

\$15M 'Digital Thread' proposal puts Dayton colleges at the forefront of next-gen jobs



Members of Dayton's defense community are looking to partner more closely with the region's community colleges through a proposal that would expand training and skills development for the next generation of Ohio's digital manufacturing workforce.

GETTY IMAGES (ZAPP2PHOTO)



By [Jacob Fisher](#)
Staff Reporter, Dayton Business Journal
December 14, 2020

Members of Dayton's defense community are looking to expand partnerships with local community colleges in order to expand training and skills development for the next generation of Ohio's digital manufacturing workforce.

ARCTOS, one of the region's largest defense contractors, submitted a proposal this month to the Dayton Region Priority Development & Advocacy Committee (PDAC) seeking \$15 million in

state support for the "Smart Manufacturing Ohio Digital Thread Initiative II" — the second phase of an initiative that launched in 2019.

The first phase enabled three community colleges — Sinclair, Clark State and Lorain County Community College — to pilot digital thread concepts designed to skill, reskill and upskill students and workers to help Ohio aerospace companies maintain their dominance in precision manufacturing of aerospace parts.

Additional funding would allow the program to embark on its next phase: creating a "digital learning factory" where Miami Valley schools can share assets with other learning institutions and industry partners without duplicating resources.

"Through asset mapping and a scheduling app, state-of-the-art I4.0 (Industry 4.0) equipment will be made available for students and workers to secure training time on the latest equipment," ARCTOS said in its proposal. "This will be established through an industry consortium which would provide payment to the equipment owner for consumables and operations cost."

The pilot program envisions a regional resource exchange that leverages partnerships with postsecondary institutions from Cincinnati to Columbus. The ability to mix and match a wide range of capabilities would enable the region's schools to develop sets of micro-credentials that fit the unique needs of various manufacturing ecosystems, ARCTOS stated.

A second funding round would also build upon digital thread concepts the initiative previously piloted, according to the proposal.

Sinclair College, for example, initiated a set of pilot programs last year to guide local companies as they incrementally adopt digital technologies. Additional resources would enable the college to develop scaled data literacy and data empathy awareness programs that lead to transportable, industry-recognized credentials.

And for Clark State, additional funding should foster continued collaborations with the University of Dayton Research Institute, Wright State University and Dayton Regional STEM School, exposing more students to career pathways in metal additive manufacturing, laser material processing, material and computer sciences, systems integration and robotics.

"A critical-thinking, digitally skilled, 21st-century manufacturing workforce is the key for the competitiveness of Ohio," ARCTOS stated. "Ohio's higher education capabilities, through regional career centers and community colleges, will deliver this understanding through hands-on, real-world pilot projects to Ohioans throughout the state."

PDAC, an arm of the Dayton Development Coalition, establishes regional priorities for funding public projects. PDAC does not directly fund projects; rather, it allows community leaders to evaluate projects and establish a list of regional priorities that help the region "speak with one voice" when presenting priorities to officeholders and other decision makers.

The PDAC committee will complete a final review and approval of project rankings, which will be submitted to the Ohio Congressional delegation in time for the Region's Annual Fly-In to Washington, D.C., tentatively scheduled for 2021.