State of the ASU Public Enterprise and Arizona State University

2022 Update
The ASU Public Enterprise continues to evolve and demonstrate new possibilities in public organization design.

Given that the design and operation of public organizations are critical determinants of social and economic progress, the success of the ASU model will show how public organizations can transform their relationship with society to drive massive social change.
The dominant design of Arizona’s public organizations has evolved through distinct stages since statehood.
These designs are tightly connected to economic and social outcomes.

Public Entity Design 1

→

Public Entity Design 2

→

Public Entity Design 3

Societal Outcomes 1

Societal Outcomes 2

Societal Outcomes 3

Statehood

Present Day
Statehood to Mid-1900s:

Public entities designed to freely distribute public resources grew population but created economy dependent on resource extraction

Inspiration Copper Mine in Globe/Miami, 1916
Mid-1900s to Present:

Public entities that were designed to minimize costs for private actors modernized economy but created economic model dependent on relocation of people and businesses from other regions.

Sun City, 1970s
Arizona’s public entity designs and associated development strategies fueled population growth

Arizona Population (1945 to 2020)
These designs and development strategies have not increased Arizona’s prosperity

Arizona Per Capita Personal Income Relative to U.S. Average (1945 to 2020)
Present to the Future:
Public enterprises, like ASU, pursue entrepreneurial opportunities to support efforts that empower and catalyze human development in all forms.
Orbital Reef, 2030s
A public enterprise approach in higher education requires a new organizational design

**Animating Purpose**
- Social transformation
- Economic success

**Path to Achieving Public Value**
- Connecting instruction to knowledge generation at society-impacting scale

**Assumptions of Faculty**
- Knowledge entrepreneurs

**Assumptions of Management**
- Management drawn from and blended with faculty but acting entrepreneurially

**Accountability Mechanisms**
- Demonstrated economic and social progress

**Primary Funding Mechanisms**
- Diverse; institutional entrepreneurship

**Organizational Scale of Impact**
- Social scale with possible national and global reach
This review demonstrates the extent to which the ASU Public Enterprise is creating new social and economic outcomes for Arizona.
The ASU Charter

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.
What is ASU?

New American University
National Service University
Public Enterprise
Teaching and Learning Realms
Public University
Learning Enterprise
Entrepreneurial
Inclusive
Knowledge Core
New Economy
Fifth Wave University
Antifragile
Excellence
Public Values
Accessible
Scale
Universal Learning
Research University
Affordable
Knowledge Enterprise
Sustainable
Digital Immersion
Entrepreneurial
Knowledge Core
New Economy
Campus Immersion
Academic Enterprise
Public Enterprise
Universal Learning
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.
ASU mission and goals make clear our expectations

- Demonstrate **leadership** in enabling academic excellence and accessibility at scale
- Establish **national standing** in academic quality and impact of colleges and schools in every field
- Expand **ASU’s role as the leading global center** for interdisciplinary research, discovery and development by 2027
- Enhance our **local impact** and social embeddedness
ASU progress is measured against our goals

Demonstrate **leadership** in enabling academic excellence and accessibility at scale

- 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.
- Ensure that *more than 90%* of students continue studies beyond their first year.
- Enhance university graduation rate to *greater than 85%* and more than *40,000* graduates.
- Continuously enhance quality while maintaining affordability.
- Overcome geographic and financial barriers to education by enrolling *140,000* online degree-seeking students.
- Continuously increase measured student development and learning outcomes.
- Engage learners of all socioeconomic, geographic and demographic backgrounds.
Establish **national standing** in academic quality impact of colleges/schools in every field

- Advance and maintain national standing in academic quality for each college and school.
- Attain national standing in learning and post-graduation outcomes for students in all colleges and schools.
- Become the leading university academically (faculty, discovery, research, creativity) in at least one department or school within each college and school.
ASU progress is measured against our goals

Expand ASU’s role as the leading 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.
- Drive regional economic competitiveness through research, discovery and socioeconomically integrated programs.
- Serve as a leading American center for innovation and entrepreneurship.
ASU progress is measured against our goals

Enhance our local impact and social embeddedness

- Leverage ASU’s comprehensive knowledge enterprise to strengthen Arizona’s interactive network of teaching, learning, and discovery resources.

- 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 Universal Learners through personalized learning pathways that promote adaptability to emergent social and technological changes.
The ASU Public Enterprise
Three pillars anchor the ASU Public Enterprise

- ASU Colleges and Schools
- Knowledge Enterprise
- Learning Enterprise

ASU Public Enterprise Office Units:
- EdPlus@ASU
- ASU Enterprise Partners
- ASU Enterprise Technology Office
- ASU Enterprise Marketing Hub
- ASU Preparatory Academy
ASU’s design synthesizes elements of different kinds of organizations
The ASU Public Enterprise organizes our efforts to advance the ASU Charter.
ASU Public Enterprise executives collaborate through a matrixed design

Nancy Gonzales
Executive Vice President and University Provost
ASU Academic Enterprise
PhD, University of Washington

Sally Morton
Executive Vice President
ASU Knowledge Enterprise
PhD, Stanford University

Maria Anguiano
Executive Vice President
ASU Learning Enterprise
MBA, Stanford Graduate School of Business

Chris Howard
Executive Vice President and Chief Operating Officer
ASU Public Enterprise Office
DPhil, University of Oxford
MBA, Harvard Business School

Morgan Olsen
Executive Vice President, Treasurer and Chief Financial Officer
ASU Public Enterprise Office
PhD, University of Kansas
ASU welcomes new deans to lead schools and colleges

Kenro Kusumi  
Dean and Professor  
The College of Liberal Arts and Sciences, Division of Natural Sciences  
PhD, Massachusetts Institute of Technology

Battinto Batts  
Dean and Professor  
Cronkite School of Journalism and Mass Communications  
PhD, Hampton University

Cynthia Lietz  
Dean and President’s Professor  
Watts College of Public Service and Community Solutions  
PhD, Arizona State University

Joanna Grabski  
Dean and Foundation Professor  
College of Integrative Sciences and Arts  
PhD, Indiana University

Ohad Kadan  
Dean, Professor and W.P. Carey Distinguished Chair  
W. P. Carey School of Business  
PhD, Hebrew University of Jerusalem
Advancing the pursuit, understanding and sanctity of knowledge, as well as the storage, synthesis, analysis, creation and transfer of knowledge.
World-class faculty join the ASU Public Enterprise

Natalie Diaz
Professor, Creative Writing
Director, Center for Imagination in the Borderlands
Pulitzer Prize (2021)
MacArthur Fellow (2018)

MaryAnn Feldman
Watts Endowed Professor, Public Affairs
Professor, Public Affairs
UNC-Chapel Hill
Research Director, Kenan Institute of Private Enterprise

Eusebio Scornavacca
Professor, School for the Future of Innovation in Society
Professor, Thunderbird School of Global Management
Senior Global Futures Scientist, Julie Ann Wrigley Global Futures Laboratory

Jeffrey Kordower
Founding Director, ASU-Banner Neurodegenerative Disease Research Center
The Charlene and J. Orin Edson Distinguished Director, Biodesign Institute
World-class faculty join the ASU Public Enterprise

**Mitchell S. Jackson**
John O. Whiteman Dean’s Distinguished Professor, English
Pulitzer Prize (2021)
Guggenheim Fellow (2021)

**Cheryl Boone Isaacs**
Founding Director, Sidney Poitier New American Film School
35th President, Academy of Motion Pictures Arts and Sciences

**Susan Goldberg**
Vice Dean and Professor of Practice, Walter Cronkite School of Journalism and Mass Communication
College of Global Futures
First female editor, National Geographic

**Allison Noble**
Assistant Professor, School of Earth and Space Exploration
Inaugural Endowed Professor, Beus Center for Cosmic Foundations
Performance and Accomplishments
ASU excellence earns recognition

#1 in U.S. for innovation
Ahead of MIT and Stanford

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

Top 8% of universities worldwide
— Times Higher Education, 2021

A top U.S. university and the top university in Arizona
— QS World University Rankings, 2021

Among the best graduate schools in the U.S.
— U.S. News & World Report, 2022

Top 10 ‘Best Buy’ in the U.S.
— The Fiske Guide to College Best Buys, 2022

A leader in undergraduate education
— The Princeton Review, 2022

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

No. 1 public university chosen by international students
— Institute of International Education, 2021

Top producer of Fulbright awards for both students and faculty
— U.S. Department of State’s Bureau of Educational and Cultural Affairs, 2021

#6 in the U.S. for total research expenditures among universities without a medical school
— National Science Foundation HERD Survey, 2021

Top 10 in the nation among universities granted U.S. patents
— National Academy of Inventors and Intellectual Property Owner Association, 2019-2021

Top U.S. school in advancing UN sustainability goals
— Times Higher Education, 2020 and 2021

No. 1 among the “coolest schools,” environmentally friendly colleges and universities
— Sierra Club, 2021
ASU excellence earns recognition

Top 10 in the world for employer-student connections
— QS World University Rankings, 2022

Top 10 in the U.S. for undergraduate teaching
— U.S. News & World Report, 2022

Top 25 among the best law schools in the nation
— U.S. News & World Report, 2021

One of the best maker schools
— Newsweek, 2021

Leader in advancing STEM equity for students, faculty and staff
— American Association for the Advancement of Science, 2021

ASU ranks 4th nationally among universities awarding the most undergraduate STEM degrees
— Integrated Post-Secondary Education Data System (IPEDS), 2021 Survey

ASU ranks among best in the nation among online education programs
— U.S. News & World Report, 2022

Top 10 ‘Best for Vets” College in the West
— Military Times, 2021

Record 92% graduation success rate among ASU student-athletes and 10 teams with 100% GSR
— National Collegiate Athletics Association, 2021

14 ASU graduate programs rank in the top 10 nationally
— U.S. News & World Report

W. P. Carey Online MBA ranks #8 in the in the U.S. and #15 worldwide
— The Financial Times, 2021

ASU ranks among the ‘Best Global Universities”
— U.S. News & World Report, 2021

ASU Law is #1 in bar passage in Arizona for the ninth consecutive year
— Arizona Bar Association

Recipient of 16 Faculty Early Career Development (CAREER) Program awards
— National Science Foundation, 2021
Arizona students exemplify excellence at ASU

Marshall Scholarship Winner
Alexander Sojourney (2021)
Barrett Honors College Alumnus
Former ASU West President
Race, media and social justice
Goldsmiths, University of London

Other ASU nominees:
Hale Anna Espinoza
Rachel Kha
Sairirchana Darira
Travis Hueber

Rhodes/ Marshall Scholar Finalists
Sairirchana Darira (2022)
Global management, Psychology,
and Social and cultural analysis
Travis Hueber (2021)
Political science
with a socio-legal studies certificate

Pickering Foreign Affairs Fellowship
Angel Orozco (2022)
Civic and economic thought
Leadership,
Business and global politics
The New Classification identifies 13 distinct organizational designs in US higher education

US Colleges and Universities by Pell Enrollment, Six-Year Graduation Rate and Total Undergrad Enrollment
We assess our performance relative to universities that share fundamental elements of ASU’s design

<table>
<thead>
<tr>
<th>Universities Sharing Similar Student Access, Academic Environment and Knowledge Production Profiles</th>
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</thead>
<tbody>
<tr>
<td>• Arizona State University</td>
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<tr>
<td>• University of Arizona</td>
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<td>• University of California-San Diego</td>
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<td>• University of Colorado Boulder</td>
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<td>• University of Central Florida</td>
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<tr>
<td>• Florida State University</td>
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<td>• University of Florida</td>
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<tr>
<td>• University of South Florida-Main Campus</td>
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<tr>
<td>• Georgia Institute of Technology-Main Campus</td>
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<td>• Georgia State University</td>
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<tr>
<td>• University of Georgia</td>
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<tr>
<td>• University of Illinois at Urbana-Champaign</td>
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<td>• Indiana University-Bloomington</td>
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<td>• University of Kansas</td>
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<td>• University of Maryland-College Park</td>
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<td>• Boston University</td>
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<tr>
<td>• Pennsylvania State University</td>
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<td>• University of Pittsburgh-Pittsburgh Campus</td>
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<tr>
<td>• Texas A &amp; M University-College Station</td>
</tr>
<tr>
<td>• The University of Texas at Austin</td>
</tr>
<tr>
<td>• University of Utah</td>
</tr>
<tr>
<td>• University of Virginia-Main Campus</td>
</tr>
<tr>
<td>• Washington State University</td>
</tr>
<tr>
<td>• University of Wisconsin-Madison</td>
</tr>
</tbody>
</table>

35
ASU enrolled first-year students from 339 Arizona high schools this year.

Zip Codes with at Least One First-Year Student in Fall 2021
ASU expands access for Arizona high school graduates

Percentage of Arizona High School Graduates who Enrolled as First-Year Students at ASU

Source: Four-Year Graduation Cohorts reported on Arizona Department of Education
Undergraduate enrollment reaches highest ever levels

Undergraduate Enrollment: Actual, Forecasted, and ABOR Metric Goals (Fall 2002 to Fall 2026)
ASU maintains strong commitment to Arizona undergraduates

Resident Undergraduate Enrollment (Fall 2002 to Fall 2026)
ASU undergraduate enrollment is highest of comparators

Fall 2020 Undergraduate Enrollment: New Classification Universities

Source: Integrated Postsecondary Education Data System
Graduate enrollment has continued to outpace goals

Graduate Enrollment: Actual, Forecasted, and ABOR Metric Goals (Fall 2002 to Fall 2026)
ASU meets Arizona students seeking graduate education where they are through expanded options

Resident Graduate Enrollment (Fall 2002 to Fall 2026)
Graduate enrollment at ASU is higher than at comparators

Fall 2020 Graduate Enrollment: New Classification Universities

Source: Integrated Postsecondary Education Data System
Total enrollment has continued to outpace goals

Total Enrollment: Actual, Forecasted, and ABOR Metric Goals (Fall 2002 to Fall 2026)
Enrollment of Arizona students continues to grow

Total Resident Enrollment (Fall 2002 to Fall 2026)
Total enrollment at ASU is significantly greater than comparators

Fall 2020 Total Enrollment: New Classification Universities

Source: Integrated Postsecondary Education Data System
ASU operates at the scale of large university systems

FY 2019-20 Total Enrollment: University Systems

- The University of California System (10 Campuses): 302,655
- The University of Texas System (13 Campuses): 293,057
- The Texas A&M University System (11 Campuses): 171,414
- ASU: 152,488
- The Penn State University System (24 Campuses & World Campuses): 108,152
- University of Missouri System (4 Campuses): 79,518

Source: Integrated Postsecondary Education Data System
First-year student enrollment has grown across all populations

First-Year Enrollment by Race/Ethnicity (Fall 2002 to Fall 2021)
ASU enrolls more students of color than comparators

Fall 2020 First-Year Enrollment: New Classification Universities

Source: Integrated Postsecondary Education Data System
ASU is now more accessible to low-income students

Full-Time, First-Year Enrollment by Income (Fall 2002, Fall 2011, Fall 2021)
Enrollment of Pell Grant recipients quadrupled over 18 years

Undergraduate Pell Grant Recipients by Academic Year (2002-03 to 2020-21)
ASU enrolls more low-income students than comparators

Fall 2019 Pell Grant Recipient Enrollment: New Classification Universities

Source: Integrated Postsecondary Education Data System
First-generation student enrollment has nearly quadrupled since 2002.
ASU has sustained transfer enrollment despite community college declines

Percentage Change in Arizona Community College Transfers by Academic Year (2002-03 to 2020-21)

Source: Integrated Postsecondary Education Data System
ASU has created geographic diversity

Fall 2021 Total International Student Enrollments by Country

Top 10 countries
- India
- China
- Saudi Arabia
- Canada
- Republic of Korea
- Taiwan
- Egypt
- United Arab Emirates
- Mexico
- Vietnam

Open Doors International Student Ranking 2020-21

#1 public university in the U.S. for hosting international students
ASU continues to support military students’ success

Total Active Military Enrollment (Fall 2007 to Fall 2021)
ASU continues to welcome student veterans

Total Veteran Enrollment (Fall 2007 to Fall 2021)
ASU first-year retention is nearing 90% goal

First-Year Student Retention Rates (Fall 2002 to Fall 2020)
New success metrics for digital students show progress

Online Course Completion Rate
Rate by Academic Year

Pace of Progression to Online Degrees
Student Credit Hours per Academic Year
Graduation rates continue growth toward 85% goal

First-Year Resident Student Graduation Rates (Fall 2002 to Fall 2017)
ASU helps all students succeed once they arrive

Four-Year Graduation Rates for Fall 2014 First-Year Cohort: New Classification Universities

Source: Integrated Postsecondary Education Data System
Graduation rates for transfer students continue to grow

Four-Year Graduation Rates for New Transfers from Arizona Community Colleges (Fall 2002 to Fall 2017)

ABOR Targets
Undergraduate degrees awarded have increased significantly since 2002-03

Undergraduate Degrees by Academic Year (Actuals for 2002-03 to 2020-21, Targets for 2021-22 to 2025-26)
The number of bachelor's degrees awarded to Arizonans continues to increase

Resident Bachelor Degrees by Academic Year (Actuals for 2002-03 to 2020-21, Targets for 2021-22 to 2025-26)
Degrees for transfer students continue to grow

Bachelor Degrees for Students Entering as Transfers from Arizona Community Colleges (2002-03 to 2023-24)
ASU will surpass 10,000 graduate degrees this year

Graduate Degrees by Year (Actuals for 2002-03 to 2020-21, Targets for 2021-22 to 2025-26)
ASU’s expanded pathways for graduate education have enhanced success of Arizona students

Resident Graduate Degrees by Year (Actuals for 2002-03 to 2020-21, Targets for 2021-22 to 2025-26)
Number of ASU degrees awarded in high-demand fields doubled over 10 years

High Demand Degrees by Academic Year (2002-03 to 2020-21)

- Doctoral - STEM
- Doctoral - Health
- Doctoral - Education
- Master’s - STEM
- Master’s - Health
- Master’s - Education
- Bachelor’s - STEM
- Bachelor’s - Education
- Bachelor’s - Health
ASU degrees awarded in STEM fields have more than quadrupled since 2002-03

STEM Degrees by Academic Year (2002-03 to 2020-21)
Degrees awarded by Fulton School of Engineering grow

Number of Degrees Awarded by Academic Year and Level (2002-03 to 2020-21)

Includes programs formerly in the College of Technology and Innovation (ASU Polytechnic campus) beginning in 2014-15
Knowledge Enterprise
Game-changing, use-inspired discovery happens at ASU
Research expenditures almost doubled over the last decade

Expenditures Reported in NSF Higher Education Research and Development Survey (Dollars in Millions)

Goal: $1B

Metric Goal
Actual
Research growth has outpaced nearly all other universities

Percentage Change in HERD Exp., Institutions with Exp. Greater than $100M (FY 2005 to FY 2020)

Indiana U. Bloomington gained IUPUI’s medical school in 2015.

Arizona State

NYU

UT

M.D. Anderson Cancer Center

UNC

Yale
ASU leads across research disciplines

National Science Foundation Higher Education Research and Development Rankings (2020)

Total Research Expenditures: 43 of 915 ahead of

Total Research Expenditures among Institutions without a Medical School: 6 of 755 ahead of

Non-Medical School Expenditures: 18 of 915 ahead of
ASU leads across research disciplines

National Science Foundation Higher Education Research and Development Rankings (2020)

Public Institutions: 26 of 415 ahead of

UCI University of California, Irvine

Anthropology: 1 of 253 ahead of

Business Management and Business Administration: 4 of 377 ahead of
ASU leads across research disciplines

National Science Foundation Higher Education Research and Development Rankings (2020)

Economics: **14 of 326** ahead of

Duke University, Penn, Yale, University of Florida, University of Arizona, University of Chicago

Engineering: **18 of 415** ahead of

Cornell University, Caltech, Rutgers, Massachusetts Institute of Technology, Stanford University, University of Minnesota

Civil Engineering: **10 of 269** ahead of

Duke University, Illinois, Stanford University, Massachusetts Institute of Technology, University of Washington, Johns Hopkins University
ASU leads across research disciplines

National Science Foundation Higher Education Research and Development Rankings (2020)

Electrical, Electronic, and Communications Engineering: 11 of 295 ahead of

Stanford University, Carnegie Mellon University, USC University of Southern California, University of Washington, Purdue University, University of Arizona, Vanderbilt University

Geological and Earth Sciences: 1 of 362 ahead of

Massachusetts Institute of Technology, PennState, Virginia Tech, University of Michigan, University of Arizona, Texas A&M University

Humanities: 14 of 406 ahead of

Yale, Northwestern University, University of Virginia, PennState, University of Arizona, Emory University, UCLA
ASU leads across research disciplines

National Science Foundation Higher Education Research and Development Rankings (2020)

Political Science and Government: 5 of 349 ahead of
- PennState
- Duke
- Tufts
- UC San Diego
- University of Arizona
- University of Washington

Psychology: 18 of 442 ahead of
- ILLINOIS
- Cornell University
- Vanderbilt
- University of Southern California
- University of Arizona
- University of Oregon
- University of Colorado Boulder

Social Sciences: 3 of 501 ahead of
- Cornell University
- UCLA
- University of North Carolina at Chapel Hill
- Berkeley
- University of Arizona
- Penn State
- Penn
ASU leads across research disciplines

National Science Foundation Higher Education Research and Development Rankings (2020)

Transdisciplinary (other sciences): 1 of 252 ahead of

Northwestern University, University of Pittsburgh, Johns Hopkins University, The Ohio State University, Massachusetts Institute of Technology, Michigan State University, The University of Arizona.

HHS (including NIH) Funded Expenditures among Institutions without a Medical School: 9 of 421 ahead of

University of Oregon, Princeton University, Cold Spring Harbor Laboratory, University of Colorado Boulder, State University of New York, Carnegie Mellon University, Georgia Tech.

NASA Funded Expenditures: 6 of 440 ahead of

Stanford University, Georgia Tech, UCLA, Berkeley, University of Washington, University of Michigan.
ASU leads across research disciplines
National Science Foundation Higher Education Research and Development Rankings (2020)

NSF Funded Expenditures: 17 of 610 ahead of

DOD Funded Expenditures: 30 of 465 ahead of
SkySong Innovations projects demonstrate the impact of ASU-led discovery
SkySong Innovations catalyzes start-up growth

Technology Transfer Metrics as Advanced by SkySong Innovations

**Invention Disclosures**

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<th>FY21</th>
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**License and Options**

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**Startups**

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**Issued US Patents**

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ASU
SkySong Innovations impact spans sectors

External Financing Reported by ASU Startups, by Sector, Since 2003 (Dollars in Millions)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Financing (Millions)</th>
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<tbody>
<tr>
<td>Sustainability</td>
<td>$1 billion+</td>
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<td>Devices</td>
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</tr>
<tr>
<td>Energy</td>
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<tr>
<td>Therapeutics</td>
<td>$100</td>
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<tr>
<td>Tools and reagents</td>
<td>$50</td>
</tr>
<tr>
<td>Vaccines</td>
<td>$50</td>
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<tr>
<td>Software and networking</td>
<td>$50</td>
</tr>
<tr>
<td>Materials and nanotech</td>
<td>$0</td>
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</tbody>
</table>
The traditional education system has excluded too many learners.

84% of Americans believe that they do not have a chance to improve their standard of living.

Sources: Pew Charitable Trusts, Many Across the Globe Are Dissatisfied With How Democracy Is Working and In many countries, dissatisfaction with democracy is tied to views about economic conditions, personal rights.
The Learning Enterprise will provide access to social and economic opportunity at every stage of life.

"Pre-K"

Step 1 Milestone: verbally and conceptually empowered learner

Lifelong Learner

"K-12"

Step 2 Milestone: fully prepared learner

Jobs and Personal Fulfillment

0 40 80+
age
We are creating an enterprise-wide integrated and seamless experience across all stages of a learner’s life.

LE offerings will be:

- Designed as a lifetime of educational discovery rather than individual offerings
- Flexible and adaptive to life circumstances
- Portable and widely recognized
- Inspirational by broadening worldviews and perspectives
- Financially accessible
The Learning Enterprise nearly doubled the learners enrolled in its second year of operation.

Bridging K-12 and college

K-12 enrollment grew three times to more than 43,000 in FY 2021.

K-12 learners now have built-in access to college-level Universal Learner Courses.

Over 15,000 learners have participated in ULCs.

Easy access to college at any life stage

No barriers to college with Universal Learner Courses:

- No transcript needed, no application required
- Learners only pay when they pass the course
- Learners earn admission into ASU if they complete their courses with a 2.75 GPA+

The FY2021 learner number includes Upskilling, ULCs, Prep Digital, and Inspark.
ASU Prep and ASU Prep Digital drive local and global impact in K-12

Operating Model

ASU Preparatory Academy serves students in grades K-12 in three different models:

• Next generation immersion
• Remote digital learning from anywhere
• Hybrid learning that combines both models

• Brick and mortar
• 10 schools on 4 AZ campuses
• Immersion and hybrid classrooms

• Digital platform
• Full-time digital academy students work from anywhere
• Part-time students work at their local schools
• We partner with schools to build models that provide online courses, teachers or training
ASU Prep and ASU Prep Digital contribute to local and global impact in K-12

How we collaborate with schools and districts

- Course Licensing + Training
- All-in-one Digital Learning Solution
  
  Course licensing, training, LMS/SIS, IT Support
- Virtual Teacher Institute
- Direct Instruction or Hybrid
  
  Course licensing, teaching, Learning Success Coach

Services

Courses

Teaching

Learning Success Coach

IT Support

LMS / SIS

Training
ASU Prep and ASU Prep Digital drive local and global impact in K-12

3,500+ learners served in K-12 immersion schools on four Arizona campuses

7,800+ learners served in K-12 full-time digital offerings around the world

52,000+ learners served in partnership with other schools around the world

14,000 teachers trained in 1,300 schools in our Arizona Virtual Teaching Institute
Creating infinitely scalable learning opportunities

Starting this year, Study Hall will target 33 million college hopefuls in the U.S.

Crash Course and Arizona State University have joined forces to tackle barriers to college access and degree completion for learners who start their college journey from YouTube.
ASU has already launched more than 300 Upskilling programs

**On-demand Course Library**

More than 300 online continuing and professional education courses, including 36 that are free and open-access

**Partner-enabled Career Bootcamps**

Eight career bootcamps, offered in partnership, prepare learners for entry-level jobs in technical fields

**Custom Corporate Partnerships**

Custom learning experiences designed based on a partner’s workforce development priorities

**Executive Education**

Advanced skills training available globally, powered by online courses and Thunderbird’s network of centers for excellence
Learners are a testament to Learning Enterprise impact

**High School Learner**

“It really helped me to see that...I think I am ready [to go to college]. And it definitely helped me get scholarships to all the schools I wanted to go to.”

**ULC Learner**

“It's a really great opportunity to not only work on your educational goals, but to do it while simultaneously building your career—no matter what it is — because of the flexibility of the program.”

**Starbucks Learner**

“I was always regretful about not finishing college or giving college my full potential. Because my past grades were not great, I wasn't able to get accepted into ASU. Pathway to Admission helped me get into the flow of school again after 10 years and helped me gain admission into ASU, all while still taking courses for credit.”
ASU operates in global metropolitan areas

- Phoenix Metro
- Los Angeles
- Washington, DC
ASU’s global engagement efforts connect the ASU Public Enterprise and Arizona to the world

- 10,974 International students
- 25 International locations
- 187 Academic partnerships
- 453 Research and sponsored projects
- 1,238 Education and service programs
- 831,000 Online English language learners and teachers of English trained
- 85 Study abroad programs
- 1,109 Students in online global learning programs
- 271 Alumni chapters
New collaborations connect efforts across oceans

Bermuda Institute of Ocean Sciences

Hawaii
With partners, ASU fuels impact around the world

- In partnership with Cintana Education, ASU is building a global network of universities to increase access to quality higher education around the world, with academic collaborations, student mobility and research and training projects.
- Nine universities with nearly 100,000 students in Costa Rica, Ecuador, Egypt, India, Kazakhstan, Mexico, Turkey, Ukraine and Vietnam are part of the ASU-Cintana Alliance. An additional four universities are expected to join by the end of the fiscal year.
Dreamscape Learn enables new learning realms

- Dreamscape Learn, a virtual reality learning platform that merges education, storytelling and entertainment, welcomed visitors for demonstrations in the ASU Creativity Commons.

- It was a featured attraction at the 2021 ASU+GSV Summit in San Diego, and Summit attendees were able to experience it firsthand.

- In December 2021, the first student cohort in ASU’s “Designing for Dreamscape” course unveiled “Theta Labs,” an environmental sustainability course they created.
Starbucks partnership advances across several initiatives

• Largest-ever Starbucks College Achievement Plan class, more than 700 strong, graduated.
• The ASU-Starbucks Center for the Future of People and the Planet was established.
• The Starbucks Global Academy passes 100,000 unique learners and 300,000 enrollments.
• The “To Be Welcoming” training was updated and expanded to help the ASU community understand the value of inclusivity in academic success.
The Health Futures Center, home of the Mayo Clinic and ASU Alliance for Health Care, opens.

The 2021 Collaborative Research Seed Grant Program garners new ideas for Mayo-ASU collaboration.

The Spring 2021 Mayo Clinic and ASU MedTech Accelerator launches.

The first cohort from the Mayo Clinic Alix School of Medicine's Arizona campus graduates with both an MD and a master’s degree in the science of health care delivery.

Mayo Clinic acquires land for the “Discovery Oasis” biotech corridor.
EdPlus partnerships expand ASU reach

- Young Thinkers Program
- WWII Studies
- African e-Scholars Initiative
- Baobab
- Air U
- MACS accelerators
- Workforce Education
- PLuS Alliance
ASU Foundation is core to the ASU Public Enterprise’s strength

FY10 to FY25 Performance and Projections for New Gifts and Commitments (Dollars in Millions)

Endowment value reached

$1.186B

$355M

Raised in new gifts and commitments, surpassing $225M goal and marking 7th consecutive year of surpassing annual goal

Only public university without a medical school to complete $2B+ campaign

ASUF received the highest rating (4-stars) from Charity Navigator for the 10th consecutive year

As of 1/20/22, fiscal forecast $300M
Revenues have more than quadrupled over past two decades

Net Revenues for ASU and Component Units in Millions (FY 2003 to FY 2022)
ASU is resilient in an uncertain environment and prepared to invest for the future

Net Position and Component Units in Millions (FY 2003 to FY 2022)

Net position is the financial position at the end of the fiscal year accounting for all assets, deferred outflows, liabilities and deferred inflows.

Pension & OPEB
Unrestricted
Restricted
Capital Assets
ASU Component Units
ASU receives less resources per degree awarded than the national median

Tuition and Appropriations per Degree (FY 2020)

Source: Integrated Postsecondary Education Data System
ASU maintains quality as resources per degree decline

Tuition and Appropriations per Degree (FY 2003 to FY 2020) in 2002 Dollars

Amounts set to base year 2003 using Higher Education Price Index (HEPI).

Source: Integrated Postsecondary Education Data System, Commonfund
Cost discipline, application of technology, and economies of scale are projected to maintain current cost levels.

Education and General (E&G) Expense Net of Scholarship Allowance (FY 2003 to FY 2021)

Note: Converting Dollar Amounts to Constant 2002-03 dollars using the Consumer Price Index (CPI)
ASU has operated with about half the staff per student as its comparators.

FTE Employees per 100 FTE Students (FY 2003 to FY 2020)
ASU operates with fewer employees per student than nearly all comparators

FTE Employees per 100 FTE Students: New Classification Universities (FY 2020)

Source: Integrated Postsecondary Education Data System
ASU prioritizes spending on the student experience by keeping administrative spending low.

Labor Spend (Excluding Academic Activities) per Student: New Classification Universities (FY 2020)

ASU prioritizes spending on the student experience by keeping administrative spending low.
Universities have been managing under high inflation relative to other sectors

Higher Education Price Index and Year-Over-Year Growth

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Higher Education Price Index</th>
<th>Higher Education Cost Growth</th>
<th>Consumer Price Index</th>
<th>Consumer Price Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>212.7</td>
<td>1.92%</td>
<td>181.6</td>
<td>1.79%</td>
</tr>
<tr>
<td>2003</td>
<td>223.5</td>
<td>5.08%</td>
<td>185.5</td>
<td>2.15%</td>
</tr>
<tr>
<td>2004</td>
<td>231.7</td>
<td>3.67%</td>
<td>189.6</td>
<td>2.21%</td>
</tr>
<tr>
<td>2005</td>
<td>240.8</td>
<td>3.93%</td>
<td>195.3</td>
<td>3.01%</td>
</tr>
<tr>
<td>2006</td>
<td>253.1</td>
<td>5.11%</td>
<td>202.7</td>
<td>3.79%</td>
</tr>
<tr>
<td>2007</td>
<td>260.3</td>
<td>2.84%</td>
<td>208.0</td>
<td>2.61%</td>
</tr>
<tr>
<td>2008</td>
<td>273.2</td>
<td>4.96%</td>
<td>215.7</td>
<td>3.70%</td>
</tr>
<tr>
<td>2009</td>
<td>279.3</td>
<td>2.23%</td>
<td>218.7</td>
<td>1.39%</td>
</tr>
<tr>
<td>2010</td>
<td>281.8</td>
<td>0.90%</td>
<td>220.8</td>
<td>0.96%</td>
</tr>
<tr>
<td>2011</td>
<td>288.4</td>
<td>2.34%</td>
<td>225.3</td>
<td>2.04%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Higher Education Price Index</th>
<th>Higher Education Cost Growth</th>
<th>Consumer Price Index</th>
<th>Consumer Price Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>293.2</td>
<td>1.66%</td>
<td>231.9</td>
<td>2.93%</td>
</tr>
<tr>
<td>2013</td>
<td>297.8</td>
<td>1.57%</td>
<td>235.7</td>
<td>1.64%</td>
</tr>
<tr>
<td>2014</td>
<td>306.7</td>
<td>2.99%</td>
<td>239.4</td>
<td>1.57%</td>
</tr>
<tr>
<td>2015</td>
<td>312.9</td>
<td>2.02%</td>
<td>241.1</td>
<td>0.71%</td>
</tr>
<tr>
<td>2016</td>
<td>317.7</td>
<td>1.53%</td>
<td>242.8</td>
<td>0.71%</td>
</tr>
<tr>
<td>2017</td>
<td>327.4</td>
<td>3.05%</td>
<td>247.2</td>
<td>1.81%</td>
</tr>
<tr>
<td>2018</td>
<td>336.1</td>
<td>2.66%</td>
<td>252.8</td>
<td>2.27%</td>
</tr>
<tr>
<td>2019</td>
<td>346.0</td>
<td>2.95%</td>
<td>258.0</td>
<td>2.06%</td>
</tr>
<tr>
<td>2020</td>
<td>352.7</td>
<td>1.94%</td>
<td>262.2</td>
<td>1.63%</td>
</tr>
<tr>
<td>2021</td>
<td>362.3</td>
<td>2.72%</td>
<td>268.1</td>
<td>2.25%</td>
</tr>
</tbody>
</table>

HEPI captures steadily rising production costs:

- Employee wages and salaries
- Fringe benefits
- Miscellaneous services
- Supplies and materials
- Utilities

Base year is 1983 (with no further changes to data.) HEPI = Higher Education Price Index. Source: Commonfund
ASU has presented, reaffirmed and extended commitment to modest tuition increases

- **Feb. 2012**: Looking toward 2022, ASU commits for ten years to modest annual tuition increases (0% to 3%) for residents, with market pricing for non-residents and online students (ABOR presentation, 2012)

- **FY 2013**: ASU announces no tuition increase for residents (press release, February 2012)

- **FY 2014**: ASU reaffirms tuition commitment to resident students (ABOR presentation, February 2014)

- **FY 2015**: ASU’s will hold annual tuition adjustments to 3% or less for residents (ABOR presentation, April 2015)

- **FY 2016**: ASU continues to limit tuition increases to 3% for residents (press release, April 2015)

- **FY 2017**: ASU keeps annual tuition adjustments to 3% or less for resident students (ABOR presentation, February 2017)

- **FY 2018**: ASU will maintain commitment to tuition increases of less than 3% for residents (press release, March 2017)

- **FY 2019**: ASU plans to keep tuition adjustments for residents to 3% or less (ABOR presentation, February 2018)

- **FY 2020**: ASU extends for another 10 years existing tuition commitment to Arizona residents (press release, April 2019)
ASU had committed to modest annual tuition adjustments

Tuition and Fees for New Resident First-Year Students (Fall 2012 to Fall 2021)

<table>
<thead>
<tr>
<th>Year</th>
<th>University of Arizona</th>
<th>Northern Arizona University</th>
<th>Arizona State University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2012</td>
<td>$9,271</td>
<td>$9,720</td>
<td>$10,035</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>$9,738</td>
<td>$10,002</td>
<td>$10,035</td>
</tr>
<tr>
<td>Fall 2014</td>
<td>$9,989</td>
<td>$10,157</td>
<td>$10,478</td>
</tr>
<tr>
<td>Fall 2015</td>
<td>$10,358</td>
<td>$10,478</td>
<td>$10,764</td>
</tr>
<tr>
<td>Fall 2016</td>
<td>$10,640</td>
<td>$10,640</td>
<td>$10,792</td>
</tr>
<tr>
<td>Fall 2017</td>
<td>$10,792</td>
<td>$10,822</td>
<td>$10,822</td>
</tr>
<tr>
<td>Fall 2018</td>
<td>$11,138</td>
<td>$11,338</td>
<td>$11,338</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>$11,338</td>
<td>$11,338</td>
<td>$11,338</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>$11,338</td>
<td>$11,338</td>
<td>$11,338</td>
</tr>
<tr>
<td>Fall 2021</td>
<td>$11,338</td>
<td>$11,338</td>
<td>$11,338</td>
</tr>
</tbody>
</table>
ASU tuition remains low across all groups compared to Pac-12 public universities

Full-Time Tuition and Fees for New Undergraduate Students (Fall 2021)

Source: ASU review of institution websites (Fees include mandatory fees and college fees)
ASU tuition remains low across all groups compared to similar universities

Full-Time Tuition and Fees for New Undergraduate Students (Fall 2021)

Source: ASU review of institution websites (Fees include mandatory fees and college fees)
ASU remains affordable by providing significant gift aid

Average Gift Aid Awards by Family Income, 35,708 Resident Undergraduate Students (2020-21)

AZ Median Household Income = $67,462
U.S. Median Household Income = $67,403

Source: U.S. Census Bureau, 2018-2020
ASU advanced major capital projects in 2021

- ISTB 7
- Los Angeles Herald Examiner Building
- MIX Center
- NOVUS
- Health Futures Center
- Fusion on First
- Wexford
- Multi-Purpose Arena
- Thunderbird School of Global Management
- Durham Hall
- Omni Tempe Hotel at ASU
- Creativity Commons
- Bateman Physical Sciences Center
ASU advanced major capital projects in 2021
ASU advanced major capital projects in 2021

Los Angeles Herald Examiner
ASU advanced major capital projects in 2021

Media and Immersive eXperience Center (MIX)
ASU advanced major capital projects in 2021
ASU advanced major capital projects in 2021

Health Futures Center
ASU advanced major capital projects in 2021
ASU advanced major capital projects in 2021

Wexford
ASU advanced major capital projects in 2021

Multi-Purpose Arena
ASU advanced major capital projects in 2021

Thunderbird School of Global Management
ASU advanced major capital projects in 2021

Durham Hall
ASU advanced major capital projects in 2021

Omni Tempe Hotel at ASU
ASU advanced major capital projects in 2021
ASU advanced major capital projects in 2021

Bateman Physical Sciences Center
What’s Next?
ASU Public Enterprise will continue to grow and diversify revenue streams

Projected Gross Revenues in Millions (FY 2022 to FY 2027)
Realms of Teaching and Learning demonstrate scale

**Realm 1**
**Campus Immersion**
Fully immersive, technology enhanced, campus-based learning for traditional P-20 and post-graduate learners

- 2021 Enrollment: 80,000
- 2026 Enrollment: >90,000

**Realm 1b**
**ASU Sync**
Fully immersive, technology enhanced, campus-synchronized learning for traditional P-20 and post-graduate learners

- 2021 Enrollment: TBD
- 2026 Enrollment: ~8,000 (including entirely new kinds of students)

**Realm 2**
**Digital Immersion**
Digitally-immersive, online, asynchronous learning for P-20 and post-graduate learners

- 2021 Enrollment: 85,000
- 2026 Enrollment: >140,000

**Realm 3**
**Digital Immersion – Massively Open**
Digitally-immersive, open access, asynchronous distance learning for all learners

- 2021 Enrollment: >150,000
- 2026 Enrollment: Many, Many

**Realm 4**
**Education Through Exploration**
High-intensity, technology-based, learning experiences for P-20 learners and beyond

- 2022 Enrollment: ~3,000 (unique)
- 2026 Enrollment: ~25,000

**Realm 5**
**Massively Distributed, Universally Accessible, High-Intensity Learning Solution**
High-intensity, technology-based, learning experiences for P-20 learners and beyond

- 2021 Enrollment: oo
- 2026 Enrollment: oo

**University**
Faculty and Staff
Schools and Departments
Centers and Institutes
Laboratories
Libraries
Campus Resources
The ASU Public Enterprise will **continue to tackle Arizona’s and the world’s big challenges**

- Scale ASU Prep and ASU Prep Digital to build capacity in the K-12 system
- Expand ASU West and ASU Polytechnic campuses
- Work with Arizona community colleges on joint bachelor's degrees
- Reach new populations through ASU Sync
- Transform student success for Arizonans through technologically-enhanced instruction
- Launch the New Economy Initiative for Arizona
Scale ASU Prep and ASU Prep Digital to meet the needs of K-12 learners

Where we are going by 2030

- #1 charter network in Arizona
- Statewide virtual program
- Leader in content and innovation
- National leader in professional development
- 860,000 enrollments
- 600+ national school partners
- 15+ international school models
- 50,000 teachers trained
Expand ASU West and ASU Polytechnic campuses
Work with Arizona community colleges on joint bachelor's degrees

What?
Offer a distinctly unique and different option for students pursuing associate’s and bachelor’s degrees: a low-cost, streamlined state college option heavily focused on adaptive learning and new technologies and leveraging all available tools and resources to increase enrollment and persistence to degree completion dramatically.

For whom?
The large population of students who intend to go to college but aren’t enrolling in post-secondary programs after high school.

Returning adult students and career changers.

Students seeking a smaller, more intimate college experience with more significant opportunities to engage fellow students and faculty.

Students from community college campuses who wish to complete their bachelor’s degrees.

How?
Programs offered on-site at the partnering community college campus, with students taking classes from both institutions in a variety of formats and instructional methodologies. Seamless access to full range of comprehensive support services.
Reach new populations through ASU Sync

Proposed and Existing Programs in Sync

- Certificates
- Degrees not yet available online
- Degrees already offered in Sync modality
- Degrees focused on professional experience
- Degrees targeted to remote populations
- Courses designed to enhance student success
- Premium experience added to online based degrees

Spring 2022 enrollment

- About 1,600 students enrolled in Sync-only degree programs
- About 5,500 students in individual Sync-only courses
Transform student success for Arizonans through technologically enhanced instruction

Intelligent Tutor
Adaptive math diagnostic assessment tool that provides personalized learning and granularity in solving math problems, step by step.

250 Arizona schools in spring semester pilot
Selected for diversity of students, learning levels, modality and geographic location
8th-10th graders, 62% minority

Delivery to Low- and No-Bandwidth Areas in AZ
Working with partners from across Arizona, ASU will work to develop actionable strategies to deliver online courseware into low- and no-bandwidth environments of Arizona.

32% of Arizona residents have no internet access at home

me3
A free interactive major and career quiz tool designed to help connect college majors with career interests.

EOSS routinely conducts me3 workshops with AZ high schools.

80,000 Arizona high school learners using me3

700 Arizona high schools using me3

Pathways for the Future (State Farm)
Provides learners the knowledge necessary for life and work in the twenty-first century. Financial assistance is available for qualified students.

61 awardees to date
An award includes payment of identity verification and payment of course conversion fees upon successful completion to transcript the course for credit.

59 degree scholars
Degree Scholars are students currently enrolled in a PFF degree program that received a scholarship of up to $6,000 per academic year.
Launch the New Economy Initiative for Arizona

ASU’s New Economy Initiative Assignment

What does it do?

- **Accelerates** talent and skills development
- **Advances** innovation that drives industrial growth by leveraging Arizona’s public universities
- **Strengthens** Arizona as a New Economy leader

How does it do it?

- **Workforce development**
  - New graduates, re-training and upskilling for existing workforce
- **Science and Technology Centers**
  - Catalyze industry-relevant research, development and manufacturing
- **Support for New Economy enterprises**
  - Multiple ASU units partnering with enterprise and supporting entrepreneurship
## Launch the New Economy Initiative for Arizona

### Workforce Development

<table>
<thead>
<tr>
<th>Enhancing job readiness</th>
<th>Accelerated learning</th>
<th>Upskilling the current workforce</th>
<th>Increasing graduation rates</th>
<th>Increasing capacity to serve students</th>
</tr>
</thead>
<tbody>
<tr>
<td>through hands-on research experiences</td>
<td>through hybrid online/in-person models</td>
<td>through stackable certificates, micro-degrees, badges and other credentials</td>
<td>and decreasing time-to-degree through AI-infused advising platforms</td>
<td>by attracting world-class faculty</td>
</tr>
</tbody>
</table>
Science and Technology Centers

Launch the New Economy Initiative for Arizona

These five STCs will add to Arizona’s existing two applied research centers focused on industry-led research – WearTech and Blockchain

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

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

**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

**Future communications technologies**
Focus on driving Arizona to the forefront of physical information systems for sensing and communications
Launch the New Economy Initiative for Arizona

Support for New Economy Enterprises

Vision is compelling to bring in key partners

<table>
<thead>
<tr>
<th>Aerospace and Defense</th>
<th>Industrial Equipment</th>
<th>Automotive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honeywell</td>
<td>Siemens</td>
<td>Lucio</td>
</tr>
<tr>
<td>Boeing</td>
<td>Festo</td>
<td>Daicel Group</td>
</tr>
<tr>
<td>General Dynamics</td>
<td>Vertech</td>
<td>Lear</td>
</tr>
<tr>
<td>BAE Systems</td>
<td>Eclipse</td>
<td>Nikola</td>
</tr>
<tr>
<td>Raytheon</td>
<td>Aerotec</td>
<td>Exponent</td>
</tr>
<tr>
<td>Able</td>
<td>Delta Technologies</td>
<td>ZF</td>
</tr>
<tr>
<td>L3Harris</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| MedTech               |                       | Health Care |
| Medtronic             |                       | Mayo Clinic |
| Stryker               |                       | Dignity Health. |
| BD                    |                       |            |
| West                  |                       |            |
| Gore                  |                       |            |

| Utility               |                       | Others     |
| SRP                   |                       | Ping       |
| APS                   |                       | First Solar. |
|                       |                       | Axon       |
Launch the New Economy Initiative for Arizona

State Support = Catalyst for Innovation

FY22: $52.1M
Total investment funded

FY23: $67.9M
Total investment request
Launch the New Economy Initiative for Arizona

Return on Investment: Arizona’s New Economy in 2032

<table>
<thead>
<tr>
<th>10,000</th>
<th>$300 million</th>
<th>48,000</th>
<th>$6.9 billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>new engineering graduates per year</td>
<td>increase in engineering research</td>
<td>new jobs</td>
<td>in increased economic output</td>
</tr>
</tbody>
</table>
Are we designing the organizations that will produce the future Arizonans want?