FY21 Public Investment in New Economy Initiative

Arizona State University

$46M

ASU's Workforce Readiness initiative is comprised of three primary components totaling $46M

ASU Workforce Readiness initiative for the New Economy represents a bold effort to ensure that Arizona is prepared for the fourth industrial revolution — which will fundamentally change the way we live, work, and relate to one another — and the accompanying future of high employment, strong economic growth, and resilience to economic shocks.

$10M

to grow the Fulton Schools of Engineering

$10M to grow the world-class faculty in the Fulton Schools of Engineering to accelerate research intensity to the levels of Stanford, MIT, and Georgia Tech, to broaden student access and graduate over 6,000 engineers by 2025, to complete the launch of a global school alliance for engineering design, to emerge as a top 15 U.S. engineering college, and to make Phoenix metro one of the largest producers of technology and engineering talent in the country and a first-tier center for knowledge-driven economic change.

$26M

for the development and expansion of education programs

$26M for faculty, classroom space, experiential learning programs and student support services. This investment will shorten the time to earn a degree and increase options for current students. It will also be used to accelerate the development and deployment of new ways of learning across New Economy fields and new hybrid learning and training models for workforce readiness. In addition, this investment will be used to develop content packaged as stackable certificates, micro-degrees, badges and other credentials that provide a flexible and cost effective way to keep skills up to date in areas that are experiencing unprecedented change. New adaptive learning platforms, AI-infused advising platforms and portals will be included as well as additional faculty to serve an expanded student and lifelong learning population.

$10M

for the establishment of five Science and Technology Centers (STCs)

$10M for the establishment of five Science and Technology Centers (STCs) that will foster the growth of New Economy industries in energy, human performance, extreme environments, advanced manufacturing, and future communications technologies. These STCs will produce a minimum 15 times return on public investment, driving job creation, 250+ new industrial partnerships, startups, and advancing STEM education and workforce training. Test centers are in play through current partnerships and are already yielding promising results. Together with ASU faculty, the STCs will empower engineering linkages around the world and propel ASU forward as a top 5 university patent provider and a top 10 university tech transfer center.

STCs are physical locations that foster the growth of industries directly leading to job creation, workforce training, startups, and advancing STEM education. Faculty, students and research partners discover and translate ideas from the lab to market, and industry pulls their work forward into the marketplace.

These five STCs will add to Arizona's existing two applied research centers focused on industry led research — one for WearTech, the other for Blockchain.

STC on Extreme Environments will focus on management and technology opportunities associated with growing population centers; research outcomes to engineer resiliency into the energy, water, materials and transportation systems in the built environment of future cities and regions.

STC on Energy and Materials will be a national research resource for advancing new energy materials and device technologies to market, growing industry engagement and workforce training.

STC on Future Communication Technologies will drive ASU and the region to the forefront of physical information systems as the "internet of things" continues to develop, and as users increasingly desire greater access, information, reliability, and communications diversity. New paradigms for both sensing and communications are critical.

STC on Advanced Manufacturing will focus on the new technologies aimed at transforming manufacturing through 3D printing, robotics and automation, and new materials that leverages current manufacturing strength and evolving maker technologies with strong links to private industry support in aerospace, defense and space systems.

STC on Human Performance will capitalize on regional strength and technology opportunity to enhance physical and cognitive performance, medical prevention and intervention and drive research from discovery to marketplace.

Science and Technology Center Outcomes

Creation of high-value jobs

Technology startups with AZ founders and innovators

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

Partnerships with established AZ technology companies

Workforce training

Hands-on research experience produces thought leaders

Entrepreneurial training paves way from lab to captured value

Attraction and retention of leading corporations

People, facilities, intellectual leadership

Partnerships and acquisition opportunities for established companies

Return on Investment for Arizona in the New Economy

	FSE Current	Goal
Students	**16,800** In-person **7,100** Online **4,200** Graduates **6,000** First generation students **5,300** Female students **4,800** Hispanic students **$85,000** Average starting salary	**25,000** In-person **15,000** Online **6,000** Graduates **>90%** Average starting salary **#1** Producer of technical talent in the U.S.
Faculty	**350** Faculty **25** Young investigator awards **804** Invention disclosures **35** Start-ups **#26** Worldwide in patents	**100** New faculty **#5** Worldwide in patents (2x output)
Research	**$134M** Research output **2** Engineering research centers **$44M** DARPA awards **8** Industry/University research collaborative centers	**$315M** Research output **250+** New industrial partnerships

Arizona Benefit

2X
return on investment in year 10 – twice as fast as standard

$1.5B
in additional state tax revenue, by year 20

40,000
new high wage jobs – by year 20

New industry attraction and formation

*data provided by Rounds Consulting Group, Inc