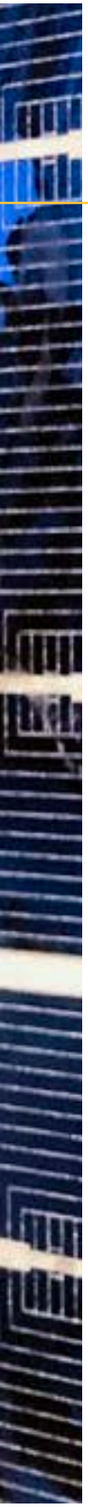
Change the future with the Ira A. Fulton Schools of Engineering

Changing Futures
From Arizona. For the world.

ASU Ira A. Fulton Schools of Engineering
Arizona State University

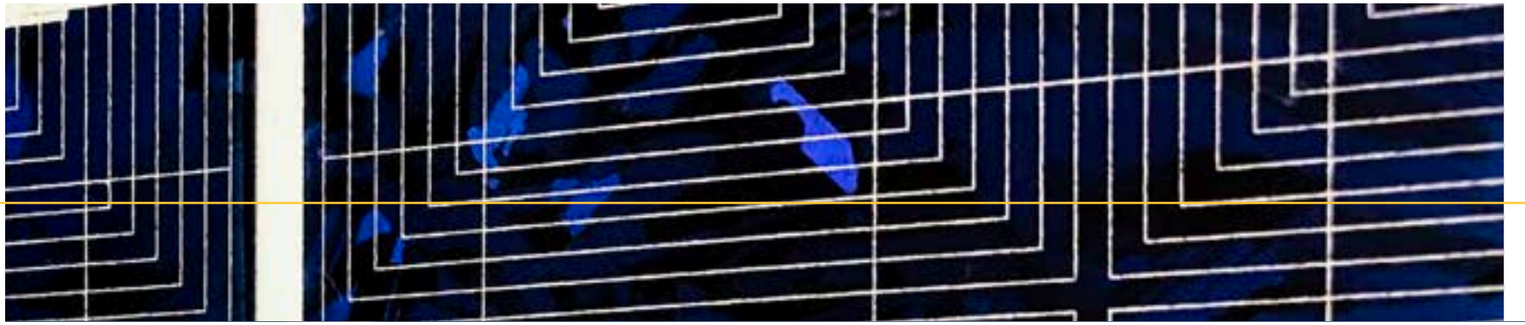


Building the future every day

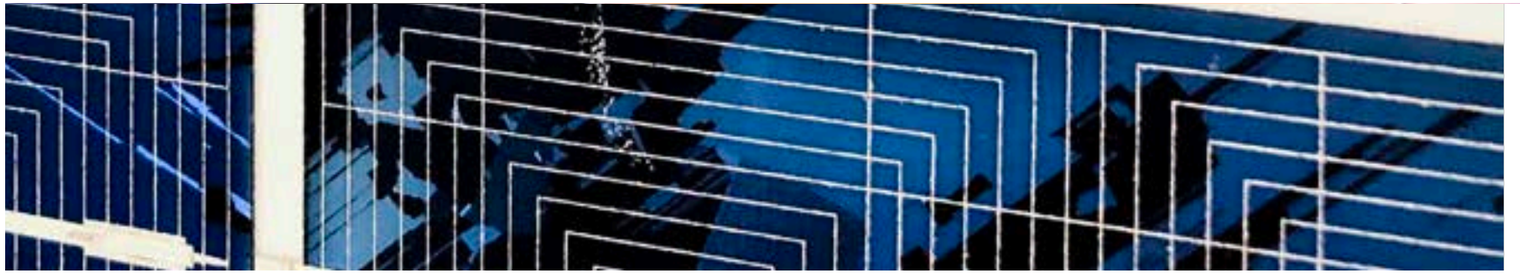
Engineers are quite literally building the future. In Arizona, we're on the front lines of life-changing innovation, research and discovery happening every day.

The Ira A. Fulton Schools of Engineering at Arizona State University is one of the most comprehensive engineering schools in the United States. With nearly 30 undergraduate degree programs, more than 50 graduate degree programs and over 33,000 students enrolled, the Fulton Schools is the largest engineering school in the country. Embracing our size as a unique strength, we aim to embody excellence at scale — demonstrating that scalable growth can fully synergize with high-quality education and meaningful impact.

At the Fulton Schools, engineering is more than the technical skills gained through traditional coursework. Engineering is a mindset that engages curiosity, creativity and a commitment to creating value and societal impact. It's an approach guided by a commitment to Principled Innovation®, meaning we ensure that the new concepts, ideas and solutions we engineer will positively impact every community we serve.



Students in the Fulton Schools benefit from the remarkable resources and partnerships at ASU — including Dreamscape Learn, which combines virtual reality and cinematic storytelling to create high-impact learning experiences.



Engineers from day one

Direct application of engineering principles through hands-on learning prepares students for success beyond the Fulton Schools.

“I am attending ASU because of the incredible opportunities to learn how to innovate and fix real-world problems. ASU isn’t just about going to class. We apply what we learn and see the difference we can make in the world.”

– Madeline Lajoie,
Civil engineering undergraduate student,
Kaloush Family Scholar

By offering meaningful, hands-on learning both in the classroom and beyond, we empower and invite students to be engineers from day one. It’s what we call the Fulton Difference. We believe every Fulton Schools student has the potential to make a lasting impact, whether it’s by contributing to ongoing research, collaborating with industry or launching their own game-changing ventures.

“Phoenix is poised to become one of the next hubs for engineering innovation with the Fulton Schools at its epicenter,” says Kyle Squires, ASU’s senior vice provost of engineering, computing and technology, vice provost of the Polytechnic campus, and dean of the Fulton Schools of Engineering. “Our goal is to achieve global leadership in the technology space, and by working with community, industry and governmental partners, we can directly influence that together.”

Through Changing Futures, we will advance bold ideas with the potential to solve the world’s most pressing societal, economic and environmental challenges of our time.

Bridging scientific exploration and practical solutions

At the Fulton Schools, we focus on **research that drives change**, from revolutionizing health care to safeguarding infrastructure and the economy. We are advancing manufacturing, fueling global competitiveness through technology and automation.

Our teams of top faculty, researchers and students develop technologies for water desalination, power grids and renewable energy storage, supporting resiliency and competitiveness. We prioritize national and economic security by strengthening communications technology, microelectronics and AI. These areas meet our world's complex demands, driving progress that benefits communities.

We recognize that impactful solutions emerge at the intersection of disciplines. Our broad expertise enables comprehensive education, faculty collaboration and knowledge transfer. From nanoparticles to infrastructure, we bridge scientific exploration and practical solutions.

Building on decades of expertise, ASU has become a **leader in microelectronics education and research**. The Fulton Schools plays a critical role in supporting semiconductor industry growth by expanding the workforce and accelerating research. "Not only are we supplying more talent than any other university to companies like Intel and TSMC, but our students are starting companies that will transform industries," says Zachary Holman, vice dean for research and innovation.

To support Arizona's path to transformative solutions, we are catalyzing innovators and entrepreneurs. The new **Fulton Engineering Entrepreneurship Hub** gives innovators the tools, space and industry partnerships to turn ideas into world-changing realities.

ASU's Charter motivates our students to strive for positive impact in the world through their work as engineers.

The Fulton Schools will be instrumental in the launch of the new ASU School of Medicine and Advanced Medical Engineering.

“I’ve been fortunate to work with some great people at Mayo Clinic. To see firsthand the patients’ lives who this work is impacting is the greatest motivation of all.”

– Kaycee Glattke,
’22 PhD in biomedical engineering

Transforming health care for a brighter future

A prime illustration of our commitment to an interdisciplinary approach lies at the convergence of engineering and health care. We are playing an integral role in ASU’s coordinated efforts to launch the **School of Medicine and Advanced Medical Engineering**. Distinguished by its focus on engineering, the new medical school leverages strengths in artificial intelligence, medical imaging, regenerative medicine and biomedical device development.

“That’s what this campaign is about: creating opportunities. Whether it’s in health or microchips, we’re trying to do something together with our alumni, community, industry and clinical partners that’s bigger than what we could do on our own,” says Heather Clark, director and professor in the School of Biological and Health Systems Engineering.

At the Fulton Schools, we are building the future of health through innovations that will transform patient outcomes and clinical practice.

Increasing access for all through inclusive excellence

The synergy between academia and industry means Arizona's innovation ecosystem is brimming with potential – but we know that research and discovery are only as effective as the people pushing them forward. To truly harness the power of engineering to shape our collective futures, we need more voices and perspectives as part of the conversation.

ASU's charter highlights how we measure our success by whom we include and how they succeed, so we're working on increasing pathways to STEM learning. We are proud to be the largest technical talent producer in the United States and ranked No. 1 nationally for awarding engineering technology degrees to women. While progress has been made, we remain focused on further advancing representation in science and engineering. Through our initiatives, we'll develop a national model for inclusive excellence in engineering — one that prioritizes retention by building support for the engineering leaders of the future.

Inviting more voices into our industry means shaking preconceptions of what training looks like. "Everyone is afraid of the changing nature of technology and how their skills might be outdated," says Binil Starly, director and professor in the School of Manufacturing Systems and Networks. "The question we're asking is, 'How can a university be more agile in its offerings that keep up with technology as it changes?'"

The Future of Learning: Workforce Development on Demand will create new stackable microcredentials — flexible, targeted learning opportunities for students and industry professionals in emerging technologies like smart manufacturing, robotics and automation. This model helps meet learners where they are and serves the broadest populations.

"I had a devout passion for space exploration, and when I arrived at the Fulton Schools of Engineering, I realized that with the degree I was getting, I was able to physically contribute to those missions, land jobs that I would be able to be part of the development team that would put the next man or woman on another planet."

– Catarino Valle,
'22 BS in aerospace engineering

At ASU, we define our success by who we include and how they succeed.

When I started at ASU, doors that I didn’t even know existed started opening. I wasn’t just learning to be an engineer, I was actually engineering.

– Rogel Bahena
’21 BSE in materials science and engineering

Support the Fulton Schools and shape a better future

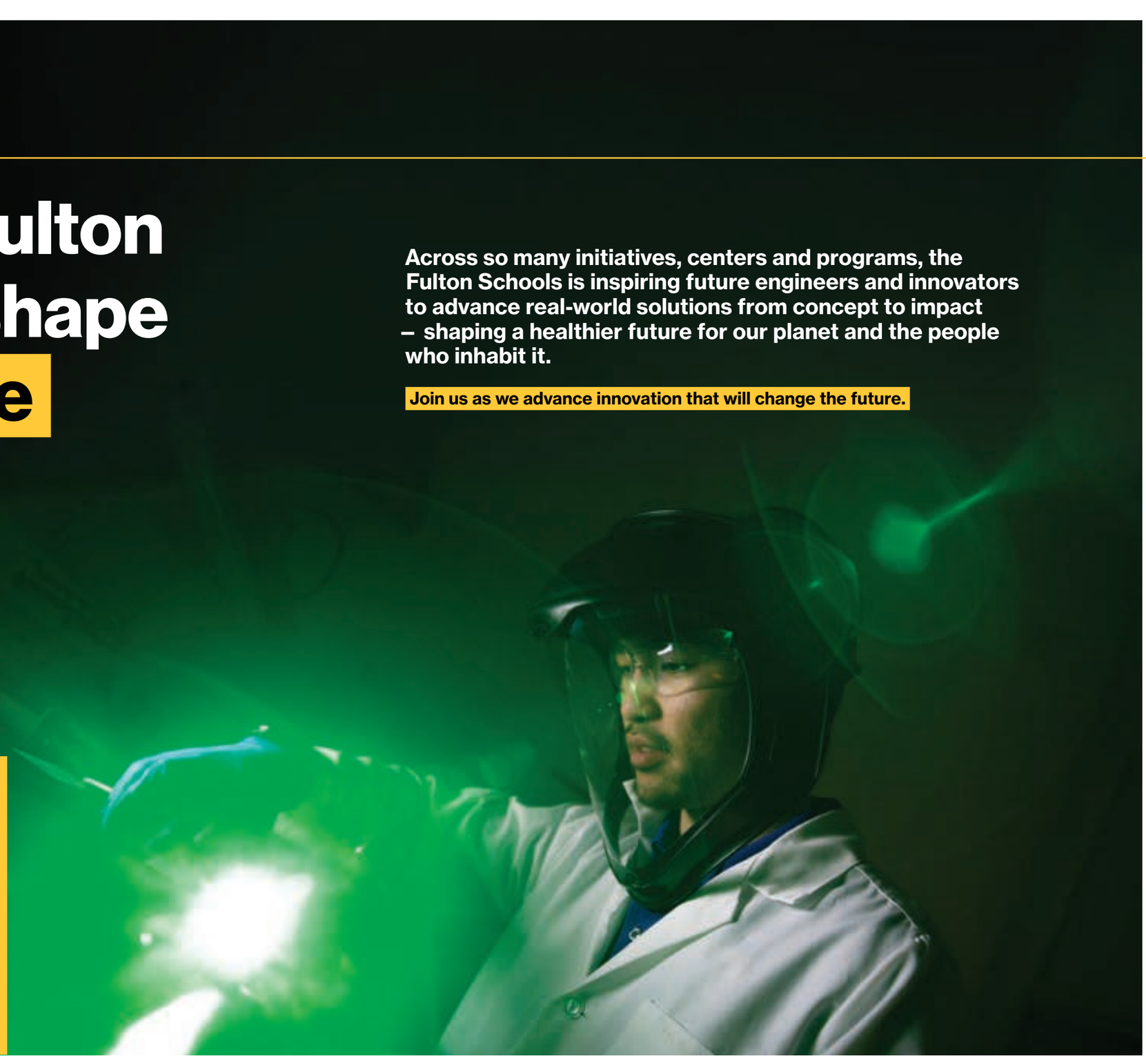
Across so many initiatives, centers and programs, the Fulton Schools is inspiring future engineers and innovators to advance real-world solutions from concept to impact – shaping a healthier future for our planet and the people who inhabit it.

Join us as we advance innovation that will change the future.

Changing Futures means a brighter future for Fulton students and the world.

“Engineering touches everybody’s lives every day, and, as such, I want to make people’s lives better by making electricity more available, or communication through antennas and radars more available to everyone.”

– Melvin Gatewood,
’22, MS in engineering



Change futures by supporting the Ira A. Fulton Schools of Engineering

Transform global education

The future of innovation spans from K-12 students to members of the workforce looking to upskill or reskill to enter the STEM industry. ASU and the Fulton Schools of Engineering seek to **build new pathways to engineering**, building ecosystems of support from our community of alumni, industry partners, government and STEM supporters. This global engagement will support initiatives that drive international impact in engineering education, deliver on-demand workforce development programs, and offer personalized, adapting learning experiences that provide pathways to success for aspiring engineers around the globe. These programs seek to transform the way we excite, support and build the future of engineering talent globally.

Empower community resilience

Building communities of support and resilience is at the heart of engineering. The Fulton Schools of Engineering seeks to broaden access to innovation centers, unique infrastructure and tools, training and skilling, as well as to innovative and entrepreneurial programs that will transform the region into a technology-driven agile economy that attracts global talent. Programs like the **Engineering Solutions Community Center** at ASU aim to make engineering accessible to everyone, empowering entrepreneurial mindsets, learning by doing and resilience, supporting first-generation college students, career changers, women in STEM and learners from low-income backgrounds. We aim to inspire, excite and connect people and places where innovation can happen.

Reshape our relationship with the planet

Arizona is an innovation hub, coordinating national and international partnerships around the globe to reshape our relationship with the planet. Through distinct capabilities and the support of partners to advance research and infrastructure, ASU is leading the way with innovative new technologies that will reshape our planet and how we interact with it. From new sensors and next-gen batteries to infrastructure and manufacturing, the Fulton Schools is building innovations that **address the need for new energy systems, semiconductors, advanced technologies, and transportation and mobility**, applying direct technologies for sustainable infrastructure and machine learning. These technologies have the opportunity to tackle food insecurity, climate change and ecosystem preservation while empowering vulnerable communities, new technologies and training infrastructure.

Inspire tomorrow's game changers

We cultivate excellence and encourage bold thinking. We **engage students in design/build activities** both inside and outside the classroom through physical maker spaces and innovation centers equipped with advanced tools and technologies, fostering hands-on project development and collaborative innovation. We have built a community of learning and collaboration that enables students to develop an engineering mindset and engage in various entrepreneurial activities that broaden support for student and faculty ventures that help transform the region into a technology-driven, agile economy. We **build a foundation for all to be successful** through community building, mentorship and peer engagement.

Change futures by supporting the Ira A. Fulton, Schools of Engineering

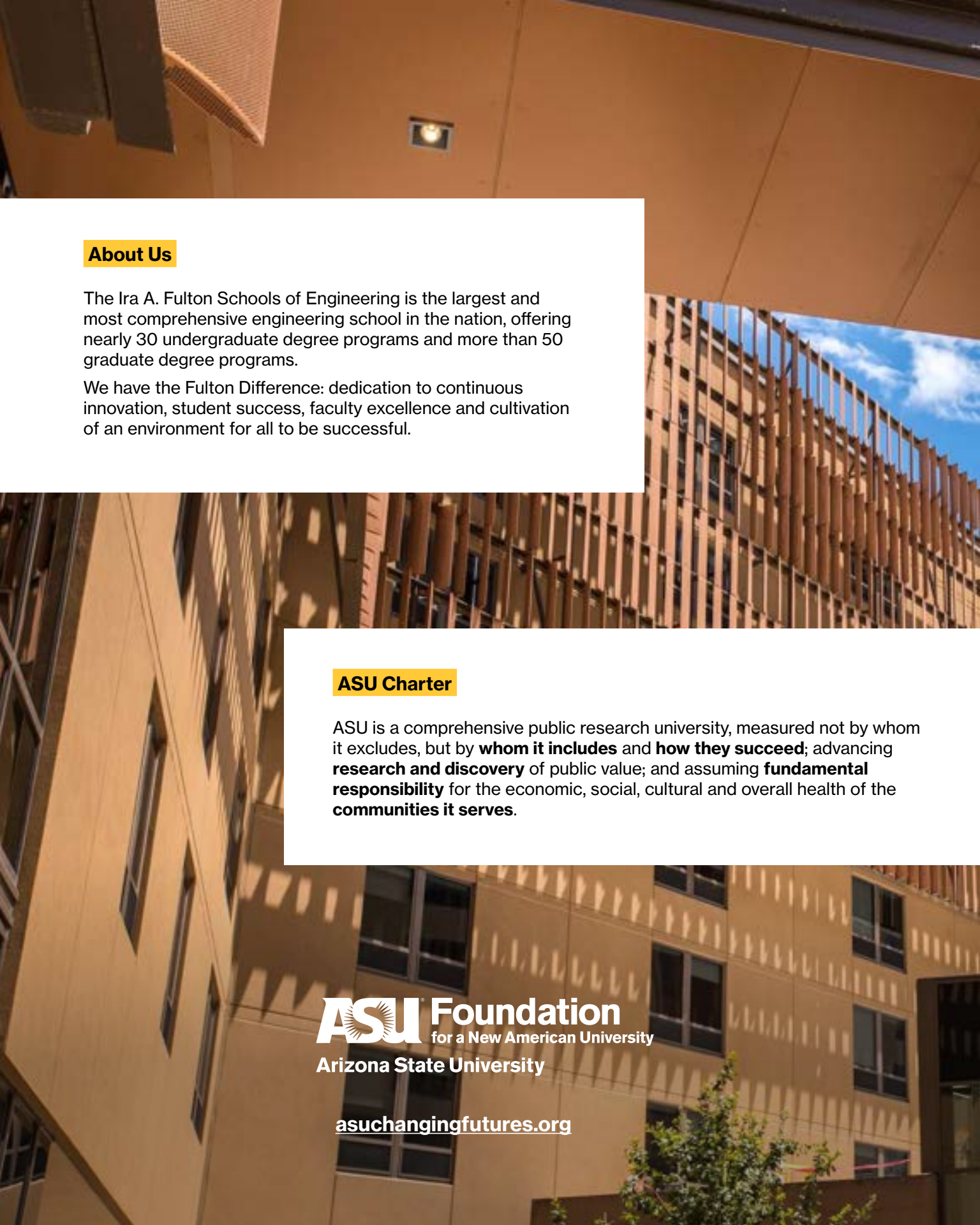
Build the future of health

The rapid growth of biomedical engineering innovation has created a disconnect between technological advances and practical clinical application, hindering the development of truly impactful medical solutions. Today's medical diagnostics, while sophisticated, still leave patients and health care systems burdened with time-consuming and often invasive procedures. ASU is accelerating its health-related efforts to tackle the state and nation's urgent health care needs, now and into the future. Collaborating with and supporting programs such as the **Medical Suite of the Future**, we are looking for partners who want to make an impact on the future of MedTech, revolutionizing this landscape by developing AI-augmented technologies and training a new generation of physician-engineers – ultimately creating faster, more accurate and universally accessible diagnostic tools that will transform health care delivery and improve health on a global scale.

Advance technology for good

At ASU, we know technology can drive meaningful change. Our researchers are working to develop a comprehensive digital infrastructure that promotes innovation and competitiveness. We are establishing a transformative virtual ecosystem that integrates real-time data and AI-powered simulations to **reimagine engineering education and accelerate next-generation manufacturing technologies**. We're also partnering with industry to **empower America's semiconductor future** – spurring research, developing breakthrough technologies and training a skilled workforce to meet and anticipate technological challenges. As AI reshapes our world, our innovative methods are redefining how machine intelligence complements human ingenuity, ensuring that technology continually advances the common good.

Fulton Schools is leading the way on technology critical to industries in the US and the world.



About Us

The Ira A. Fulton Schools of Engineering is the largest and most comprehensive engineering school in the nation, offering nearly 30 undergraduate degree programs and more than 50 graduate degree programs.

We have the Fulton Difference: dedication to continuous innovation, student success, faculty excellence and cultivation of an environment for all to be successful.

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 Foundation
for a New American University
Arizona State University

asuchangingfutures.org