

# OREGONGIH OCEAN INNOVATION HUB

Discovering and Linking Oregon's Coastal Blue Economy Assets for a More Vibrant Future

# What is the Blue Economy?

The Blue Economy encompasses all economic sectors that utilize and affect water-related resources. This notion of a Blue Economy underscores the importance of sustained development and care of coastal regions and marine life. The Blue Economy is more than the Maritime sector.

### **Fisheries and Aquaculture**

Includes the promotion, regulation and monitoring of wild caught and aquaculture species. Best overall managed fisheries. Marine Stewardship Council certifications and history of innovation in excluder technologies make Oregon a leader in sustainable harvest practices.

#### **Ocean Energy, Maritime fuels**

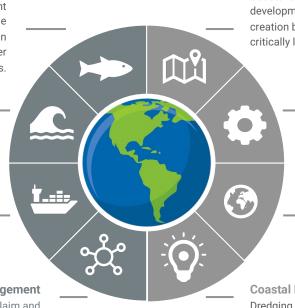
Includes wave, wind, solar, and geothermal. Oregon is poised to enter this conversation with PMEC's off-shore energy test site. Alternate marine fuels continue to be of interest to maritime subsector.

> Maritime Transport Maritime transport is essential for sustainable trade and development.

#### Waste management

Includes processes and technologies to reclaim and mitigate waste streams entering ocean. A focus on environmental and human health

#### Tourism



Coastal tourism is both a contributor and detractor of sustainable development and coastal livability issues. It supports jobs and wealth creation but is a subject of great controversy. Oregon tourism is critically linked to environmental resources.

### Science and Technology Fabrication and design methods are ever evolving. Blue tech has unique problems to solve.

#### **Climate Change**

Establishing Climate change mitigation and adaptation strategies is critical to future coastal reliance.

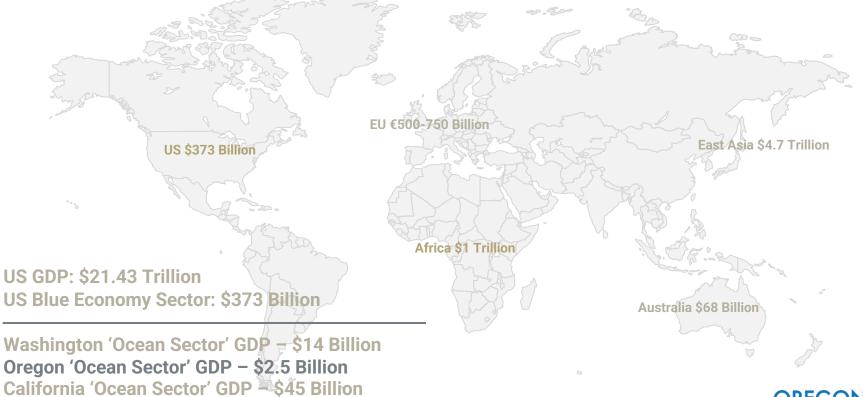
### **Coastal Engineering**

Dredging, erosion, sea level rise, and hazard mitigation represent new and continuing engineering challenges.



# Size of the Opportunity

The blue sector is an important part of every economy. The US has great potential for growth – particularly for Oregon.



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## Low investment in the heart of the sector



### Low-investment

- Federal Funding for R&D per capita in Oregon is behind WA and CA, and ranks 22/50 overall
- Only 3% of the State's accelerators and incubators are located on the coast
- Of the Small Business Innovation Research and Small Business Tech Transfer grants made in Oregon in 2016/2017, only **1/142 grants were made to the coast**, totaling just \$650k/\$61M invested.
- Between 2014-2017, the Coastal region received .003% of total equity investments in Oregon

### Struggling Workforce

- Private industry struggles to find qualified, local workers from basic deckhands to high-tech sectors
- Oregon's maritime sector (a sub-sector of BE) has a greying workforce, with 27% of jobs held by workers 55+
- The maritime sector workforce is expected to expand 5% (approximately 400 jobs) by 2027, per Oregon Employment Department projections. Additionally, it is projected that 16 replacement openings will need to be filled for every 1 new job in the maritime sector workforce (nearly 6,600 replacements) through 2027
- Limited training programs for Blue Economy Workers
- Coastal economies are generally extraction and tourism based, with the latter representing low-wage jobs that do not provide a pathway out of poverty.

### **Economically-Challenged**

- The percentage of coastal families struggling financially ranges from 46-49% (poverty level and Asset Limited, Income Constrained, Employed)
  - The Oregon Coast has a lower average income (\$24,221) per capita than the state average (\$32,812)
  - % of Traded Sector employment in strong clusters rank is 46/50
  - Children growing up in Lincoln County on average earn 6% less than the national household income.
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# What's the solution?

- Form the **Oregon Ocean Innovation Hub** a central solution to growing the Oregon's Blue sector.
- Building on the success of WA and CA, we're putting together a hub that will combine Blue Sector workforce development, Innovation and Entrepreneurial support, and Research and Development. This is a unique configuration among our peers.

## US Hubs





## EU Hubs





## Built Upon Strong Previous Work

## SB 867

Senate Bill 867 established the Task Force on Maritime Sector Workforce Development. Directs task force to study and develop description of maritime sector and maritime sector workforce in Oregon and develop recommendations for State Workforce Investment Board to incorporate consideration of maritime sector into statewide workforce investment system plan

### THREE RECOMMENDATIONS FROM TASKFORCE

- 1. Accept Oregon's Maritime Workforce Sector Report Oregon's Maritime Workforce Sector Report including the "description of the scope and extent of the maritime sector and the maritime sector workforce in Oregon. (SB 867)"
- 2. Modify the existing Unified Plan for a Statewide Workforce Investment System (ORS 660.324) to include a new sector of maritime, as defined in Oregon's Maritime Workforce Sector Report.

3. Prioritize current workforce development funding (federal and other) to support the maritime workforce sector



## Built Upon Strong Previous Work

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## Who is Driving the Bus?





Mark Farley Strategic Initiatives Manager Hatfield Marine Science Center





Paul Schuytema Executive Director Economic Development Alliance of Lincoln County





## Who is on the Bus?

Columbia Pacific Economic Development District Cascades West Economic Development District **CCD Business Development Corporation** Economic Development Alliance of Lincoln County South Coast Development Council Lincoln County School District Clatsop Community College Tillamook Bay Community College Oregon Coast Community College Lane Community College Southwestern Oregon Community College Oregon State University Hatfield Marine Science Center **OSU** Advantage Accelerator Oregon Coast STEM Hub Northwest Oregon Works Lane Workforce Partnership Southwestern Oregon Workforce Investment Board Port of Astoria Port of Tillamook Bay Port of Newport Port of Toledo Port of Coos Bay Port of Port Orford

Clatsop SBDC Tillamook Bay SBDC Oregon Coast SBDC Lane SBDC Southwestern SBDC Oregon RAIN Startup Blue Seguoia Consulting Local Ocean NearSpace Pacific Seafood Rondy's Inc. Women's International Shipping and Trade Association Yaguina Boat Equipment Business Oregon **Oregon SeaGrant** Washington Maritime Blue Oregon Manufacturing Innovation Center Oregon Manufacturing Extension Partnership **Oregon Coast Visitors Association** NOAA Technology Association of Oregon

Fitzsimmons CPA





## O2IH GOAL: Make Oregon a Leader in the Blue Economy

### **Create Oregon Blue Sector Identity**

Brand Oregon as the place to do Blue Sector business nationally and globally

### Invest in Data to guide Oregon's Blue Sector growth

Data-based decision making to guide investment and help define Oregon's evolving blue sector. Note: funding has already been secured for this work.

**Build Blue Workforce training network to shift Oregon's workforce** Career technical Training, Professional certifications, post secondary, and higher education pathways to blue careers.

**Increase innovation capacity to accelerate Blue Businesses and investment** Create facilities, expertise, tools and capital to stimulate innovation and growth. Grow existing blue business as well as attract new blue businesses to Oregon. Formalize networks and partnerships.

### Advance Blue technologies to address problems of shifting ecosystems

Create technologies that extend understanding, mitigate risk, and can help realize the values expressed in the Blue Sectors 'triple bottom line'.

### **Create opportunities for historically underserved populations**

Responsive programming and infrastructure that leverages the Blue Economy as a pathway out of poverty

## You Can't Eat an Elephant in One Bite!





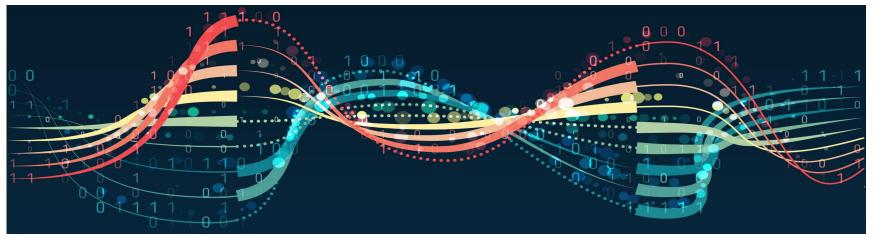
## Asset Quilting and Discovery



What *ARE* Oregon's unique Blue Sector assets? How can we help them to "tip" towards success sooner? How can they connect together?



## Data Gathering and Validation



Define the sector for OR's lawmakers. Find the future opportunities. Identify and classify the career clusters. Scale the opportunity. Build from Oregon's Maritime Sector Workforce Report (March 2019). Business Oregon's Market Analyses for Oregon Emerging Industries -Ocean Resources and Blue Economy Sector. Coastal Blue Economy Workforce Analysis.



# Innovation, Entrepreneurship and Incubation



The OREGON STATE UNIVERSITY Advantage Accelerator



Bring OSU's Advantage Accelerator to the coast. Further engage the ILab. Engage the SBDCs. Locate and infuse "almost there" incubation sites.



## BRE and Business Attraction



Define new BRE practices and data points. Engage existing businesses in the field. Define attraction and new business opportunities.



## Blue Career Pathways

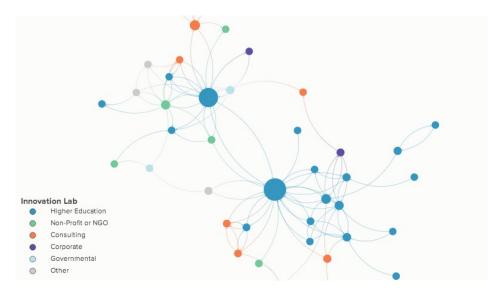




Coastal DACUM process. Listen to industry. Define shared and needed skills. Engage coastal Workforce Investment Boards.



## Sharing the Data State Wide





Build the go-to web portal for Oregon's Blue Economy. Map the assets, resources and relationships. Share the data (freely) with all stakeholders.



# Other Powerful Efforts in OR's Blue Economy





**Oregon Cluster Initiative (USDA)** 

Market Analyses for Oregon Emerging Industries - Ocean Resources and Blue Economy Sector



Hatfield Marine Science Center





Start Up Blue (RAIN)



# Thank You for Your Time and Attention!



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