

**Arizona State University**

# **Strategic Enterprise Plan**

2017 Update & Operational and Financial Review

Arizona Board of Regents

February 3, 2017



# ASU Charter

ASU is a comprehensive public research university, measured not by whom it excludes, but by whom it **includes** and how they **succeed**; advancing research and discovery of **public value**; and assuming **fundamental responsibility** for the **economic, social, cultural, and overall health** of the communities it serves.

# Responsibility and the Public Trust

The charter is a promise to the citizens of Arizona.

ASU has a responsibility to fulfill the requirements of the Arizona Constitution to provide public education.

The responsibility is not one that is conditional upon the actions of the legislature; it is ASU's responsibility to find the means to fulfill its charter while seeking appropriate and fair public investment in the costs of education for Arizona resident students.

# Design Aspirations

## **Leverage Our Place**

ASU embraces its cultural, socioeconomic and physical setting.

## **Transform Society**

ASU catalyzes social change by being connected to social needs.

## **Value Entrepreneurship**

ASU uses its knowledge and encourages innovation.

## **Conduct Use-Inspired Research**

ASU research has purpose and impact.

## **Enable Student Success**

ASU is committed to the success of each unique student.

## **Fuse Intellectual Disciplines**

ASU creates knowledge by transcending academic disciplines.

## **Be Socially Embedded**

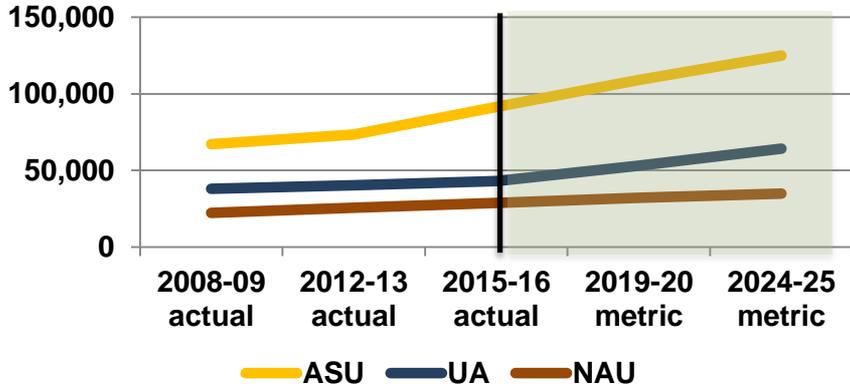
ASU connects with communities through mutually beneficial partnerships.

## **Engage Globally**

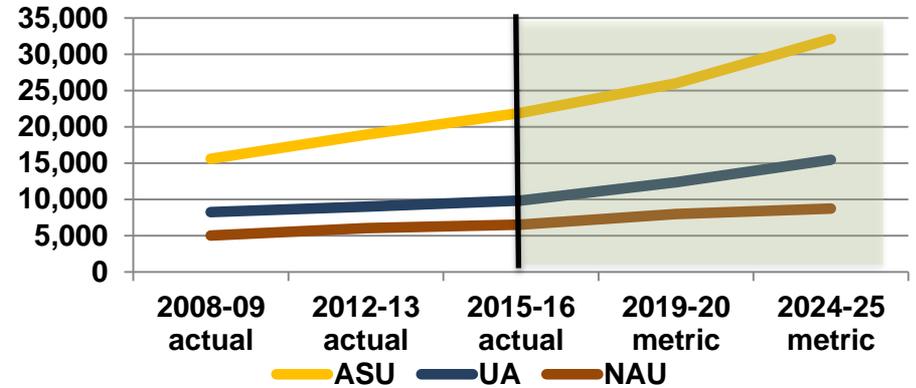
ASU engages with people and issues locally, nationally and internationally

# Scale of ASU's Assignment and Ambition

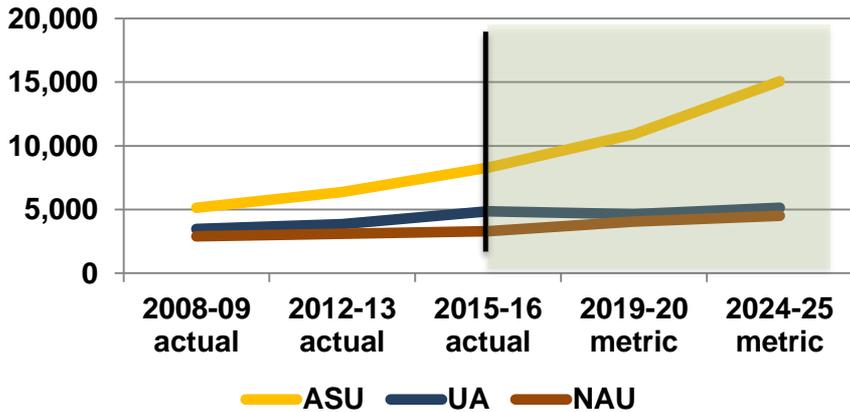
### Share of Total Enrollment



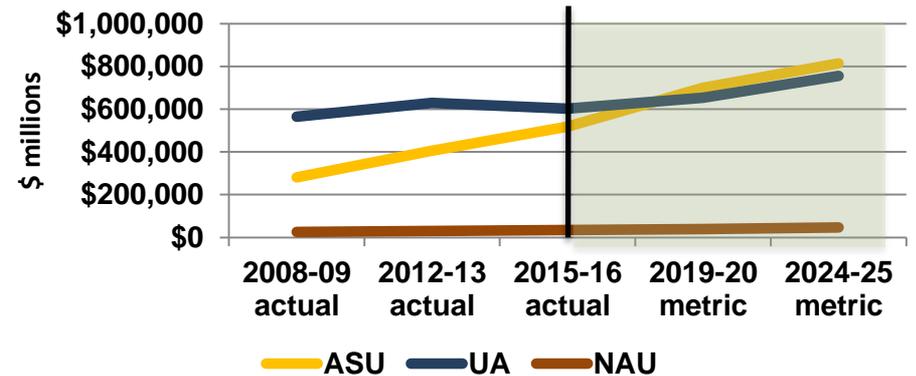
### Share of Total Degrees



### Share of High Demand Degrees



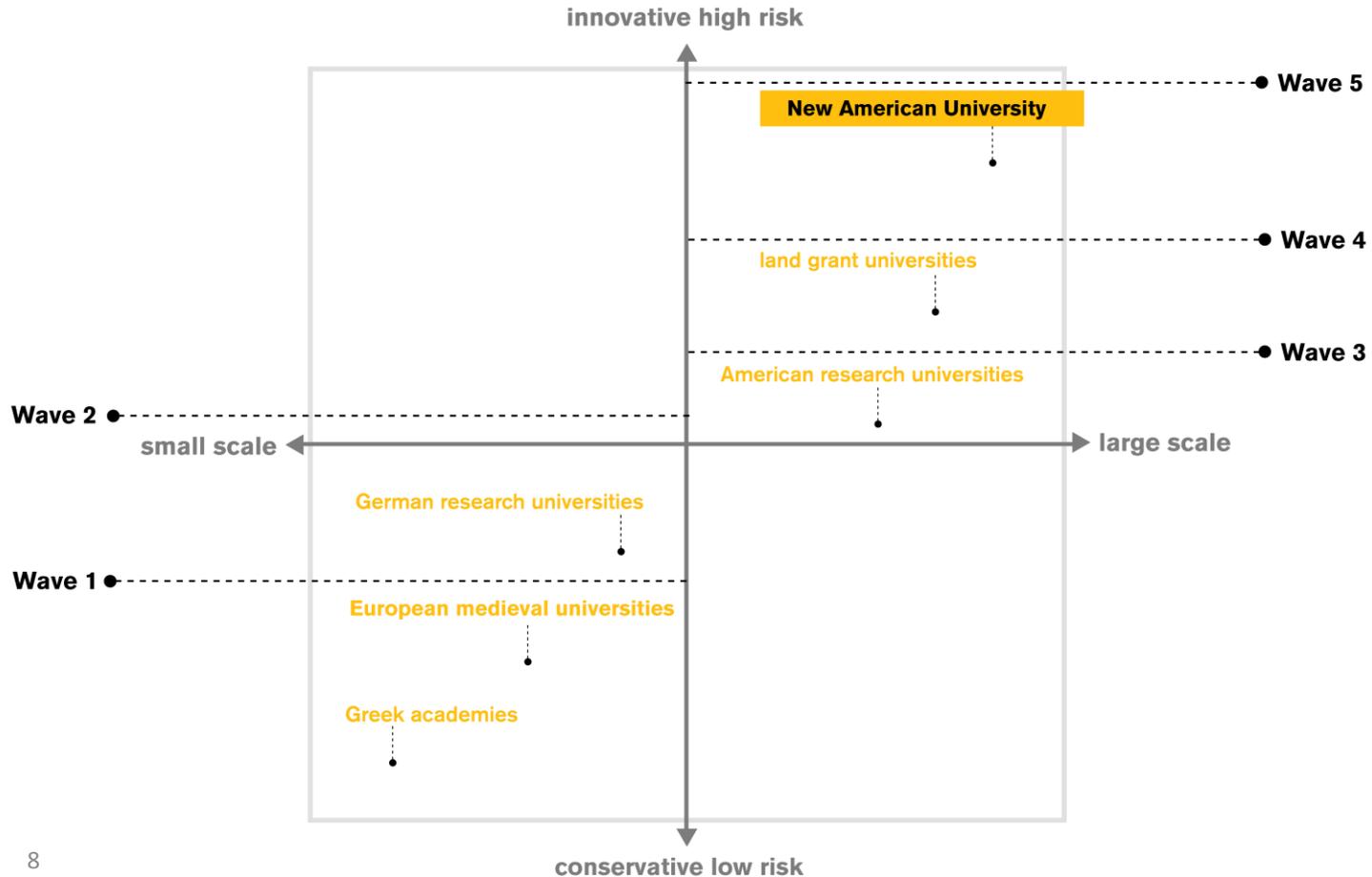
### Share of Research Expenditures



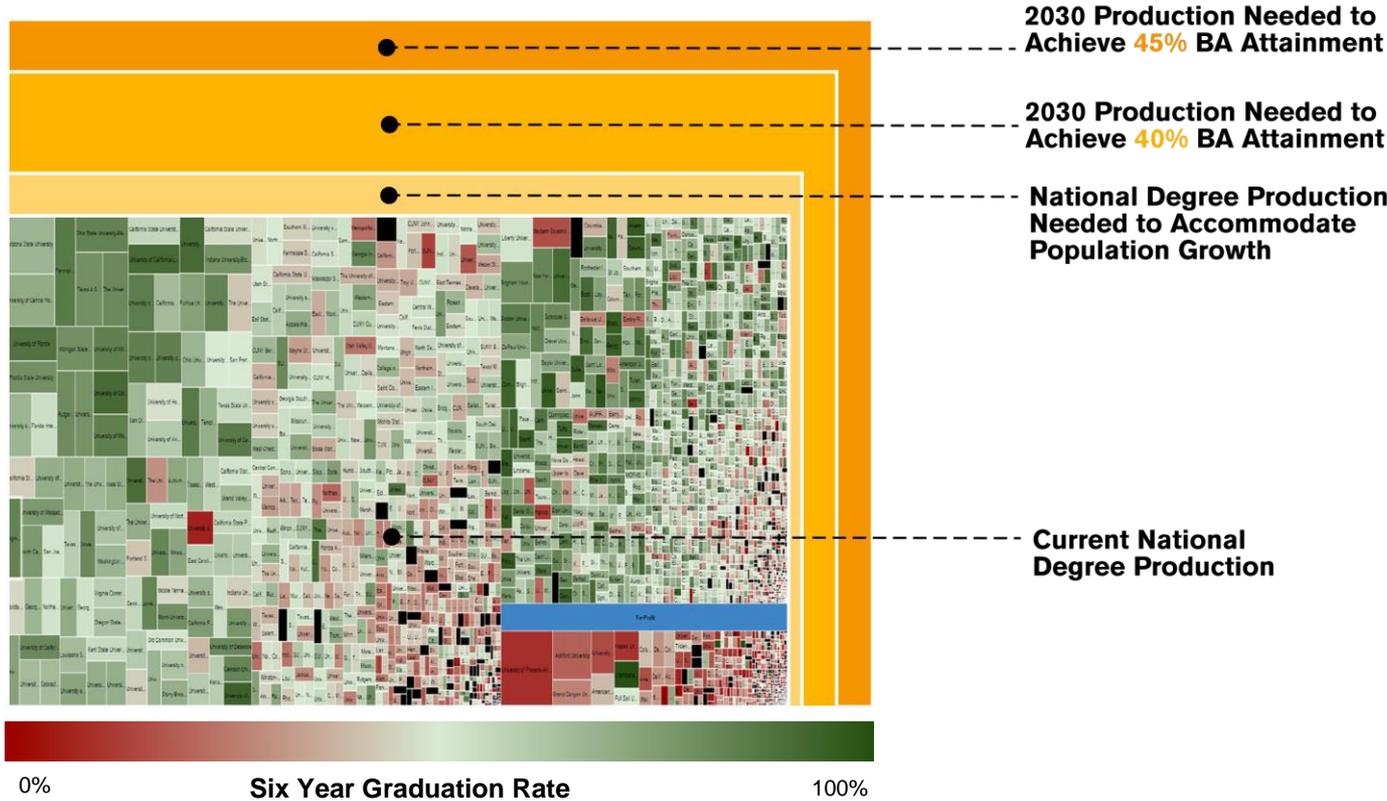
# Five Forces are Reshaping Higher Education

1. Economic and social disruption is continuing to accelerate, which is placing many institutions at risk.
2. The globalization of education is accelerating.
3. New business and delivery models are gaining traction.
4. Greater transparency about student outcomes is becoming the norm.
5. Student and family demands are rising for a greater return on investment in higher education.

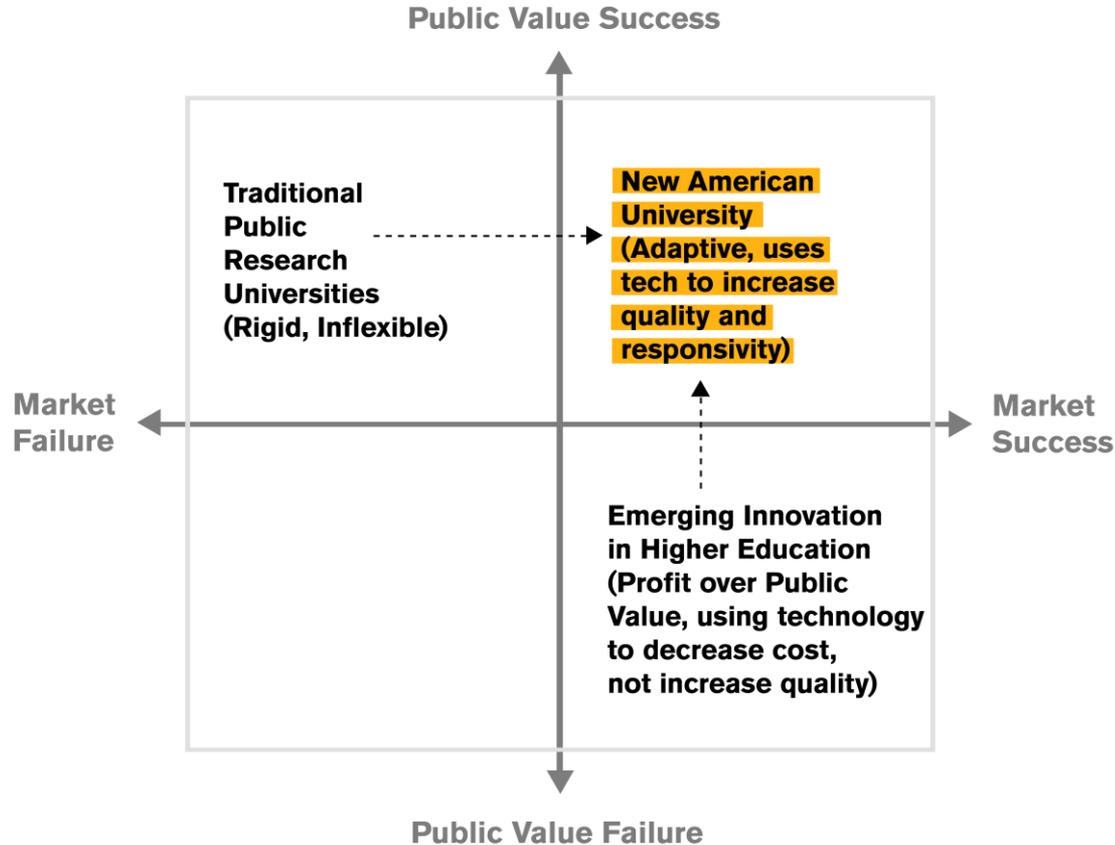
# Higher Education Evolution



# The Imperative of Innovation

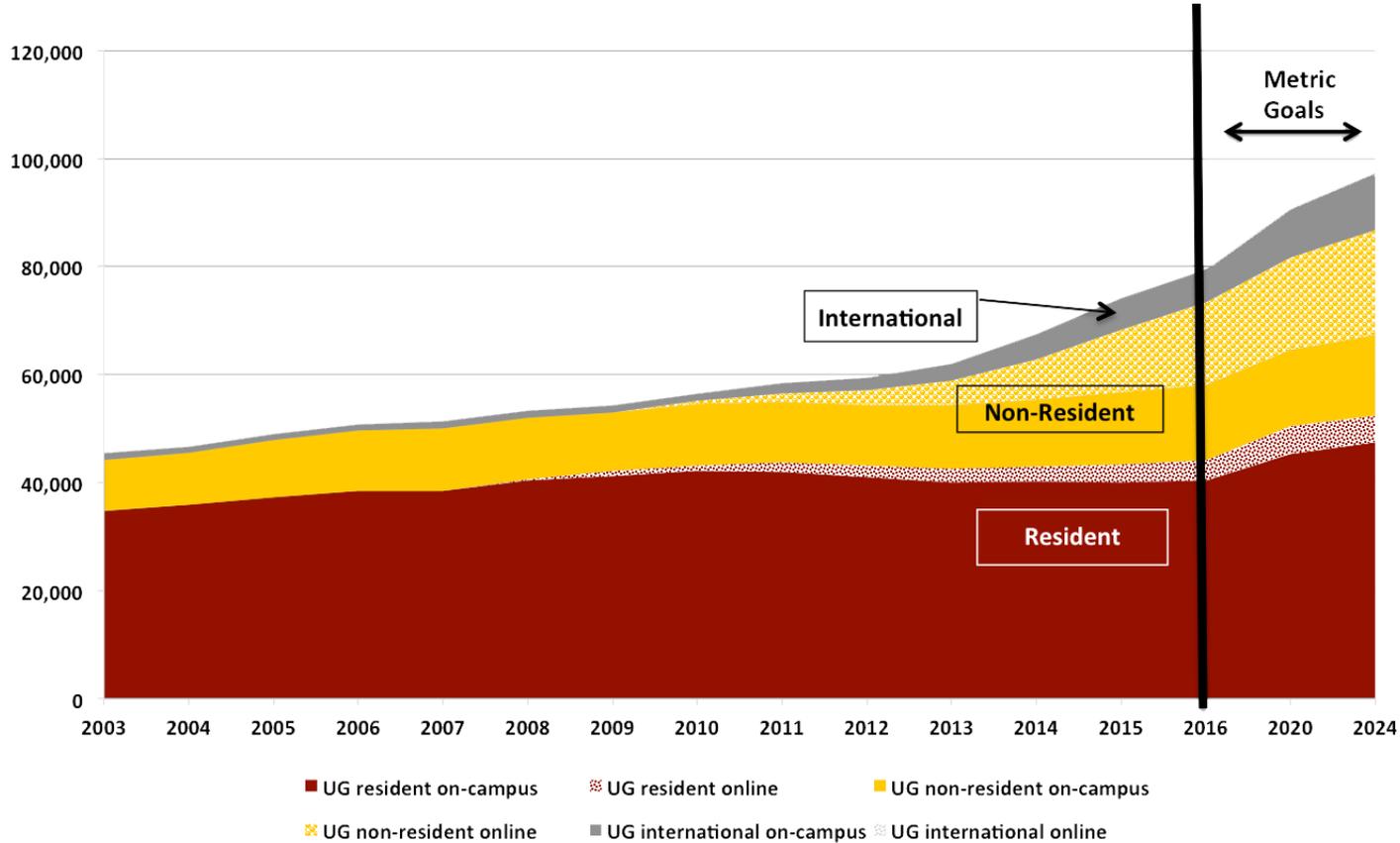


# Public Value vs. Market

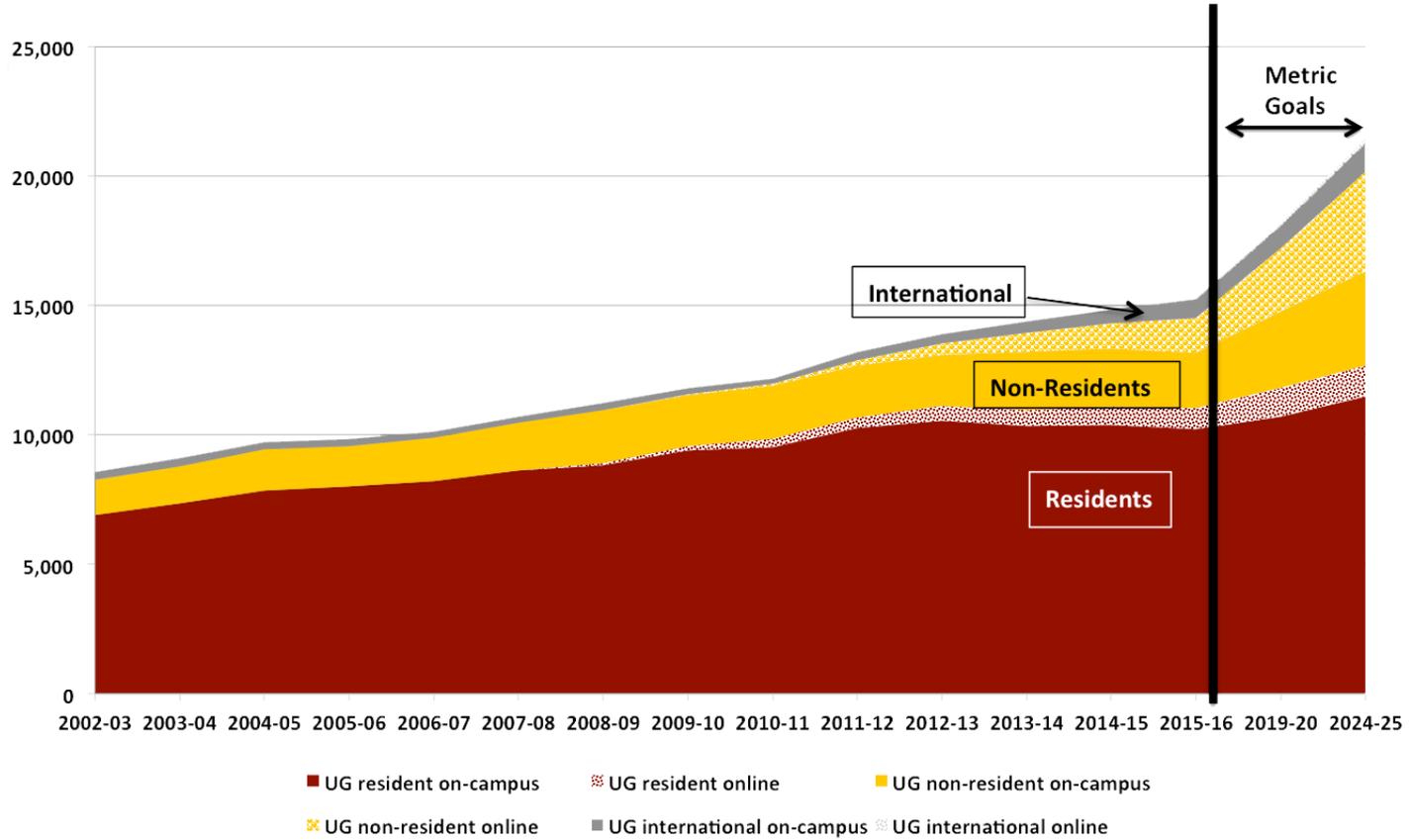


# Performance to Date

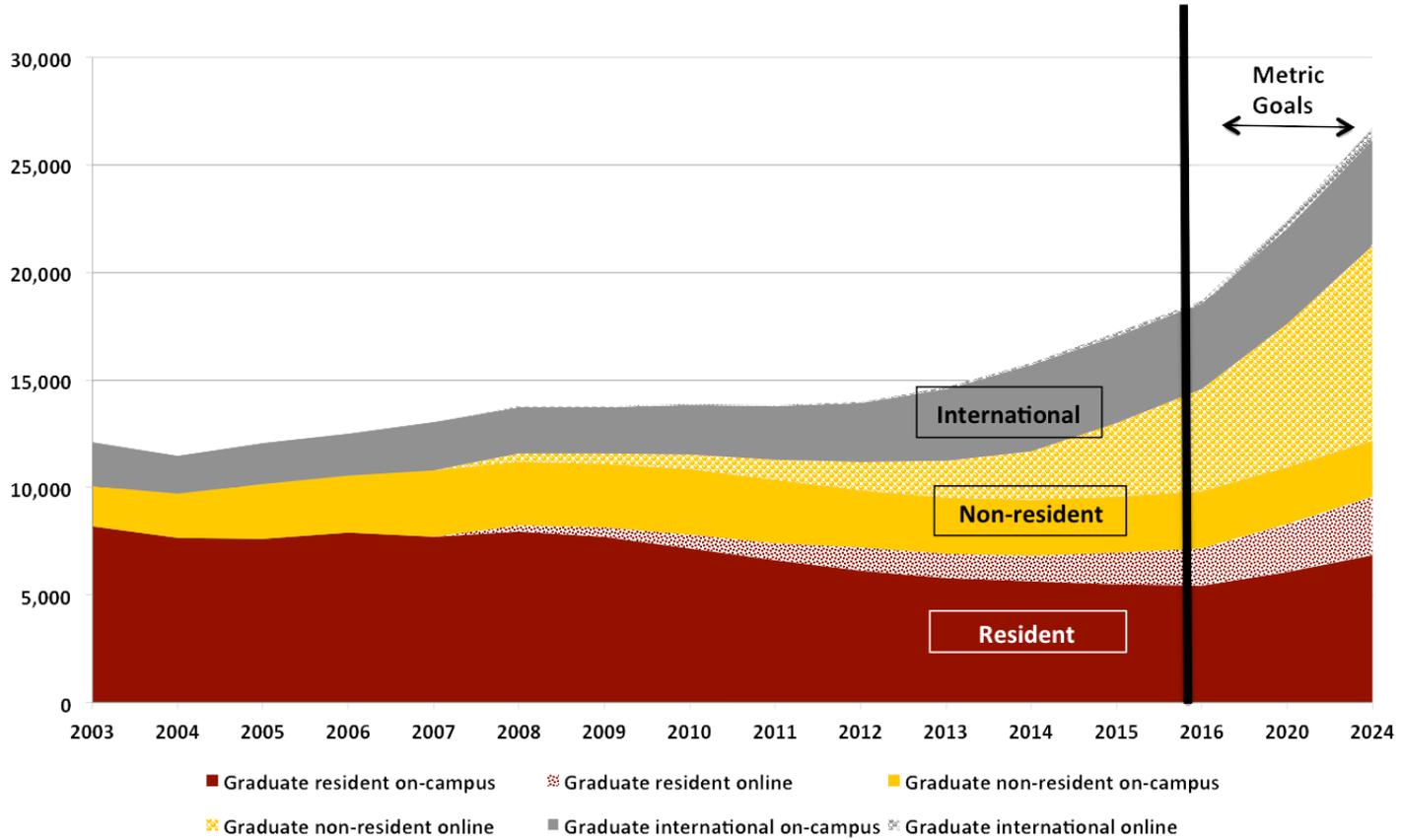
# Undergraduate Enrollment Actual and Metric Goals



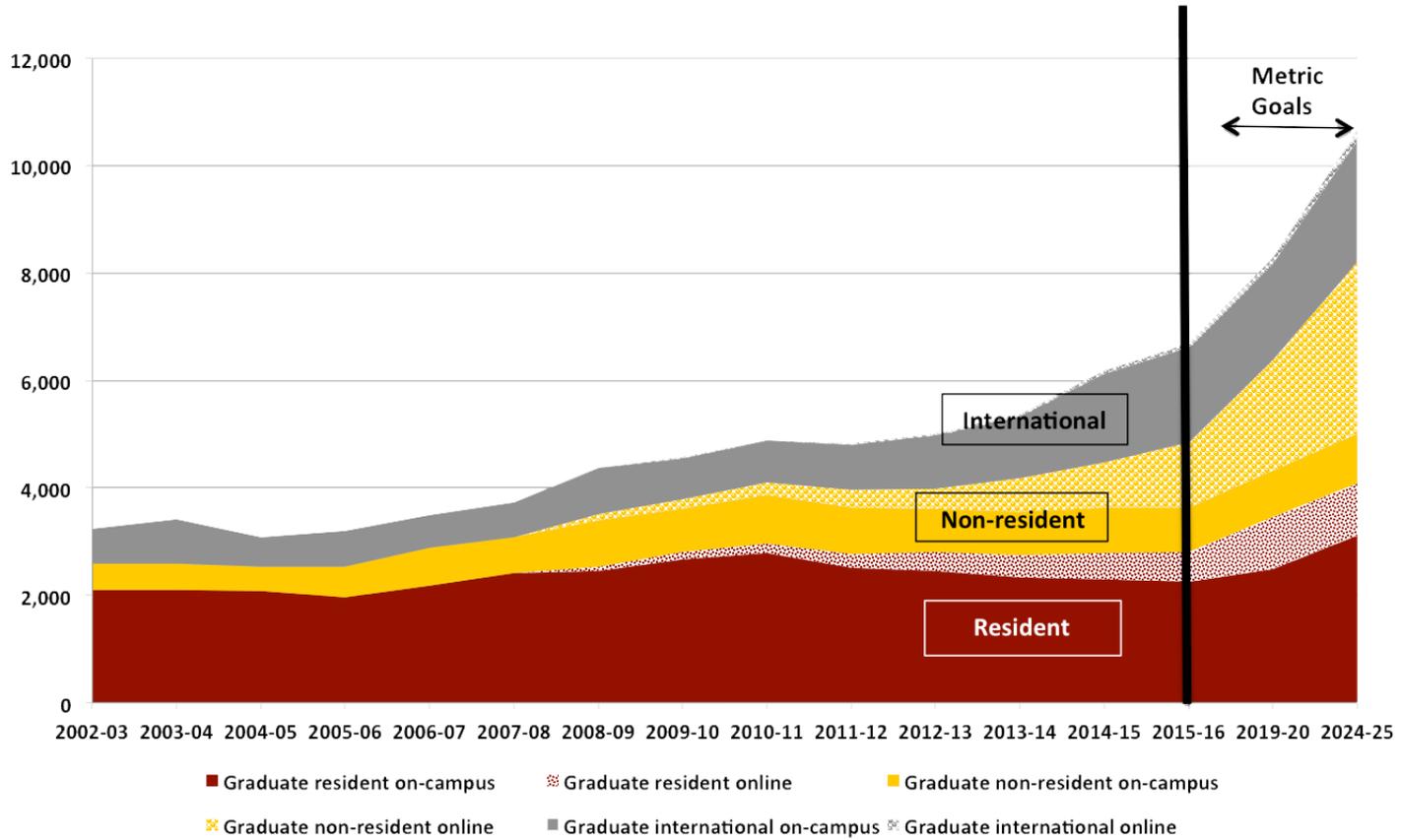
# Bachelor Degrees Actual and Metric Goals



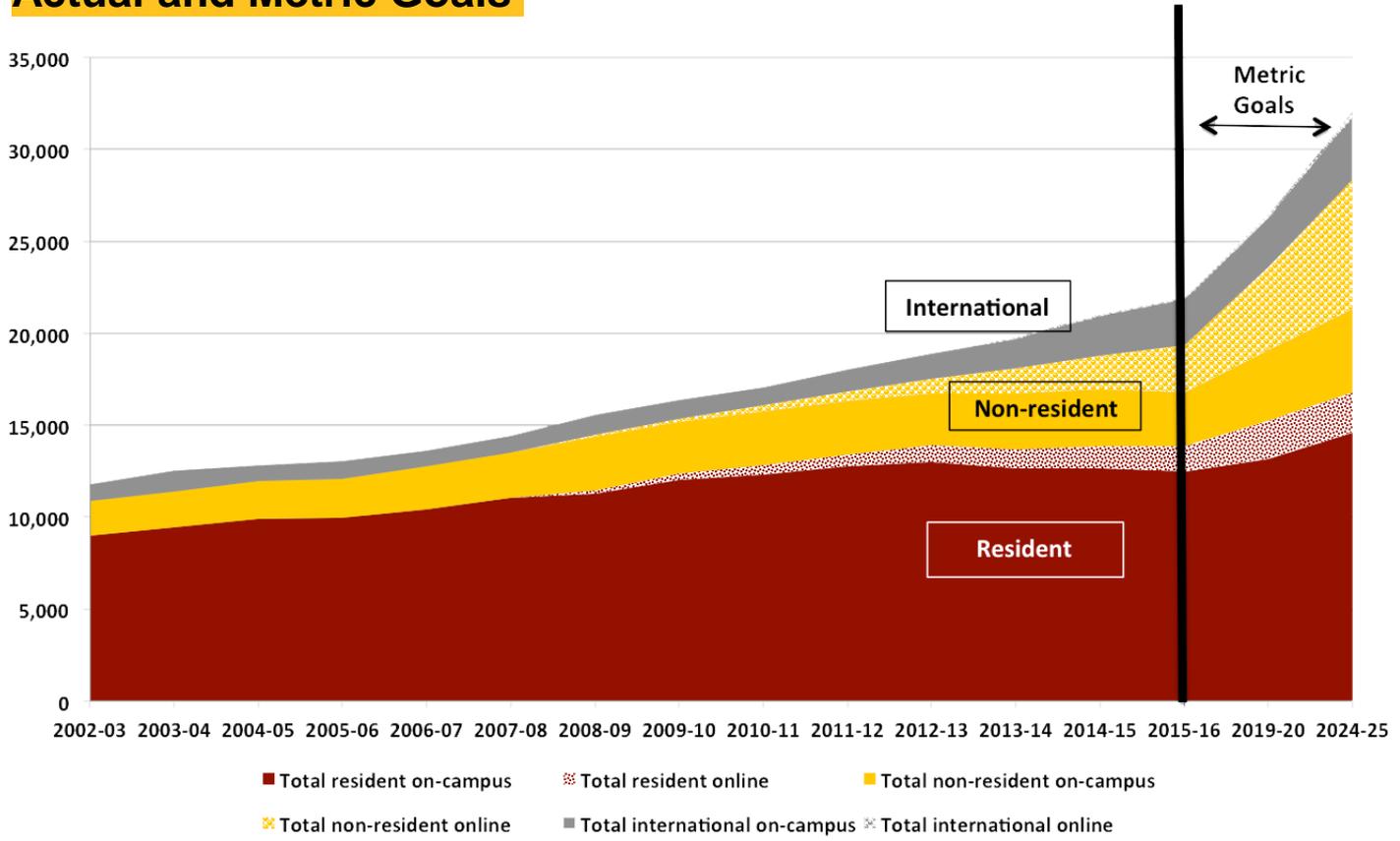
# Total Graduate Enrollment Actual and Metric Goals



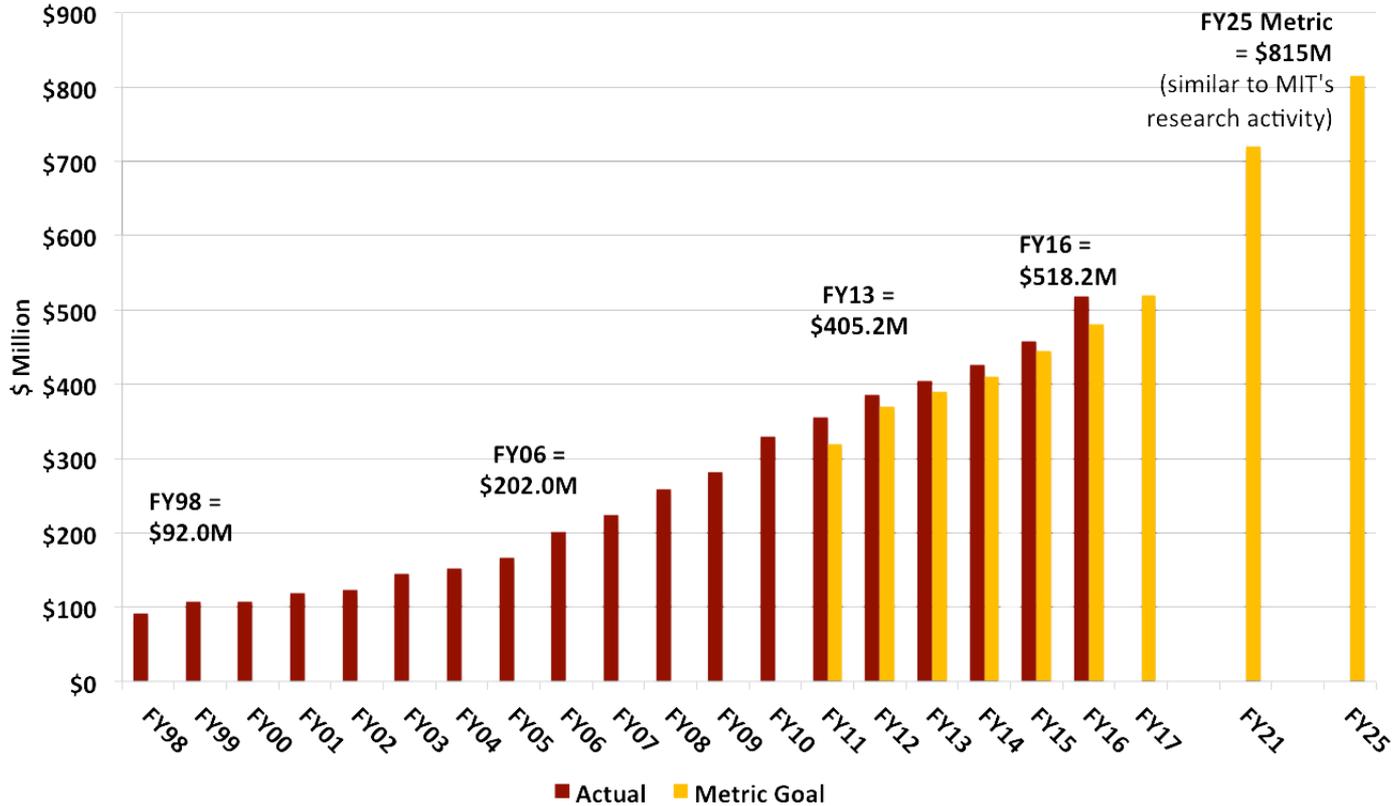
# Total Graduate Degrees Actual and Metric Goals



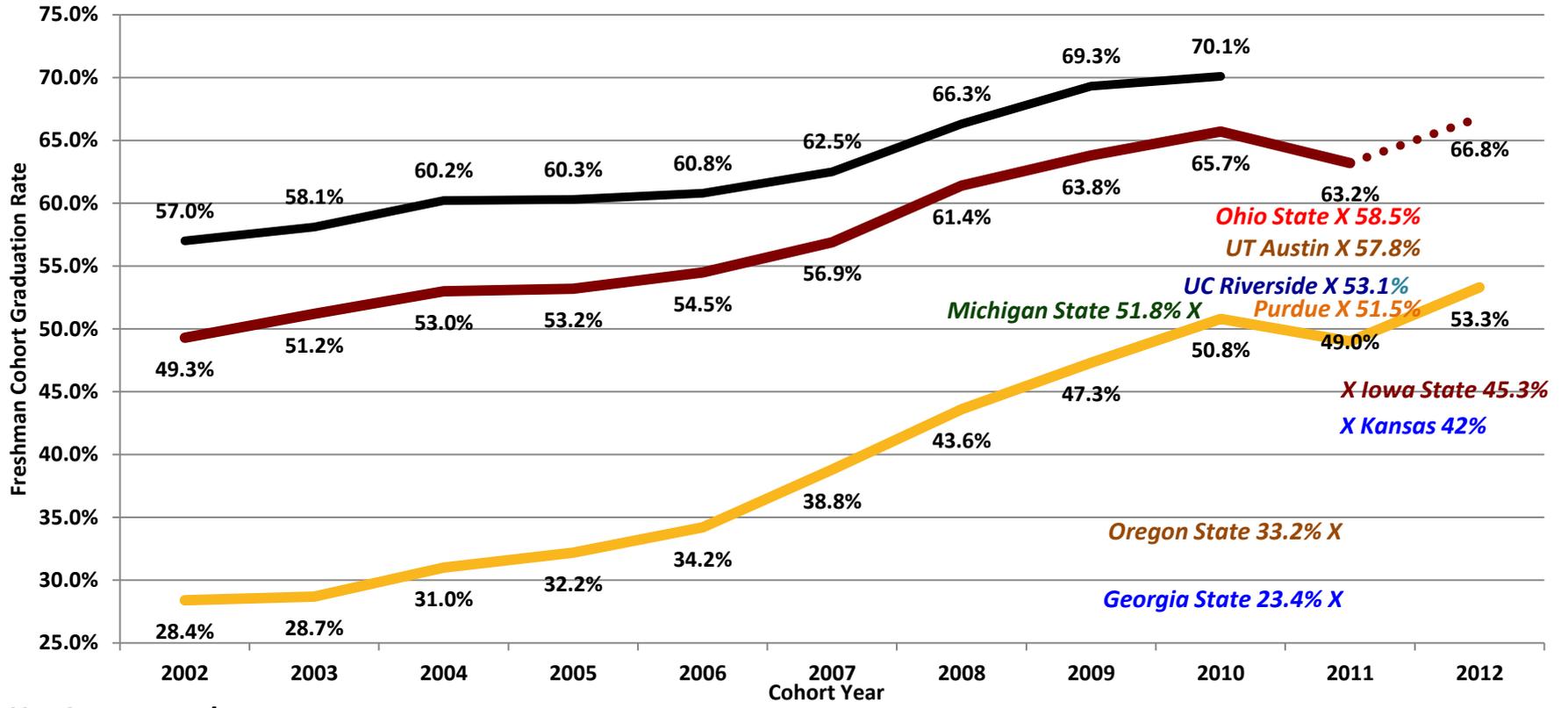
# Total Undergraduate and Graduate Degrees Actual and Metric Goals



# Research Expenditures Have Doubled Every Six to Eight Years



# Arizona Resident Graduation Rates

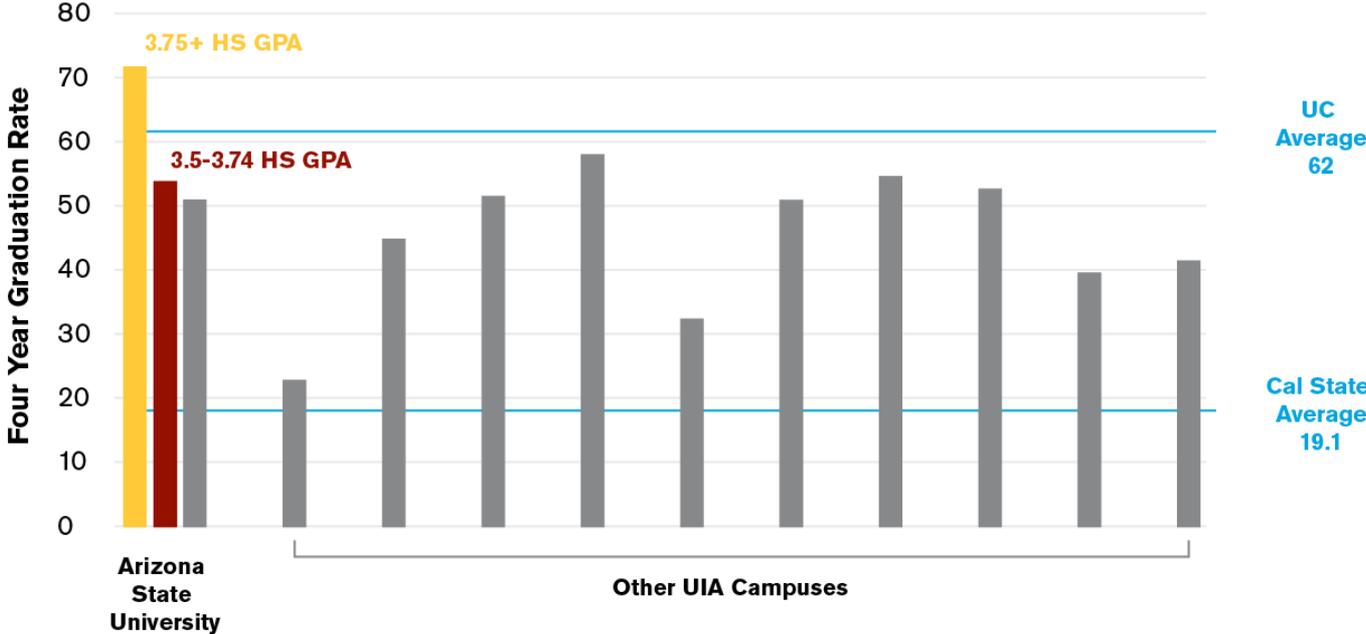


X = 4-year grad

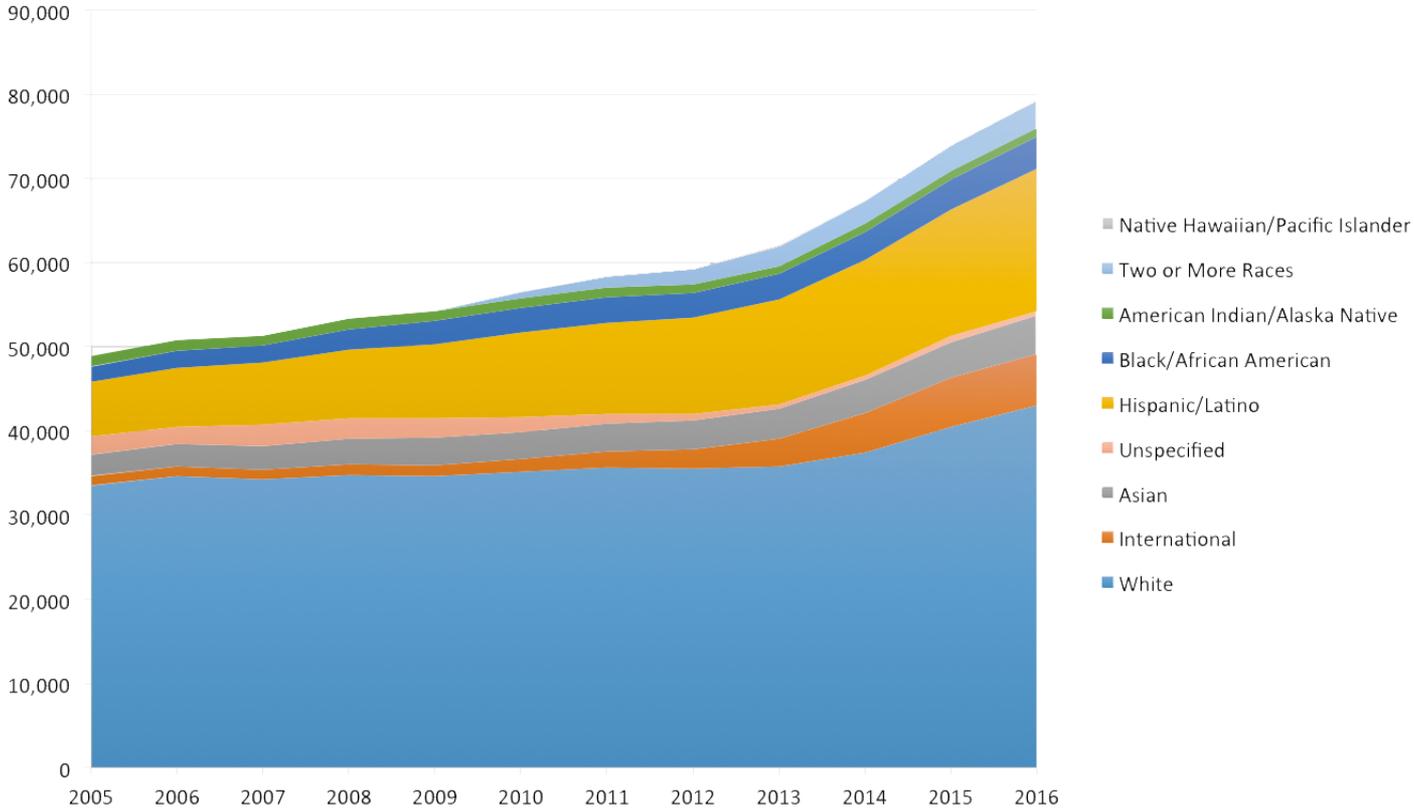
■ 4 Year ASU Graduation Rate   
 ■ 5 Year ASU Graduation Rate   
 ●●●● Forecast 5 Year Rate   
 ■ 6 Year ASU Graduation Rate



# Four Year Graduation Rates at UIA Campuses, 2015



# Undergraduate Ethnicity On-Campus and Online



# 2015 National Science Foundation (NSF)

## Higher Education Research and Development (HERD) Rankings

Total Research Expenditures: **48 of 876** ahead of



Total Research Expenditures among Institutions without a Medical School :

**10 of 724** ahead of **Caltech**  **Princeton University** **Carnegie Mellon University**

Non-Medical School Expenditures: **27 of 876** ahead of



Social Sciences: **5 of 486** ahead of



Political Science: **5 of 332** ahead of **Yale**  **Columbia University** **Duke**  
UNIVERSITY

Sociology: **5 of 371** ahead of



Cornell University

Stanford  
University



Humanities: **12 of 379** ahead of



Berkeley  
UNIVERSITY OF CALIFORNIA



Cornell University

Business and Management: **17 of 350** ahead of

UCLA



Duke  
UNIVERSITY



Non-Science and Engineering: **12 of 539** ahead of

Stanford  
University



Earth Sciences: **3 of 354** ahead of

Stanford  
University

Berkeley  
UNIVERSITY OF CALIFORNIA



Electrical Engineering: **8 of 285** ahead of



Stanford  
University

Carnegie  
Mellon  
University

Bioengineering: **13 of 185** ahead of



Cornell University



Engineering Expenditures: **20 of 388** ahead of



Cornell University

Carnegie Mellon University

Caltech



PRINCETON UNIVERSITY

HHS (including NIH) Funded Expenditures among Institutions without a Medical School:

**10 of 409** ahead of



PRINCETON UNIVERSITY

Georgia Tech



Carnegie Mellon University

NASA Funded Expenditures: **11 of 433** ahead of

Stanford University

Georgia Tech



UCLA



TEXAS  
The University of Texas at Austin

NSF Funded Expenditures: **25 of 586** ahead of

HARVARD UNIVERSITY



THE UNIVERSITY OF CHICAGO

Duke UNIVERSITY



THE OHIO STATE UNIVERSITY

DOE Funded Expenditures: **24 of 366** ahead of

Yale

 COLUMBIA UNIVERSITY  
IN THE CITY OF NEW YORK

 Penn  
UNIVERSITY OF PENNSYLVANIA

Carnegie  
Mellon  
University

DOD Funded Expenditures: **32 of 454** ahead of



Cornell University

PURDUE  
UNIVERSITY



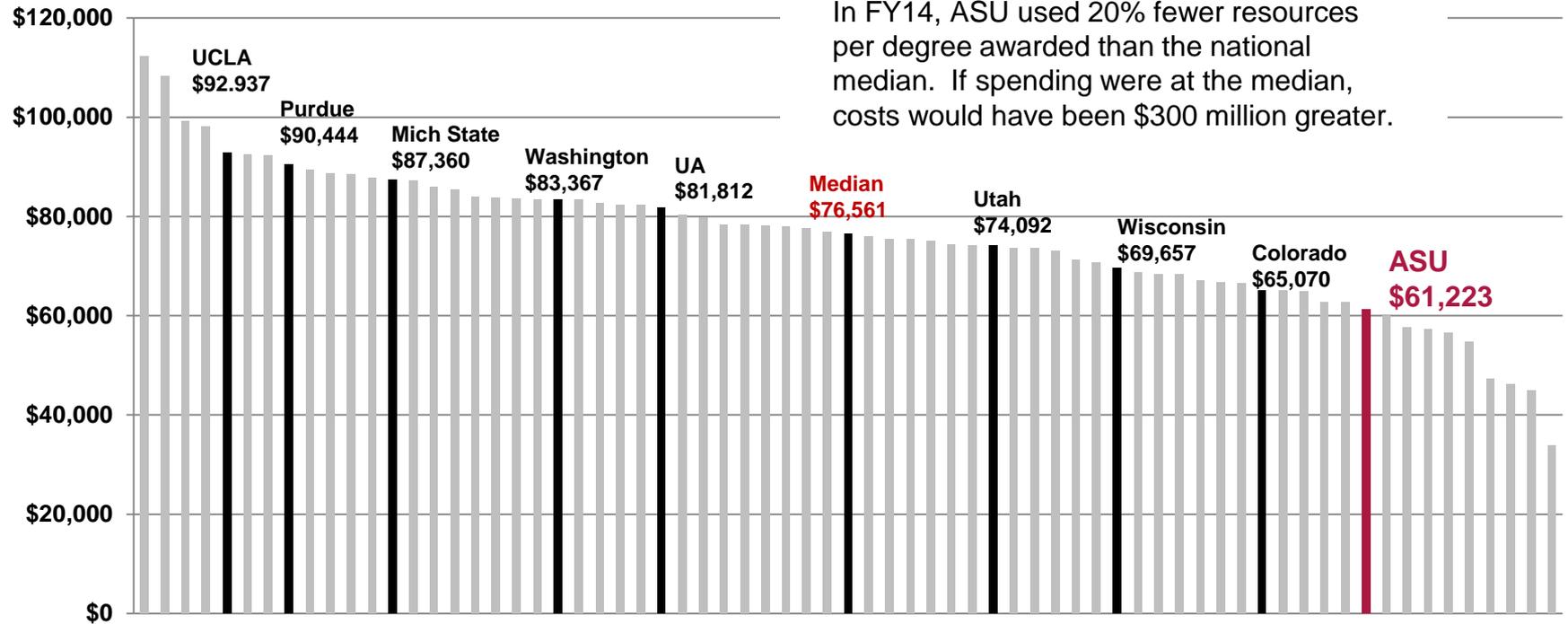
 USNA  
UNITED STATES NAVAL ACADEMY



Produced by ASU Office of Knowledge Enterprise Development. Feb 2017  
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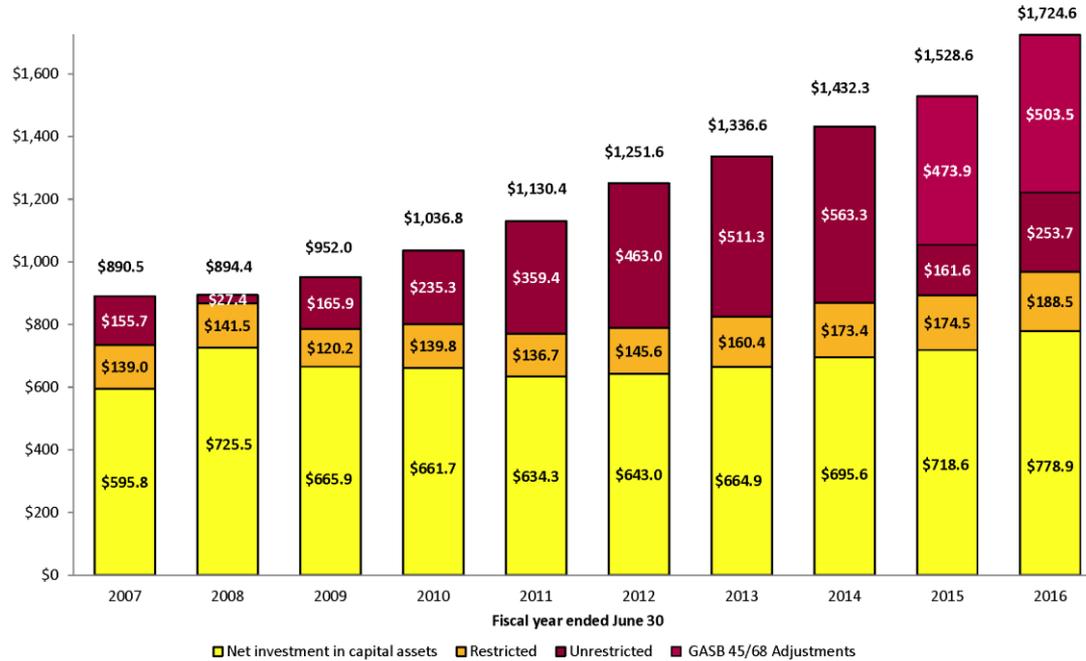
# Tuition, Fees, and State Appropriations per Degree Awarded

## Very High Research Universities IPEDS FY2014

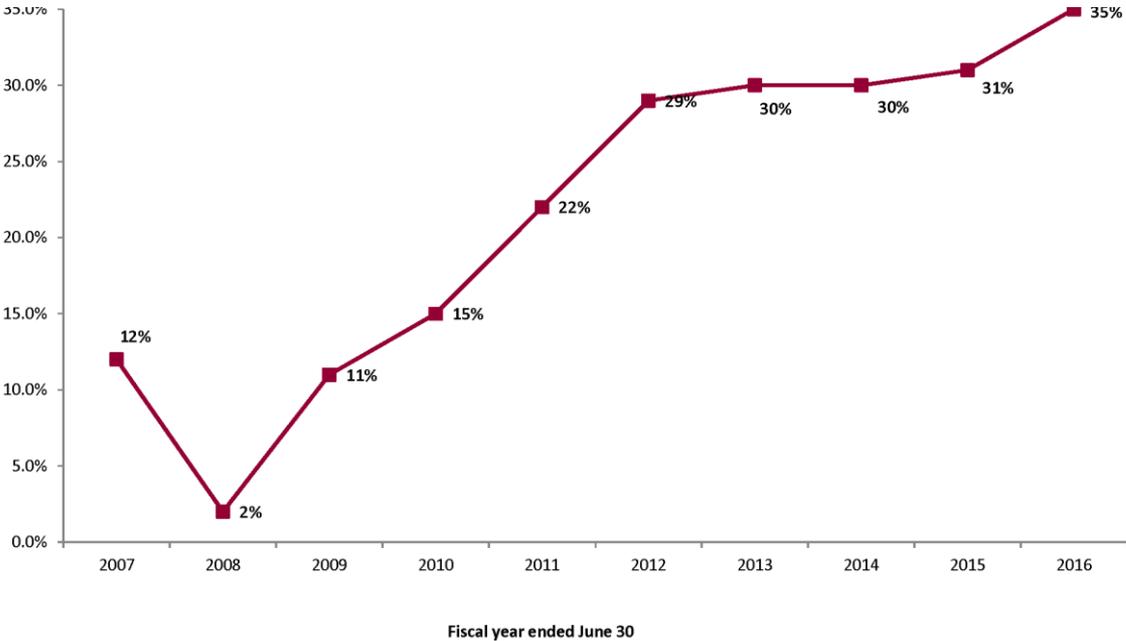


# ASU Net Position

(in millions)



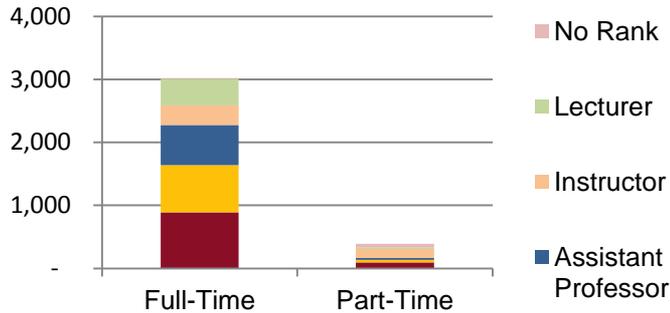
# Unrestricted Net Position to Operations



# What Kinds of Investments are Needed?

# Student Success and Research Growth Drive from Faculty Productivity

**Filled Faculty Positions  
Fall 2015**



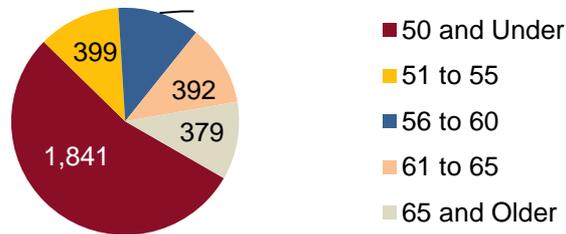
ASU has a reasonable mix of tenure/tenure track faculty and a healthy age profile.

ASU Enterprise Plan supports adding 800-1,000 new faculty members.

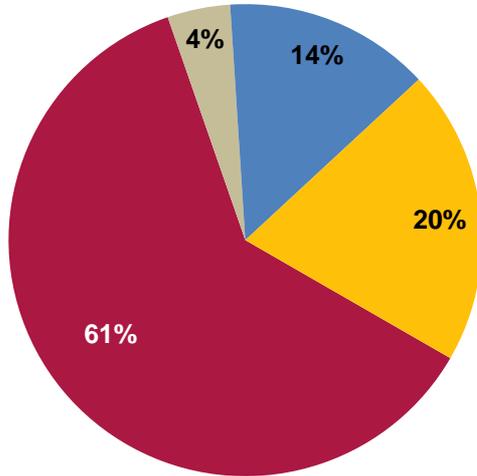
Age demographics suggest an additional 400+ vacant positions.

Hiring will be focused on raising the proportion of tenure/tenure track to support research growth and maintain a strong balance in the teaching mix as enrollment grows.

**Faculty Age Demographics  
Fall 2015**



## 2025 Research Expenditure Planning: \$815M Metric



- FY2016 research expenditures
- Productivity gains and replacement hiring
- Enterprise Plan faculty expansion
- Large projects and funded centers

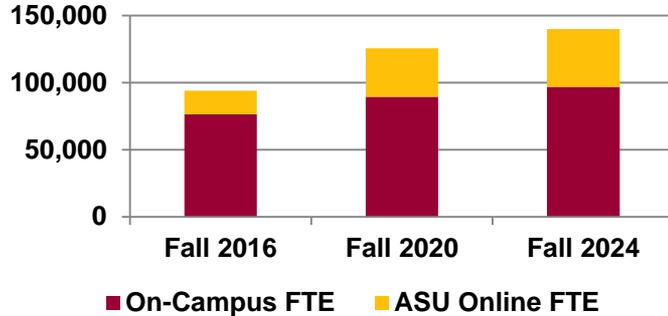
1,000 additional faculty members can contribute 35% to 40% of the required research growth from their individual awards.

Productivity gains among existing and faculty hired to fill vacancies can contribute 10% of the growth.

Large scale projects and funded centers, which are supported by regular faculty and research faculty, must provide the balance.

# Research Needs Will Drive the Need for New Facilities

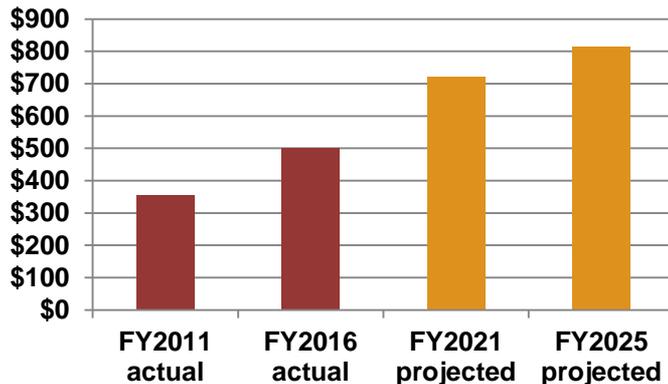
## On-Campus and ASU Online FTE Growth



While there are large increases in enrollment projected, a substantial proportion will be in ASU Online programs, so the need for teaching space growth will be muted.

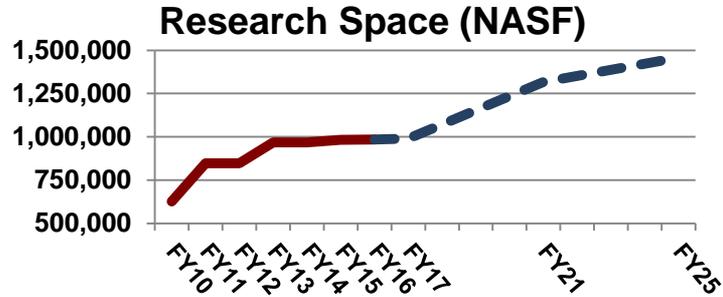
New research activities are projected to grow at 2.5 times the growth of on-campus enrollment.

## Research Expenditure Growth



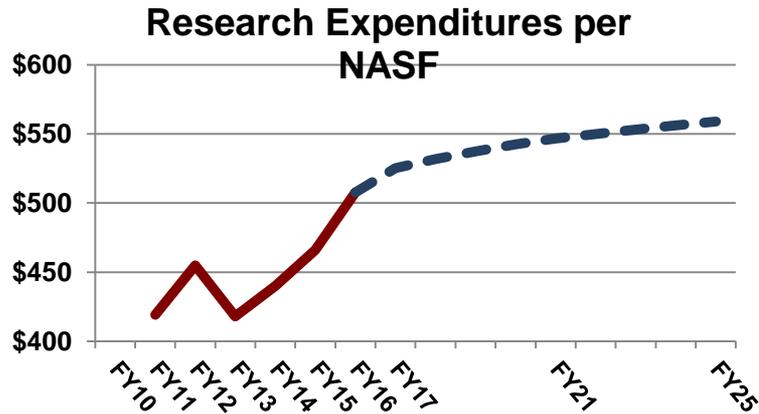
Research cannot be expanded without new space, and new research fields often require new types of facilities, so space needs will lean towards research space.

## Research Needs Will Drive the Need for New Facilities



ASU productivity per SF has progressed (from \$419 in 2011 to \$466 per NASF in 2015) and exceeds that of all of its ABOR peers without medical schools.

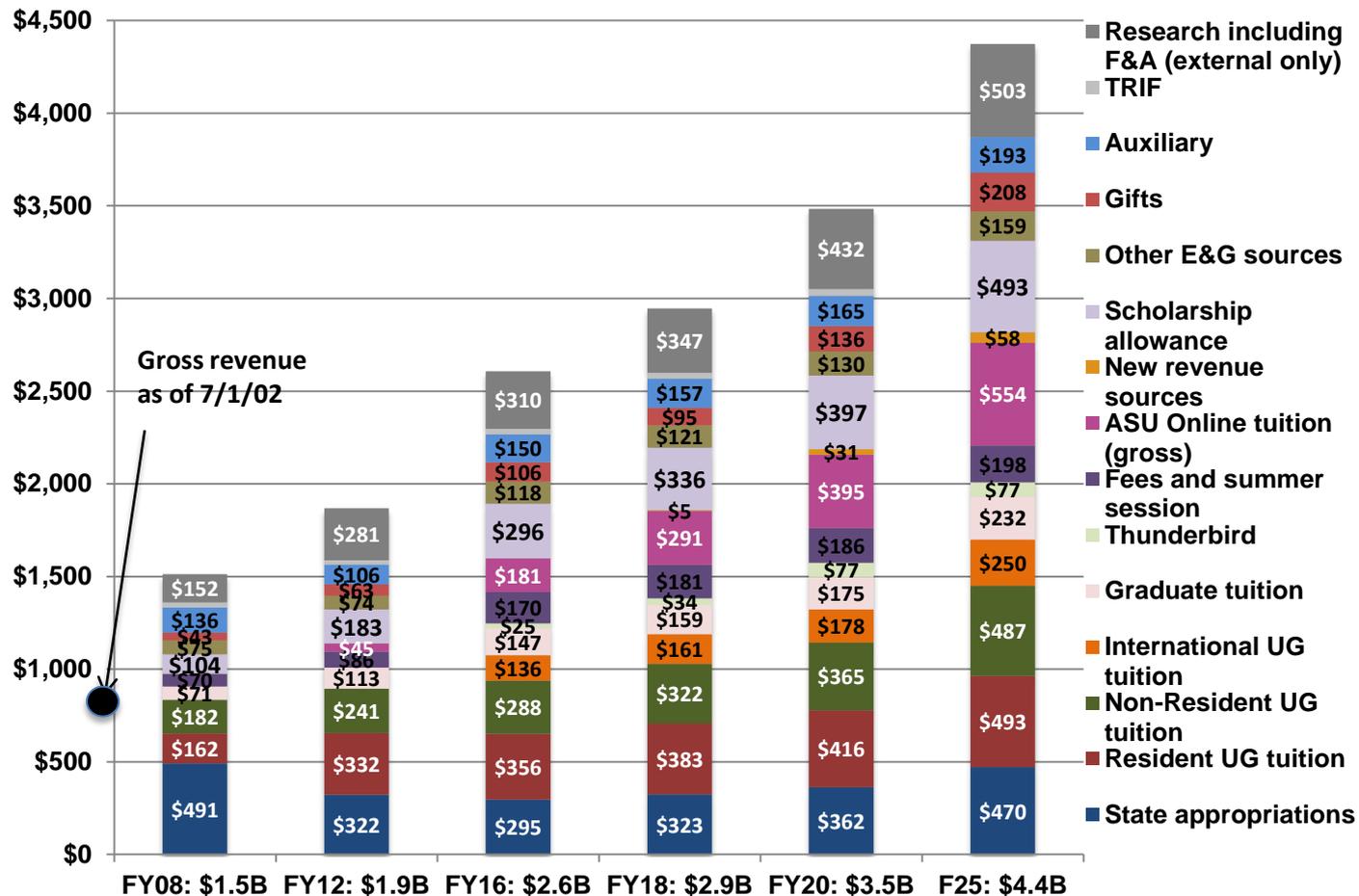
The ASU Enterprise Plan projects an increase in research space of 475,000 NASF (48%) by 2025.



At the projected research volume, the expenditures per SF will need to rise from around \$500 per NASF to \$560 in 2025.

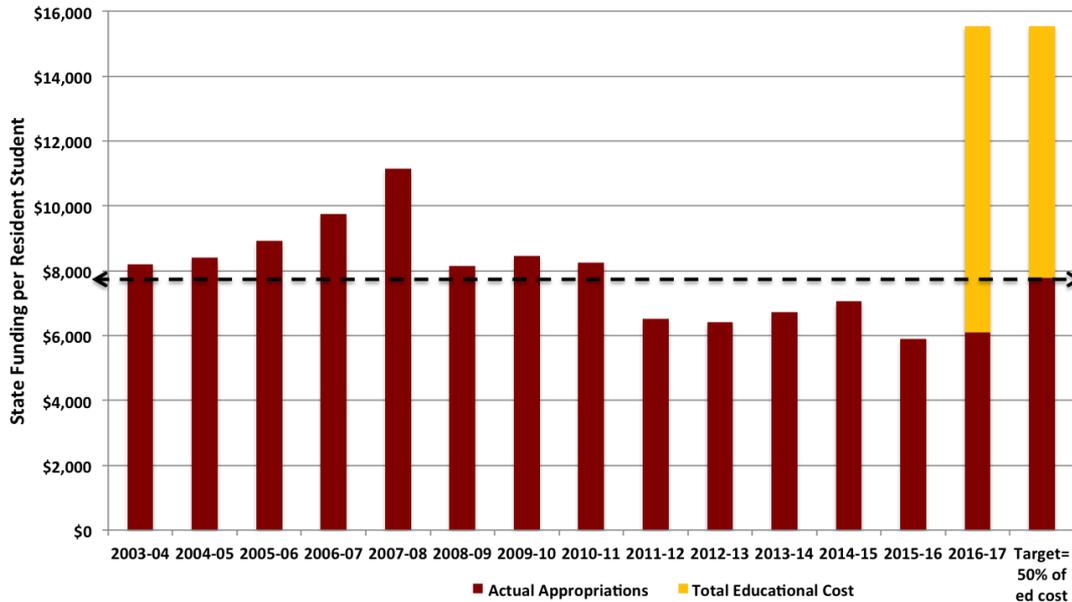
# Where Will the Resources Come From?

# ASU University Gross Revenue Sources: All Funds (\$ millions)



# State Funding for Resident Students

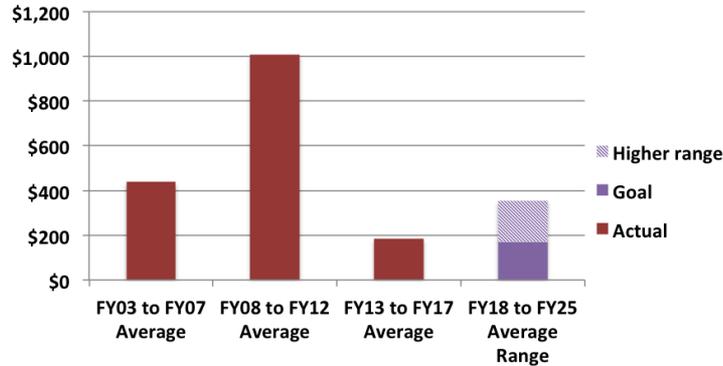
## ASU, NAU and UA Total



In FY2017, the shortfall between the State investment and the goal of its providing 50% of the cost of education amounts to over \$200 million annually at ASU.

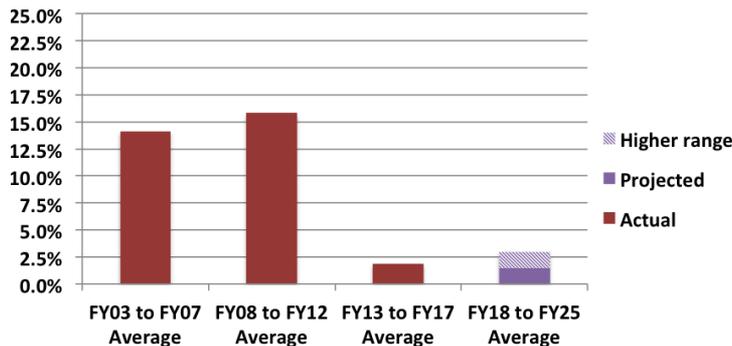
While the goal remains reaching the 50% support target, the ASU Enterprise Plan assumes a more modest level of State investment which would maintain the current proportion of support for resident students as enrollment grows.

**Average Annual Resident UG Tuition and Fee Increases**  
**Actual FY03 to FY17**  
**Planning Range FY18 to FY25**



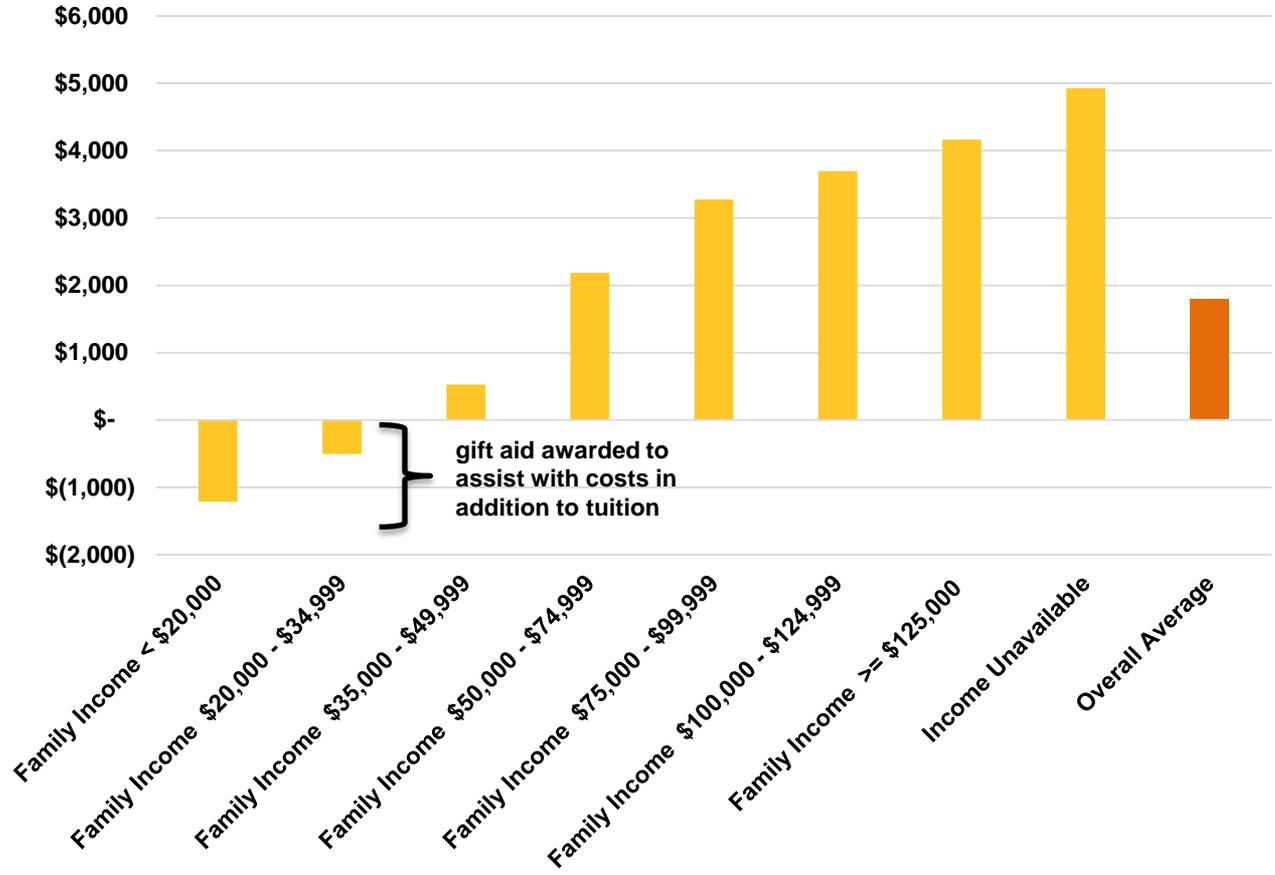
The disinvestment that took place beginning in 2009 required a period of large tuition increases for residents in order to maintain the quality of education.

**Average Annual Resident UG Tuition and Fee Rate Increases**  
**Actual FY03 to FY17**  
**Planning Range FY18 to FY25**



The ASU Enterprise Plan projects continuing the modest increase policy that ASU has followed since FY13 with increases in the range of zero to 3% annually.

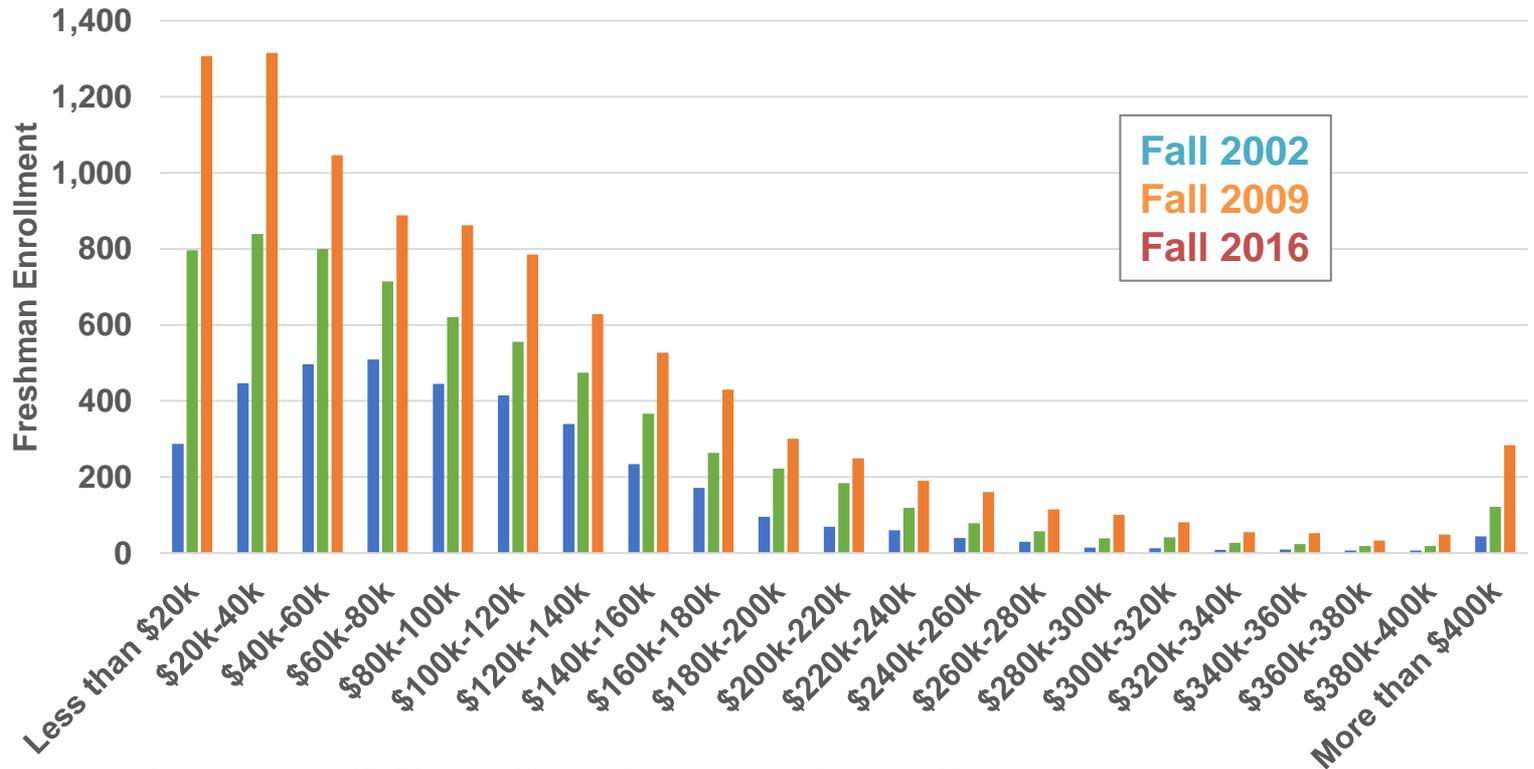
# ASU Full-Time Resident Undergraduate Students 2016 Net Tuition Paid (after gift aid and tuition benefits)



ASU's commitment to financial aid continues to be crucial to affordability.

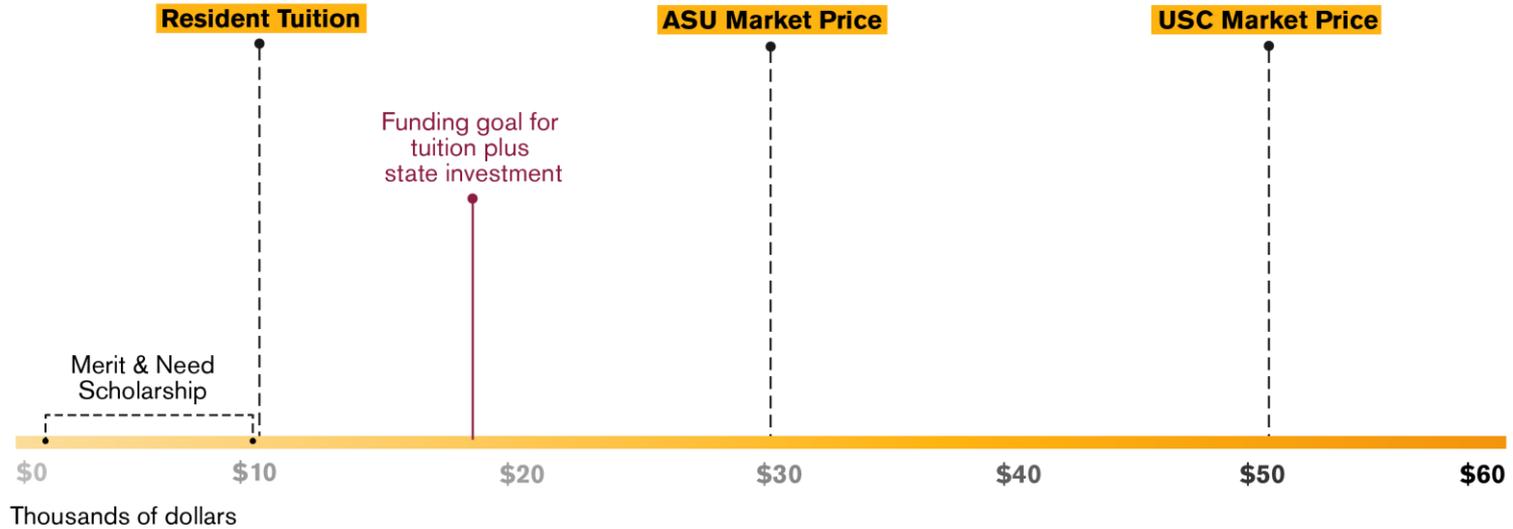
Slow shifts to further emphasize need in resident aid policies can support growth in access as K-12 and community college pipelines improve.

# ASU First-Time Full-Time Freshmen Enrollment by Adjusted Family Income



Source: Analysis of FAFSA data. All data adjusted to 2016 dollars using CPI.  
 Fall 2016 data preliminary as of 1/20/17. Analysis limited to dependent students.

# Market Price Model



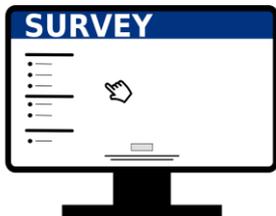
The market (measured by non-resident and international student demand) values an ASU education at \$30,000 per year.

Residents receive excellent value at \$10,000 less substantial financial aid.

Building the brand quality and recognition will allow further revenue opportunities in the non-resident markets.

# ASU Marketing Hub

## Insights are needed to impact and improve perceptions



### brand tracker

The Hub has been measuring brand perceptions since June of 2014 across a wide range of constituents totalling over 12,000 to date.

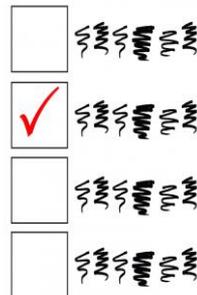
For some, we are now able to examine long-term effects of marketing and communications efforts designed to impact perceptions of the brand.



### structural equation models

With the tracker data, we are able to perform complex analyses that help us understand the causal factors and their relative importance in influencing perceptions and behaviors.

A structural equation model (SEM) exists for all key constituents to help guide marketing strategies and plans.



### message testing

The SEM helps us decide where to focus to achieve desired outcomes while message testing helps us determine the optimum communication, by constituent, to deploy.

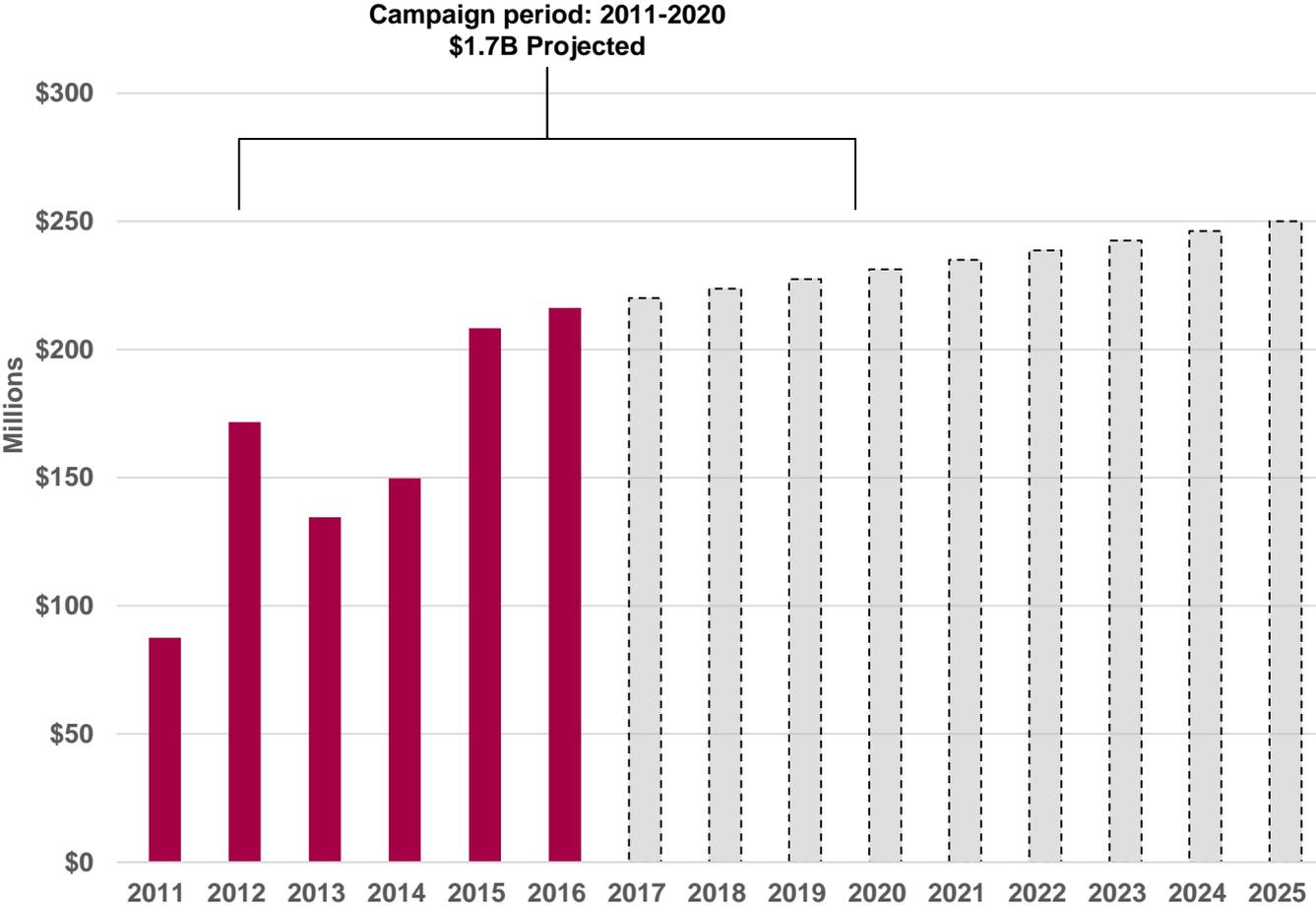
To date we have tested over 600 messages to determine their potential impact on brand perceptions.



### marketing effects analysis

The Hub conducts post-program analyses on all marketing efforts to measure the effects.

# ASUF New Gifts and Commitments



# Enterprise and Innovation

# Innovation Outcomes

- **Improved value**  
ASU is Top Ten in the quality of graduates for employment.
- **Greater efficiency**  
CPI-adjusted resources used per degree are 11% below FY08 levels.
- **Enhanced productivity**  
Research support and development improvements contributed to a four-fold increase in research activity.
- **Satisfaction of market and national/public needs**  
ASU Online provides degree pathways for a wider range of students.
- **Greater competitiveness**  
Inter-disciplinary emphasis attracts top faculty.
- **Beneficial partnerships**  
Mayo Clinic-ASU Alliance advances education and research capability.
- **Better outcomes**  
Four-year graduation rates are close to double those of 2002.
- **Improved quality of life**  
Moderate tuition/high financial aid policy changes quadrupled access for low-income families.

# Educational innovation has driven the progress in student success and academic excellence

eAdvisor

Interdisciplinary schools and colleges

ASU Online

Starbucks College Achievement Plan

ePortfolio and other learning outcome tools

Adaptive and active course redesign

Mayo Clinic partnership

University Innovation Alliance

# Operating and financial innovation has driven the resource strategies

Moderate tuition/high financial aid

OKED research development and support teams

Municipal partnerships

Santa Monica office

Residence hall partnerships

Marketing hub

# The ASU Enterprise Plan strategies and tactics require ongoing innovation

Educational programs

Research and education alliances

Enterprise resource acquisition

Proliferating the ASU model

# ASU Teaching and Learning Realms

## Realm 01

Full Immersion

On-campus

Technology Enhanced

## Realm 02

Digital Immersion

Online

Technology Enhanced

## Realm 03

Digital Immersion

Massive Scale

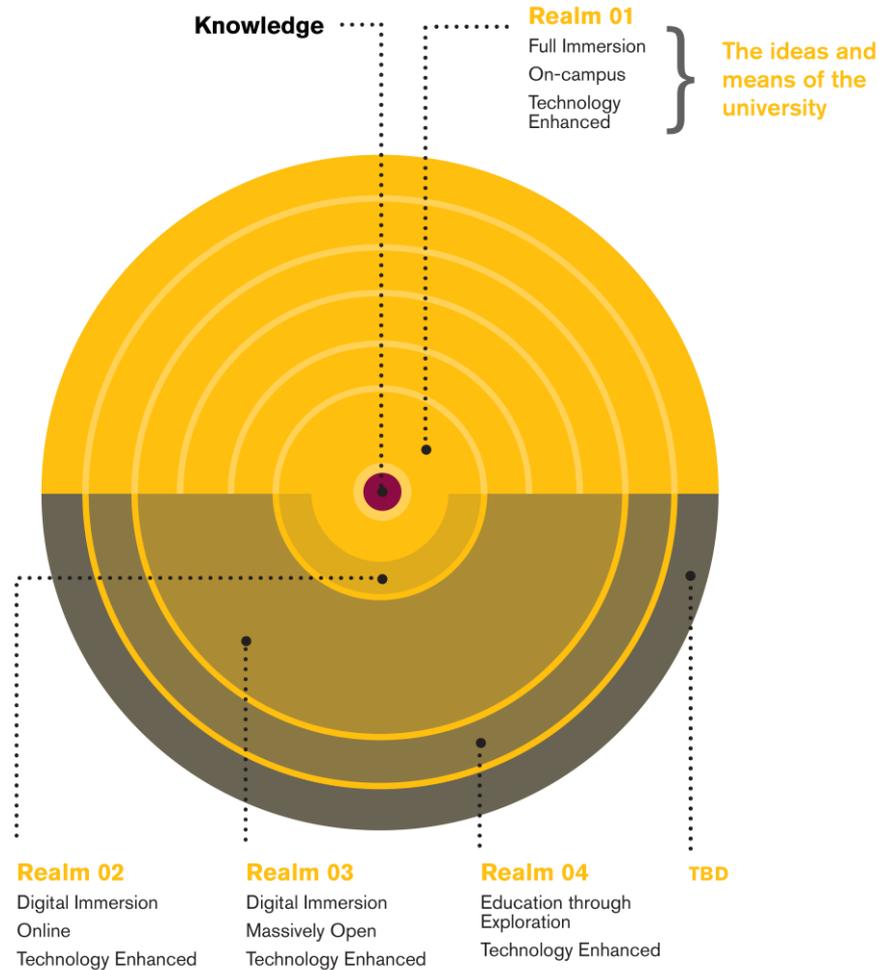
Technology Enhanced

## Realm 04

Education through  
Exploration

Technology Enhanced

# ASU Teaching and Learning Realms



# Emerging Innovation Strategies: Educational Programs

Global Freshman Academy

Adaptive courses offered through a broad platform

ASU Preparatory Digital Academy

University to Business programs

Multiple executive education formats

Targeted programs in professional degree and non-degree education

Realm 4: Education through exploration

# Emerging Innovation Strategies:

## Alliances

Mayo Clinic and ASU Alliance for Health Care

PLuS Alliance (with New South Wales and King's College London)

Partnerships to advance shared large-scale and long-term interests with major philanthropies

# Emerging Innovation Strategies: Resource Acquisition and Operating Improvements

Most educational and alliance efforts have both programmatic and resource acquisition elements

A more comprehensive look at potential resources via ASUF Enterprise Partners

New forms of marketing and brand enhancement to support multiple goals

Next generation platform including mindset elements– for ASU and the broader market

Salesforce uses for service improvement and reaching new sources of support

# Special Innovation Reports

# Special Innovation Reports

## **Learning outcomes and teaching quality**

Mark Searle, Executive VP and University Provost and Professor

## **Multiple pathways to ASU to be supported by Global Freshman Academy**

Phil Regier, CEO and Dean, EdPlus and Associate Professor

## **ASU Digital Academy as a means of supporting K-12 success**

Beatriz Rendon, VP Educational Outreach and CEO ASU Preparatory Academy

Leah Lommel, Assistant VP and COO, EdPlus

## **How to be successful with large scale multi-partner research programs: 16Psyche**

Lindy Elkins-Tanton, School Director and Professor, School of Earth and Space Exploration

Sethuraman Panchanathan, Executive VP OKED and Chief Research & Innovation Officer

## **Managing deferred maintenance in a sub-optimal system**

Morgan Olsen, Executive VP, Treasurer and CFO

## **Adaptive learning**

Adrian Sannier, Senior Technology Fellow, EdPlus and Professor of Practice

# The Challenges

# Challenges

ASU's business plan has anticipated many of the challenges outlined here and has articulated strategies for dealing with them.

Worthy of discussion since there is a role for the Regents in addressing many of the challenges

# National and International Challenges

Outdated perception of ASU

Growing competition for students and changes by competitors in use of financial aid

General demographic challenges

# State and Local Challenges

High school performance

Community college relationship

Resident graduate enrollment

No predictable investment model regarding the value of education

Limited reaction to Arizona's lagging pace of economic recovery

# Management Complexity

Balancing #1 and #2

**#1:** Sailing the ship -- Assuring regular improvements in day-to-day operations

**#2:** Speeding up the ship (without sinking it) -- Integrating innovation at scale

- Design of innovations and how to pilot
- Analysis
- Implementation

Balancing momentum and financial risk

# Discussion

