



## AGENDA

IALR Board of Trustees

### MANUFACTURING ADVANCEMENT COMMITTEE

Thursday, November 2, 2023 - 10:45 am - Conference Room 203

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|---|-------------------|
| I. <b>Convening of Meeting</b>                                  | Mr. Ben Davenport |
| A. Welcome  |                   |
| B. Call to Order and Confirmation of Quorum                     |                   |
| C. Call for Changes to Agenda                                   |                   |
| II. <b>Approval of Minutes</b>                                  | Mr. Ben Davenport |
| A. August 3, 2023   |                   |
| III. <b>Manufacturing Advancement Update</b>                    | Ms. Amanda Hylton |
| IV. <b>Center for Manufacturing Advancement - Update</b>        | Mr. Telly Tucker  |
| V. <b>Open Discussion of Concerns, Issues, and Observations</b> | Group             |
| VI. <b>Adjournment</b>  | Mr. Ben Davenport |

Reference material included: "Advanced Manufacturing Update"

#### Future Committee Meetings

February 1, 2024  
May 2, 2024

#### Future Plenary Meetings

November 16, 2023  
February 15, 2024  
May 16, 2024

#### Advanced Manufacturing Committee Members

Mr. Ben Davenport, *Chair*  
Mr. David Bennett  
Mr. Don Gibson  
Dr. Greg Hodges  
Mr. Mark Holland  
Mr. Don Merricks, *Ex Officio*  
Mr. Lott Rogers  
Dr. Jerry Wallace

#### IALR Staff

Mr. Telly Tucker, President  
Ms. Amanda Hylton, VP of Strategic Initiatives  
Dr. John Hughes, EVP, Operations  
Ms. Pam Patterson, BOT Secretary



**IALR BOARD OF TRUSTEES (BOT)**  
**MANUFACTURING ADVANCEMENT COMMITTEE**  
**Minutes – August 3, 2023 - 10:45 a.m. – Conference Room 205**

<p><b><u>Members Present</u></b> Mr. Ben Davenport, <i>Chair</i> Mr. David Bennett Mr. Don Gibson Dr. Greg Hodges Mr. Mark Holland Mr. Don Merricks, <i>Ex Officio</i></p> <p><b><u>Members unable to attend</u></b> Mr. Lott Rogers Dr. Jerry Wallace</p>	<p><b><u>IALR Staff Present</u></b> Mr. Telly Tucker, President Dr. John Hughes, EVP of Operations Mr. Todd Yeatts, EVP, Manufacturing Advancement Ms. Pam Patterson, BOT Secretary &amp; Executive Assistant</p> <p><b><u>IALR Staff Unable to Attend</u></b></p> <p><b><u>Guests</u></b> None</p>
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**Call to Order / Confirmation of Quorum / Changes to the Agenda**

Mr. Ben Davenport, Chair, called the meeting to order at 10:45 a.m. on Thursday, August 3, 2023. A quorum was present. There were no changes to the agenda.

**Attendance of Committee Members by Electronic Communications Means**

There was no attendance by electronic communication means.

**Approval of Minutes**

- **Motion** – Mr. Mark Holland made a motion to approve the Minutes from the May 4, 2023 meeting. Mr. Don Gibson seconded the motion. The motion was approved by unanimous vote.

**Manufacturing Advancement Update**

Mr. Todd Yeatts presented the Manufacturing Advancement narrative report (**Exhibit A**), and a PowerPoint presentation (**Exhibit B**). The report focused on the following programs:

ATDM – Accelerated Training in Defense Manufacturing

- Two cohorts, 128 students currently in training
- ATDM 3.0 contract has been executed
- Regional Training Center contract has been executed
- A total of 24 new hires during the 4<sup>th</sup> quarter
- Supported 15 industry visits during the quarter
- The May cohort graduation was the last small graduation. It started with 22 students and has been replaced with 72 students.
- 86% graduation rate; all 229 graduates earned national certifications
- Strong Submarine Industrial Base (SIB) and Navy Organic Industrial Base (OIB) participation – 35% of total students
- Overall, 65% (149) of ATDM graduates are working in the Submarine Industrial Base (SIB) / Defense Industrial Base (DIB)

ATDM Housing

- 151 apartments have been secured to date. Mr. Tucker commented that he is working to secure 47 additional apartments between October 2023 and February 2024.

ATDM Regional Training Center

- The groundbreaking ceremony with the Navy is being planned during the ATDM Summit in October 2023.

Defense Manufacturing Community Support Program (DMCSP)

- The no-cost extension has been approved.

CMA – Industry 4.0

- Working through the partnership agreement for the metrology lab
- Three ITAR general awareness classes have been completed for IALR staff

CMA – Additive Manufacturing Center of Excellence(AM COE)

- The first five Technical Data Packages (TDPs) have been successfully completed
- Equipment installation is being finalized

Specialized Training – Haas Technical Education Community (HTEC)

- Currently registering students for the next training courses
- Presented at the 2023 HTEC Americas Conference held July 24<sup>th</sup>-27<sup>th</sup> in Fort Smith, Arkansas

**Open Discussion of Concerns, Issues, and Observations**

- Workforce Development – Mr. Tucker commented that IALR and DCC plan to convene a meeting in September for all of the entities in this region that deal with workforce development programming (GO TEC, K12 School Superintendents, CTE leaders, community

colleges, and IALR. There is less connectivity at present than there used to be.

**Adjournment**

Mr. Davenport adjourned the meeting at 11:36 a.m.

**Minutes Recorded By:**

**Minutes Approved By:**

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**Pam Patterson**  
**BOT Secretary**

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**Mr. Ben Davenport, BOT Chair**  
**Advanced Manufacturing Committee**

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**Date**

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**Date**

**Attachments Included as Official Part of Minutes**

Exhibit A - Manufacturing Advancement Report

Exhibit B – Manufacturing Advancement PowerPoint Presentation

Manufacturing Advancement Report  
Amanda Hylton, VP Strategic Initiatives  
Tim Robertson, COO  
November 2, 2023

**Personnel Updates:**

- ATDM
  1. Tytiana Dennis – ATDM Student Support Specialist
  2. Corey Williams – ATDM Student Support Specialist
  3. Shawn Dolph – ATDM CNC Instructor
  4. Kip Crouch – ATDM CNC Technician
  5. Tim Holland – ATDM CNC Technician
  6. Jason Fenley – ATDM CNC Instructor
  7. Nathan Lake – ATDM Admissions Counselor
  8. James Perry – ATDM Welding Technician
  9. Karl Staten – ATDM Recruitment Specialist
  10. Sherlina Thomas – ATDM Assistant Director for Student Support
  11. Rodrica Clark – ATDM Industry Senior Support Specialist
  12. Savannah Horney – ATDM Curriculum Content Designer
  13. Maiwand Hashimi – ATDM Afghan Support Specialist
  14. Philip Bowers – ATDM NDT Instructor
  15. Hector Garcia – ATDM Welding Technician
  16. John Keatts – ATDM Welding Department Lead
  17. Robbie Jones – ATDM Welding Instructor
  18. Morgan LaBranche – ATDM Student Placement Coordinator
- CMA
  1. Kevin Thompson – CMA Operations Manager
  2. Lynn Jones – CNC Machinist
  3. Yolanda Mounkaila – CMA Information Desk Specialist
- Manufacturing Advancement
  1. Debbie Fuchs – Manager, Strategic Communications
- Open Positions
  1. ATDM NDT Instructor – 2 positions
  2. ATDM CNC Department Lead
  3. ATDM Recruitment Specialist
  4. ATDM Applications Support
  5. ATDM Metrology Instructor
  6. ATDM Metrology Technician
  7. ATDM Additive Manufacturing Technician
  8. ATDM Deputy Director, Training and Technology
  9. NAVAIR Additive Manufacturing Instructor
  10. NAVAIR Additive Manufacturing Technician
  11. CMA Manager, Digital Manufacturing
  12. CMA CNC Machinist

## Accelerated Training in Defense Manufacturing

- Budget and Contracting
  - ATDM 2.0 contract has been finalized and fully invoiced
  - ATDM 3.0 is underway with \$5.4M being invoiced to date of the full \$21.2M
    - \$7.1M expended to date
  - The RTC contract has been fully executed and a proposal has been submitted for additional funding to support the additional costs submitted by the contractor through the bid process
    - Total funded to date is \$56.9M
  - Under contract to execute the NAVAIR Additive Manufacturing Training
  - ATDM and Spectrum participated in an in-person Program Management Review with leasers from the IBAS (Industrial Base Analysis and Sustainment) program office in Falls Church, VA in August
- Staffing
  - A request to realign staffing has been submitted to better align to current and future identified needs
  - Instructional staff has successfully transitioned to IALR as of August 1, 2023
- Recruitment
  - Increase in the number of applicants, with over 670 in the past three weeks, resulting in an accelerated implementation of new processes
  - 1,016 active applications; 7,561 active leads/inquiries
- Training
  - 50 Students graduated on September 15, 2023 as part of the May cohort
  - The July cohort started currently at 56 students, will graduate November 7
  - October cohort started with 93 students
- Industry Engagement
  - Additional processes being developed to support an increase in the number of participating companies
  - 24 companies participating in Workforce Connection event in August and 25 participating during the event on October 11
- Dedicated Training Facility
  - Construction remains on schedule
  - Groundbreaking took place as part of the ATDM Summit on October 11
- ATDM/AM COE Summit
  - 464 attendees
  - 25 companies participated in the Workforce Connections Events
  - Speakers included:
    - The Honorable Chris Lehman, Chairman of the Board of the Landing Craft Support Museum Foundation
    - RADM Scott Pappano, Program Executive Officer, Strategic Submarines
    - Julian Purdy, Deputy Assistant Secretary – Policy U.S. DOL Veterans Employment and Training Services

- Brad Keselowski, NASCAR Driver, Owner/Founder Keselowski Advanced Manufacturing
- Don Hairston, General Manager of Austal USA Advanced Technologies
- Livia Shmavonian, OMB Director of the new Office for “Made in America”
- Carlos Del Toro, U.S. Secretary of the Navy

### **NAVAIR Additive Manufacturing Training**

- Contract to complete training has been executed
- Equipment has been installed and curriculum scope of work is being finalized
- Anticipated start date of dedicated training is February 2024
- Will train 96 sailors and marines every year with 12 students per cohort every 6 weeks at scale

### **Defense Manufacturing Community Support Program (DMCSP)**

- Patrick & Henry Community College and Old Dominion University are in the final stages of approving an articulation agreement for the Manufacturing Engineering Technology degree pathway
- The Office of Veterans and Defense Affairs continues to work to coordinate a visit from the new federal program manager
- A whitepaper to outline next phases of the DMCSP grant and Defense Manufacturing Community designation renewal is in development
- The next phase of funding is anticipated to be submitted June 2024
- America Makes is under contract to support the development of ITAR and security awareness training modules to support defense manufacturing training
- James Hubbard, Director of Training and Technology, was invited to serve as a panelist at the annual America Makes conference to highlight the partnership with America Makes in additive manufacturing curriculum development

### **Center for Manufacturing Advancement**

- International Traffic in Arms Regulations (ITAR) training is required for all staff to receive badge access to the CMA
- A training package to help board members understand the implications of ITAR security protocols is being developed
- Complete integration of the Industry 4.0 lab is anticipated for Mid-December
- The Quality Management System (QMS) has been completed and implemented
- CMA is now ISO 9001:2015 compliant
- Large scale X-ray cabinet has been installed in CMA bay #1 to support AMCOE activity. This equipment will be operated by Industrial Inspection and Analysis (IIA). This capability the first of it's kind in the region.

## **Additive Manufacturing Center of Excellence (AM COE)**

- Production on AMCOE parts has begun in CNC bay
- Installation and training on first piece of equipment funded by AMCOE project is complete (rough value \$175K)
- IALR will machine on schedule to machine and inspect 26 AMCOE parts prior to December 31<sup>st</sup>, 2023.

## **Specialized Training**

- Dylan Hardy continues to work with the Haas Technical Education Community to deliver HTEC training
- 35 participants (duplicated) representing \$81,250 in total revenue, and \$65,000 in revenue for IALR
- Dylan Hardy held a workshop on Teacher Training at the HTEC Americas conference
- Amanda Hylton was elected to serve on the National HTEC member council

## **Integrated Machining Technology**

- The newest cohort started in August with 11 students
- Robotics & Automation integration into the curriculum is underway
- A new IMT instructor has been selected and will begin on November 10

## **Key Highlights this Quarter**

- Justin Owen, ATDM CNC Instructor, was selected to participate in Leadership Southside
- ATDM staff visited Curtiss-Wright, Newport News Shipbuilding, Fairlead, Scot Forge, Machine Specialties, BWX Technologies (Indiana) and AMG
- ATDM and Manufacturing Advancement staff have supported ten company visits this quarter
- James Hubbard and Amanda Hylton served on a national additive manufacturing panel at America Makes Members Meeting & Exchange (MMX) to represent the Defense Manufacturing Community Support Program.



## Contributions to the Strategic Plan

- **Accelerated Training in Defense Manufacturing**
  - Center of Excellence for Education & Workforce Development – ATDM is the pilot for a national network of accelerated training programs aimed at reducing “time-to-talent” for the defense industrial base (DIB) and filling critical skills gaps in defense manufacturing. As a national-in and national-out training platform, it partners with recruiting sources and industries nationwide
  - Globally Competitive Ecosystem – ATDM provides a robust level of industry engagement that allows industry to send students for training and place students in employment. As with previous models, such as Integrated Machining Technology, it has been shown that industry is interested in locating near training facilities to recruit workers at velocity and scale, which ATDM will produce. These trained individuals will support a workforce pipeline that will make the region more globally competitive
  - Collaborative Team Success – ATDM relies on external partnerships with recruitment sources, job placement entities, industry and technology partners. The multiple subcontractors involved in making the training a success provide opportunities to collaborate with other internal divisions
  
- **Defense Manufacturing Community Support Program**
  - Virginia's Go-To Partner for Business and Economic Growth – DMCSPP supports the Virginia Maritime Industrial Base Consortium (VMIBC) as a leading hub for developing skilled workers and the engineering workforce for the maritime industry in Virginia; supports local, regional, state, and national economic development through the designation as a Defense Manufacturing Community (DMC) and the collaborative partnerships created through the VMIBC; IALR serves as the convener of partners to execute the DMCSPP grant, providing the ability of IALR to be the go-to partner for the Virginia Department of Veterans and Defense Affairs in developing and enhancing workforce development pipelines that support Virginia's business and economic growth plans
  - Center of Excellence for Education & Workforce Development – DMCSPP supports education & workforce development through the DMC ecosystem which provides a K-12 to university and beyond workforce training system. This includes career connections, high school, community college, university and adult learner options for training students to support the Virginia maritime industry. DMCSPP creates a pipeline for manufacturing engineering technologists and provides continuous improvement into training programs that rely on industry needs. The mission of the VMIBC (the designated DMC community) is to increase manufacturing capacity, capability, resiliency, and diversity in the maritime industrial base by creating a cross-region K-12 to university training pipeline for skilled workers and manufacturing engineers
  - Globally Competitive Ecosystem – DMCSPP advances and connects

businesses in the region through a strong collaborative network of industry, government and academia. DMCSPP will increase the supply of skilled labor and manufacturing engineers that will help to close manufacturing skills gaps, address manpower shortages, build manufacturing capacity and capability, and modernize the workforce to enable the industrial base to fully support the Navy's sustainment and shipbuilding needs. This will position the Commonwealth to be globally competitive in attracting manufacturing industries that are aligned to the skills within the pipeline

- Collaborative Team Success – DMCSPP strengthens collaborative, regional education partnerships (ODU, P&HCC, Virginia State University and K-12 school divisions in Southern Virginia and Hampton Roads) and supports internal collaboration through the integration and expansion of GO TEC into the Hampton Roads region through the DMCSPP partnership

- **Center for Manufacturing Advancement**

- Virginia's Go-To Partner for Business and Economic Growth – The CMA supports Virginia manufacturers in their pursuit of manufacturing optimization and innovation. The CMA offers technical expertise, lab space, equipment and a collaborative environment to help existing and new Virginia manufacturers increase productivity that has direct economic impact. The CMA serves as a centralized resource of emerging, production ready technologies to help drive the success of Virginia manufacturers. The US Navy AM Center of Excellence within the CMA is expected to support additional companies in their ability to produce AM parts for Navy submarines, including companies in Virginia
- Center of Excellence for Education & Workforce Development – Through efforts connected with ATDM, the CMA's AM COE will connect ATDM graduates with Additive Manufacturing (AM) jobs directly related to the Submarine Industrial Base (SIB). These connections will support the recruitment and placement efforts of ATDM. These connections will also support the US Navy and the SIB's effort to modernize the workforce and prepare for increasing AM production
- Globally Competitive Ecosystem – The CMA will allow businesses in Virginia to be globally competitive through innovations in current and new manufacturing processes. The AM COE at CMA will also support a globally competitive ecosystem through development of innovative additive manufacturing strategies, technical data and processes
- Collaborative Team Success - The CMA serves as the go-to hub for manufacturing advancement and innovation for Virginia businesses and beyond. The CMA will bring internal and external partners together to form a cohesive group of manufacturing experts, technical partners, business leaders and government officials. These partnerships and collaboration will drive the projects and programs at the CMA. The projects and programs will lead to positive return on investment for IALR and project partners. Revenue generated through CMA projects will help

support the Manufacturing Advancement division as a whole and help provide the required resources to remain industry relevant and globally competitive

- **Specialized Training**

- Virginia's Go-To Partner for Business and Economic Growth – As one of four HTEC training centers in the country, IALR serves as the Go-To teacher training facility for Virginia
- Center of Excellence for Education & Workforce Development – The mission of HTEC is to provide a collaborative space in which we collectively develop, deliver, and disseminate the best educational methods and techniques for CNC education in the world. The goal is to drive the upskilling of manufacturing educators, and transform CNC classrooms into modern, high-tech advanced manufacturing labs that both encourage students to seek successful careers in CNC and related fields and ensure that these students are well-equipped when they enter the field. The goal of specialized training within the manufacturing advancement department is to be the Go-To training provider on CNC and related machine technologies, including the upcoming Industry 4.0 integrations within the CMA
- Globally Competitive Ecosystem – As a partner for the HTEC network and Phillips Corporation, the training facility at IALR serves as a global benchmark as Haas expands into other countries and provides the potential to be a train-the-trainer provider for global Haas activity

- **Integrated Machining Technology**

- Virginia's Go-To Partner for Business and Economic Growth – IMT has supported extensive business and economic growth in the region by highlighting the ability of the region to train a workforce that can meet demands at multiple levels, from the work floor technician to front line management and beyond. The IMT program is the advanced level training and culmination of the workforce pipeline that begins in middle school. It has been identified as one of the reasons that multiple companies have located in the region and has been the catalyst for allowing IALR to support these companies through rapid launch space and concierge services
- Center of Excellence for Education & Workforce Development – The IMT program has been a national benchmark for advanced training in CNC machining for years and delegations from multiple states and countries have visited to learn more about how to execute similar programs. The continuous improvement and adoption of current technology allows this program to support the strategic goal of being a center for excellence for education & workforce development
- Globally Competitive Ecosystem – Technology in manufacturing is rapidly evolving. Providing relevant training in support of industry needs is critical as technology and processes continue to modernize. It is a key factor in providing a globally competitive ecosystem. IMT supports this

goal by remaining at the forefront of technology and training and ensuring that students can enter the workforce and provide innovative solutions to workforce challenges

- **Additional Contributions to the Strategic Plan**

- Excellence in Board Leadership - All projects strive for transparency with the Board by providing needs, successes and areas of support required that allow the board to serve as community champions, share successes and stories and support public and private funding support which promotes excellence in board leadership as the board carries out these strategic activities
- Strategic Expansion of Applied Research and Culture of Learning - The Manufacturing Advancement division encapsulates a culture of learning in all projects. It fosters innovation and encourages continued efforts to remain current on the knowledge of existing and emerging