WASHINGTON MARITIME blue

A Strategic Alliance for Maritime Innovation and a Sustainable Blue Economy

Washington Maritime Blue

An Innovation Cluster Organization

Washington Maritime Blue is a non-profit (501c3), strategic alliance formed to accelerate innovation and sustainability in support of an inclusive blue economy. Maritime Blue works to create a world-class, thriving, equitable and sustainable maritime and ocean industry through knowledge sharing, joint innovation, entrepreneurship, commercialization, business and workforce development.

Strategic Focus & Leadership in the Blue Economy

HIGH LEVEL PANEL for A SUSTAINABLE OCEAN ECONOMY

This we KNOW

Ocean based solutions and the Blue Economy are critical for addressing the climate crisis while supporting thriving and equitable communities with significant economic opportunities.

HOW we do it

Ocean/Maritime Innovation Clusters activate and catalyze public/private/philanthropic capacity to accelerate innovation, investment, and community development.

WASHINGTON MARITIME blue

Industry Members

DNV
Glosten
MOL Mitsui O.S.K. Lines
TOTE Maritime
SSA Marine A Carrix Enterprise
CROWLEY
MANSON
MER EQUIPMENT
Elliott Bay Design Group
Mitsubishi Corporation (Americas)
Newfront Formerly ABD
TMI
American Seafoods Pride of the Sea
KONGSBERG
TRIDENT WINDS
BAE SYSTEMS
UES USA Inc
FOSS OFFSHORE WIND
gybe
HSC HULL SCRUBBER CORPORATION
COASTAL SENSING & SURVEY
Streetline
Restorical Research
IMPACT Naval Architects
WATERLESS
EDCO METAL FABRICATORS
EDCO, INC. — AN AISC CERTIFIED FABRICATOR
Blue Dot Kitchen
ADHERE GEV
JOHNSTON ENGINEERING
steamchain
SAFE BOATS
ALL AMERICAN MARINE
MARINE SAFETY SOLUTIONS, LLC
STABBERT MARITIME
SMRU Consulting Europe • North America
SCHOTTEL elkon
WÄRTSILÄ
XFLOW ENERGY
MARKEY
ioCurrents
OCEANCHEM
RWE
NOKIA
FORTESCUE FUTURE INDUSTRIES
SPEAR POWER SYSTEMS
HUSKY TERMINAL
Corvus Energy
LAKE UNION DRYDOCK
Par Pacific
DISCOVERY HEALTH MD
wsp
HANDY Marine Engineering

Community Partners

IMPACT WASHINGTON
Goodwill Because jobs change lives
COVE
EDASC Economic Development Alliance of Skagit County
decarbonized.org
WORKING WATERFRONT COALITION OF WHATCOM COUNTY
Transportation Institute
OCEANIC NETWORK
NWSeaport Maritime Heritage Center
NORTHWEST SCHOOL OF WOODEN BOATBUILDING
ABS
Maritime Battery Forum
BLUE SKY MARITIME COALITION
EDC TEAM Jefferson
Northwest Straits Foundation
Discover Magnolia MAGNOLIA CHAMBER OF COMMERCE
Sound Experience
NAMEPA
nw Innovation Resource Center
Marine Exchange of Puget Sound
EDMONDS COLLEGE
Maritime Battery Forum
CleanTech Alliance Washington
GREEN MARINE
NCE Maritime CleanTech

WASHINGTON MARITIME blue
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Research Institutions

PMEL Pacific Marine Environmental Laboratory
Applied Physics Laboratory University of Washington
Institute for Health Metrics and Evaluation
Pacific Northwest National Laboratory
Middlebury Institute of International Studies at Monterey Center for the Blue Economy
PMEC Pacific Marine Energy Center
NANOOS

Public Partners

Seattle Office of Economic Development
Washington State Department of Commerce
Port of Seattle
THE NORTHWEST SEAPORT ALLIANCE Gateway to Solutions
Washington State Department of Transportation
Center of Excellence for Marine Manufacturing & Technology
Washington State Ferries
EDA Jamestown S'Klallam Tribe Economic Development Authority
Sea Grant Washington
PUGETSOUND PARTNERSHIP
Port of Tacoma
PUGET SOUND PILOTS Protecting Puget Sound Since 1935
Port of Skagit
PORT OF BELLINGHAM Washington State — Building A Strong Community
Port of EVERETT
Washington Workforce Training and Education Coordinating Board
Innovation Norway
SKAGIT COUNTY Pure Puget Playground Washington
Port of Whitman County
CITY OF Tacoma

Impactful Programs to Accelerate the Blue Economy

Blue Ventures

Supporting Entrepreneurship and Capital Investment for Ocean-based Solutions

Joint Innovation

Collaborative Initiatives and Project Management for Innovation and Development

Equity Engagement

Career Connected Workforce and Employer Development through an Equity Lens

Quiet Sound

Reducing Impacts on Southern Resident Orcas from Large Vessels

Members come together through **Strategic Initiatives & Joint Innovation Projects** (JIPs) to collaborate and implement key demonstration projects to accelerate Ocean health and the Blue Economy

Collaborations and Strategic Initiatives

A Voluntary Program to Reduce the impacts to Southern Resident Killer Whales from large commercial vessels.

A Collaborative Approach to Equitable Benefits from Floating Offshore Wind Supply Chain Development.

Facilitating Port and Maritime Advisory Input for the Pacific Northwest Hydrogen Hub Development.

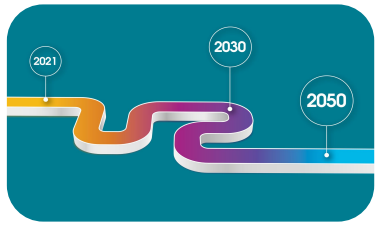
Supporting the Development of Green Shipping Corridors in the Pacific Northwest.

Studies & Analysis

Underway

Safety Study for Decarbonization of Fishing

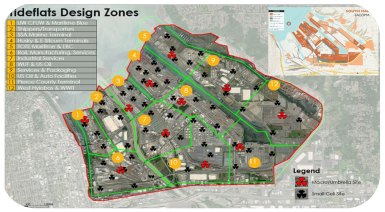
ABS · Glosten · AMSEA Alaska Marine Safety Education Association



Sustainable Maritime Fuels Roadmap

RMI · Port of Seattle · JCDREAM · Washington State Department of Commerce · The Northwest Seaport Alliance

Completed



Tacoma Tideflats 5G Use Case & Feasability Study

5G Open Innovation Lab · Washington State Department of Commerce · Tacoma · Impact Washington · Business Finland · University of Washington Tacoma · Husky · Tacoma Public Utilities

Maritime Electrification for Utilities

Pacific Northwest National Laboratory · DNV · U.S. Department of Transportation Maritime Administration

Washington Maritime blue

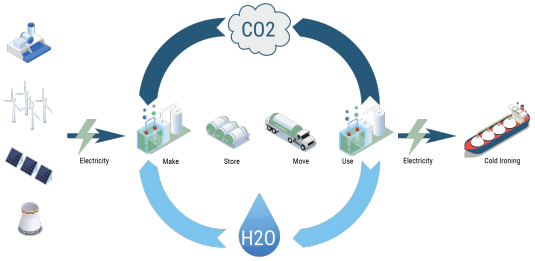
Joint Innovation Projects

Zero-Emission Foil Fast Ferry: from Concept to Demonstration

Glosten · BIEKER BOATS · Kitsap Transit Connecting Communities · TACOMA POWER Tacoma Public Utilities · DNV · Port of Bellingham Washington State Building A Strong Community · Port of Anacortes Est. 1926 · Port of Skagit · EDASC Economic Development Alliance of Skagit County

Tacoma Blue Edge Network & Innovation Lab

Tacoma · 5G Open Innovation Lab · EDGE Cluster · Tacoma Public Utilities · TOTE Maritime · SAFE BOATS · MOTIVE E-Port Shipyard, Tacoma · Trident Seafoods · SILVERBACK



Green Hydrogen Shore Power: Formic Acid as a Liquid H2 Carrier

OCO Use, Don't Waste, Carbon Dioxide · Pacific Northwest National Laboratory · TACOMA POWER Tacoma Public Utilities · DNV

Washington Maritime blue

WASHINGTON MARITIME blue Wind

Activating the Regional Supply Chain for Floating Offshore Wind

Mission

Maritime Blue Wind is a nonregulatory coalition to support strategic development and activation of Washington's participation in the West Coast-wide Floating OSW supply chain through a collaborative and community benefits approach.

Objectives

- ➔ Convene the Cluster of activity, stakeholders, and partners
- ➔ Identify and map WA's full value and supply chain available to support floating offshore wind along the West Coast of US
- ➔ Understand the economic, community, and workforce development opportunity for our region through focused convenings/workshops
- ➔ Develop a strategy for and activate WA's participation in the West Coast OSW Supply Chain through inclusive workshops, studies, and convenings to ensure it's done in a way that is: **Equitable, Sustainable, & Profitable**

Tacoma Blue Edge Network

Maritime Manufacturing & Port Operations

edge cluster

5G OPEN INNOVATION LAB

WASHINGTON MARITIME blue

Tacoma · Tacoma Public Utilities · TOTE Maritime · SAFE BOATS · MOTIVE E-Port Shipyard, Tacoma · Trident Seafoods · SILVERBACK

Supporting **entrepreneurs and startups** in maritime, ocean, and related sectors building the Blue Economy

CARBON ORCA
knowgap
ALGEON MATERIALS
WEAVAIR
ALLOSENSE
PUGET BUOY EST. 2019
PHOTON
Blue Dot Kitchen
steamchain
Marine Safety Solutions, LLC
SPBES
canscan
FUTURE SIGHT AR
fishtail
VIRGIL GROUP
PMG PACIFIC MOBILITY GROUP
oneTANK from Glosten
MM-SEAS™
SILVERBACK MARINE
Beam Reach
DISCOVERY HEALTH
OpenTug
JJ&COMPANIES
ADHERE
iHAUL SOUTH PUGET SOUND
MUVEEN
ecoSPEARS
EQULL
FREEBOARD
Aquagga
NET YOUR PROBLEM
Sea Potential
ONE FOR NEPTUNE
eOceans
REWAKE
ASTRAEUS OCEAN SYSTEMS
PUREWATERCRAFT
DOCKSHARE
Earthwise SORBENTS INC
Berkeley Marine Robotics
qualiTEAS
HyperKelp SPACE & SEA
Duplex M
microsystems
gybe
WhyGrene Energy Exchange
ATARGIS
OO-NEE SeaRanch
ELOMATIC Visions of Tomorrow, Engineered Today
CargoCheck™
GIGACHANCES
RMZ
UnCruise ADVENTURES LEADER IN AUTONOMOUS WHALE DETECTION

Our Blue Ventures Programs

Our growing innovation programs work to support founders and startups at every stage of their journey.

4 Month Mentor-based Innovation Accelerator

One Year Incubators in Tacoma & Seattle

12 week program for International startups for WA/US market entry

Best In Class
Mentor Based Programming

Group programming on topics such as financial models, tax incentives, SEO optimization, market analysis, etc…

Office hours with service firms, insurance, legal, HR, and investors.

1-1 sessions with matched professionals and leaders in your field and market.

Full access to the Maritime Blue Cluster of Industry, Research, Public Agencies and Community Organizations.

Our Programs have IMPACT

56 Startups Engaged since Jan 2020

Wins and Deals

- $400M + in Capital Investments
- 3 Exits (1 pending)
- Several Demos & Customer Acquisitions
- Over %500 increase in revenue
- At least 400 jobs created

Cluster Engagement

Startups receive year-long membership with Maritime Blue and continue engagement with Cluster partners and the sector.

Demographics

Local - 65% PNW // 35% other
Gender - 70% male // 30% female or NB
Race/Ethnicity - 64% white // 36% BIPOC
Identify as Underrepresented - 46%

blue TACOMA MARITIME Innovation Incubator

Steering Committee

Port of Tacoma · Tacoma Power · TOTE Maritime · SSA Marine · City of Tacoma · Manufacturing Industrial Council · edb Economic Development Board · University of Washington Tacoma

Aquagga

knowgap — Skills & Talent Development Software Platform

iHAUL South Puget Sound

Sea Potential

PMG Pacific Mobility Group

INNOV8 SOCIAL

MARINE MOBILITY

WhyGrene Energy Exchange

HOMEOSTASIS

Blue Innovation Fund

Raising an early-stage investment fund to build on the world-class cluster and programs that exist here in Washington and the Greater NW.

Clean Oceans & Climate Solutions

Maritime Transformation

Sustainable Fisheries

2024-2027 Deployment Period
Sourcing innovation globally / Accelerating in Seattle

Brock Mansfield
Managing Partner
Blue Innovation Fund

Jean-Noel Poirier
Managing Partner
Blue Innovation Fund

Fostering an **equitable and diverse 21st century workforce** through career connected learning and employer driven engagement

Equity Engagement

The Carrick Bend Knot

Its purpose is to connect two lines of different type and size. It's particularly appropriate for very heavy rope or cable that is too large and stiff to be easily formed into other common bends. It will not jam even after carrying a significant load.

Equity Focused Workforce and Employer Engagement Programs

Youth Maritime Collaborative (YMC):
A collaboration of youth serving, and public-private entities identifying pathways, sharing best practices, and collective engagement through career awareness and experiential events.

Youth Maritime Accelerator Project:
Summer-long, youth focused, paid internship program. 8 weeks with cohort learning modules and wrap around services including DEI training and support for employers.

Maritime Blue Career Launch Program:
3-Month, full time paid internship program with wrap around services, employer, commitments, and DEI training and support for employers.

Impact

We champion diversity, equity and inclusion through continuous operational and interpersonal mindset change and recognizing the important intersection of environment, sustainability and racial equity.

2020-2023

Total Interns Served: **72**

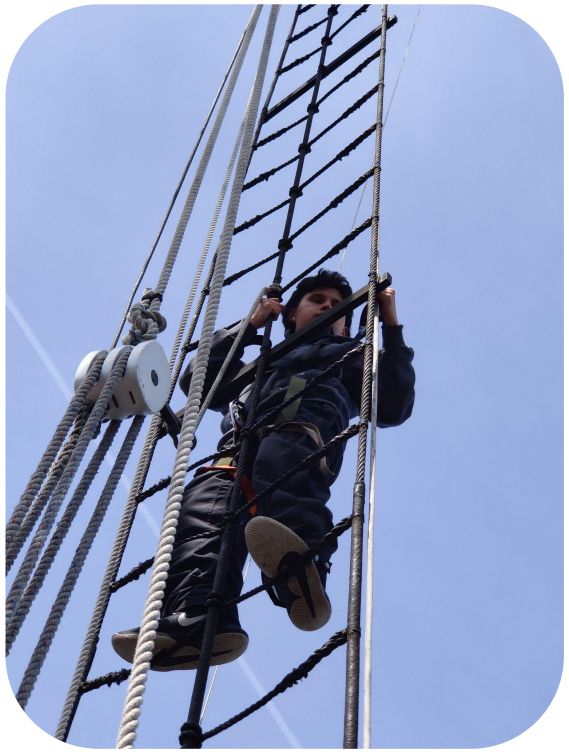
Total Stipends Delivered: **$145,000**

Total Career Awareness Events: **34**

Total Youth Served: **358**

Total Employer DEI Training: **31**

Race/Ethnicity Demographics of Youth Served:
African-American 23.3%, Hispanic/Latino 42.1%, Asian 28.5%, Caucasian 6.1%



A collaborative, non-regulatory program to **reduce the impacts to Southern Resident Killer Whales** from large commercial vessels

QUIET SOUND

A collaborative, non-regulatory program tasked with understanding and mitigating the acoustic and physical impacts from large commercial vessels on the critically endangered Southern Resident killer whales in Washington waters

With thanks to our 2023 funders:

Quiet Sound Leadership Committee Members

Parameters of the 23-24 slowdown

Dates: October 12, 2023-January 12, 2024

The voluntary vessel slowdown began once SRKW were observed in the slowdown area on or after Oct 1, 2023. This slowdown has a fixed end date.

When safe and feasible to do so, transit at or below:

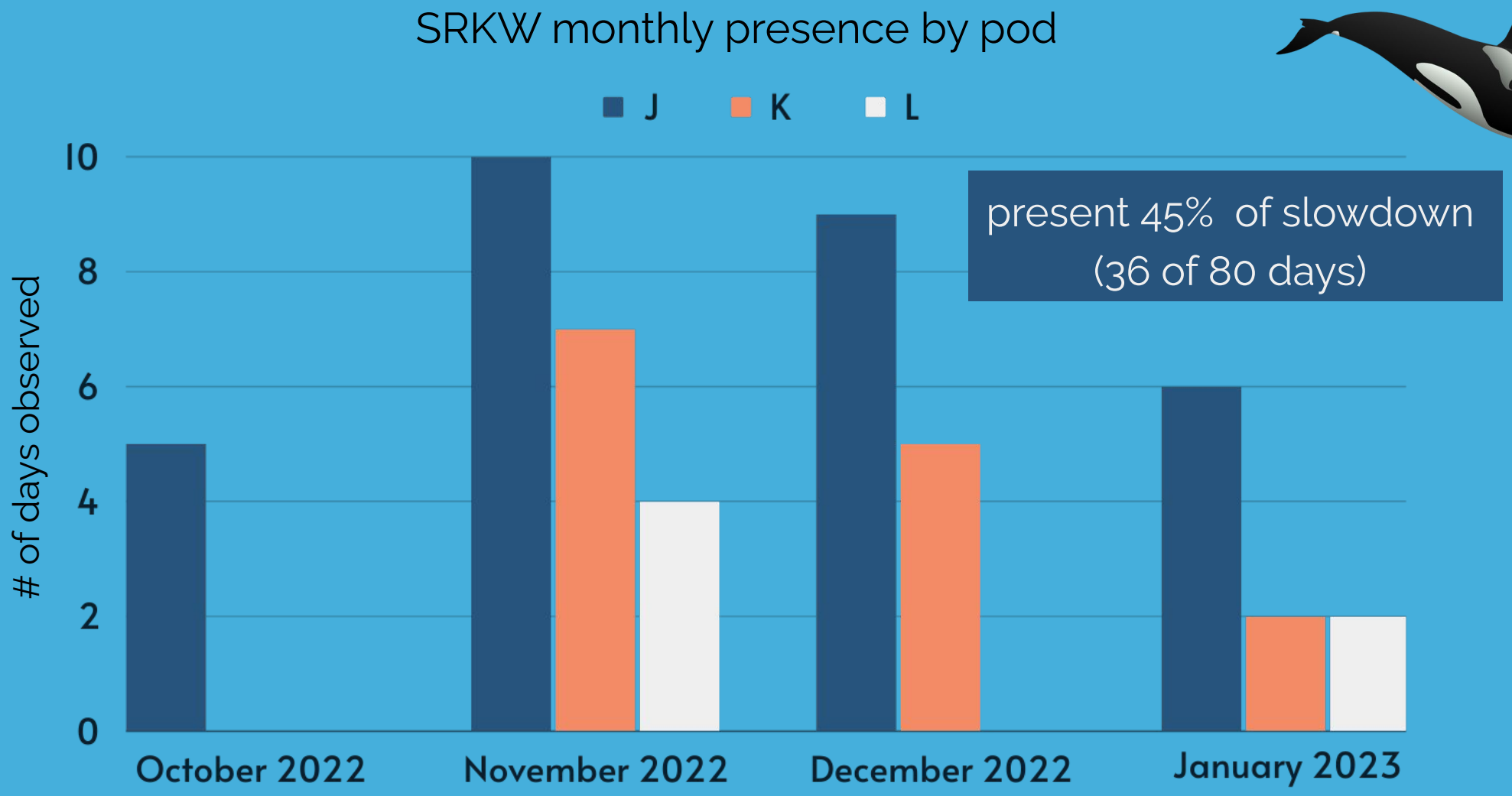
- **14.5 knots –** speed through water or less for **vehicle carriers**, **cruise ships**, and **container vessels**

11.0 knots – speed through water or less for **bulkers** and **tankers**

Turn off ultrasonic antifouling devices in SRKW critical habitat.

quietsound.org/admiralty-inlet-slowdown

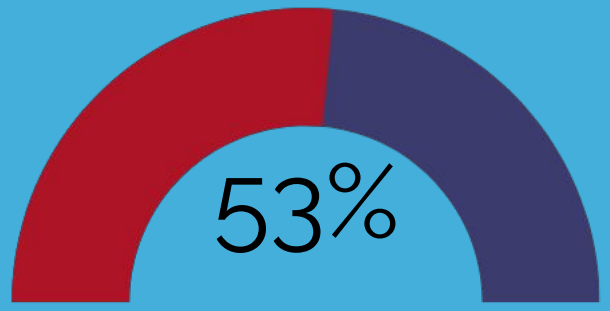
2022-23 Orca Presence During Slowdown



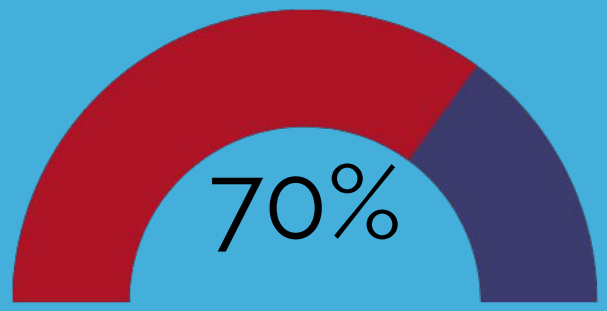
The Impacts of Vessel Participation: Seasons 1 & 2

Season 1, 2022-23

Weeks 1-12



fully met speed targets

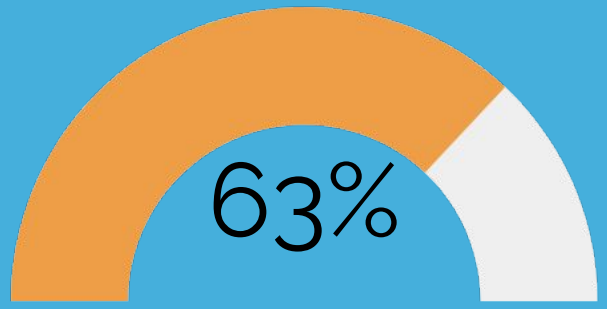


reduced speed

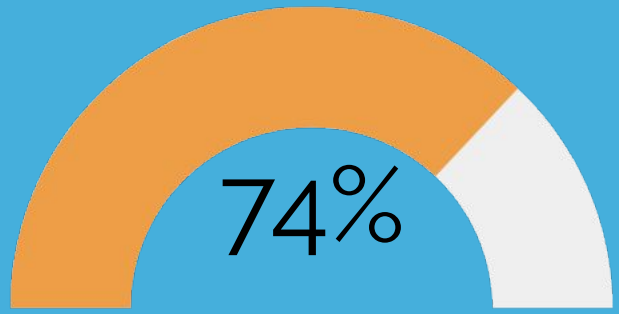
Median broadband sound levels were reduced by 2.8 decibels, a **45%** reduction in sound intensity

Season 2, 2023-24

Weeks 1-6 (halfway point)



fully met speed targets



reduced speed

Hydrophone is in the water now collecting sound data that we'll use to calc. noise benefits in 2024.

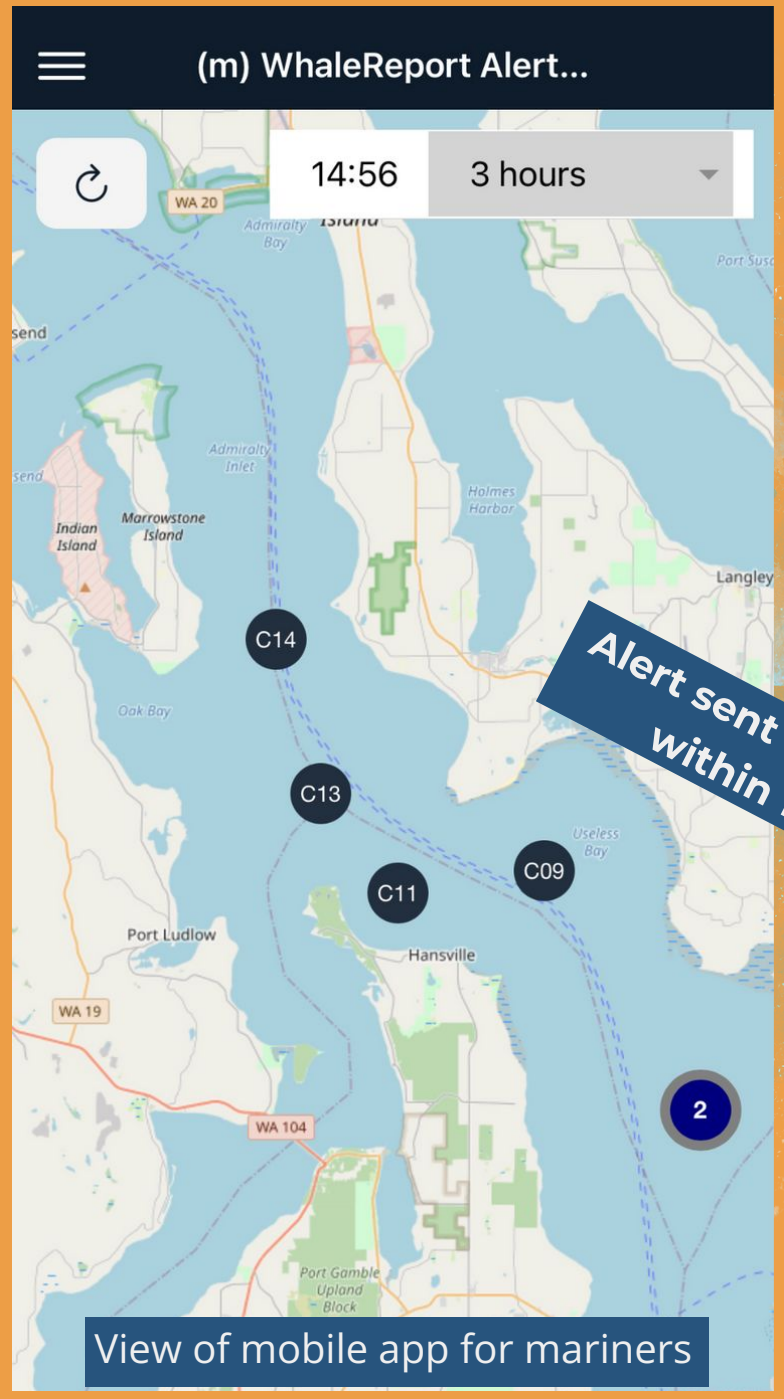
Further Develop the WhaleReport Alert System

2023 Milestones:

- API completed
- Local sightings network data added to WRAS to provide mariners with real-time, location specific information

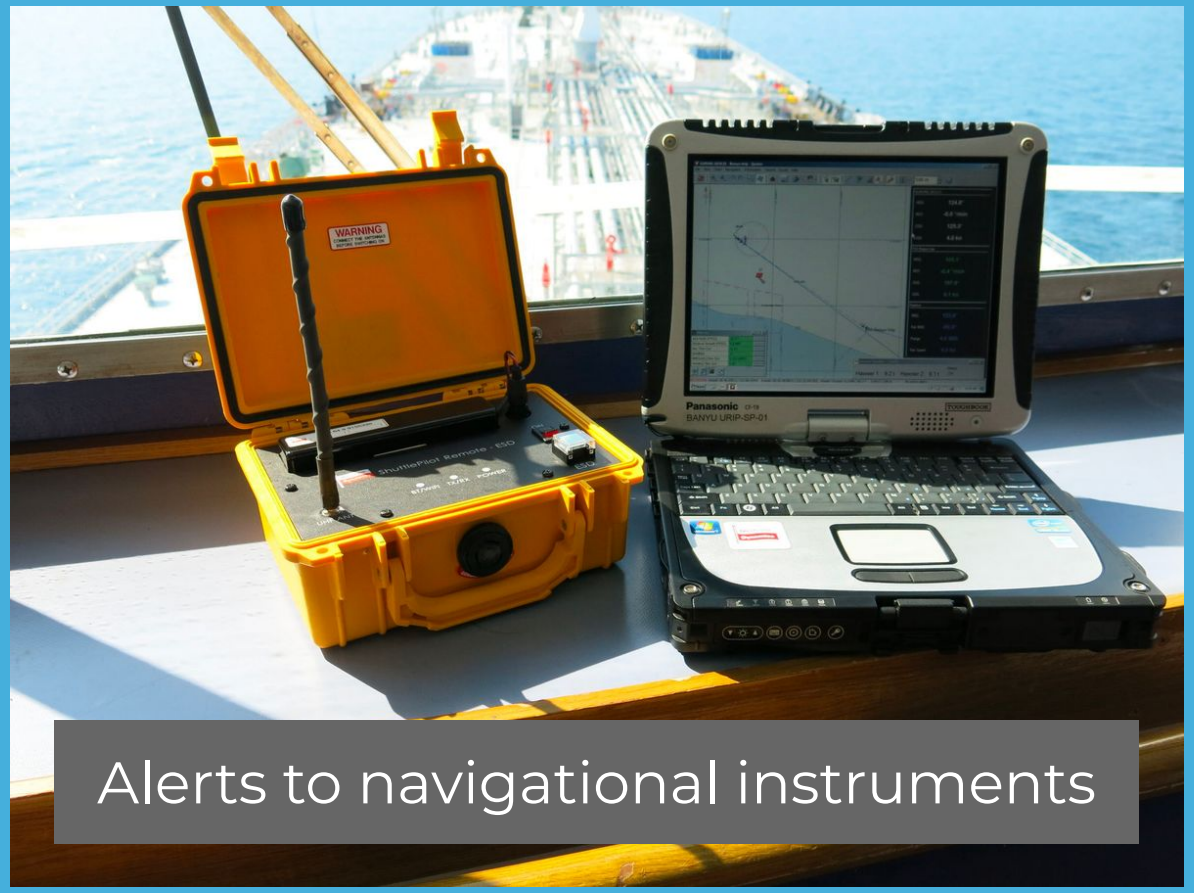
Project partners:

- Orca Network
- Ocean Wise
- Conserve.io

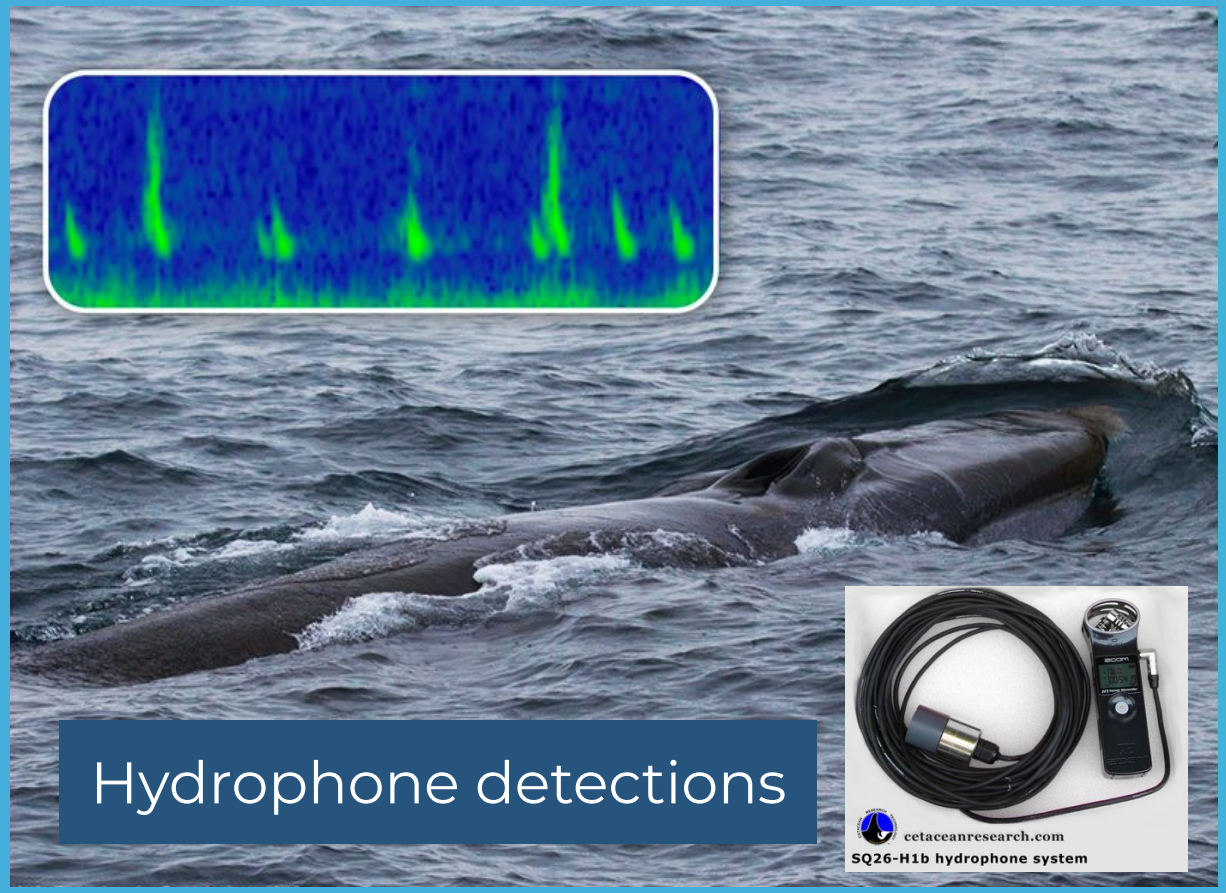


View of mobile app for mariners

What's upcoming for WRAS



Alerts to navigational instruments



Hydrophone detections

https://www.fisheries.noaa.gov/s3/2021-11/900x600-finwhale-spectrogram-AFSC.jpg

Support Maritime Innovation – Whale Sensing Challenge

- UnCruise Adventures won challenge to develop autonomous, ship-mounted whale sensing system, funded by the federal government
- 2023 sea trials tested infrared camera and video analytics to detect whales within 1 nautical mile
- Next steps - integrate whale detection to navigational software to alert the crew

Part of a Global Enterprise for the Blue Economy

WASHINGTON MARITIME blue

We seek to co-create a workplace culture and community that aligns with the values of the Blue Economy: diversity, equity, inclusion, and health.

Rachel Aronson
Director, Quiet Sound

Joshua Berger
President/CEO

Robert Brown III
Program Manager,
Equity Engagement

Cassidy Fisher
Director,
Joint Innovation

Veasna Hoy
Director,
Equity Engagement

LeAsia Johnson
Manager, Youth Programs

Karina Martija-Harris
Manager, Tacoma
Maritime Incubator

Caitlin O'Morchoe
Sr. Manager, Quiet Sound

Jean-Noel Poirier
Executive in Residence

Daniel Pulse
CFO (Interim)

Camille Smith
Contract & Finance Manager

Devon Thorsell
VP of Operations

Sara Adams
Graduate Fellow

Funding Partners

Committed to a diverse funding model, Maritime Blue works with a broad set of funders and manages multiple contracts with federal, state, and local entities as well as private funders from both the corporate and philanthropic sectors.

Board Leadership

Founded in October 2018, Maritime Blue has taken significant steps towards organizational sustainability by diversifying revenue, increasing operational capacity and Board leadership.

President/CEO Joshua Berger, Maritime Blue
Chair Simon Geerlofs, PNNL

W Joe Allen, Jamestown S'klallam EDA
Ann Avary, NW Center of Excellence for Marine
Caitlin Hardy, Kongsberg Maritime
Jason Jordan, NW Seaport Alliance
Cosmo King, ioCurrents
Nico De Golia, Microsoft / Center for Blue Economy

Vice-Chair Eleanor Kirtley, Green Marine
Treasurer Pat Beard, City of Tacoma

Stephanie Jones-Stebbins, Port of Seattle
Vesa Koivumaa, Wärtsilä
Sen. Liz Lovelett, WA State Legislature (ex-officio)
Patty Rubstello, Washington State Ferries
Chris Rye, TOTE Maritime

WASHINGTON MARITIME blue

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www.maritimeblue.org
#WaMaritimeBlue, #BuildBackBlue

WASHINGTON MARITIME blue

A Strategic Alliance for Maritime Innovation and a Sustainable Blue Economy

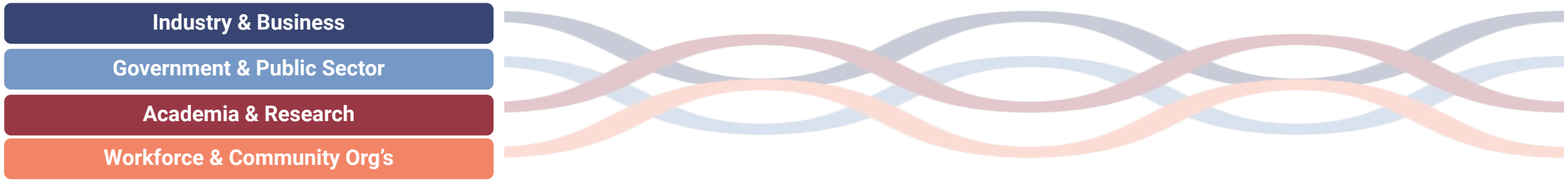
APPENDIX

Our Joint Innovation Cluster Model

OPPORTUNITY: Ocean-Based Climate Solutions can provide **21%** of the emission reductions required by 2050 to prevent global temperature rise of 1.5°C and are essential to addressing the climate crisis, growing the blue economy, and supporting equitable communities.

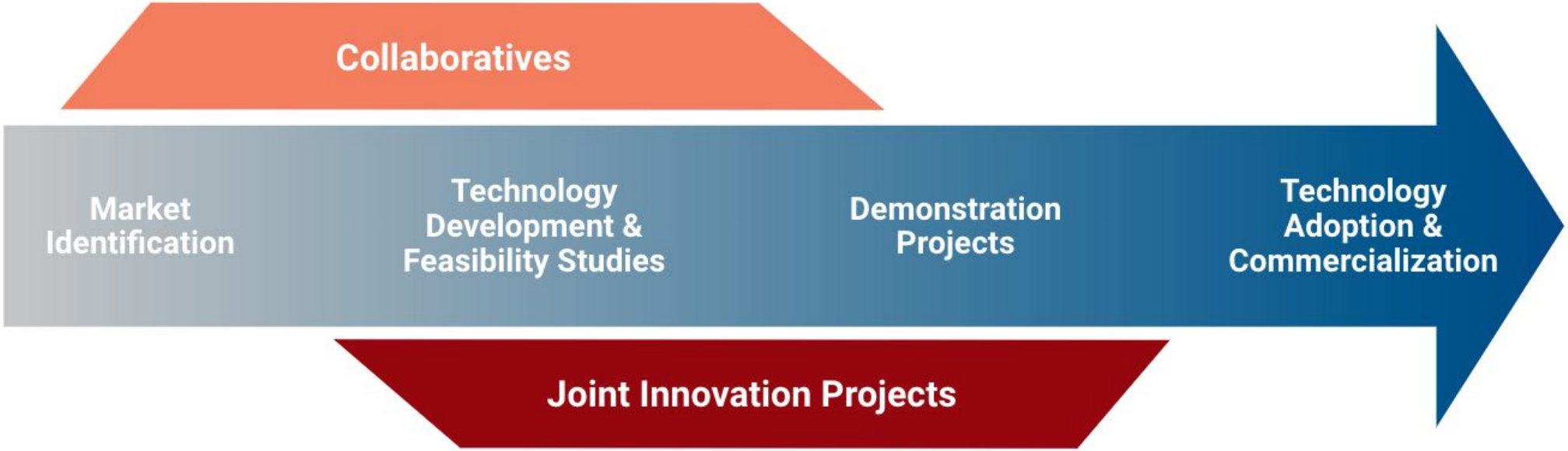
CHALLENGE: Our foremost climate challenges sit at the intersection of the Blue-Green Economies, on, in, or near the ocean. Extensive collaboration is required to identify the technology solutions required, perform the R&D to achieve them, and connect this technology from the research community to the industry that will deploy and commercialize them while connecting to the communities that will harness them.

CLUSTER MODEL



Washington Maritime Blue seeks to leverage our innovation cluster – a proven, nationally-leading process for accelerating development and up-scaling ocean-based climate solutions to full commercialization through collaboration. We build upon our existing relationships across public, private, and philanthropic institutions. Programs are targeted to facilitate collaborative joint innovation, address equitable workforce development, and build an entrepreneurship ecosystem for technological innovation for decarbonization, digitalization, and sustainable ocean development, all through an equity lens.

Why does it work?



- Collaborative partnerships with Public/Private/Philanthropic sectors
- Parallel paths of scope, reaching across full value and supply chains
- Place-based work accessing local, regional and global partners
- Hybrid funding models to layer capacity and capital/investment

Tacoma Tideflats 5G Network Feasibility Study

Supporting Partners

Tacoma Blue Edge Network

Maritime Manufacturing & Port Operations

edge cluster

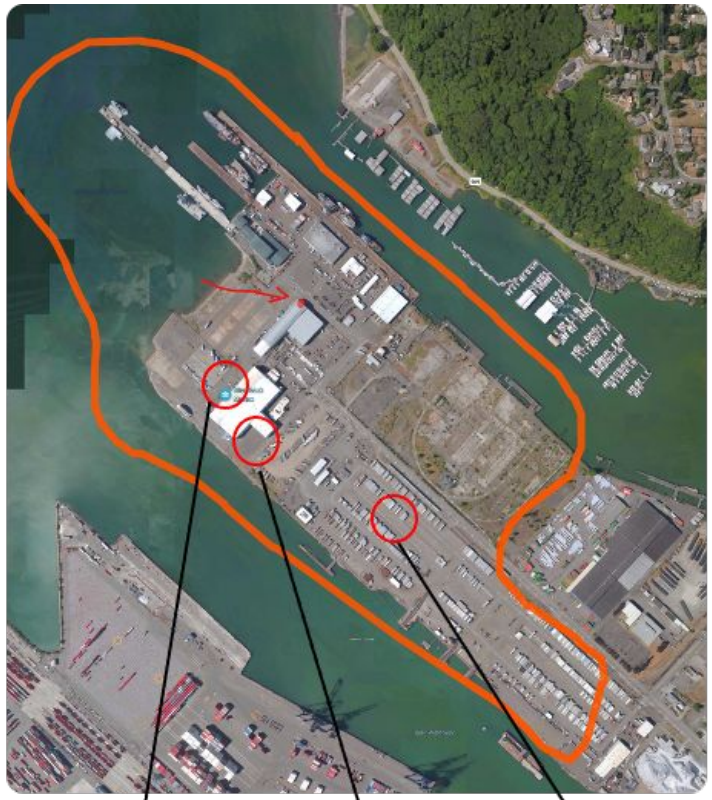
5G OPEN INNOVATION LAB

WASHINGTON MARITIME blue

Tacoma · Tacoma Public Utilities · TOTE Maritime · SAFE BOATS · MOTIVE E-Port Shipyard, Tacoma · Trident Seafoods · SILVERBACK

Tacoma Blue Edge Network

Entire Site



Propagation Plan

Equipment Location

MOTIVE E-Port Shipyard, Tacoma

SILVERBACK

TOTE Maritime

SAFE BOATS

Trident Seafoods

Customers

1. Invoicing to Commerce – July 19th
2. Construction – Sept 22nd – Oct 30th
3. Turn up – November 5th

TOTE Maritime

TACOMA PUBLIC UTILITIES

Tacoma Blue Edge Network

Use cases developed from interviews with the 5 customers and the Port feasibility study

Native 5G Connected Hi-res Cameras

1. Security in hard to reach places
2. Truck and Trailer Identification TOuch Points

Ship-to-Shore Private Connectivity

1. Boats in Commencement Bay, at the docks, and sea trials
2. Satellite to P5G when in port with SD-WAN to each enterprise

Connected Workers

1. Industrial tablets and handheld devices like phones and scanners
2. FIxed Wi-Fi in hard-to-reach places

Connected Vehicles

1. Roaming Wi-Fi with Private to Public 5G roaming (ex. Trucks)

IoT Sensors

1. 5G and LoRa WAN environmental monitoring sensors (ex. Water)

Tacoma Blue Edge Network

Technology & Startup Innovation Partners - Open Port Innovation Lab / Incubator

5G OPEN INNOVATION LAB

WASHINGTON MARITIME blue Ventures

ERICSSON
EP5G Private CBRS 5G-SA Network

Microsoft
Azure AKS & ARC

DELL intel
Edge Compute

expeto Airspan
Expeto & Airspan Private CBRS 5G-SA Network

cradlepoint
Enterprise & Mobile Routers

vmware
VMware vSphere, vCenter, Tanzu

Spirent
Landslide

FibroLAN
Precision Timing

ZEBRA
5G Ruggedized Devices

HORIZON
5G Cameras

TEAL MEGH COMPUTING shabodi
Credentialling, Real-Time Video Analytics, and Application Enablement

Tacoma
Tacoma Public Utilities
Trident Seafoods
SAFE BOATS
MOTIVE E-Port Shipyard, Tacoma
SILVERBACK
TOTE Maritime
HUSKY TERMINAL
CargoCheck
gybe
WhyGrene Energy Exchange
Aquagga
canscan
PMG PACIFIC MOBILITY GROUP
ASTRAEUS OCEAN SYSTEMS
ALLOSENSE
Port of Tacoma
edb ECONOMIC DEVELOPMENT BOARD TACOMA PIERCE COUNTY
South Sound Manufacturing Industrial Council

WASHINGTON MARITIME blue Wind

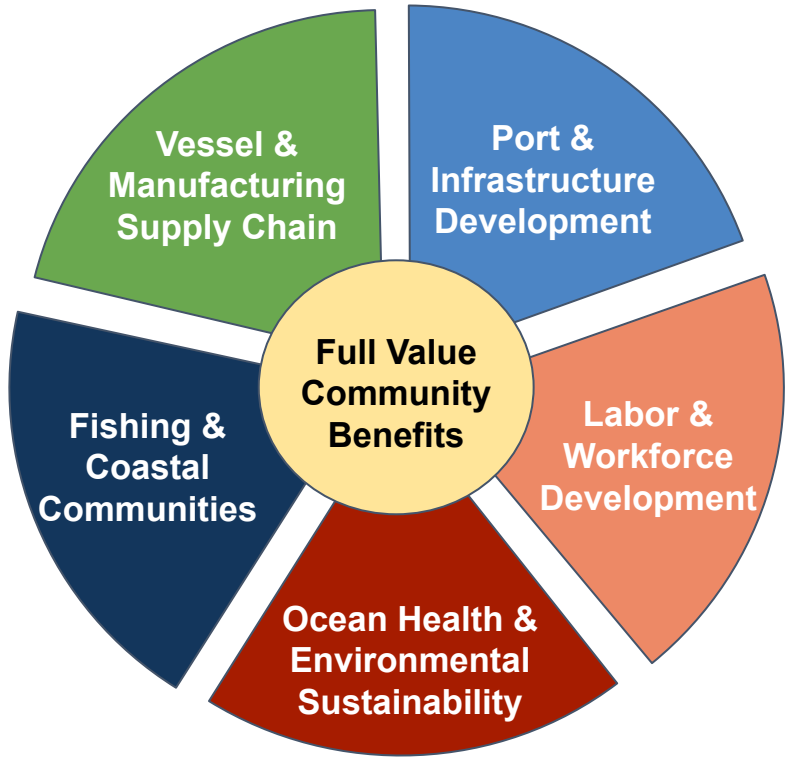
Activating the Regional Supply Chain for Floating Offshore Wind

Mission

Maritime Blue Wind is a nonregulatory coalition to support strategic development and activation of Washington's participation in the West Coast-wide Floating OSW supply chain through a collaborative and community benefits approach.

Purpose

Maritime Blue Wind aims to channel its expertise in the development and execution of research, strategies, and management of projects to better understand the opportunities for community, industry, and workforce development within the activation of Washington's engagement in a West Coast floating offshore wind supply chain. At each step, Blue Wind works to create mechanisms to convene relevant parties around ensuring that this development is **equitable, sustainable, and profitable.**



WASHINGTON MARITIME blue Wind

Activating the Regional Supply Chain for Floating Offshore Wind

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WASHINGTON MARITIME blue Wind

Framework

Leadership Committee

WA Commerce
Blue Green Alliance
Climate Solutions
Renewable NW
Port of Seattle
Washington Maritime Blue
Washington Public Ports Association
Oceantic (frmly BNOW)
WA State Labor Council
ILWU & IBU
Building and Metal Trades
Machinists
Research Advisors
Pacific Northwest National Lab
UW-Pacific Marine Energy Center

Working Groups/Subcommittees

- Community Engagement
- Workforce Development
- Supply Chain Mapping
- West Coast Collaboration
- Ports & Final Assembly
- Vessel Needs & Construction
- Economic Cost Benefit Analysis

Pacific Northwest Hydrogen Association

A circular, cooperative approach to hydrogen research and commercialization.

About

The Pacific Northwest Regional Hydrogen Hub is a collective of representatives from the private, government, academic, research and philanthropic communities. Our goal is to create a hydrogen center of excellence to develop and bring to market new solutions that can help us meet the nation's clean energy goals. PNWH2 is focused on the full lifecycle of hydrogen's potential, from research to operationalization with a keen eye on social equity and environmental justice as guiding principles.

Maritime Blue's Role

Washington Maritime Blue works as part of the PNWH2 Advisory Board and Working Committees to connect the Port and Maritime Community into the development of a DOE Hydrogen Hub proposal including feedback on supply chain, project development, and community benefit plans including DEI Workforce Development and the startup innovation ecosystem.

visit: www.pnwh2.com/

Pacific Northwest Green Shipping Corridor

Working with relevant stakeholders to explore and study feasibility and demonstration

Pacific Northwest to Alaska Green Corridor (PNW2AK)

A collaborative effort led by ports, industry, governments, and de-carbonization subject matter experts to explore a maritime green corridor aimed at accelerating the deployment of zero GHG emission ships and operations between Alaska, British Columbia, and Washington.

- Explore the feasibility, define the scope and application of the green corridor concept
- Enhance and support the emission-reduction efforts already underway
- Define governance structures, terms, and frameworks

PNW Gateway to Busan, Korea

A pre-feasibility study to explore potential green shipping corridor between the PNW Gateway and Busan, Korea as part of the US Department of Energy's Mission Innovation program.

In 2021, twenty-four countries, including the United States and Canada, signed the Clydebank Declaration and in doing so, committed to support the establishment of at least six green corridors by 2025 while aiming to scale up activity in future years.

Zero Emission Fast Foil Ferry Joint Innovation Project

CHALLENGE

Increasing need to improve mobility options while reducing emissions from traditional forms of transportation to achieve environmental justice for disproportionately impacted near-shore communities. Vision is to relaunch the Puget Sound “Mosquito” fleet & reduce vehicle traffic.

SCOPE OF WORK

Design and Demonstration of a zero-emission, clean transit concept for high-speed hydrofoil craft using lightweight carbon fiber hull construction. Accompanying impact analysis studies for development of business model.

BENEFITS

More efficient vessel, reduced emissions, improved commuter & transit options, quieting & strike avoidance to reduce marine mammal impacts, platform for WA manufacturing, innovation & economic development.

- Partners -

Glosten · BIEKER BOATS · Kitsap Transit Connecting Communities · DNV · Tacoma Power · Port of Anacortes · Port of Bellingham Washington State Building A Strong Community · Port of Skagit · EDASC Economic Development Alliance of Skagit County

Green Hydrogen for Tacoma Maritime Joint Innovation Project

CHALLENGE

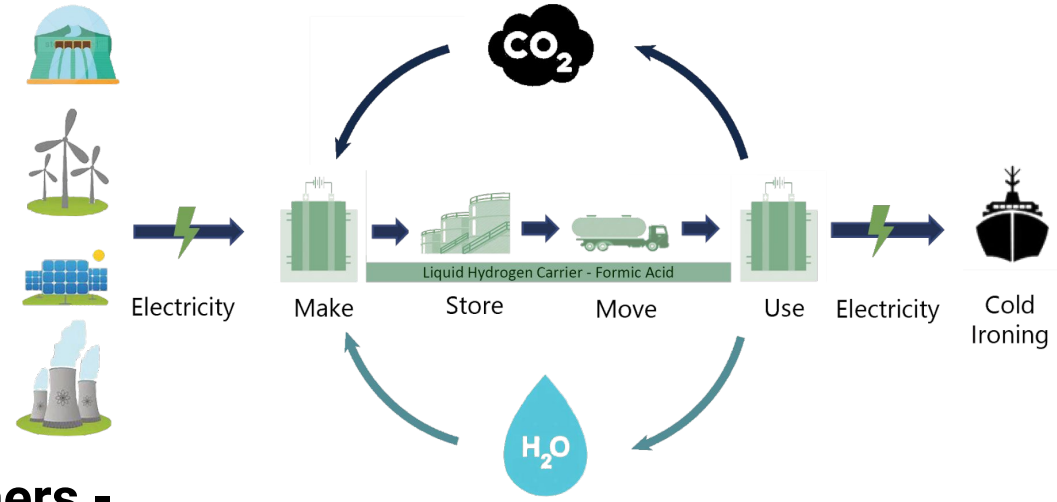
Alternative fuels and energy are needed to reduce emissions from transportation and port operations. Hydrogen shows great promise, if it can be generated at scale in our region from renewable energy, as well as stored and transported in a safe manner.

BENEFITS

Provides scalable local production and use for Hydrogen in ports that can be generated cost effectively and stored easily in the form of Formic Acid, Potential to show ports, utilities, and maritime end-users what can be achieved when H_2 is used at scale. Reduction of local CO_2 emissions through utilization of capture CO_2 and change in fuel by end-users.

SCOPE OF WORK

- Demonstrate the concept of Formic Acid as a liquid hydrogen carrier
- Provide mobile shorepower solution for multimodal port applications
- Generate H_2 for fueling and electrical charging, enabling on-demand energy for cold-ironing services to berthed vessels



- Partners -

Use, Don't Waste, Carbon Dioxide

Pacific Northwest NATIONAL LABORATORY

TACOMA POWER TACOMA PUBLIC UTILITIES

Tacoma Tideflats Blue-EDGE Network Joint Innovation Project

CHALLENGE

Ports are unable to take advantage of emerging technology because the lack of infrastructure for networking, computing, and connectivity. We lack actionable data on solving our largest problems surrounding port and industrial areas

SCOPE OF WORK

Design and Install Pilot Network

- Install 5G and EDGE computing Network
- Access to Maritime Employers, Univ., & Utility
- Specific Use Case Planning
- Establish pipeline of relevant startups for demonstrations and early sales

BENEFITS

Tacoma would instantly become the most tech advanced regions in North America. We could more easily recruit companies to base here, knowing this infrastructure existed to prove their concepts, and we could become a global leader in new technology in the maritime sector.

- Partners -