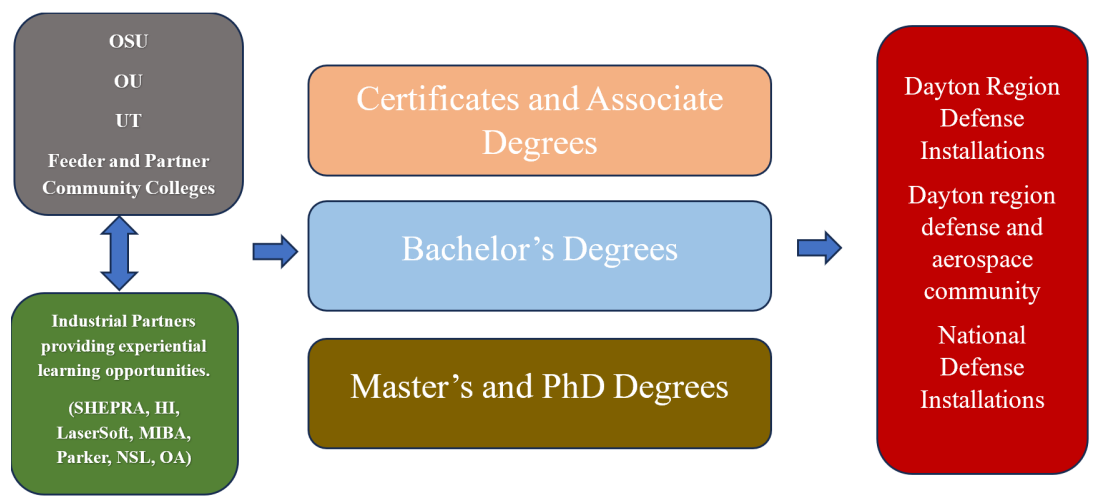


DREAM: AM Focused Workforce Development



Description: AM Focused STEM Workforce Development Model

Objective: Develop skillful and reliable AM focused STEM workforce to maintain competitive advantage for Dayton Region Defense Installations, Dayton region defense and aerospace community, and national defense.

Benefits: Readily available personnel and skillset for Dayton Region Defense Installations or defense community/contractor's business expansion or relocation.

Approach: Higher educational institutes working with technical/community colleges and industrial partners to leverage existing training pipelines to target and develop AM focused STEM based skillset highly desired by Dayton region defense stakeholders.

Collaborators: OSU, OU, UT, partner community colleges/feeder college (Hocking College, Shawnee State University, Columbus State Community College, Owens Community College), SHEPRA, HI, LaserSoft, MIBA, Parker, NSL, OA.

Deliverables:

1. Certificate program pipeline , 100 to 200 graduates.
2. Associate degree program pipeline, 200 to 250 graduates.
3. Bachelor and advanced degree program pipeline (Train the trainer), 75 to 100 graduates.

DoD Science & Technology Priority:
 Advanced Materials & Manufacturing
 Artificial Intelligence & Autonomy
 Space Technology
 Hypersonics

JobsOhio Priority:
 Advanced Manufacturing
 Aviation & Aerospace
 Military & Federal
 Automotive

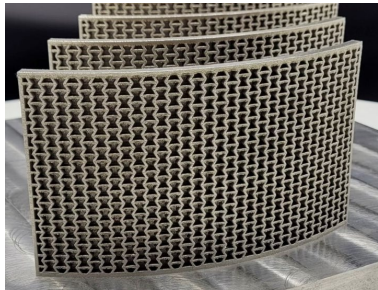
Budget Request

Item / Task	Non-Recurring	Recurring
Certificate Program development/Scholarships	\$700K	\$100K
Associate Degree Scholarships and support efforts	\$900K	\$200k
Bachelor and Advanced Degrees and infrastructure	\$1000K	\$400K
Total	\$2,600K	\$700K

FY'25 Congressional Budget Request: \$3,300K

Program Element: Air Force Applied Research Materials: 0602102F

Dayton Regional Ecosystem for Additive Manufacturing: DREAM



DREAM Overview

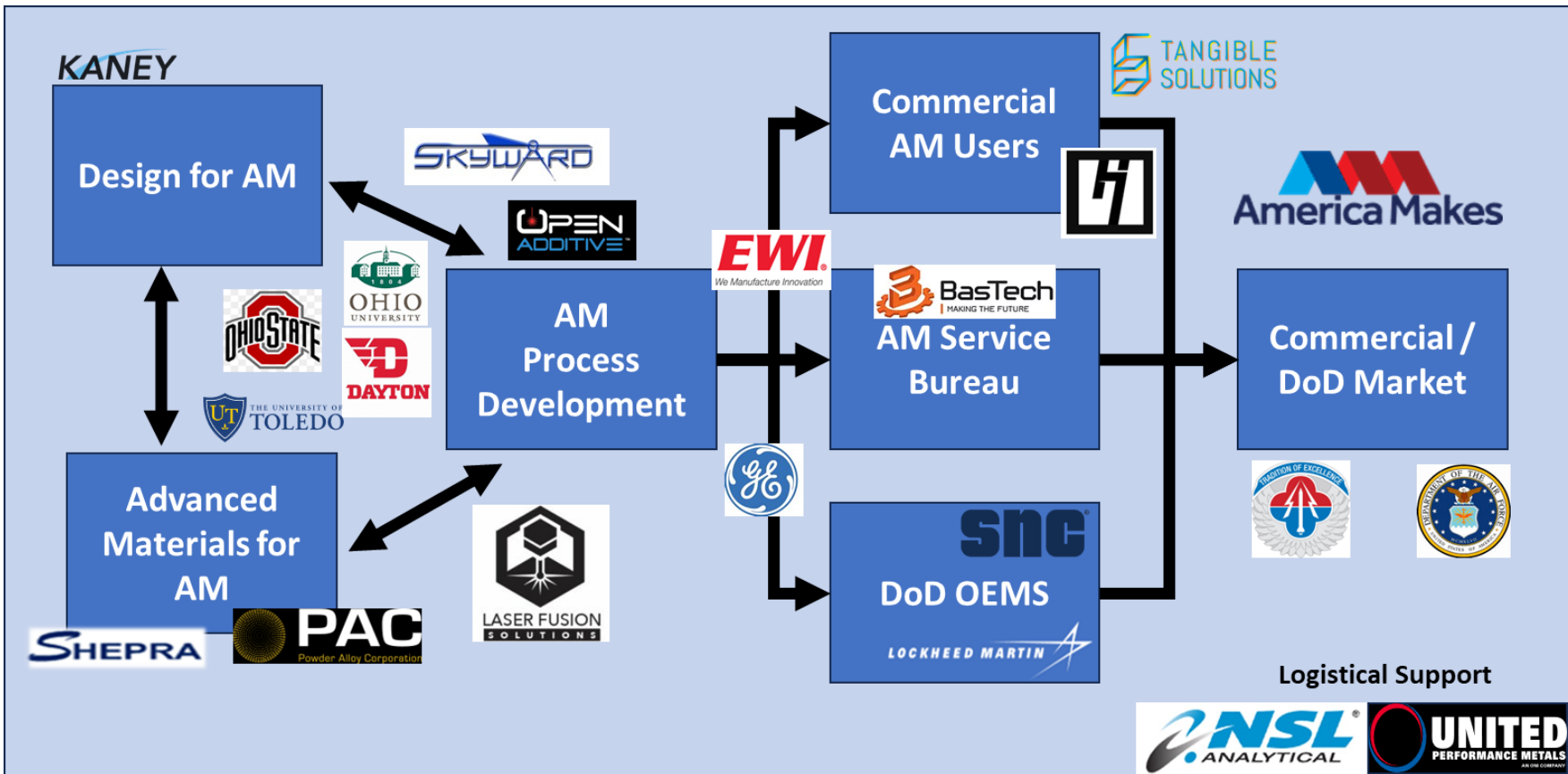
Objective: Spur economic growth by developing keep capabilities and technologies that support the utilization of Additive Manufacturing

Opportunity: The greater Dayton region and the state of Ohio have established a nascent ecosystem that supports the emerging technology of Additive Manufacturing.

- This ecosystem includes:
 - *Raw materials production and advanced material development,*
 - *Fabrication of additive manufacturing systems,*
 - *Sensor and software development for AM quality assurance*
 - *Contract Additive Manufacturing and logistical Support*
 - *Fabrication of Aerospace and Biomedical components and devices*

Approach: Execution of individual projects that collectively develop the workforce and enable new technologies that expand the Additive Manufacturing capabilities of the ecosystem and transition to DoD and Commercial OEMs and spur economic development.

DREAM Value Stream



DoD Science & Technology Priorities

Advanced Materials & Manufacturing
Artificial Intelligence & Autonomy
Space Technology
Hypersonics

Jobs Ohio Priorities

Advanced Manufacturing
Aviation & Aerospace
Military & Federal
Automotive

The DREAM value stream spans the entire innovation pipeline to turn concepts and capabilities into market realities

DREAM Team: Ohio



National Policy & Technology Leadership: US Air Force, AmericaMakes, NASA

Materials Development: SHEPRA, Univ of Dayton, Powder Alloy Corp, Ohio State, Ohio Univ. Univ of Toledo

Design for Additive Manufacturing: Kaney

AM Sensor & Software Development: Skyward, Laser Fusion Solutions, Open Additive, Wright State

AM Production Systems Mfg: Open Additive, AddUp, Lincoln Electric

AM Fabrication Services: BasTech, Tangible Solutions, Laser Fusion Solutions, Beehive, RP+M

AM Logistical Support: United Performance Materials (AM consumables)

Applications:

Maintenance & Sustainment: Sierra Nevada (MRO), SHEPRA (logistics)

Propulsion: General Electric, Hyphen Innovations, Beehive

Hypersonic: SHEPRA, GoHypersonic, New Frontier Aerospace