Arizona State University

Strategic Enterprise Plan:

2019 Update & Operational and Financial Review

Arizona Board of Regents February 8, 2019



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 is 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.



Economic and

Social Imperative

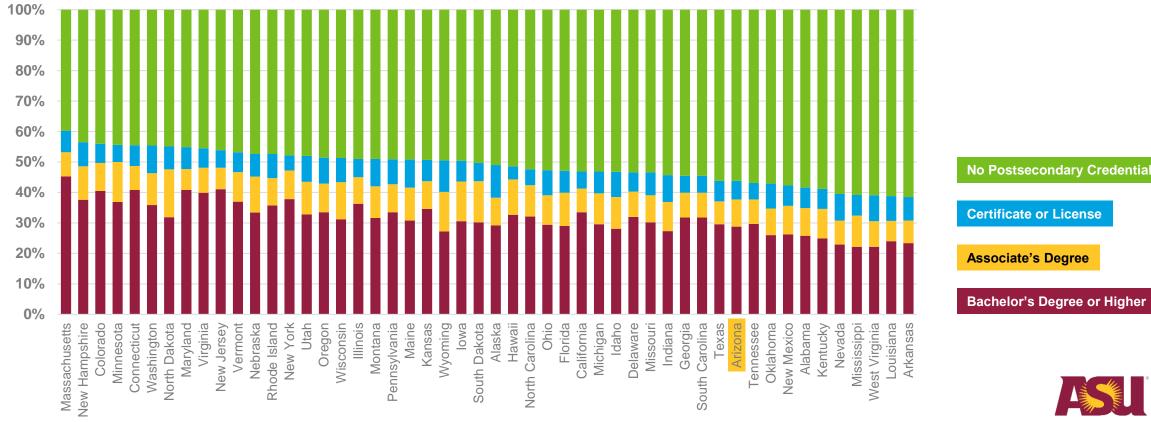
FINALLY





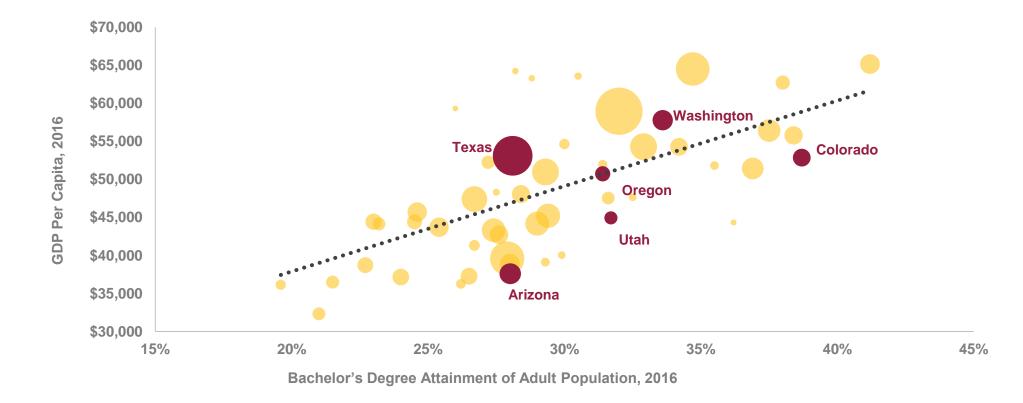
Arizona's educational attainment is lower than most states

Working-Age Population by Educational Attainment by State



Per capita GDP correlates with educational attainment

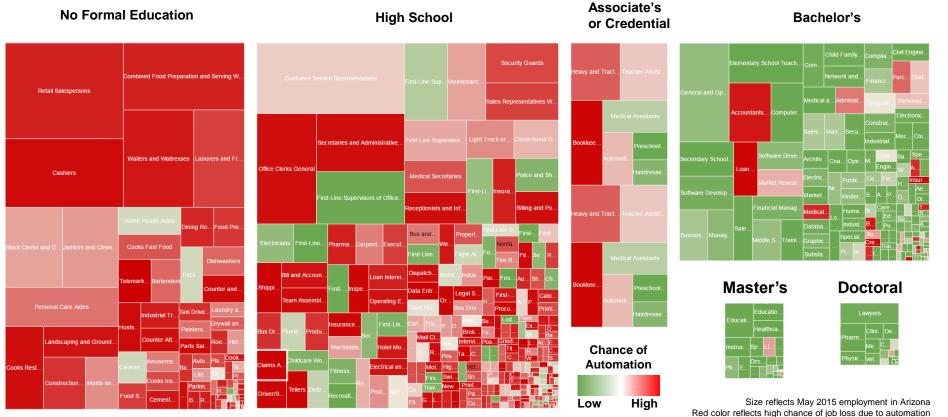
Bachelor's Degree Attainment and Real Per Capita GDP by State (2016)





The future economy will need higher educational attainment

AZ Employment by Occupation, Minimum Education Required & Probability of Job Loss Due to Automation

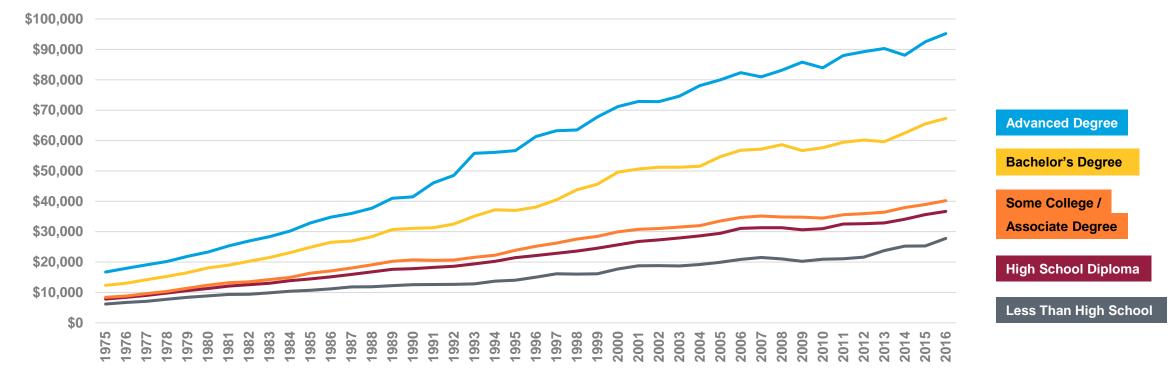


Data: BLS and Frey and Osborne (2013)



Adults with college degrees earn more

Mean Earnings of Workers 18 Years and Over by Educational Attainment (1975-2016)





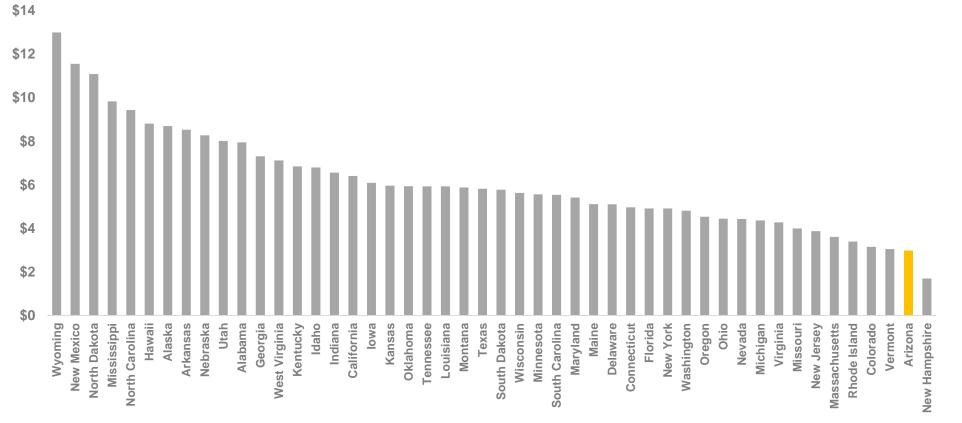
65%

Estimated percentage of children who will ultimately perform new types of jobs that do not yet exist.



Arizona lags in state postsecondary investment

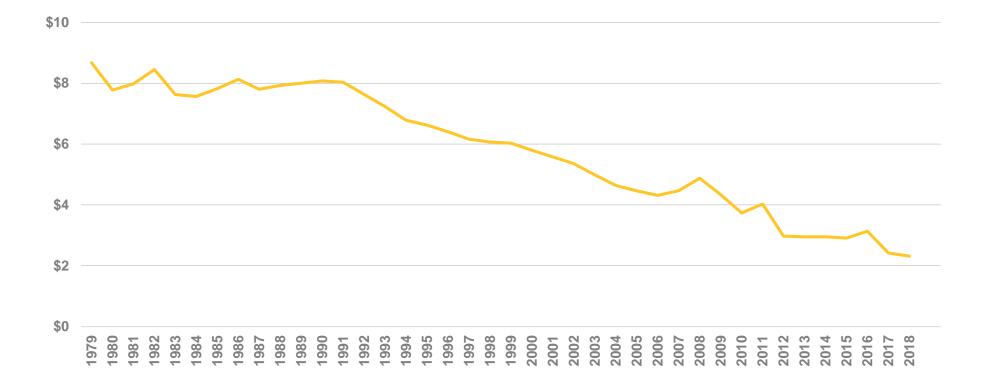
Higher Education Spending per \$1,000 in Personal Income (FY2016)





Higher education per capita spending has declined by 75%

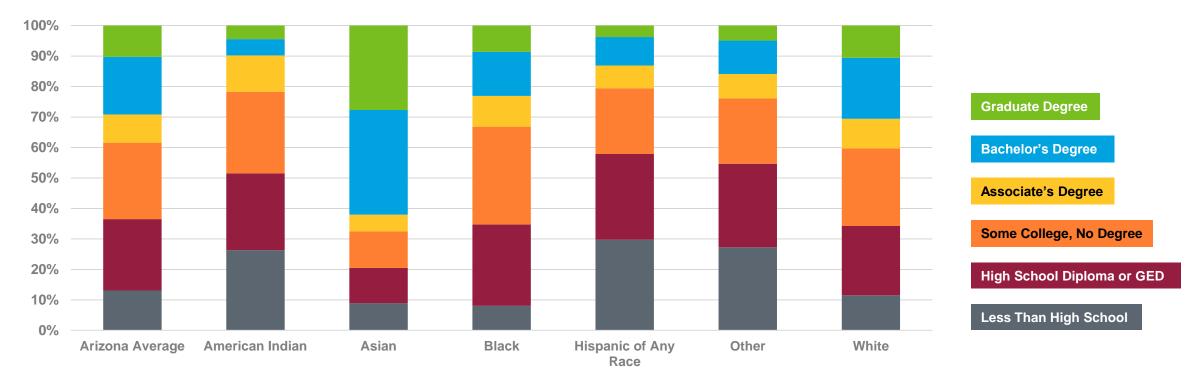
Arizona Higher Education Spending per \$1,000 in Personal Income (1979-2018)





Educational attainment is unevenly distributed by ethnicity

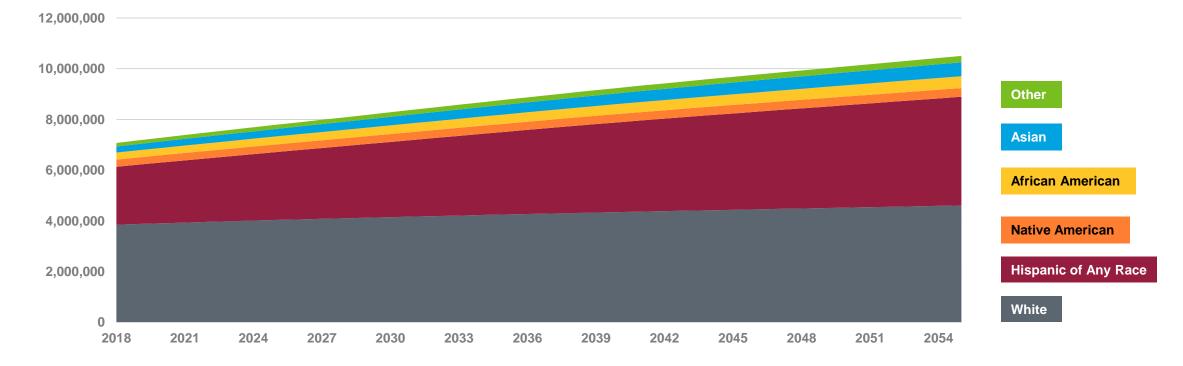
Arizona's Educational Attainment By Race (2017)





Hispanics are Arizona's fastest growing demographic

Arizona Population Projections by Ethnicity (2018-2055)

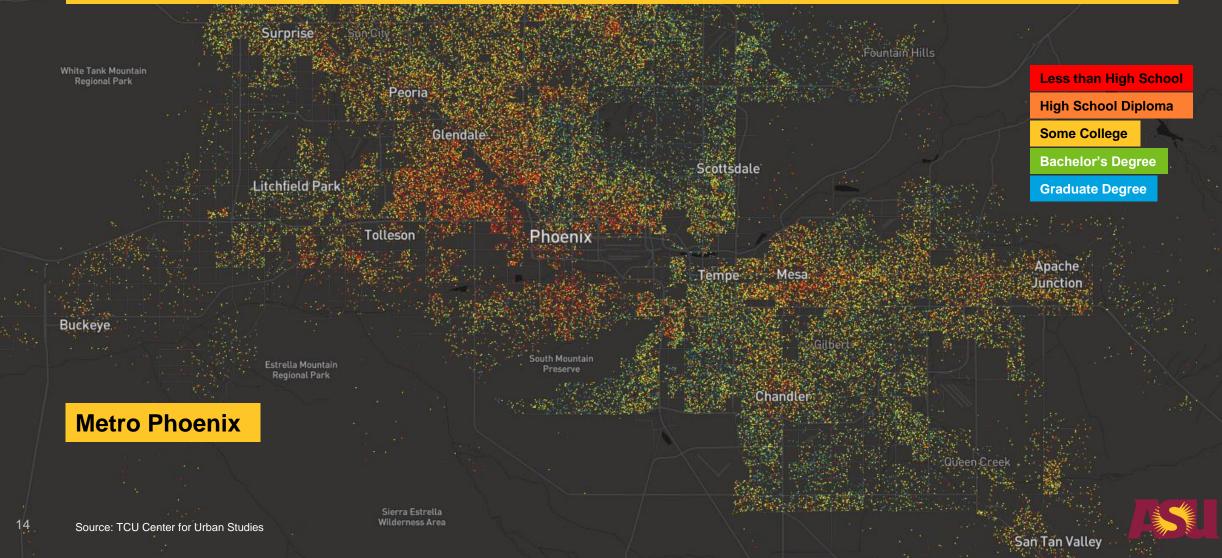




Educational attainment is unevenly distributed by geography

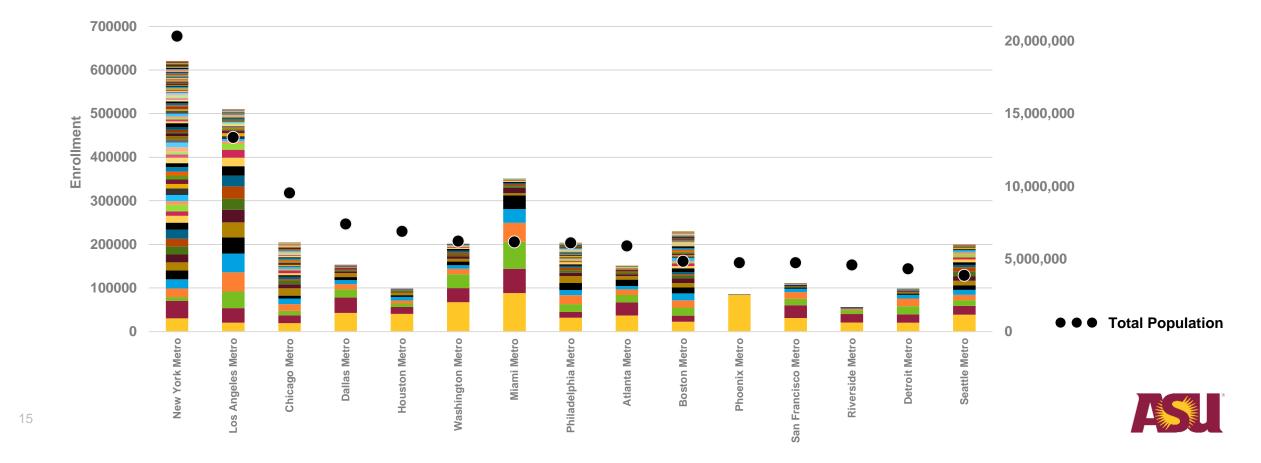
McDowell Sonoran Preserve

Wilde



Investment in ASU is critical to metro Phoenix

Undergraduate Enrollment in the 15 Largest US Metros by School (Fall 2017)

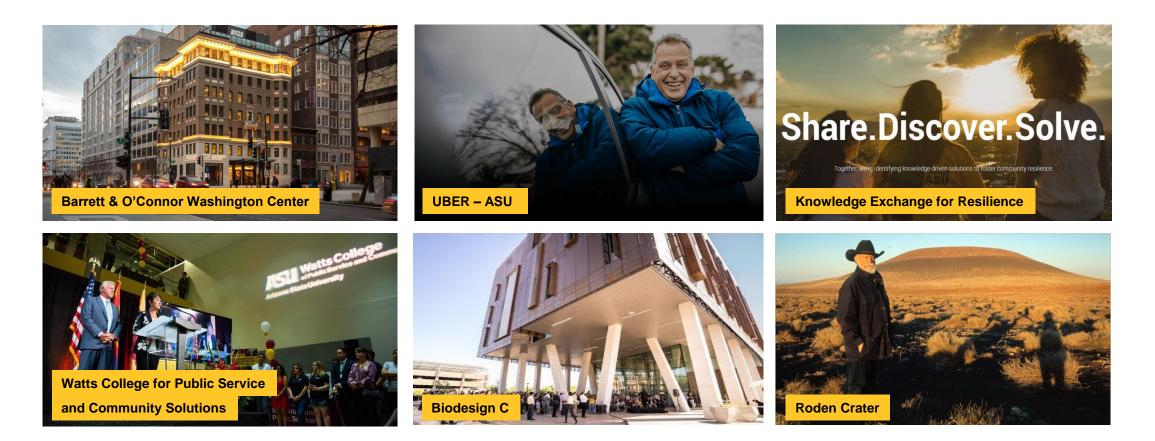


Performance and

Accomplishments to Date



ASU partnerships and infrastructure launched in 2018





ASU excellence earns recognition

#1 in U.S. for innovation ASU Ahead of Stanford and MIT -U.S. News & World Report 2016, 2017, 2018 and 2019	Among best graduate schools in the U.S. –U.S. News & World Report, 2018	Top 1 percent of world's most prestigious universities Times Higher Education, 2018	A top producer of the world's elite scholars -Frank Office of National Scholarships Advisement	Top 100 world's best for research and teaching Times Higher Education, 2018	Highest-ever: Sun Devil Athletics Academic Progress rate –NCAA, 2018	'Best Bang for Tuition Buck' —Princeton Review, 2018
Top producer of Fulbright students Chronicle of Higher Education, 2018	Top university for undergraduate education –U.S. News & World Report, 2019	#2 online undergraduate degree program in the nation	A leader in undergraduate education —Princeton Review, 2019	Top 10 fine arts programs –U.S. News & World Report, 2018	#5 in the nation for producing the best-qualified graduates	Top-10 university for research -National Science Foundation Education Research and Development rankings



#1 choice of international students -Institute of International Education, 2018	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, 2018	#1 in the world: Thunderbird global management degree —Times Higher Education / Wall Street Journal, 2019	<section-header></section-header>	A top world university -Center for World University Rankings	A world leader in executive education —Financial Times, 2018
Recipient: Carnegie Foundation Community Engagement Classification	Top 10 for students studying abroad Institute of International Education, 2018	#2 graduate local government management program in the U.S. News & World Report, 2018	#5 online MBA program in nation –U.S. News & World Report, 2018	#3 producer of TFA teachers -U.S. News & World Report, 2018	Top producer: Peace Corps volunteers -Peace Corps Top Volunteer-Producing Colleges and Universities, 2018	A best-in-U.S.: health and well-being programs for students –Active Minds, 2018



Top 5 campus for sustainability –Sierra Club, 2018	#9 graduate public affairs –U.S. News & World Report, 2018	#4 ASU Online programs among nation's best -U.S. News & World Report, 2018	President Crow: one of the best college presidents –Time magazine	A national leader in tech transfer Milken Institute Report, April 2017	Top 20 in the world: Utility patents granted —National Academy of Investors/Intellectual Property Owners Association, 2018	#15 graduate education school in nation –U.S. News & World Report, 2019
Top 10 in the U.S. for Silicon Valley hires Ahead of Cornell, MIT and UCLA -Quartz Media, 2017	#1 BEA Festival of Media Arts awards, 2018 – Broadcast Education Association	A top-ranked law school in the nation -U.S. News & World Report, 2018	Top 5 graduate business schools in the U.S. –U.S. News & World Report	A 'world's-best' full-time MBA program —The Economist, 2018	Gold Medal 'Military Friendly' -G.I. Jobs Magazine, 2018	One of the nation's outstanding public universities -American City Business Journals



Key areas of ASU accomplishment



Student Success

- 1. Access
- 2. Affordability
- 3. Outcomes



Research

- 1. Expenditures
- 2. Top Rankings
- 3. Tech Transfer



Financial Health

- 1. Cost Containment
- 2. Growth in Revenue
- 3. Growth in Net Assets



Students

=>125-18811 = 4 22-1201

2) (951) = 2 by m

=> h=216.9 m

100

ASU is committed to student success

More ASU students are earning prestigious scholarships than ever before





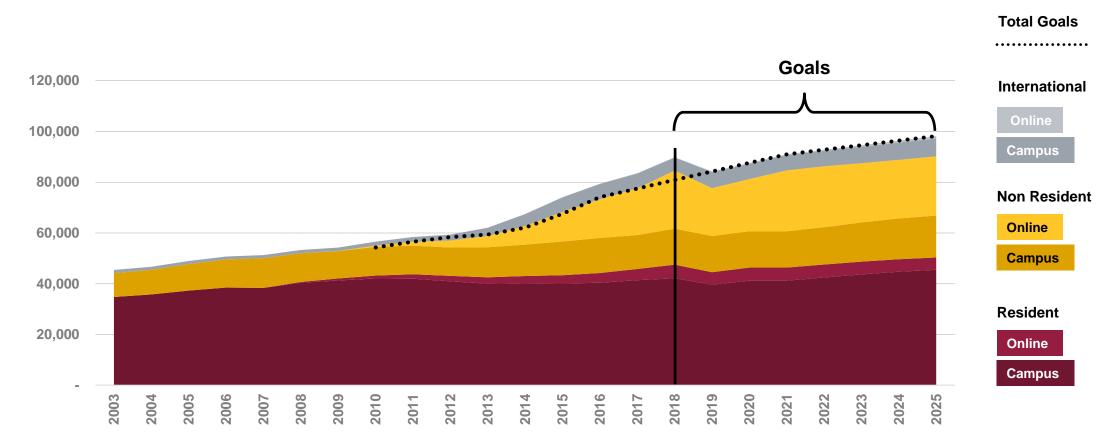
Alexa Scholl 2018 Truman Scholar



Shantel Marekera 2019 Rhodes Scholarship Frank Smith III 2018 Marshall Scholar **Charity Bhebhe** 2018 Gates Cambridge Scholar

Undergraduate enrollment is up 45% in 5 years

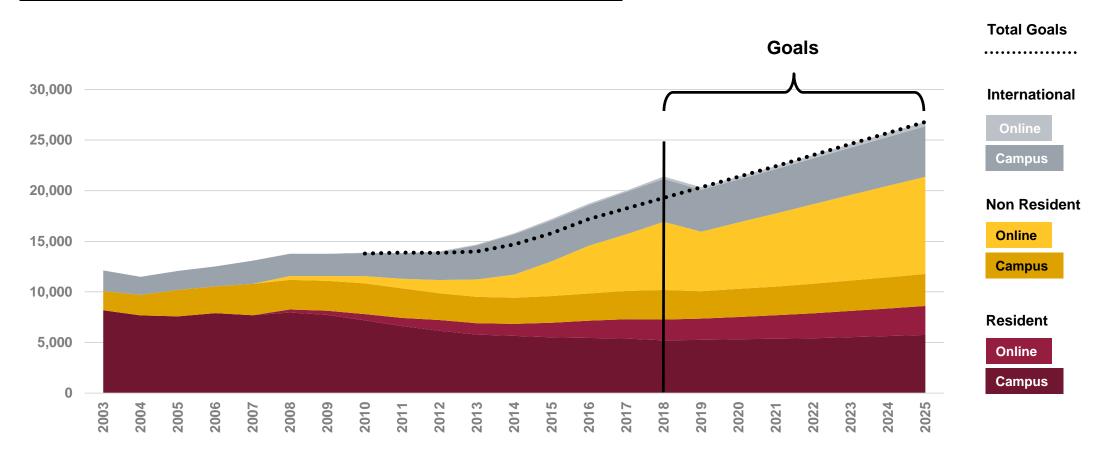
Undergraduate Enrollment Actual and Metric Goals (2003-2025)





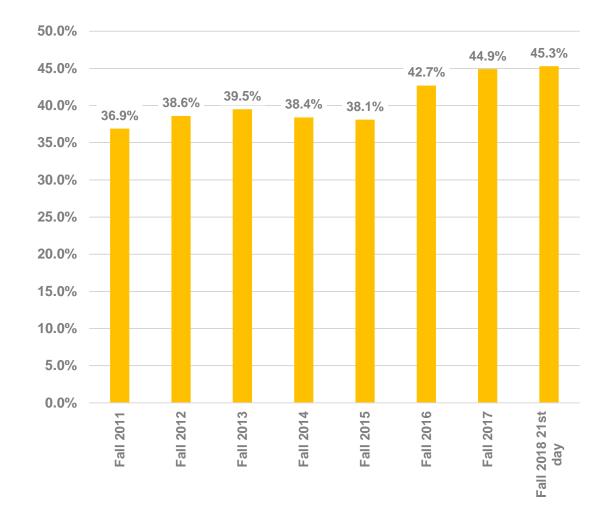
Graduate enrollment is up 46% in 5 years

Graduate Enrollment Actual and Metric Goals (2003-2025)





Freshman class grows in diversity and inclusion



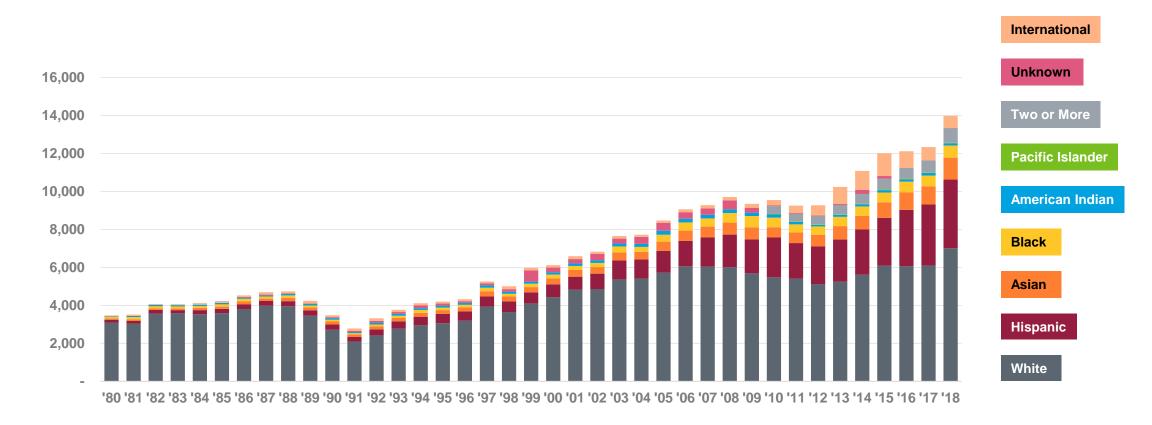


This percentage reflects the entire domestic (in- and out-of-state) freshman class.



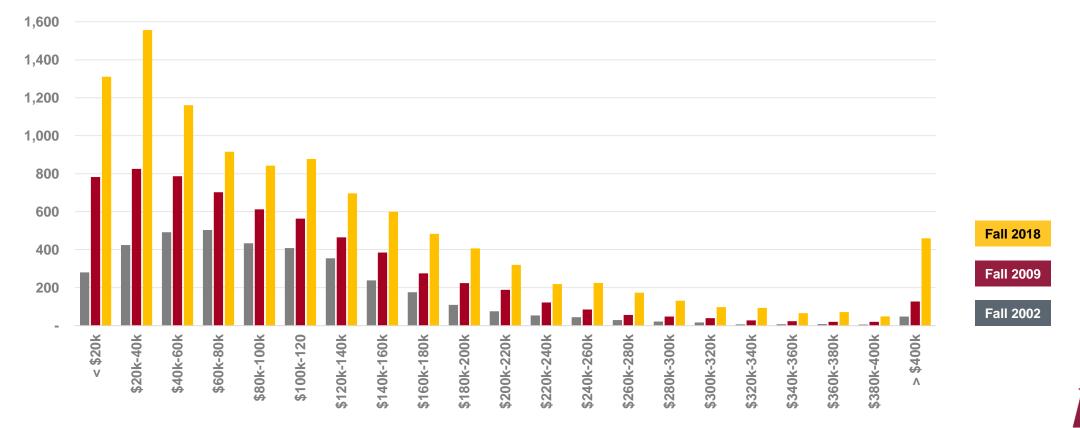
Freshman diversity grew markedly in 15 years

First-Time Freshmen Enrollment by Race (Fall 1980 – Fall 2018)



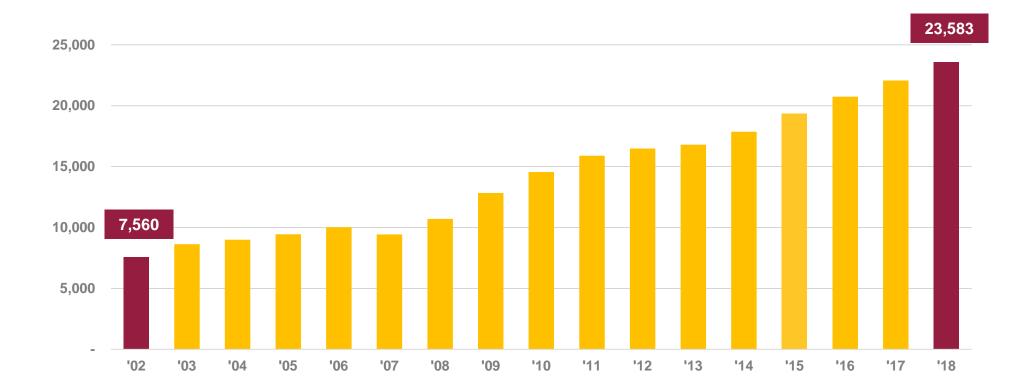
ASU is far more accessible to low-income students

Freshmen Enrollment by Income (2002, 2009, 2018)



Number of ASU first-generation students has more than tripled

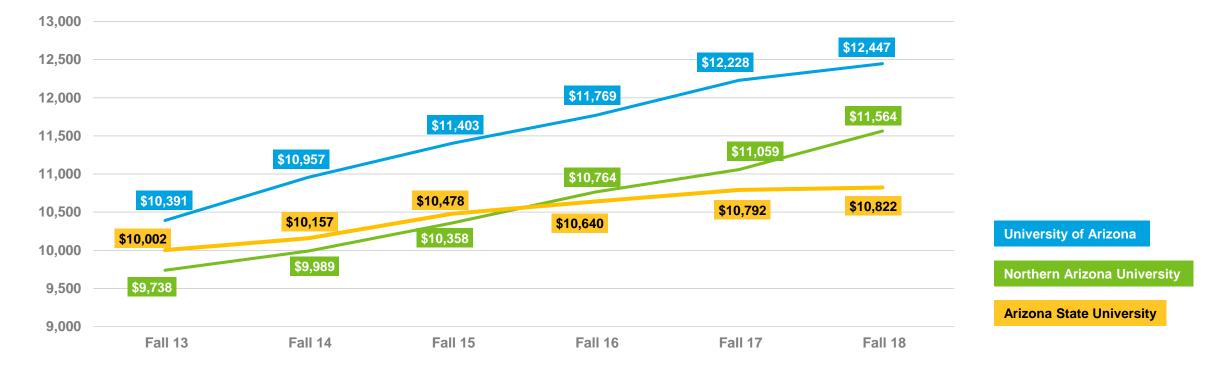
First-Generation Students at ASU (2002-2018)





ASU is committed to low annual tuition adjustments

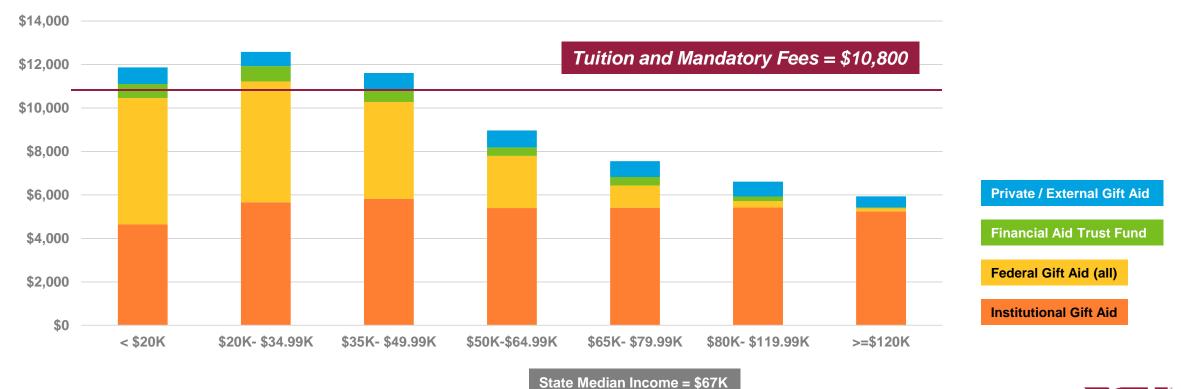
Tuition & Fees For New Resident Freshman Entering (Fall 2013 – Fall 2018)





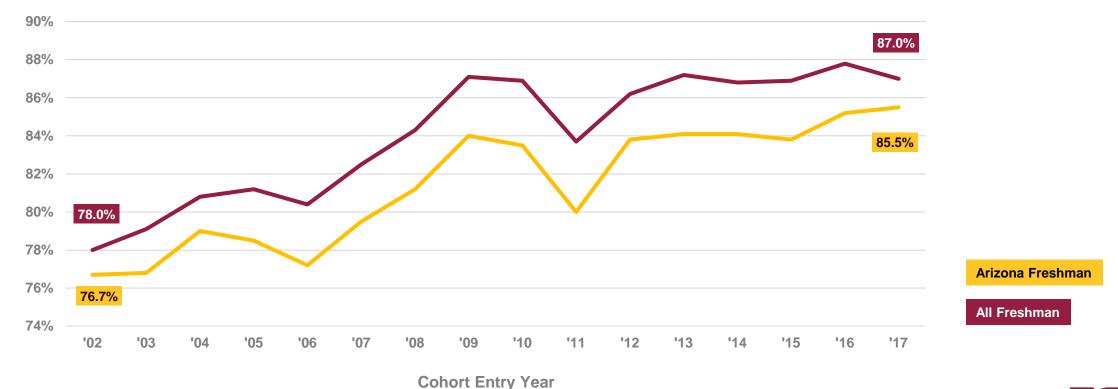
ASU gift aid is crucial to affordability

Resident Undergraduates Average Gift Aid Awards by Family Income (2017-2018)



First-year freshman retention is nearing 90% goal

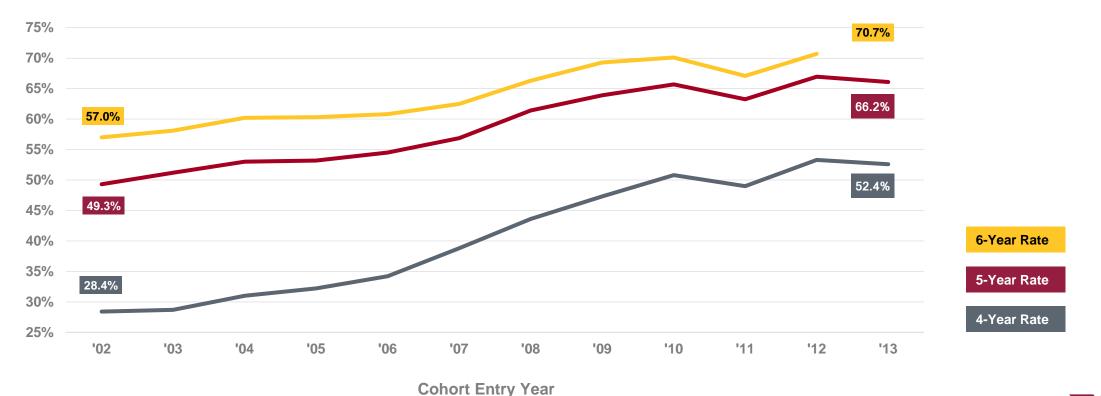
First-Year Freshman Retention Rates (2002-2017)





ASU 4-year graduation rate is up 85% since 2002

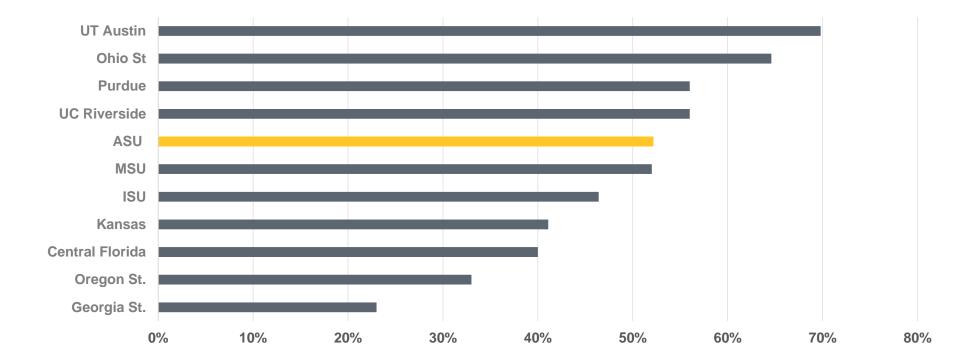
Resident Freshman Cohort Graduation Rate (2002-2013)





ASU 4-year graduation rate compares well with UIA peers

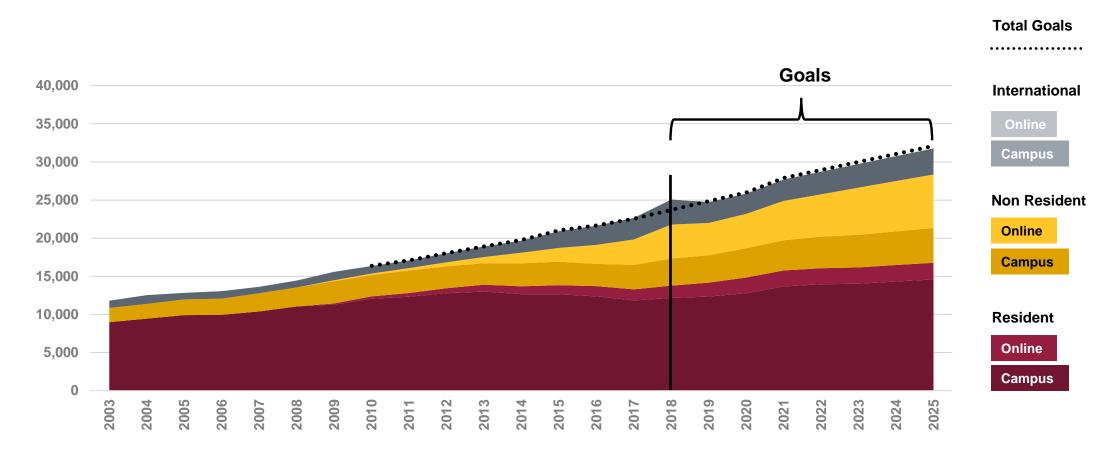
4-Year Graduation Rate of University Innovation Alliance (UIA)





The number of degrees awarded is up 33% since 2013

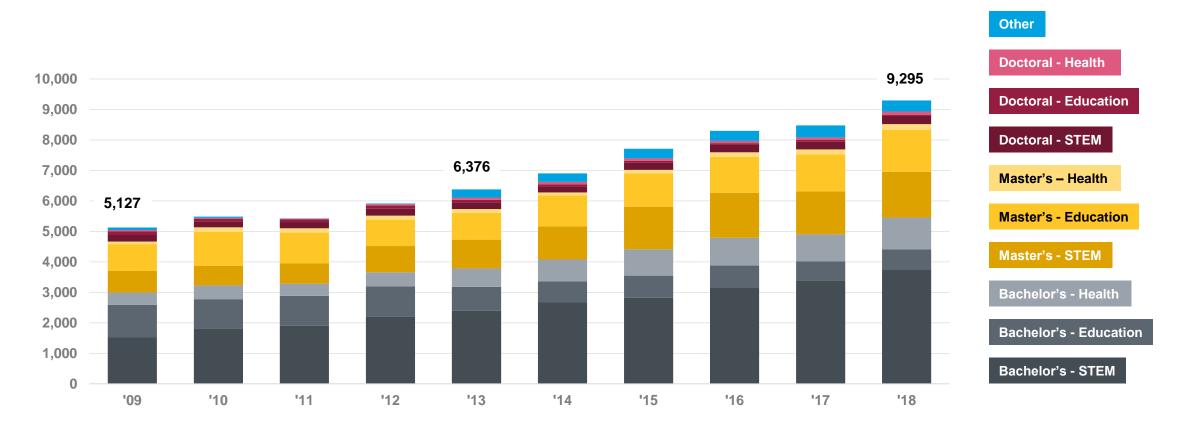
Undergraduate and Graduate Degrees by Year (2003 - 2025)





Degrees awarded in high demand fields are up 46% since 2013

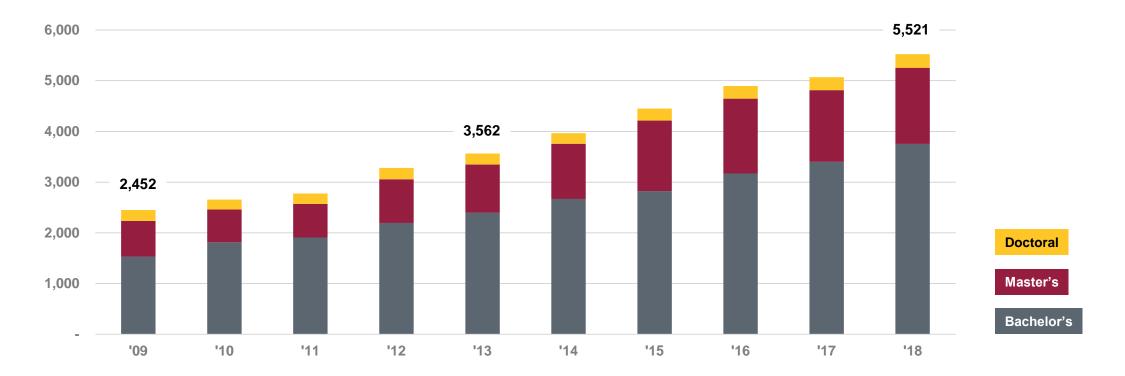
High Demand Degrees Awarded (2009-2018)





STEM degrees awarded are up 55% since 2013

STEM Degrees Awarded (2009-2018)





ASU Fulton Schools of Engineering experienced major growth

2009 vs 2018



6,407 Fall 2009



Undergraduates

4,253 **17,960** Fall 2009 Fall 2018 Graduates

Fall 2010



Degrees granted





Research expenditures





T/TT faculty **214 350**

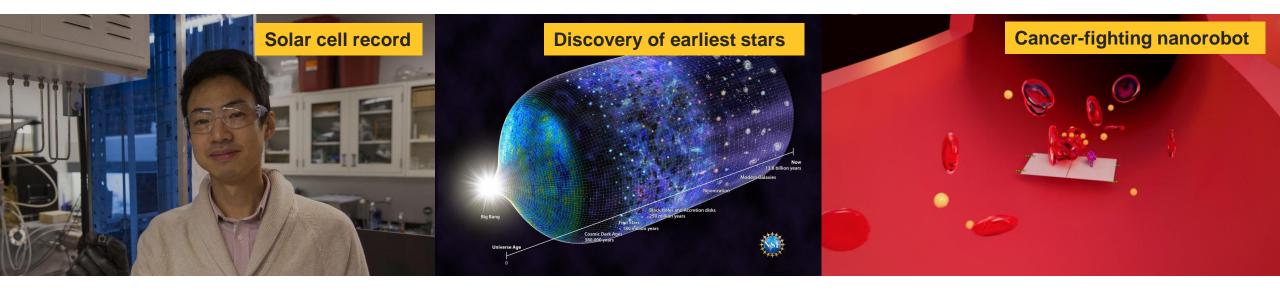
Fall 2018

Research



ASU produces groundbreaking research

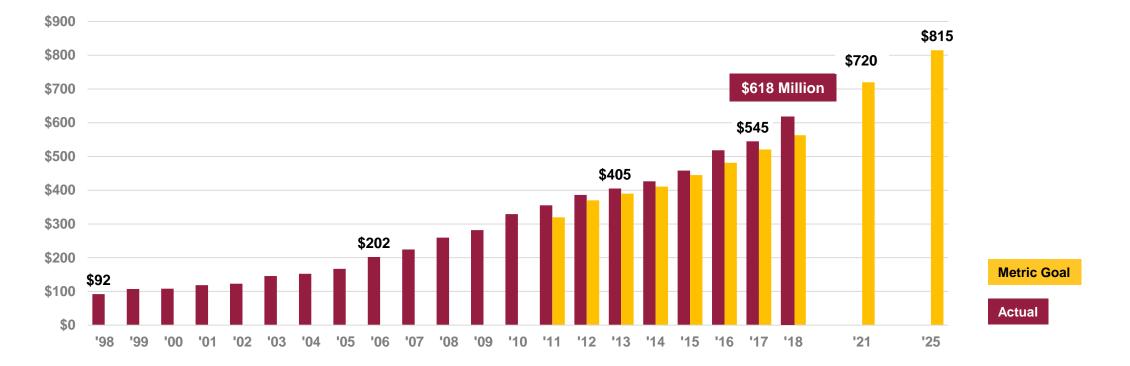
Game-changing, use-inspired discovery happens here





ASU research expenditure growth has been rapid

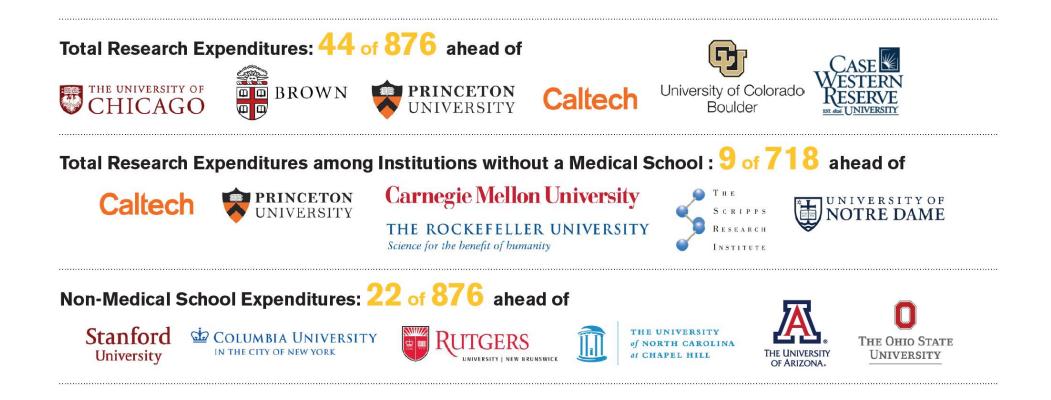
Research Expenditures has Doubled Every 6-8 Years (in Millions)





ASU research expenditure growth is competitive

Higher Education Research and Development Rankings (2017)



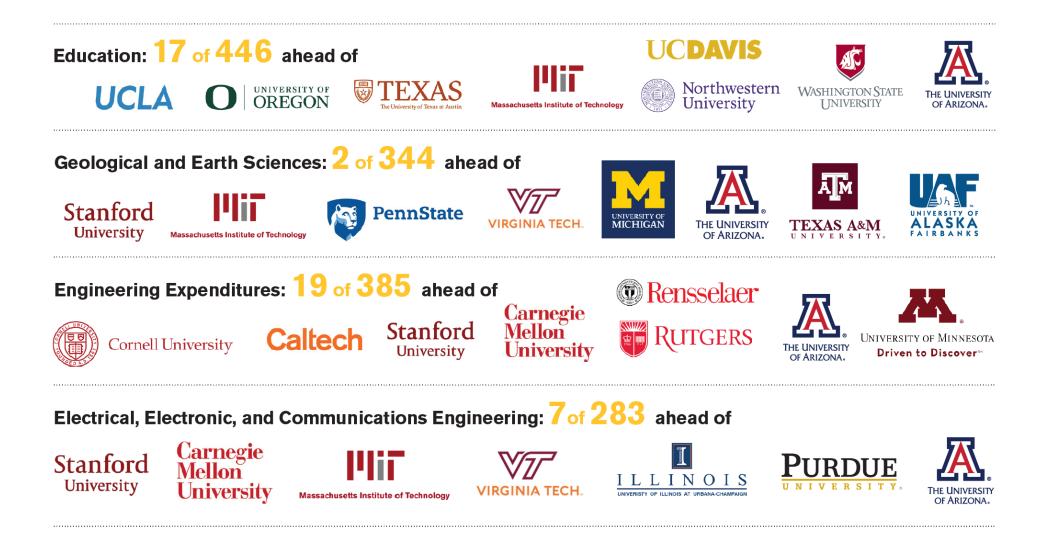














HHS (including NIH) Funded Expenditures among Institutions without a Medical School:

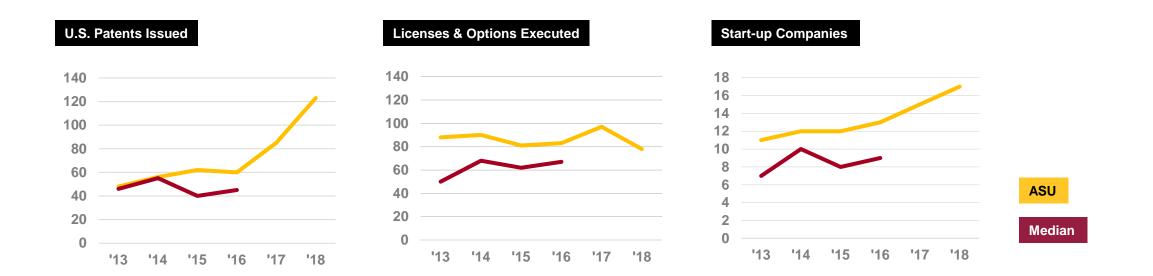








ASU outperforms the median of its peers in tech transfer





Financial Health

ASU demonstrates financial health

Entrepreneurial and philanthropic strategies support success

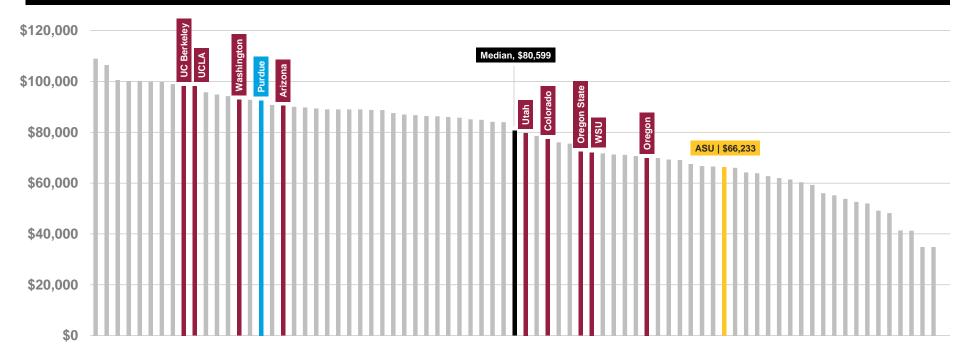




ASU uses 17% fewer resources per degree awarded than

the national median

Tuition & State Appropriation per Degree Awarded (FY2017) Public Very High Research Universities



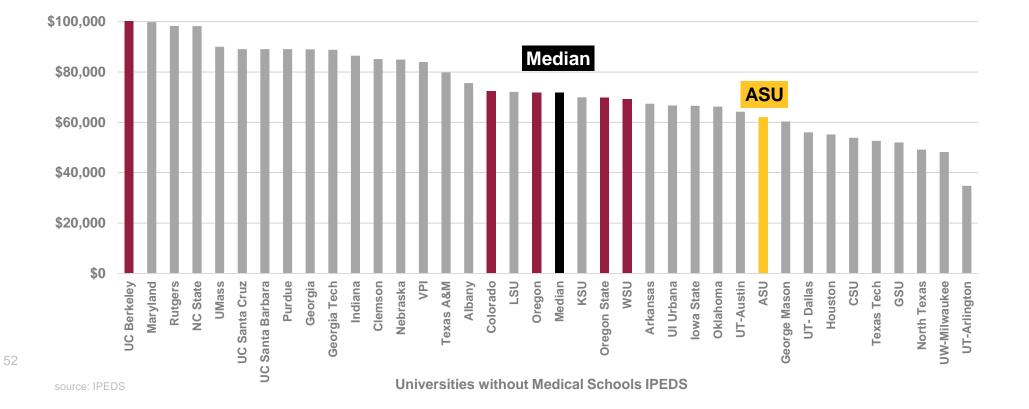


ASU uses 8.3% fewer resources per degree awarded than

the median for universities without a medical school

Tuition, Fees, & State Appropriations per Degree Awarded Very High Research Public (FY 2017)

\$120,000

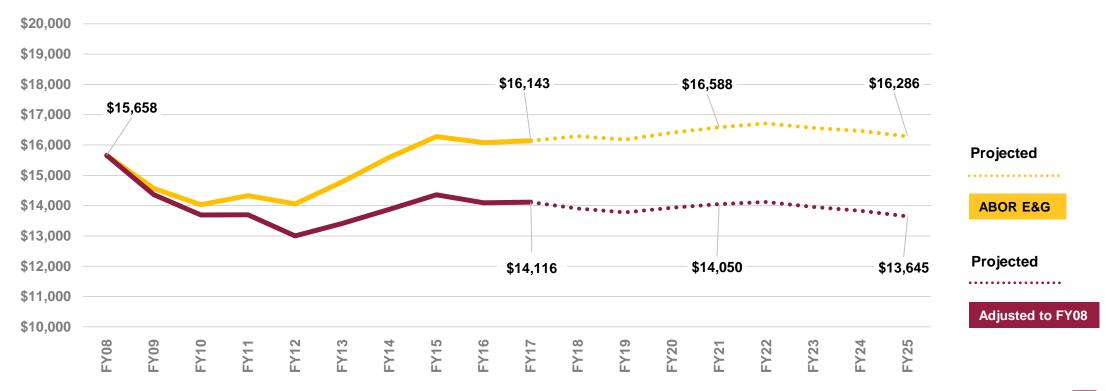




Cost discipline, application of technology, and economies of

scale are projected to maintain current cost levels

E&G Expense Net of Scholarship Allowance per FTE ABOR Methodology

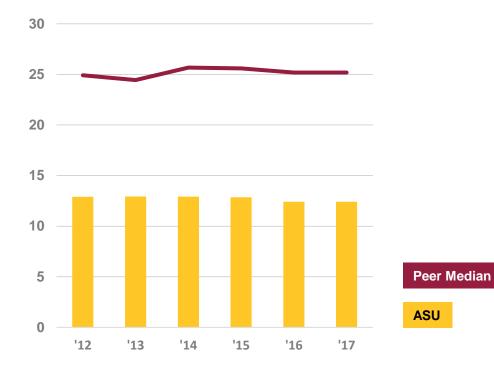




For 5 years, ASU has operated with about half the staff per

student as its peers

FTE Employees Per 100 FTE Students (FY2012 - FY2018)

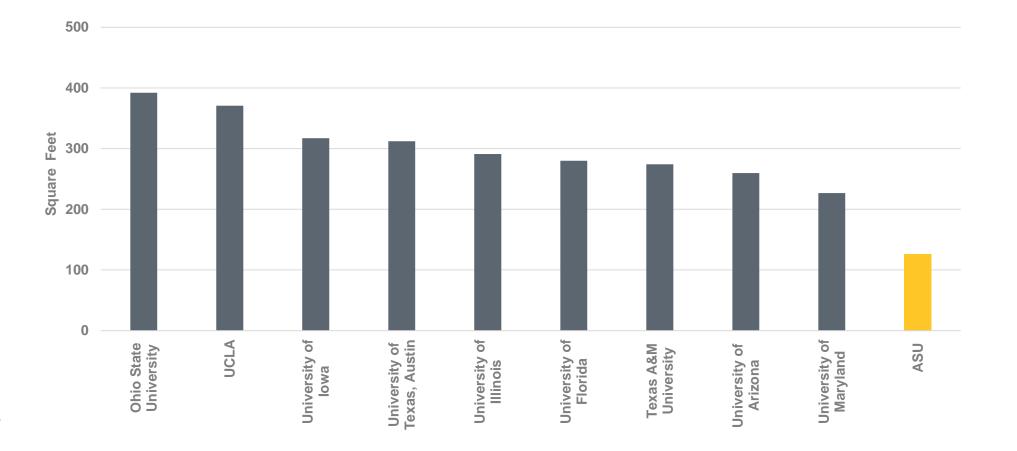


	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Arizona State University	12.91	12.93	12.92	12.85	12.52	12.36	12.90
Florida State University	15.3	15.8	16.1	16.0	16.1	16.2	16.8
Indiana University-Bloomington	20.1	20.5	20.1	20.8	20.3	20.8	22.1
Michigan State University	22.7	21.5	21.3	21.6	21.9	22.8	22.9
Ohio State University-Main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

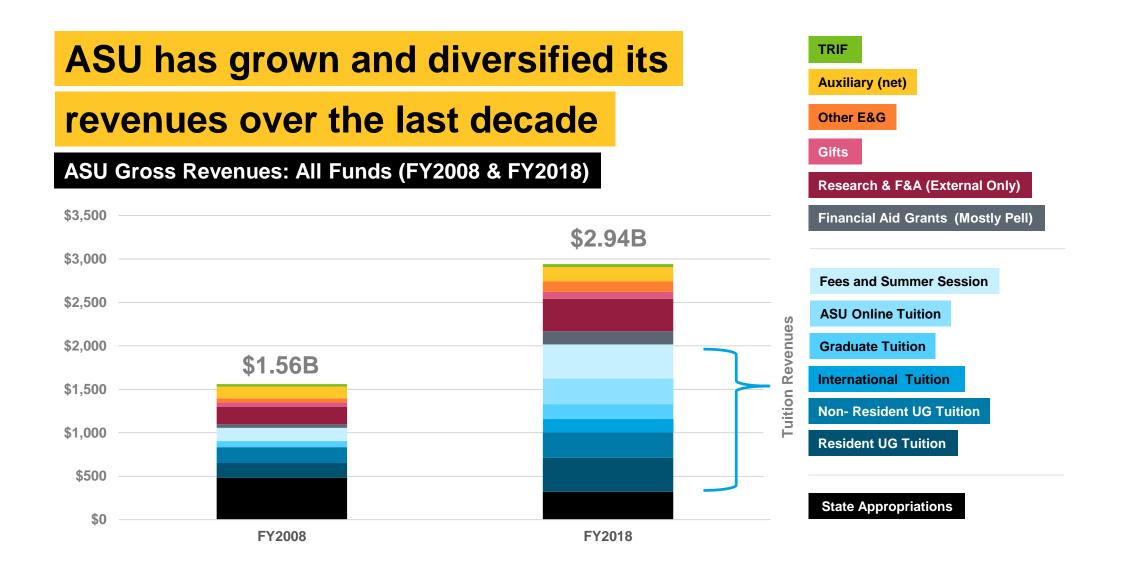


ASU is highly efficient in its use of space compared to its peers

Space Density: Net Assignable Square Footage by FTE



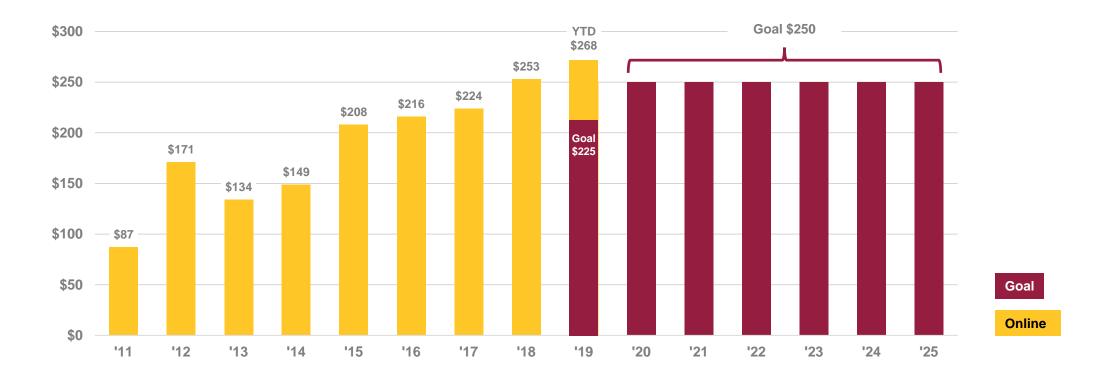






The Campaign ASU 2020 goal of \$1.5B has been exceeded

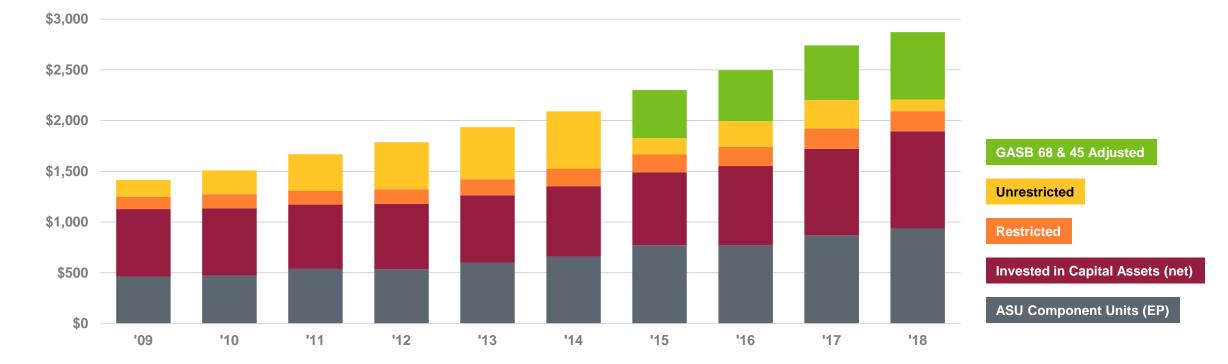
ASU Gifts and Commitments (2011-2025)





ASU's net position has doubled since 2009

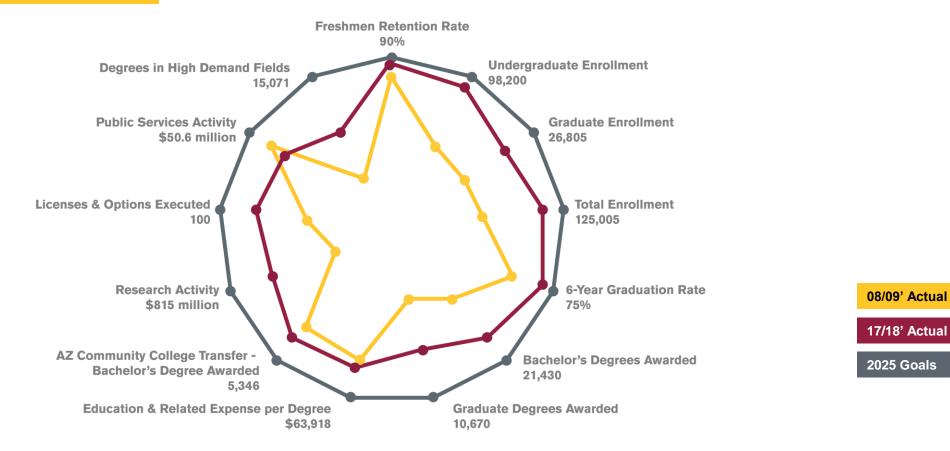
Net Position and Component Units in Millions (2009-2018)





ASU has made substantial progress on its metric goals

since 2008-09





ASU 2025 Goals



ASU's 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.

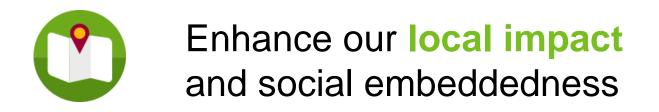




Establish ASU as a **global center** for interdisciplinary research, discovery and development

- 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.



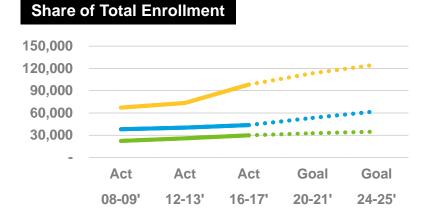


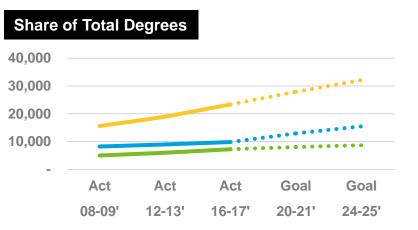
- Strengthen Arizona's interactive network of teaching, learning and discovery resources to reflect the scope of ASU's comprehensive knowledge enterprise.
- Co-develop solutions to the critical social, technical, cultural and environmental issues facing 21st-century Arizona.
- Meet the needs of 21st-century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



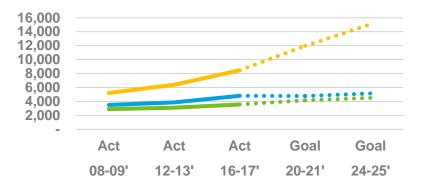
The 2025 metrics require ASU to increase its proportional

share of performance

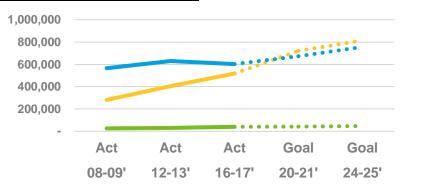


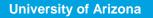


Share of High Demand Degrees



Research Expenditures





Northern Arizona University

Arizona State University



What It Will Take



ASU will continue to lead as an enterprise

Higher Education Governance Logic



Academy Model



State Control Model



Market Model



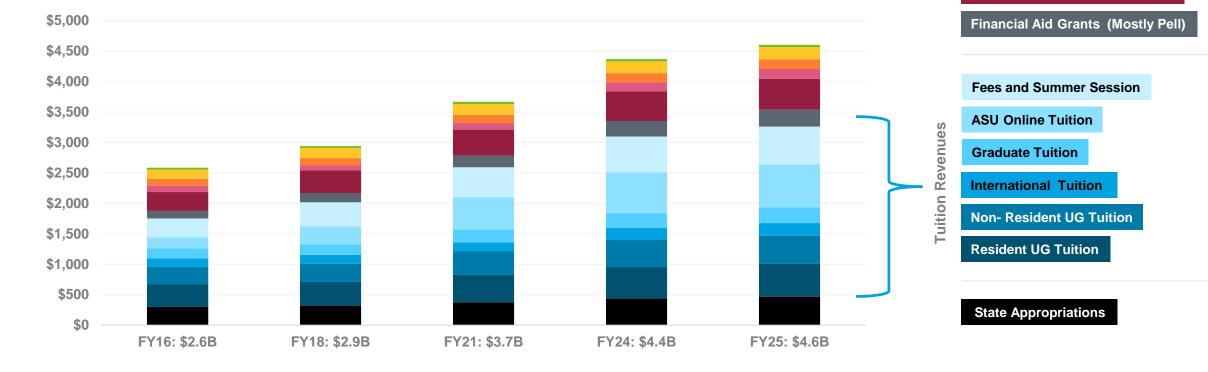
Enterprise Model

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



ASU continues to diversify its revenue sources

ASU Gross Revenues: All Funds (FY2008-2018 Actual) (FY2019-FY2025 Projected)





TRIF

Gifts

Auxiliary (net)

Research & F&A (External Only)

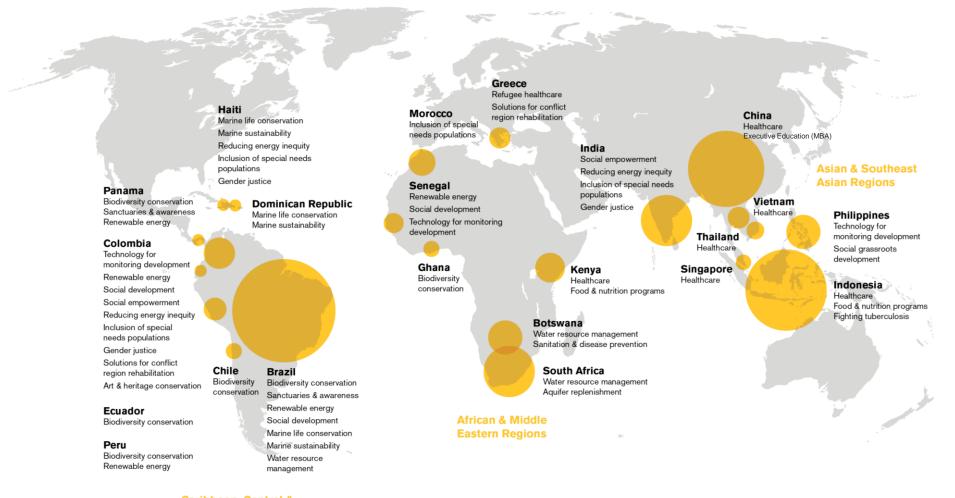
Other E&G

ASU continues to grow nationally





ASU continues to grow internationally



Caribbean, Central & South American Region

ASU strengthens its core while growing as an enterprise





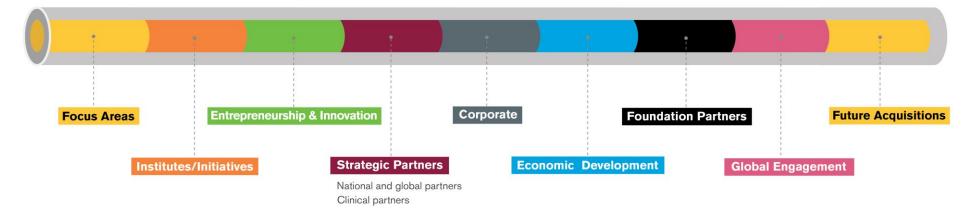
ASU continues its operational focus on expanding each unit

Example: Knowledge Enterprise



2. Design & Build Transdisciplinary Programs & Initiatives







Deep dive: Expanding ASU's research

Focus Areas

Mega Projects Green Chemistry Ubiquitous Health Technology Global LightWorks Laboratory Water for the Future Human Security Collaboratory

Solution Projects

Lunar Reconaissance Orbiter Camera (LROC)

THEMIS Phase E Budget

The MasterCard Foundation Scholars Program

Quantum Energy and Sustainable Solar Technologies (QESST)

Center for Bio-Mediated and Bio-Inspired Geotechnics (CBBG)

Center for Membrane Protein Drug Discovery (MEDD)

Integrated Biodosimetry System (IBiS) for High Throughput Medical Care After Radiologic and Nuclear Events

Mastcam-Z: A Geologic Stereoscopic and Multispectral Investigation for the NASA Mars-2020 Rover Mission

Foundation Projects

Effects of meditative movement on fatigued breast cancer survivors

Morphological consequences of hybridization in primate and human evolution

Identification of Alzheimer's disease causes based on ApoE gene

Obesity intervention focused on Latino youth

Online marketplaces and mobile apps to reduce food waste

Building leadership for change through school immersion

Group size, scaling of work and metabolism in ant colonies

Wireless brain implant for neurological disorders

Preparing scholars for academia and beyond

Adaptive multi-paddock grazing research project

Using victim advocacy clinics and institutionalized training

Expand Native American participation in solar energy

Linking current and future hydrologic change to hydropower

The WEAmericas Accelerator

Responsible research and innovation in practice



ASU advances expansive and integrated research initiatives

Institutes/Initiatives

Biodesign Institute (BDI) Global Futures Initiative (GFI) Julie Ann Wrigley Global Institute of Sustainability (GIOS) Global Security Initiative (GSI) Institute for Social Science Research (ISSR) Institute for Humanities Research (IHR) NewSpace Initiative Interplanetary Initiative MacroTechnology Works Decision Theater Network Complex Adaptive Systems Initiative (CAS@ASU) Institute for the Science of Teaching & Learning (ISTL) The McCain Institute for International Leadership

Emerging Transdisciplinary Programs

Automated System Health Informatics Smart Cities Humanitarian Logistics Biodesign Resilience Global Security Future of Work



ASU expands partnerships with a myriad of corporations

Corporate

Adidas
Amazon
American Express
Apple
AT&T Inc
Avnet, Inc
Bank of America
Bashas
Boeing
CenturyLink
Chevron
Cisco Systems, Inc.
Dell
Edward Jones

A

Fulton Homes Inc. General Electric Company Google, Inc Honeywell IBM Corporation Intel Corporation JPMorgan Chase Liberty Mutual Insurance Group Lockheed Martin Corporation Microsoft Corporation NTS PayPal PepsiCo PetSmart Pinnacle Airlines Raytheon Salt River Project Starbucks Shell Oil Company Southwest Airlines Sky Harbor Airport Spirit Airlines Ticketmaster Uber United Airlines Verizon Vanguard Wal-Mart Stores, Inc



ASU grows the Fulton Schools of Engineering

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
918 Students 759 Undergraduate 159 graduate	6,735 Students 5,276 Undergraduate 1,459 graduate	3,324 Students 2,340 Undergraduate 984 graduate	3,820 Students 3,154 Undergraduate 666 graduate	1,734 Students 1,321 Undergraduate 422 graduate	5,454 Students 5,088 Undergraduate 366 graduate
 Biomedical Engineering Biological Design 	 Computer Engineering Computer systems Engineering Engineering Management Industrial engineering Informatics Robotics Software Engineering 	 Electrical Engineering Computer Engineering Robotics 	 Aerospace Engineering Chemical Engineering Materials Science and Engineering Mechanical Engineering Robotics Solar Energy Engineering and Commercialization 	 Civil Engineering Construction Engineering Construction Management Environmental Engineering Sustainable Engineering 	 Aviation Programs Engineering Programs Environmental and Resource Management Global Technology and Entrepreneurship Graphic Information Technology Human Systems Engineering Information Technology Robotics Management of Technology User Experience

programs

programs

+ ASU Online

School 7

Advancing engineering design on a global scale

"The Engineering and Design Institute: London (TEDI)"





Produce new kinds of graduates:

- Creators and innovators
- Entrepreneurs and problem solvers
- Global citizens who are the engineers and technologists of the future

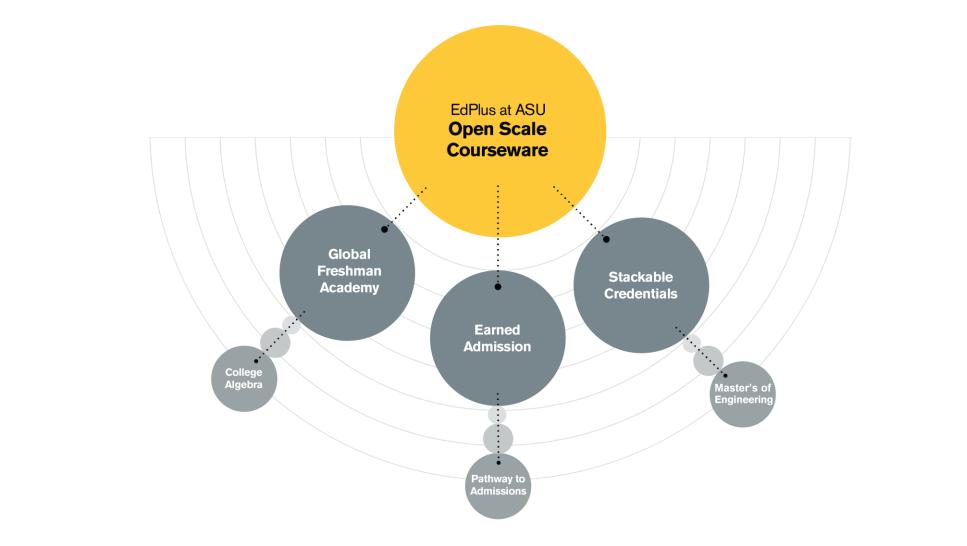
Attract new kinds of learners:

- Diverse
- International
- Attract students with the `engineering design mindset' and build skills along their learning path



programs

ASU advances expanded digital pathways for all learners





ASU evolves the universal learning initiative

ASU is currently designing demonstration projects with corporate and nonprofit partners to test the bundling of learning enterprise assets to meet their needs and engage new types of learners. These projects will:





1. Forge industry partnerships to remove barriers to learning

Hub for network of learning providers connecting employers and their employees directly with in-demand skills training and credentials.

2. Develop technology to advance and scale personalized learning

Flexible and rigorous online offerings and offer high school courses through a direct-to-learner model

3. Create new pathways to expedite learning

Translate informal learning to shorten time-to completion with college level courses starting with the MAT 117 College Algebra and Problem Solving course



4. Reimagine delivery models

Pilot learning centers that serve as in-person hubs to augment digitally delivered undergraduate degrees with a suite of student support services such as success coaching



ASU adds new, high quality online programs



Fall 2018

Art (Digital Photography), BFA

Business Economics, BS

Computer Information Systems, BS

Digital Audiences, BS

Economics, BS

Electrical Engineering (Electric Power and Energy Systems), BSE

Geographic Information Science, BS

Religious Studies (Religion, Culture, and Public Life), BA

Speech and Hearing Science, BS

Tourism and Recreation Management, BS

Communication, Minor

Global Studies, Minor

Technical Communication, Minor Computer Science, MCS (Coursera)

Digital Audiences Strategy, MS

Global Technology Development – Applied International Dev, MS

Indigenous Education, MA

Information Technology, MS

Medical Nutrition, MS

Special Education (Applied Behavior Analysis), MA

Digital Audiences Strategy, Graduate Certificate

Global Development and Innovation, Graduate Certificate

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Spring 2019

Supply Chain Management, BS

Technological Entrepreneurship and Management, Minor

Emergency Management and Homeland Security (Cybersecurity Policy and Management), MA

International Health Management, MIHM

World War II Studies, MA

Summer 2019

MEd, Elementary Education (1-8) InMAC degree

18 Fall 2019

Applied Sciences (Early Childhood Studies), BAS

Applied Science (Graphic Information Technology), BAS

Astronomical and Planetary Sciences, BS

Business (Human Resources Management), BA

Global Management, BGM

Physics, BS

Mathematical Concepts of Engineering, Undergraduate Certificate

Petroleum Engineering, Undergraduate Certificate

American Media and Popular Culture, MAS

Art History, MA (LA County Museum of Art - LACMA)

Complexity Studies, MS (Santa Fe Institute)

Global Education, MEd

Graphic Information Technology, MS

Modern Energy Production and Sustainable Use, MS

Program Evaluation and Data Analytics, MS

User Experience, MS

Addiction and Substance Use Related Disorders, Graduate Certificate

Applied Prevention Science, Graduate Certificate



Moderate increases in State investment to sustain

current levels of financial aid and tuition growth

State Appropriation per Resident FTE (2004-2018)

