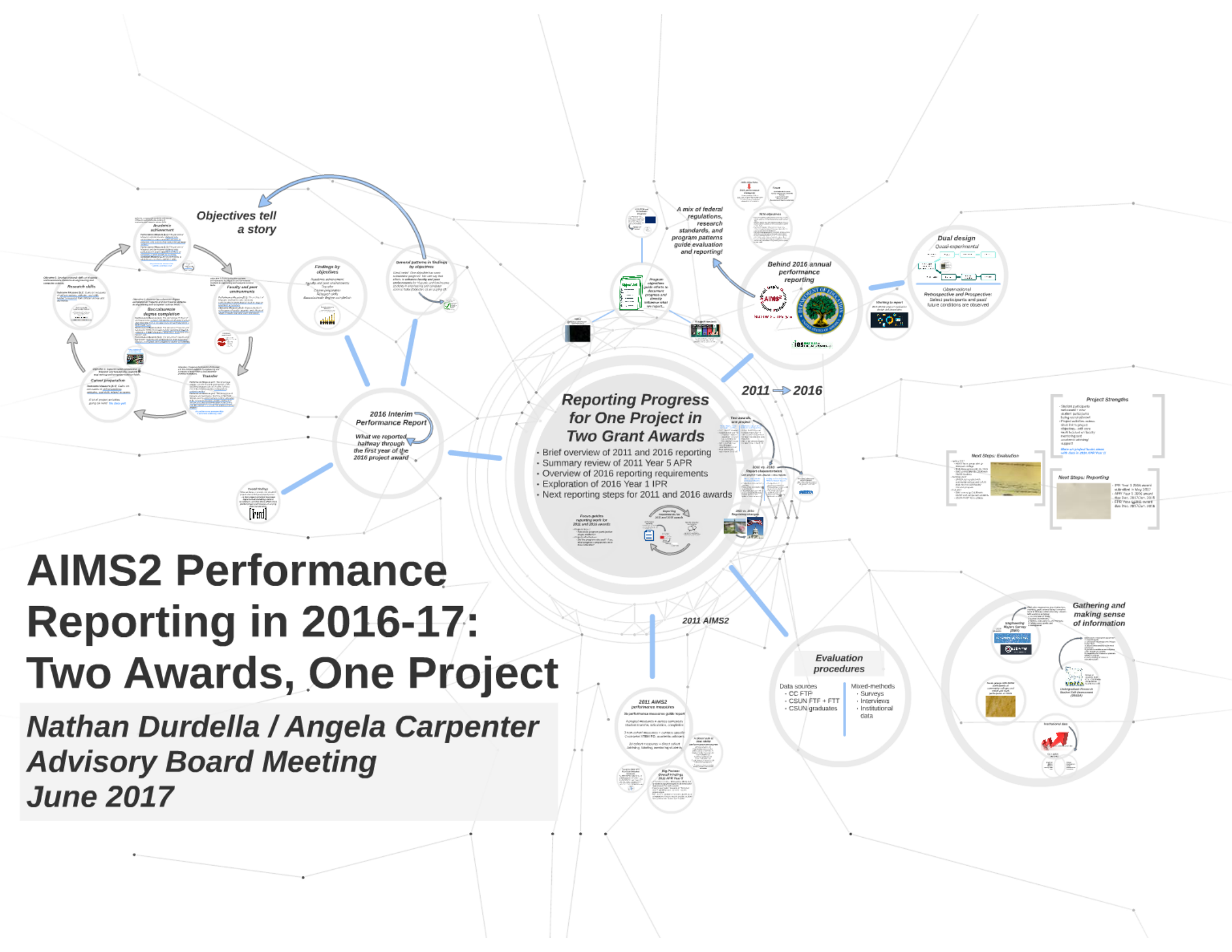
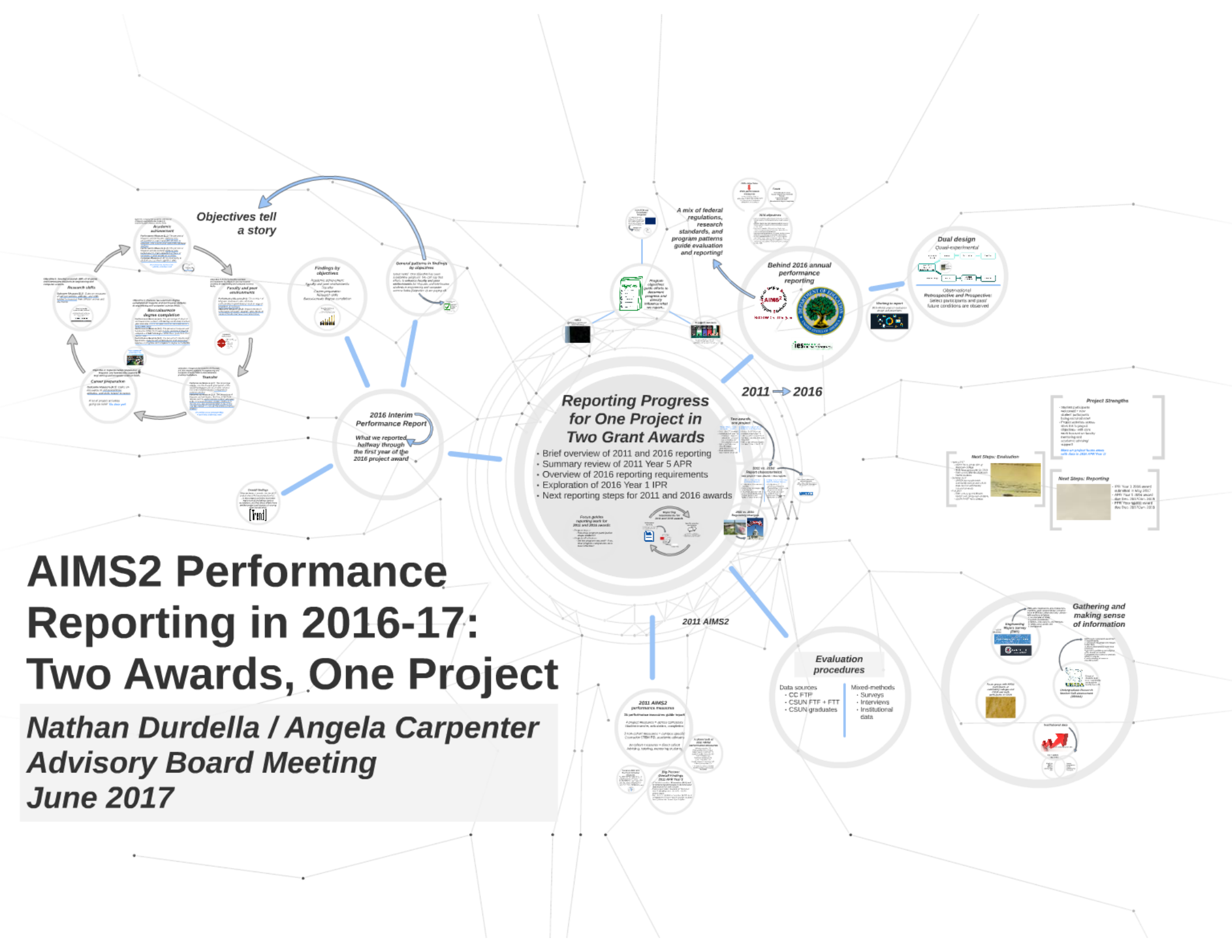


AIMS2 Performance Reporting in 2016-17: Two Awards, One Project

Nathan Durdella / Angela Carpenter

Advisory Board Meeting

June 2017



AIMS2 Performance Reporting in 2016-17: Two Awards, One Project

Nathan Durdella / Angela Carpenter

Advisory Board Meeting
June 2017

Reporting Progress for One Project in Two Grant Awards

Brief overview of 2011 and 2016 reporting
Summary review of 2011 Year 5 APR
Overview of 2016 reporting requirements
Exploration of 2016 Year 1 IPR

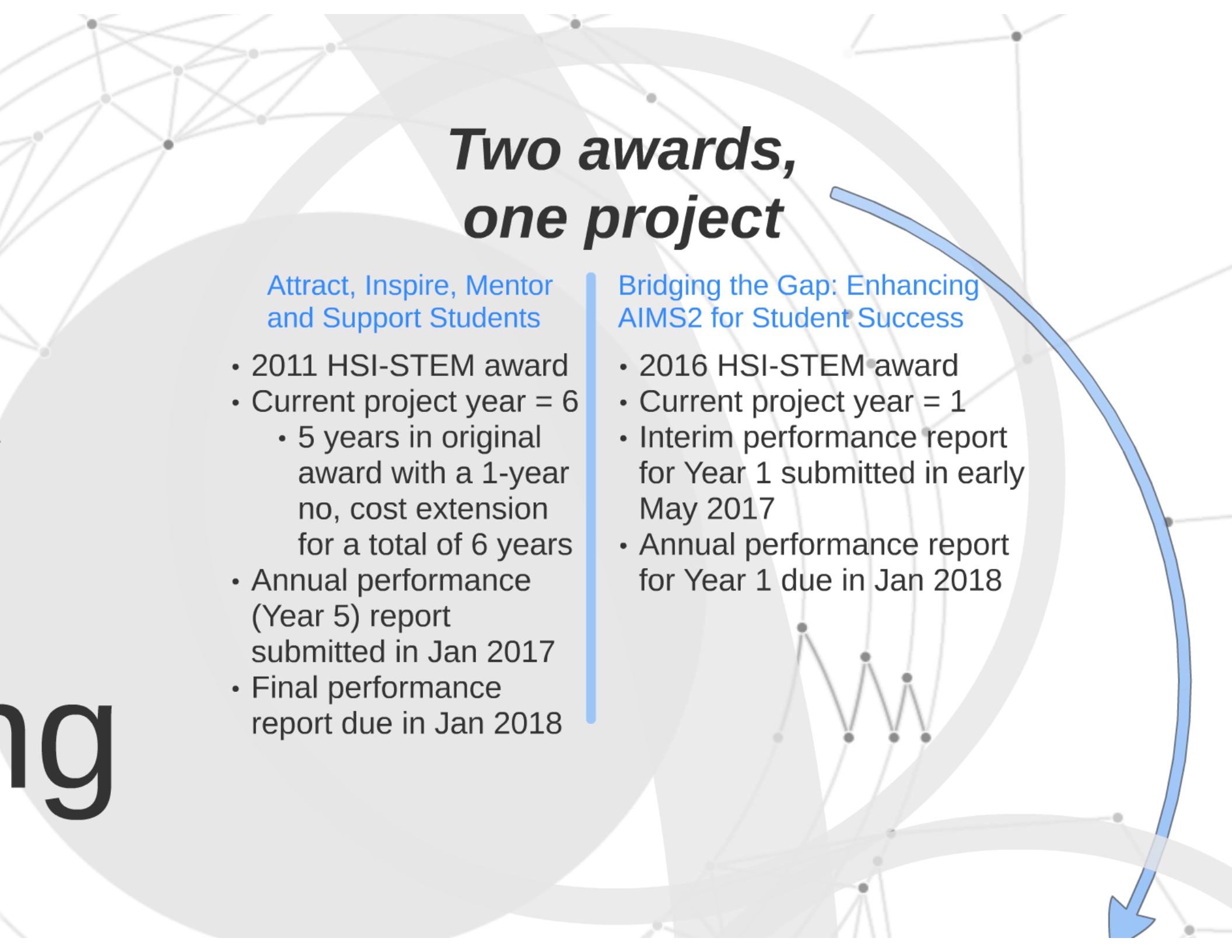
Two awards, one project

Attract, Inspire, Mentor and Support Students

- 2011 HSI-STEM award
- Current project year = 6
  - 5 years in original award with a 1-year no, cost extension for a total of 6 years
- Annual performance (Year 5) report submitted in Jan 2017
- Final performance report due in Jan 2018

Bridging the Gap: Enhancing AIMS2 for Student Success

- 2016 HSI-STEM award
- Current project year = 1
- Interim performance report for Year 1 submitted in early May 2017
- Annual performance report for Year 1 due in Jan 2018



2011 vs. 2016: Report characteristics

One project + two awards = two reports

Attract, Inspire, Mentor and Support Students

12 objectives, 35 performance measures

Focus on two cohorts/year in

Bridging the Gap: Enhancing AIMS2 for Student Success

- 10 objectives, 12 performance measures
- Treat participants as a singl

Both awards share same overarching goals

Build a transfer model, increase student transfer to CSUN, and increase program completion of students at CSUN

2011 vs. 2016: Report characteristics

One project + two awards = two reports

Attract, Inspire, Mentor and Support Students

- 12 objectives, 35 performance measures
- Focus on two cohorts/year in annual reports
- Mixed-methods design with balance of quantitative data (student journals) and qualitative data (interviews)

Bridging the Gap: Enhancing AIMS2 for Student Success

- 10 objectives, 12 performance measures
- Treat participants as a single group across cohorts
- Mixed-methods design heavily focused on quantitative data (survey and institutional)

2011 vs. 2016: Regulatory changes

Reporting Progress for One Project in Two Grant Awards

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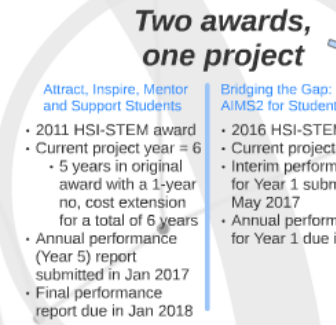
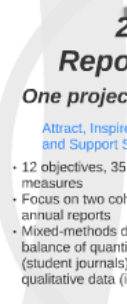
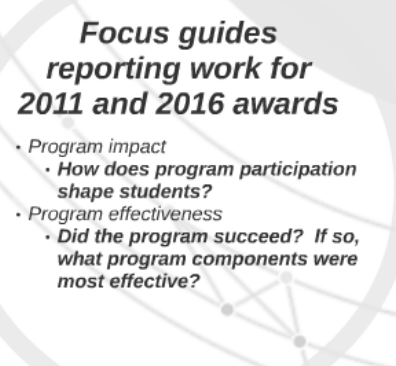
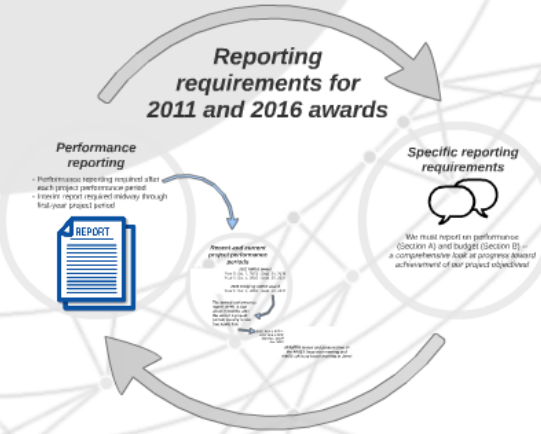
- Summary review of 2011 Year 5 APR
- Overview of 2016 reporting requirements
- Exploration of 2016 Year 1 IPR
- Next reporting steps for 2011 and 2016 awards









Reporting Progress for One Project in Two Grant Awards

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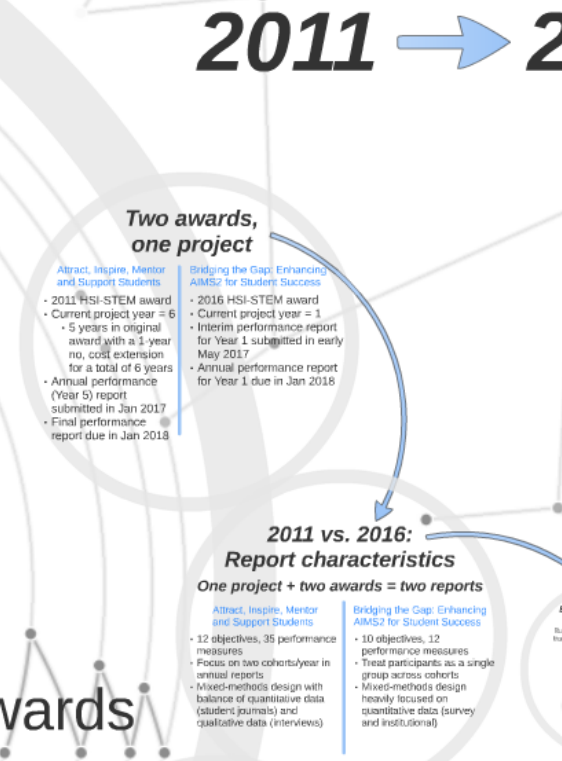

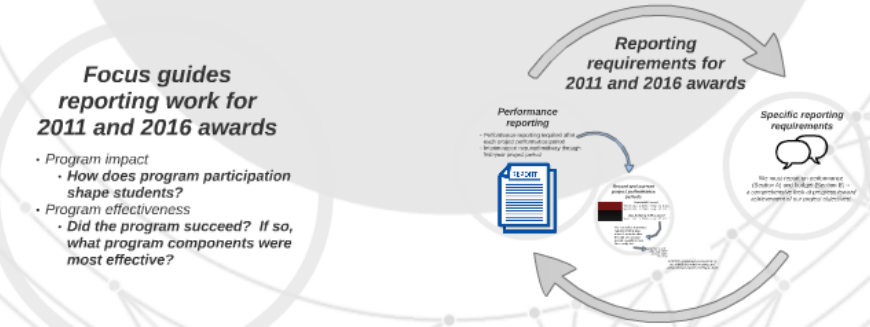

Focus guides reporting work for 2011 and 2016 awards

- *Program impact*
  - ***How does program participation shape students?***
- *Program effectiveness*
  - ***Did the program succeed? If so, what program components were most effective?***

Reporting requirements for 2011 and 2016 awards

Performance reporting

- Performance reporting required after each project performance period
- Interim report required midway through first-year project period

Recent and current project performance periods

2011 AIMS2 award
Year 5: Oct. 1, 2015 - Sept. 30, 2016
Year 6: Oct. 1, 2016 - Sept. 30, 2017

2016 Bridging AIMS2 award
Year 1: Oct. 1, 2016 - Sept. 30, 2017

The annual performance report (APR) is due about 3 months after the end of a project period, usually in late Dec./early Jan.

2016 Year 1 APR + 2011 Year 6 FPR due Dec. 2017/ Jan. 2018

APR/FPR review and presentation @ the AIMS2 December meeting and AIMS2 advisory board meeting in June!

Specific reporting requirements

We must report on performance (Section A) and budget (Section B) -- *a comprehensive look at progress toward achievement of our project objectives!*

Performance reporting

- Performance reporting required after each project performance period
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Recent
project p
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Year

The annual
report (APR
about 3 mo
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period, usu

Recent and current project performance periods

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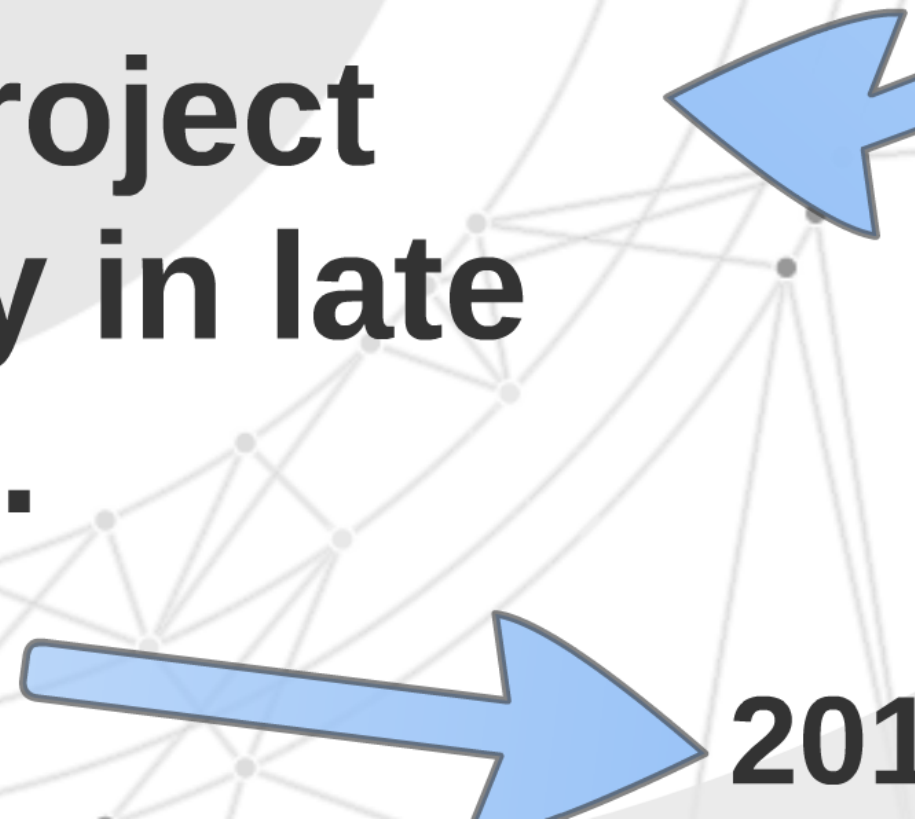

2016 *Year 1 APR +*
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due Dec. 2017/
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+
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7/
8

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2011 AIMS2

2011 AIMS2
performance measures

35 performance measures guide report

4 project measures = across campuses
Student transfer, articulation, completion

3 non-cohort measures = campus specific
Counselor STEM PD, academic advisers

28 cohort measures = direct cohort
Advising, tutoring, mentoring students

A closer loo
2011 AIM
performance m

Advising session
Peer/tutoring sessio
Online course enroll
Student-faculty intera
Peer mentoring
Academic worksho
Supplemental lab
Faculty research inter
Cohort participatio

+ 7 measures related t
faculty, peer-peer and

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A closer look at 2011 AIMS2 performance measures

Advising sessions (6)
Peer/tutoring sessions (12)
Online course enrollment (4)
Student-faculty interaction (6)
Peer mentoring (6)
Academic workshops (2)
Supplemental lab (2)
Faculty research interaction (2)
Cohort participation (2)

+ 7 measures related to student-faculty, peer-peer and research interaction!

Big Picture: Overall Findings 2011 APR Year 5

- Of 56 total measures, ***36 measures (64%) met or exceeded project targets or demonstrated improvement for both cohorts***
- Data for quantitative measures (n=49) reveal that 22 (**or 45%)** measures met or exceed project targets
- Results for all qualitative measures (**n=7/7**) point to improvement in peer-peer interaction, student-faculty interaction, research participation

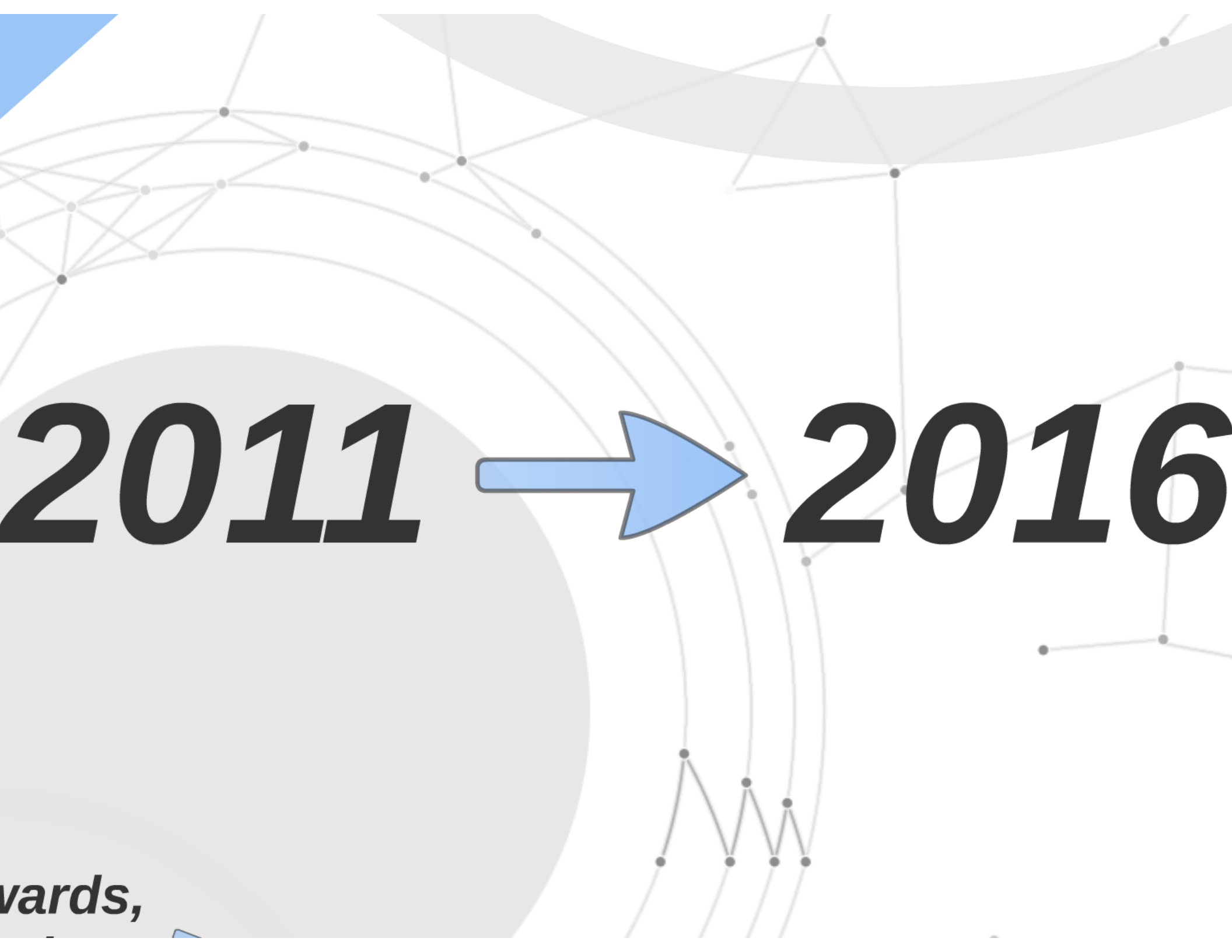
Trends in 2011 APR Year 5 performance measures

- All 4 **project** measures – transfer (1a), course articulation (2a/b), and completion (7a) met or exceeded project targets in the period
- All 3 **non-cohort** measures – Counselor STEM PD (3a) at GCC/COC, academic advisors at CSUN (8a) – met or exceeded project targets
- 22 of 49 (45%) **cohort** measures across campuses met or exceeded targets in the period

2011 APR Year 5: Transfer and program completion

Transfer achievement
exceeded target with
47 new CSUN transfer students entering in 2015-16 from College of the Canyons/Glendale Community College in a field housed in CECS
→ *131% increase over the project target (n=36) and a 224% increase over baseline figure (n=21) from 2010-11!*

Program completion
exceeded target with
31.4% (49/156) completing a degree program for the most recent period vs. 30.9% (21/68) project target
→ An increase over the first project year of 29.3% (22/75) and a decrease over the fourth project year of 36.5% (72/197) but overall headcount is up!


2011
2016
vards,

Behind 2016 annual performance reporting

Attract Inspire Mentor Support Students
AIMS2

HSI STEM Grant Program

DEPARTMENT OF EDUCATION
UNITED STATES OF AMERICA

ies INSTITUTE OF EDUCATION SCIENCES

A mix of federal regulations, research standards, and program patterns guide evaluation and reporting!

HSI-STEM and Articulation Programs

(1) increase the number of Hispanic/low-income students attaining degrees in STEM fields; and (2) develop model transfer and articulation agreements between two-year and four-year institutions in STEM fields.

United States Department of Education

Standard set of performance measures

Competitive program priorities

- Competitive Preference Priority (2) USDE HSI-STEM Program =
  - **Moderate evidence of effectiveness**
    - *Test participants prior to and after participation AND compare to a test of non-participants across multiple sites directly related to target population!*

Competitive program priorities

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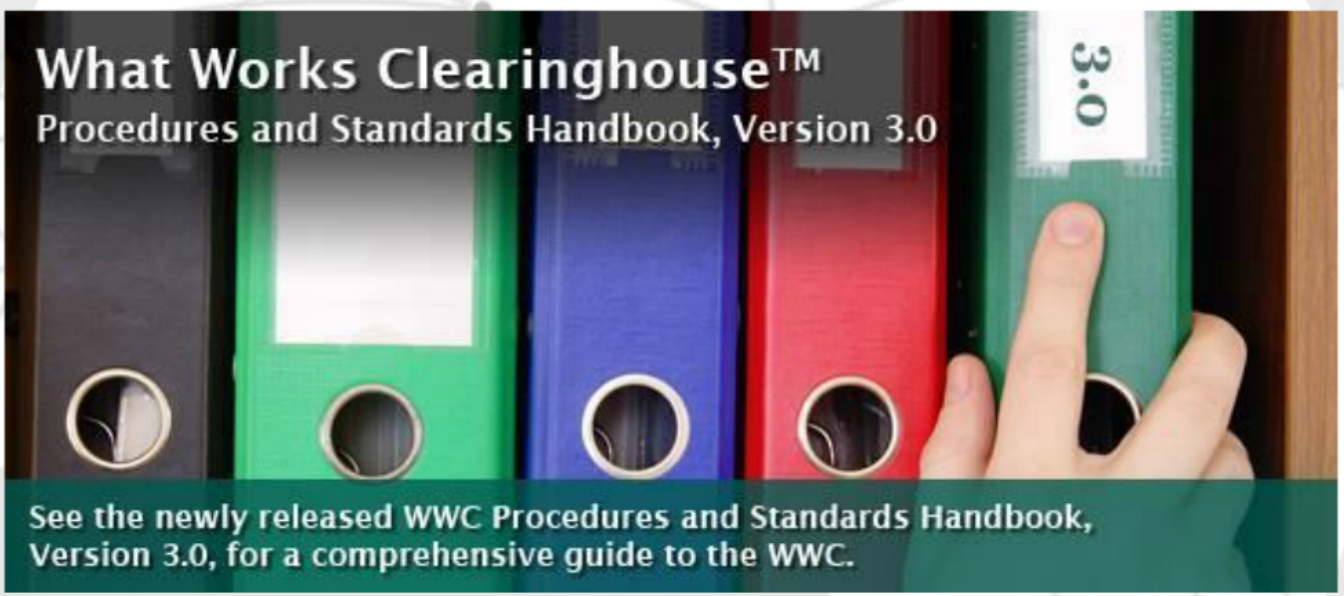
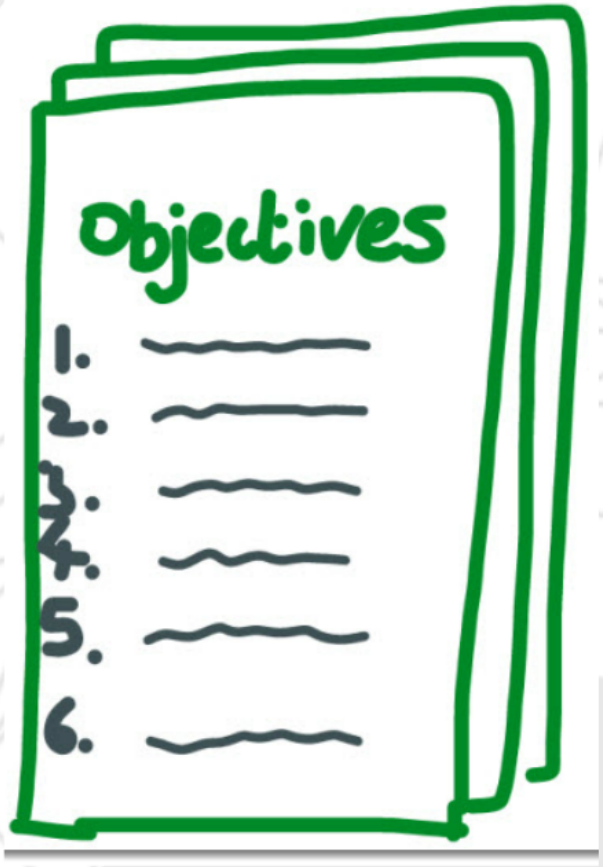
Research standards



Quasi-experimental design of a matched sample with baseline equivalence and pre-/post-test survey

AIMS2

Historical contexts and current practices

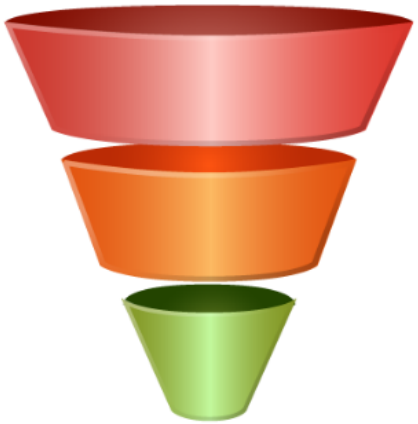


Program objectives guide efforts to document progress and directly influence what we report...

2016 objectives

- *Improve **academic achievement** of Hispanic and low-income students in engineering and computer science fields.*
- *Enhance **faculty and peer environments** for Hispanic and low-income students in engineering and computer science fields.*
- *Improve the **transfer** of Hispanic and low-income students in engineering and computer science fields to baccalaureate-granting institutions.*
- *Improve **career preparation** of Hispanic and low-income students in engineering and computer science fields.*
- *Develop **research skills** of Hispanic and low-income students in engineering and computer science fields.*
- *Increase **baccalaureate degree completion** of Hispanic and low-income students in engineering and computer science fields.*

Focus

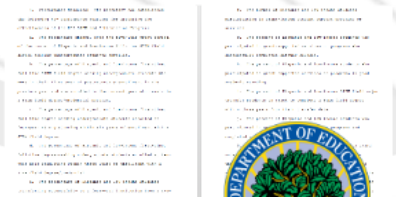


Academic achievement
Faculty and peer environments
Transfer
Career preparation
Research skills
Baccalaureate degree completion

2016 objectives

2016 performance measures

Developed by USDE +
articulated in 2016 HSI-STEM RFP
= common set of measures
adopted for 2016 AIMS2



Behind 2016 annual performance reporting

Attract Inspire Mentor Support Students
AIMS2

HSI STEM Grant Program

DEPARTMENT OF EDUCATION
UNITED STATES OF AMERICA

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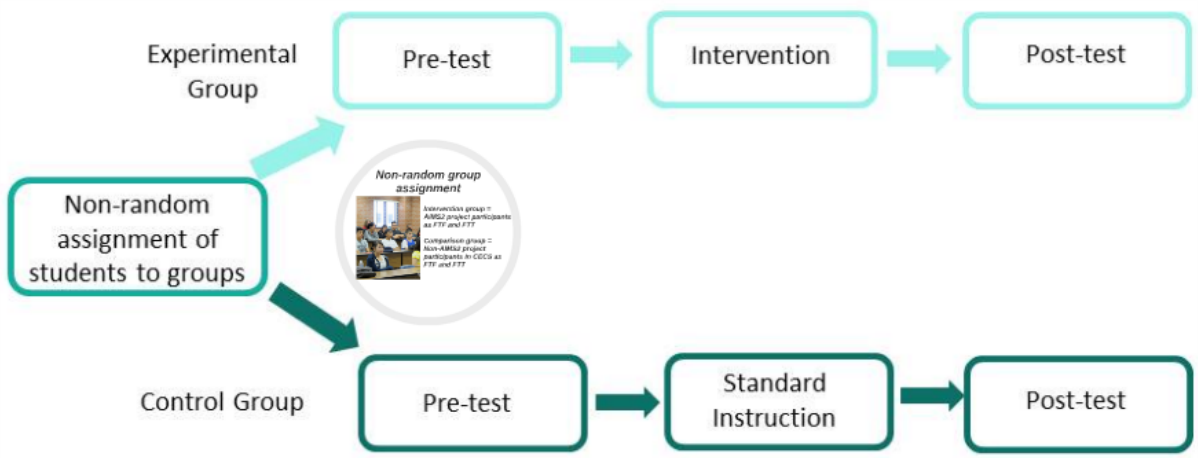
Working to report

2016 AIMS2 program evaluation design and procedures

Dual design

Quasi-experimental



Observational

Retrospective and Prospective:

Select participants and past/ future conditions are observed

to report

ogram evaluation
l procedures

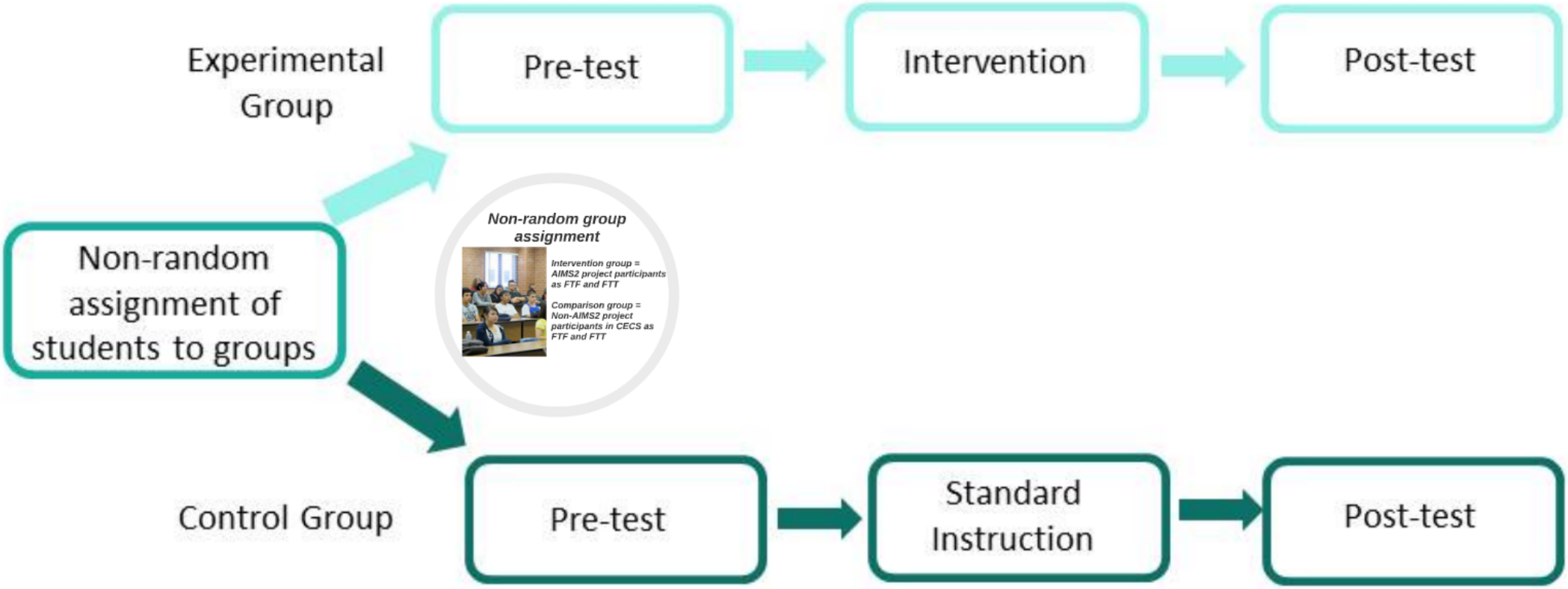
Non-random group assignment

Intervention group = AIMS2 project participants as FTF and FTT

Comparison group = Non-AIMS2 project participants in CECS as FTF and FTT

Dual design

Quasi-experimental



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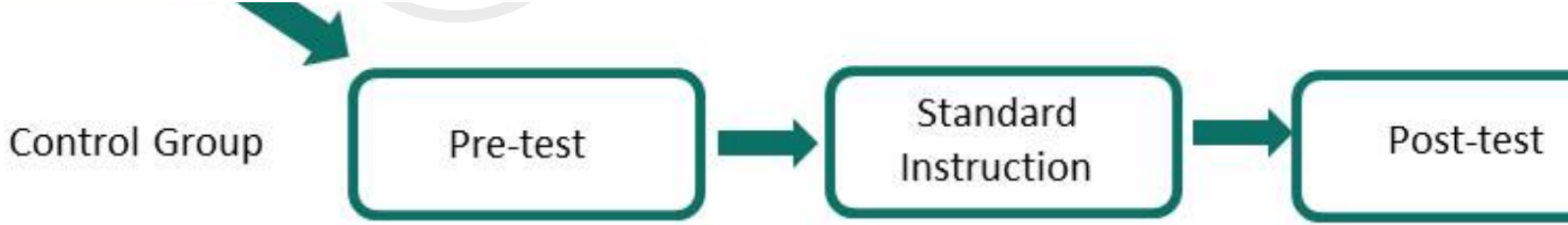

Observational

Retrospective and Prospective:

Select participants and past/ future conditions are observed

Gathering and making sense of information

CSUN students

Engineering Majors Survey (EMS)

EMS asks respondents about behaviors, interests, goals around doing innovative work in their baccalaureate/early careers-- with sections as follow:
1. *current plan of study;*
2. *school experiences;*
3. *beliefs, expectations, and interests;*
4. *future career goals; and*
5. *background*

Undergraduate Research Student Self-Assessment (URSSA)

URSSA asks respondents about their:
1. *research skills;*
2. *conceptual knowledge and linkages in their field;*
3. *deeper understanding of the work of science;*
4. *growth in confidence and adoption of the identity of scientist;*
5. *preparation for a career or graduate school in science;*
6. *understanding of career or educational path.*

Subset of students from CCs + CSUN who participate in faculty research

Focus groups with AIMS2 participants at community colleges and CSUN and math participants at CSUN

Institutional data

CC + CSUN students

Match to EMS & URSSA survey data sets

Assess progress on project performance measures

Engineering Majors Survey (EMS)

CSUN students

epicenter
National Center for Engineering Pathways to Innovation

with sections as follow:

1. ***current plan of study;***
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3. ***beliefs, expectations,***
4. ***future career goals; a***
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Match to EMS & URSSA survey data sets

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Focus groups with AIMS2 participants at community colleges and CSUN and math participants at CSUN

2016 Interim Performance Report

What we reported halfway through the first year of the

Performance Rep

What we reported halfway through the first year of the 2016 project award


Objectives tell
a story

Objectives tell a story

Objective 1: Improve the academic achievement of Hispanic and low-income students in engineering and computer science fields.

Academic achievement

***Performance Measure (1.1)**: The percent of Hispanic and low-income students who participated in grant-supported services or programs who successfully completed gateway courses.*

***Performance Measure (1.2)**: The percent of Hispanic and low-income students who participated in grant-supported services or programs in good academic standing.*

***Outcome Measure (1.3)**: Improvements in student success (non-cognitive) skills.*

No performance measure data = activities underway now!

Objective 2: Enhance faculty and peer environments for Hispanic and low-income students in engineering and computer science fields.

Faculty and peer environments

***Performance Measure (2.1)**: The number of Hispanic and low-income students participating in grant-funded student support programs or services.*

***Outcome Measure (2.2)**: Improvements in self-reports of quality, quantity, and effects of student-faculty and peer-peer interaction.*

Objective 3: Improve the transfer of Hispanic and low-income students in engineering and computer science fields to baccalaureate-granting institutions.

Transfer

***Performance Measure (3.1)**: The percentage change, over the five-year grant period, of the number of Hispanic and low-income, full-time STEM field degree-seeking undergraduate students enrolled.*

***Performance Measure (3.2)**: The percentage of Hispanic and low-income, first-time STEM field degree-seeking undergraduate students who were in their first year of postsecondary enrollment in the previous year and are enrolled in the current year who remain in a STEM field degree/credential program.*

No performance measure data = activities underway now!

Objective 4: Improve career preparation of Hispanic and low-income students in engineering and computer science fields.

Career preparation

***Outcome Measure (4.1)**: Gains on measures of self-perceptions, attitudes, and skills related to career.*

A lot of project activities going on here! ***No data yet!***

Objective 5: Develop research skills of Hispanic and low-income students in engineering and computer science.

Research skills

***Outcome Measure (5.1)**: Gains on measures of self-perceptions, attitudes, and skills related to research from URSSA survey and interviews.*

Objective 6: Increase baccalaureate degree completion of Hispanic and low-income students in engineering and computer science fields.

Baccalaureate degree completion

***Performance Measure (6.1)**: The percentage of Hispanic and low-income students transferring successfully to a four-year institution from a two-year institution and retained in a STEM field major.*

***Performance Measure (6.2)**: The percent of Hispanic and low-income STEM field major transfer students on track to complete a STEM field degree within three years from their transfer date.*

***Performance Measure (6.3)**: The percent of Hispanic and low-income students who participated in grant-supported services or programs and completed a degree or credential.*

Objective 1: Improve the academic achievement of Hispanic and low-income students in engineering and computer science fields.

Academic achievement

***Performance Measure (1.1)**: The pe*

Objective 1: Improve the academic achievement of Hispanic and low-income students in engineering and computer science fields.

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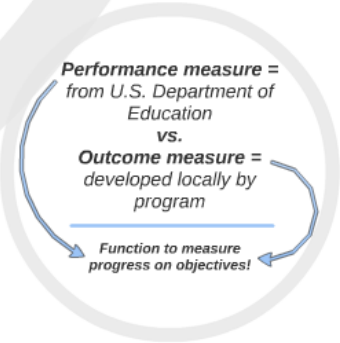
No performance measure data = activities underway now!



Performance measure =
from U.S. Department of Education

vs.

Outcome measure =
developed locally by program

Function to measure progress on objectives!

ms in good academic standing

***me Measure (1.3)**: Improveme*

t success (non-cognitive) skills

No performance measure data
= activities underway now!

Objective 2: Enhance faculty and peer environments for Hispanic and low-income students in engineering and computer science fields.

Faculty and peer environments

***Performance Measure (2.1)**: The numbe*
Hispanic and low-income students

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Faculty and peer environments

***Performance Measure (2.1)**: The number of Hispanic and low-income students participating in grant-funded student support programs or services.*

***Outcome Measure (2.2)**: Improvements in self-reports of quality, quantity, and effects of student-faculty and peer-peer interaction.*

Increase in

Increase in participants!

- Current student participant headcount by site:
  - COC = 23
  - GCC = 10
  - MC = 25
  - PC = 230
  - CSUN = 19

Objective 3: Improve the transfer of Hispanic and low-income students in engineering and computer science fields to baccalaureate-granting institutions.

Transfer

***Performance Measure (3.1)**: The percenta*
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***Performance Measure (3.2)**: The percentage of Hispanic and low-income, first-time STEM field degree-seeking undergraduate students who were in their first year of postsecondary enrollment in the previous year and are enrolled in the current year who remain in a STEM field degree/credential program.*

No performance measure data = activities underway now!

to be reported in 2016
APR Year 1 in Dec. 2017!

Objective 4: Improve career preparation of Hispanic and low-income students in engineering and computer science fields.

Career preparation

Outcome Measure (4.1)*: Gains on measures of self-perceptions, attitudes, and skills related to career.*

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Career preparation

***Outcome Measure (4.1)**: Gains on measures of self-perceptions, attitudes, and skills related to career.*

A lot of project activities going on here! ***No data yet!***

Objective 5: Develop research skills of Hispanic and low-income students in engineering and computer science.

Research skills

***Outcome Measure (5.1)**: Gains on measure of self-perceptions, attitudes, and skills related to research from URSSA survey and interviews.*

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Research skills

***Outcome Measure (5.1)**: Gains on measures of self-perceptions, attitudes, and skills related to research from URSSA survey and interviews.*

Plans for faculty research with students

Data to be collected this summer on students who participate in research with CSUN faculty mentors planned for Summer 2017!

RESEARCH INTERNSHIPS

Summer 2017 Research Projects with CSUN Faculty Mentors

Plans for faculty research with students

Data to be collected this summer on students who participate in research with CSUN faculty mentors planned for Summer 2017!

RESEARCH INTERNSHIPS

Summer 2017 Research Projects with CSUN Faculty Mentors

Objective 6: Increase baccalaureate degree completion of Hispanic and low-income students in engineering and computer science fields.

Baccalaureate degree completion

***Performance Measure (6.1)**: The percentage of Hispanic and low-income students transferring successfully to a four-year institution from a two-year institution and retained in a STEM field major.*

Objective 6: Increase baccalaureate degree completion of Hispanic and low-income students in engineering and computer science fields.

Baccalaureate degree completion

***Performance Measure (6.1)**: The percentage of Hispanic and low-income students transferring successfully to a four-year institution from a two-year institution and retained in a STEM field major.*

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***Performance Measure (6.3)**: The percent of Hispanic and low-income students who participated in grant-supported services or programs and completed a degree or credential.*

Program completion data to be reported in 2016 APR Year 1 in Dec. 2017!

Program completion data to be reported in 2016 APR Year 1 in Dec. 2017!

career preparation of

Project Strengths

- Student participants welcomed + new student participants being recruited now!
- Project activities across sites link to project objectives--with core work focused on faculty mentoring and academic advising/ support!

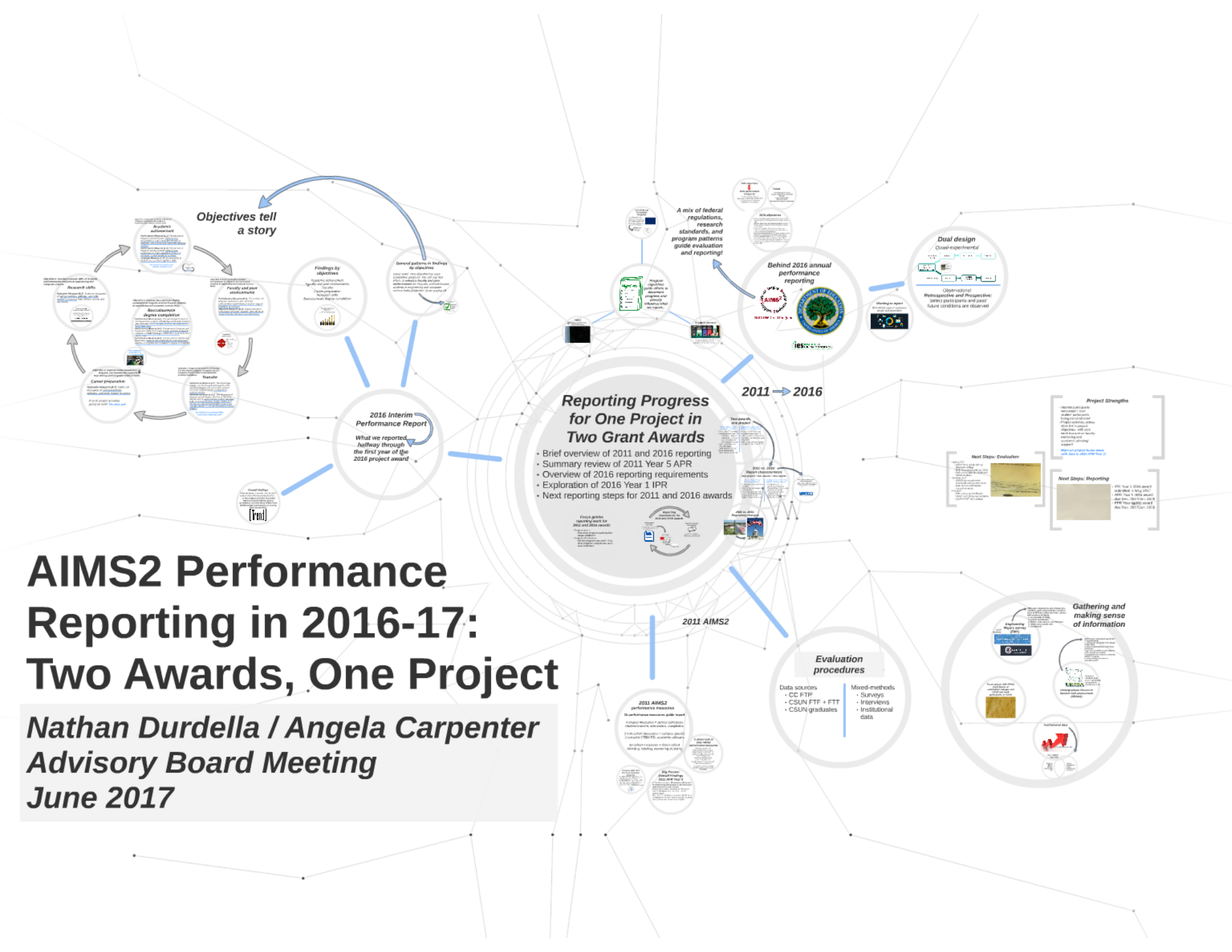
More on project focus areas with data in 2016 APR Year 1!

Next Steps: Evaluation

- Spring 2017
  - AIMS2 focus group pilot @ Moorpark College
  - Math focus group pilot @ CSUN
  - EMS survey pilot @ CSUN with AIMS2 students
- Summer 2017
  - URSSA survey pilot with community college and CSUN students in CSUN faculty research projects
- Fall 2017
  - EMS survey @ CSUN with AIMS2 and comparison students
  - CSUN AIMS2 focus groups

Next Steps: Reporting

- IPR Year 1 2016 award submitted in May 2017
- APR Year 1 2016 award due Dec. 2017/Jan. 2018
- FPR Year 6 2011 award due Dec. 2017/Jan. 2018



AIMS2 Performance Reporting in 2016-17: Two Awards, One Project

Nathan Durdella / Angela Carpenter

Advisory Board Meeting
June 2017