



Alabama Defense Advanced Manufacturing Community

ADAMC

ADAMC Status Update

January, 2023



U.S. Department of Defense
Office of Local Defense
Community Cooperation

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ADAMC Vision

The ADAMC region is comprised of. . .

industry that is **knowledgeable** of advanced manufacturing technologies, applications, and benefits and progressively adopting them into their normal operations;

and an

advanced manufacturing workforce that is **educated and gainfully employed**, and fed by a **pipeline** of candidates that view advanced manufacturing as a **preferred career path**;

where

advanced manufacturing technologies are easily **accessible** by industry and **developed and integrated** to improve their performance.



ADAMC Consortium

Founding Organizations



Lead Organization



Other Consortium Members



ADAMC Supporting Organizations

Partner Non-Profit

National Center for Defense Manufacturing and Machining
Advanced Manufacturing Innovation and Integration Center

Academia

Auburn University
Stillman College
Troy University
University of Alabama
University of Alabama in Huntsville
University of West Alabama
Athens State University

Community College / Technical

Calhoun Community College
Central Alabama Community College
J.F. Drake State Community & Technical College
Southern Union College

Municipality / Econ. Development

BIO Alabama
Calhoun County EDC
City of Huntsville
City of Tuscaloosa
Huntsville Committee of 100
Huntsville Madison County Chamber
Lake Martin Area Economic Development Alliance
Montgomery Area Chamber of Commerce
Morgan County Economic Development Association
Ozark-Dale County Economic Development Corporation
TN Valley Corridor
Tuscaloosa County Commission



ADAMC

Alabama Defense Advanced Manufacturing Community



ADAMC is building on the existing relationships with DoD Manufacturing Innovation Institutes that support the vision of ADAMC

DoD OEM

Carpenter Technology
Dynerics
Dynerics, Inc.
GE Additive
GE Aviation

Intuitive Research
Lockheed Martin Corporation
Northrop Grumman
Siemens
Teledyne Brown Engineering

DoD Small/Medium

Aerobotix
Brown Precision, Inc.
Canvas Incorporated
CFD Research Corporation
Cimarron Composites
Defense Enterprise Solutions
DigiFlight
EngeniusMicro
Engenix, Inc.
Geeks and Nerds Corporation
GeneCapture, Inc.
Go-to-Market Solutions
iXpressGenes, Inc.
Kord, a Centauri company

Linc Research
Marathon Robotics
Pinnacle Solutions, Inc.
R2C Inc.
ReLogic Research, Inc.
Schmitt Consulting Group LLC
Seabrook Solutions, LLC
T&C Stamping, Inc.
TomMarkTony3 Services, LLC (TMT3)
Torus Concepts Inc.
TriVector Services Inc.
Victory Solutions

Workforce Development

Alabama Technology Network (NIST – MEP)
Alabama Productivity Center/UA-ATN Center
CMER / UAH-ATN
North Alabama Works
West Alabama Works
Still Serving Veterans

Regional Other

HudsonAlpha Institute for Biotechnology
NASA Marshall Space Flight Center

About ADAMC

The ADAMC comprises 22 counties that capture

- the majority of aerospace and defense manufacturing,
- defense installations, and
- associated industries



ADAMC Thrust Areas



Workforce Development

Secondary, post secondary, incumbent worker, dislocated worker



Technology Adoption

Awareness, benefits, justification and barriers



Technology Development

Integration, augmentation and design

Enabling Activities

- Support the establishment of the **Advanced Manufacturing Innovation and Integration Center (AMIIC)**
- Conduct research and analysis of advanced manufacturing **workforce needs and gaps**

Goal Areas for ADAMC Strategy

- ✓ Presence
- ✓ Perception
- ✓ Promotion



Presence

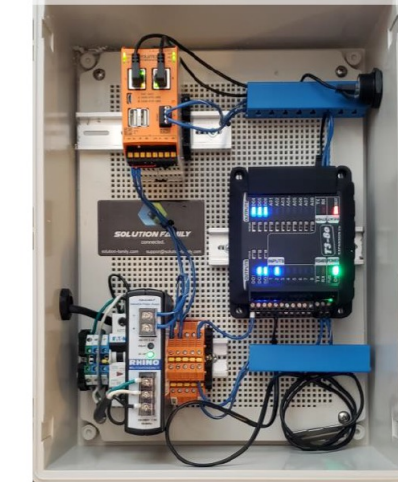
Establish presence with industry stakeholders across the region

“Support industry with advanced manufacturing technology”

“Go to industry: Virtual and/or physical roadshow to go to industry”

- ✓ **Workforce Development**
- ✓ **Technology Development**
- ✓ **Technology Adoption**

Delivering IIoT 4.0 Today!



SMART MANUFACTURING
ADOPTION STUDY
2022



Thank you to everyone who attended our March Tech Talk. We had great food and great information from this month's speaker, Chandler Wicks! ...see more

America Makes
2mo • 4

SOLD OUT! #TRXevent at AMIC (Advanced Manufacturing Innovation and Integration Center) in Huntsville, Alabama will be a full house! Looking forward to seeing industry come together once again with 17 technical present...see more

SOLD OUT!

America Makes + AMIC

TRX
Technical Review & Exchange

Kuan Collins • 2nd
4mo • 4

+ Follow

I am in digital engineering heaven. I have an academic crush on Ahsan Choudhuri. Equating this to learning nuclear physics from Robert Oppenheimer. Thanks to our partner AMIC (Advanced Manufacturing Innovation and Integration Center) and John Schmitt for making this happen for SAIC.

Digital Trinity

There is No Spoon
The New Digital Architecture Reality

A Transformative Acquisition Process where hundreds of tested, and even sustained virtually before the test parts are purchased or used in reality.

Digital Engineering

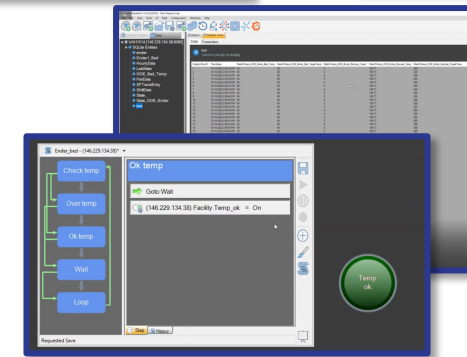
Agile Software

Open Architecture

A TRUSTED, UNBIASED PARTNER
IN MANUFACTURING AND
WORKFORCE MODERNIZATION.

TEAMING AND
COLLABORATION

GOVERNMENT



- Assess industry challenges & needs
- Assess DoD Technology development needs
- Convene industry, workforce development, DoD, other
- Technology conferences / workshops
- Training
- Technology introduction
- Technology demonstrations
- Technology implementation
- Technology talks
- Advanced Manufacturing and Technology Guide
- DoD manufacturing association

Perception

Change the perception of manufacturing

“Students choose careers based on what they know or have seen; most do not know nor have seen manufacturing (Perception: Dirty, dark and dangerous)”

“Not just students, but parents and teachers”

- Career exposure and opportunities – students, parents and teachers
- Curriculum and program development
- Workshops and conferences
- Accessible education and career pathways

Worlds of Work (WOW):

Designed to expose youth to high-wage, high-demand careers available in North Alabama (approx. 9,000 students)

STEM Industry Externship Program:

Provide educators with externship experiences in STEM-based public and private industries, deepening the connection between STEM workplaces and the classroom.

The University of Alabama IMaDE Lab - Introduction to Smart Manufacturing Workshop:

Motivate regional teachers and educators to implement an early introduction program to Industry 4.0 and smart manufacturing systems (SMS).

Modern Manufacturing:

Develop knowledge and skills to equip high school students for careers in manufacturing such as industrial maintenance, manufacturing, electronics, precision machining, and robotics. UAH ADAMC is serving on the Advisory Committee.

NextFlex

FlexFactor and Flex2Future programs with Calhoun and Drake State



Promotion

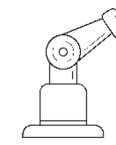
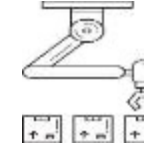
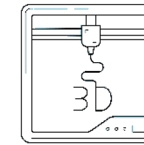
Promote advanced manufacturing initiatives and all that is available in the region

“ADAMC can play a role as hub for sharing/disseminating information and resources to industry”

“ADAMC can play role as "convener" of organizations and associations around topics of interest – education, training, job seekers”



ADVANCED MANUFACTURING WORKFORCE VISUALIZATION AND ACCESS TOOL



ADAMC developing a tool to map and increase awareness of the current and evolving advanced manufacturing skills needed along with workforce development resources and curricula across the region.

- ✓ Education & career pathways
- ✓ Collaboration between industry / education
- ✓ Links to statewide resources
- ✓ Advanced manufacturing / STEM activities
- ✓ DoD industry advanced manufacturing needs and capabilities
- ✓ Success stories and case studies



Alabama Defense Advanced Manufacturing Community

The ADAMC consortium promotes **visibility, awareness, and adoption** of advanced manufacturing technologies; and **enhances the development and education of the regional workforce** that is critical to modernization of the DoD industrial base and related industries.



Awarded a **\$3.7M**
Defense Manufacturing
Community grant
\$6.2M total



Comprised of **22**
Counties

that capture most of the aerospace and defense manufacturing, defense installations, and associated industries



Over **32**
companies assisted

in advanced manufacturing technology deployment and training



Over **350**
Workers trained

in **32 workshops**; includes incumbent workforce and dislocated worker training and awareness (veterans)



Over **500**
Students trained

in **40+ workshops**; includes secondary and post secondary students in NextFlex learning programs



Over **20**
New courses developed

In advanced manufacturing including IIoT, controls, robotics, etc.

Leverages resources such as regional industry partners, DoD manufacturing institutes and other academia and workforce development organizations

THRUST AREAS



WORKFORCE DEVELOPMENT



TECHNOLOGY ADOPTION



TECHNOLOGY DEVELOPMENT

Strategic Initiatives* 2023-2024

VISION

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industry that is **knowledgeable** of advanced manufacturing **technologies, applications, and benefits** and **progressively adopting** them into their normal operations; and an **advanced manufacturing workforce** that is **educated and gainfully employed**, and fed by a **pipeline** of candidates that view advanced manufacturing as a **preferred career path**; where **advanced manufacturing technologies** are easily **accessible** by industry and **developed and integrated** to improve their performance.

FOCUS AREAS

Workforce Development

Technology Adoption

Technology Development

ADAMC Program

STRATEGIC INITIATIVES

Engage and support WDE organizations

Promote in-demand jobs and education pathways

Maximize alignment of skills taught to industry needs

TA Resources / Tools Available to Industry

Complete TA Support Projects with Industry

Align DoD needs with industry capabilities

Support industry with TD Research

Develop ADAMC Sustainability Plan

Enhance ADAMC Communication

Expand and diversify ADAMC

ACTIONS

- Engage with all AlabamaWorks! regions
- Expand support activities (e.g., STEM Externships, WoW support)
- Compile and consolidate industry workforce needs
- Develop capability to maintain skills taught and volume going through programs

- Develop maturity measurement capability
- Develop technology adoption guides
- Develop and provide business case analysis and ROI tools
- Plan, pilot and expand technology adoption support

- Engage with DoD on technology development needs (e.g., workshops)
- Identify organizations that can support DoD needs
- Establish and industry engagement plan aligned with technology development roadmap milestones

- Plan and execute ADAMC sustainability workshops
- Develop a detailed strategic communication plan
- Develop and deploy online tool and resource sharing capability
- Develop and execute industry expansion and diversification plan
- Explore the creation of an Advanced Manufacturing Association

* Some strategic initiatives are new for 2023/24 while others are a continuation of ongoing ADAMC efforts.



ADAMC Advisory Board

Name	Organization	Title
Keith Bagley	Hartzell Engine Technologies, LLC	President at Hartzell Engine Technologies, LLC
Greg Brown	Brown Precision, Inc. / Huntsville Madison County Chamber	Co-CEO / CFO at Brown Precision, Inc.; 2022 Chamber Board Chair
George Clark	Manufacture Alabama	President
Dr. Greg Harris	Auburn University	Department Chair, Industrial & Systems Engineering
Dr. Nader Jalili	The University of Alabama	Professor and Department Head, Mechanical Engineering
Mary Norton	Intuitive Research and Technology Corporation	Corporate Relations
John Schmitt	Advanced Manufacturing Innovation and Integration Center	Executive Director
Steve Sewell	Economic Develop Partnership of Alabama (EDPA)	Executive Vice President
Antoine Townes	GE Aviation	Executive Plant Leader
Gary Weaver	Alabama Community College System	Regional Workforce Director
Dr. Suzy Young	The University of Alabama in Huntsville	Director Office of Proposal Development
Jamie White (ex-officio)	U.S. Department of Defense Office of Industrial Base Policy	Deputy Director, Industrial Base Analysis and Sustainment (IBAS) Program



For more information

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