

Make-It-Better. Reimagining Advanced Manufacturing Pathways

ACTE NextLevel Fellows are changing the future of postsecondary career and technical education. Through the yearlong program, Fellows develop their professional and leadership skills while creating a plan to solve a real challenge at their institution. Below is the story of one Fellow whose Make-It-Better plan inspired transformative change.

Justin Erickson, 2022 ACTE NextLevel Postsecondary CTE Leaders Fellow | Manatee Technical College

The challenge

As Assistant Director at Manatee Technical College, Justin recognized that enrollment in advanced manufacturing programs was declining even as employer demand grew. Many students could easily picture themselves becoming electricians or HVAC technicians but struggled to envision careers in robotics or automation. Modern manufacturing had changed dramatically, but perceptions of the field had not kept pace. Justin saw an opportunity to redesign manufacturing pathways to better reflect industry needs, attract more students, and prepare students for high-demand careers.

The plan

Justin created a Make-It-Better plan to create industry-aligned pathways that prepare students for careers in advanced manufacturing. Over time, this institutional effort evolved into the Silicon & Steel Pivot, a framework for developing robotics and semiconductor technician pathways. This approach brings together competency-based learning, employer partnerships, apprenticeships, and modern training environments to better connect education with workforce needs. The NextLevel Fellowship provided dedicated time, accountability, and a network of peers that helped Justin refine his vision and expand the impact of his plan beyond a single institution.

Justin's Make-It-Better plan included

- Developing the Silicon & Steel Pivot framework for robotics and semiconductor pathways
- Building employer co-investment partnerships to modernize CTE programs
- Creating competency-based apprenticeship pathways to replace seat-time requirements
- Developing implementation tools to help colleges replicate high-demand pathways
- Designing integrated learning factories and simulated semiconductor cleanrooms

The impact



Institutional impact

- Increased manufacturing program enrollment from 8 to 30–40 students
- Developed new robotics and semiconductor technician pathways
- Expanded employer partnerships to support apprenticeship pathways
- Created implementation tools other colleges can adopt

Professional impact

- Joined ROOTS Education Co.
- Expanded a national network of education and industry partners
- Broadened his impact beyond a single institution
- Grew as a leader in advanced manufacturing education

For Justin, one of the most meaningful outcomes was seeing his work grow beyond a single institution to influence advanced manufacturing education nationwide. Today, he partners with colleges, employers, and workforce organizations across the country to develop pathways that prepare the next generation of robotics, automation, and semiconductor technicians.

Advice for future NextLevel Fellows

Justin encourages future Fellows to think beyond the immediate challenges facing their institutions and consider how their ideas can create lasting impact for the broader field. He believes meaningful change happens when educators stay connected to industry needs and remain willing to adapt as technology and workforce demands evolve.

Justin also credits the Fellowship with expanding his professional network and exposing him to new ideas that helped shape his leadership and his career. The relationships and perspectives he gained through the program gave him the confidence to pursue innovative solutions that continue to influence career and technical education across the country.

The ACTE NextLevel Fellowship helped Justin transform an institutional improvement project into a national framework for preparing the next generation of robotics and semiconductor technicians.

To learn more about the NextLevel Postsecondary CTE Leaders Fellowship, visit www.nextlevelcte.org

