Maritime Sector

Sector Strategy Update: June 2025

Prepared by the NW Center of Excellence for Marine Manufacturing & Technology

Please describe the greatest workforce needs facing your sector, with a focus on needs that career connected learning strategies can help to address.

The Washington State maritime industry continues to face significant technical workforce needs across the three sub-sectors addressed in this project:

1. Boat and ship building and repair.
2. Underway transportation and operations.
3. Commercial fishing and seafood processing.

Maritime workforce needs can be broadly characterized by the following:

1. Immediate need for technicians across maritime disciplines – followed by an imperative to grow a maritime workforce bench.
2. Wage competition with industries seeking similar skill sets that include, but are not limited to welding & fabrication, electrical & electronic technologies, autonomous systems across platforms and cyber security.
3. Retention following hiring/placement.
4. Maritime is actively transitioning from a traditional legacy industry regarding how new participants to the workforce are identified and recruited. Understanding evolving community demographics, commuting, housing and family dynamic patterns of the modern workforce is critical to sustaining a competitive and thriving workforce.
5. More education and training capacity – this includes faculty/trainer development in high demand disciplines and the means to support credential attainment for faculty who wish to teach in high demand disciplines.
6. Greater connection to, and alignment with post-secondary education and training programs.
7. Grow and expand Career Connected Launch programming – this includes finding innovative strategies to on ramp current programs outside of the Launch network to full Launch endorsement.
8. Improve connections to K12 programming in an employer's immediate region to facilitate engagement, awareness and program development.

The workforce needs for the sub-sectors listed above are influenced by multiple factors, which will place new and expanded pressures on the maritime workforce system. Influencers and disruptors include, but are not limited to:

1. **Fierce competition** for a technically competent and trained workforce, both internal to the industry, and externally, across sectors competing for the same talent pool
2. **Office of Shipbuilding** – this announcement by the Trump Administration is a response to the current state of U.S. Shipbuilding overall, and a need to bolster the defense industrial base, which will include both military and commercial shipbuilding and repair. The establishment of this will require significant investment to meet the stated goal of a 381-ship fleet. U.S. shipbuilding capacity has decreased in recent decades, contributing to a backlog in the production of new ships and submarines and very importantly, the maintenance of the same. This development clearly has

profound implications for an already thin maritime workforce.

3. **Rebuilding of the Washington State Ferries -** with plans for a new fleet of hybrid-electric ferries, a recent study, by Martin Associates highlights the estimated economic impact of the construction of up to five hybrid-electric ferries. Were the ferries to be built in Washington State, approximately 1,298 jobs would be created (direct and indirect).
4. **Assignment of defense assets** – the U.S. Navy has designated Naval Station Everett as homeport for its next generation of Constellation-class frigates. It is anticipated that 12 Constellation-class frigates will be based at Naval Station Everett. Everett Ship Repair has received designation to conduct military ship repair services. Fincantieri, has announced its expansion to the Everett area. The Constellation-class project points to a highly probable change in education program scope and workforce demand. As a system, tracking these types of developments is crucial to planning, development and delivery of contextualized maritime education and training.
5. **New and emerging maritime markets** that currently and will include electrification, propulsion technologies and marine fuels (e.g. ammonia, small modular reactors, hydrogen, etc.), blue economy development, offshore wind development, and autonomous systems and vessels. Each of these technology advancements and market developments will impact the education and training requirements for the industry – for those just entering the industry and those currently in the industry.
6. A **thin maritime workforce pipeline** in need of new and expanded contextual training and education capacity for both the ashore and afloat sectors. This would include increased access in early grades to exploration and preparation activities and curriculum, open educational resources readily accessible to school districts and communities statewide, expanded supports for career connected launch endorsement, and the development of maritime pre-apprenticeship programming to reach youth and young adults from all communities.
7. Need to address **access barriers**, particularly in rural communities statewide. Barriers may include any combination of the following: connectivity, transportation, funding, housing and childcare, industry awareness, ready access to contextualized open educational resources, faculty capacity and professional development opportunities and pathways.
8. **Outdated and obsolete occupational titles**. These adversely impact high demand occupation lists, financial aid opportunities for students, NAICS codes, program development and expansion and perception of the industry overall. Our partnerships with organizations such as the Transportation Institute, contextualized programs in Washington State and other regions of the country, work with the Maritime Administration as a designated maritime workforce center of excellence, and industry have allowed us to build a collaborative network that will address this challenge. This work compliments career connected learning efforts statewide.

These and other influencing factors represent opportunities to support and grow career connected learning strategies for the maritime industry.

This update builds on the four (listed below) industry informed strategies created during the first phase of the project. The strategies have been updated to show the actionable projects and initiatives, oriented to career connected learning. All goals support strategies and activities that are actionable, observable and measurable. Each has been developed with direction, guidance and leadership from the Statewide Maritime Sector Stakeholder Group. Core considerations in the development of the following goal statements include current and

forecasted industry workforce needs; the imperative of creating a Career Connected learning pathway beginning at K-5; engaging all communities to address access barriers and strategically growing awareness of career opportunities and pathway options in maritime.

Goal One: *Improve awareness and access to Maritime Career Pathways with an emphasis on partnerships and engagement with Black, Indigenous, and People of Color and rural communities statewide.*
Goal Two: *Communicate the value of Maritime sector careers more effectively.*
Goal Three: *Build foundational tools to remove structural barriers to advancing an equitable maritime workforce plan.*
Goal Four: *Improve the cohesiveness of the Career Connected Learning Ecosystem across the State.*

Feedback collected from Maritime Stakeholder Group members, confirms the continued relevance of the four goals listed above. Specific projects will reflect these goals.

Focused and strategic career connected learning projects can support access to education and training for high demand occupations and skill sets in the maritime industry. Following are problem/challenge statements with recommended strategies that are intended to mitigate access gaps and grow the statewide network of career connected learning.

Challenge Statement 1: Similar Technical Skill Set Demand Across Industries
Shoreside and underway maritime employers are seeking skill sets and technical competencies in demand by other industries (e.g., construction, agriculture, energy, aerospace, automotive, health care and the broader manufacturing industrial base). The Maritime Sector Lead project committed resources to cross-sector pathway development for high demand occupations and skill sets such as welding, electrical technologies, fuel technologies, autonomous systems and project management. While not replacing contextualized maritime pathways, cross-sector efforts support awareness and resource options for students, educators, families and CCL networks to embed maritime into the menu of career options for youth and young adults.

The MAC Welding Framework Project (MAC) is an example of cross-sector pathway work. Welding is a high demand technical skill across industry sectors.

- MAC is a fully scalable welding framework project, which received Accelerator funding in July 2024 to support the development of an industry aligned welding and fabrication framework.
- The project is a response to awareness, access, opportunity and educational gaps.
- MAC is focused on the maritime, ag & natural resource and construction industries. At scale, MAC will expand to energy, aerospace, automotive, infrastructure, advanced manufacturing and other industries. The project is demonstrating the strategic value of cross-sector work to address and meet growing technical skill shortages in multiple industry sectors.
- To date, MAC has met all deliverables and is planning the next phase of the project. To date, the following project milestones have been met – this list includes the deliverables as outlined in the funded project briefing and deliverables developed as a result of discoveries made during this first phase of the project: (a) Industry aligned welding and fabrication frameworks and equivalencies completed and submitted to

OSPI; (b) professional development matrix; (c) Support for CCW Launch application process for the three partner colleges Skagit Valley College - completed, Walla Walla Community College and Grays harbor College – both in progress; (d) welding career pathway map; (e) landing page for the project (the-mac-project.org, which is migrating to teachwelding.org); (f) open resource cross-sector navigator, providing a blueprint for other organizations to engage in cross-sector work; and (g) MAC statewide welding map – denoting K12 and post-secondary welding programs – this resource supports the welding career pathway map.

Other cross-sector opportunities will focus on

- Autonomous platforms (e.g., vessel systems, ROV's)
- Fuel technologies (e.g., diesel, ammonia, small modular reactor, hydrogen, hybrid)
- Electrical technologies

Challenge Statement 2: CCW Career Launch Designation

Attaining Career Launch designation can be a difficult and challenging process. The following is a condensed version of a policy proposal submitted in 2024: *Investment in a pilot project to create and test a provisional designation onramp to full designation would provide a process by which programs lacking capacity and other supports to effectively work with, and leverage Sector Leaders, other partners and industry members who either have, or could develop a paid work-experience for student technicians. The program receives direct grant funding to follow and clear and sequential process to full Launch designation*.

The opportunity to demonstrate this premise, the MAC project embedded this concept into the deliverables. Working with three partner colleges, the project provided technical support to Skagit, Walla Walla and Grays Harbor as they took on the task of preparing for a Career Launch application submission for Welding Technology. Skagit successfully submitted an application and received launch designation under the project. We are continuing to provide technical support to Grays Harbor and Walla Walla in their application process. Walla Walla and Grays Harbor are taking approaches that support their unique institutional dynamic. The project will continue to provide technical support and assistance, as needed to each college, as they work toward Launch application and designation. This will inform how we work with other programs that may seek CCW Launch designation.

Challenge Statement 3: Rural, underserved and underinvested communities are often impacted by resource deficits.

Connectivity, transportation, funding, lack of programming, infrastructural deficits, awareness and access, and access to support services are not uncommon challenges faced by rural and underinvested communities.

Developing data informed projects and working collaboratively with local and regional leadership to develop innovative and solutions-based approaches are part of our sector strategy for both cross-sector and contextualized maritime initiatives. Taking this approach, we can:

- Develop strategies to address resource deficits and barriers to access and participation.
- Transportation and access barriers can be mitigated by bringing programming directly to communities via mobile training platforms that deliver programming in communities where access barriers are acute. This innovative solution can ensure place based individuals have access to programming otherwise not available. This is not without precedent. The welding program, for example, at Portland Community College has a

mobile welding trainer. The Machinists Institute has a mobile classroom. We are currently working with Peninsula College regarding their intent to establish mobile marine technology & welding education platforms. There are procurement, operational and maintenance costs and considerations associated with mobile platforms, however the flexibility to take programming to communities experiencing access issues, is significant. Central to this would be the partnership with local/regional industry partners to support and drive mobile training and education.

Challenge Statement 4: Instructional Capacity
Faculty development and connection to maritime industry employers is critical, not only in maritime, but across sectors as well. We are strategically developing projects and resources to support faculty professional development relative to the maritime industry and in cross-sector applications, such as MAC. These efforts will enable faculty to bring the industry into the classroom, develop and access open education resource modules focused on the maritime industry. Investing in, and developing faculty is critical to meeting workforce demand, establishing and growing contextualized programming. Competing with industry for qualified instructors requires innovative and new approaches.

NOTE: The updated Maritime Sector Strategy will now use the phrase Essential Skills in place of Soft Skills. We feel it more accurately represents the imperative of the skills. Essential Skills cover communication, teamwork, problem solving, organization, critical thinking, adaptability, conflict resolution, time management and leadership.

Between now and June of 2025, what are your sector's 3-6 occupations that are highest priority for building supportive career connected learning pathways? Please focus on occupations that lead to economic self-sufficiency.

- Marine Electrician, SOC 49-2093
- Diesel Engine Technicians, SOC 48-3200
- Aluminum Welder/Fabricator, SOC 51-4121
- Sailors and Marine Oilers, SOC 53-5011
- Ship Engineer, SOC 53-5031
- Captains, Mates & Pilots, SOC 53-5021

NOTE: we are not making any changes to the high priority occupations. We are going to continue to track evolving technical skill requirements being informed by technological change (e.g. marine fuels, AI, battery technologies, etc.). We are listing examples of technology changes/advancements/disruptors that impact high priority occupations, where known, with the high priority occupations that follow.
Wage and salary data for Washington State have been updated in this section using data obtained from O*Net.

For <u>each</u> of the occupations identified above, please provide the information below to help inform pathway development efforts and investments.

Occupation:	**Sub-sector:**
Marine Electrician	Both ashore and afloat. Boat and shipbuilding

SOC 49-2093	and repair; Underway; and Commercial Fishing
Average wage: $108,100 (O*Net)	
Which skills/competencies do employers use as a benchmark to hire someone in this occupation? ● AC/DC theory ● PLC's ● Blueprint/schematic skills ● Safety awareness ● Knowledge of appropriate standards and regulatory requirements ● Communication skills ● Problem solving skills ● Battery technologies ● Tag out procedures ● Project Management	**Which credentials do employers cite as a valuable benchmark to hire someone in this occupation?** ● Journeyman credential ● Electrical Certificate/Credential from standards or other organization (NAVSEA, American Boat & Yacht Council, USCG, etc.) ● Corrosion Certificate/Credential ● Merchant Mariner Credential ● Post-secondary certificate or degree
Please describe possible career progression opportunities for this occupation: Rigger, Entry Level Electrician, Systems Technician, Electronics Technician, Project Lead, Electrician, Corrosion Technician, Hydraulics Technician, Mechatronics Technician, Rigger, Autonomous Systems Technician, ROV Technician ***Technology considerations - this occupation is currently being impacted by generative AI, new battery technologies, and new vessel systems developments across multiple platforms. This will likely occur well into the future. The rate of technological advancement in the maritime industry is aggressive, impacting all sub-sector of the industry. These changes will require adjustments and enhancements to current and future programming and curriculum - not only because of the technologies, alignment to industry standards will be critical as well - those might include the U.S. Coast Guard, American Bureau of Shipping, National Marine Electronics Association, etc.***	
Please share the data, employer feedback, and/or Regional Network feedback that helped you identify this as a high-priority occupation: ● One-on-one engagement with maritime employers ● Job postings on multiple platforms ● Employer demand for this skill set ● Technological advancement in the industry, i.e. electrification, battery technologies	
Please describe the top barriers employers have identified to hiring for this occupation: ● Education and training capacity, which adversely impacts programmatic growth and expansion	

- Competition with other maritime employers and other industries seeking the same or similar skill set
- Access to education and training programs in rural and underserved communities
- Basic/essential skills programming, including pre-apprenticeship

Please describe the type of programs or approaches employers have found helpful in hiring for this occupation:

- Direct hiring from contextualized maritime and related multi-sector programs
- Registered apprenticeship
- Hiring transitioning active-duty military personnel
- Reaching into other industries for a similar skill set
- Providing paid work experience opportunities for students
- Recruitment via maritime specific employment platforms

Occupation: **Diesel Engine Technician** SOC 48-3200	**Sub-sector:** Both ashore and afloat. Boat and shipbuilding and repair; Underway; and Commercial Fishing
Average wage: $76,940 (O*Net)	
Which skills/competencies do employers use as a benchmark to hire someone in this occupation? ● Mechanical skills ● Electrical and electronic skills ● Battery technologies ● EPA standards ● Safety ● Communication ● Systems networking skills	**Which credentials do employers cite as a valuable benchmark to hire someone in this occupation?** ● Original Equipment Manufacturer (OEM) Engine Certification, i.e. Detroit Diesel, Cummins Diesel Engine, Yanmar Diesel ● Certificate/degree in diesel technology ● Marine Engines & Fuel Systems Cert/ABYC ● Merchant Mariner Credential

Please describe possible career progression opportunities for this occupation:

Diesel Propulsion Technician, Hybrid Fuels Technician, Diesel Technician, Diesel Mechanic, Diesel Mechanic Technician, Mechatronics Technician, Systems Technician, Rigger

Technology considerations - this occupation is currently being impacted by generative AI, developing fuel systems and technologies. Diesel technicians will not be replaced, rather this skill set will grow and evolve - this includes proficiencies with electronic tools and diagnostic software, autonomous and electrical systems. Technicians will need to become familiar with new and emergent fuel technologies that may include ammonia, hydrogen and small modular reactors. As with Marine Electricians, and all other listed high priority occupations, these changes will require adjustments and

enhancements to current and future programming and curriculum.
Please share the data, employer feedback, and/or Regional Network feedback that helped you identify this as a high-priority occupation: ● Demand data ● Direct employer engagement via interview and onsite work ● Technological changes and advancements relative to hybrid diesel propulsion ● Demand data via data analytics platforms ● Industry studies
Please describe the top barriers employers have identified to hiring for this occupation: ● Same or very similar skill sets required and in demand in other industries – energy, ground transportation, energy, automotive and construction ● Scale of student awareness is low compared to other industries ● Perception that maritime industry employment is less desirable compared to other industries ● Education and training capacity
Please describe the type of programs or approaches employers have found helpful in hiring for this occupation: ● Direct hiring from contextualized maritime and related programs ● Participation as an apprenticeship employer ● Hiring transitioning active-duty military personnel ● Reaching into other industries for a similar skill set ● Providing paid work experience opportunities for students ● Direct hiring from OEM training programs ● Recruiting via industry specific platforms

Occupation: **Aluminum Welder/Fabricator** **SOC 51-4121**	**Sub-sector:** Both ashore and afloat. Boat and shipbuilding and repair; Underway; and Commercial Fishing
Average wage: $61,730 (O*Net)	
Which skills/competencies do employers use as a benchmark to hire someone in this occupation? ● Print reading & welding symbols ● Basic metallurgy	**Which credentials do employers cite as a valuable benchmark to hire someone in this occupation?** ● American Welding Society certifications: Certified Welder,

• Welding positions & techniques • Procedures and processes • Safety/regulatory/class requirements • Communication • Adaptability	Certified Welding Fabricator, Certified Welding Inspector • Journeyman Credential • Welding certificate/degree • Military MOS

Please describe possible career progression opportunities for this occupation:

Entry Level Welder, Exotic Alloys Welder, Steel Welder, Aluminum Welder, Certified Welding Inspector, Corrosion Technician, Fabricator, Quality Assurance, Fitter, Non-Destructive Testing Technician, Project Lead, Metallurgist, Coatings Technician, Structural Welder

Technology considerations for aluminum welding and welding in general, are considerable. This occupation is the focus of the Maritime, Ag & Natural Resource and Construction Model Welding Framework Project. Aluminum welding continues to be in high demand. It is currently being impacted by generative AI, automated systems, and data analytics to drive increased efficiencies and decreased re-work, which is very expensive and time consuming. Welders will need to adapt to new technologies through professional development and skills enhancement. These changes will require adjustments and enhancements to current and future programming and curriculum.

Please share the data, employer feedback, and/or Regional Network feedback that helped you identify this as a high-priority occupation:

- Direct one-on-one engagement with employers
- National data (American Welding Society)
- Demand data from data analytic platforms
- Program capacity challenges regarding expansion to meet needs

Please describe the top barriers employers have identified to hiring for this occupation:

- Competition with other maritime employers and other industry sectors
- Training capacity to meet required needs
- Aluminum is a more complex alloy to weld, more difficult to find welders with a competent skill set
- Aluminum is an expensive alloy, which can be a challenge for programs
- Potential employers are unable to test successfully to weld for a boat or shipyard

Please describe the type of programs or approaches employers have found helpful in hiring for this occupation:

- Direct engagement and recruiting with welding programs
- Registered apprenticeship
- Recruiting from other industries
- On the job training – in house
- Offering paid internships to student welding technicians

Occupation: **Sailors and Marine Oilers** SOC, 53-5011	**Sub-sector:** Underway Commercial Fishing
Average wage: $64,860 (O*Net)	
Which skills/competencies do employers use as a benchmark to hire someone in this occupation? ● Regulatory & safety standards ● Navigation ● Engineering Technology ● Deck Technology ● Problem solving skills ● Communication skills ● Adaptability	**Which credentials do employers cite as a valuable benchmark to hire someone in this occupation?** ● Merchant Mariner Credential ● Ordinary Seaman ● Able Bodied Seaman ● QMED
Please describe possible career progression opportunities for this occupation: Ordinary Seaman, Able Seaman, AB Unlimited, AB Limited, AB Special, AB OSV (offshore service vessel), AB Fishing, STCW AB, Lifeboatman, AB Modu (offshore well operations), Deck Hand, QMED (Qualified Member of the Engine Department), Oiler ***Technology advancements in underway careers include navigation, safety systems, AI, cyber security, marine fuels, autonomous shipping, and environmental technologies. As with all other high demand maritime occupations, programming and curriculum will need to keep pace to meet industry needs and regulatory requirements.***	
Please share the data, employer feedback, and/or Regional Network feedback that helped you identify this as a high-priority occupation: ● One on one interviews with industry members ● Data analytics platforms ● Projected demand via workforce databases ● Industry resources (i.e. MARAD)	
Please describe the top barriers employers have identified to hiring for this occupation: ● Shift to shoreside jobs requiring maritime experience new markets, such as offshore wind development ● Instructional capacity – can be difficult to identify and recruit instructors, who often have much higher earning opportunities underway	
Please describe the type of programs or approaches employers have found helpful in hiring for this occupation:	

- In house credential-track pathway and professional development
- Direct engagement with public, non-profit and private training programs
- Broad recruitment efforts
- Perception of the industry
- Retention of new hires

Occupation: **Ship Engineer** SOC, 53-5031	**Sub-sector:** Underway Commercial Fishing
Average wage: $96,390 (O*Net)	
Which skills/competencies do employers use as a benchmark to hire someone in this occupation? ● Maritime safety ● Critical thinking ● Problem solving ● Regulatory/safety/class standards ● Adaptability ● Communication ● Regulatory understanding ● Mechanical aptitude	**Which credentials do employers cite as a valuable benchmark to hire someone in this occupation?** ● Merchant Mariner Credential ● Licensure ● Apprenticeship ● Two- or Four-year certificate or degree ● QMED
Please describe possible career progression opportunities for this occupation: Hydraulic Engineer, Automation Engineer, Refrigeration Engineer, Electro-Technical Officer, Engine Cadet, Third Engineer, Second Engineer, First Engineer, Marine Chief Engineer ***Technology impacts for ship engineers include integrated automation and digital systems, communication technologies, remote operations and monitoring, navigation, safety systems, AI, cyber security, marine fuels, autonomous shipping, and environmental technologies. As with all other high demand maritime occupations, programming and curriculum will need to keep pace to meet industry needs and regulatory requirements.***	
Please share the data, employer feedback, and/or Regional Network feedback that helped you identify this as a high-priority occupation: ● Direct employer engagement and interviews ● Demand data via job search platforms ● Industry associations (i.e. Transportation Institute, MARAD & AWO)	
Please describe the top barriers employers have identified to hiring for this occupation:	

- Instructional capacity
- Competition with shoreside occupations requiring similar skill sets
- Perception of industry
- Being away from family and friends

Please describe the type of programs or approaches employers have found helpful in hiring for this occupation:

- Maritime programs
- Internal development
- Registered apprenticeship
- Training schools
- Industry specific sites

Occupation: **Captains, Mates & Pilots** SOC, 53-5021	**Sub-sector:** Underway Commercial Fishing
Average wage: $104,560 (O*Net)	
Which skills/competencies do employers use as a benchmark to hire someone in this occupation? ● Safety requirements ● Operations control and monitoring ● Technical skills: engineering, navigation ● Regulatory/safety/class requirements ● Project management ● Communication skills ● Problem solving skills ● Adaptability ● Safety of Life at Sea ● All appropriate maritime conventions	**Which credentials do employers cite as a valuable benchmark to hire someone in this occupation?** ● Merchant Mariner Credential ● Licensure ● Credential/degree from accredited program ● Tonnage and vessel type licensure

Please describe possible career progression opportunities for this occupation:

Boat Captain, Captain, Ferry Captain, First Mate, Harbor Pilot, Mate, Tugboat Captain, Ship Pilot

This occupation is being significantly impacted by technological shifts and developments. AI tools, augmented reality, navigation and satellite technology, integrated systems, safety technologies and software platforms.
As with all other high demand maritime occupations, programming and curriculum will need to keep pace to meet industry needs and regulatory requirements.

Please share the data, employer feedback, and/or Regional Network feedback that helped you identify this as a high-priority occupation:

- Direct one-on-one employer engagement
- Demand data platforms
- Employer roundtables
- Documented industry research sources

Please describe the top barriers employers have identified to hiring for this occupation:

- Competing shoreside opportunities requiring these skills sets, credentialing and licensure
- Not enough qualified prospects in pipeline
- Instructional capacity
- Credential attainment

Please describe the type of programs or approaches employers have found helpful in hiring for this occupation:

- Promoting/developing from within an organization
- Training programs and maritime academies
- Industry job sites

For each region below, which workforce education & training programs are *effectively* meeting employer needs, or could effectively meet their needs with adjustment or expanded capacity? Where relevant, please color code responses to reflect their relevance to specific occupations.

Please provide your color-coding key below:

(1) Marine Electrician
(2) Diesel Engine Technician
(3) Aluminum Welder/Fabricator
(4) Sailors and Marine Oilers
(5) Ship Engineer
(6) Captains, Mates & Pilots

Capital	• Centralia College, Welding Program • Grays Harbor College, Welding Program • Lower Columbia College, Welding Program
East	
King & Pierce	• Boilermaker-Uptown/Shipyards, Boilermakers Local 104 & Puget Sound Employers Apprenticeship Committee

	• Marine Electrician, Greater Puget Sound Electrical Workers Apprenticeship Committee • Plumber/Steamfitter, Seattle Area Plumbers Housing Plumbers Pipefitters HVAC-Service Controls Technician/Refrigeration Mechanics and Marine Pipefitters Apprenticeship Committee • Lake Washington Institute of Technology, Diesel and Heavy Equipment Technician • Eat on the Wild Side, Inbreaker Apprenticeship • Eat on the Wild Side, Marine Engineering • MITAGS, Marine Engineering • MTIAGS, Sailors and Marine Oilers • Northwest Maritime Center, Seattle Maritime Academy • Washington Maritime Blue, Youth Maritime Collaborative • Northwest Maritime Center, Seattle Maritime Academy • Washington Maritime Blue, Youth Maritime Collaborative • Northwest Maritime Center, Real World Readiness • Eat on the Wild Side, Inbreaker Apprenticeship • Eat on the Wild Side, Marine Engineering • Northwest Maritime Center, Real World Readiness • Eat on the Wild Side, Inbreaker Apprenticeship • Eat on the Wild Side, Marine Engineering • Northwest Maritime Center, Seattle Maritime Academy • Washington Maritime Blue, Youth Maritime Collaborative
Mid-Columbia	• Residential Plumber and Steamfitter, Eastern Washington – Northeast Oregon Pipe Trades Apprenticeship Committee
North Central	
Northwest	• Northwest Maritime Apprenticeship • Marine Maintenance Technician Program, Skagit Valley College • Whatcom Working Waterfront, Northwest Maritime Apprenticeship • Skagit Valley College: (1) Marine Tech; and (2) Diesel Power Technology • Centralia College: Diesel Technology • Northwest Maritime Center, Maritime Career Launch • Maritime Institute
South Central	• Perry Technical Institute Welding Technology Program
Southwest	• Clark College Welding Technologies
West Sound	• Olympic ESD, Maritime Career Launch • Northwest Maritime Center, Maritime Career Launch • Northwest Maritime Center, Real World Readiness • Northwest Maritime Center, Real World Readiness • Northwest Maritime Center, Maritime Career Launch • Olympic ESD, Maritime Career Launch

	• Northwest Maritime Center, Maritime Career Launch • Olympic ESD, Maritime Career Launch • Northwest Maritime Center, Real World Readiness • Olympic College, Welding Program • Peninsula College, Welding Program • NOTE: Peninsula College has a new Marine Technology Program – while not yet officially started, it will provide critical marine technology education and training to deeply rural Olympic Peninsula Communities • Northwest School of Wooden Boat Building

Between now and June of 2025, where is there regional momentum to support pathway development in this occupation?

For each region listed, please describe:

1. *Key **momentum factors** (e.g., interested employers, high-priority for Regional Network, opportunity to improve equitable access, opportunity to scale existing programs, portions of CCW pathway already built)*
2. ***High-potential opportunities** to support pathway development*
3. *Is supporting those high-potential opportunities a **shared priority** across SL and RN?*

Regional Momentum Factors – Aggregated

(1) **Marine Electrician**
(2) **Diesel Engine Technician**
(3) **Aluminum Welder/Fabricator**
(4) **Sailors & Marine Oilers**
(5) **Ship Engineer**
(6) **Captains, Mates & Pilots**

It is important to note, in any discussion of momentum factors regionally or statewide, there are common factors that will influence regional activities and drive demand for a technically competent maritime workforce. Those factors include, but are not limited to:

a. The imperative to support more **instructional capacity** at all educational levels. Programs will continue to compete statewide for faculty willing to leave far more lucrative private sector employment and come into the classroom.
b. **Cross-sector pathway development**. This is particularly true in areas where access and awareness are an area of identified opportunity. Cross-sector pathways support student awareness of career opportunities and most importantly, options to select from those opportunities with high demand technical and essential skills that 'travel' across sectors. Examples are the MAC Project, fully underway, and developing cross-sector work focused on autonomous platforms, electrical technologies and fuel system technologies.
c. **New and emerging industry expansion and markets** such as the planned US Navy expansion at Naval Base Everett; the newly established Office of U.S. Shipbuilding, decarbonization, rebuilding of the Washington State Ferry fleet with hybrid-electric ferries, Blue technologies and markets, and offshore wind (note: this momentum factor is based on Washington becoming a supply chain region for offshore wind at this time – there are infrastructural/Indigenous Community/commercial fishing/capacity/fisheries/heritage community and other considerations, and not enough is known to accurately predict beyond that point. Blue economy initiatives will impact all maritime sub-sectors and regions statewide.
d. **High demand occupation lists**, published by regional Workforce Development councils, routinely do not list many maritime occupations, as many are not called out explicitly in O*Net and other platforms. This can make it very challenging for students seeking financial aid for a contextualized maritime/marine technology program of study. There are workarounds for this - obtaining letters from industry partners to attest to local, regional and state demand. We are working with state and national partners to address this ongoing issue.

Please consider these common factors regarding each region and how they may differ and or be similar. This informs the approach to all our industry and education partner engagement.

NOTE: No major changes to this section. Following are projects that can be momentum factors across all regions.

- A significant focus will be the next phase of the MAC Project. MAC will now be introduced to all regions - this will include professional development; a statewide MAC comm; a resource focused site (teachwelding.org); expanded industry engagement and a potential dual credit project with the NW Region.
- Multi-Generation Maritime Navigator - this is an open resource maritime exploratory activity and curriculum blueprint for younger learners, faculty, families and community organizations. Initial demos of the Navigator have been well received and provide a platform for introducing maritime industry activities statewide.
- Cross-Sector Navigator - created as a deliverable for the MAC Project, the Navigator is a blueprint for cross-sector work, and applicable across industry sectors and all Regional Networks.
- Cross-sector work overall. Potential momentum factor across Regional Networks. Cross-sector opportunities will focus on autonomous systems, electrical technologies and new fuel systems.

Region 1 - Capital

Key momentum factors:

Momentum factors for this region are informed by direct on the ground Sector Lead

outreach to industry members, public ports, and engagement with the Regional Network. There are multiple factors at play in this region: the need to improve overall access to contextualized and cross-sector exploration, prep and launch content; the opportunity to scale up nascent or existing programs; and develop robust cross-sector pathways providing students with informed career options – this includes professional development for faculty members. Maritime industry demand and expanding markets contribute to this as well, both in the immediate and broader geographic region. This can and will impact all six high-demand occupations in the Capital region.

High-potential opportunities:
Through direct outreach with industry and education partners, we have documented opportunities to adopt a phased project approach to support contextualized and cross-sector pathway development in the region. One project in development is a collaboration with the Construction, Ag/Natural Resource and ESD 113 to support a scaled welding/fabrication model framework. Other opportunities for pathway development include direct work with industry members, public ports and secondary and post-secondary education providers. These opportunities will influence expanded access across communities, awareness and options for students and their families. Faculty professional development represents a significant high-potential opportunity via externships, leveraging relationships with OEM manufacturers, supply chain, and open resource curriculum development.

Shared priority? Yes, across all six occupations.

Region 2 - East

Key momentum factors:
Momentum in this region is informed by direct outreach and work with industry and education partners. College in the High School articulation. Recreational boat building, repair sector. Primary momentum here is focused on aluminum welding/fabrication, vessel systems overall (including electrical), and the development of other cross-sector technical skills. Awareness of maritime careers overall is important as well with regard to the underway sector of the industry.

High-potential opportunities:
College in the High School articulation – specifically for marine electronics. Faculty professional development and access to open resource curriculum and experiential modules. Faculty professional development may include externships, OEM training, access to industry standards-based curriculum and certification. The development of expanded cross-sector pathways for aluminum welding/fabrication, vessel systems and rigging, and related high-demand skills such as project management, and logistics. Awareness of underway maritime careers as well for inland and coastal operations. These opportunities inform expanded access across the rural community landscape. These opportunities are facilitated through direct engagement with the Regional Network and industry partners.

Shared priority?

Yes	**Awareness Only**
Marine Electrician	Sailors & Marine Oilers
Diesel Engine Technician	Ship Engineer
Aluminum Welder/Fabricator	Captains, Mates & Pilots

Region 3 – King & Pierce

Key momentum factors:
Very mature and dynamic maritime industry in this region – across all high-demand occupations. This is influenced by multiple sub-sectors of the industry, new markets and emerging technologies. Direct work with industry partners, the Regional Network, Port of Tacoma, education partners and other organizations drives this. Demand for shoreside and underway technical skills continues to grow – those include electrical, diesel and other propulsion technologies, aluminum welding/fabrication, project management, AB, deck and engine room. The rapidly changing workforce demographic in this region informs the imperative of engagement in all communities to expand awareness of maritime industry career opportunities, and improved/expanded access to education and training.

High-potential opportunities:
There are multiple opportunities in this region including faculty professional development, multi-generation outreach and awareness, and collaboration with the Regional Network and other education partners to support efforts and initiatives. Robust pathway development and support of projects underway (such as Tacoma 253, Youth Marine Foundation) are critical. Leveraging work underway to ensure access and content for early learners is important.

Shared priority? Yes, across all six occupations.

Region 4 – Mid-Columbia

Key momentum factors:
This region of the state has a very active aluminum boat building cluster as well as inland waterway operations. Through direct outreach with industry partners, the Regional Network, and other education partners, the project has documented specific technical workforce needs. Primary drivers are focused on aluminum welding/fabrication, rigging (which includes electrical), and engagement with K12 community. Awareness of inland and coastal maritime opportunities are a factor as well.

High-potential opportunities:
There are multiple opportunities is this region including faculty professional development, multi-generation outreach and awareness, and collaboration with the Regional Network and other education partners to support efforts and initiatives. The project will support pathway work to highlight cross-sector career opportunities and will leverage efforts to ensure access and content for early learners is important. Awareness activities for inland underway operations.

Shared priority?

Yes	**Awareness at this time**
Marine Electrician	Sailors & Marine Oilers
Diesel Engine Technician	Ship Engineer
Aluminum Welder/Fabricator	Captains, Mates & Pilots

Region 5 – North Central

Key momentum factors:
The primary factors in this region focus on cross-sector technical workforce needs –

specifically aluminum welding/fabrication, electrical and diesel technologies. Overall maritime career awareness and cross sector pathway development are high priority.

High-potential opportunities:
Cross-sector pathways, particularly for aluminum welding/fabrication, electrical technologies, and essential skills. Faculty professional development and access to open resource materials represent productive and measurable opportunities.

Shared priority?

Yes	**Awareness Only**
Marine Electrician	Sailors & Marine Oilers
Diesel Engine Technician	Ship Engineer
Aluminum Welder/Fabricator	Captains, Mates & Pilots

Region 6 – Northwest

Key momentum factors:
Very mature and dynamic maritime industry in this region – across all high-demand occupations. This is influenced by multiple sub-sectors of the industry, new markets and emerging technologies. Direct work with industry partners, the Regional Network, regional ports (Edmonds, Everett, Skagit, Anacortes, Bellingham), education partners and other organizations drives this. Demand for shoreside and underway technical skills continues to grow – those include electrical, diesel and other propulsion technologies, aluminum welding/fabrication, project management, AB, deck and engine room. The consistent and growing technical workforce needs in this region inform the imperative of engagement in all communities to expand awareness of maritime industry career opportunities, and improved/expanded access to education and training. New markets and expanded maritime operations are critical in this region – electrification and US Navy expansion will influence demand and workforce education and training needs at all levels: K12, community and technical colleges, registered apprenticeship and four-year programs.

High-potential opportunities:
There are multiple opportunities in this region including faculty professional development, multi-generation outreach and awareness, and collaboration with the Regional Network and other education partners to support efforts and initiatives. Robust pathway development, faculty professional development and support of projects underway are critical (i.e. the Around the America's Project – where we will be the ROV sponsor, connecting to K12 classrooms and curriculum resources – expanding access and awareness across communities). Leveraging work underway to ensure access and content for early learners is important.

Shared priority? Yes, across all six occupations.

Region 7 – South Central

Key momentum factors:
This region of the state has an active recreational boating cluster as well as inland waterway operations. Through direct outreach with industry partners, the Regional Network, and other education partners, the project has documented specific technical workforce needs. Primary drivers are focused on aluminum welding/fabrication, rigging (which includes electrical), marine service operations, and engagement with K12

community. Awareness of inland and coastal maritime opportunities are a factor as well.

High-potential opportunities:
There are multiple opportunities is this region including faculty professional development, multi-generation outreach and awareness, and collaboration with the Regional Network and other education partners to support efforts and initiatives, such as cross sector pathways to develop portable technical skill portfolios for students. Leveraging work underway to ensure access and content for early learners is important. Awareness activities for inland underway operations.

Shared priority?

Yes	**Awareness Only**
Marine Electrician	Sailors & Marine Oilers
Diesel Engine Technician	Ship Engineer
Aluminum Welder/Fabricator	Captains, Mates & Pilots

Region 8 – Southwest

Key momentum factors:
Momentum factors for this region are informed by direct on the ground Sector Lead outreach to industry members, public ports, and engagement with the Regional Network. There are multiple factors at play in this region: the need to improve overall access to contextualized and cross-sector exploration, prep and launch content; the opportunity to scale up nascent or existing programs, such as the new maritime program for the Vancouver School District; and develop robust cross-sector pathways providing students with informed career options – this includes professional development for faculty members. Maritime industry demand and expanding markets contribute to this as well, both in the immediate and broader geographic region. This can and will impact all six high-demand occupations in the Southwest region, as demand exceeds current pipeline capacity.

High-potential opportunities:
Through direct outreach with industry and education partners, we have documented opportunities to adopt a phased project approach to support contextualized and cross-sector pathway development in the region. Other opportunities for pathway development include direct work with industry members, public ports and secondary and post-secondary education providers. These opportunities will influence expanded access across communities, awareness and options for students and their families. Faculty professional development represents a significant high-potential opportunity via externships, leveraging relationships with OEM manufacturers, supply chain, and open resource curriculum development.

Shared priority? Yes, across all six occupations.

Region 9 – West Sound

Key momentum factors:
Very mature and dynamic maritime industry in this region – across all high-demand occupations. This is influenced by multiple sub-sectors of the industry, new markets and emerging technologies. Direct work with private and public industry partners, the Regional Network, regional ports, secondary and post-secondary education partners and other organizations drives this. Demand for shoreside and underway technical skills

continues to grow – those include electrical, diesel and other propulsion technologies, aluminum welding/fabrication, project management, AB, deck and engine room. The rapidly changing workforce demographic in this region informs the imperative of engagement in all communities to expand awareness of maritime industry career opportunities, and improved/expanded access to education and training. New markets and expanded maritime operations are critical in this region – electrification and US Navy activity at Puget Sound Naval Shipyard will influence demand and workforce education and training needs at all levels: K12, community and technical colleges, registered apprenticeship and four-year programs.

High-potential opportunities:

1. There are multiple opportunities in this region including faculty professional development, multi-generation outreach and awareness, and collaboration with the Regional Network, tribal, rural community leadership, and other education partners to support efforts and initiatives. The West Sound region is a critical maritime industry hub. Leveraging work underway to ensure access and content for early learners is important.
2. Development of a statewide Underway Framework - we are working directly with the NW Maritime Center to support the creation of a statewide Underway framework for the K12 system. Providing technical support to the Maritime Center focused on technical requirements, content and structure of frameworks. This opportunity is aligned with a refined focus as Maritime Sector Lead. The frameworks will support access, awareness across all communities, as well as professional development for K12 faculty.

Shared priority? Yes, across all six occupations.

Please describe the types of employers in your sector who are most eager to participate in career connected learning to meet their workforce needs. Why are these types of employers interested in participating in career connected learning, and what type of career connected learning programs are most valuable to them?
In the maritime sector, there are multiple employer types who are enthusiastic about working with career connected learning to address their workforce needs. The motivating rationale for employers is the thin technical talent pipeline - other industries seek similar technical competencies. Employers represent all sub-sectors of the maritime industry, including the three sub-sectors that are the focus of the Maritime Sector Lead work: boat and shipbuilding and repair, underway operations (tug, barge & water transportation), commercial fishing and seafood processing. This includes direct activities, and the supply chain. There is geographic diversity as well. Employers in rural, urban and suburban communities want to be aligned with career connected programming to help address their workforce needs.

What is needed to increase participation of BIPOC students in your sector's high priority occupations? To increase participation of students from rural areas? Which programs are doing this well?

Original strategic plan goals and strategy statements inform this work. The following Goal statements have been reviewed by Maritime Stakeholder Group members for relevancy and possible update.

Broadly speaking, the Goals remain valid and support specific projects such as the Maritime, Agriculture & Natural Resource and Construction (MAC) Welding Framework. MAC is led by the Maritime, Agriculture & Natural Resource, and Construction Sector Leads, in collaboration with the Northwest, Capital and Mid-Columbia Regional Networks, and Skagit Valley College, Grays Harbor College and Walla Walla Community College.

Goal - Improve awareness and access to Maritime Career Pathways with an emphasis on partnerships and engagement with Black, Indigenous, and People of Color as well as other under-invested communities.
As Maritime Sector Lead, we are committed to continuing our strategies focused on increasing participation in the maritime industry across communities.

- *We are working on the development of an open resource Navigator addressing underserved and underinvested community engagement in collaboration with Washington Maritime Blue.*
- We are committed to supporting and platforming underserved community voices and initiatives.
- Work directly with community organizations and leadership to ensure youth have access to core credentialing opportunities, which improve access to career connected programming and registered apprenticeship programs. Examples of critical credentials include driver's licensure, TWIC card, Merchant Mariner Credential (which can be obtained at 16), etc. These not only enhance employability, they create access options for youth and young adults.

Goal - Build foundational tools to remove structural barriers to advancing an equitable maritime workforce plan.

Following are high priority target activities designed to reach across communities.

Early Learner Access to Maritime	Instructional Capacity	OER Curriculum & Resources
Develop contextualized modules & activities. Modules are aligned with computational benchmarks and CTE career pathways. Provide robust professional development for faculty to support content and activity delivery.	Increase faculty professional development opportunities contextualized to maritime. Support access to credentialing opportunities for faculty (i.e. MAC Project). Develop and grow the number of CTE faculty across communities and pathway disciplines.	Invest in open resource & contextualized maritime curriculum - aligned with industry and are standards-based. Ensure resources are readily accessible by faculty statewide.

Multi-Generation Navigator, designed to support awareness and access to the maritime industry by early learners.		

There are several initiatives that are reaching Black, Indigenous and People of Color and rural communities very effectively, and include:

- Youth Marine Foundation
- Washington Sea Grant
- Sound Experience
- Sea Potential
- Center for Wooden Boats
- Urban League
- Sawhorse Revolution – Boat Build
- Maritime High School
- Youth Maritime Collaborative
- Real World Readiness – Maritime, Northwest Maritime Center
- Machinists Institute

What overarching strategies do you recommend to support pathway development for the highest-priority occupations in your sector?

Goal: Communicate the value of Maritime sector careers more effectively

Strategy Statements

1. Leverage the K-12 system to develop a two-generation strategy to engage youth and young adults as well as their families. Multi-Generation Navigator reaching younger learners, families, faculty and community-based organizations. The Navigator is now complete, has been vetted with Maritime Stakeholder Group, and is now moving into the formatting phase. The Navigator is open resource and will be readily accessible.
2. Develop an easy-to-understand career lattice to show how career progression occurs. MAC Project welding career pathway map, highlights career progression and options.
3. Create tools that highlight diverse working environments to broaden appeal for the Maritime Sector.
4. Articulate that Maritime occupations are STEM based careers to ensure programmatic investment.
5. Identify new communication channels to reach communities of focus.
6. Conduct statewide training for workforce professionals in the Work Source system to connect active job seekers to maritime careers.

Goal: Improve the cohesiveness of the Career Connected Learning Eco-system across the State.

Strategy Statements

1. MAC Welding Framework Project.

2. Connect industry members to community-based organizations that are trusted messengers in communities.
3. Develop a dashboard/data system to collectively measure the impact of Career Prep and Career Launch programs compared to industry demand.
4. Identify areas for investment (programmatic, geographic community etc.) for future CCL funding to avoid overlap and ensure stewardship of public resources.
5. Central to this goal is the development of open resource Navigators to support the development of Career Explore, Prep, Launch and Apprenticeship. It is critical to establish strong contextualized opportunities for early learners. This includes professional development for faculty. By doing so, the project creates and supports a connected network of exploratory and preparatory content. Establishing a framework for explore and prep, facilitating opportunities for launch and apprenticeship programming.

Faculty professional development

1. Externships
2. Experiential/project opportunities
3. OER resources
4. Direct connection to regional and stateside maritime industry partners
5. Professional development calendar
6. Professional development leading to certifications, where applicable

Please describe the types of activities and tactics you believe are needed to make progress against each recommendation between now and June of 2026, including:

1. **Key activities and tactics you would like to prioritize as a fully-funded Sector Leader**
2. **Key activities other partners should consider advancing**

Key activities we would prioritize as a fully-funded Sector Leader

Washington State Maritime Campus

Central to serving as Maritime Sector Lead, is approaching Washington State as a connected maritime campus. The maritime industry operates across the state. Strategies and activities will focus on supporting this premise, improving awareness and access for communities statewide, and expanding Career Connected programming for maximum and long-term impact.

Targeted Impacts and Outcomes

1. A seamless, interconnected network where students can move from high school to community and technical colleges, non-profit and private providers, apprenticeships, and four-year universities.
2. Standardized, statewide pathways that support students no matter where they enter the maritime education system.
3. Regional accessibility, ensuring coastal, Puget Sound, mid-state, and east state communities benefit equally.
4. Strong industry connections, ensuring Career Connected programs align with current and future workforce needs.

Maritime Agriculture & Natural Resource and Construction Welding Framework Project, Phase II

- Implement full systemwide scaling of the project.
- Establish www.teachwelding.org as the primary resource space for welding faculty.
- Disseminate the Cross-Sector Navigation Guide.
- Develop and deliver faculty professional development using the professional development matrix created under this project as a blueprint.
- Create a professional development calendar.
- Create a project advisory committee.
- Evaluate dual credit and college in the high school options and opportunities.
- Establish a systemwide comm to ensure faculty, industry and community partners are receiving current project information.
- Work with community and technical colleges on Welding Launch endorsement, and subsequent partnership with their regional K12 programs.
- Ensure all materials created are open resource.
- Expand employer partner cohort.

Develop and Deliver Faculty Professional Development

- Collaborate with industry, system and CCW partners to identify and create professional development content for faculty. Professional development will focus on the maritime industry, and cross-sector technologies, where applicable.
- Offer professional development on multiple platforms – online, in person, onsite with an industry partner, etc.
- Access and develop open educational resources for faculty.
- Identify subject matter experts to develop and deliver content.
- Work through appropriate processes to offer STEM clock hours for professional development offerings.

Underway Statewide Framework Development

- Following the best practices created under the MAC Project, work with the NW Maritime Center on the development of a statewide Underway Pathway Framework for K12.
- Support Launch application and designation where relevant.
- Map statewide K12 maritime training network for articulation to underway education providers, supporting regional access points for underway training.
- Develop an underway pathway map in collaboration with industry and education partners.

Buoyant Beginnings Pre-Apprenticeship Program (Lummi Nation & Whatcom Working Waterfront Foundation)

- Continue to provide project support and technical assistance for this maritime pre-apprenticeship program.
- Support initial launch and expansion of the program to other regions in the state.
- Identify and connect potential partners.

Cross-Sector Project Development

- Cross-sector work will be based on high demand technical skills that are in demand across industry sectors, and emerging technologies applicable to multiple sectors.
- This approach supports system efficiencies, access (especially in underserved and underinvested communities), faculty professional development and industry engagement.

- Content areas under active evaluation are: submersible ROV's (this is directly aligned to the Around the America's Project), fuel systems and electrical technologies.

Open Resource Navigators

- Multi-Generation Maritime Navigator – created for young learners, 3rd to 6th grades, the navigator is a tool for use by teachers, students, families and community organizations. The Navigator is complete and will now be disseminated systemwide. There will be accompanying professional development for faculty, and community users.
- Cross-Sector Navigator – a product of the MAC Project, the Navigator presents a blueprint for cross-sector work across industries and organizations.
- Community Engagement Navigator – under development in partnership with Washington Maritime Blue. Data informed and focused on underserved and underinvested communities statewide. Topics will include engagement strategies, working with community leaders, understanding regional differences, etc.

National Maritime Initiatives & Blue Technologies

- Create a strategic workforce alignment plan, ensuring Washington's maritime education and training network is aligned with State and national priorities.
- Leverage this work through the existing relationships and collaborations with maritime organizations including: (1) Teaching with Small Boats Alliance; (2) National Shipbuilding Research Program; (3) Northwest Marine Trade Association; (4) Washington Maritime Federation; (5) Washington Maritime Blue; (6) Ship Operators Cooperative Program; (7) Puget Sound Ship Repair Association and (8) Maritime Administration Domestic Maritime Workforce Centers of Excellence.
- Support integration of blue and emerging maritime technologies into programs statewide.

Opportunity Gap Analysis – Interconnected Maritime Campus

- By region (coastal, Puget Sound, mid-state, east state) identify workforce training gaps to strengthen program and industry alignment.
- Ensure students furthest from opportunity are aware of educational options and accessibility platforms.
- Conduct statewide review of statewide maritime campus model, collecting evaluative feedback from education, students and industry partners.

Other support will include the following:

1. **Washington Jobs Initiative:** As Maritime Sector Lead, the Center is working directly with the Machinists Institute on the Aerospace and Manufacturing Sectoral Partnership. The role of the Center is to conduct industry outreach, specifically with aluminum vessel manufacturing, to link them with this project and address the workforce challenges faced by industry in the aluminum welding and fabrication space.
2. **Outreach/Support/Grant Efforts:** Engagement with employers, CCW partners, registered apprenticeship, and programmatic support.
3. **Mentorship:** work with CCW partners to share experience and strategies to benefit overall work.

Summary of Project Values

- All projects and initiatives should be actionable, measurable and observable.

- All products created (modules, frameworks, curriculum, best practices, Navigators, etc.) will be open source and readily accessible.
- Faculty professional development is imperative.
- Projects should and will be adaptable and replicable by regions statewide.
- The project works across all communities statewide, supporting access and the empowerment of local/regional leadership.

Key activities other partners should consider advancing

- Focus on the development of contextualized and cross-sector frameworks.
- Collaborate to support the creation of professional development for faculty.
- Adopt consistent communications strategies for system, industry and community partners and stakeholders.
- Mentorship strategies to support colleague organizations and establish best practices.