

Blue Economy Part II: *Best Practices*

UPCOMING
SERIES:

Industries of the Future

A Pathway Toward
Economic Resiliency

June 21- August 9

Series Summary

The Economic Recovery Support function, in partnership with local, state, and federal partners, will be hosting a series of virtual sessions on Florida's Industries of the Future.

Session Topics:

- State of the Industry
- Industry Assets
- Industry Challenges
- Highlight of Industry Best Practices

21

JUNE

*Blue Economy
Part I: What it
Means for Florida*

12

JULY

*Blue Economy
Part II: Best
Practices*

19

JULY

*Advanced
Manufacturing:
Microelectronics &
Semiconductors*

26

JULY

*Clean Energy
/ Cleantech*

2

AUGUST

*Aerospace
& Aviation*

9

AUGUST

*Agricultural &
Life Sciences*

Why focus on Industries of the Future?

1. Diversify the economic base
2. Build a more resilient economy
3. Create more high-wage, high-skill employment opportunities

For more information,
contact: Milton
Cochran at
mcochran@eda.gov



RHODE ISLAND BLUE ECONOMY AND GROW BLUE INITIATIVE

JULY 12TH 2023

The URI Research Foundation

The URI Research Foundation is a leading driver of economic prosperity for Rhode Island, executing programming for technology transfer and growth industries by engaging (and leveraging URI research, the manufacturing community, and (key state, regional, and federal) resources and partnerships to accelerate innovation, advancement, and entrepreneurship in RI's commercial and technological ecosystem



In Rhode Island, we define the Blue Economy as “the sustainable use of the ocean to create a resilient economy and good-paying jobs”.



Ports and Shipping



Tourism & Recreation



Offshore Renewable Energy



Marine Trades



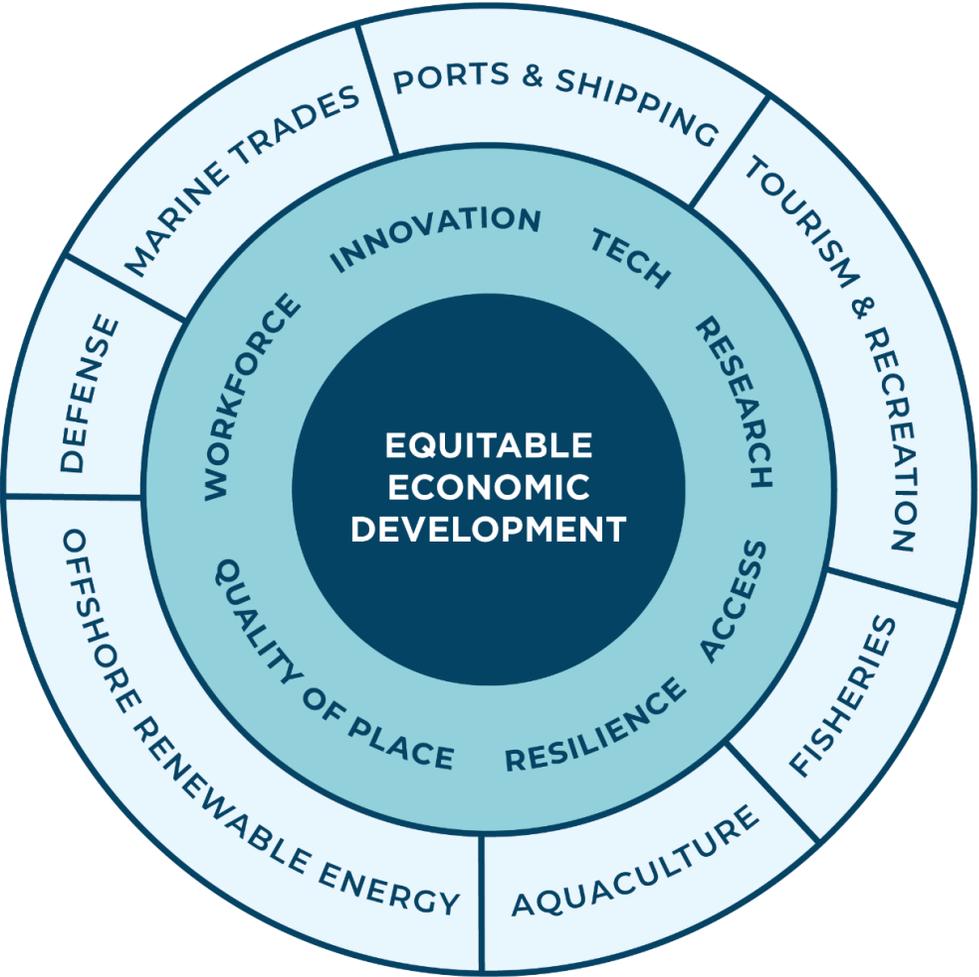
Education and Training



Aquaculture & Fisheries

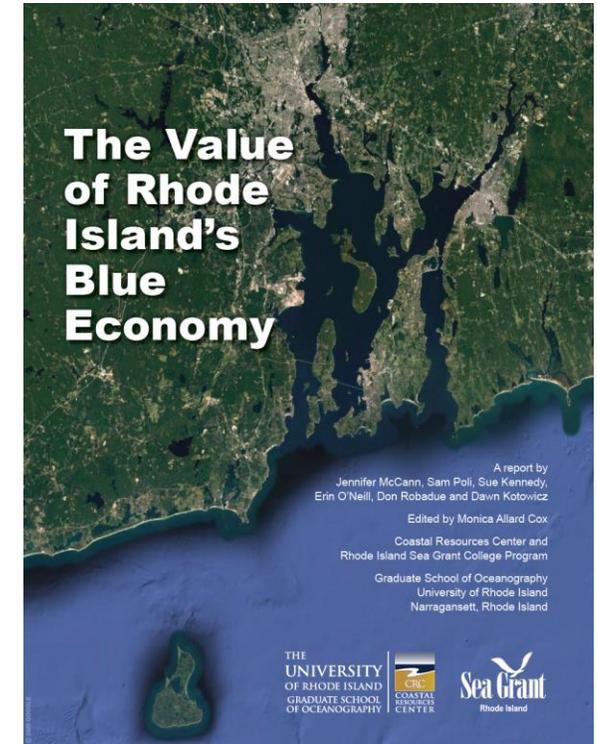


Defense



Rhode Island Blue Economy History

- Evolution from historical sailing and fishing to science, technology and initiatives protecting our national security
- Facing offshore: 400+mi of shoreline transitions to coastal shelf adjacent to gulf stream, home to the nations first offshore wind farm, soon growing into once in a generation offshore operational platform
- Facing inshore: Unique bay bathymetry, surrounded with an unmatched density of old and new and growing industry and military assets & operations, populated by talented historically under represented communities
- EDA Build Back Better Regional Challenge provided an opportunity to create a forward-looking Blue Economy Strategy



The Value of Rhode Island's Blue Economy (Author's Calculations)

Sector	Value	Jobs	Description	Source
Aquaculture	\$5.77 million (farm gate ¹³)	194	Farm gate for shellfish aquaculture.	CRMC 2018
Defense	\$3.16 billion (direct effect ¹⁴)	16,011	Federally funded defense activities and industries.	SENEDIA 2017
Fisheries and Related (net of charter)	\$151.5 million (direct effect)	2,965	Harvesting and processing capacity of the fishing industry, in addition to support businesses and organizations. No charter.	Sproul, T., personal communication, Nov. 5, 2019
Marine Trades	\$1.45 billion (direct effect)	13,337	Boat building, repair, and retail industries, diving and marine construction industries, and select tourism and recreation industries, including charter.	Sproul 2018a, 2018b, 2018c
Hotels and Lodging (coastal communities)	\$428 million (direct effect)	3,999	Hotel and lodging establishments located in Rhode Island zip codes adjacent to the coast.	ENOW 2019
TOTAL	\$5.2 billion	36,502		

RI Blue Economy Assets



Defense sector assets



Block Island Wind Farm



Squid landed in Narragansett Bay



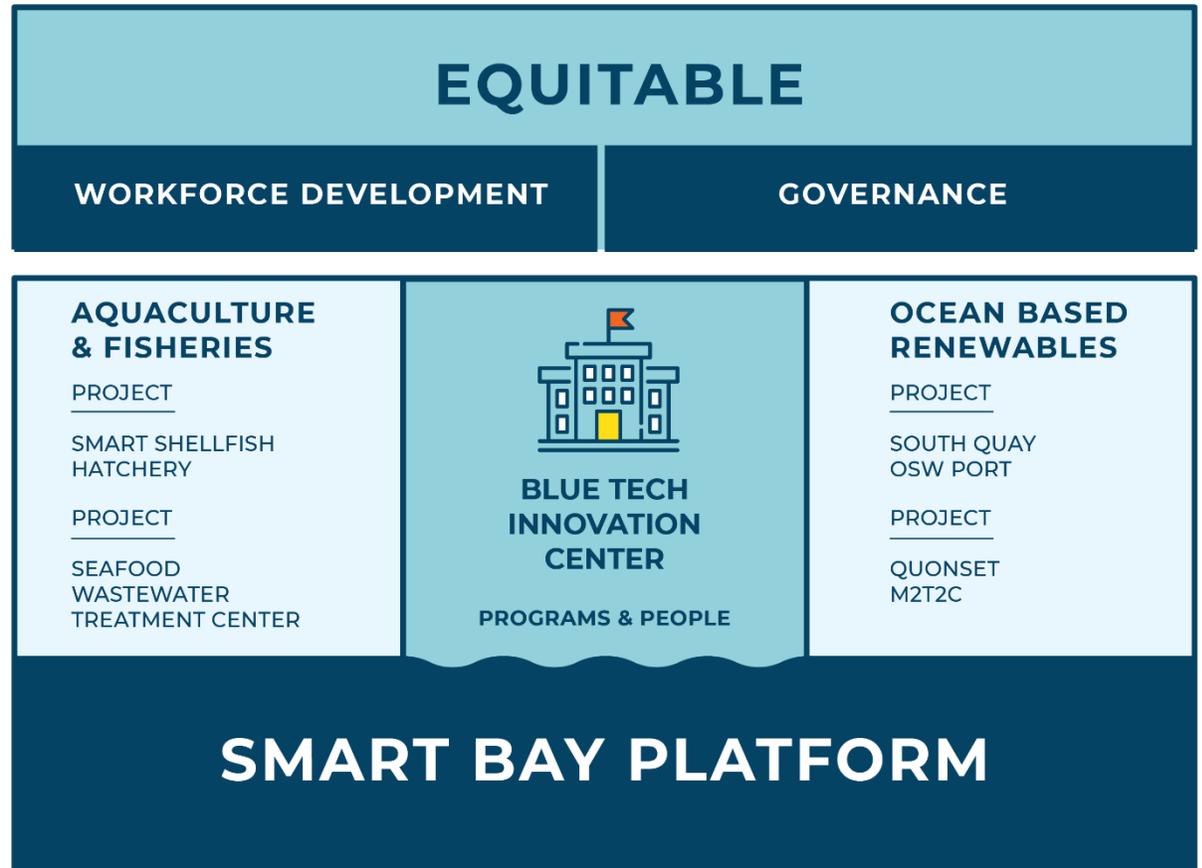
URI's remote operated vehicle, *Hercules*



Blue tech start up ecosystem

RI Blue Economy Platform, Programs & People, and Projects

- **Projects:**
 - **Ocean-Based Renewables**
 - **Aquaculture and Fisheries**
- **Platform – Narragansett Bay and Continental Shelf Observation Network and its “Digital Twin” (the “Smart Bay Platform”)**
- **Programs & People**
 - **Blue Technology Innovation Center (BTIC)**
 - **Equitable Workforce Development**
 - **Grow Blue Initiative (www.growblue.org)**





Resilient Innovative Sustainable Economies via University Partnerships

VISION

Three states collaborating to build a world class model for solving dual-use maritime challenges by leveraging the states' unique assets. In the process, elevate the states' technology-based economies and workforces.

Made possible with ONR's support and commitment to RISE-UP's multi-year plan to deliver on its vision.

RISE UP

Coastal USM

July 12, 2023

Presented by
Shannon Campbell, PhD



THE UNIVERSITY OF
SOUTHERN MISSISSIPPI®

Coastal USM

Vision Statement: Be a national leader in addressing issues relevant to people in coastal and maritime settings

Pillars



Coastal USM Areas of Focus



Research

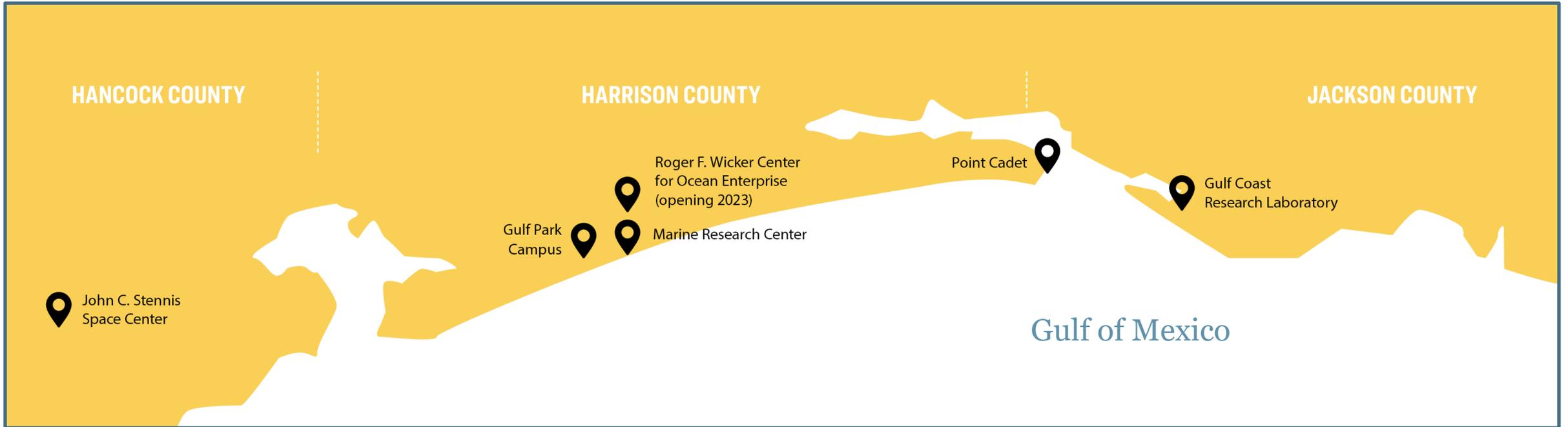


Student Success



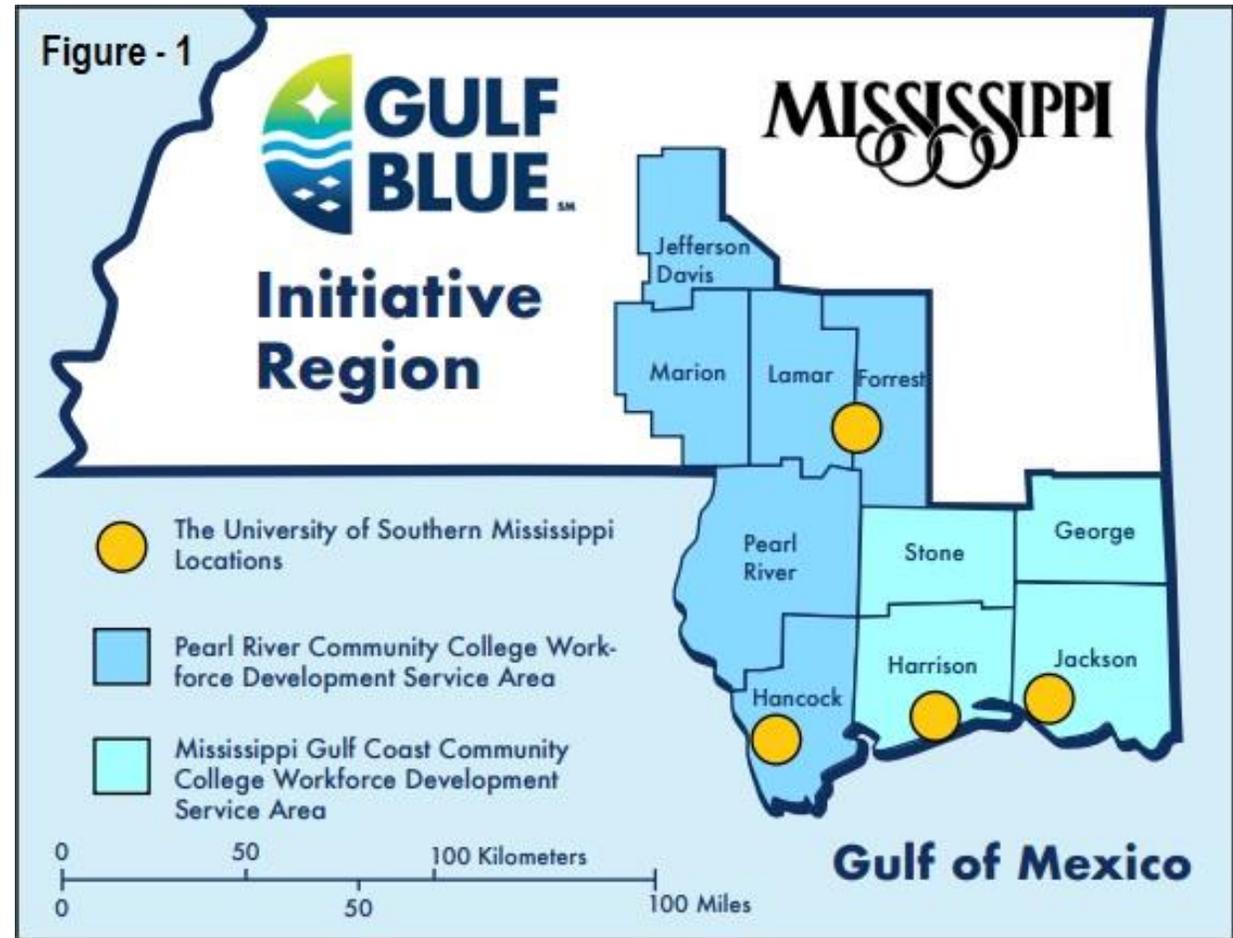
Outreach

Coastal USM Locations



Collaborative Partners

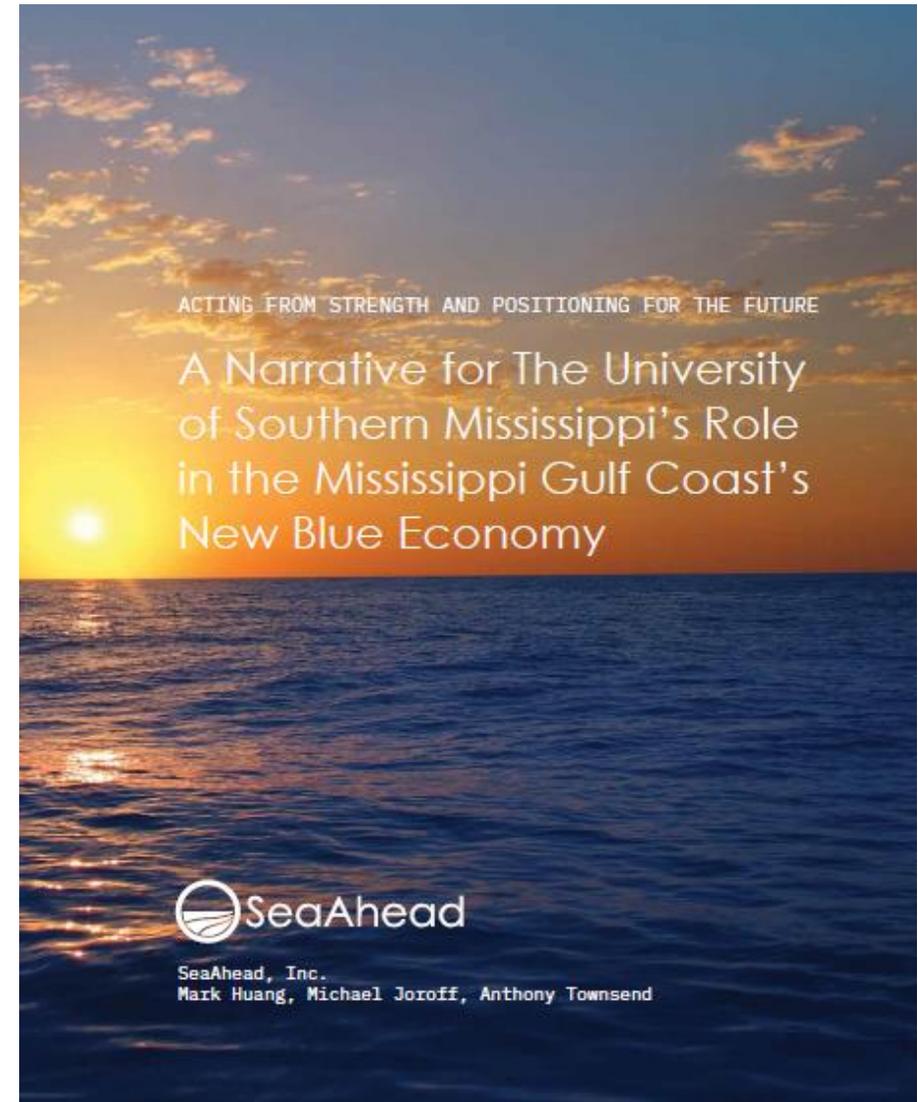
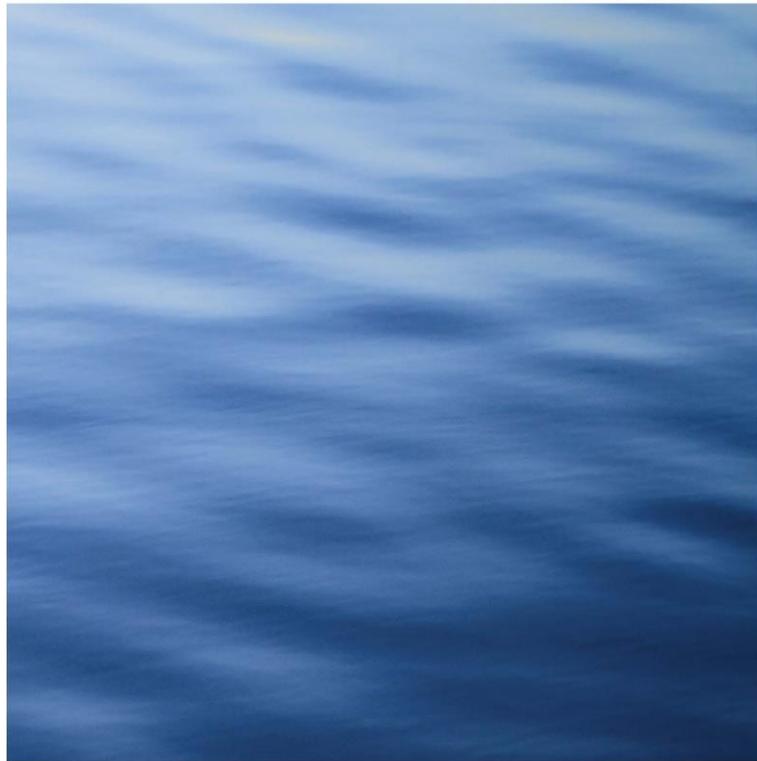
- The University of Southern Mississippi
- Jackson State University
- Mississippi Development Authority
- Private-sector Companies
- Mississippi State Port Authority
- Federal Agencies
- Southern Mississippi Planning and Development District
- Entrepreneurs/Innovators
- Mississippi Gulf Coast Community College
- Pearl River Community College
- Tech-based Startups
- City of Hattiesburg
- Mississippi Enterprise for Technology Inc. (501c3)



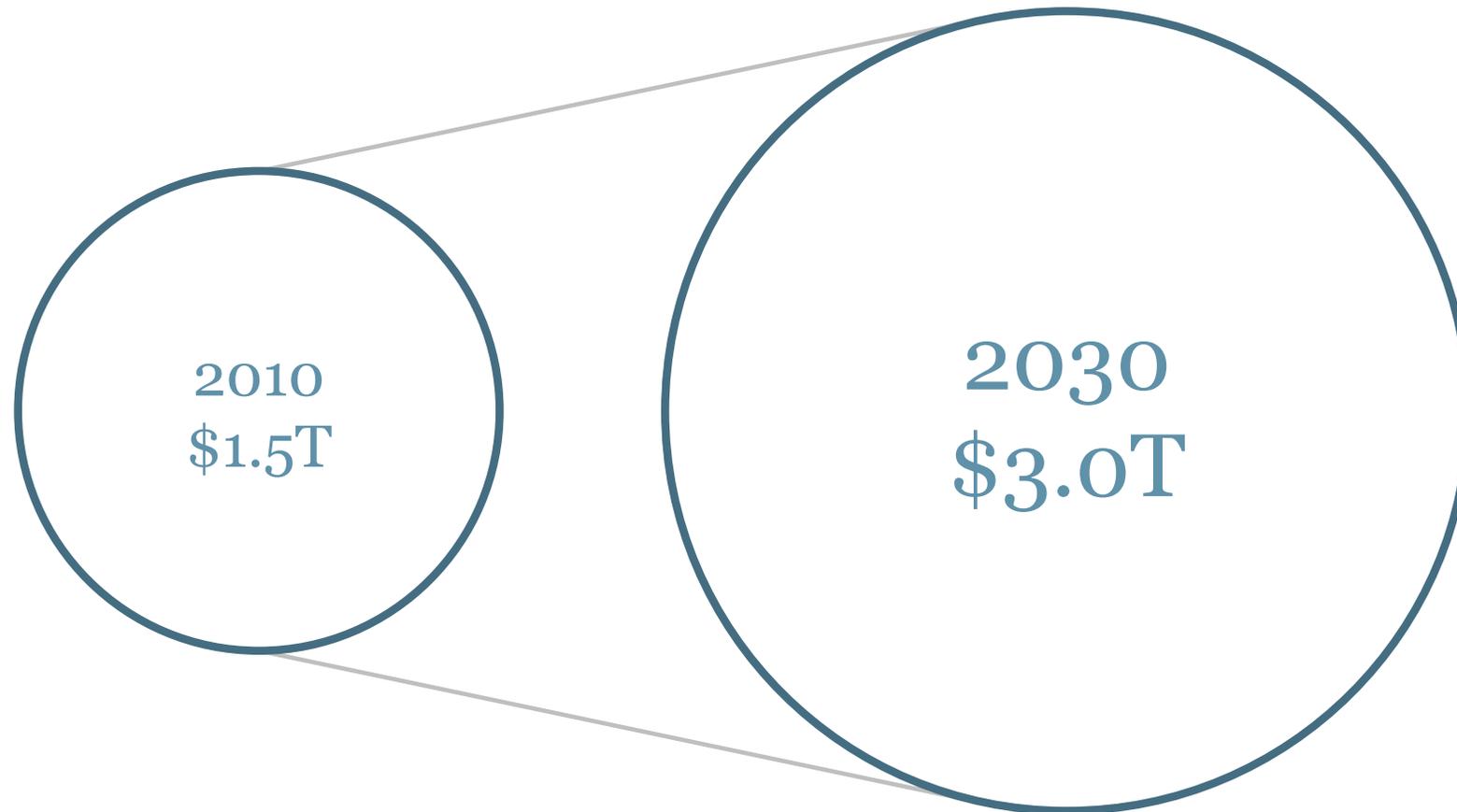
Regional Planning

OCEAN TASK FORCE:

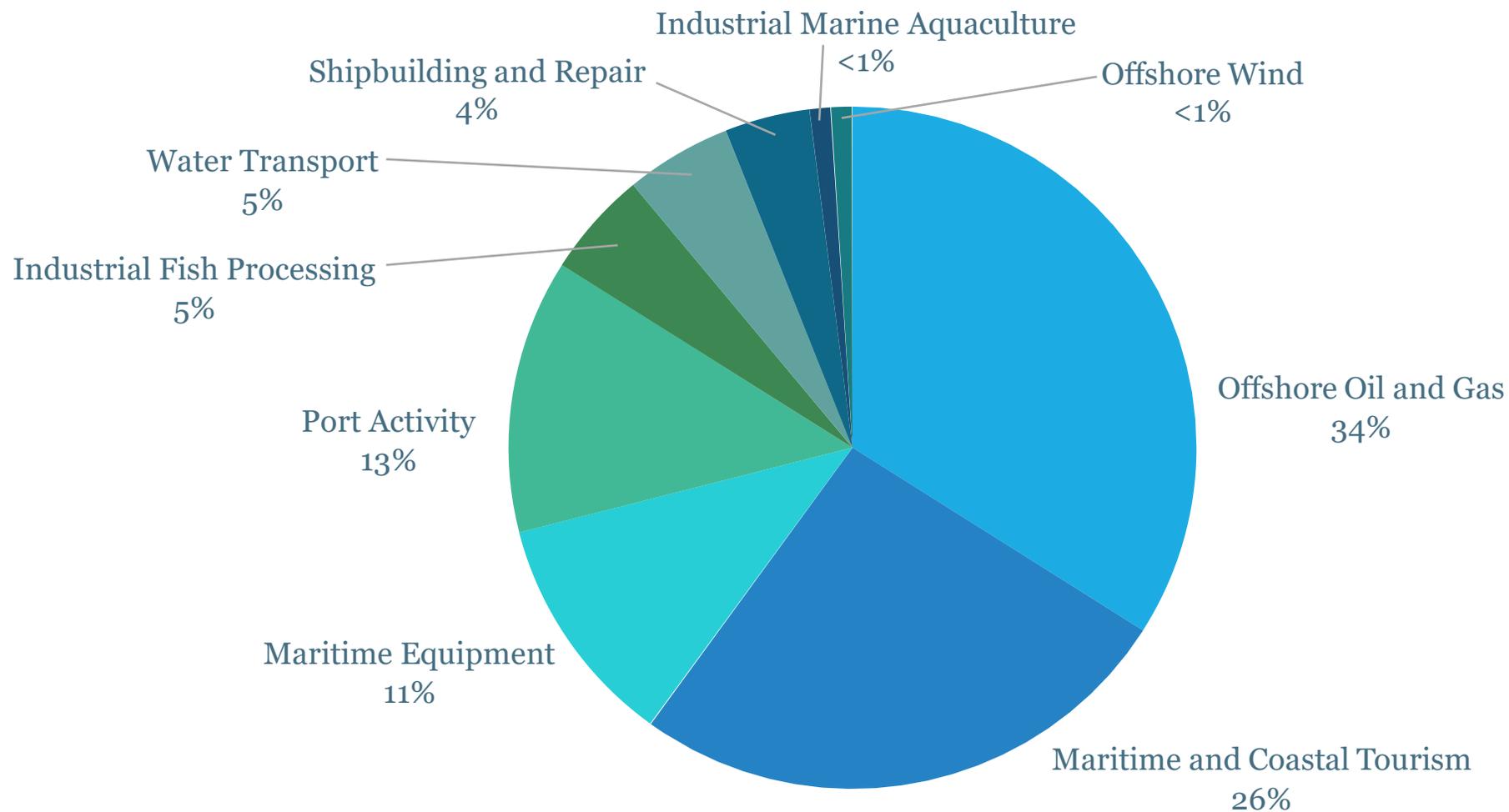
CHARTING THE FUTURE OF MISSISSIPPI'S
OCEAN TECHNOLOGY ECONOMY



World Ocean Economy: \$1.5+ Trillion and Growing



Coastal Market Sectors Engaged in Innovation



Industry Sectors Supporting Blue-Tech Innovation

NAICS	Industry Title
11	Agriculture, Forestry, Fishing and Hunting
21	Mining, Quarrying, and Oil and Gas Extraction
22	Utilities
23	Construction
31	Manufacturing (<i>particularly shipbuilding</i>)
42	Wholesale Trade
44	Retail Trade
48	Transportation and Warehousing
51	Information
52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment and Recreation
72	Accommodation and Food Services
81	Other Services (except Public Administration)
92	Public Administration
99	Unclassified

NAICS - North American Industry Classification System

What is the blue economy?

All economic activities related to oceans, seas and coasts; covers a wide range of interlinked established and emerging sectors

Source: European Commission

What is the new blue economy?

A sustainable and equitable ocean and coastal economy that optimizes advancements in science and technology to create value-added, data-driven economic opportunities and solutions to pressing societal needs

*Source: Dr. Rick Spinrad, Under Secretary for
Commerce for Oceans and Atmospheric Administration*

Six Innovation Clusters



Uncrewed
Maritime Systems



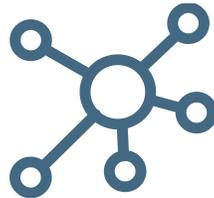
Ocean-friendly
Plastics



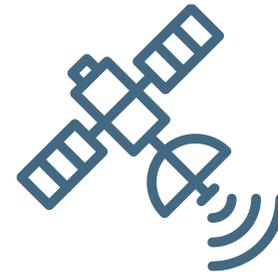
Precision
Aquaculture



Smart
Ports



Coastal
Data



Sea-space
Systems

The Challenge: Creating Transformational Change



Building an Innovation Economy



Professional mentoring
(legal,
accounting)



Access to
universities,
labs, marine
facilities and
makerspace



Coworking



Access to
talent



Access to
potential
customers



Access to
corporate
partners



Funding
(equity/grants)

Professional Mentoring



Access to precision labs and coworking space



Access to marine labs and ocean



Thad Cochran Marine
Aquaculture Center

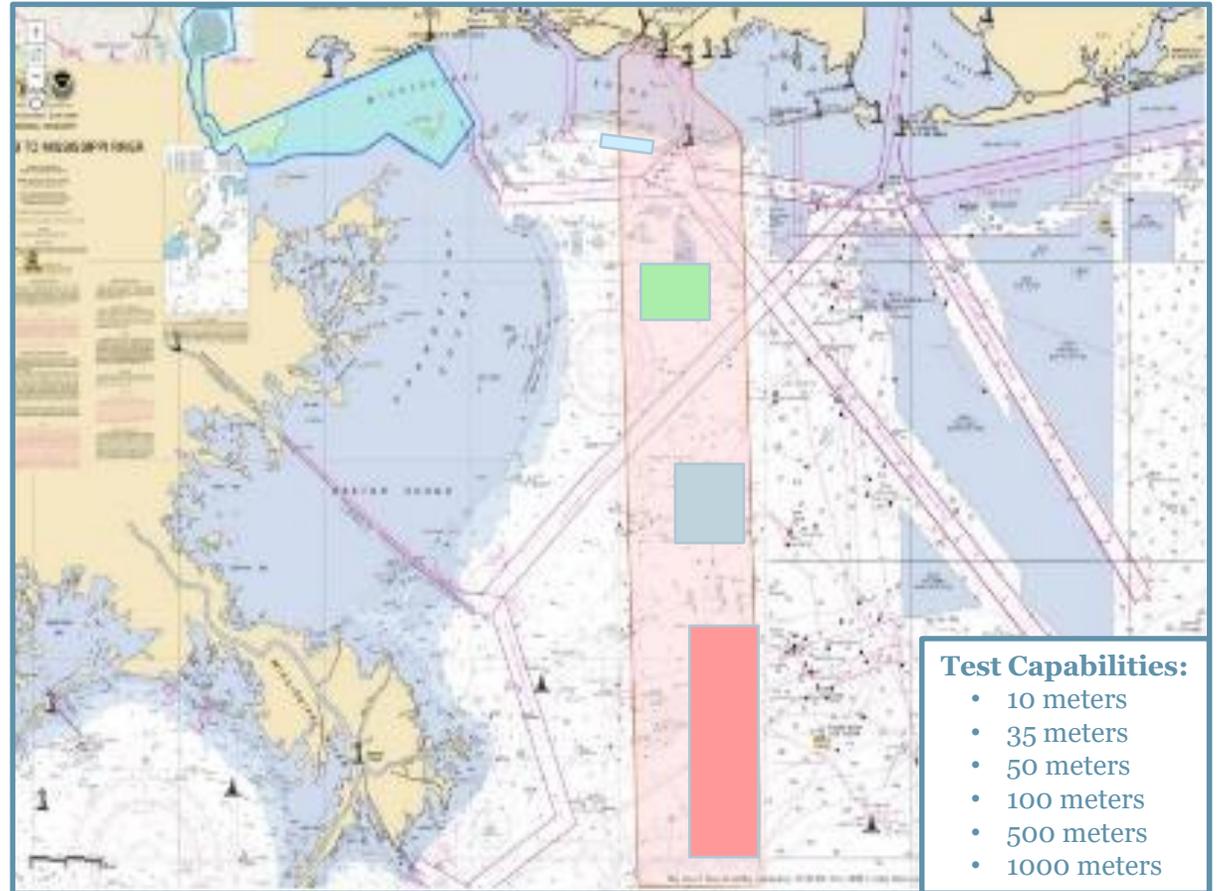


Center for Fisheries
Research and
Development

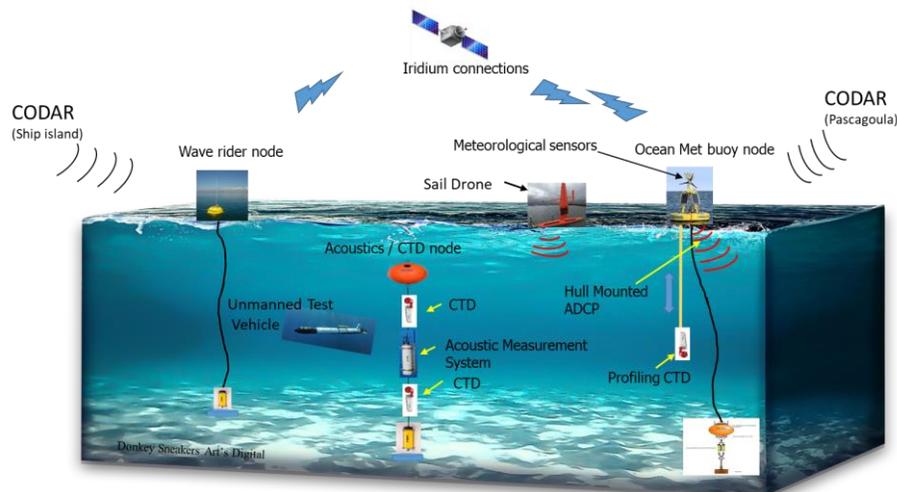


Division of Coastal
Sciences

Access to test and evaluation area in Gulf of Mexico



Gulf of Mexico Hydrographic Survey Areas by Depth



Under construction: *R/V Gilbert R. Mason*



Access to talent



STEM in the
Sound Day



Summer Field
Program

Teacher
Residency
Program



The Gulf Blue Navigator



THE UNIVERSITY OF SOUTHERN MISSISSIPPI
**RESEARCH
FOUNDATION**



SeaAhead
BLUETECH INNOVATION



**GULF
BLUE** SM

Gulf Blue Navigator

Safety Net Technologies (SNTech)

England

Develop and scale trusted and valued solutions that enable sustainable practices in the fishing industry for a world where oceans and people thrive together

Seatrec

California

Manufactures intelligent tracking buoys for commercial fishing fleets, aquaculture farms and ocean observers; helps fleets save time and money while gaining critical operational insights and increasing sustainability in the fishing industry

Marauder Robotics

Georgia

Building a remote work platform that collects data in near real-time and automates underwater tasks done by divers

Blue Ocean Gear

California

Manufacturing intelligent tracking buoys for commercial fishing fleets, aquaculture farms and ocean observers, helping them save time and money while gaining critical operational insights

Seatrac Systems Inc.

Massachusetts

Manufacture, sell and rent persistent, multi-purpose solar-powered Uncrewed Surface Vehicles to efficiently, safely and cost-effectively perform real-time data collection and communications for research, commercial and defense applications

BeeX

Singapore

Building the most advanced underwater vehicles and software tools to help reduce the costs and risks of underwater work at scale

Coastal USM

Shannon Campbell, PhD
shannon.campbell@usm.edu
Office: 228.214.3243



THE UNIVERSITY OF
SOUTHERN MISSISSIPPI®



A Strategic Alliance for Maritime Innovation and a Sustainable Blue Economy

Washington Maritime Blue Overview

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.



Our Growing Blue Blue Economy

Blue Economy contributes **\$373 billion** towards US gross domestic product

\$44 billion driver to WA's economy

Relationships **across sectors** including; aerospace, ag, tech, life sciences, more

Significant **investments** in maritime, ocean, and clean tech in WA state.

Fastest growing state for innovation, technology and capital investment



Industry Members



Community Partners



A Strategic Alliance for Maritime Innovation and a Sustainable Blue Economy

Research Institutions



Public Partners





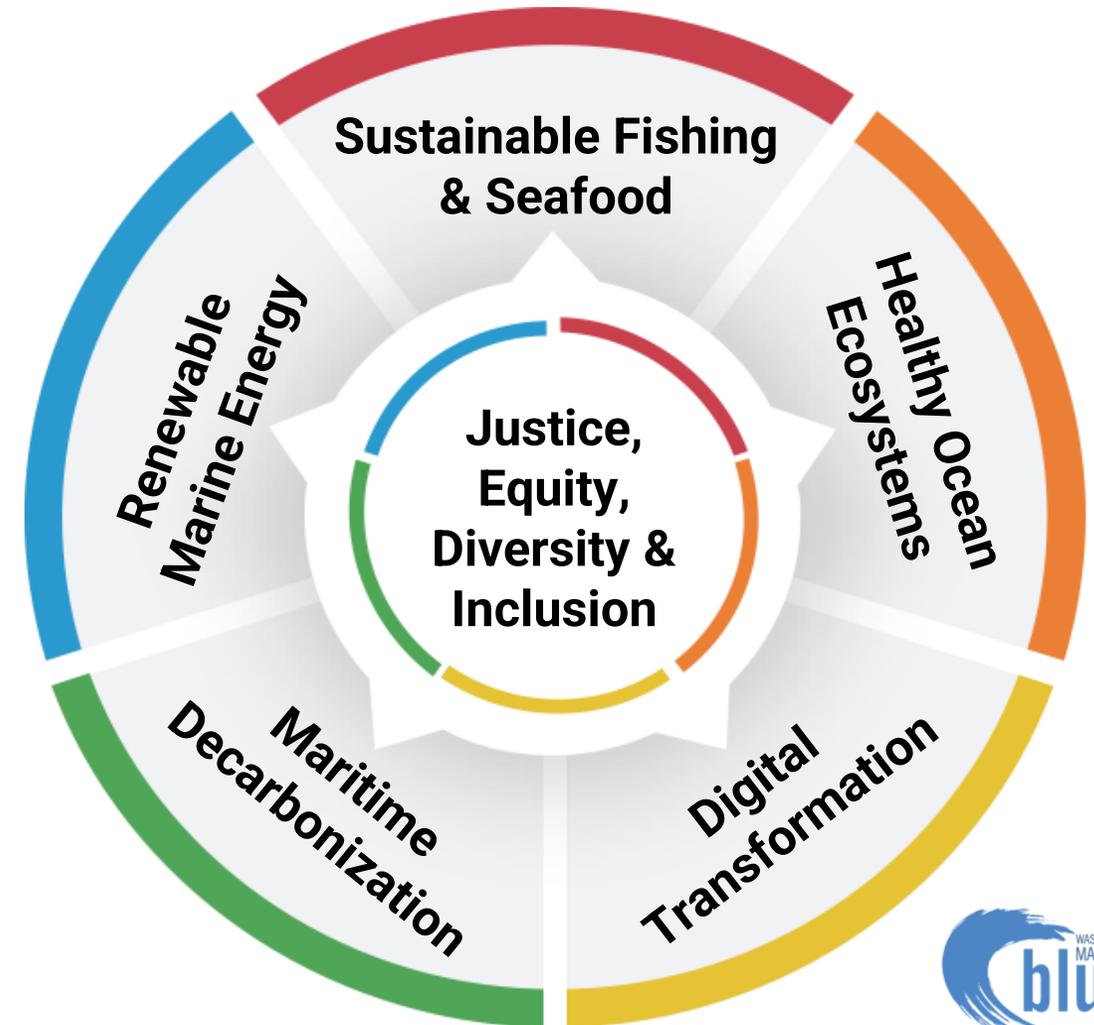
Strategic Focus & Leadership in the Blue Economy

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.



Industry leaders / Public Agencies / Research Institutions / Community Organizations





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



Blue Hub

Home for Facilitation, Convening, Collaboration & Knowledge Sharing



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





Our Blue Ventures Programs

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





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

35 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.

GM takes a stake in electric boating start-up Pure Watercraft

PUBLISHED MON, NOV 22 2021 12:38 AM EST | UPDATED MON, NOV 22 2021 12:04 PM EST

Levi Kishday

KEY POINTS

- General Motors acquired a 25% stake in Pure Watercraft, a Seattle start-up that makes fully electric outboard motors for boats of all kinds.
- GM is under pressure to deliver on its promises of going "all in on electrification."
- With their investment, GM will become a supplier to Pure Watercraft and co-developer of fully electric boating products.



Uber, Virgin Galactic Founders Invest in Advanced Tech Startup Allosense

By Iris Gonzalez



Consider supporting our work. Every dollar supports our mission to report on San Antonio's startup community. Thank you!

Support us

Startups San Antonio

Sign up for our weekly newsletter to receive news about San Antonio tech and science startups.

Email:

Name:

Subscribe

Help snacks, cargo tracking and electric boat engine startups part of Maritime Blue accelerator

BY USA STAFFERS ON JANUARY 5, 2022 AT 3:07 PM



The 10 companies participating in Maritime Blue's third accelerator, (seaside blue insight) Maritime Blue, a Washington state public-private coalition promoting marine-related technologies, has announced the 10 startups participating in its 2022 accelerator. Seven are from Washington or Oregon. The cohort includes four female founders and two teams led by people of color, which supports a deliberate effort by the accelerator to bring diversity into the historically white and male dominated marine sector. "We are very eager to help drive momentum for this electric group of startups, each delivering unique value into our region's blue economy ecosystem, from help to global supply chain solutions," said Joshua Berger, founder and CEO of Washington Maritime Blue. This is the third year of the Maritime Blue Innovation Accelerator. The mentoring program runs for four months, culminating in a startup-showcase in May. Past participants include Discovery Health, a company remote healthcare services for workers on marine vessels that has grown to employ more than 200 people, at Silverback Marine, a Seattle boat building and design company that won a grant from Pure Watercraft to build an all electric vessel for the Port of Lopez. The Port of Seattle and the Washington Department of Commerce are also part of the program.

The Maritime Executive

INTELLECTUAL CAPITAL FOR LEADERS

ERMA FIRST Acquires World's Smallest Ballast Water Treatment System



Illustration courtesy oneTANK

PUBLISHED JUL 26, 2021 7:43 PM BY GLOSTEN

Global ballast water equipment manufacturer ERMA FIRST is bringing the world's smallest and easiest to install ballast water treatment system to the international market through its acquisition of US firm oneTANK LLC. oneTANK, a subsidiary of naval architecture and marine engineering firm GLOSTEN, has developed a small scale innovative, low-cost, IMO Revised G8 Code and





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



QUIET SOUND

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.



Active Joint Innovation Projects in 2022-2023



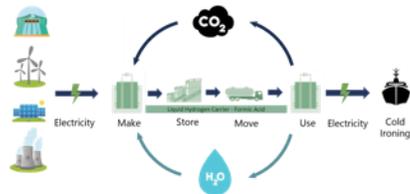
Zero-Emission Foil Fast Ferry



Port of Skagit



Tacoma Tideflats Blue-EDGE 5G Network



Green Hydrogen for Tacoma Maritime



NIOSH Safety Study for Decarbonization of Fishing





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

2020-2022

Total Interns Served: **47**

Total Stipends Earned: **\$52,000**

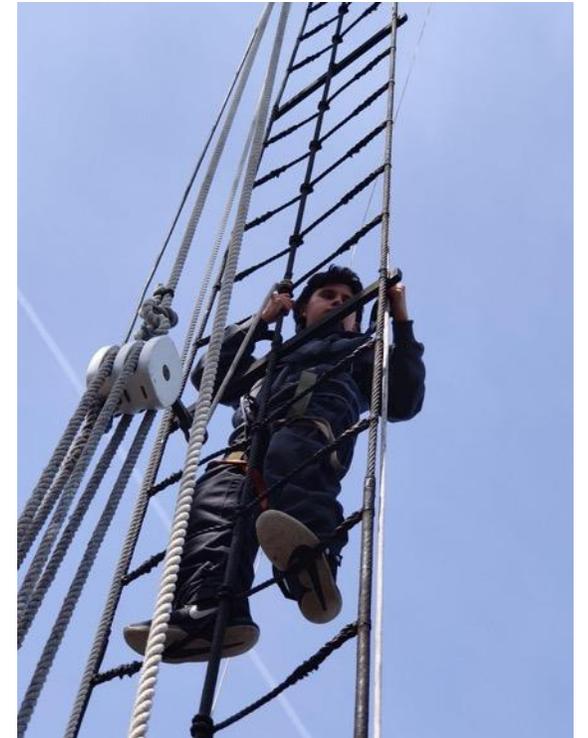
Total Career Awareness Events: **27**

Total Youth Served: **304**

Total Employer DEI Training: **26**

Race/Ethnicity Demographics of Youth Served:

African-American 22%, Hispanic/Latino 44.4%, Asian 26.4%, Caucasian 6.7%





The home of Maritime Blue with **collaborative work and meeting space** for members, partners, and stakeholders

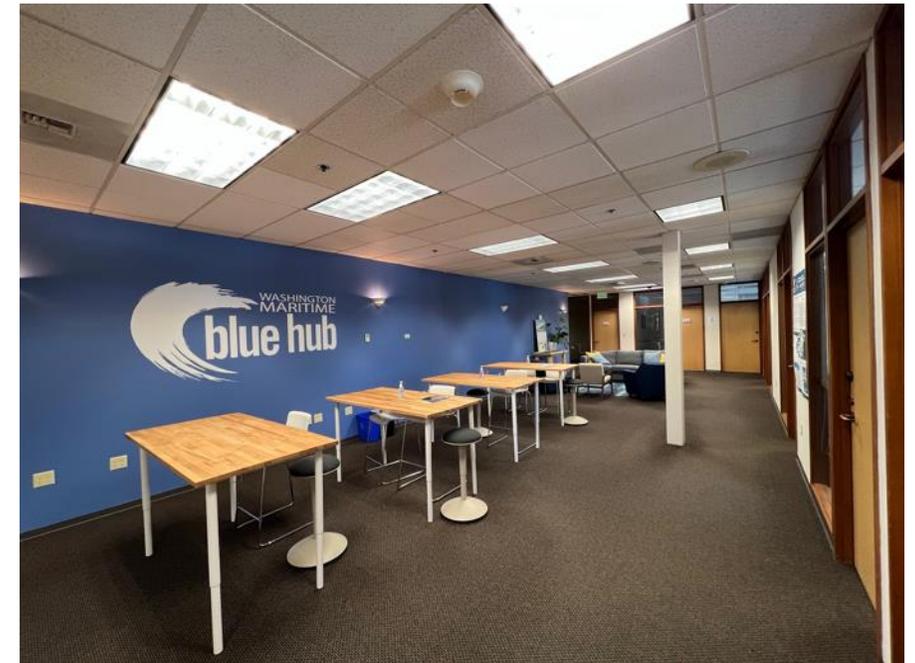


s2s Public Relations



Member Access to:

- Events and Convenings
- Board and small meeting rooms
- Collaborative work space
- Drop-in Executive office space





Maritime Innovation Center

Under Design and Construction - opening 2025





Part of a Global Enterprise for the Blue Economy





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



Josh Carter
Director, Blue Ventures



Cassidy Fisher
Director,
Joint Innovation



Tina Flores-McCleese
Finance Director



Veasna Hoy
Director,
Equity Engagement



LeAsia Johnson
Manager, Youth Programs



Karina Martija-Harris
Manager, Tacoma
Maritime Incubator



Angel Menchaca
Operations Manager



Caitlin O'Morchoe
Manager, Quiet Sound



Devon Thorsell
VP of Operations



A Strategic Alliance for Maritime Innovation and a Sustainable Blue Economy

Joshua Berger, President/CEO
Joshua@maritimeblue.org

www.maritimeblue.org

#WaMaritimeBlue, #BuildBackBlue



For More Information, Please Contact:

Milton Cochran

Economic Development Integrator
ERSF Field Coordinator

U.S. Department of Commerce,
Economic Development Administration

mcochran@eda.gov

UPCOMING SERIES:

Industries of the Future

A Pathway Toward Economic Resiliency

June 21- August 9

Series Summary

The Economic Recovery Support function, in partnership with local, state, and federal partners, will be hosting a series of virtual sessions on Florida's Industries of the Future.

Session Topics:

- State of the Industry
- Industry Assets
- Industry Challenges
- Highlight of Industry Best Practices

21 JUNE <i>Blue Economy Part I: What it Means for Florida</i>	12 JULY <i>Blue Economy Part II: Best Practices</i>	19 JULY <i>Advanced Manufacturing: Microelectronics & Semiconductors</i>	<h3>Why focus on Industries of the Future?</h3> <ol style="list-style-type: none">1. Diversify the economic base2. Build a more resilient economy3. Create more high-wage, high-skill employment opportunities <p>For more information, contact: Milton Cochran at mcochran@eda.gov</p>
26 JULY <i>Clean Energy / Cleantech</i>	2 AUGUST <i>Aerospace & Aviation</i>	9 AUGUST <i>Agricultural & Life Sciences</i>	