

SEEING THE FOREST THROUGH THE TREES:

How Humboldt State University Leveraged
Decision Trees in Communicating Results

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Outcomes

What you will learn in this session...

1 HSU Context & Challenges

A President's first year; Strategic Planning and the Road to 2020.

2 Guiding Principles

The role of actionable intelligence and assessment.

3 Application and Visualization

What are Decision Trees; how to use them; example studying 6-year graduation rates.

Previously on
“As HSU turns”...

Section I

Context

1 Leadership Changes

New President in 2014; rotating interim Provosts; change in various leadership roles.

2 Strategic Planning

2014-15 the development and adoption of a new Strategic Plan- a 'living' guidepost for the campus' planning and implementation activities to 2020; WASC up-coming.

3 Change in the Role of IRP

Campus needs assessment concluded the role of IRP should expand beyond typical reporting previously conducted.

Challenges/ Opportunities

Raw material + Sweat equity

01

Data Management

The role of the Strategic Data Repository and its use.

- Student
- Financial Aid
- Personnel

02

System Knowledge

Using the team you have to build the team you want them to become.

- EMSA
- Provost Office
- Budget

03

Marrying Statistics with Visualizations

Making it informative, useful, and engaging.

- Tableau
- SPSS
- Excel

What we did...

Section II



INNOVATION MANAGEMENT

Quote

”

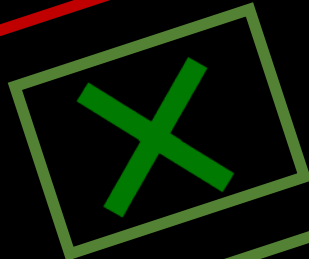
In hindsight, every great idea is logical but to get there you have to change the mindset.

Edward de Bono

Guiding Principles



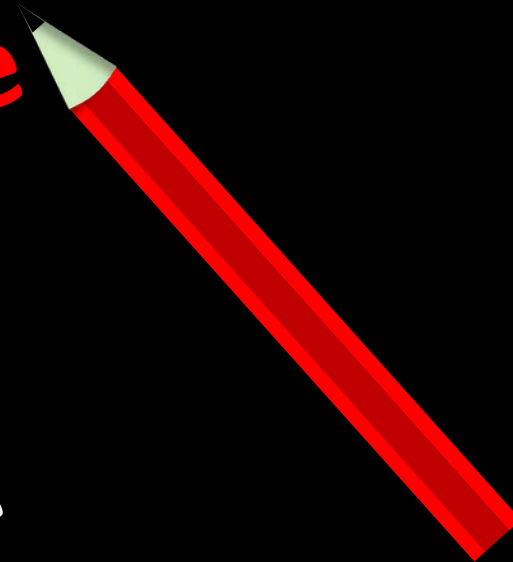
Actionable Intelligence



Link to Theory

Statistically Robust

but Approachable



“Deciding” to climb
the redwood tree...

CHAID

Option I

Chi squared
automatic
interaction
detection tree
Non parametric

CART

Option II

Regression
Analyses

QUEST

Option III

Quick, unbiased
efficient statistical
tree

<http://www.researchmethods.org/CARTIntroTutorial.pdf>

What we studied...

Section III

HSU STUDENT SUCCESS: GRADUATION INITIATIVE

Target



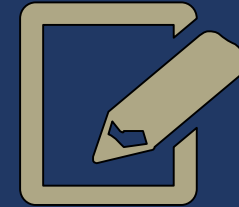
By 2020, **50%** of students will complete their degree within six years; **53%** by 2025.

History



Currently, around **42%** of students graduate within six years.

Challenge



How to better understand, communicate and achieve this target?

Road to 2020

1,386 students

The first-time undergraduates who started in Fall 2014 is who we will follow.

Trend

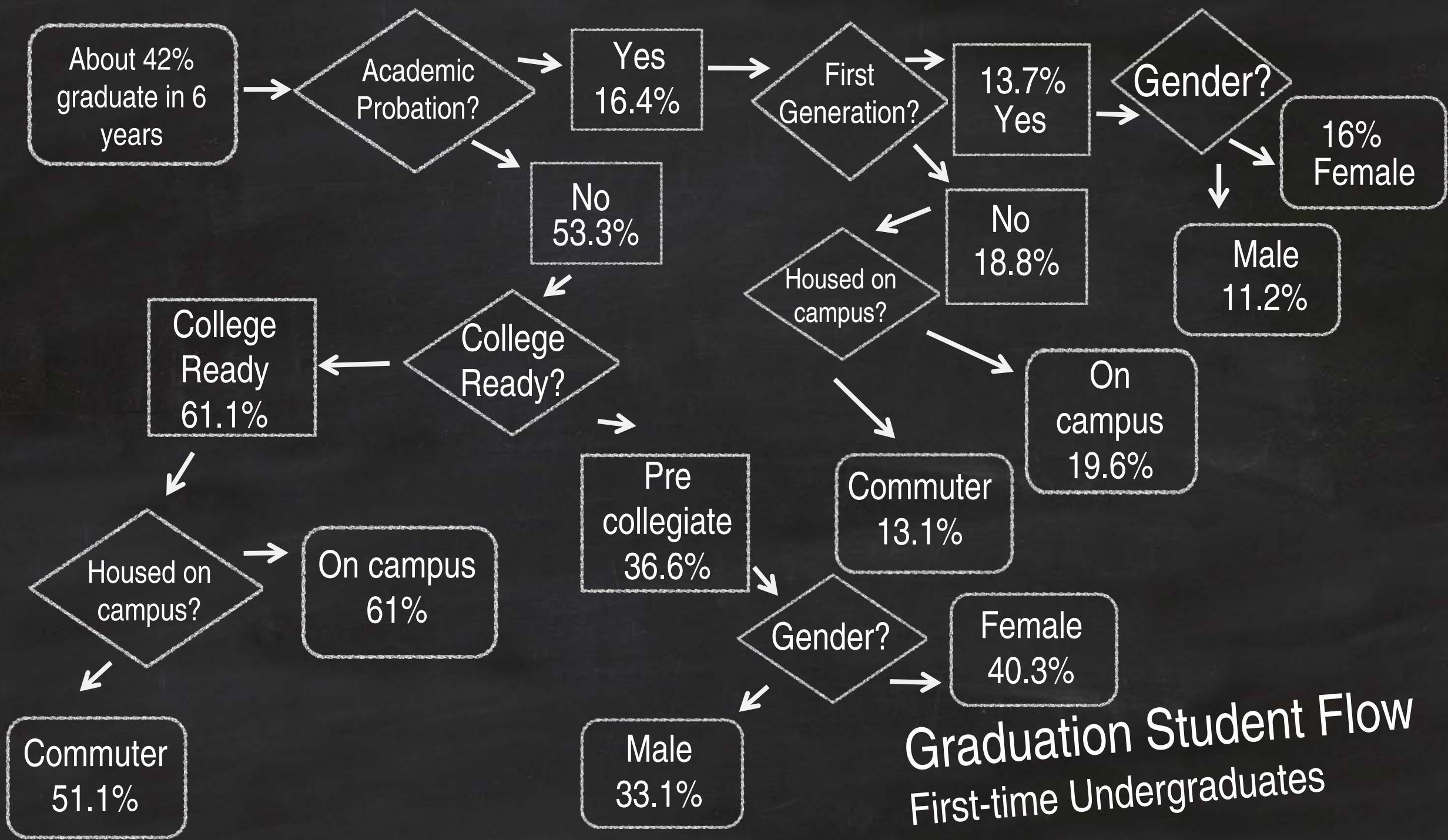
Assuming current trends, about **582** students will graduate in six years.

Opportunity

To meet target we would need to increase the number of students graduating to **693**...

...Or an additional **111** students.



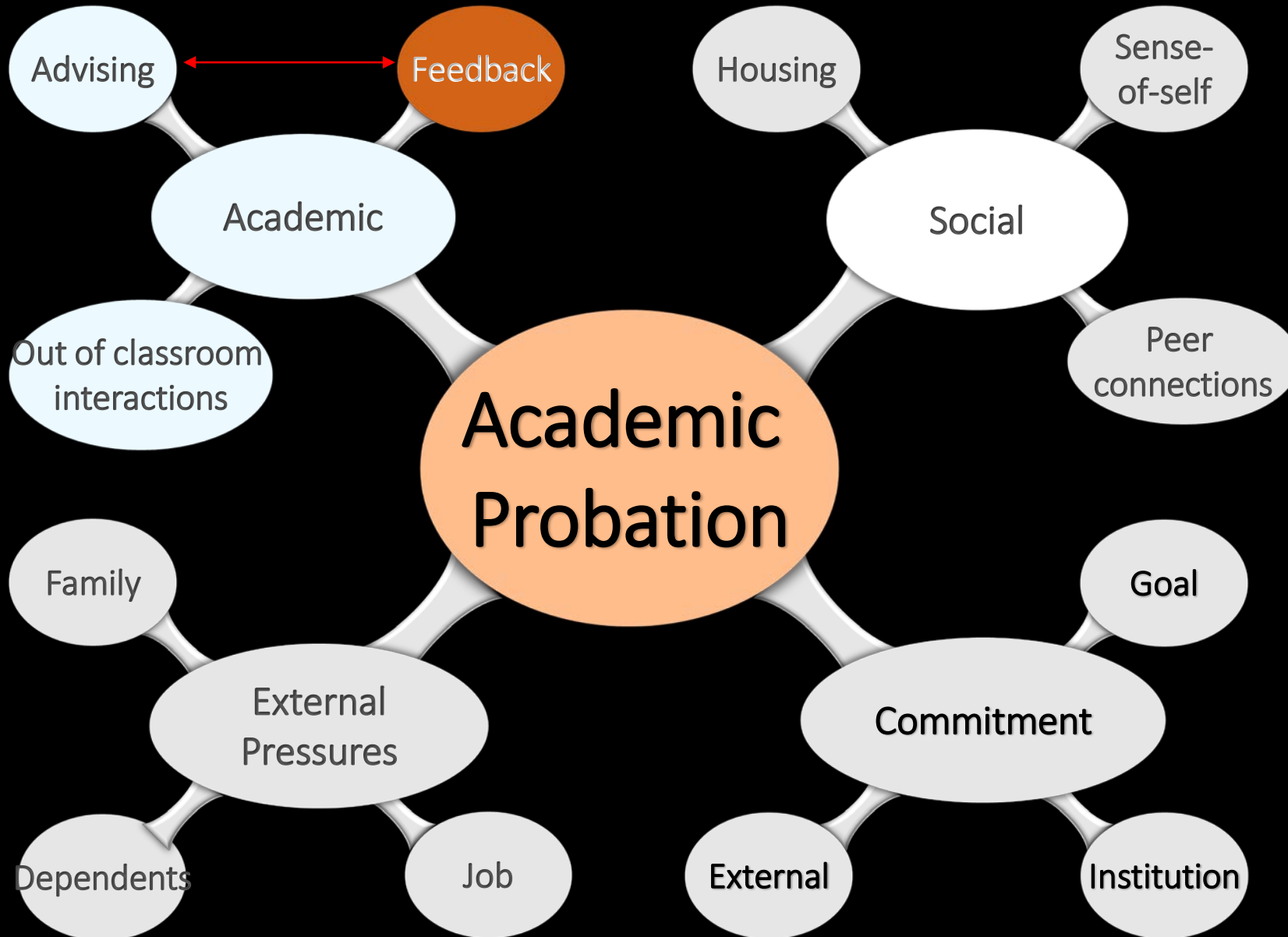


Tending The Tree: Update

Section IV

MINDMAPPING ACADEMIC PROBATION

Academic Probation as a function of...



Precursor to
Structural
Equation
Modeling
(SEM)

Intelligence in Action....

Want to see more?

11/5 4:30-5:15

Oregon Room

Identifying Target Student

Populations for HIPs-

*“Don’t Put the “CART” Before the
Horse—Decomposition Study”*

Q&A

Section V