**Arizona State University** 

# **Strategic Enterprise Plan:**

## 2020 Update & Operational and Financial Review

Michael M. Crow February 14, 2020



## **Economic and**

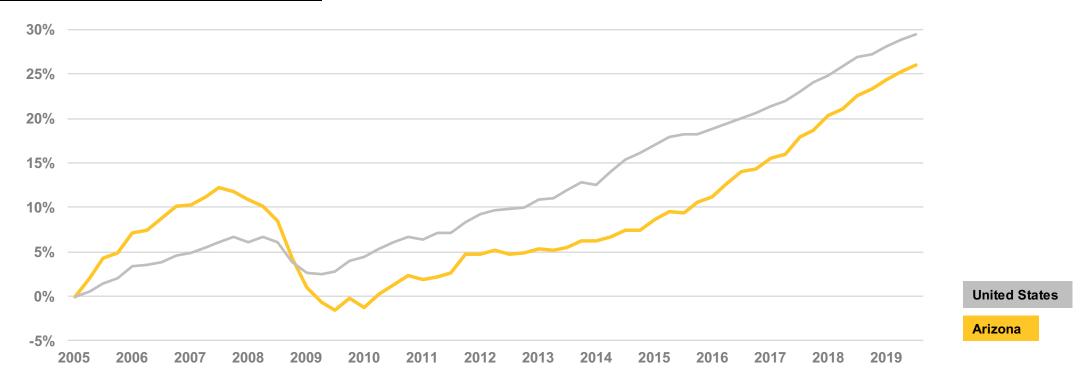
# **Social Imperative**

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#### Arizona's GDP has grown, but at a slower rate

## than the U.S. overall

#### GDP change relative to 2005

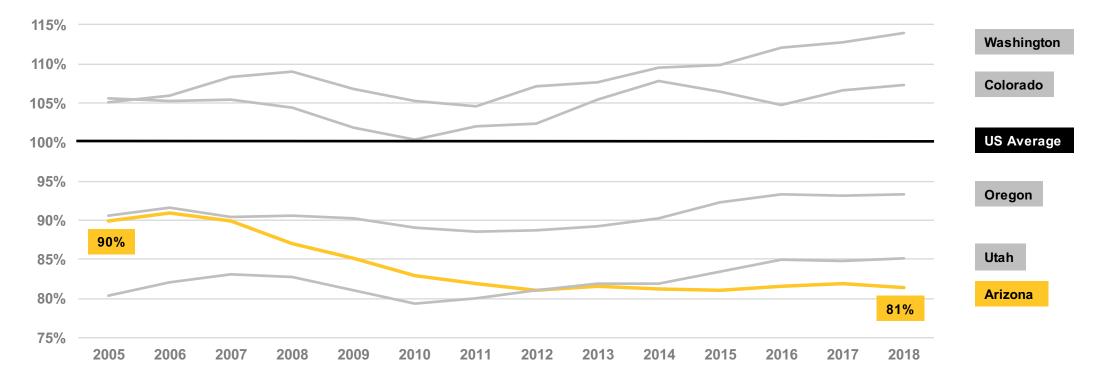




#### Arizona's relative prosperity has actually

### decreased since 2005

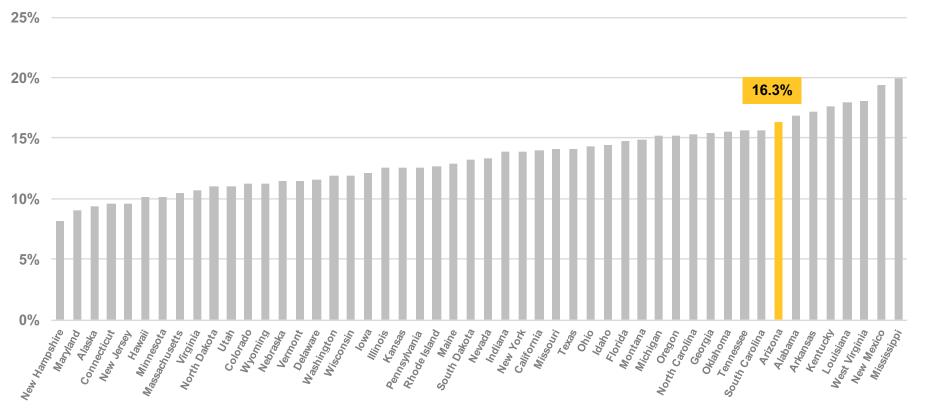
Per capita personal income relative to US average





#### Arizona has the eighth-highest poverty rate in the U.S.

Percent of working-age population living in poverty (2017)

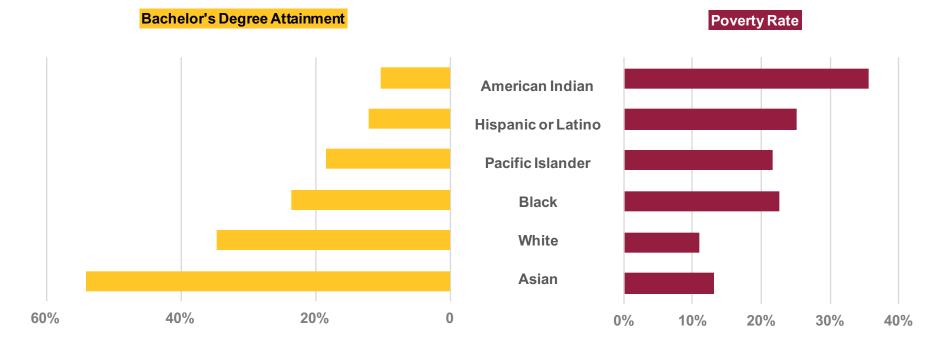




#### Gaps in Arizona's educational attainment across

#### ethnic groups are linked to economic disparities

#### Census data for Arizona (2017)

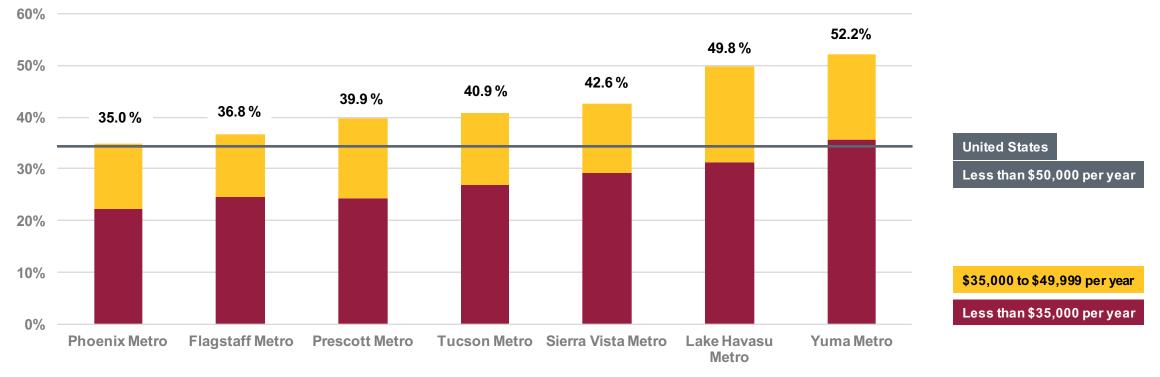




### **Percentage of low income families in rural metros**

## is 15 points higher than the Phoenix metro

#### Lower-income families as a percent of all families (2017)





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**Arizona's economic development policy has traditionally** 

centered on creating a low-cost business environment

- Low taxes
- Low regulatory burden
- Low land development costs



Success in the new economy is driven

by access to resources

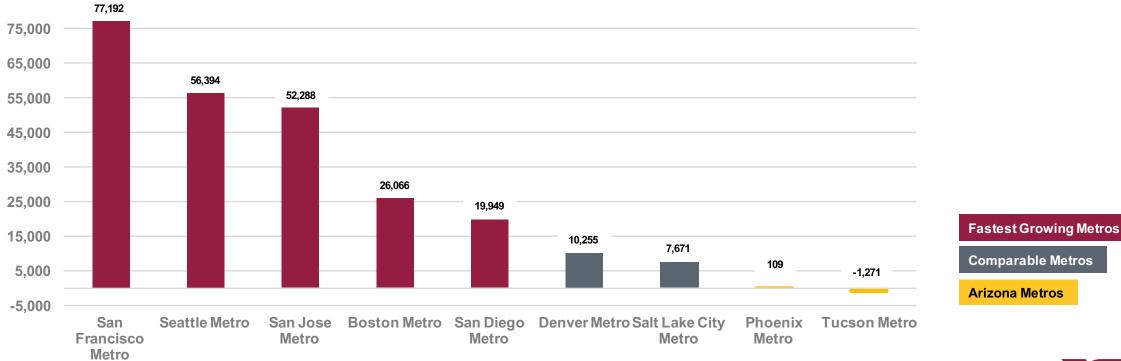
- Access to specialized labor
- Access to specialized business services
- Access to new knowledge



#### Metros where new economy resources are more plentiful

### have substantial tech industry job growth

Employment change in high-technology industries (2005-2017)





#### Arizona needs to invest in new economy resource

#### policies to attract new industries





# Our Design

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#### **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.



#### Our charter is what we do

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.



### **Our responsibility and 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.



#### Our design aspirations are how we do it

#### **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.



#### **Our design transcends traditional boundaries**

- School of Arts, Media and Engineering
- School of Biological and Health Systems Engineering
- School of Civic and Economic Thought
   Leadership
- School of Computing, Informatics, and Decision Systems Engineering
- School of Community Resources and Development
- School of Earth and Space Exploration
- School of Electrical, Computer and Energy Engineering
- The Polytechnic School

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 School for Engineering of Matter, Transport and Energy

- School of Film, Dance and Theatre
- School for the Future of Innovation and Society
- School of Geographical Sciences and Urban Planning
- School of Historical, Philosophical and Religious Studies
- School of Human Evolution and Social Change
- School of Humanities, Arts and Cultural Studies
- School of International Letters and Cultures
- School of Life Sciences
- School of Mathematical and Natural Sciences

- School of Mathematical and Statistical Sciences
- School of Molecular Sciences
- School of Politics and Global Studies
- T. Denny Sanford School of Social and Family Dynamics
- The Design School
- School of Social and Behavioral Sciences
- School of Social Transformation
- School of Sustainability
- School of Sustainable Engineering and the Built Environment
- School of Transborder Studies



## **Performance and**

## Accomplishments

#### **ASU excellence earns recognition**

#1 in U.S. for innovation ASU Ahead of Stanford and MIT -U.S. News & World Report 2016, 2017, 2018, 2019 and 2020	Top 20 in graduate education schools in the nation – U.S. News & World Report, 2019	Top 10 in the world for U.S. patents - U.S. National Academy of Inventors and Intellectual Property Owners Association, 2019	Top 10% Athletics Academic Progress Rate in the Pac-12 – NCAA, 2019	One of the world's best for research and teaching - Times Higher Education, 2019	ASU a top 10 "Best Buy" in the U.S. - The Fiske Guide to Colleges 2020 36th Edition	A "Best Value College" in the U.S. — Princeton Review, 2019
Top producer of Fulbright students - Chronicle of Higher Education, 2020	Top 10 university for undergraduate education – U.S. News & World Report, 2020	#2 online undergraduate degree program in the nation - U.S. News & World Report, 2019	A leader in undergraduate education — Princeton Review, 2019	Top 10 in first-year student experiences – U.S. News & World Report, 2019	Top 20 fine arts programs – U.S. News & World Report, 2019	No. 7 nationally in total research expenditures for universities without a medical school National Science Foundation Education Research and Development rankings



Top 10 school of choice for international students - Institute of International Education, 2019	Top 10 in the U.S., Canada for preparing students in science, tech – Popular Mechanics	A top school for veterans and military students – Military Times, 2019	#1 in the world: Thunderbird global management degree —Times Higher Education / Wall Street Journal, 2019	Top 10 in the world business management Ahead of Stanford, USC and UC Berkeley - Shanghai Ranking, Academic Ranking of World Universities, 2019	#2 in the world: excellence in employer- student connections – QS World University Rankings, 2019	A "world's best" full-time MBA program –The Economist, 2019
Recipient: Carnegie Foundation Community Engagement Classification – Carnegie Foundation	Top 10 for students studying abroad Institute of International Education, 2019	#3 graduate local government management program in the U.S. – U.S. News & World Report, 2019	#6 online MBA program in nation – U.S. News & World Report, 2019	Top producer of Teach For America teachers - Teach For America, 2019	Top producer of Peace Corps volunteers - Peace Corps Top Volunteer-Producing Colleges and Universities, 2019	#6 "best green colleges" for sustainability –Sierra Club, 2019



#### **ASU** continues to achieve on all fronts





# Students

#### **Students demonstrate excellence and innovation in 2019**



#### **Desert WAVE Robotics Team**

- First place among U.S. teams
- Third place among international teams



#### First place winners

- Valielza O'Keefe
- Joshua Pardhe



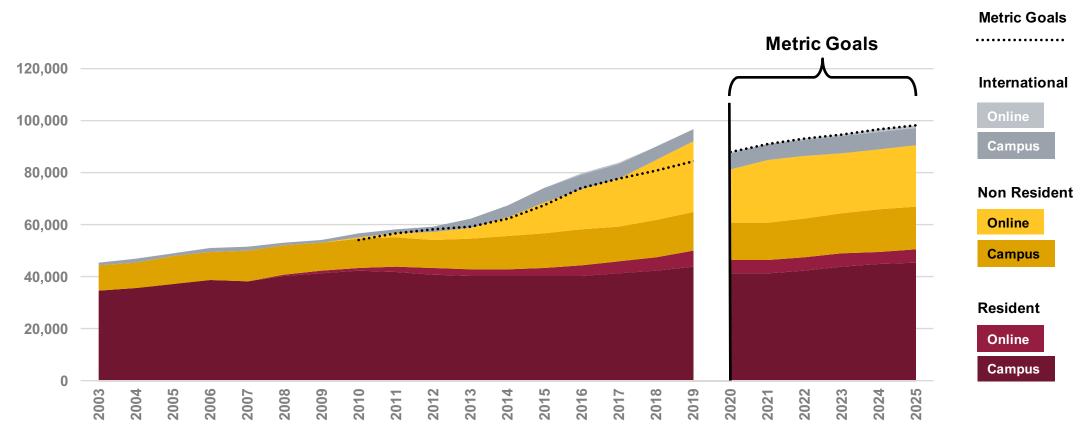
#### Cronkite School of Journalism and Mass Communication

- Seven first-place awards
- Most of any school in the nation



#### Undergraduate enrollment up 43% compared to 2014

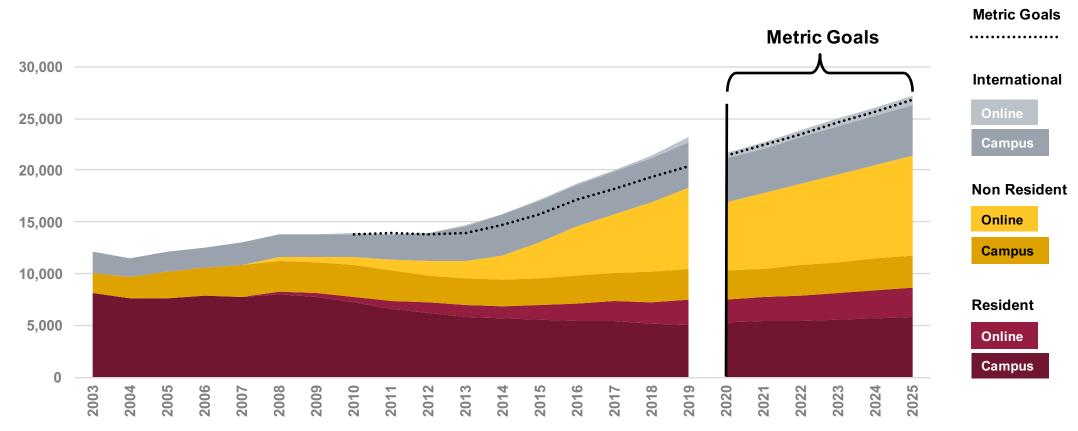
Undergraduate enrollment actual and metric goals (2003-2025)





#### **Graduate enrollment is up 47% over five years**

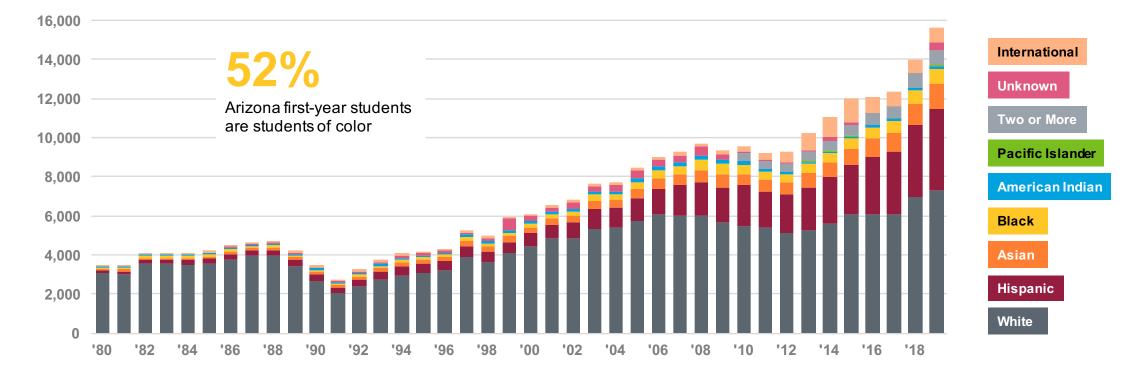
#### Graduate enrollment actual and metric goals (2003-2025)





#### First-year student enrollment has grown across all populations

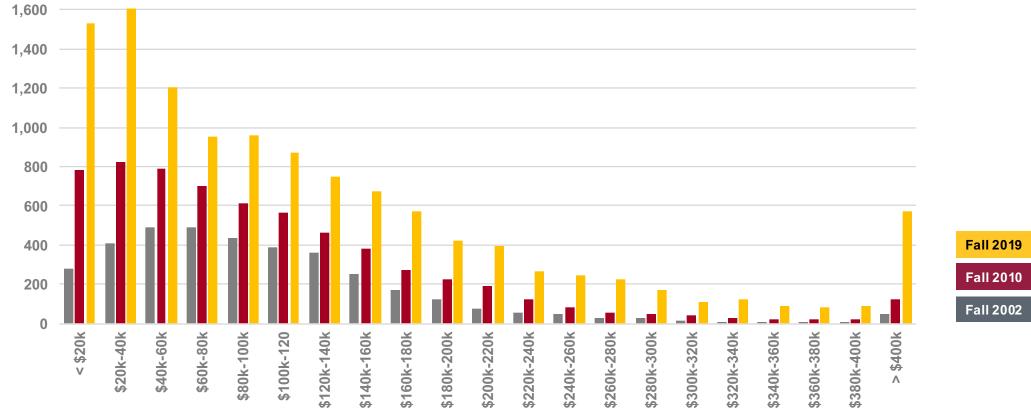
First-time first-year enrollment by race/ethnicity (Fall 1980 – Fall 2019)





#### **ASU** is now more accessible to low-income students

First-year enrollment by income (2002, 2010, 2019)



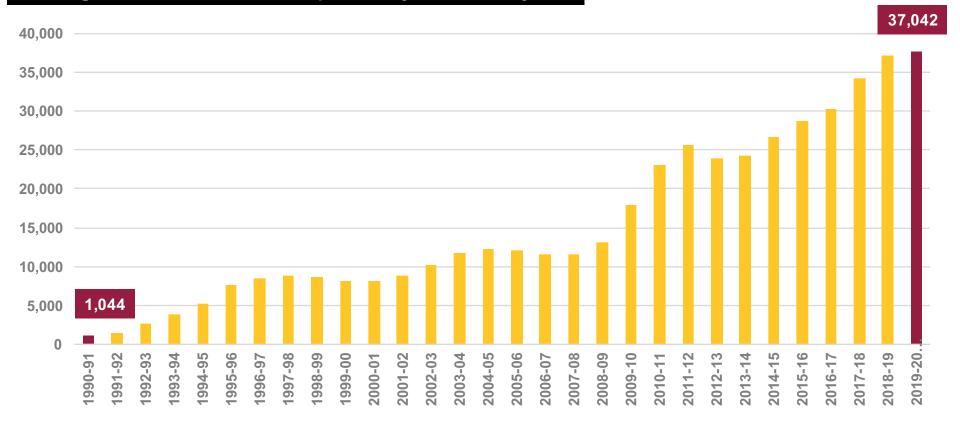
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#### **Enrollment of Pell Grant recipients is more than**

## triple that of the lvy League

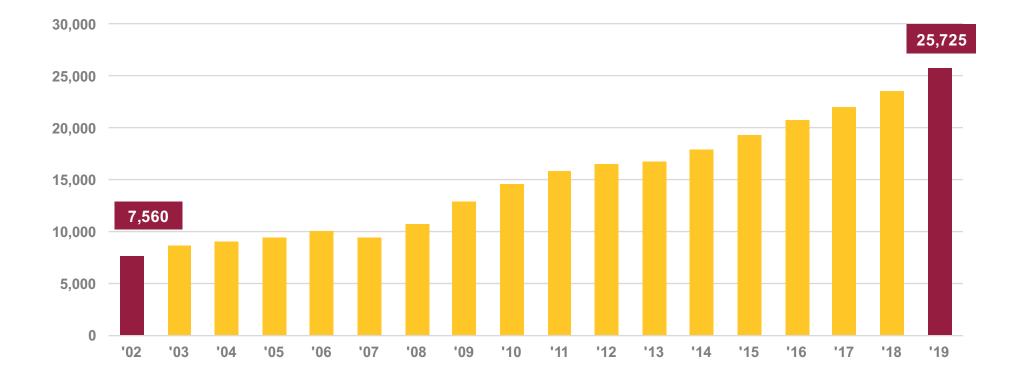
#### Undergraduate Pell Grant recipients by academic year





#### **First-generation student enrollment tripled since 2002**

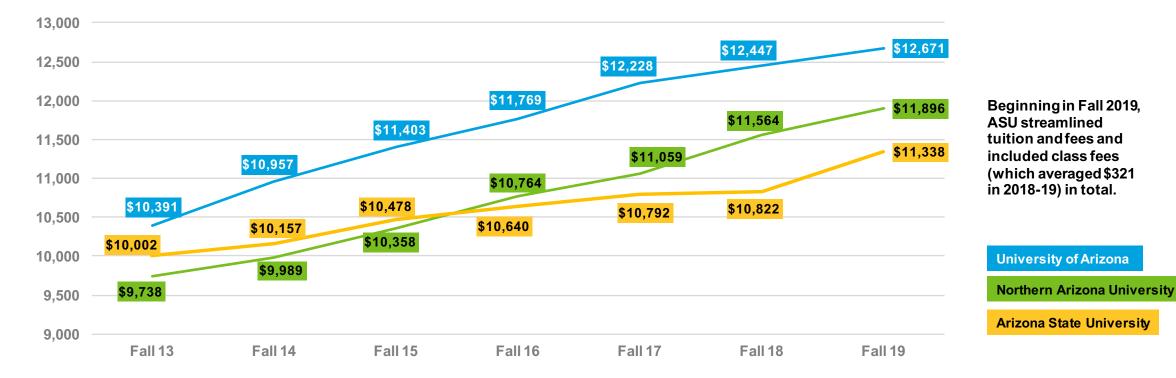
#### First-generation student enrollment (Fall 2002 – Fall 2019)





#### **ASU is committed to low annual tuition adjustments**

Tuition and fees for new resident first-year students (Fall 2013 – Fall 2019)





### Simplified tuition and fees make total costs more transparent

## to students and their families

Tuition and fee structure for resident undergraduate students (2019-20)

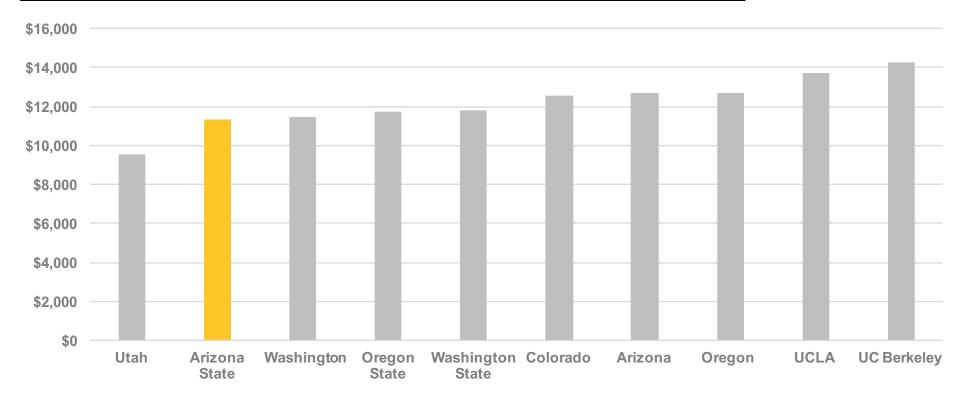




## **Resident tuition remains low compared to**

## Pac-12 public schools

Full-time tuition for new resident undergraduate students (2019-2020)

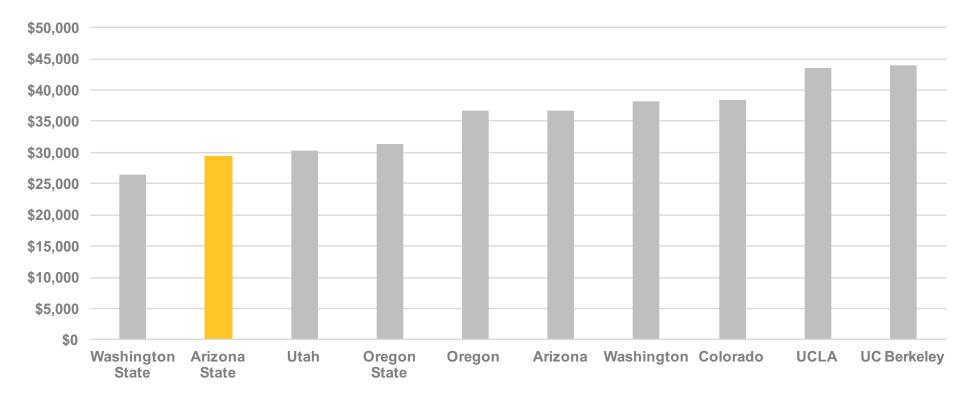




## Non-resident tuition remains low compared to

## Pac-12 public schools

Full-time tuition for new non-resident undergraduate students (2019-2020)

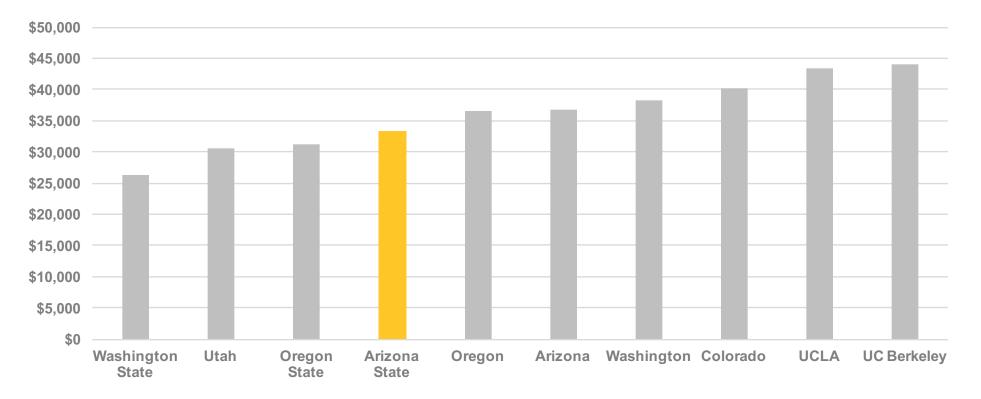




## International tuition remains low compared to

## Pac-12 public schools

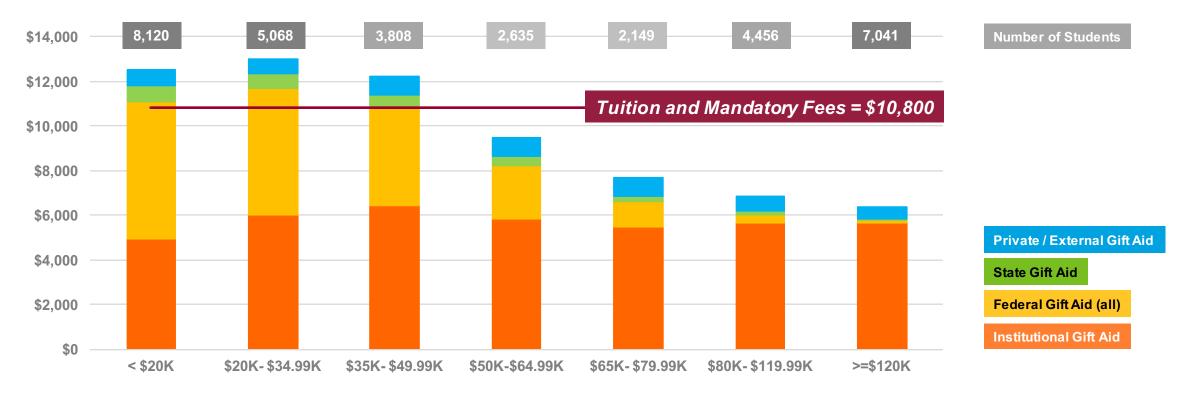
Full-time tuition for new international undergraduate students (2019-2020)





## ASU is committed to affordability by providing gift aid

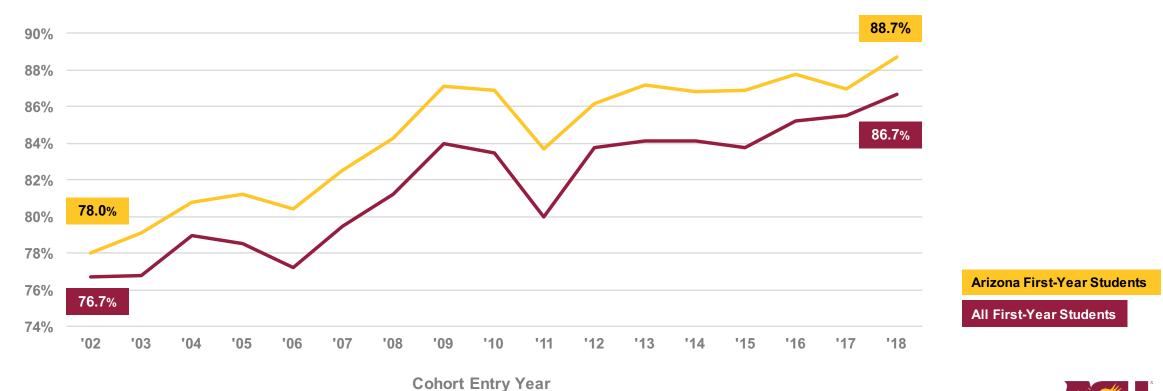
Average gift aid awards by family income for 33,277 resident undergraduate students (2018-2019)





### **ASU first-year retention is nearing 90% goal**

First-year student retention rates (2002-2018)

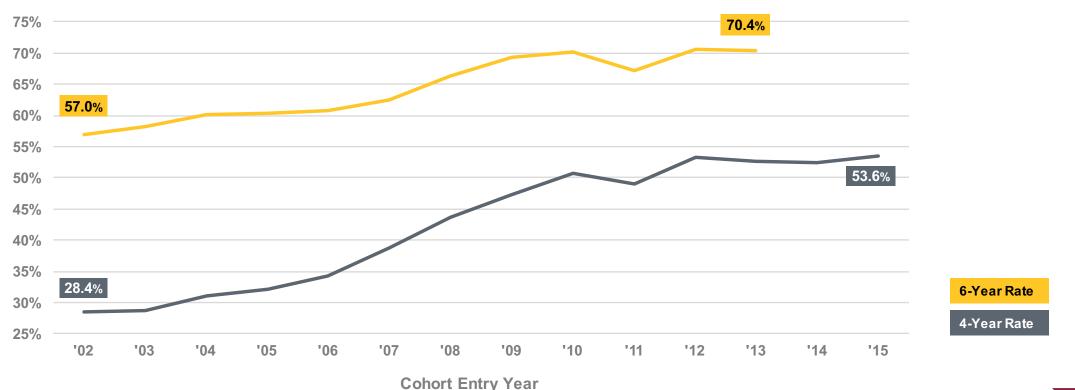




### **Graduation rates have increased markedly since 2002,**

### with the four-year rate nearly doubling

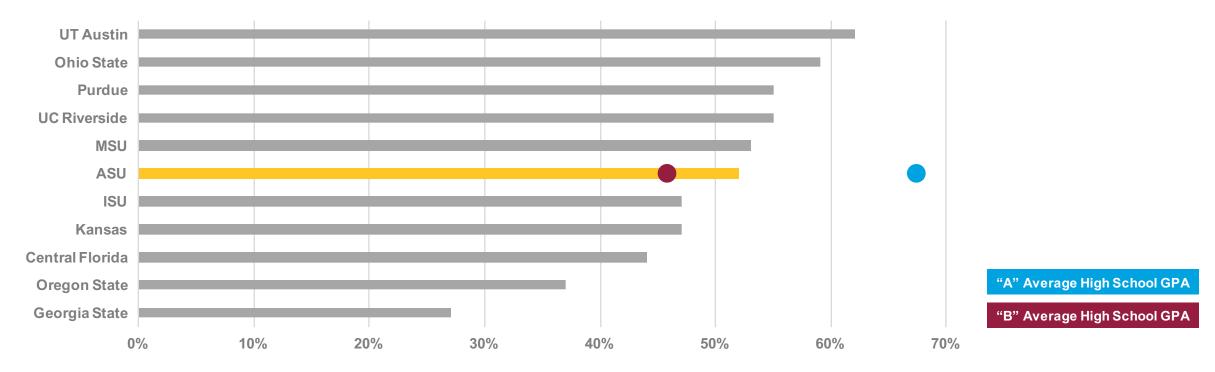
First-year resident student cohort graduation rate (Fall 1983 - Fall 2015)





### Four-year graduation rate compares well with UIA schools

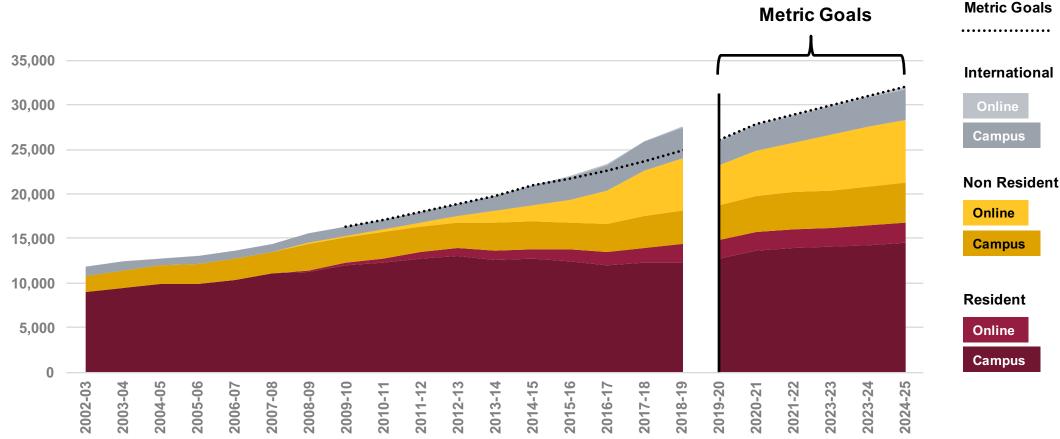
Four-year graduation rate of University Innovation Alliance member universities





### Number of degrees awarded increased 76% since 2008-09

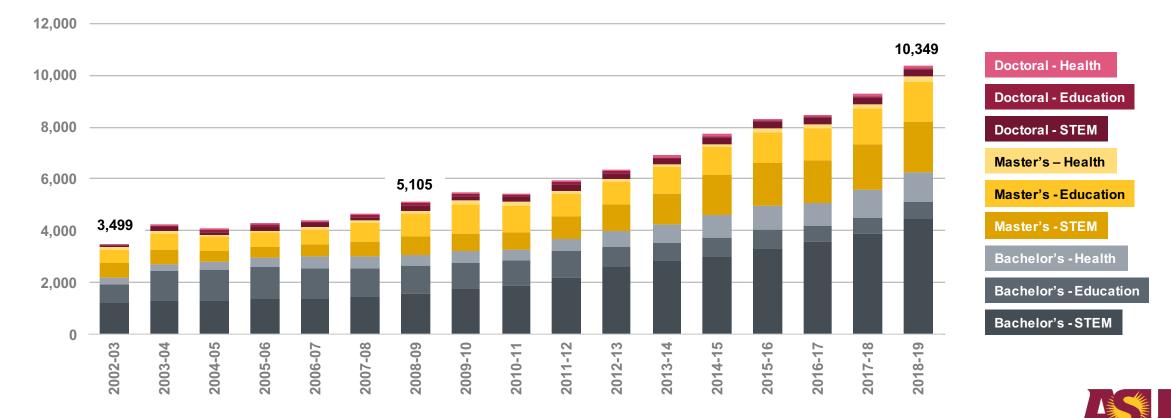
#### Undergraduate and graduate degrees by year (2002-2025)





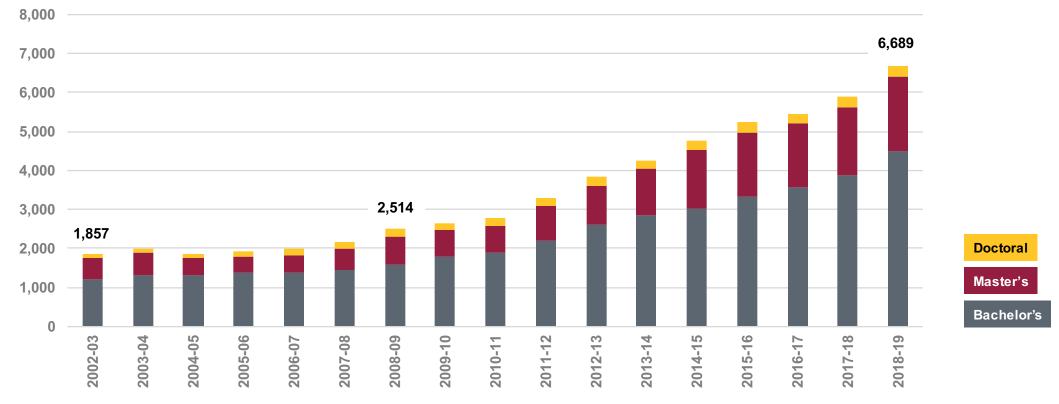
### **Degrees in high demand fields doubled over 10 years**

### High demand degrees awarded (2002-2019)



### STEM degrees up 166% since 2008-09

### STEM degrees awarded (2002-2019)





### **Fulton Schools of Engineering enrollment has nearly**

## quadrupled since 2009



6,407 Fall 2009



#### Undergraduates



Tenured/Tenure-Track Faculty



**350** 0 Fall 2019





#### **Degrees Granted**



41





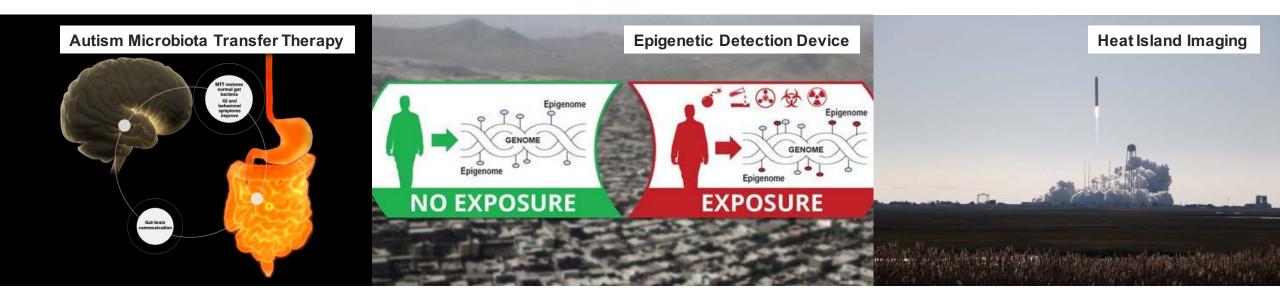
# Research

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### ASU produces groundbreaking research

Game-changing, use-inspired discovery happens here





### **World-class new faculty continue to join ASU**



#### **University Professor, Social Sciences**

Joint appointments: School of Politics and Global Studies School of Public Affairs School for the Future of Innovation in Society School of Sustainability School of Arts, Media and Engineering

Former director and president, London School of Economics



Professor and Director, Social Transformation

Anthropologist, author and former journalist

Consulted for the U.S. Government, Google, Inc. and the United Nations



Professor, Geographical Science and Urban Planning Director, Center for Global Discovery and Conservation Science

School of Earth and Space Exploration

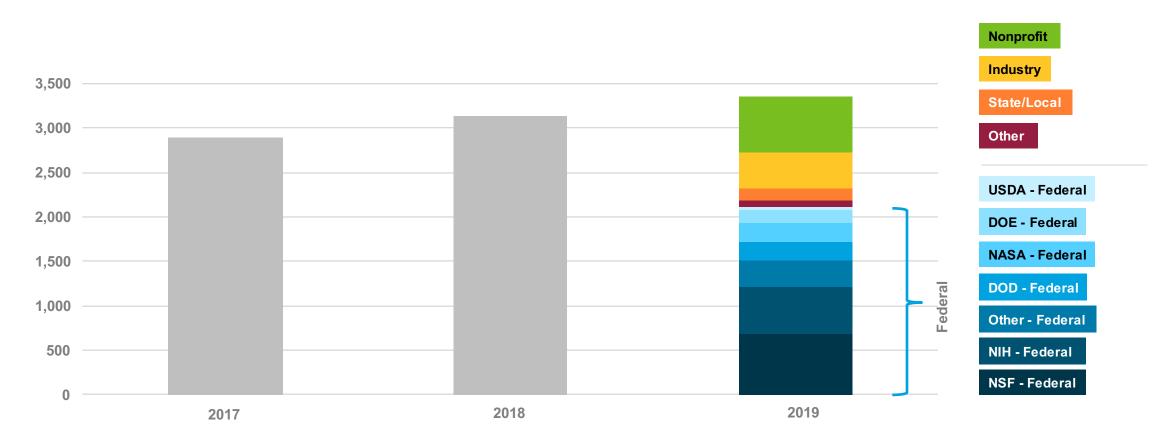
Leading ecologist in exploratory and applied research on ecosystems and climate change

Member, National Academy of Sciences



### **Researchers cultivate a growing number of opportunities**

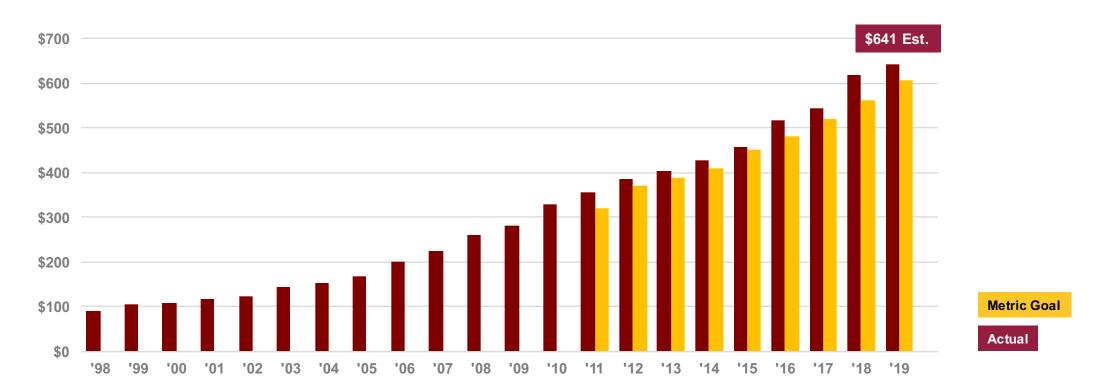
Number of proposals submitted by ASU researchers (2017-2019)





### **Research expenditures doubled over the last decade**

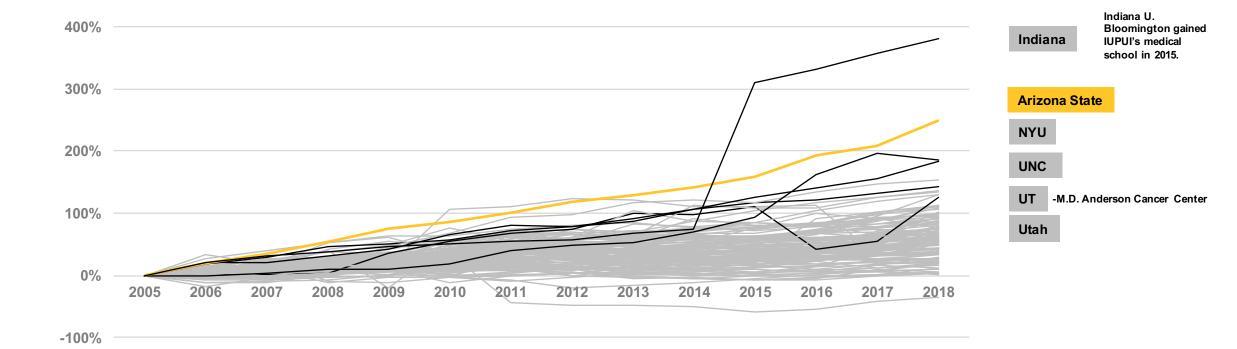
#### **Dollars in millions**





### Research growth has outpaced nearly all other universities

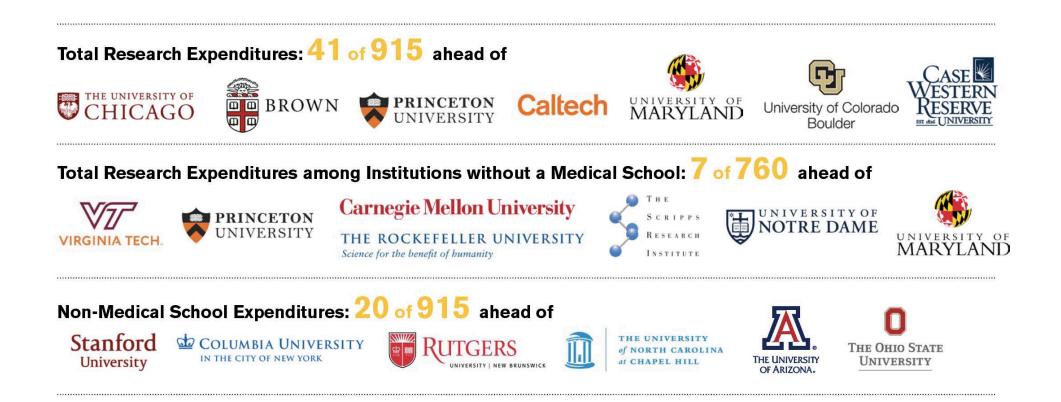
Percentage growth for institutions with research expenditures greater than \$100M annually





## **ASU leads on research across disciplines**

National Science Foundation Higher Education Research and Development rankings (2018)

























# **Financial Health**

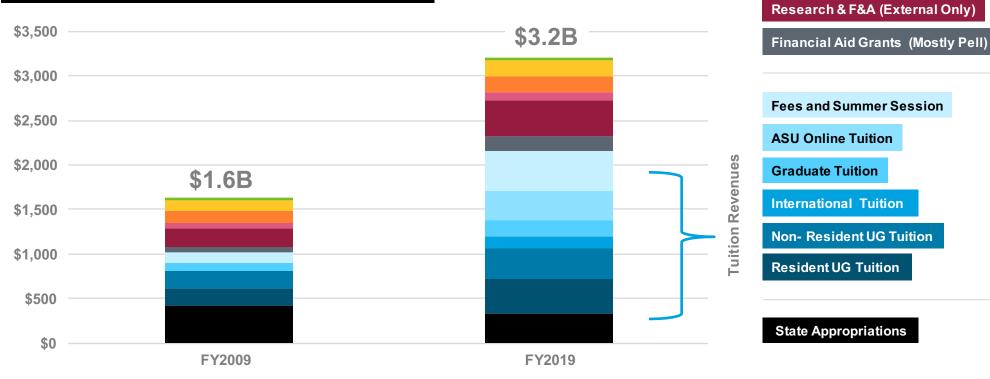
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### ASU has grown and diversified its

### revenues over the last decade

#### ASU gross revenues (FY2009 & FY2019)



TRIF

Gifts

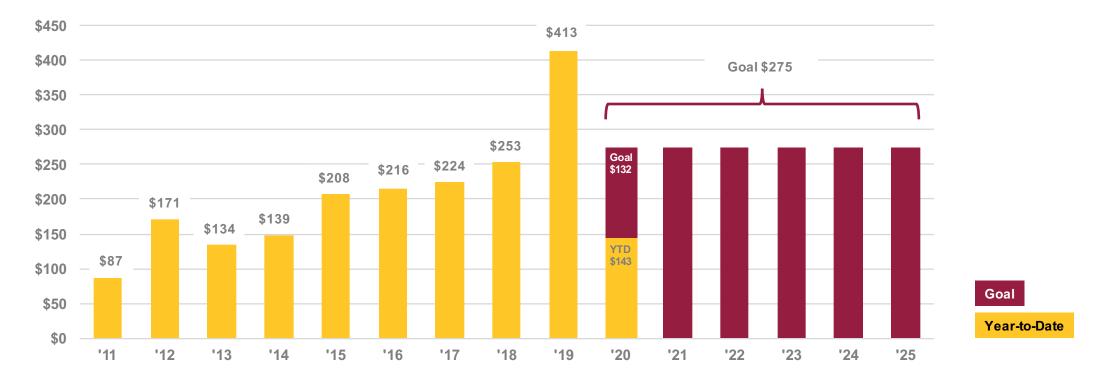
Auxiliary (net)

Other E&G



### Campaign ASU 2020 exceeded its goal of \$1.5B

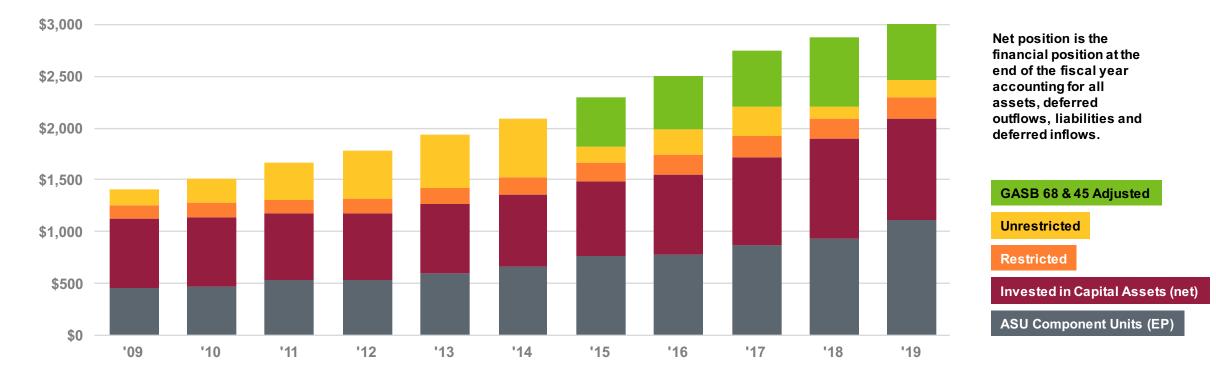
### ASU gifts and commitments in millions (2011-2025)





### Net position has doubled since 2009

Net position and component units in millions (2009-2019)

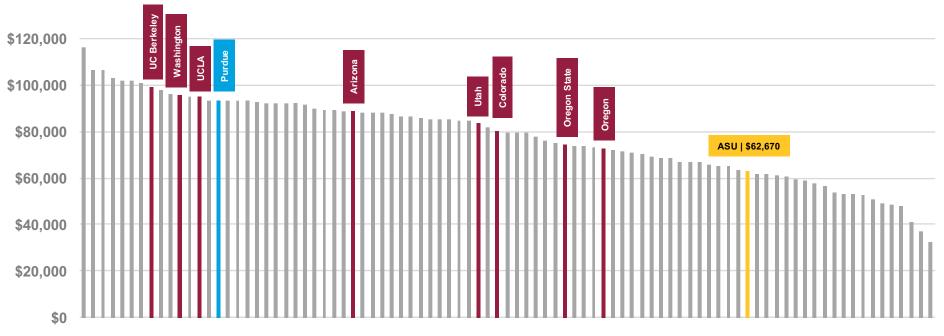




## ASU uses 21% fewer resources per degree awarded than

### the national median

Tuition and state appropriation per degree awarded (FY2018)



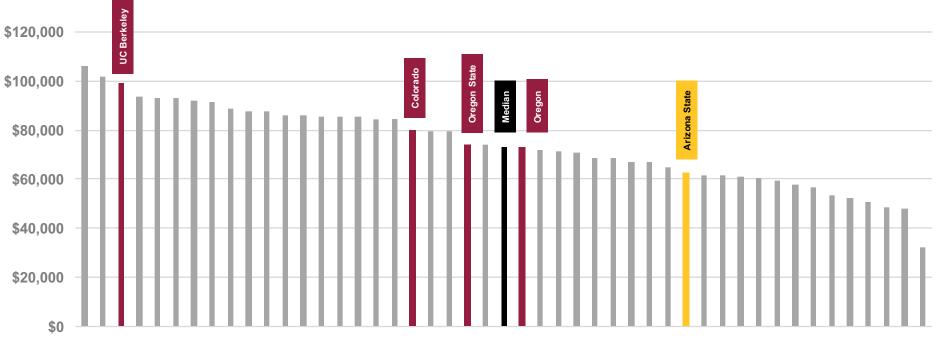
Public very high research universities



### ASU uses 14% fewer resources per degree awarded

### than the median of universities without medical schools

Tuition and state appropriation per degree awarded (FY2018)



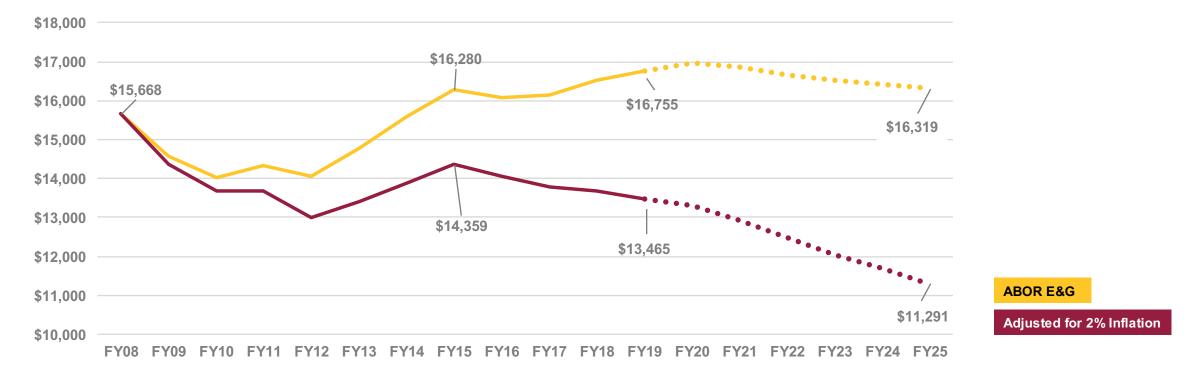
Public very high research universities without medical schools



### Cost discipline, application of technology, and economies

### of scale are projected to maintain current cost levels

E&G expense net of scholarship allowance per FTE ABOR methodology

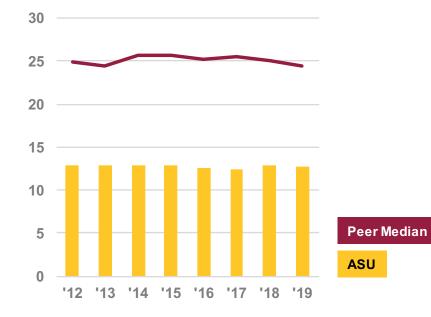




### For 5 years, ASU has operated with about half the staff

### per student as its peers

#### FTE employees per 100 FTE students (FY2012 - FY2019)

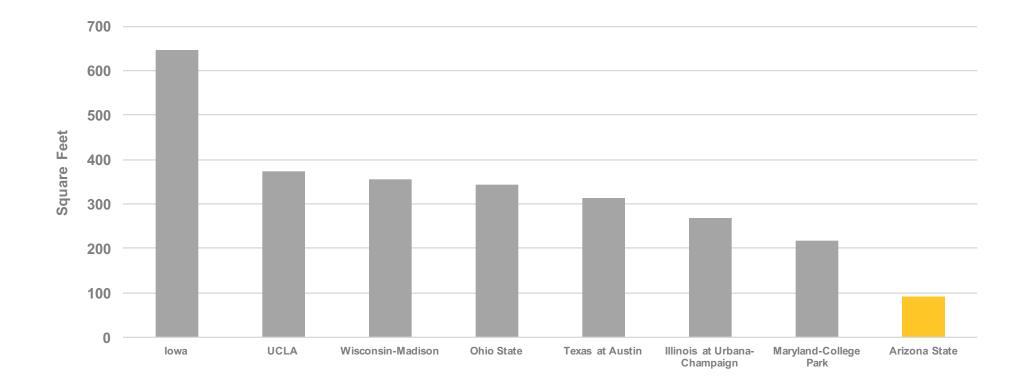


	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Arizona State University	12.91	12.93	12.92	12.85	12.52	12.36	12.90	12.78
Florida State University	15.3	15.8	16.1	16.0	16.1	16.2	16.8	17.5
Indiana University-Bloomington	20.1	20.5	20.1	20.8	20.3	20.8	22.1	22.5
Michigan State University	22.7	21.5	21.3	21.6	21.9	22.8	22.9	23.0
Ohio State University-Main Campus	24.3	23.0	23.0	22.9	22.7	22.9	23.5	23.5
Pennsylvania State University-Main Campus	28.6	28.8	28.8	29.0	29.6	29.3	30.1	31.7
Rutgers University-New Brunswick	23.0	23.9	25.7	25.0	24.7	25.9	29.9	29.9
The University of Texas at Austin	28.8	32.8	26.0	26.7	27.4	27.7	27.2	27.6
University of California-Los Angeles	27.3	26.7	28.4	26.4	26.9	26.7	27.1	29.4
University of Connecticut	26.9	28.1	28.3	27.6	27.2	27.9	28.5	26.8
University of Illinois at Urbana-Champaign	24.3	24.4	25.1	25.2	25.2	24.2	24.0	23.9
University of Iowa	23.2	23.3	23.5	24.1	24.2	23.5	23.2	23.1
University of Maryland-College Park	24.9	25.8	26.0	27.4	25.5	25.6	25.0	24.5
University of Minnesota-Twin Cities	29.6	30.3	30.9	31.2	31.6	31.7	31.9	32.3
University of Washington-Seattle Campus	25.6	24.4	25.3	25.6	21.7	25.6	24.7	24.0
University of Wisconsin-Madison	26.4	26.9	26.9	27.6	27.5	27.8	28.0	30.1
Peer Median	24.9	24.4	25.7	25.6	25.2	25.6	25.0	24.5



### **Use of space is efficient compared to ABOR peers**

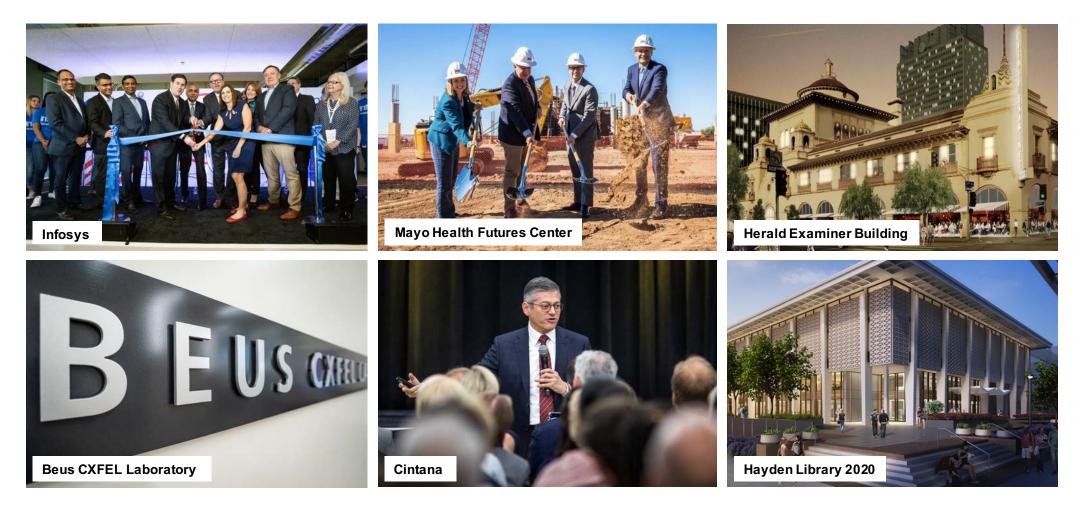
Space density: Net assignable square footage per full-time equivalent





# **Enterprise Capacity**

### ASU continues to build locally and beyond

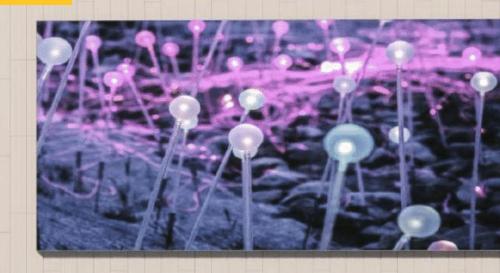




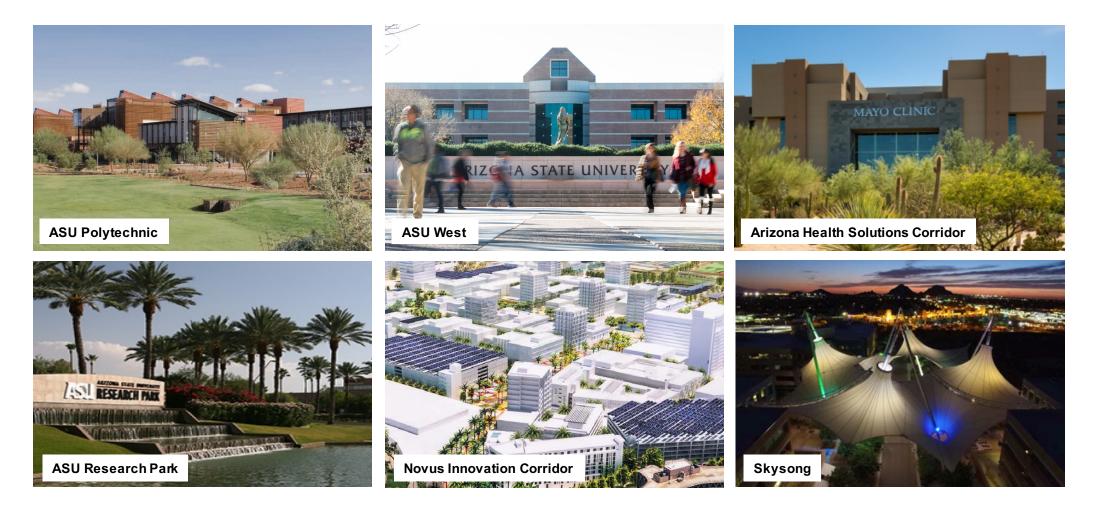
## **Thunderbird School of Global Management**



## ASU @ Mesa City Center



### Large footprint allows linkages with corporate partners





### **Innovation Zone: ASU Polytechnic**

- Over 300 acres for private build-to-suit opportunities
- Integrated with the campus and its aviation, advanced manufacturing, bio-fuels and robotics expertise
- Adjacent to the Phoenix-Mesa Gateway Airport, site of "SkyBridge Arizona" the nation's first international air cargo hub to house both Mexican and United States customs
- Proximate to Eastmark, the region's new largescale 3,200 acre residential community



### **Innovation Zone: ASU West**

- Over 60 acres for build-to-suit opportunities
- More than 4K students engaged in 110 undergraduate and post-graduate degree programs offered by seven schools and colleges
- Located in the West Valley's corporate distribution and logistics hub

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### **Innovation Zone: Arizona Health Solutions Corridor**

### MAYO CLINIC

- 24 acre ASU biomedical center under development
- Adjacent to the Mayo Clinic Hospital-Phoenix and the Mayo Clinic cancer center and proton beam therapy facility
- Home to recently launched Mayo Clinic-ASU MedTech Accelerator, designed specifically for medical device and health care technology companies
- Mayo Clinic MD/ASU Masters degree, including Health Informatics, Biomedical Diagnostics, Business and Juris Doctorates



### **Innovation Zone: ASU Research Park**

- 320 acre site with two parcels available for corporate facility or build-to-suit opportunities (16.5 and 5.5 acres)
- 18 surface acres of lakes and extensive trail system
- 2.2M sf Class A office space
- 51 corporate tenants employing 6K people

ASU Macrotechnology Works — home to ASU's Quantum Energy and Sustainable Solar Technologies (QESST), ASU's first national Engineering Research Center (ERC) supported jointly by the National Science Foundation (NSF) and the Department of Energy (DOE)

\$1.4B annual economic impact

#### **Innovation Zone: Novus Innovation Corridor**

350 acre sustainable mixed-use urban center
Home to State Farm's 2M sf regional hub

 4M square feet of high-rise, mid-rise and creative office build to suit opportunities

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- 3,645 residences and 700 hotel rooms planned
- "Sun Devil 365" programming
- 24K jobs created

reen

Projected \$4.6B annual economic impact upon completion

## Innovation Zone: SkySong, ASU Scottsdale Innovation Center

Planned 1.2M sf mixed-use development with 750K sf occupied by July 2019

- 38 technology-driven commercial tenants
- 10 University units on-site including online education leader EdPlus at ASU
- 325 market rate apartments
- 157 room Marriott/Element boutique hotel
- Four on-site restaurants
- Support for over 60 affiliate startups led by students, faculty and community entrepreneurs
- Site of over 500 community meetings per month serving over 4,000 people
- Projected \$32B 30-year economic impact

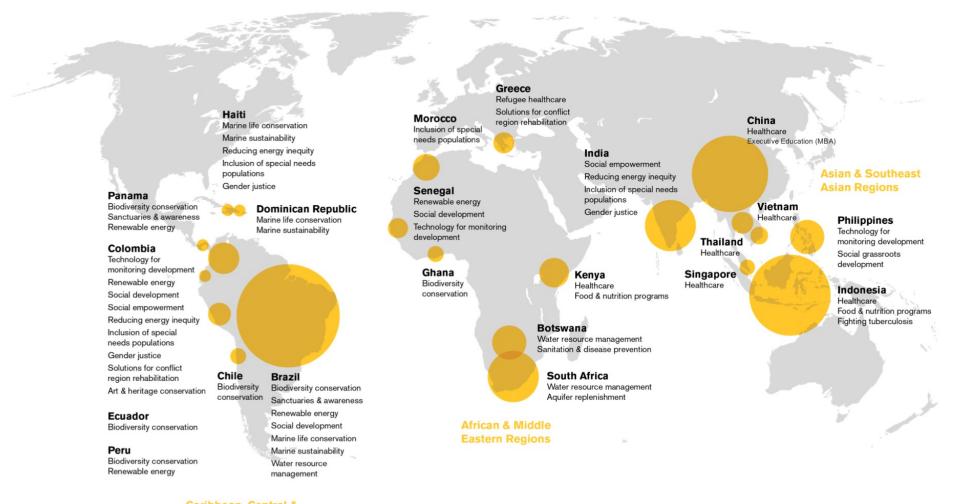


#### New physical locations support global connections





#### **Global research engagement continues to grow**





Caribbean, Central & South American Region

### **ASU** has developed many external partnerships



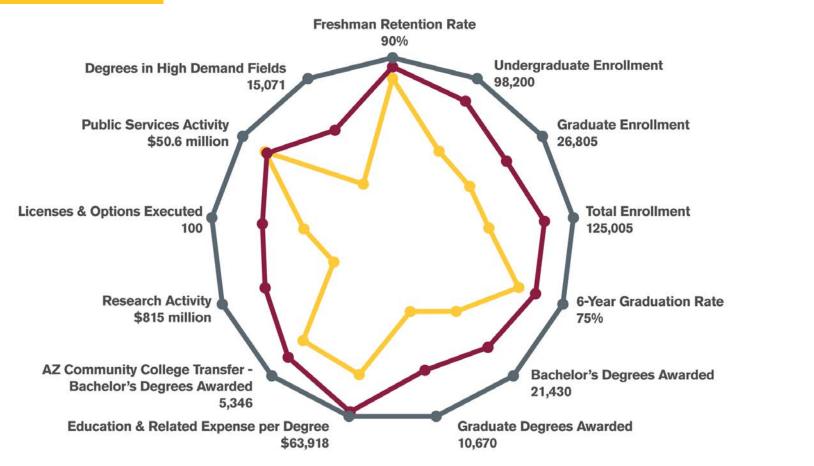


## ASU 2025 Goals



## ASU has made substantial progress on its metric goals

## since 2008-09







## ASU approach is driven by its mission and goals



Demonstrate leadership in academic excellence and accessibility



Establish **national standing** in academic quality and impact of colleges and schools in every field



Establish ASU as a **global center** for interdisciplinary research, discovery and development by 2025



Enhance our **local impact** and social embeddedness



# Demonstrate leadership in academic excellence and accessibility

- Maintain the fundamental principle of accessibility to all students qualified to study at a research university.
- Maintain university accessibility to match Arizona's socioeconomic diversity, with undifferentiated outcomes for success.
- Improve freshman persistence to greater than 90 percent.
- Enhance university graduation rate to greater than 85 percent and more than 32,000 graduates.
- Enhance quality while reducing the cost of a degree.
- Enroll 100,000 online and distance-education degree-seeking students.
- Enhance measured student development and individual student learning to national leadership levels.
- Engage all learners on all levels.





# Establish **national standing** in academic quality/ impact of colleges/schools in every field

- Attain national standing in academic quality for each college and school (top 5 percent).
- Attain national standing in the learning value added to our graduates in each college and school.
- Become the leading university academically (faculty, discovery, research, creativity) in at least one department or school within each college and school.

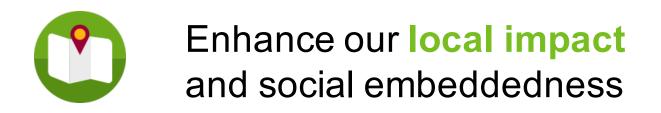




# Establish ASU as a **global center** for interdisciplinary research, discovery and development

- Become the leading American center for discovery and scholarship in the integrated social sciences and comprehensive arts and sciences.
- Enhance research competitiveness to more than **\$815 million** in annual research expenditures.
- Transform regional economic competitiveness through research and discovery and value-added programs.
- Become a leading American center for innovation and entrepreneurship at all levels.



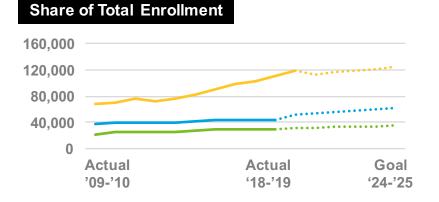


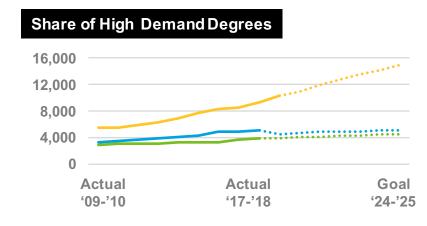
- Strengthen Arizona's interactive network of teaching, learning and discovery resources to reflect the scope of ASU's comprehensive knowledge enterprise.
- Co-develop solutions to the critical social, technical, cultural and environmental issues facing 21st-century Arizona, ensuring sustainability and resilience.
- Meet the needs of 21st-century learners through the universal learner initiative by increasing individual success through personalized learning pathways and promoting adaptability to all accelerated social-technical changes.



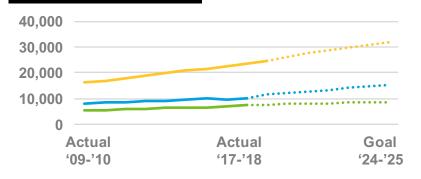
#### The 2025 metrics require ASU to increase its proportional

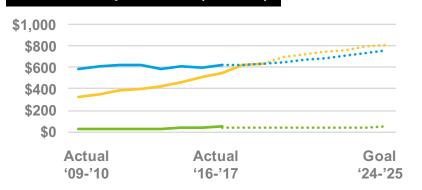
#### share of performance





#### Share of Total Degrees





**Research Expenditures (millions)** 

#### Arizona State University University of Arizona Northern Arizona University



## What It Will Take



#### **ASU** continues to lead as an enterprise

#### Higher Education Governance Logic



Academy Model



State Control Model



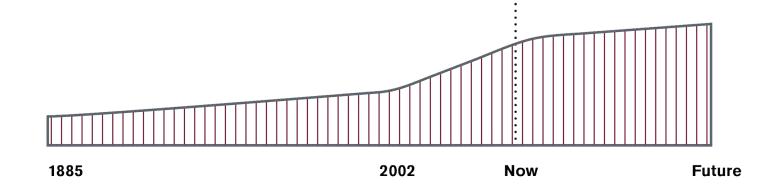
Market Model



**Enterprise Model** 

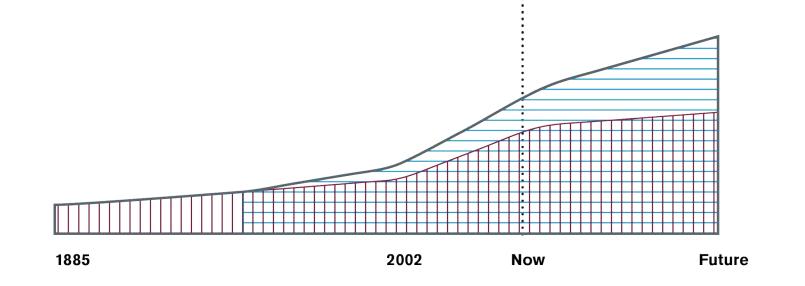
Animating Purpose	Enlightenment of individual students	Organizational preservation	Profit maximization for owners and shareholders	Social transformation Economic success	
Path to Achieving Public Value	Immersive instruction	Achievement of state- specified goals	Efficiency and cost reduction	Connecting instruction to knowledge generation at society- impacting scale	
Assumptions of Faculty	Self-governing professionals	Bureaucrats responding to rules	Commodity labor; faculty not entrepreneurial	Knowledge entrepreneurs	
Assumptions of Management	Management drawn from and blended with faculty	Traditional public managers distinct from faculty	Professional management distinct from faculty and acting entrepreneurially	Management drawn from and blended with faculty but acting entrepreneurially	
Accountability Mechanisms	Faculty and Management Professionalism	Audits, public reporting, standardized testing	Student choice, standardized testing	Demonstrated economic and social progress	
Primary Funding Mechanisms	Enrollment funding from state, endowments	Enrollment funding from state	Vouchers, performance based funding from state	Diverse; institutional entrepreneurship	
Organizational Scale of Impact	Individual or groups of individuals	Community or state	Indeterminate, any scale from which profit can be derived	Social scale with possible national and global reach	





Academic Enterprise

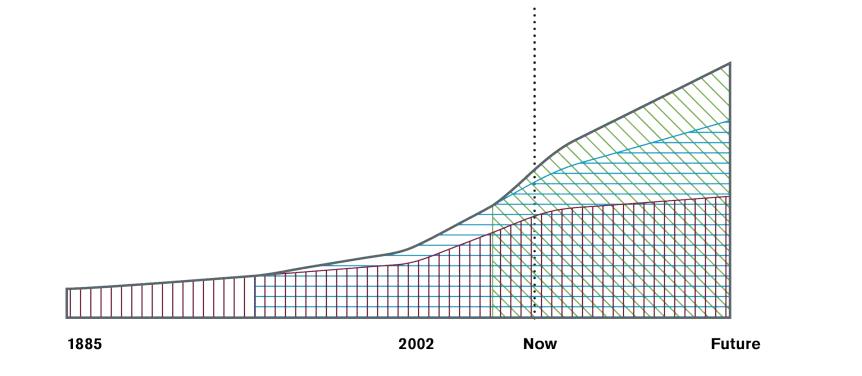




Knowledge Enterprise

Academic Enterprise



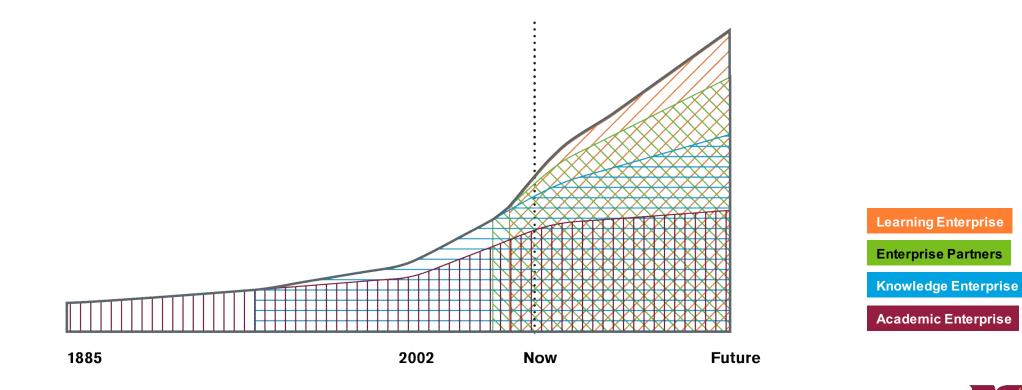




Enterprise Partners

Knowledge Enterprise

Academic Enterprise





### The ASU Enterprise

#### 2020 Launch



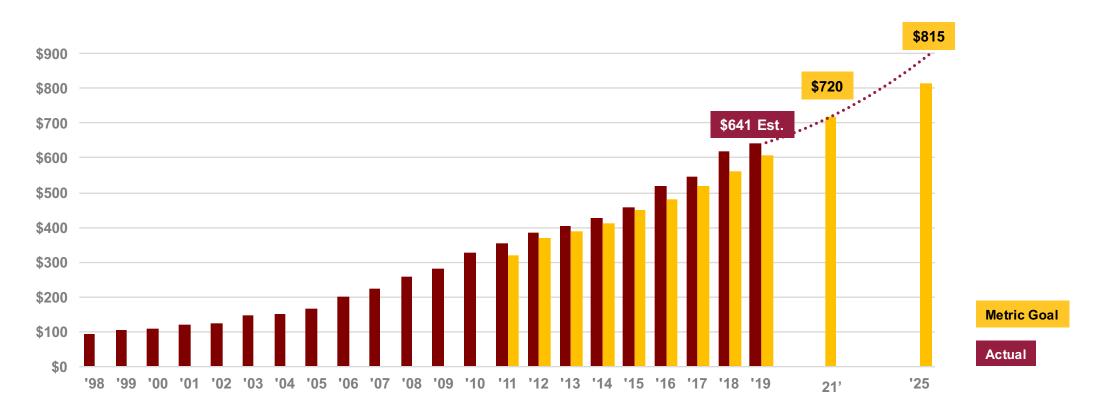


EdPlus@ASU

#### Knowledge Enterprise

## ASU continues to expand its research portfolio

#### **Dollars in millions**





#### Academic Enterprise

## ASU continues to drive growth in undergraduate enrollment

Benchmarks for future success (FY2018 vs FY2019)

ASU is investing in technology-enabled student communications to improve the prospective first-year student journey and grow interest in and enrollment at ASU.



#### +18.9% first-year student applications

(54,386 vs 64,647) campus and digital immersion combined

#### +11.3% campus visits/tours

(31,322 vs **34,853**) including on-campus admissions events

#### +5.4% admission-related web traffic

(3.5M vs **3.7M**) website sessions



#### Academic Enterprise

### **ASU continues to drive innovation**

#### for improved student success

Key areas of continued investment

#### **Experiential Learning Network**

- Integration of learning, work and service
- Participation of all students
- Cooperative education
- Experiential learning transcript

#### **Integrated Case Management**

- Predictive analytics
- Proactive advising
- Holistic student data
- Health and wellness

#### **Active, Immersive Learning**

- Digital virtual learning environments
- Use of adaptive learning to expand flipped classrooms
- Connected courses
- Immersive play/creation

#### **Intentional Student Engagement**

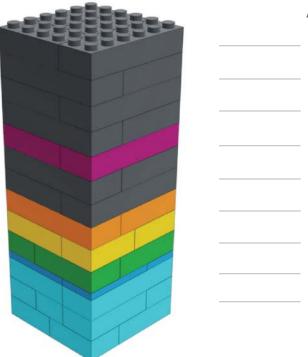
- ASU mobile app
- Sunny, ASU's chatbot
- Digital portfolios
- Energizing ASU 101



## **ASU expands ability to serve all learners**

Creates, incubates and scales tech-enabled educational solutions that are personalized, stackable,

accessible and responsive to workforce needs







Learners will acquire the skills and competencies typically gained through traditional credentials such as a high school diploma/GED, Arizona Career Readiness Credential, associate degree, bachelor's degree, graduate degree and lifelong learning, at any stage of their life, including while employed and beyond.



#### **EdPlus**

## **Digital learning platform will support each enterprise**

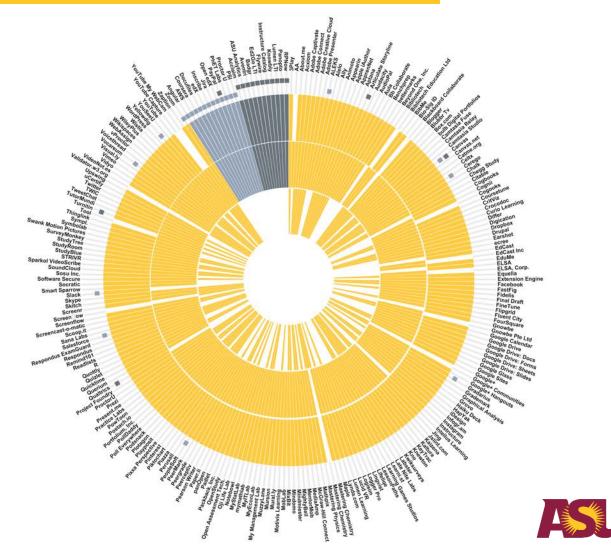
238 educational technologies utilized

## Evolution of the ASU Digital Learning Platform



ASU Online Open Scale

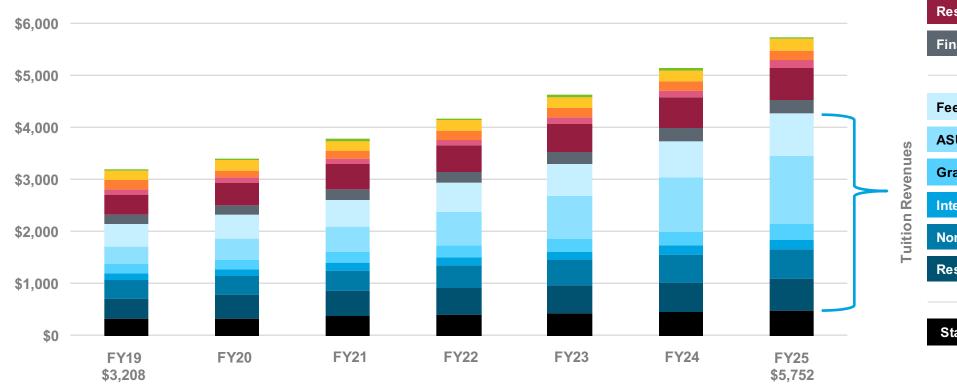
le Continuing & Professional Education



## ASU must continue to grow and diversify

ASU gross revenues in millions (FY2019 actual, FY2020 to FY2025 projected)

#### revenue streams



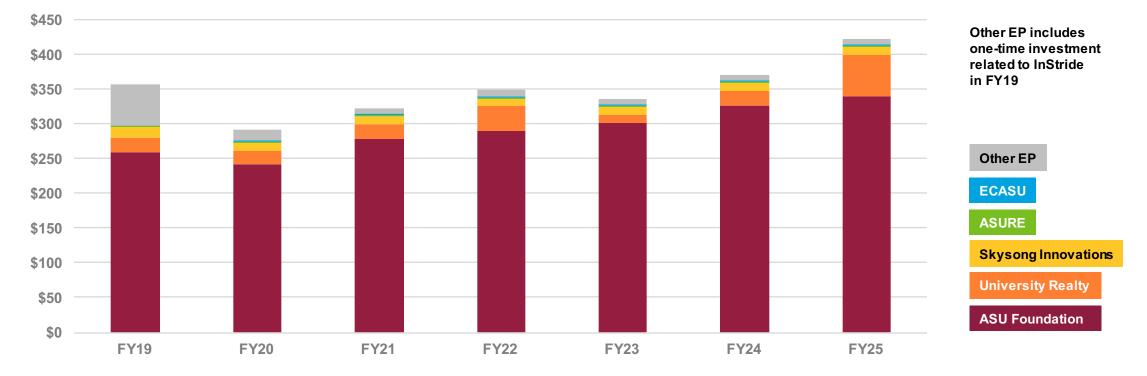
TRIF Auxiliary (net) Other E&G Gifts Research & F&A (External Only) Financial Aid Grants (Mostly Pell) Fees and Summer Session **ASU Online Tuition Graduate Tuition International Tuition** Non- Resident UG Tuition **Resident UG Tuition** 

#### State Appropriations



## **Enterprise Partners presents significant opportunities**

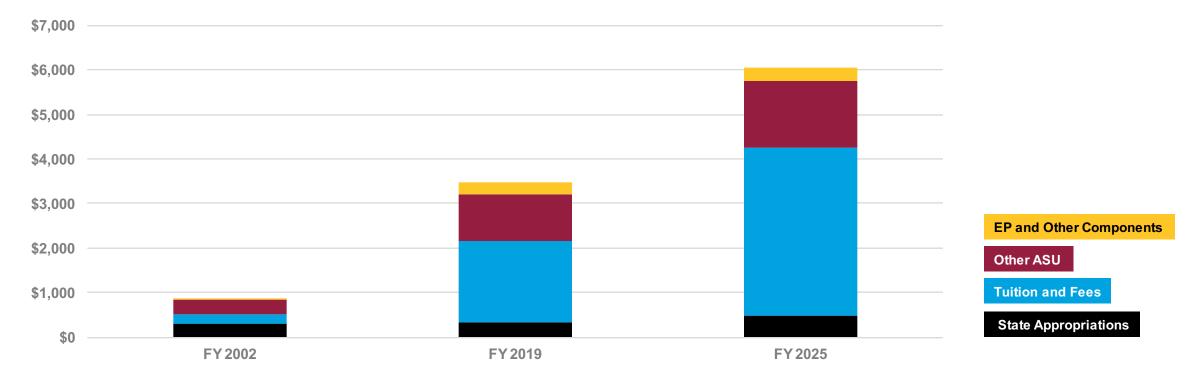
Actual and projected revenues in millions (FY2019 actuals, FY2020 to FY2025 projected)





### **Together, ASU and EP revenues power the enterprise**

FY 2002 and FY 2019 actuals, FY 2025 projected (in millions)





#### The Fulton Schools of Engineering will expand to

#### meet new economy needs

School of Biological and Health Systems Engineering	School of Computing, Informatics, and Decision Systems Engineering	School of Electrical, Computer and Energy Engineering	School for Engineering of Matter, Transport and Energy	School of Sustainable Engineering and the Built Environment	The Polytechnic School	The Engineering and Design Institute (TEDI)	"School 8"
<b>833 Students</b> 707 Undergraduate 126 Graduate	<b>7,773 Students</b> 5,901 Undergraduate 1,872 graduate	<b>3,353 Students</b> 2,,369 Undergraduate 974 graduate	<b>3,891 Students</b> 3,153 Undergraduate 738 graduate	<b>1,771 Students</b> 1,380 Undergraduate 391 graduate	<b>5,858 Students</b> 5,422 Undergraduate 436 graduate	Advancing engineering design on a global scale	





## **Future growth of Fulton Schools of Engineering will**

#### drive economic competitiveness

#### **Students**

#### Current 16,800 in person 7,100 online 4,200 graduates 6,000 first generation students 5,300 female students 4,800 hispanic students

Goal 25,000 in person 15,000 online 6,000 graduates

f producer of technical talent in the U.S.

#### Faculty

#### Current

350 faculty

25 young investigator awards

804 invention disclosures

35 start-ups #26 worldwide in patents

Goal 100 new faculty #5 worldwide in patents (2x output)

#### Research

#### Current

\$134M research output

2 engineering research centers

\$44M DARPA awards

8 industry/university research collaborative centers

Goal \$315M research output 250+ new industrial partnerships



## Science and Technology Centers support a stronger economy

Faculty, students and research partners discover, and industry pulls their work forward into the marketplace



Creation of high-value jobs

Technology start-ups with AZ founders and innovators

Retention of more than **4,000 skilled** engineering grads per year

Partnerships with established AZ technology companies



## Workforce training

Hands-on research experience produces thought leaders

Entrepreneurial training paves way from lab to captured value



#### Attraction and retention of leading corporations

People, facilities, intellectual leadership

Partnerships and acquisition opportunities for established companies

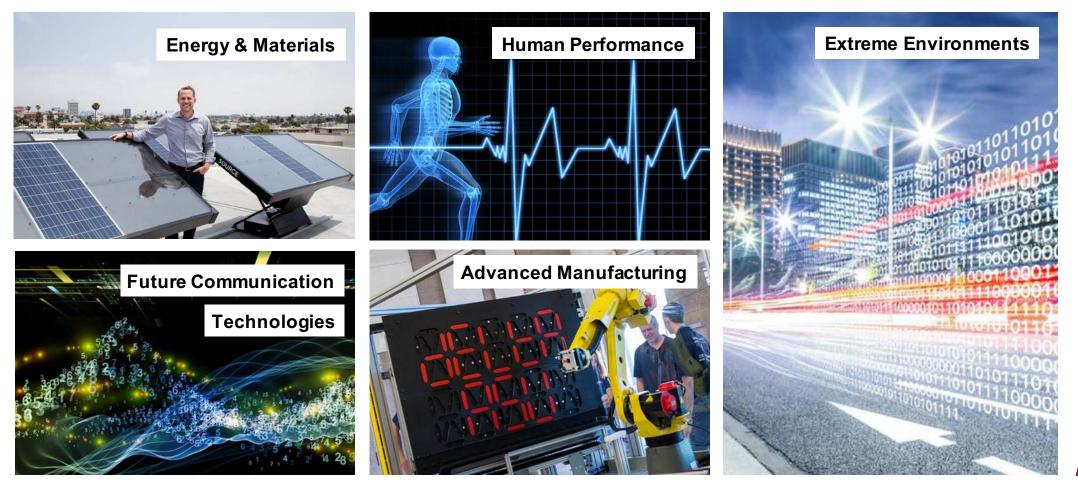


#### **Existing Arizona STCs demonstrate opportunity**





#### **Potential regional STCs built on Arizona's strengths**





#### **ASU Workforce Readiness Initiative for the New Economy**

## \$46M

A three-part plan to prepare and position Arizona for the fourth industrial revolution and to enjoy a future of high employment, strong economic growth and resilience to economic shocks.

## \$26M

for the development and expansion of education programs

\$10M to establish five Science and

Technology Centers (STCs)



to grow the Fulton Schools of Engineering



**ROI for Arizona in the New Economy** ASU is uniquely positioned to be the state's leader in scaling degree production and knowledge creation through accessible, well-designed programs that generate a high ROI for the broadest cross-section of Arizona's citizenry.



