

Arizona New Economy Initiative (NEI) Science and Technology Centers (STCs)

2023 Fall STC Entrepreneurial Fellowship Program

Application portal opens	August 10, 2023
Online applications due	September 10, 2023 at 5 pm AZ time
Pitches	September 2023
Fellowship award notifications	October 2023
Fellowships begin	November-December 2023

Please direct questions to stc@asu.edu.

1. Fellowship description

a. About the STCs

The Science and Technology Centers (STCs) are research and development centers at Arizona State University (ASU) supported by the Arizona New Economy Initiative (NEI). NEI is an investment in ASU's assignment to drive Arizona's future economic growth and resiliency through engineering and technology innovation and training. STCs are one component of NEI and are responsible for leveraging ASU-industry partnerships to enable research innovation, entrepreneurship, and tech transfer in areas key to the future of Arizona's economy. As of Spring 2023, five STCs have been started:

Advanced Materials, Processes and Energy Devices (AMPED),

Manufacturing, Automation and Data Engineering (MADE),

Advanced Communication Technologies (ACT),

Extreme Environments (EXTREME),

and Human Performance (PERFORM).

b. Opportunity overview

Through this program, the STCs are soliciting applications for Entrepreneurial Fellowships. The Fellowships are designed to enable postdoctoral scholars to grow ventures that are commercializing ASU deep technology that emerged from or is relevant to the STCs. STC Entrepreneurial Fellowships are two years in length and provide salary and fringe benefits for an ASU start-up founder, credits to use ASU's

Core Facilities or other university resources, and office space at an ASU tech-commercialization site. The STCs anticipate making 1–2 awards each year, depending on the availability of funds.

c. Target outcomes

The STC Entrepreneurial Fellowship program seeks to advance Arizona’s New Economy through creation and growth of start-up companies (ventures) that are based upon deep technology developed at ASU. Specific target outcomes include job creation, wealth creation, and economic diversity and stability within Arizona. Indicators that a venture is on track to achieve these outcomes include funding traction (e.g., equity financing, grants, business plan competition wins), market traction (e.g., joint-development agreements, non-recurring engineering contracts, early sales), and technology leadership (e.g., granted and pending patents).

d. Topics of interest

The AMPED STC seeks to create the materials and devices needed for broad electrification of the energy sector, and it has three thrust areas: photovoltaics, batteries, and power-electronic devices. The MADE STC seeks to create foundational manufacturing technologies and methods that enable new products and enhance manufacturing competitiveness, and it has three thrust areas: process science and engineering, robotics and automation, and data analytics, cyber, and AI. The ACT STC seeks to design, create, validate and translate technologies that develop the next generation of communications and related technologies and make these solutions accessible to the broader community, and it has four thrust areas: future RF systems, flexible modem SoCs, communications for augmented reality and awareness for autonomous vehicles. The EXTREME STC seeks to build collaborations between university researchers, local businesses, and municipal partners to design, create, validate and translate technologies that mitigate extreme environmental conditions and make these solutions accessible to the broader community, and it has three thrust areas: air, water, and heat. The PERFORM STC seeks to create, validate and disseminate actionable knowledge and tools that will positively impact health and well-being across the lifespan, and it has three thrust areas: devices, assessment, and performance multipliers. Fellowship applications that align with these STC thrust areas are solicited, though compelling applications that propose to commercialize ASU deep technology that is outside of these areas will also be considered if the likelihood of impact within Arizona is high.

2. Eligibility and programmatic details

a. Eligible applicants

Any person who has completed the PhD degree in engineering or a related field, or will have completed the degree by the start of the Fellowship, is eligible to apply. In particular, applicants may be PhD students who are completing their degrees, postdoctoral researchers, research faculty, or staff researchers. This program is not aimed at tenured and tenure-track faculty, as Fellows will, in general, proceed to be full-time employees and officers of their companies after the Fellowship. Applicants should be cofounders or key personnel of a registered company that has a license (or an exclusive option to negotiate a license) to ASU intellectual property. Competitive applicants and ventures will have made beneficial use of the entrepreneurship and entrepreneurial training resources available at ASU or elsewhere prior to application.

b. Fellowship duration

STC Entrepreneurial Fellowships begin with a one-year ASU employment contract that, pending satisfactory progress and reporting, may be extended for an additional year, for a total of two years.

Fellows may voluntarily end the Fellowship early if, e.g., they wish to become employees of their venture (and thus no longer of ASU) following a fundraising round.

c. Budget

Each Fellowship has a total value of up to \$130,000 per year. Eligible Fellowship expenses include:

- Fellow salary up to \$75,000 per year (Fellows will be hired as ASU postdoctoral associates in the Fulton Schools of Engineering, or, if a Fellow is already in another ASU research faculty or staff position, that position will be continued)
- Fellow fringe benefits (also called employee-related expenses)
- [ASU Core Facilities](#) fees (with the Fellow, other ASU cofounders of the venture, or Core Facility staff as eligible equipment operators)
- Other university resources that are available on a pay-per-use basis, such as [VISLAB](#) or the [Innovation Hub](#) at the Poly campus

Other expenses that are not directly linked to ASU—such as non-Fellow personnel salaries, equipment, materials, and attorney fees—are ineligible and must be covered by the venture. A written budget is not required in the Fellowship application process, but applicants may be asked by the review panel about planned usage of funds. Selected applicants will work with ASU staff to create a detailed budget after the review process.

d. Intellectual property

Entrepreneurial Fellows are expected to commercialize ASU technology, and thus their ventures must maintain a license from [Skysong Innovations](#), ASU's exclusive intellectual property management company. Termination or lapse of the license may be cause for early termination of the Fellowship. Ventures are allowed to have an exclusive option to negotiate a license—and not yet a license—at the time of application, but the license should be negotiated and executed prior to the second-year renewal of the Fellowship.

Fellows will be ASU employees during the Fellowship period and are thus subject to Arizona Board of Regents (ABOR) [policy 6-908](#), which governs intellectual property (IP). Of particular note, IP created by Fellows during their tenure will be owned by ABOR and managed by Skysong Innovations. To that end, Fellows are required to disclose such IP to Skysong Innovations. Fellows' ventures will have a limited opportunity to license such IP from Skysong Innovations, per the conditions of each venture's existing license agreement.

e. Reporting requirements

Fellows are required to submit a brief annual report detailing business and technical progress, as well as documenting quantitative impact metrics such as number of employees and funds raised.

3. Application submission

a. Online application

To apply for the STC Entrepreneurial Fellowship, applicants must complete the [online application](#) by the date and time specified on the cover page of this document. The online application requires short-answer responses to a few introductory questions (expected to take approximately 30 minutes to complete) and a one-page executive summary that, per [these guidelines](#), should describe the venture's

problem, competition or state of the art, technology solution, value proposition, and technology and business development progress to date.

b. Pitch

Applicants who submit compliant online applications will be invited to give an in-person (or virtual, if the applicant prefers) five-minute, investor-style pitch to a review panel, followed by 15 minutes of questions and answers. The pitches will be scheduled in the time period specified on the cover page of this document.

4. Application evaluation

a. Review criteria

Online applications and pitches will be evaluated based on the following merit review criteria:

- *Market opportunity and Arizona impact:* The venture has identified a large and profitable market opportunity that can be captured in a reasonable time frame. If the product development and business plan are successfully executed, the venture will have significant impact—or lay the foundation for subsequent significant impact—on the Arizona economy. Impact may take the form of job creation, wealth creation, economic diversity and stability, or other outcomes related to the transition to a New Economy.
- *Technology innovation and alignment with an STC:* The venture is based upon compelling and differentiated technology that has roots in ASU IP. The technology aligns with one or more STC thrust areas or aligns with a deep technical area that is not captured within an existing STC but is important to creating a New Economy in Arizona.
- *Business plan and Fellowship role:* The venture has a sound business plan and has achieved early milestones in executing it. More particularly, the venture knows its customers, has market traction with those customers and other stakeholders, has a business model that fits the market in which it is operating, and has a credible growth path. An STC Entrepreneurial Fellowship provides a key opportunity for the venture and applicant that may be otherwise inaccessible, and the applicant has identified important milestones that the venture will meet during the Fellowship period with the Fellowship’s support.
- *Applicant and team:* The applicant is supported by a committed team with diverse expertise that spans business and technology. The applicant (and potentially other team members) have utilized resources at and beyond ASU to learn and practice entrepreneurship, such as Venture Devils and I-Corps. The venture is likely to be successful under the applicant’s leadership.

b. Review panel

Online applications and pitches will be reviewed and evaluated by a panel consisting of at least STC Directors, ASU Entrepreneurship + Innovation staff, and the Arizona investment community.

c. Award selection

Well-reviewed applications will be recommended for funding by the review panel to the ASU administration, which will then select applicants for Fellowship awards. The anticipated date for notification of selection is given on the cover page of this document. All applicants will receive reviewer comments from their pitches.

5. Fellowship administration information

a. Award negotiation

Selected applicants will be invited to construct a detailed budget with the help of a Research Administrator. These incoming Fellows will then receive a one-year employment contract, an account to charge for Core Facility and other ASU resource usage, and access to appropriate ASU tech-commercialization spaces (e.g., at Skysong, MacroTechnology Works, WearTech, or others) and events.

b. Fellowship start date

Fellowships are expected to commence in the time range given on the cover page of this document.