



AGENDA

IALR Board of Trustees

MANUFACTURING ADVANCEMENT COMMITTEE

Thursday, August 1, 2024 - 10:45 am - Conference Room 203

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| I. Convening of Meeting | Mr. Ben Davenport |
| A. Welcome | |
| B. Call to Order and Confirmation of Quorum | |
| C. Call for Changes to Agenda | |
| II. Approval of Minutes | Mr. Ben Davenport |
| A. May 2, 2024 | |
| III. Manufacturing Advancement Update | Ms. Amanda Hylton/
Mr. Jason Wells |
| IV. Center for Manufacturing Advancement - Update | Mr. Telly Tucker |
| V. Open Discussion of Concerns, Issues, and Observations | Group |
| VI. Adjournment | Mr. Ben Davenport |

Reference material included: "Advanced Manufacturing Update"

Future Committee Meetings

October 31, 2024
January 30, 2025
May 1, 2025

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*
Dr. Jerry Wallace

Governor's Appointee

Future Plenary Meetings

August 15, 2024
November 14, 2024
February 13, 2025
May 15, 2025

IALR Staff

Mr. Telly Tucker, President
Dr. John Hughes, EVP of Operations
Ms. Pam Patterson, BOT Secretary
Mr. Tim Robertson, COO, Manufacturing Adv.
Ms. Amanda Hylton, VP, Strategic Initiatives
Mr. Jason Wells, EVP, Manufacturing Adv.



IALR BOARD OF TRUSTEES (BOT)
MANUFACTURING ADVANCEMENT COMMITTEE
Minutes – May 2, 2024 - 10:45 a.m. – Conference Room 203

<p><u>Members Present</u> Mr. Ben Davenport, <i>Chair, via Zoom</i> Mr. David Bennett Mr. Don Gibson Dr. Greg Hodges Mr. Don Merricks, <i>Ex Officio</i></p> <p><u>Members unable to attend</u> Mr. Mark Holland Mr. Lott Rogers Dr. Jerry Wallace</p>	<p><u>IALR Staff Present</u> Mr. Telly Tucker, President Dr. John Hughes, Executive Vice President of Operations Ms. Pam Patterson, BOT Secretary & Executive Assistant Mr. Tim Robertson, Chief Operating Officer, Man. Adv.</p> <p><u>IALR Staff Unable to Attend</u> Ms. Amanda Hylton, VP of Strategic Initiatives, Man. Adv.</p> <p><u>Guests</u> 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, May 2, 2024. A quorum was present. There were no changes to the agenda.

Attendance of Committee Members by Electronic Communication Means

Mr. Don Merricks announced that Mr. Ben Davenport would participate electronically. Due to unforeseen circumstances, Mr. Davenport attended via Zoom from his home. The committee voted to allow him to attend the meeting electronically.

- **Motion:** Dr. Greg Hodges made a motion to allow Mr. Ben Davenport to attend the meeting via Zoom. Mr. David Bennett seconded the motion. The motion passed unanimously.

The results of the vote are shown below.

Committee Members Absent	-	3
Committee Votes For	-	4
Committee Votes Against	-	0
Committee Abstentions	-	0

Approval of Minutes

- **Motion** – Dr. Greg Hodges made a motion to approve the Minutes from the February 1, 2024 meeting. Mr. Don Merricks seconded the motion. The motion was approved by unanimous vote.

Manufacturing Advancement Update

Mr. Tim Robertson presented the Manufacturing Advancement narrative report (Exhibit A). The personnel updates within the Accelerated Training in Defense Manufacturing (ATDM) and Center for Manufacturing Advancement (CMA) divisions indicate a significant expansion in skilled personnel, with new hires ranging from precision manufacturing technicians to welding instructors.

Progress is being made in terms of budget and contracting, with substantial invoicing and expenditures for ATDM 3.0. Additionally, bids and proposals for future phases are in the finalization stages. Tiger Teams' involvement has led to notable process improvements, such as automation in recruitment and admissions, enhanced data analysis, and refining the student experience.

Staffing requirements for upcoming phases are being assessed, with a focus on streamlining the hiring process. Recruitment efforts have seen automation enhancements, resulting in a large number of active leads and applications. Moreover, engagement with industry partners remains strong, with numerous companies participating in recruitment events and career fairs.

Training initiatives have been successful, with cohorts graduating and new ones underway. Notably, efforts are being made to expand training options, such as accommodating sailors with shorter training durations. The Naval Aviation Schoolhouse for Additive Manufacturing (NASAM) training program has completed its first cohort and is exploring expansion options.

The Defense Manufacturing Community Support Program (DMCSP) continues to make strides in workforce development, with significant enrollments across various educational programs. The program's impact extends to supporting local communities and fostering economic growth through partnerships and outreach efforts.

The Center for Manufacturing Advancement (CMA) has achieved several milestones in its first year, including equipment setup, ISO certification, and hosting visitors. Notably, collaborations with organizations like Los Alamos National Lab highlight efforts to optimize and innovate manufacturing processes.

The Additive Manufacturing Center of Excellence (AM COE) within the CMA has processed numerous parts for the US Navy, showcasing its role in supporting defense manufacturing. Similarly, the Specialized Training division is gearing up for training sessions and collaborating with industry partners like the Gene Haas Foundation.

Integrated Machining Technology programs are evolving to include robotics and automation integration, aligning with industry demands. Partnerships with educational institutions ensure program alignment and relevance to workforce needs.

Key highlights include successful career fairs, industry partnerships, and division collaborative efforts. Contributions to the strategic plan are evident, with a focus on workforce development, economic growth, and fostering a globally competitive ecosystem. The commitment to excellence in board leadership and a culture of learning underscores the division's dedication to strategic expansion and innovation.

Mr. Davenport expressed his appreciation for the excellent report and continued efforts of the Manufacturing Advancement staff.

Center for Manufacturing Advancement (CMA) Update

Mr. Telly Tucker commented that the CMA Update had already been covered in the Manufacturing Advancement report.

Open Discussion of Concerns, Issues, and Observations

Mr. Tucker announced that an offer had been presented and accepted for the Executive Vice President of Manufacturing Advancement position. He stated that a press release was planned for May 13, 2024.

Adjournment

Mr. Davenport adjourned the meeting at 11:33 a.m.

Minutes Recorded By:

Minutes Approved By:

Pam Patterson
BOT Secretary

Mr. Ben Davenport, Chair
Advanced Manufacturing Committee

Date

Date

Attachments Included as Official Part of Minutes

Exhibit A - Manufacturing Advancement Narrative Report

Exhibit B – Manufacturing Advancement Quad Chart Report

Manufacturing Advancement Report
Amanda Hylton, VP Strategic Initiatives
Tim Robertson, COO
July 16, 2024

Personnel Updates:

- ATDM
 1. Russell Byler – ATDM Career Services Coordinator
 2. Chante Elam – ATDM Student Services Specialist
 3. Bruce Hughes – ATDM Admissions Advisor
 4. Kennedy King – ATDM Welding Technician
 5. Jonathan Mercer – ATDM CNC Instructor
 6. Christa Reed – Interim VP of ATDM
 7. Justin Scarce – Promotion to Manager, Industry Engagement
 8. Kevin Gatewood - Promotion to Assistant Director, Student Services
 9. Karen Hardy – New Position as Assistant Director, Career Services
 10. Cheryl Terry – Promotion to Director, Training & Technology
 11. Rodrica Clark – New Position as Senior Administrative Support Specialist
 12. Sherlina Thomas – New Position as Assistant Director, Community Engagement & Support
- CMA
 1. Jeremiah Williams – Promotion to CMA Technology Manager
- Manufacturing Advancement
 1. Jason Wells – Executive Vice President, Manufacturing Advancement
 2. Debra Holley – New Position as Director, Project Development
- Open Positions
 1. Administrative Support, Manufacturing Advancement
 2. ATDM Manufacturing Industry Representative
 3. ATDM NDT Instructor
 4. ATDM NDT Lab Technician
 5. ATDM Shift Manager – 2 positions
 6. ATDM Educational Compliance
 7. ATDM Floating Instructor – 2 positions
 8. ATDM Technical Program Manager
 9. NASAM/NAVAIR Additive Manufacturing Technician

Accelerated Training in Defense Manufacturing

- Budget and Contracting
 - ATDM 3.0 is wrapping up with \$17.4M being invoiced to date of the full \$21.2M
 - \$17.7M expended to date
 - ATDM 4.0 is underway with the first invoice expected in August with a total amount of \$24.5M
 - \$1.7M expended to date

- The RTC/NTC bid proposal for Phase II has been approved
 - Total funded to date is \$85.9M
- A proposal for staffing and operations for the next 5 years for ATDM and the RTC/NTC has been submitted and we are awaiting next steps on how to proceed
- Tiger Teams
 - Many of the Tiger Teams have been able to close out activities with several rapid response teams being determined at this time. These include Industry Engagement Strategy, ATDM Career Services efficiencies, and additional Recruitment and Admissions automations
- Staffing
 - ATDM completed a reorganization during the previous quarter to support the next phases of scaling as the training moves into the dedicated facility and grows to over 800 students per year (a copy of the new structure is included)
- Recruitment
 - Automations and student admissions portals have greatly improved the ability of staff to respond to the number of leads and active applications
 - The team is attending on average two to three recruitment events per week
 - 1,011 active applications; 19,713 active leads/inquiries
- Training
 - 87 students graduated from the 11th cohort
 - The July cohort started with 115 students
 - To date, 557 students have completed the training
- Industry Engagement
 - Additional processes being developed to support an increase in the number of participating companies
 - More than 30 new companies were engaged during this quarter
 - Ray Montgomery continues to support the Industry Engagement team through development of strategy and connections to new companies
- Career Services
 - 101 career-seeking students were placed in SIB/DIB jobs in May, June and July
 - In the most recent cohorts, over 90% of students receiving offers and over 80% accepting employment
 - ATDM staff has engaged with over 330 companies to date, with over 100 sponsoring and/or recruiting candidates
 - The ATDM Career Fair was held in May with 29 companies and one veteran organization participating
- Student Services
 - Held meet and greet for new students for each of the incoming cohorts

- Coordinated housing for all new and incoming students, as well as exit interviews and inspections for all graduating students
- Began a dedicated volunteer opportunity for students to participate
- Dedicated Training Facility
 - Construction remains on schedule
 - Second phase of construction has been awarded
- Other Highlights
 - The ATDM participated in the FanZone for the Charlotte race and will participate in Richmond in August, Martinsville in November. We have been invited to participate in Talladega as well

NASAM Additive Manufacturing Training

- Third cohort completed in July
- Enrollment for fourth and fifth cohorts are full
- 36 graduates to date
- Work is ongoing to finalize funding to continue this training through FY25

Defense Manufacturing Community Support Program (DMCSP)

- Total student enrollments to date: 569 students in ODU coursework leading to MfgET degree; 185 in Danville Public Schools 9th and 10th grade programs; 150 in Pittsylvania County Schools 9th and 10th grade programs and welding; 8,153 impacted by GO TEC expansion efforts; 28,256 students and educators impacted by 472 outreach visits at VSU
- A whitepaper to outline next phases of the DMCSP grant and Defense Manufacturing Community designation renewal has been submitted to our state liaison in the Office of Veterans and Defense Affairs
- Henry County Schools completed equipment identification and selection to begin 9th and 10th grade coursework in the fall
- A no-cost extension has been submitted to continue activity through March 31, 2025

Center for Manufacturing Advancement

- Virtual and onsite ISO 9001:2015 audits are complete
- Updated business case was completed in June
- More than 600 visitors to the CMA this year
- More than 125 students have participated in training at the CMA

Additive Manufacturing Center of Excellence (AM COE)

- 127 Navy parts have been printed in the AMCOE; 90 Navy parts machined
- Capital investment of ~\$2.2M in CNC is planned for GVT FY25 Q1

Specialized Training

- The first HTEC training has been completed
- Work with the Gene Haas Foundation has begun to develop courses for robotics integration into CNC machine instruction
- There were two workshops selected for presentation at the National HTEC Conference in July

Integrated Machining Technology

- The 10th cohort of IMT students begins this fall
- A lab technician has been hired in partnership with DCC

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

- **NASAM**

- Center of Excellence for Education & Workforce Development – Through efforts connected with ATDM, the Naval Aviation School of Additive Manufacturing will support active-duty military with Additive Manufacturing (AM) training directly related to Navy needs. These connections will also support the US Navy's effort to modernize the workforce and prepare for increasing AM production

- **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