CAREER CONNECT WASHINGTON

Advanced Manufacturing and Aerospace Sector

Summary of key themes, needs, and opportunities: 2025

Prepared by the AWB Institute, in partnership with the Aerospace Futures Alliance

(1) What are the top 3-5 themes you hear from employers in your sector related to workforce development?

- The Aerospace industry needs to prepare their workforce for the ramp up of the industry projected for the end of 2025. Growing and expanding career connected and career launch programs requires **qualified faculty with industry experience**. It's a constant challenge to find individuals who are willing to adjust to an educator's salary to train apprentices and future workers.
- The skills that are necessary for manufacturing and aerospace roles are also needed within other industries. There's a **small pool of qualified and experienced individuals**, creating difficulty hiring and retaining employees among high-demand industries. Working with employers to adopt a **skills-based hiring framework and approach** when looking to hire new talent is important. Additionally, CorePlus Aerospace already utilizes this methodology and works with training programs to ensure that the skills students are learning are in alignment with the skills-based hiring framework implemented by Boeing and correlate to a direct occupation within aerospace manufacturing. We would engage other employers in this practice to benefit talent development for the industry.
- New **tariff barriers are now a potential threat** to the industry and ultimately will affect the ability of companies to keep up with their workforce needs and production demands.
- Employers are having difficulty with retention of entry-level and mid-level aerospace manufacturing positions. With an **aging and retiring workforce** of skilled workers, replacement is difficult to match the industry's workforce needs. **Early awareness** of aerospace and manufacturing careers will create more prospective workers; however this requires the **education of teachers and families**, too. Individuals who play a role in shaping children's minds and provide support and encouragement must be educated in possible careers.
- There must be opportunities to teach or help **small businesses find relevant workforce development grants and assist them with the application**. Employers have repeatedly indicated that they are either unaware of funding opportunities or have limited resources to take the time to research and apply for funding. For small businesses, it takes leaders off of the floor and from management tasks that are needed on a daily basis. Often there is not an HR department, the CEO is taking on this role directly. The opportunity cost with the time it takes to find funding that applies, navigate the application, and successfully apply, leads to less applications from businesses that need funding the most. It would be helpful to create a program for businesses, specifically aerospace manufacturing shops, to navigate through this challenge.

(2a) What are the 3-6 occupations that employers in your sector indicate should be high-priority for workforce development to help meet their hiring needs?

- Machinists
- Welders
- Electrical and Electronic Engineering Technologists and Technicians
- Electro-Mechanical and Mechatronics Technologists and Technicians
- Aerospace Engineering Operations Technician

(2b) Which career connected learning programs are effectively meeting the hiring needs of employers in your sector?

- SEH America High Tech Manufacturing Internship
- Wagstaff Production and Manufacturing Academy
- The Advanced Manufacturing Academy by Skills Inc.
- Sno-Isle TECH Skills Center
- The Machinists Institute Career Accelerator (Machinists Institute)
- Manufacturing Connections (Greater Spokane Valley Chamber of Commerce)
- Spokane Community College
- Clover Park Technical College
- SEATech - AJAC Production Technician Registered Youth Apprenticeship Program - Advanced Manufacturing and Welding Technology Program (Walla Walla Public Schools)
- Aerospace Career Launch (North Central WDC/SkillSource)
- AMTEC - Advanced Manufacturing Training & Education Center (Everett Community College)
- Big Bend Community College
- Seattle Goodwill Industries - Evergreen Goodwill - STEM + Manufacturing Career Explore - Olympic Consortium WDC
- ***See full Sector Strategy document for complete list***

(2c) Which career connected learning programs could be adjusted, expanded, or scaled to other regions to meet the hiring needs of employers in your sector?

- Manufacturing Week presents an opportunity to leverage state-wide industry engagement with schools and career connected learning. AWB and AFA are working to see how best this can be leveraged for Career Explore opportunities.
- Accessibility of programs to rural students must be improved, creating more inclusivity and a larger future workforce in manufacturing and aerospace. Underserved individuals should have a greater presence in these programs. Relationship building between organizations such as Skills Inc. and Orion Industries is important for this work as well as relationship building with specific BIPOC/rural organizations that may not yet be in the CCW network.
- The Maritime Sector's pilot Teacher Externship program could be broadened to include Manufacturing, Aerospace and Space.
- Several community colleges (Olympic College, Port Townsend, Clover Park) have opened high tech manufacturing educational facilities. These facilities should be expanded to serve more youth as currently employers report hiring students before they graduate.
- Programming in Southwest Washington and Eastern Washington could capitalize on federal CHIPS funding to expand career pathways in these high-needs manufacturing subsectors.
- Programs like Raisbeck Aviation High School could greatly enhance the exposure opportunities for students.
- Sno-Isle's manufacturing and aerospace program is well regarded in the industry and could be expanded to encompass other careers including Fiber Optics Technicians.
- Walla Walla school district is developing a SEA-TECH AJAC Production Technician registered youth apprenticeship program that could be expanded. This could be an important addition to the Advanced Technology and Welding program.
- Manufacturing WORKS (advanced manufacturing & aerospace sector) — a partnership with WorkForce Central, AJAC, and regional community colleges in manufacturing occupations such as machinists and welders.

(2d) Which career connected learning programs should be developed to meet the hiring needs of employers in your sector?

- Transportation funding for schools and students remains a significant barrier to the development of Career Explore opportunities including Workplace Visits. Dedicated funding for school districts to support these early exposure opportunities is critical for industries that do not readily interact with the public.
- A challenge in developing career connected learning programs is access to funding. Without adequate funding, equipment may not be upgraded to meet industry standards, and qualified employees will be harder to find, train, and retain. As programs are developed, up-to-date equipment should be considered as part of the program approach. There is also a possibility of a shared resource or machine "library," which would allow smaller companies to stay up to date with ever-evolving technology.
- Look to adopt Career Prep "Intro to Manufacturing Technology" Bootcamps that can take place in the space between K-12 and college to provide a launch for individuals considering a career in manufacturing. An example can be found here: https://ampsocal.usc.edu/how-we-help/manufacturing-technology-bootcamp/
- Adopt Creators Wanted curriculum from NAM to allow the connection between the maker community and manufacturing to flourish. https://themanufacturinginstitute.org/students/creators-wanted/
- Adopt Modern Manufacturing Program launched for Automotive careers in West Alabama for Aerospace and Manufacturing. https://westalabamaworks.com/career-pathways/modern-manufacturing-center-of-excellence
- World of Work has proven to be a solid Career Exploration program in Alabama focused on Manufacturing https://westalabamaworks.com/education. This along with portable learning trailers are critical for expanding across the state.
- Washington has an opportunity to develop a state-wide Teacher and Counselor Externship program. Currently state-wide teacher externship programs exist in a number of other states. Directly tied to industry - these programs typically require an application and clear follow up plan with the development of lesson plans that help make the experience come to life. Programs are currently in practice in Maryland, Hawaii, Michigan, Tennessee, Iowa, Oklahoma, and Missouri.
- An expanded number of programs or approaches should be developed to demystify the Aerospace industry and transform the common misconception that a career in Aerospace is elusive. It is important to show those who do not have a connection to the industry what it truly means to work in Aerospace and the career pathways that lead there.
- Expand career connected learning programs in cross-sector area skill sets, such as welding, to meet the hiring needs of employers in the aerospace, manufacturing, maritime, clean energy, agriculture and construction industries.

(3) What are the top three efforts, initiatives, or investments that could meaningfully support the workforce development needs of employers in your sector?

- Foundational Prep and **Career Awareness** within the Aerospace Industry
- Investment in **shared resources** (examples, but not limited to - grant writer, manufacturing center with updated/updating equipment, Navigator, regional facilitator with industry leaders and education) for small to midsize in the supply chain companies for specific hiring and **on the job training**
- Initiatives that support training that allows for **cross-sector baseline skills** that can be applicable to more than one career and/or occupation - see MAC Welding program

(4) What are the top 3-5 approaches you recommend to increase participation of underrepresented students in your sector's high priority occupations?
● There is an opportunity to **support the development of a sub-committee explicitly looking to advance BIPOC students and women's participation in the sector**. This is in support of the state legislator's goal to double manufacturing in the state by 2031, including the importance of explicitly supporting BIPOC and Women in pursuing careers and ownership of business. This sub-committee is looking at strategies aimed at developing supportive peer groups, implementing quick industry-led certification/upskilling and getting at the issue of larger exposure to the industry earlier. ● In urban areas, the manufacturing industry has made significant in-roads in **hiring "non-traditional students"** (those with criminal records, recent immigrants, and those with disabilities). More work needs to be done to connect manufacturing with community trusted BIPOC organizations that can help to build awareness within the depth of careers within the sector. ● Employers report a critical need for high level marketing and education to middle school/high school counselors and parents of students so there is an understanding of aerospace and manufacturing sector roles. Creating **career awareness among BIPOC and rural students** is crucial in increasing participation of these communities in aerospace and manufacturing occupations. For example, AWB has profiled students, employers, and employees that reflect BIPOC communities through storytelling, industry communication vehicles, and other avenues to showcase the industry as much more diverse than perhaps people assume. ● **Language and working with immigrant populations** has been a critical workforce consideration for numerous employers. At Kaas Tailored (Mukilteo): manufacturing space and floor set-up is designed so that work can be communicated regardless of language capacity. Workflows are set up for strength and capabilities and skills and don't have to rely on language as much.