop leadership skills
- Increase faculty understanding of mentoring URM students

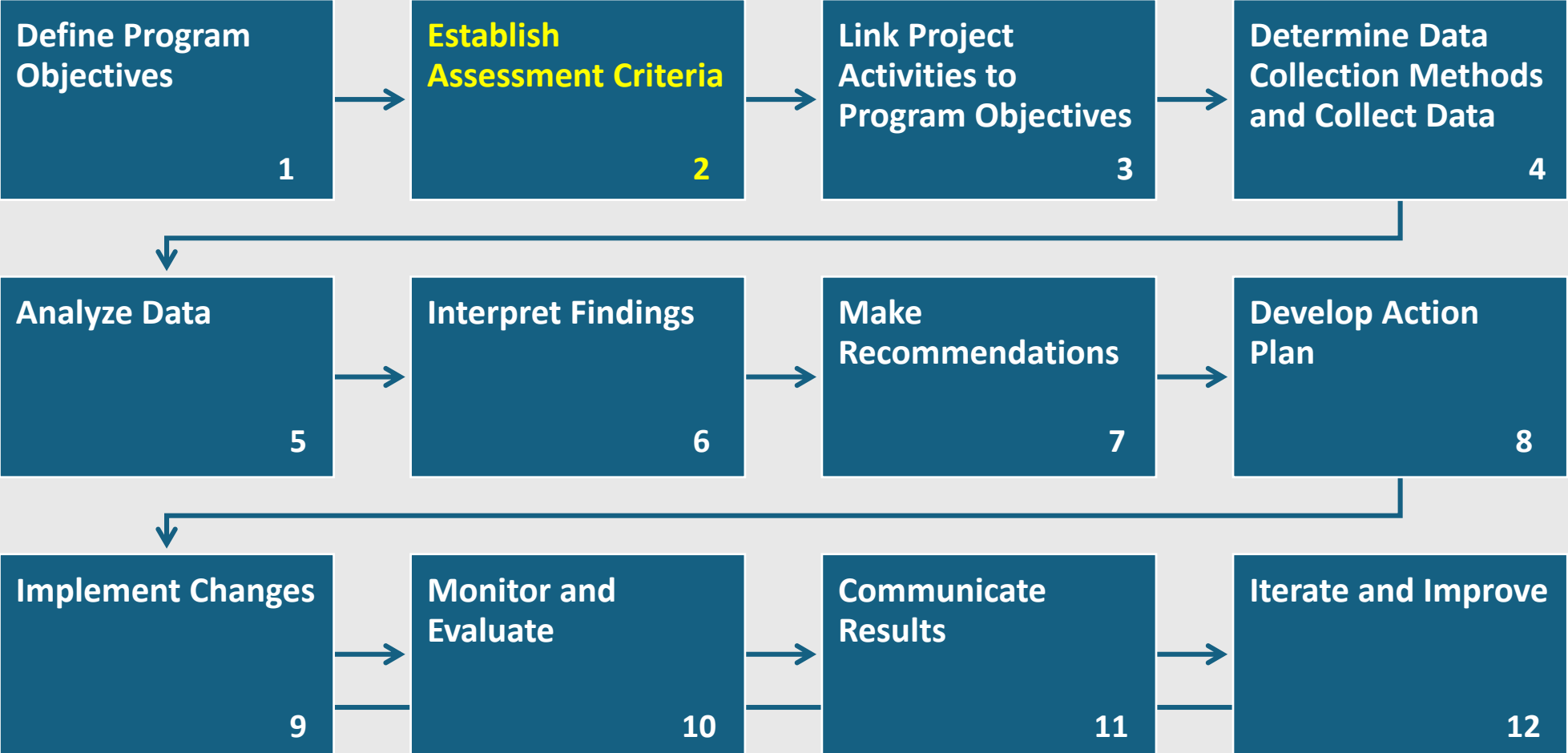
## Broad

- Increase science identity
- Increase persistence and graduation

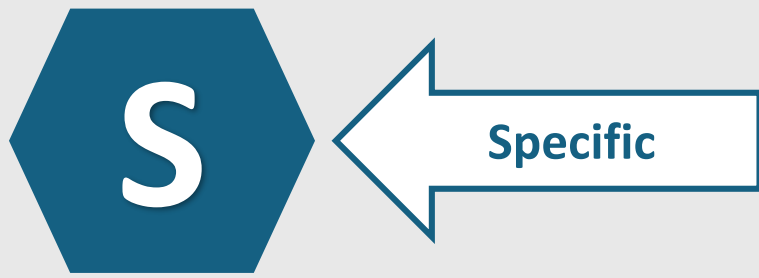
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# Steps in Assessment and Evaluation

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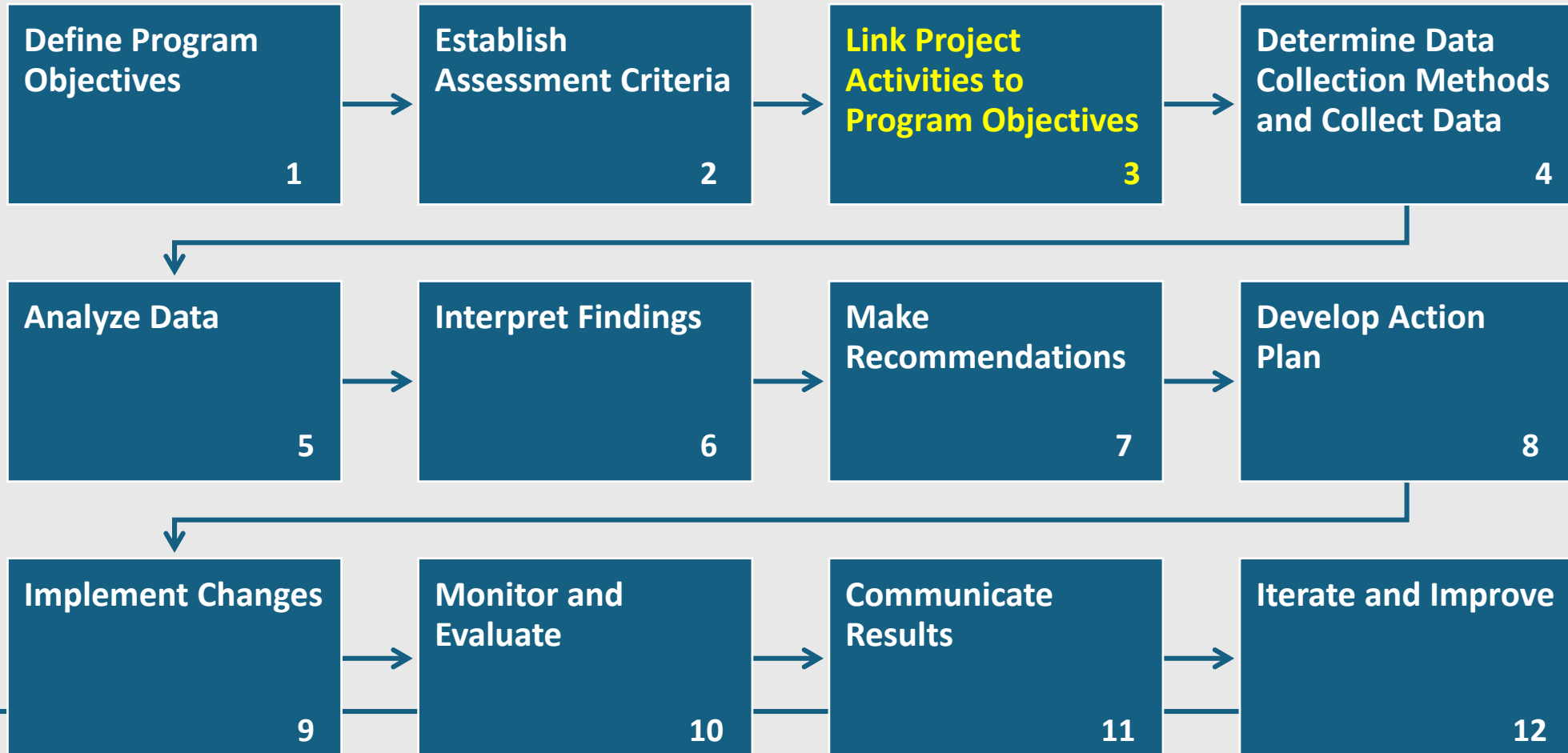


**Step 2  
Establish  
Assessment  
Criteria**

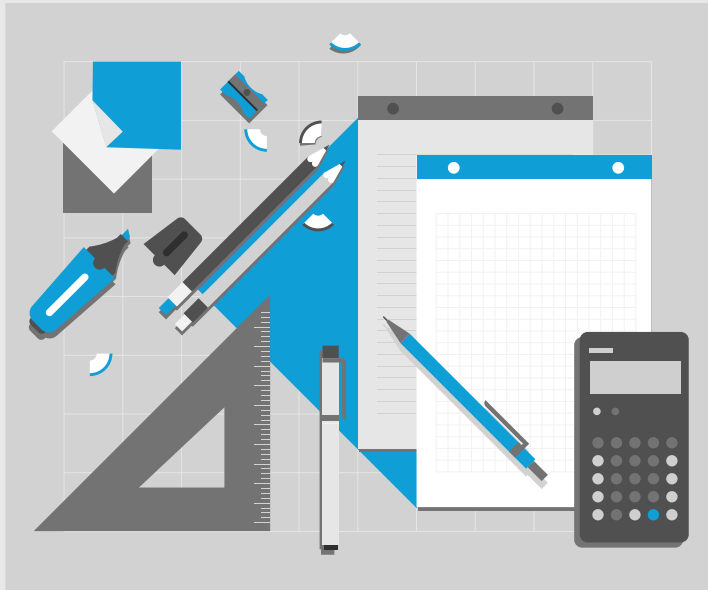
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# Steps in Assessment and Evaluation

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## Step 3

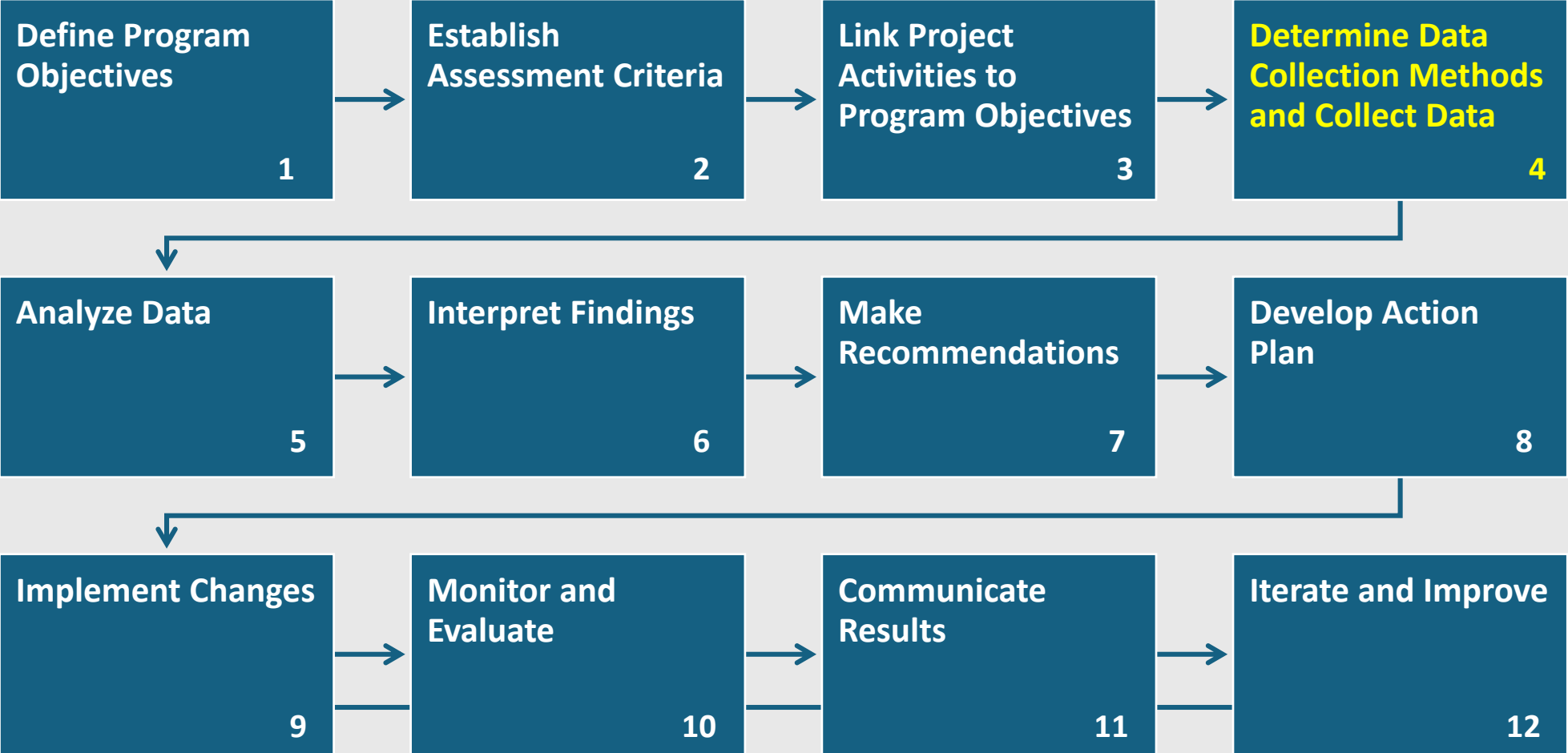


- Map each proposed activity to project outcomes and determine assessment instrument
- Example Activity:
  - Train faculty and staff on holistic mentoring
  - Mapped to improving faculty mentoring of URM

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# Steps in Assessment and Evaluation

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# Step 4 – Determine Data Collection Methods and Collect Data

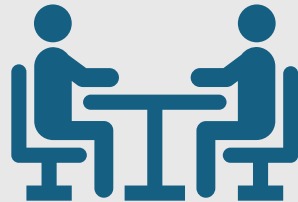
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Surveys



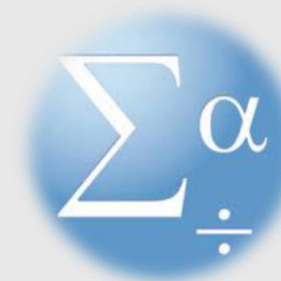
Document  
Analysis



Interviews



Focus  
Groups

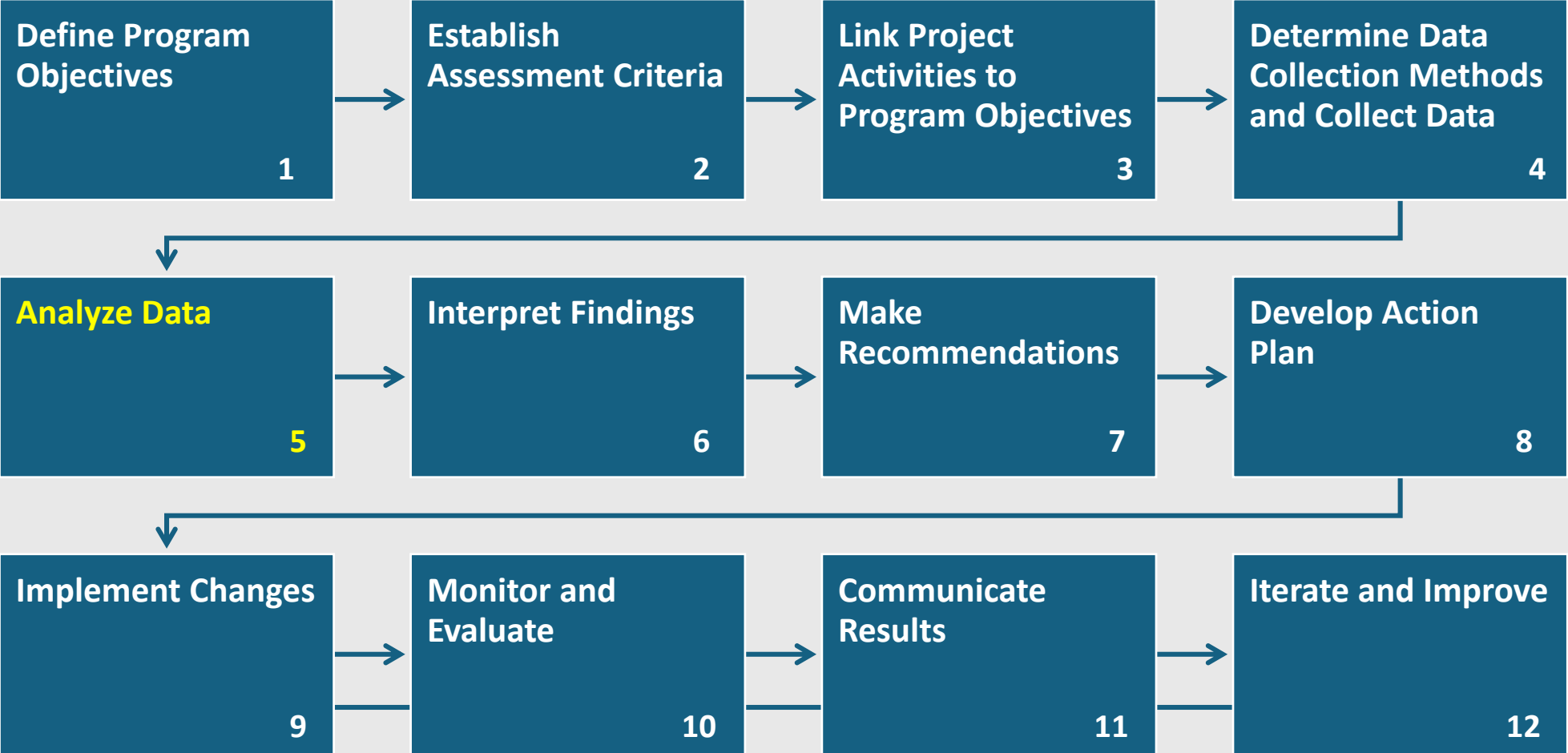


Quantitative  
Metrics

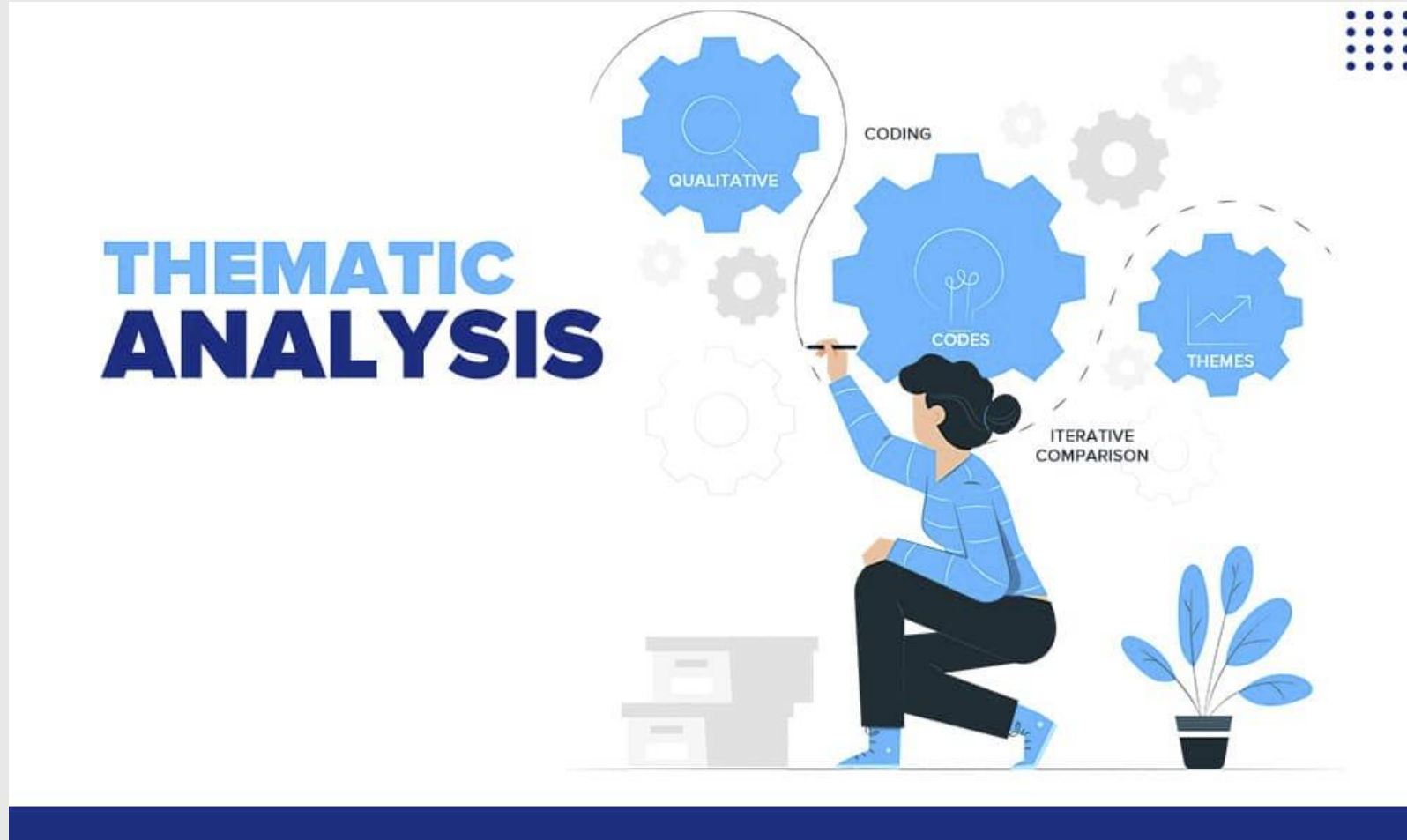
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# Steps in Assessment and Evaluation

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# Step 5 – Analyze Data

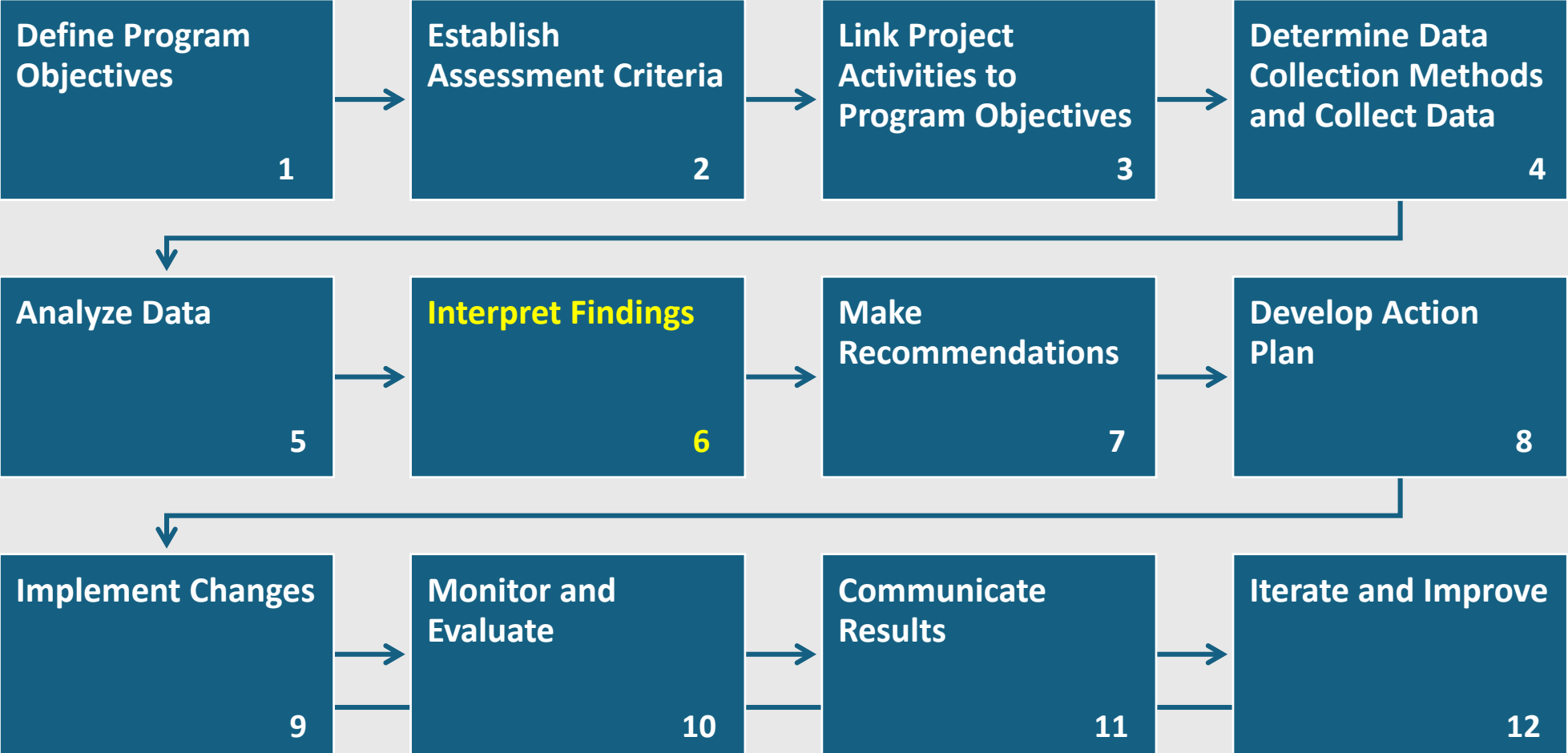




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# Steps in Assessment and Evaluation

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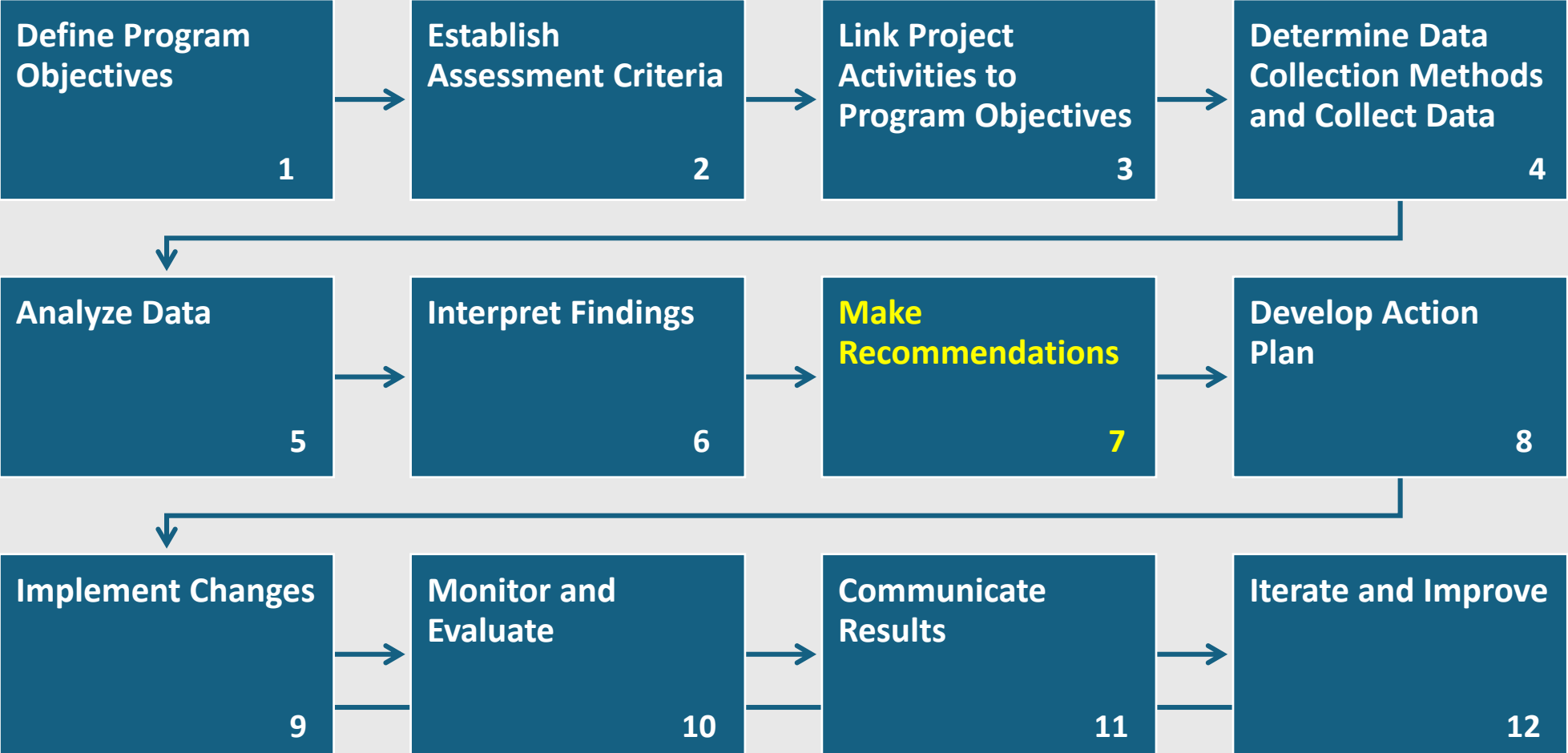
# Step 6 - Interpret Findings

Survey Item (Scale 1 – Strongly Disagree to 5 – Strongly Agree)	Mean	SD	Min	Max	Percent Favorable*
<b>My faculty mentor showed genuine concern for me and treated me with respect.</b>	4.69	0.60	3	5	93.8%
<b>My faculty mentor was helpful in answering questions.</b>	4.63	0.62	3	5	93.8%
<b>My faculty mentor provided guidance about my educational program.</b>	4.63	0.62	3	5	93.8%

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# Steps in Assessment and Evaluation

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# Step 7 – Make Recommendations

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Practical

Feasible

Targeted

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# Steps in Assessment and Evaluation

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# Step 8 – Develop Action Plan



**SPECIFIC STEPS**



**RESOURCES**



**TIMELINES**



**ASSIGN  
RESPONSIBILITY**



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# Steps in Assessment and Evaluation

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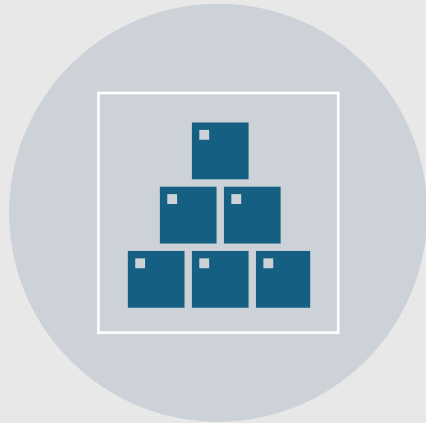




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# Step 9 – Implement changes

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**MODIFYING PROGRAM  
COMPONENTS**



**REALLOCATING  
RESOURCES**

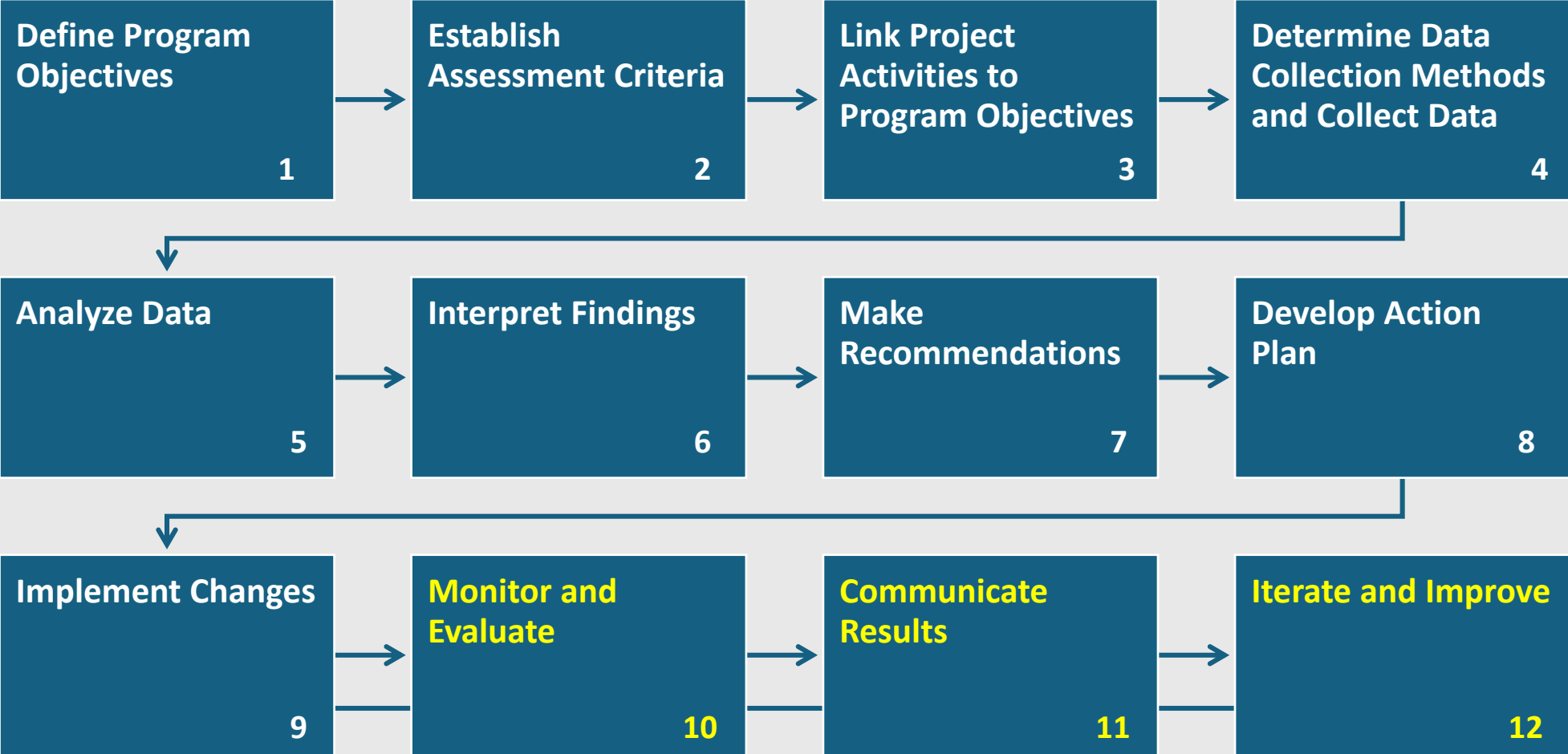


**REDESIGNING PROCESSES**

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# Steps in Assessment and Evaluation

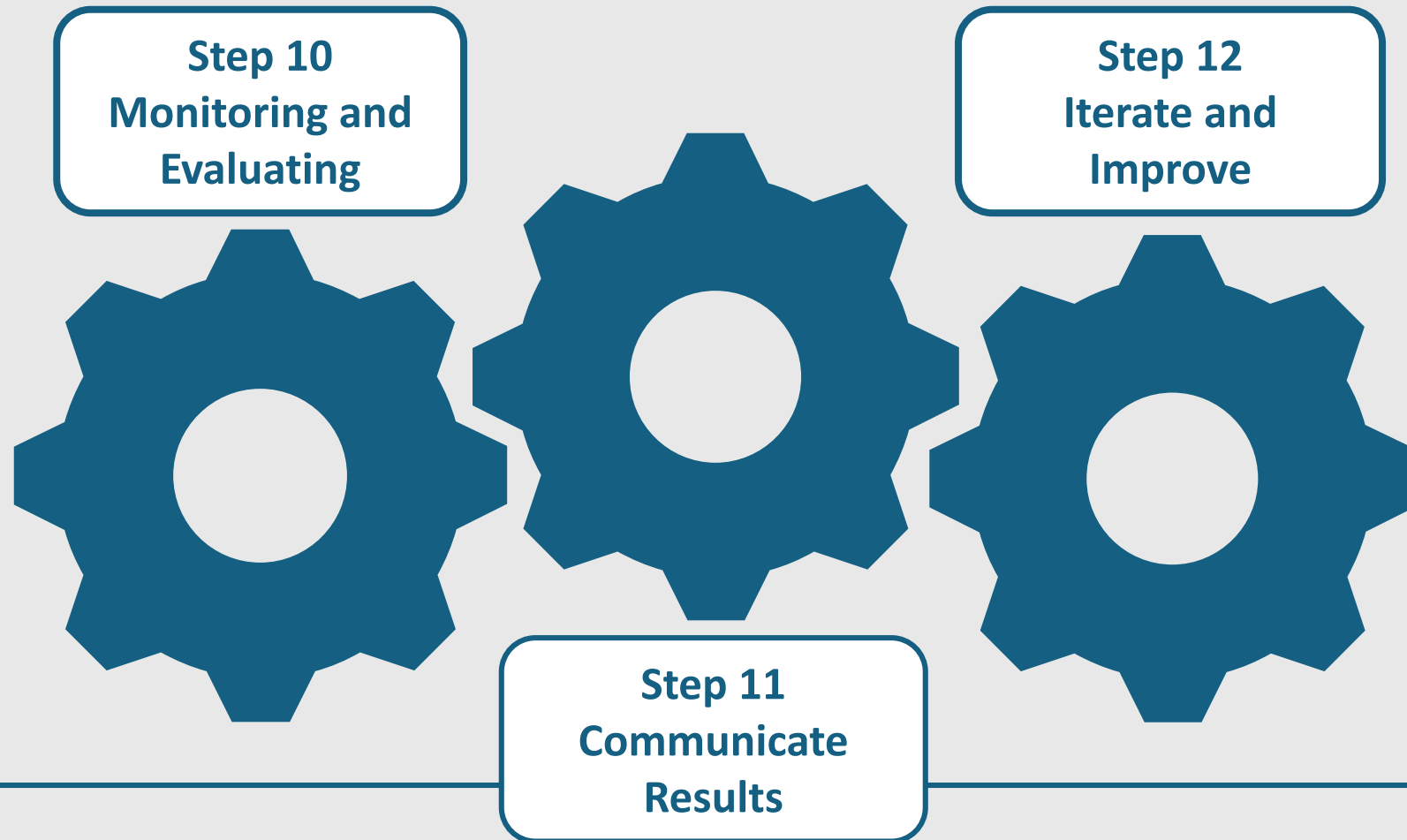
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# Monitoring, Communicating and Continuous Improvement

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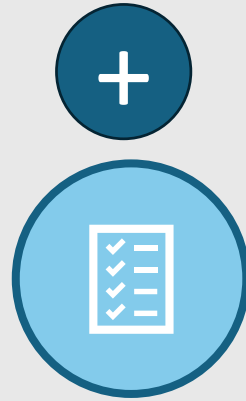


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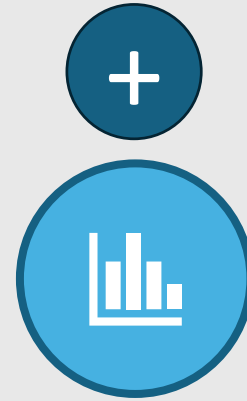
# Lessons Learned



**FORMING A TEAM  
WHICH ENSURES ALL  
ASPECTS OF THE  
PROGRAM CAN BE  
ACCOMPLISHED**



**DESIGNING GRANT  
ACTIVITIES THAT  
WILL SUPPORT YOUR  
OBJECTIVES**



**CONTINUOUS  
MONITORING**



**FINDING WAYS TO  
IMPLEMENT  
CHANGES THAT CAN  
BE SUSTAINABLE**



**EARNING THE  
SUPPORT OF THOSE  
IN CONTROL OF  
RESOURCES**



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# Our Project

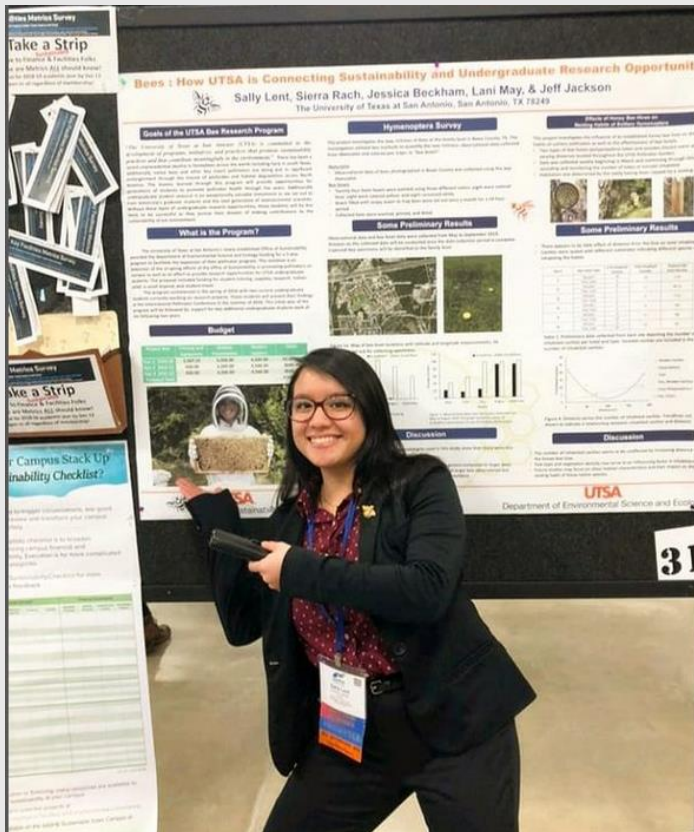
## Problem

- Students changing from thesis to non-thesis
- Lack of communication skills
- Imposture syndrome

## Objectives

- Develop science identity
  - Holistic mentoring
  - Writing-to-learn pedagogy
  - Developing science communication

# Our conceptual framework



## Research science identity is the outgrowth

- Training in science
- Science writing
- Science mentoring
- Close mentoring
- Persistence and graduation



# Establishing the Conceptual Framework



DEFINE CONCEPTS



ESTABLISH  
RELATIONSHIPS



SET BOUNDARIES



PROVIDE CONTEXT



GUIDE YOUR  
RESEARCH DESIGN