

# From Data Warehouse to Data Dashboards: Creating Diversity Data Dashboards at UC Berkeley

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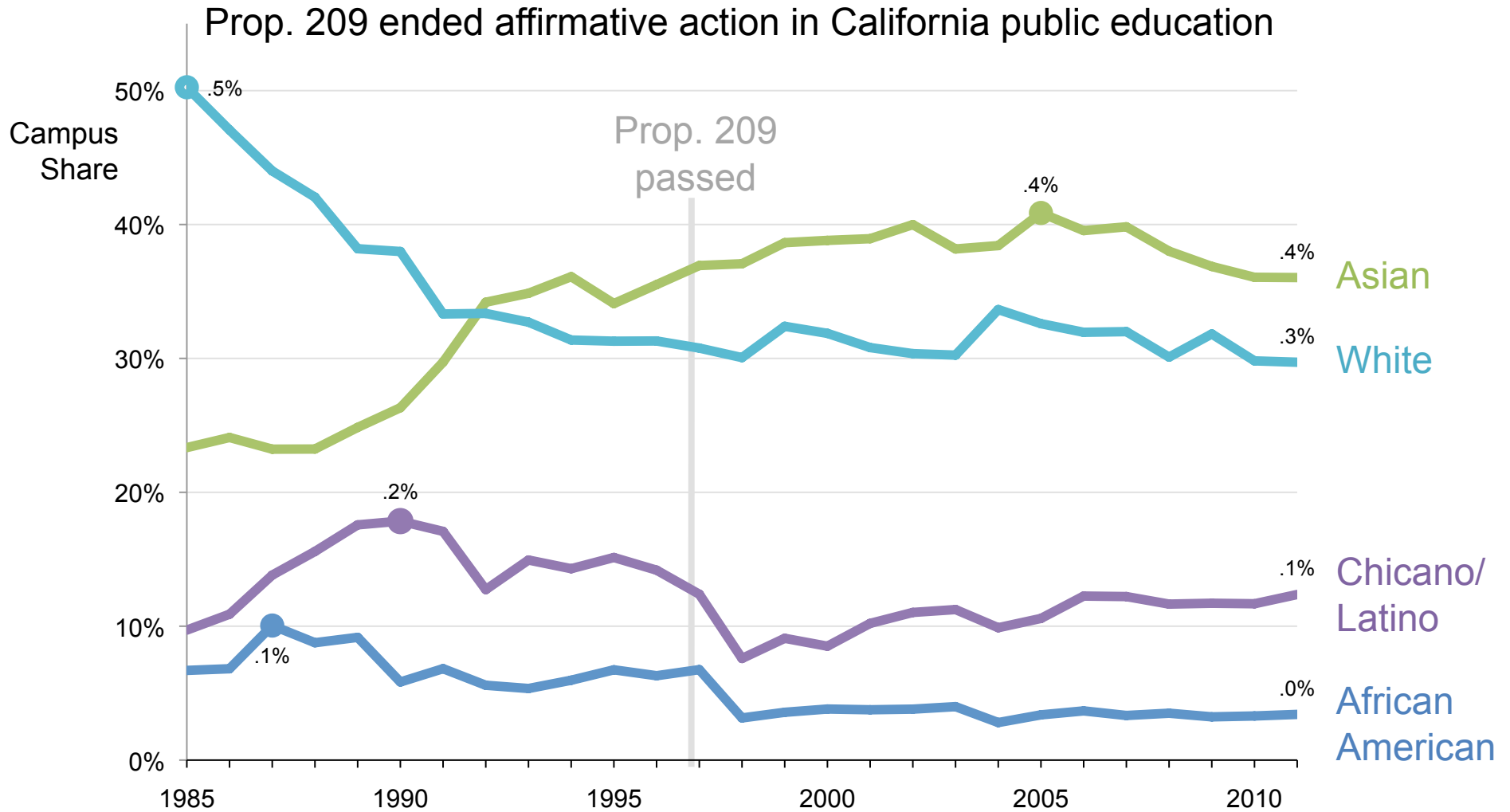
# Abstract

We will discuss the process of creating an electronic data warehouse (EDW) and then using it to create a diversity data dashboard that spans all campus populations. We discuss the difficulty in consolidating institutional data and the utility in centralization in creating institutional dashboards. We also discuss the creation of metrics and the use of logic models in tracking progress.

# Overview

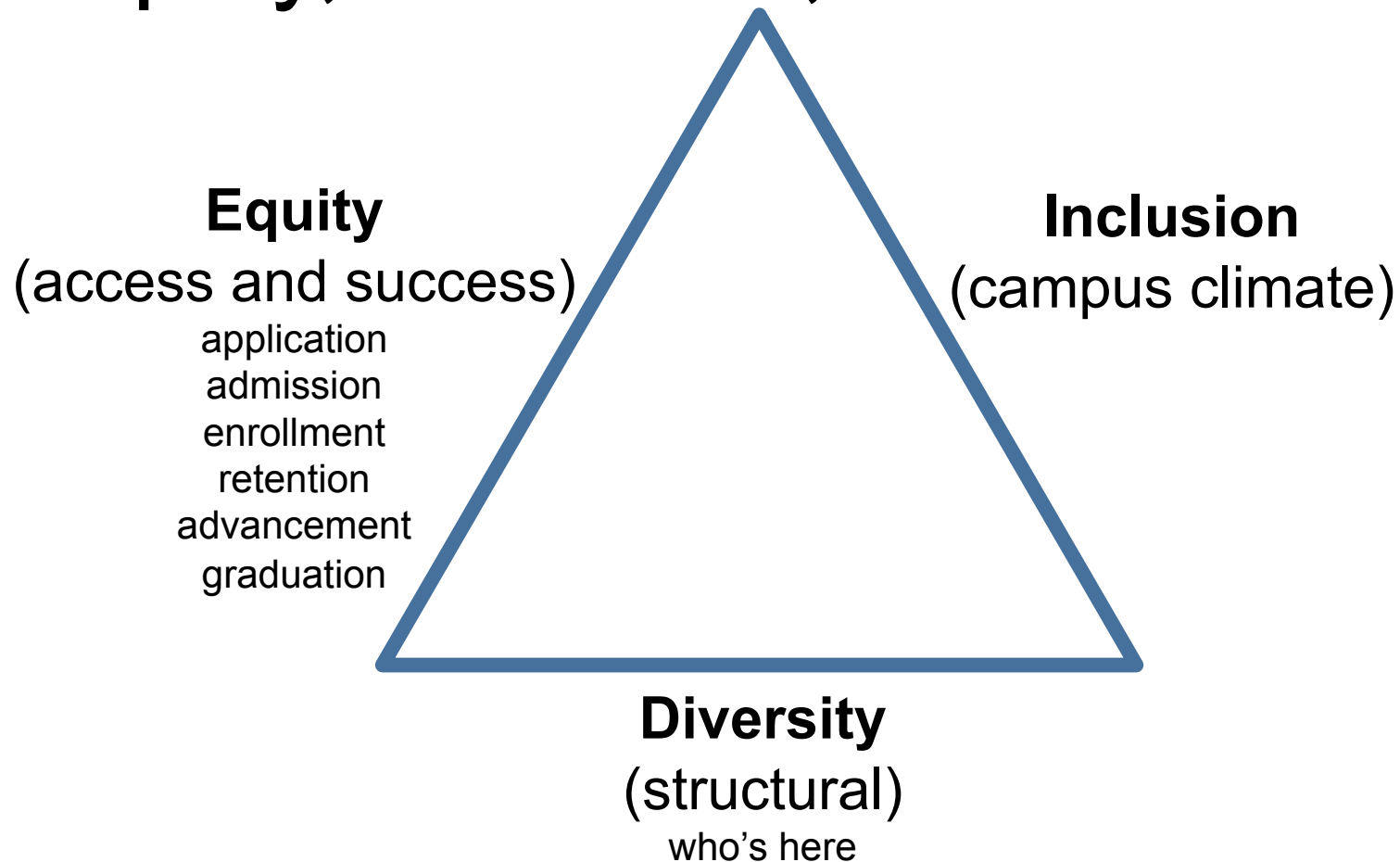
- What is “diversity” and how do we measure it?
- How do you set goals?
- How do you measure those goals?
- Where do you get the data?
- What do you with the data?
- What’s next?

# UC Berkeley New Undergraduate Demographic Trends, 1985-2011



Source: UC Berkeley Cal Answers

# Equity, Inclusion, and Diversity



Mission Statement: The Division of Equity and Inclusion provides leadership and accountability to resolve systemic inequities for all members of UC Berkeley through engaged research, teaching, and public service, and by expanding pathways for access and success and promoting a healthy and engaging campus climate.

**UC Berkeley Strategic Plan for  
Equity, Inclusion, and Diversity**

**PATHWAY TO  
EXCELLENCE**

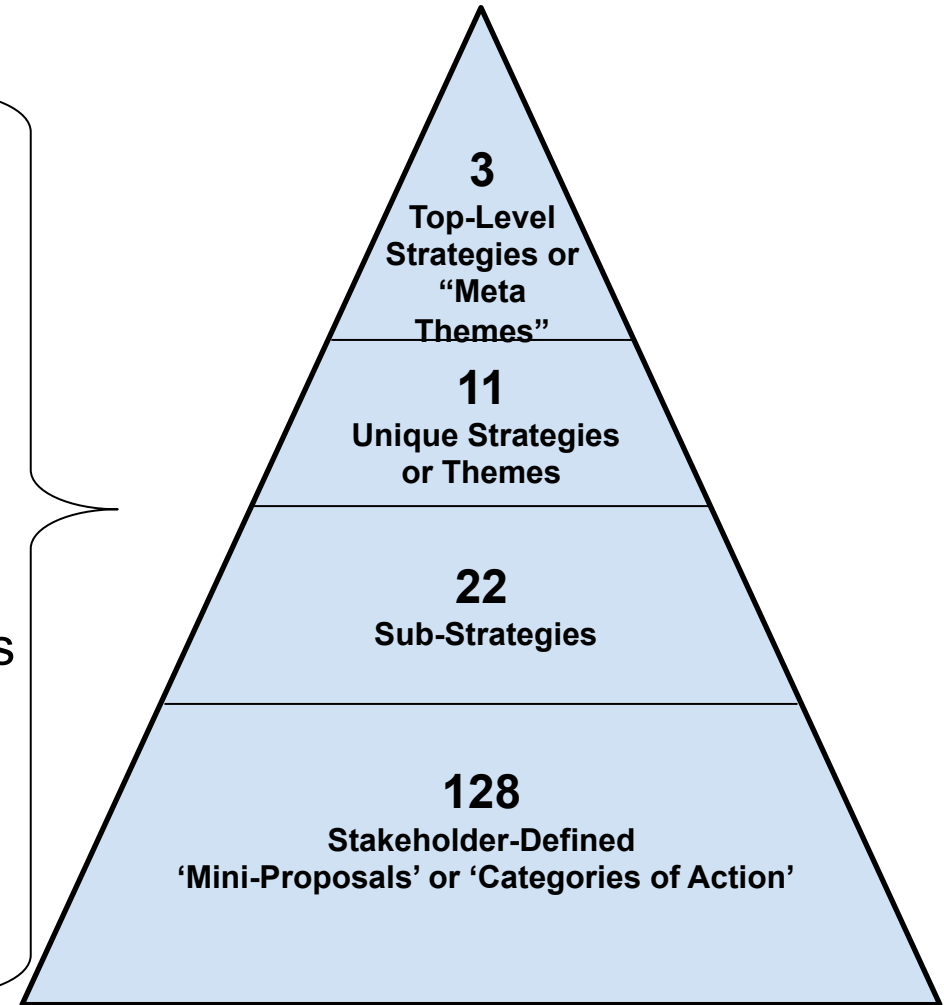
2009



**EXECUTIVE SUMMARY**

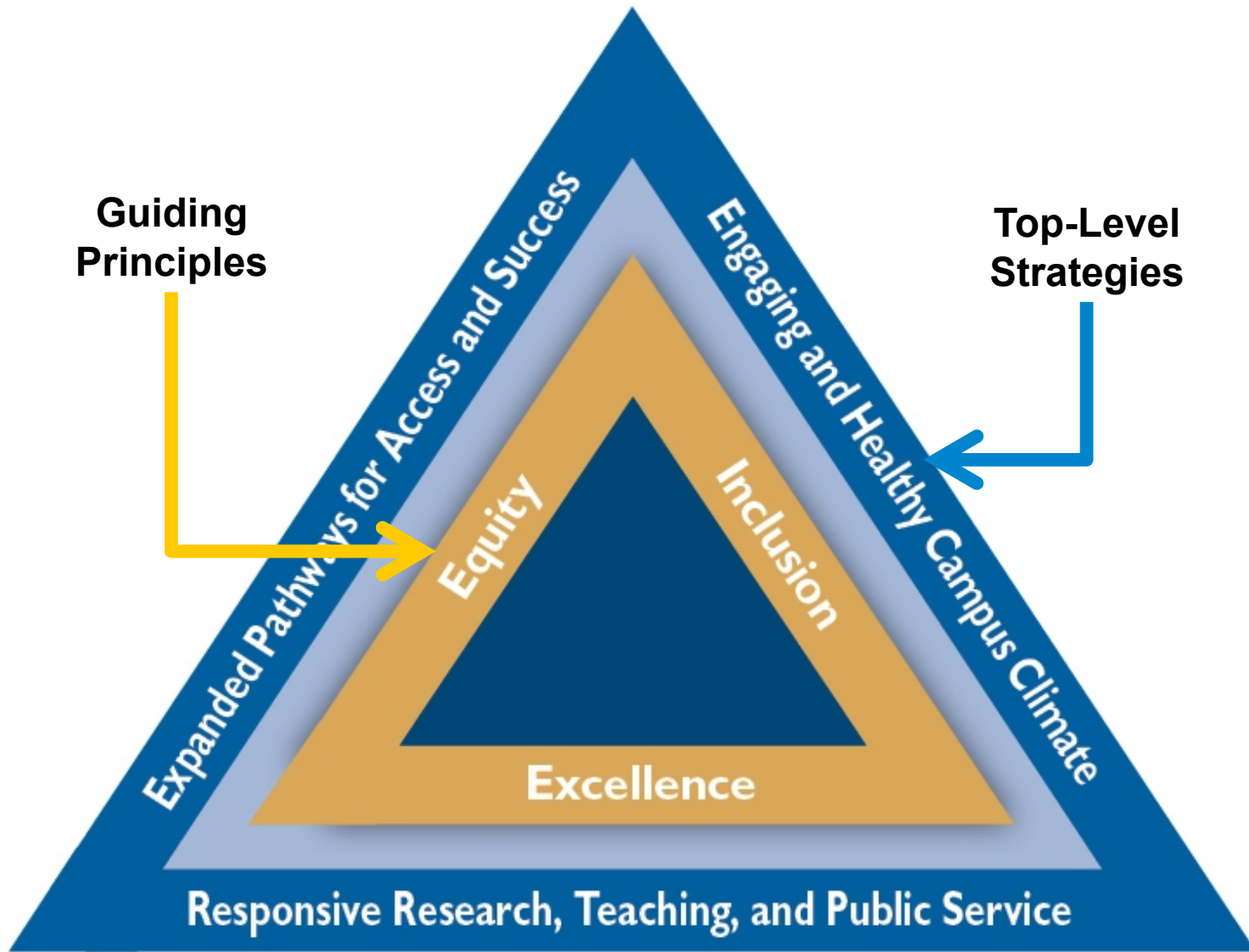
# SPEID Planning Process

- 15 -person planning team
- Town halls
- Focus groups
- Interviews
- Program inventory
- Peer institution visits
- Lit review
- Climate and workplace surveys
- Data analysis and synthesis
- Writing team
- Multiple drafts
- 2 review teams



13-Month Planning  
Process

→ Product





# Outcome-Driven Vision

- UC Berkeley is recognized as a **national leader** in research, teaching, and public service related to equity, inclusion, and diversity.
- All campus members report a **strong sense of belonging** and demonstrate the knowledge and skills necessary to successfully navigate and lead in a diverse world.
- **Intergroup disparities** in the enrollment, retention, and graduation rates of undergraduate and graduate students are **eliminated**.
- **Staff** at all levels — including the executive and management levels — **reflects the rich diversity** of the national and local talent pools.
- The **faculty hiring and retention rates** reflect the composition of the **availability pools** of exceptional talent in all fields nationally.
- The campus devotes the **leadership and resources** to sustain and enhance equity, inclusion, and diversity at UC Berkeley.

# Taking Action and Tracking Progress

- Once goals are defined
  - How do you determine what steps to take?
  - How do you know what resources you will need?
  - How will you know if you are on track to reach your goal?
  - How will you know if reach your goal?
- Logic models and metrics help with all these questions

# Using Logic Models

- Deliverable(s): What do you hope to accomplish?
- Motivating Need(s): What problem you are attempting to solve or issue do you want to address?
- Audience: Who is the target of your intervention?



- Timeline: When will each activity start and when will each activity end?

# Creating Metrics

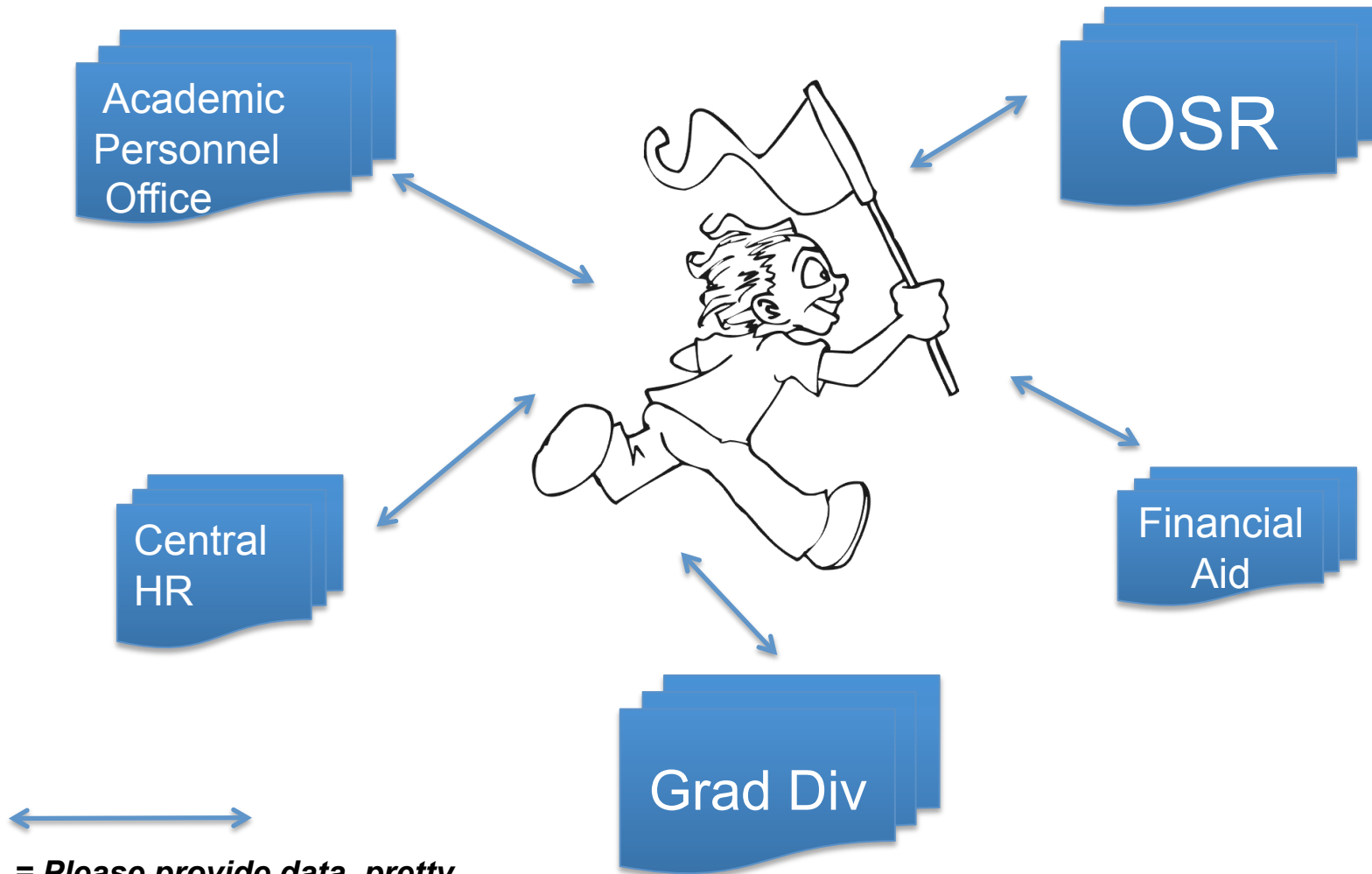
- For each outcome in your logic model(s), create a metric to track progress
- The metric should have the following characteristics:
  - Use data that is available
  - Use data that is updated regularly
  - Address the specific outcome directly
- Once metrics are defined
  - Establish baselines to know where you are now
  - Set targets and milestones for the metric

# Metric Matrix

Expected Outcomes	Intermediate Outcomes	Performance Objectives	Metric	Source
3. Intergroup disparities in the enrollment, retention, and graduation rates of undergraduate and graduate students are eliminated.	3.1. Increase in the number of students from UC Berkeley educational partner schools and programs who complete the A–G course pattern and who are eligible for UC or California State University (CSU) admission.	3.1.1. Fifty percent increase in the number of academic preparation program participants who complete A–G requirements.	3.1.1. Number of academic preparation program participants who complete A–G requirements	UC Berkeley Center for Educational Partnerships
		3.1.2. Fifty percent increase in the number of academic preparation program participants who are eligible for University of California.	3.1.2. Number of academic preparation program participants who are eligible for University of California	UC Berkeley Center for Educational Partnerships

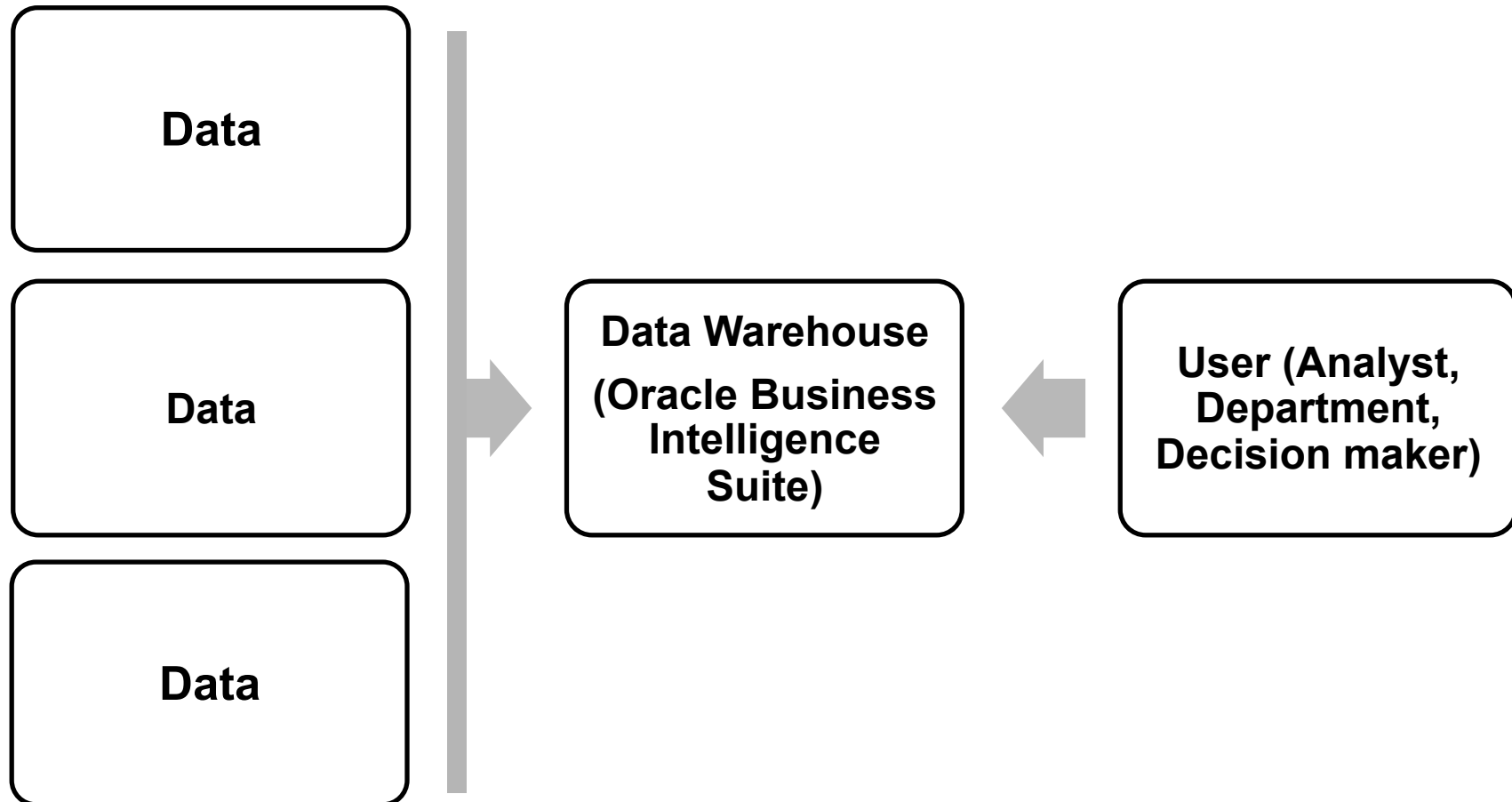
Data needs and sources are now identified – all that remains is the “hustle the data”

# Chasing Data, Circa 2009



*= Please provide data, pretty please...*

# Enterprise Data Warehouse, 2012



# Data Sources

	Undergraduate Students	Graduate Students	Faculty	Staff
Availability	CDE, CPEC	IPEDS and SED		US Census
Applicant	Cal Answers	Grad Div	AP Recruit	N/A
New Entrant				
Current				
Climate	UCUES (undergraduates) and Campus Climate Survey			

UC Berkeley Source   External Source



# Cal Answers Demo

# E&I Data Dashboard Overview

- **Background:** In 2009, E&I published *UC Berkeley Strategic Plan for Equity, Inclusion, and Diversity* with six top-level outcomes and thirty-eight intermediate outcomes targeting K-12 students, undergraduates, graduate students, faculty, and staff.
- **Goal:** Make it easy for the public to find information about demographics, campus climate, and progress toward meeting the goals of the *UC Berkeley Strategic Plan for Equity, Inclusion, and Diversity*
  - Indicators/metrics based on the long-term and intermediate outcomes outlined in the Strategic Plan
- **Audience:** To provide transparency and accountability, the E&I dashboard is designed for the following groups:
  - General Public
  - UC Berkeley Community
  - Funding Sources

# E&I Data Design Goals/Principles

- Broad Goals:
  - Collaborative with other units, organizations
  - Stable, easy-to-use data sources with universal definitions
  - Publically accessible
  - Centralized
  - Leveraged with EDW investment, Haas grant
- Design Goals:
  - Integrated with existing E&I website
  - Visual coherence within and between elements
  - Navigational ease
  - Minimal effort for user to understand



# Dashboard Strengths

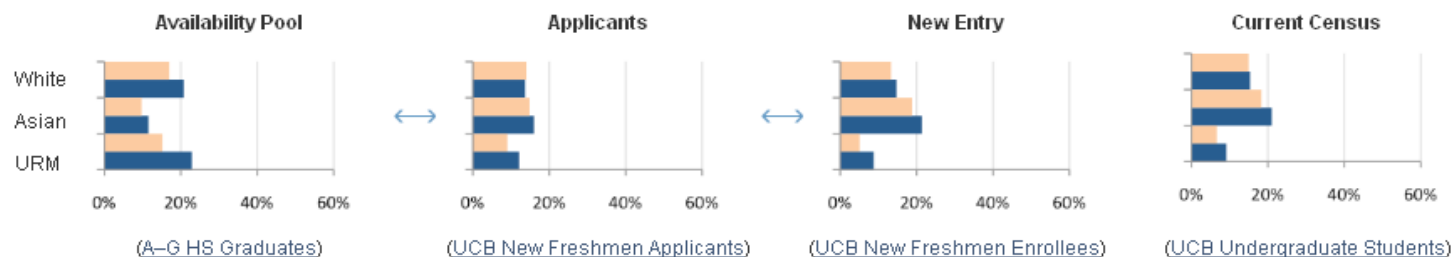
- Cal Answers used as a primary data source
- Campus demographics described succinctly
- Information communicated to wide audience

# Dashboard Demo

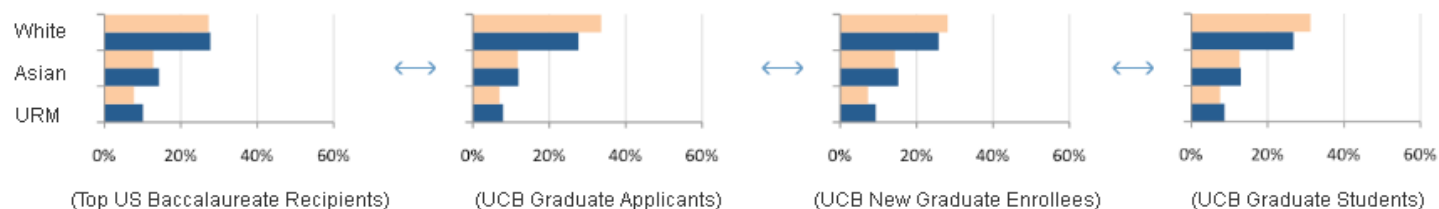
# Demographics Dashboard

Women Men

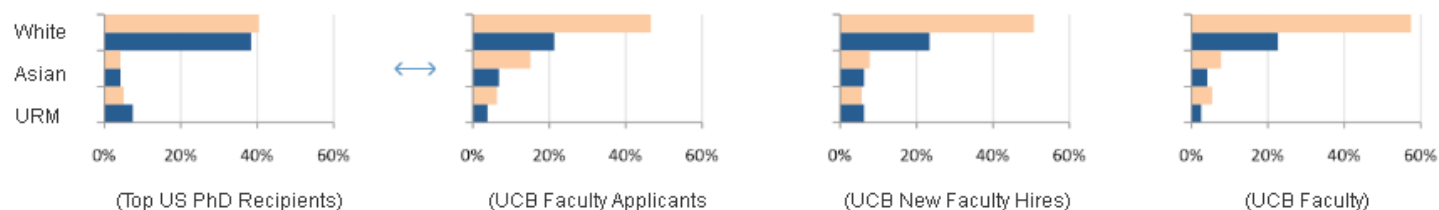
## Undergraduate Pipeline



## Graduate Student Pipeline



## Faculty Pipeline

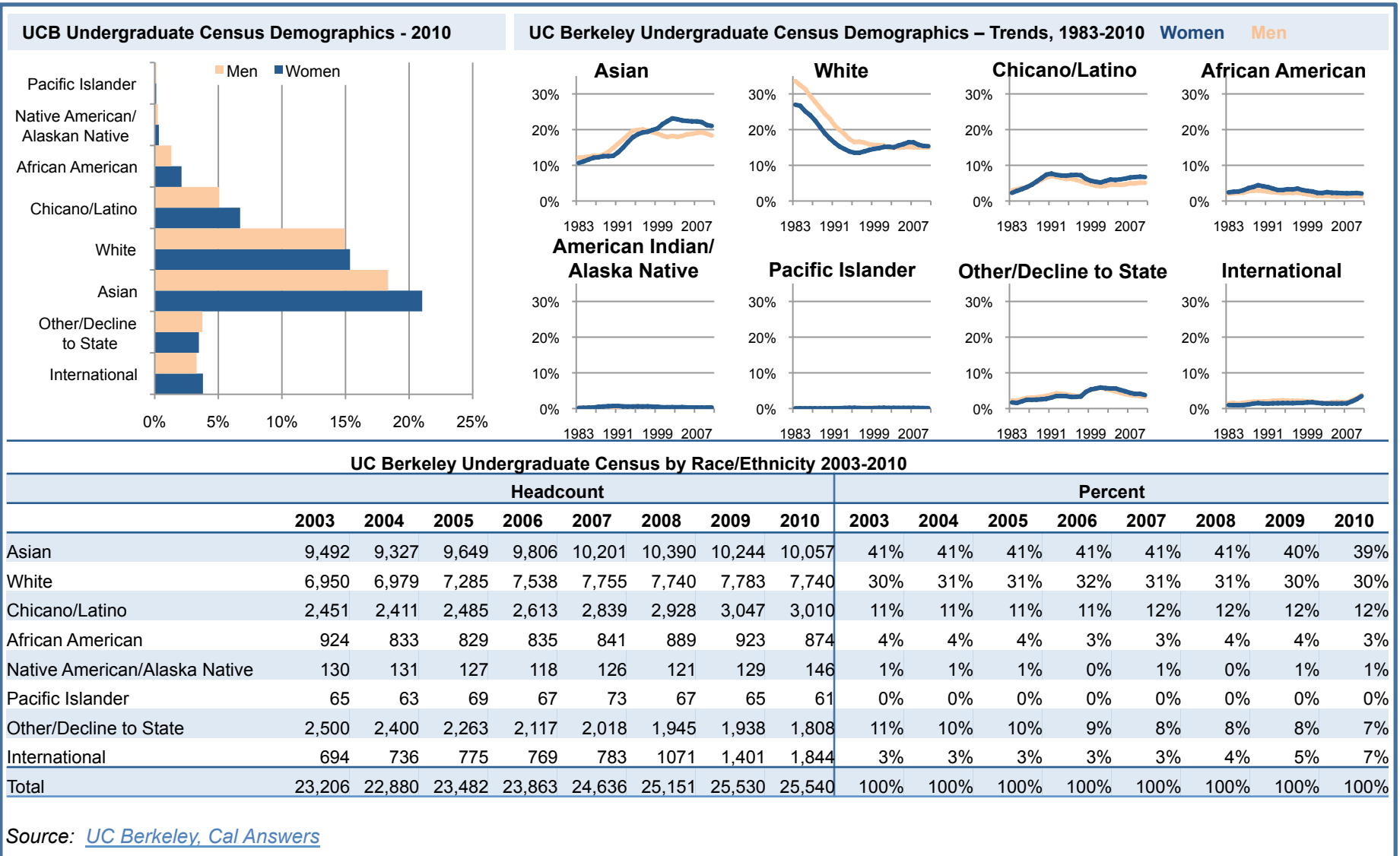


## Staff Pipeline



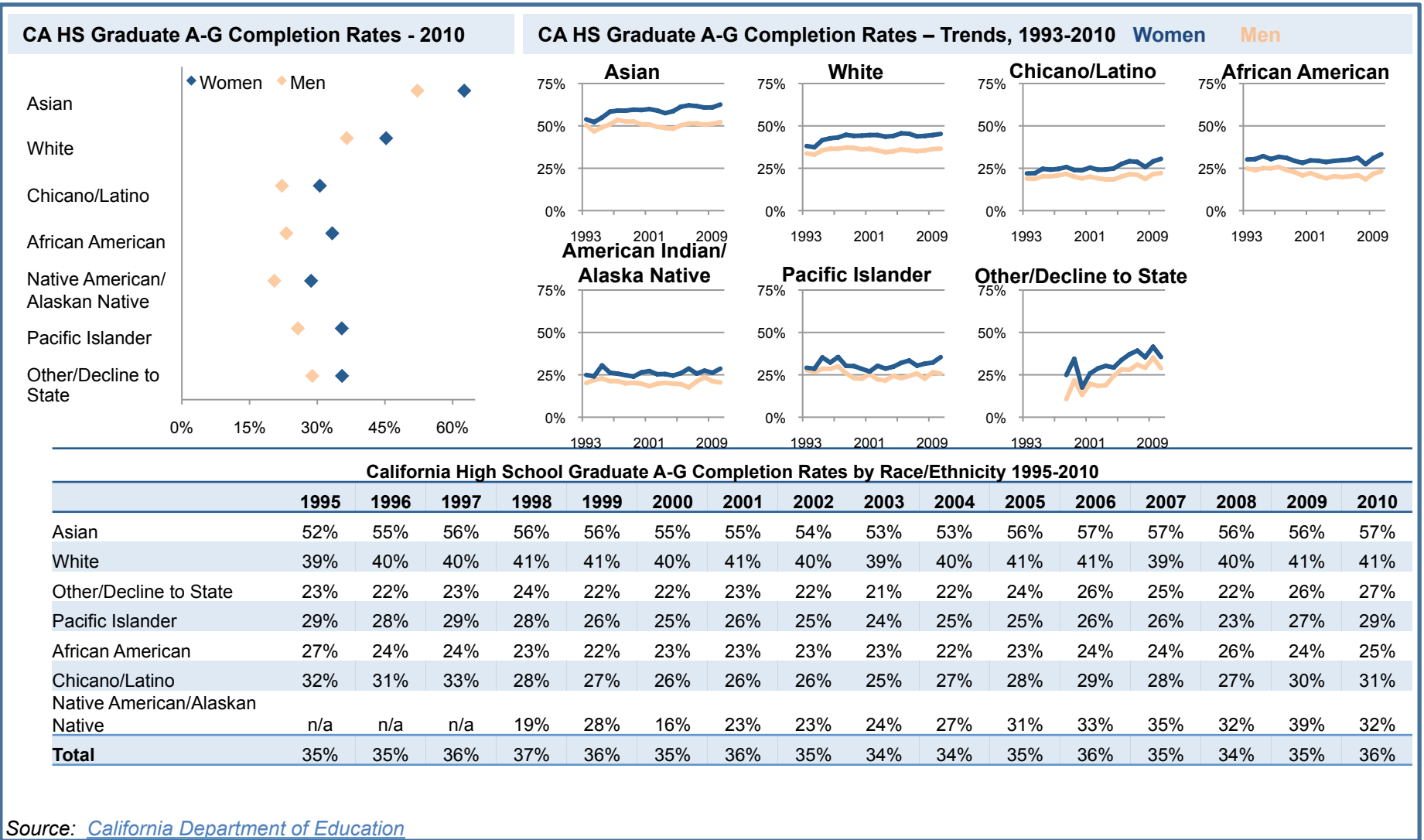
**UC Berkeley Demographic Shares > Undergraduate Students – Current**

Currently, 39% of UC Berkeley undergraduates are Asian, 30% are White, 12% are Chicano/Latino, 3% are African American, 1% are Native American/Alaskan Native, less than 1% are Pacific Islander, 7% are Other or Decline to State, and 7% are International. Women outnumber men in all race/ethnic groups, with the largest gaps occurring in Asian and Chicano/Latino undergraduates. Asian undergraduates have had the largest increase in the past 28 years, growing from just over 20% to almost 40% of all UC Berkeley undergraduates.



**UC Berkeley Expanded Pathways > Undergraduate Students – A-G Completion Rates**

Currently, 57% of Asian high school graduates in California complete A-G requirements compared to 41% of White students, 32% of Other/Decline to State students, 31% of Pacific Islander students, 29% of African American Students, 27% of Chicano/Latino students, and 25% of Native American/Alaskan Native students. Across all race/ethnicities, women have higher A-G completion rates than men. A-G completion rates have been relatively stable over the past 16 years.



Source: [California Department of Education](#)



# Campus Climate Dashboard

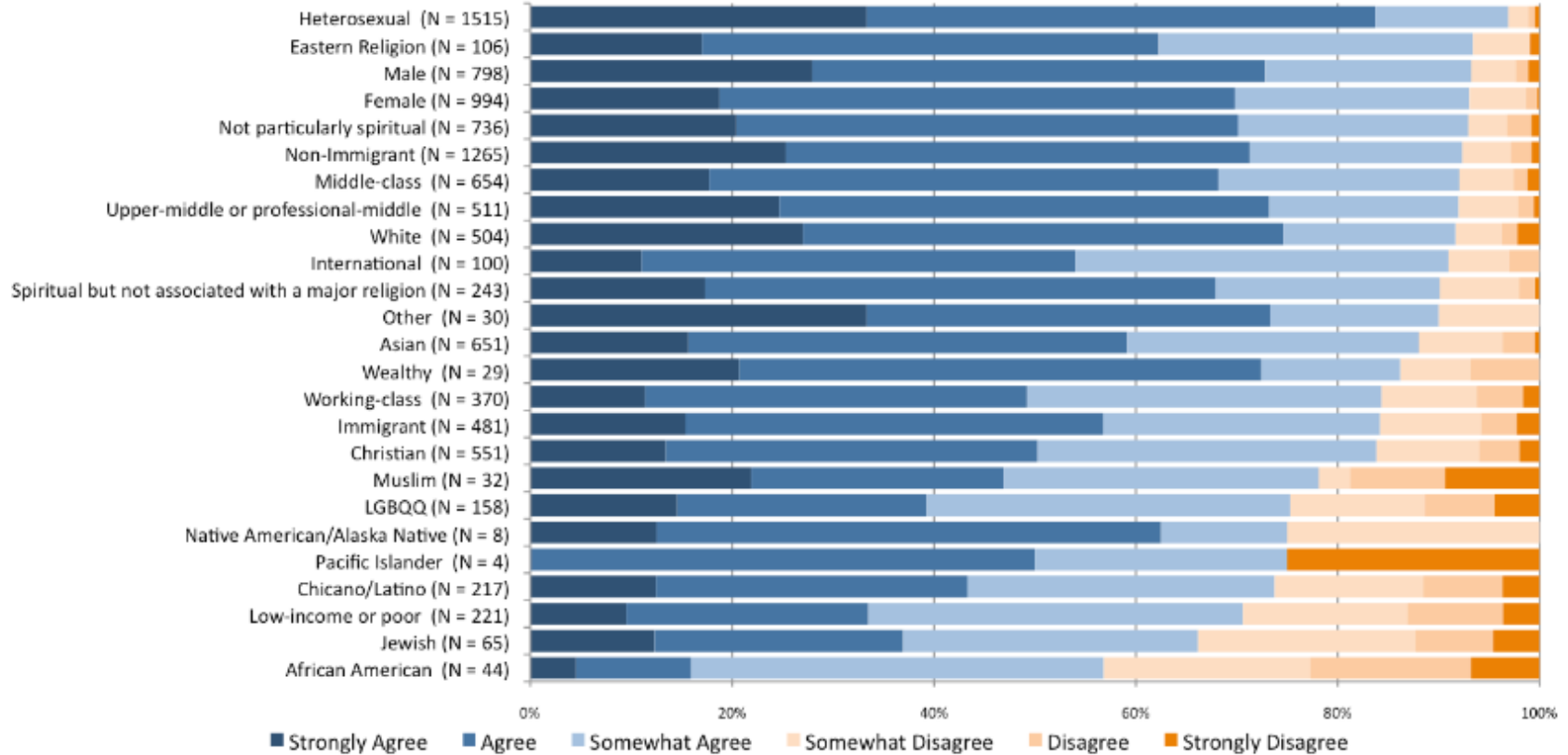
Undergraduate Students

Graduate Students

Faculty

Staff

## Feelings of Respect among Undergraduate Students by Group



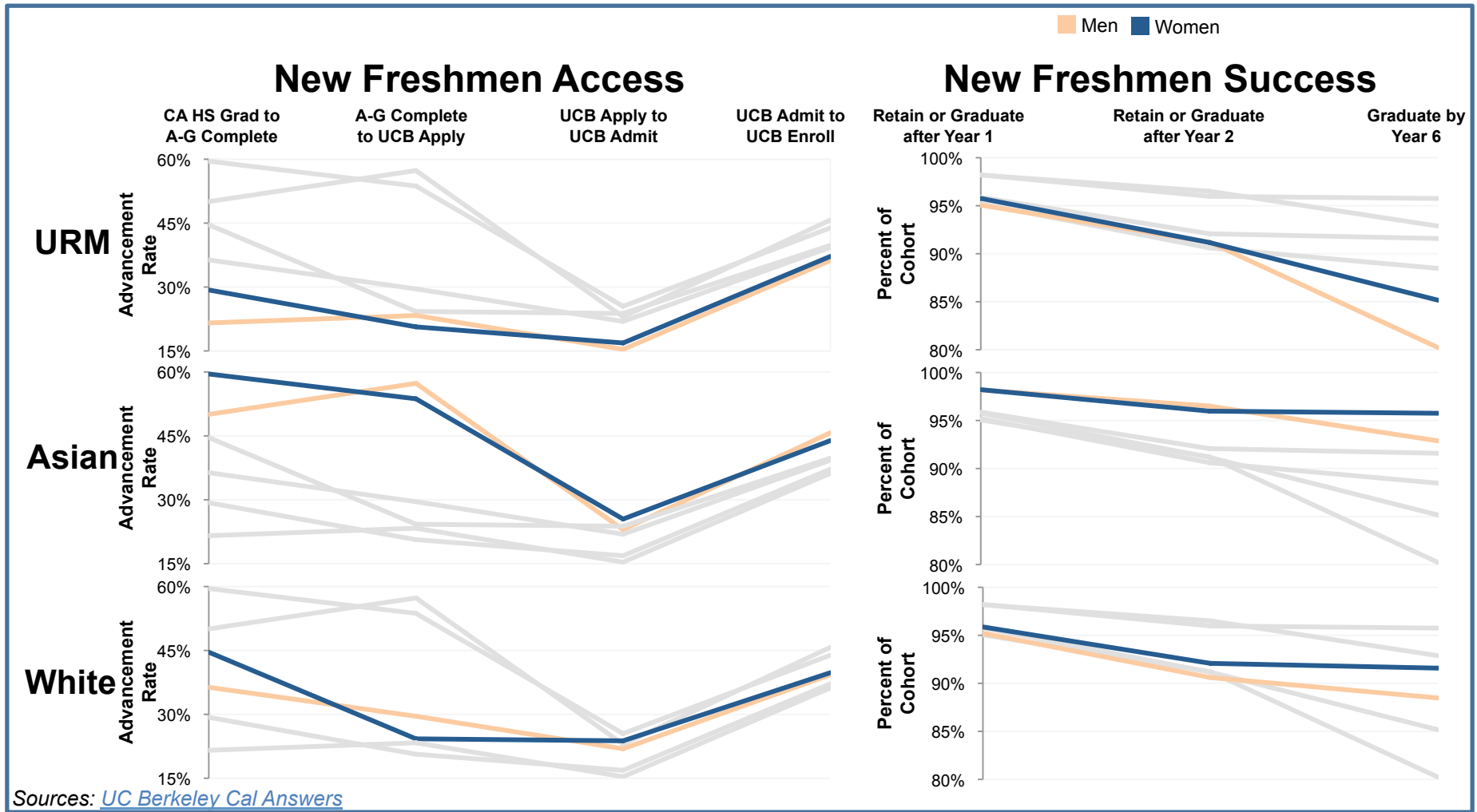
Source: [UC Berkeley, UCUES](#)

# Dashboard Challenges

- Hard to simplify multi-dimensional data/ goals into single graphic
- People don't look at data until they need it
- Finding consistent and reliable data sources

[Expanded Pathways for Access and Success > Undergraduate Students](#)

The following charts track advancement and success rates for undergraduate students entering into and graduating from UC Berkeley. The charts show that for California HS Graduates, 29% of URM women complete A-G requirements. Of the URM women who complete A-G, 21% apply to UC Berkeley, and of those that apply 17% of URM women are admitted. Of URM women who are admitted to UC Berkeley as new freshmen, 37% enroll. After the 1<sup>st</sup> year, 96% of URM new freshmen women were enrolled or graduated. After the 2<sup>nd</sup> year, 91% of URM new freshmen women were enrolled or graduated. By the 6<sup>th</sup> year, 85% of URM new freshmen women were graduated.



# What's Next?

- Creating interactive dashboards
- Finding a clearer way to display progress (or lack thereof) in the pipeline
- Answering questions before they're asked (publications, publicity)
- Developing a “Diversity Index” or “scorecard” – to compare equity, inclusion, diversity across units, campuses, universities
- Building capacity of practitioners to use data/information to improve programs or change policy

# Additional Resources

- Liz Halimah, [ehalimah@berkeley.edu](mailto:ehalimah@berkeley.edu)
- Andrew Eppig, [aepig@berkeley.edu](mailto:aepig@berkeley.edu)
- UC Berkeley Equity & Inclusion (E&I)
  - <http://diversity.berkeley.edu>
- E&I Strategic Plan for Equity, Inclusion, and Diversity
  - <http://diversity.berkeley.edu/StrategicPlan>
- E&I Diversity Data Dashboard
  - <http://diversity.berkeley.edu/data>