Strategic Enterprise Plan:

2021 Update & Operational and Financial Review

Arizona State University

Michael M. Crow
February 12, 2021
The ASU Enterprise

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.
ASU is leading the Fifth Wave

First Wave
Greek Academies

Second Wave
State Colleges

Third Wave
Land-Grant Colleges

Fourth Wave
Research Universities

Fifth Wave
National Service Universities

1836 Harvard College*
1812 College of William and Mary
1791 Yale College
1746 College of New Jersey (Princeton)
1745 King’s College (Columbia)
1755 College of Philadelphia (Penn)
1754 College of Rhode Island (Brown)
1766 Queens College (Rutgers)
1795 Dartmouth College

Schools founded during the early Republic that established the prototype for the American residential liberal arts college

1785 University of Georgia*
1789 University of North Carolina*
1790 University of Vermont
1819 University of South Carolina
1819 University of Michigan
1819 University of Virginia*

1848 University of Wisconsin
1855 University of Minnesota
1855 Michigan State University
1855 Penn State University
1858 University of Maryland
1869 Iowa State University
1869 Massachusetts Institute of Technology (MIT), etc.

1852 California State Normal School (California State University system)
1870 University of Southern California
1883 University of Texas, Austin
1885 Temple Normal School (ASU)
1885 Georgia Institute of Technology (Georgia Tech)
1891 California Institute of Technology (Caltech), etc.

1899 Northern Arizona University
1900 Tennessee Tech
1944 Utah Valley University
1944 Cleveland Institute of Art
1944 Ohio State University
1945 Pennsylvania State University
1946 University of Central Florida
1946 University of Maryland
1946 Baltimore County, etc.

1830 land-grant institutions (HBCUs)
Alabama A&M University
Tuskegee University
West Virginia State University, etc.

1855 land-grant colleges and universities established as a consequence of the Morrill Act of 1862

1885 Cornell University*
1887 University of Illinois*
1888 University of California*
1889 Purdue University
1890 Ohio State University
1891 Texas A&M University, etc.
1893 University of Arizona

Second Wave schools subsequently designated land-grant universities

1865 land-grant institutions (HBCUs)
Alabama A&M University
Tuskegee University
West Virginia State University, etc.

Third Wave universities that evolved into research universities

1876 Johns Hopkins University*
1885 Stanford University*
1890 University of Chicago*

First Wave colleges that evolved into research universities

Harvard University
Yale University
Princeton University
Columbia University
University of Pennsylvania
Brown University, etc.

Second Wave colleges and universities that evolved into research universities

University of Georgia
University of North Carolina
University of Michigan
University of Virginia
Georgia Tech
Caltech
Arizona State University, etc.

Second Wave schools subsequently designated land-grant universities

University of Wisconsin
University of Minnesota
Michigan State University
Penn State University
University of Maryland
Iowa State University
MIT, etc.

Third Wave universities that evolved into research universities

University of Wisconsin
University of Minnesota
Michigan State University
Penn State University
University of Maryland
Iowa State University
MIT
Cornell University
University of Illinois
University of California
Purdue University, etc.

University of Arizona

Fourth Wave institutions combining scale and accessibility with world-class research enterprises

Penn State University
University of Maryland system
Purdue University, etc.

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University of California
Purdue University, etc.

University of Arizona

Fourth Wave institutions combining scale and accessibility with world-class research enterprises

Penn State University
University of Maryland system
Purdue University, etc.
National Service Universities aspire to accelerate positive social outcomes through the seamless integration of cutting-edge technological innovation and scalability with institutional cultures dedicated to the advancement of academic enterprise and public value.
Our charter drives all 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.
Fulfilling our 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.
Our design aspirations are how we work

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.
ASU’s public enterprise continues to evolve
ASU’s public enterprise continues to evolve
ASU’s public enterprise continues to evolve
Three pillars anchor the public enterprise

Academic Enterprise

Knowledge Enterprise

Learning Enterprise
ASU: A public enterprise university in service to the nation
The pillars and our colleges and schools work together
ASU advances across teaching and learning realms

- **Campus Immersion**: Fully immersive, technology enhanced, campus-based learning for traditional P-20 and post-graduate learners
- **Campus Digital Sync**: Fully immersive, technology enhanced, campus-synchronized learning for traditional P-20 and post-graduate learners
- **Digital Immersion**: Digitally immersive, online, asynchronous learning for P-20 and post-graduate learners
- **Digital Immersion – Massively Open**: Digitally immersive, open access, asynchronous distance learning for all learners
- **Education Through Exploration**: High-intensity, technology-based, learning experiences for P20 learners and beyond
- **Infinitely Scalable Learning**: Massively distributed, personalized, adaptive learning solutions
- **University**: Faculty and Staff, Schools and Departments, Centers and Institutes, Laboratories, Libraries, Campus Resources

Knowledge Core
Our design enables our response under all conditions

**Fragile**

The quality of being easily broken or damaged

—The Oxford Dictionary

**Resilient**

“the capacity of a system to absorb disturbance and re-organize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks”

—Walker et al., *Ecology and Society*, 2004

**Antifragile**

Something that “thrives and grows when exposed to volatility, randomness, disorder, and stressors and loves adventures, risk, and uncertainty”

—Nassim Taleb, author of *The Black Swan*, 2007
COVID Management
ASU as a resource for fighting COVID-19

Throughout the past year, during a time of high stress and unique demands, leaders throughout the state have called upon Arizona State University to be of service.

ASU students, faculty and staff have relied on innovation, ingenuity, hard work and determination to take on assignments that have helped the state advance through unprecedented challenges.
ASU COVID-19 response: 2020 Timeline

January 26
- First confirmed COVID-19 case in ASU community
- Emergency preparedness plans in effect
- Novel Coronavirus information website launched

February 28
- ASU update on COVID-19 preparedness, travel and study abroad

March 16
- Transition to remote learning and teleworking

March 31
- Governor Ducey issues COVID-19 order

April 30
- Plans to resume in-person classes in Fall 2020 announced

May 15
- Plans for phased return to campus announced

June 12
- Mandatory face coverings announced
ASU COVID-19 response: 2020 Timeline

**July 15**
- COVID-19 saliva testing begins

**August 11**
- Daily Health Check announced

**August 12**
- Introduction of COVID-19 management framework and twice weekly case updates

**September 18**
- Fall 2020 academic calendar adjustments announced

**November 7**
- Call for COVID-19 surge awareness and vigilance

**July 30**
- Requirements for return to campus announced

**August 20**
- New testing phase for ASU community

**October 22**
- Spring 2021 learning options announced
ASU COVID-19 response: Students

- Accessible and free COVID-19 testing
- Enhanced campus safety and cleaning protocols
- ASU COVID-19 Outbreak Response Unit
- Telemedicine and telecounseling
- COVID-19 management strategy and case data updates
- Three learning modalities: ASU immersion, ASU Sync, iCourses
- ASU 24/7 Experience Center
- Digital tools including laptops, WiFi hotspots
- Digital academic support programs
- Virtual orientations and campus visits
- CARES Act funding
- Modified dining options
- Physically distanced community activities
- Virtual commencement and convocation ceremonies
ASU COVID-19 response: Faculty and Staff

- Enhanced safety protocols
- Accessible and free COVID-19 testing
- Daily health check app
- COVID-19 management strategy and case updates
- Employee Wellness Exposure Management Team
- Employee Assistance Office
- Phased return to work plan
- Online employee webinars
- Workplace accommodations
- ASU Telecommuting Resource Guide
- Classroom safety supplies
- Classroom technology upgrades
- Digital tools including laptops and WiFi hotspots
- ASU Sync classroom orientations, on-demand training modules, and digital tools and templates
- ASU 24/7 Experience Center
- Instructional videos to facilitate remote teaching (Zoom, Slack, etc.)
- UTO key modality data dashboard
ASU COVID-19 response: Research

• Rapid robotic saliva testing
• PPE Response Network
• 100+ research groups mobilized (including COVID-19 vaccine teams)
• Weekly ASU Biodesign media briefings
• Wastewater COVID-19 tracking
• Point-of-care testing device
• Computational Modeling in Social and Ecological Sciences (CoMSES Net), international clearinghouse for computer models
• COVID Testing Commons, one-stop resource for comprehensive testing information
• Global Futures Laboratory
ASU COVID-19 response: Community

• Accessible and free COVID-19 saliva testing
• Operation of the state’s mass vaccination sites
• COVID-19 management strategy and case updates
• Wastewater COVID-19 tracking
• Outbreak Response Team traced 15,000 cases
• Maricopa County Serosurvey Program
• Edson mask-making tutorial
• COVID Resilience for Healthcare Professionals Facebook group (ECONHI)
• COVID-19 Diagnostic Commons
• Online music therapy for the elderly (School of Music)
• ASU Prep Digital and ASU For You
• MLFTC Sun Devil Learning Labs
• Virtual Field Trips
• Arizona PBS educational programming
• Center for Accelerating Operational Efficiency work on medical equipment and vaccine supply chain challenges
• Global Security Initiative’s Center for Cybersecurity and Digital Forensics tracking of COVID-19 by online scammers
The ASU community stepped up to serve

In response to COVID-19, many ASU students, personnel and alumni went above and beyond their daily work and studies to meet the needs of the university and Arizona’s communities at large.
These conditions accelerate the changes we knew were needed.

We believe there is more value in moving forward from here than going back to “normal.”
Our ASU Sync modality is one way of moving forward through innovation

Course options

- **Full immersion**: On-campus, in-person instruction.
- **ASU Sync**: Blend of in-person and ASU Sync experiences. ASU Sync is fully interactive remote learning using live lectures via Zoom.
- **iCourse**: On-campus immersion courses delivered entirely online with lectures available on demand.
We asked students to tell us what surprised them about the **fall** 2020 semester and what they're hoping for in **spring** 2021.
Evolution of the public enterprise
ASU thrives on collaboration
ASU integrates capacity of major affiliates
ASU operates in metropolitan U.S. cities

Colleges at ASU
Multiple theme campuses
World-class research campus

LA Center and Global City
DC Center and Global Center
ASU will open flagship center in Downtown Los Angeles architectural landmark in 2021

Five story, 80,000 square foot center for modern Los Angeles

Herald Examiner Building
ASU academic engagement spans the globe
ASU research engagement spans the globe
Performance and Accomplishments
ASU mission and goals make clear our expectations

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
ASU progress is measured against our goals

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 first-year 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 **125,000** 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 $1 billion 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.
Enhance our **local impact** and social embeddedness

- 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.
ASU excellence earns recognition

#1 in U.S. for innovation
ASU Ahead of Stanford and MIT
— U.S. News & World Report 2016-2021

Top 1% of institutions of higher education worldwide
— Center for World University Rankings, 2020

29 top 10 graduate programs in the nation, including law, education, business, public affairs, fine arts and others
— U.S. News & World Report, 2021

Top-producing university for elite scholars for 10 consecutive years
— Frank Office for National Scholarships Advisement

Top 15 in the world for U.S. patents
— U.S. National Academy of Inventors and Intellectual Property Owners Association, 2020

Top 10% Athletics Academic Progress Rate in the Pac-12, highest in ASU history
— NCAA, 2020

#1 in the U.S. and #5 in the world for advancing global impact (poverty, hunger, clean water, energy and gender equality)
— Times Higher Education, 2020

Top 10 “Best Buy” public school
— Fiske Guide to Colleges, 2021

Named a “best college” with “one of the best journalism schools in the nation”
— The Princeton Review, 2020

Top 20 producer of Fulbright U.S. Student and Fulbright U.S. Scholar awards
— The Chronicle of Higher Education, 2020

Top 20 university for undergraduate education
— U.S. News & World Report, 2020

Top 10 in first-year experiences
— U.S. News & World Report, 2020

Top 10 nationally for best online undergraduate programs
— U.S. News & World Report, 2020

Top 10 university for technology company hires
— SHL, 2020
ASU continues to achieve on all fronts

Student Success

Research

Enterprise Management
Student Success
Three ASU winners
• Outstanding undergraduates pursuing environmental careers and Native American students who want to work in tribal public policy or tribal health
• Nekiyah Draper
• Tahiry Langrand
• Grant Real Bird
• Two additional ASU honorary mentions

Udall Undergraduate Scholarship

First place winners
• Challenge to create a more comfortable effective and affordable face covering
• Floe Mask anti-fogging mask
• $500,000 prize
• Selected over 1,000+ other teams

XPRIZE Next-Gen Mask

Two ASU finalists in 2020-2021
• Established by Sir Winston Churchill to fulfil his vision of US–UK scientific exchange
• One year of Master’s study at Cambridge
• Maeve Kennedy
• Alexis Hocken
• Barrett Honors College 2020 alumni

Churchill Scholarship
Undergraduate enrollment reaches highest ever levels

Undergraduate enrollment actual, current metric goals, and proposed goals (2003-2025)
Graduate enrollment has continued to outpace goals

Graduate enrollment actual, current metric goals, and proposed goals (2003-2025)
First-year student enrollment has grown across all populations

First-time, first-year enrollment by race/ethnicity (1980-2020)

- International
- Unknown
- Two or More
- Pacific Islander
- American Indian
- Black
- Asian
- Hispanic
- White

Arizona first-year students are students of color

52%
ASU is now more accessible to low-income students


All incomes adjusted to 2018 dollars using CPI.
Pell Grant recipient enrollment is more than triple that of the Ivy League

Undergraduate Pell Grant recipients by academic year

1990-91: 1,044
1991-92: 3,491
1992-93: 5,981
1993-94: 8,471
1994-95: 10,961
1995-96: 13,451
1996-97: 15,941
1997-98: 18,431
1998-99: 20,921
1999-00: 23,411
2000-01: 25,901
2001-02: 28,391
2002-03: 30,881
2003-04: 33,371
2004-05: 35,861
2005-06: 38,351
2006-07: 40,841
2007-08: 43,331
2008-09: 45,821
2009-10: 48,311
2010-11: 50,801
2011-12: 53,291
2012-13: 55,781
2013-14: 58,271
2014-15: 60,761
2015-16: 63,251
2016-17: 65,741
2017-18: 68,231
2018-19: 70,721
2019-20: 73,211

Total Pell Grant recipients: 40,491
First-generation student enrollment has tripled since 2002

First-generation student enrollment (Fall 2002-Fall 2020)
Arizona community college transfer enrollment has grown

Percentage change in 12-month enrollment compared to 2002-03

Over a period during which community college enrollment has declined, ASU has consistently increased enrollment, with four-year graduation rates of 78% in 2018-19.
ASU has created geographic diversity
Student body includes 8,875 international students from 145 countries

#6
in the U.S. for hosting international students
Institute for International Education 2020

Top 10 countries
- China
- India
- Saudi Arabia
- Canada
- Republic of Korea
- Taiwan
- United Arab Emirates
- Mexico
- Egypt
- Kuwait
ASU is committed to low annual tuition adjustments

Tuition and fees for new resident, first-year students (Fall 2013-Fall 2021)

Beginning in Fall 2019, ASU streamlined tuition and fees and included class fees (which averaged $321 in 2018-19) in total.
ASU tuition remains low across all groups compared to Pac-12 public universities

Full-time tuition for new resident undergraduate students (2020-21)
ASU is committed to affordability by providing gift aid

Average gift aid awards by family income for 42,034 resident undergraduate students (2019-2020)

Source: U.S. Census Bureau, 2019

Chart does not include data for 6,827 students for whom income data is unavailable
ASU first-year retention is nearing 90% goal

First-year student retention rates (2002-2019)
Graduation rates have increased markedly since 2002 and the four-year rate has nearly doubled.

First-year resident student cohort graduation rate (Fall 1983-Fall 2016)
Four-year graduation rate compares well with UIA schools

Four-year graduation rate of University Innovation Alliance member universities

- UT Austin
- Ohio State
- Purdue
- ASU
- Michigan State
- UC Riverside
- Kansas
- Iowa State
- UCF
- Oregon State
- Georgia State

“A” Average High School GPA

“B” Average High School GPA
ASU degrees awarded have nearly tripled since 2002-03

Undergraduate and graduate degrees by year (2002-2025)
Number of ASU degrees awarded in high-demand fields doubled over 10 years

High demand degrees awarded (2002-2020)

- Doctoral - STEM
- Doctoral - Health
- Doctoral - Education
- Master’s – Health
- Master’s - Education
- Master's - STEM
- Bachelor’s - Health
- Bachelor’s - Education
- Bachelor’s - STEM
ASU degrees awarded in STEM fields nearly tripled since 2002-03

STEM degrees awarded (2002-2020)
ASU produces pioneering research

Game-changing, use-inspired discovery happens here

COVID-19 Saliva Test

Mars Perseverance Rover Cameras

Tandem Cell Energy Research
World-class new faculty continue to join ASU

Donatella Danielli
Professor and Director, School of Mathematical and Statistical Sciences
Expertise: Partial differential equations, calculus of variations and geometric measure theory
2017 fellow of the American Mathematical Society
2020 Class of Fellows of the Association for Women in Mathematics

Landry Signé
Professor and Senior Director, Thunderbird School of Global Management
Leads the Fourth Industrial Revolution and Globalization 4.0 Initiative and the Washington, DC-based Executive Master of Global Affairs and Management
Senior fellow, Brookings Institution
Distinguished fellow, Stanford University World Economic Forum Young Global Leader

Robert Kaindl
Professor, Department of Physics
Director, Beus CXFEL Laboratory
Biodesign Institute at ASU
Lawrence Berkeley National Laboratory and 2019 fellow of the American Physical Society
Expertise: Quantum materials and ultrafast science, light-driven materials phenomena, multi-modal probes, terahertz and photoelectron spectroscopies
Research expenditures doubled over the last decade

<table>
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<th>Metric Goal</th>
<th>Actual</th>
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<td>Dollars in millions</td>
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New Goal: $1B

ASU
Research growth has outpaced nearly all other universities

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

- Indiana U. Bloomington gained IUPUI’s medical school in 2015.
- Arizona State
- NYU
- UNC
- UT -M.D. Anderson Cancer Center
- Utah
Research growth has fueled heightened impact

Technology transfer as advanced by SkySong Innovations

ASU FY20 Goals
- Invention Disclosures
- License Agreements
- Startups
- Issued U.S. Patents

<table>
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<tr>
<th>Year</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
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<td>Cases</td>
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<td>Startups</td>
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<td>Issued U.S. Patents</td>
<td>55</td>
<td>122</td>
<td>129</td>
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SkySong Innovations supports start-up growth

SI’s startup portfolio continues to thrive. Nationally, these companies supported more than 2,000 jobs and contributed $222 million to the economy, with the bulk of that impact in Arizona.

In FY20, ASU startups also raised approximately $100 million in external funding. By the end of next year, if economic conditions stabilize, we may approach or surpass $1 billion in all-time funding raised by ASU-connected startups.
### ASU leads across research disciplines

**National Science Foundation Higher Education Research and Development rankings (2019)**

<table>
<thead>
<tr>
<th>Total Research Expenditures: 43 of 916 ahead of</th>
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<tr>
<td>THE UNIVERSITY OF CHICAGO</td>
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<th>Total Research Expenditures among Institutions without a Medical School: 6 of 759 ahead of</th>
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<th>Non-Medical School Expenditures: 19 of 916 ahead of</th>
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<tr>
<td>Stanford University</td>
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</table>
Public institutions: 26 of 405 ahead of

Geological and Earth Sciences: 1 of 353 ahead of

Anthropology: 1 of 242 ahead of

Humanities: 18 of 399 ahead of
Social Sciences: 4 of 487 ahead of

Transdisciplinary (other sciences): 1 of 247 ahead of

Electrical, Electronic, and Communications Engineering: 12 of 289 ahead of

Political Science and Government: 5 of 342 ahead of
Economics: 11 of 319 ahead of

Duke University, Penn University, Yale University, UF University of Florida, University of Arizona, University of Wisconsin

Psychology: 11 of 430 ahead of

UC San Diego, Berkeley University of California, Cornell University, University of Pittsburgh, University of Colorado Boulder, University of Arizona

Non-Science and Engineering: 14 of 543 ahead of

Stanford University, Columbia University in the City of New York, USC University of Southern California, Clemson University, Boston University, The Ohio State University

Business and Management and Business Administration: 4 of 377 ahead of

The University of Chicago, Duke University, Columbia University in the City of New York, Penn State, Georgetown University, University of Arizona
NSF Funded Expenditures: 23 of 604 ahead of

Visual and Performing Arts: 11 of 323 ahead of

Nonprofit Funded Expenditures: 25 of 562 ahead of

Computer and Information Sciences: 28 of 447 ahead of
Civil Engineering: 14 of 266 ahead of

Mathematics and Statistics: 30 of 451 ahead of

DOE Funded Expenditures: 42 of 348 ahead of

Law: 14 of 164 ahead of
Communications and Communication Technologies: 8 of 266 ahead of

Sociology, Demography and Population Studies: 33 of 361 ahead of

Total Research Expenditures among Public Institutions without a Medical School: 5 of 306 ahead of

Public Institutions Excluding Medical School Expenditures: 15 of 400 ahead of
Enterprise Management
Revenues have more than tripled over past two decades

Net revenues for ASU and component units in millions (2008-2021)
ASU’s net position has more than doubled since 2008

Net position and component units in millions (2008-2021)

Net position is the financial position at the end of the fiscal year accounting for all assets, deferred outflows, liabilities and deferred inflows.
ASU uses 21% fewer resources per degree awarded than the national median

Tuition and state appropriation per degree awarded (FY2018)

Source: IPEDS
ASU uses 14% fewer resources per degree awarded than the median of universities without medical schools

Source: IPEDS

Tuition and state appropriation per degree awarded (FY2018)
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

Adjusted for 2% Inflation

<table>
<thead>
<tr>
<th>FY</th>
<th>E&amp;G Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY08</td>
<td>$15,668</td>
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<td>FY09</td>
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<tr>
<td>FY25</td>
<td></td>
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<tr>
<td>FY26</td>
<td>$17,145</td>
</tr>
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</table>
For 5 years, ASU has operated with about half the staff per student as its peers

FTE employees per 100 FTE students (FY2012 - FY2019)

<table>
<thead>
<tr>
<th>University</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
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<td>Indiana University-Bloomington</td>
<td>20.1</td>
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<td>21.3</td>
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<td>22.8</td>
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<td>23.0</td>
</tr>
<tr>
<td>Ohio State University-Main Campus</td>
<td>24.3</td>
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<td>23.0</td>
<td>22.9</td>
<td>22.7</td>
<td>22.9</td>
<td>23.5</td>
<td>23.5</td>
</tr>
<tr>
<td>Pennsylvania State University-Main Campus</td>
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<tr>
<td>Rutgers University-New Brunswick</td>
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<td>24.7</td>
<td>25.9</td>
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<tr>
<td>The University of Texas at Austin</td>
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<td>27.4</td>
<td>27.7</td>
<td>27.2</td>
<td>27.6</td>
</tr>
<tr>
<td>University of California-Los Angeles</td>
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<td>26.7</td>
<td>28.4</td>
<td>26.4</td>
<td>26.9</td>
<td>26.7</td>
<td>27.1</td>
<td>29.4</td>
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<tr>
<td>University of Connecticut</td>
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<td>28.3</td>
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<td>27.2</td>
<td>27.9</td>
<td>28.5</td>
<td>26.8</td>
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<tr>
<td>University of Illinois at Urbana-Champaign</td>
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<td>24.4</td>
<td>25.1</td>
<td>25.2</td>
<td>25.2</td>
<td>24.2</td>
<td>24.0</td>
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</tr>
<tr>
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<td>23.3</td>
<td>23.5</td>
<td>24.1</td>
<td>24.2</td>
<td>23.5</td>
<td>23.2</td>
<td>23.1</td>
</tr>
<tr>
<td>University of Maryland-College Park</td>
<td>24.9</td>
<td>25.8</td>
<td>26.0</td>
<td>27.4</td>
<td>25.5</td>
<td>25.6</td>
<td>25.0</td>
<td>24.5</td>
</tr>
<tr>
<td>University of Minnesota-Twin Cities</td>
<td>29.6</td>
<td>30.3</td>
<td>30.9</td>
<td>31.2</td>
<td>31.6</td>
<td>31.7</td>
<td>31.9</td>
<td>32.3</td>
</tr>
<tr>
<td>University of Washington-Seattle Campus</td>
<td>25.6</td>
<td>24.4</td>
<td>25.3</td>
<td>25.6</td>
<td>21.7</td>
<td>25.6</td>
<td>24.7</td>
<td>24.0</td>
</tr>
<tr>
<td>University of Wisconsin-Madison</td>
<td>26.4</td>
<td>26.9</td>
<td>26.9</td>
<td>27.6</td>
<td>27.5</td>
<td>27.8</td>
<td>28.0</td>
<td>30.1</td>
</tr>
</tbody>
</table>

Peer Median

| Arizona State University                        | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| Florida State University                        | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| Indiana University-Bloomington                  | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| Michigan State University                       | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| Ohio State University-Main Campus               | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| Pennsylvania State University-Main Campus       | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| Rutgers University-New Brunswick                 | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| The University of Texas at Austin               | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of California-Los Angeles            | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of Connecticut                       | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of Illinois at Urbana-Champaign      | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of Iowa                              | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of Maryland-College Park             | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of Minnesota-Twin Cities              | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of Washington-Seattle Campus         | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
| University of Wisconsin-Madison                  | 24.9  | 24.4  | 25.7  | 25.6  | 25.2  | 25.6  | 25.0  | 24.5  |
ASU use of space is efficient compared to ABOR peers

Space density: Net assignable square footage per FTE

Institutions:
- Florida State University
- Indiana University
- Michigan State University
- Rutgers University
- The Ohio State University
- Pennsylvania State University
- University of Connecticut
- University of Iowa
- University of Maryland
- University of Minnesota
- University of Washington
- University of Wisconsin
- Northern Arizona University
- University of Arizona

ASU

NAU

UA
ASU Foundation is core to long-term health

FY10-FY25 performance and projections for new gifts and commitments (in millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$101</td>
<td>$87</td>
</tr>
<tr>
<td>2011</td>
<td>$171</td>
<td>$135</td>
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<td>2014</td>
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<td>2017</td>
<td>$253</td>
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<tr>
<td>2018</td>
<td>$289</td>
<td>$290</td>
</tr>
<tr>
<td>2019</td>
<td>$413</td>
<td>$300</td>
</tr>
</tbody>
</table>

As of 1/25/21
Highlights of the Campaign 2020

Final total: $2.354B

Timeframe of Campaign ASU 2020
July 1, 2010 – Dec. 31, 2020

Donor Count
- 359,699 unique donors (gave at least 1 gift during campaign)
- 213,473 first-time donors (first-ever gift to ASU during campaign)
- 59.35% of total donors are first-time donors
- 107,144 alumni donors
- 65,992 alumni first-time donor count (first-ever gift to ASU during campaign)
- 29.79% of alumni donors/total unique donor count

Gift Value
- 2,591,571 in total gift count
- $835 average gift amount
- 39% increase in average gift amount
- 88% of all gifts were $100 or less
- 10,206 gifts were greater than $25,000

Student Access and Excellence
- Raised $375M for scholarships (undergraduate/graduate)
- Disbursed $269M through ASUF privately-funded awards
- Disbursed 76,441 scholarships as ASUF privately-funded awards
- 40% increase in total scholarship amount awarded annually (FY11 vs. FY20)
- 22% increase in total number of unique scholarships awarded (FY11 vs. FY20)

Faculty/Staff Giving
- 75,837 faculty/staff gift count
- $21.8M raised from faculty/staff
- 4,747 faculty/staff unique donor
- 109% growth in faculty/staff donor count

Faculty Excellence
- $85.5M raised for chairs/professorships
- 60 new chairs/professorships established
- 53% growth in number of chairs/professorships established
What It Will Take
As Arizona leaders plan for a revitalized state economy in 2021 in this reshaped world, ASU is prepared for its next assignment.
FY22 Public Investment request: New Economy Initiative

An investment in ASU’s assignment to drive Arizona’s economy through engineering and technology education and advancement, critical components of responding to COVID-19 and key catalysts for future economic growth and resiliency.

$46M

Student support, academic programs and faculty
To meet the workforce demands of the new economy and to the a resource for disruption and displacement caused by the pandemic, ASU seeks investment to expand its experiential learning programs and additional student support, such as career services, placement, and coaching. New programs will be developed within emerging New Economy fields in the natural sciences, neuroscience, digital culture and design, media arts, computer science, data science, and allied health professions and will promote knowledge acquisition and skill development for individuals at all stages of life.

Science and Technology Centers
State investment will establish five Science and Technology Centers (STCs) – attracting private capital investment and pairing new companies with FSE students who will perform research and technology development via capstone projects, entrepreneurial fellowships, and other curricular and extra-curricular pathways. This unique set of collaborations and engagements will enable companies to accelerate the transition of discoveries from laboratory to market, in turn attracting new startups and technology-oriented businesses to Arizona over the long-term. STCs will foster the growth of New Economy industries, thereby directly leading to job creation, workforce training, startups, and STEM education advances.
Ira A. Fulton Schools of Engineering

The largest and one of the most comprehensive engineering schools in the nation

#1

Largest and one of the most comprehensive engineering schools in the nation

58,000+
Alumni

8,000
Online students

5,300
Female students

5,200
Under-represented groups

232
National Hispanic Scholars

218
National Merit Scholars

85
Members of the National Academies and distinguished societies

50+
Graduate degree programs

25
Undergraduate degree programs

7
Transdisciplinary schools

#13
Online engineering graduate programs

#11
Online engineering graduate programs for veterans

#8
Bachelor’s degrees awarded to Hispanics

#6
Women as tenure/tenure-track faculty

$127M
Research expenditures
FY 2019-2020

60
Patents per year

#7
Licenses and Options

#6
IP Disclosures

#5
Startups

42
CAREER awards in the last 5 years. 13 in 2020

91
Science and technology centers generate collaboration and innovation

Learning, discovery, entrepreneurship
While classroom and online instruction is an important part of educating the next generation of engineers, students say that real world applied learning opportunities is where they learn the most. Science and Technology Centers are one way we bring students, faculty researchers, and private sector partners together to innovate, create and produce, serving both learning and the objectives of business.
Future science and technology centers in new economy industries

Future communications technologies
Focus on driving Arizona to the forefront of physical information systems for sensing and communications.

Extreme environments
Focus on engineering resiliency into transportation, energy, water and materials systems of future cities.

Human performance
Focus on enhancing physical and cognitive performance, as well as medical prevention and intervention.

Energy and materials
Focus on advancing new energy materials and device technologies to market, growing industry engagement.

Advanced manufacturing
Focus on new technologies that strengthen links to private industry support in aerospace and defense.

These five STCs will add to Arizona's existing two applied research centers focused on industry-led research – WearTech and Blockchain.
Arizona’s return on investment toward a stronger economy

Creation of high-value jobs
- Technology startups with AZ founders and innovators
- Applied learning opportunities for students, internships and a pathway to high wage jobs
- Partnerships with established AZ technology companies

Workforce training
- Hands-on research experience produces thought leaders
- Entrepreneurial training paves way from lab to captured value
- Reskilling and upskilling opportunities to enhance and adapt current workforce to cutting edge technologies and innovations

Attraction and retention of leading corporations
- People, facilities, intellectual leadership
- Partnerships and acquisition opportunities for established companies
- Access to the largest diverse technical talent pool in the nation
- Multiplier opportunities for joint projects and next stage technological development
ASU is prepared to operate and create progress in all realms

<table>
<thead>
<tr>
<th>Realm 1</th>
<th>Realm 1b</th>
<th>Realm 2</th>
<th>Realm 3</th>
<th>Realm 4</th>
<th>Realm 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campus Immersion</strong></td>
<td><strong>Campus Digital Sync</strong></td>
<td><strong>Digital Immersion</strong></td>
<td><strong>Open Scale</strong></td>
<td><strong>Education Through Exploration</strong></td>
<td><strong>Infinitely Scalable Learning</strong></td>
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<tr>
<td>Full Immersion</td>
<td>Full Immersion</td>
<td>Digital Immersion</td>
<td>Digital Immersion</td>
<td>Education Through Exploration</td>
<td>Massively distributed, personalized, adaptive learning solutions</td>
</tr>
<tr>
<td>On-campus</td>
<td>Campus-synchronized</td>
<td>Online</td>
<td>Massively Open</td>
<td>Technology Enhanced</td>
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<tr>
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<td>Technology Enhanced</td>
<td></td>
</tr>
</tbody>
</table>

**Needs**
- 21st century digital learning spaces
- Artificial intelligence-based advising
- Ubiquitous content delivery mechanisms
- Intelligent tutoring platform
- Personalized learning at scale

**Needs**
- Technology to support human relationships and build organizational affinity
- "Integrated" human-tutor interface
- Real time assessment
- Development-based assessment

**Needs**
- Technologies that derive value from scale
- Content and delivery for any life stage
- Multi-organizational pathway mapping

**Needs**
- Virtual augmented reality for learning
- Direct human cognition linkages
- Intelligent tutoring through verbal query
- Group learning tools

**Needs**
- Infinitely scalable teaching
- Advanced game-based learning
- Seamless integration of individualized learning across life stages
- Lifelong intelligent tutoring

Math and science mastery for all
ASU Enterprise will continue to grow and diversify revenue streams

ASU gross revenues in millions (FY2021-FY2026 projected)

- FY21: $3.8B
- FY22: $4.2B
- FY23: $4.6B
- FY24: $5.1B
- FY25: $5.8B
- FY26: $6.5B

Component Units
TRIF
Auxiliary
Learner and Other
Gifts
Grants and Contracts
Financial Aid Grants
Summer Session
Fees
ASU Online Tuition
Graduate Tuition
International Tuition
Non-Resident UG Tuition
Resident UG Tuition
Federal Fiscal Stabilization
State Appropriations
What's next?
New Economy Initiative

What’s next?