

Preparing Technicians for the **FUTURE OF WORK**

Project Rationale

Partnerships among employers and educators have never been more important as the country faces significant challenges in the preparation of its future workforce. Technology advances are changing industries at an unprecedented pace, demanding an expanding array of knowledge, skills, and abilities from technicians in the STEM disciplines. The workplace is undergoing a major transformation driven by the ongoing evolution of artificial intelligence, the internet-of-things, cybersecurity procedures, advanced robotics, digital design and prototyping, and the way in which these and other changing technologies interact within horizontally and vertically integrated systems.

The National Science Foundation has established “The Future of Work at the Human Technology Frontier,” (NSF, 2016) as one of its 10 Big Ideas; a collective vision to prioritize NSF investments that “push forward the frontiers of U.S. research and provide innovative approaches to solve some of the most pressing problems the world faces.” America’s technicians are already being affected by this transformation and they require our urgent and earnest attention.

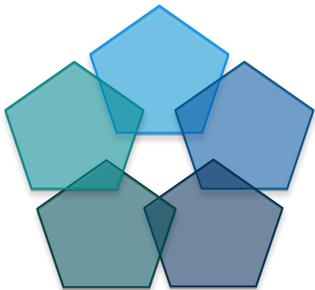


Overarching Project Mission:

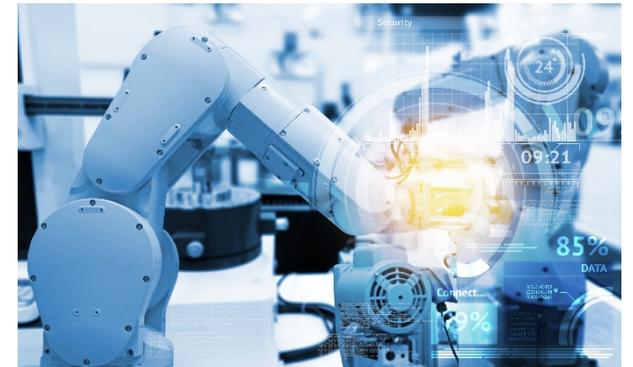
Enable the NSF-Advanced Technological Education (ATE) community to collaborate regionally with industry partners, within and across disciplines, on the transformation of associate degree programs to prepare US technicians for the Future of Work.

Supporting the Technicians of the Future

For many of today's technicians the Future of Work is already in focus. They will soon discover, if they haven't already, that they are cross-disciplinary workers, immersed in diverse platforms and interrelated systems that once belonged to single industry sectors. On behalf of the ATE community, this project aims to realize the following key outcomes.



- Industry's perception of the Future of Work and implications for technician education are identified.
- New technologies and cross-cutting technologies impacting technician education are identified.
- Recommendations are developed to address major challenges.
- ATE centers and projects have new levels of knowledge of the future technician's role.
- NSF has detailed knowledge of cross-discipline and emerging discipline issues relative to the Future of Work.



Project Activities



Phases

Deliverables

Year 1: Discover

Gather input from National Industry Advisory Board, ATE Leadership Caucus, and industry site visits to determine critical FOW implications for the nation's technicians.

48

Podcasts, webinars and videos

Year 2: Specify

Conduct regional convenings of industry and education leaders to elicit recommendations for changes to discipline and cross-discipline technician education programs

12

Future of Work Regional Forums

Year 3: Develop

Regional networks of industry and education partners refine recommendations and adopt regional strategies to support their future technician workforce.

8

Professional development workshops

Year 4: Sustain

Networks pilot, refine, and further adapt program strategies to address FOW-driven issues at the regional level.

2

ATE Leadership Caucus meetings

4

ATE Regional Networks



Join the Community

Participate:

Scan the code to take a short survey. Share your thoughts about technicians and the Future of Work.



Collaborate:

- Host a regional convening of educators and employers
- Become or recommend a podcast series featured presenter
- Recommend a colleague for the Board of Contributors
- Help build regional ATE networks to facilitate partnerships among educators and employers supporting regional economies
- Host a regional educator workshop

Learn More:

preparingtechnicians.org

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