TEXAS A&M UNIVERSITY
GALVESTON CAMPUS
FEARLESS ON EVERY FRONT
WE ARE
AGGIES
BY THE SEA
Dr. Antonietta Quigg,
Regents Professor
Senior Associate Vice President for
Research and Graduate Studies

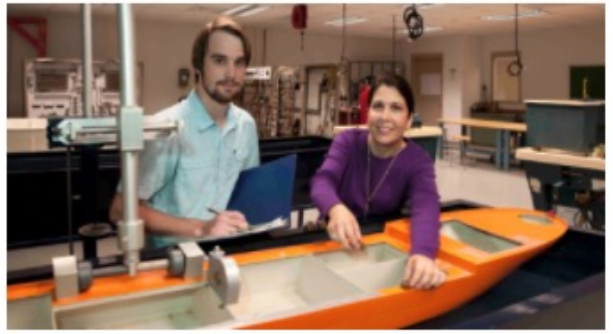
Mission: We are the future of innovation, education, service and communities of, for and by the sea.

DEPARTMENTS

Computer Science and Engineering

Marine and Coastal Environmental Science

Maritime Business Administration



Ocean Engineering

Maritime Transportation

Foundational Sciences

Liberal Studies

Marine Biology

Marine Engineering Technology

New training ship

https://drive.google.com/drive/folders/1DCwvVLWO9iNt1qqfknt_2QVwjjMXN_dn

Major strategic areas

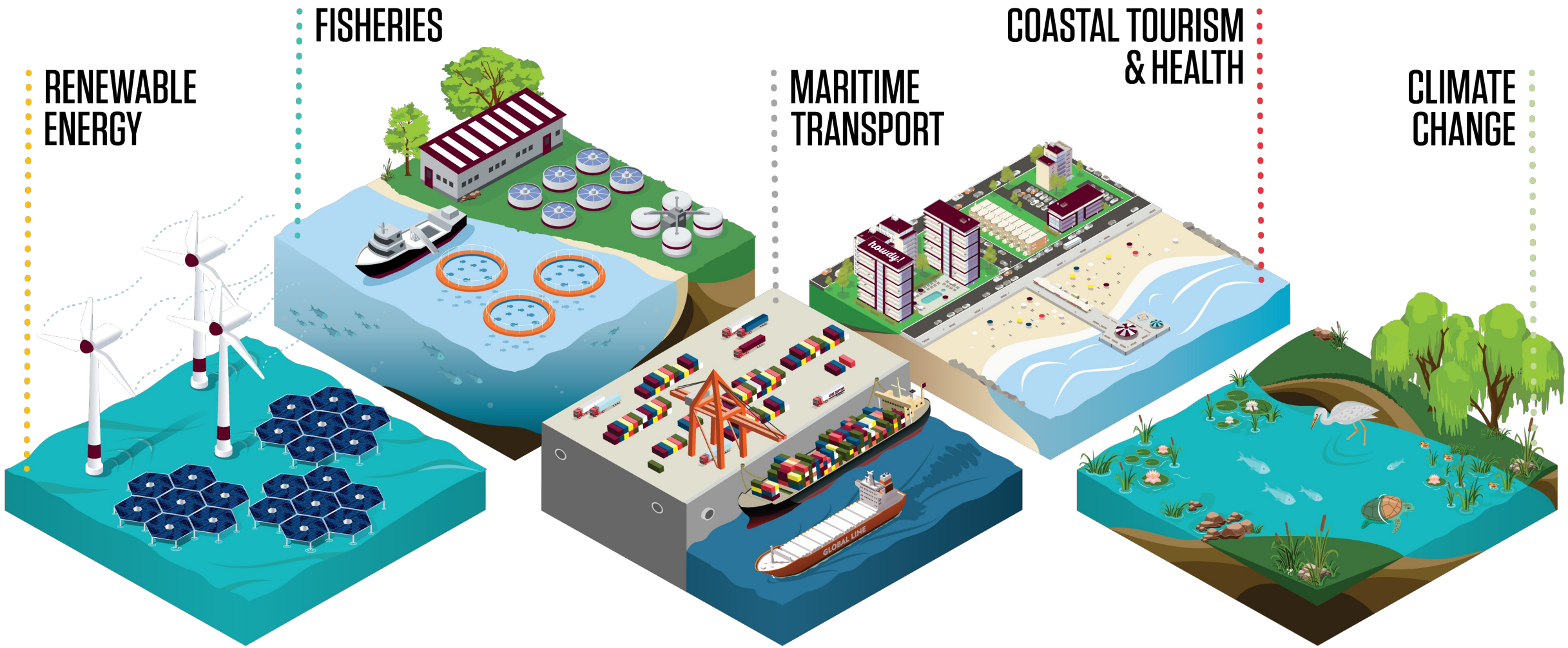
The **"Blue Economy" concept**, is an organizing principle that captures the interplay between economic, social, political and ecological sustainability of the ocean.

As a strong maritime nation with dominance in high tech expertise, the U.S. is well positioned to lead blue technologies in ocean activities.

Strategic Plan : 2020 - 2025

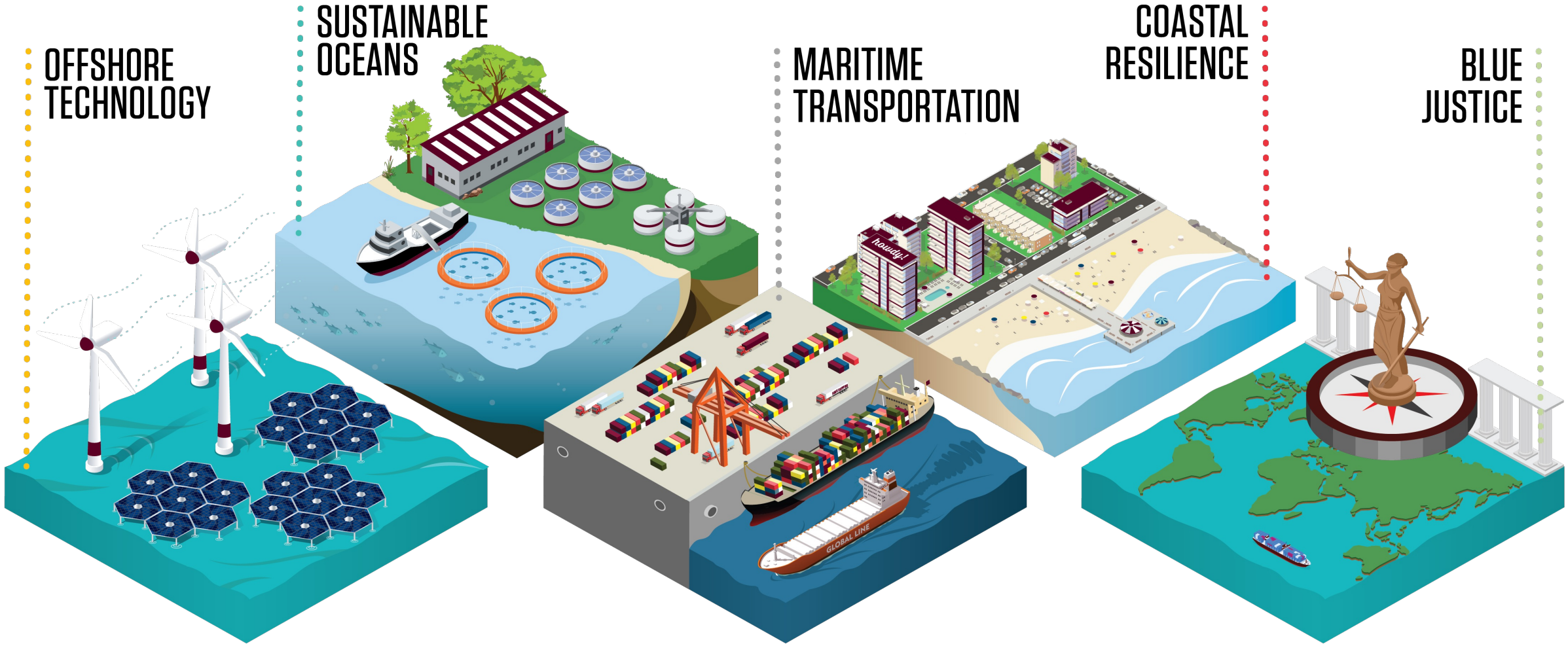
Texas A&M University at Galveston

Leading the Blue Economy

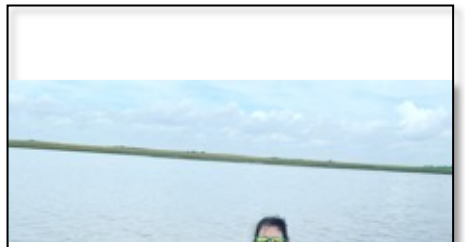


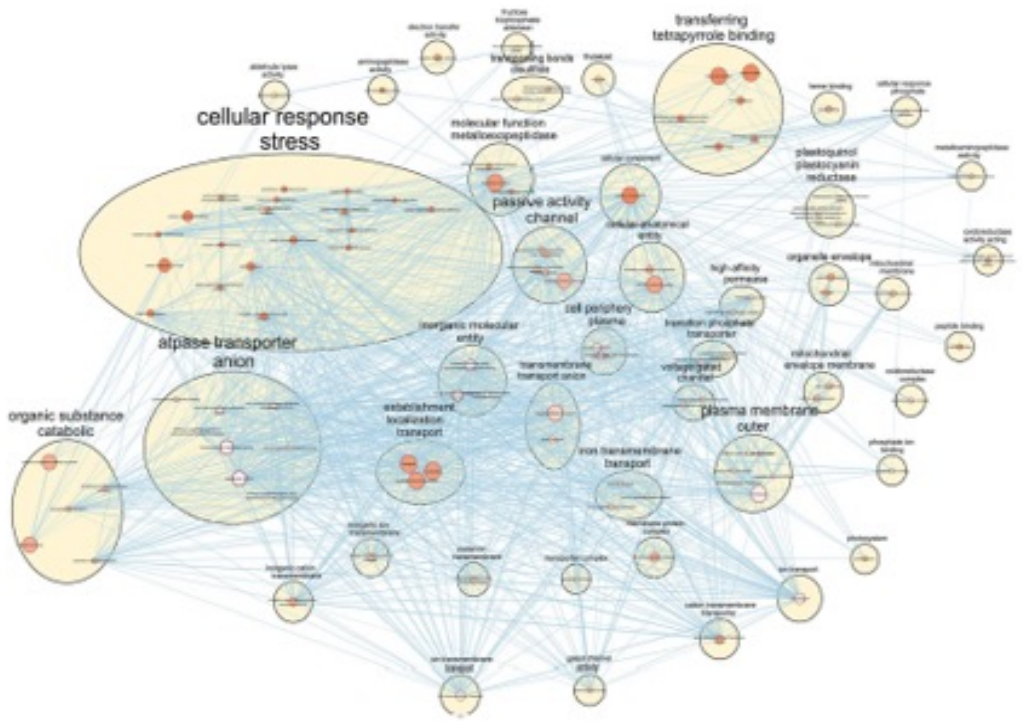
Texas A&M University at Galveston

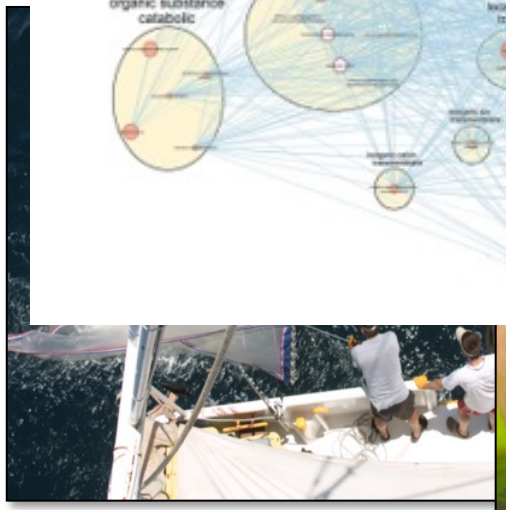
Leading the *NEW* Blue Economy

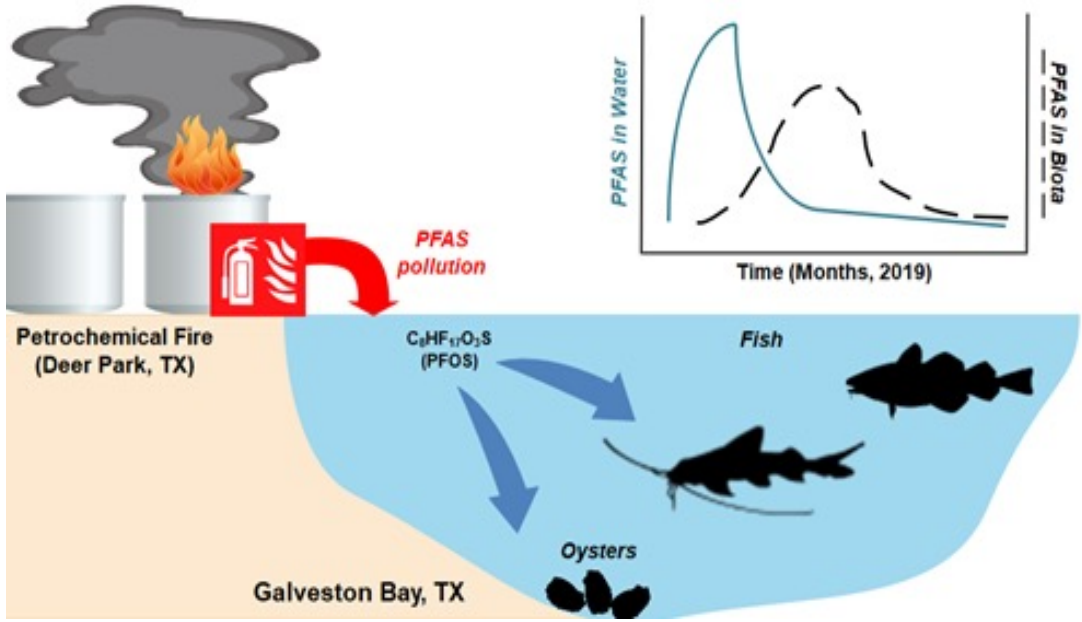


Sustainable Oceans









Gulf Research Institute for Highly Migratory Species

1. Migration ecology of tarpon in the NW Gulf of Mexico
2. Origin and trans-Atlantic migrations of yellowfin tuna in the Atlantic Ocean
3. Habitat and ecosystem connectivity of fishes on natural banks in the Flower Garden Banks NMS
4. Movements and post-release survival and behavior of coastal sharks
5. Population connectivity of apex predators in Cuba-Mexico-US waters
6. Feeding ecology and environmental contaminants in top predators
7. Movement and population connectivity of greater amberjack
8. Bluefin tuna restoration

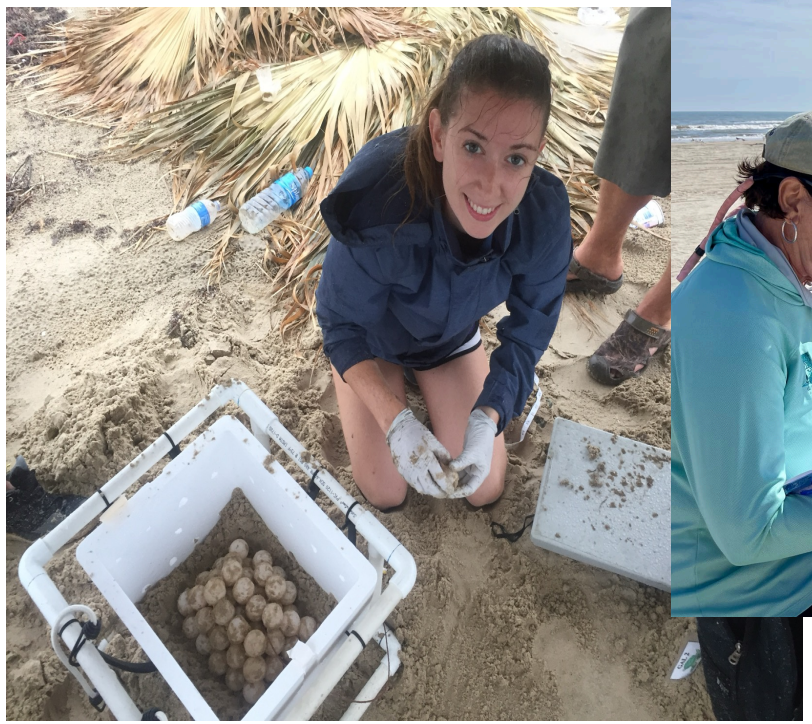
https://www.tamug.edu/grihms/index.html

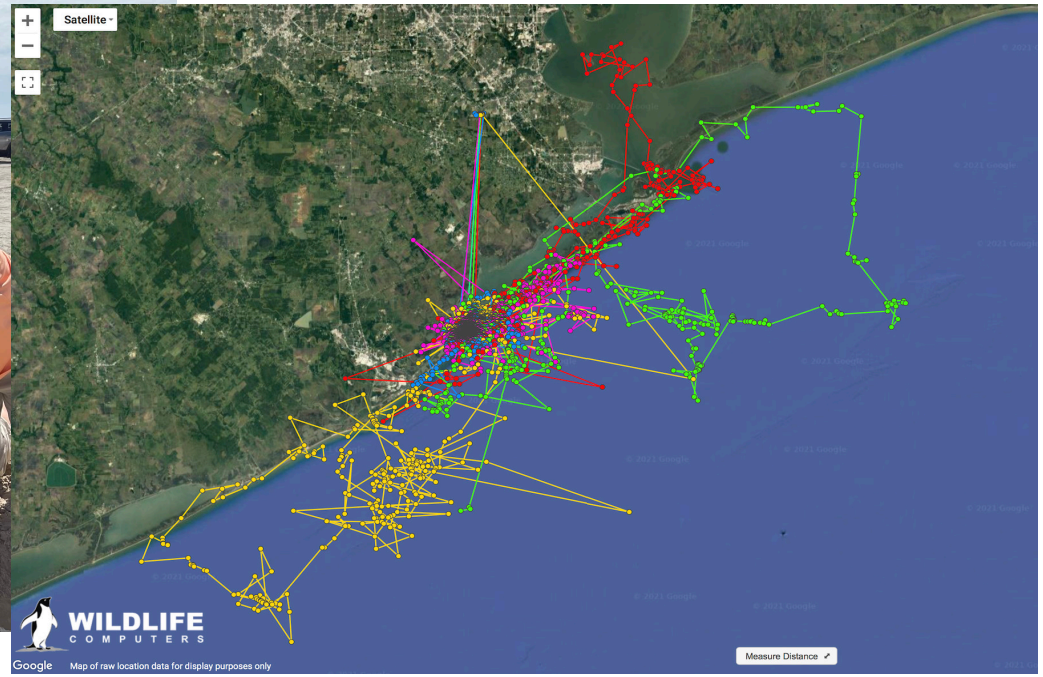
Gulf Center for Sea Turtle Research

Assessment of Optimal Sea Turtle Nesting Sites Along the Texas Coast

In-Water Sea Turtle Capture and Tagging Program

Sea Turtle Health Assessments





https://www.tamug.edu/GulfCenterforSeaTurtleResearch/

Gulf Center for Sea Turtle Research

Sea Turtle Rehabilitation Hospital and Education Outreach Center

Coastal Resilience

Improve coastal resiliency to hurricanes and storm surge

Better understand the marine pollution problem

Lead the study of flood impacts on natural and social systems

Trace changes to coastlines and people in face of climate change

INSTITUTE FOR A DISASTER RESILIENT TEXAS

TEXAS A&M UNIVERSITY GALVESTON CAMPUS.

1 Hazard Analytics

Measuring, Mapping, & Managing Flood Risk

Funded By:
Texas General Land Office

2 Risk Communication & Perception

Buyers BeWhere

Funded By:
FEMA & TDEM

3 Policy & Decision Support

Texas' Enhanced State Hazard Mitigation Plan

Funded By:
TDEM

4 Education

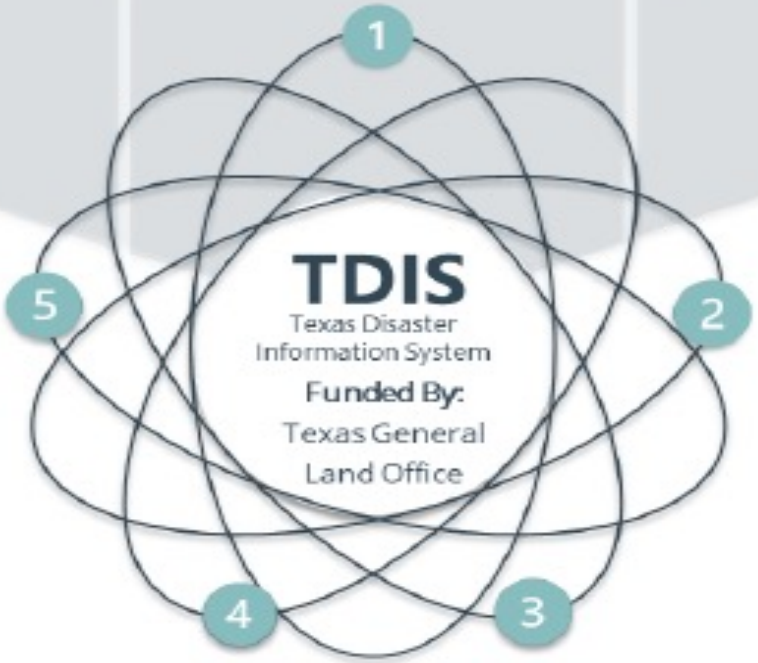
Partnerships for International Research & Education

Funded By:
National Science Foundation

5 Coastal Risk Reduction

Ike Dike

Led By:
Center for Texas Beaches & Shores

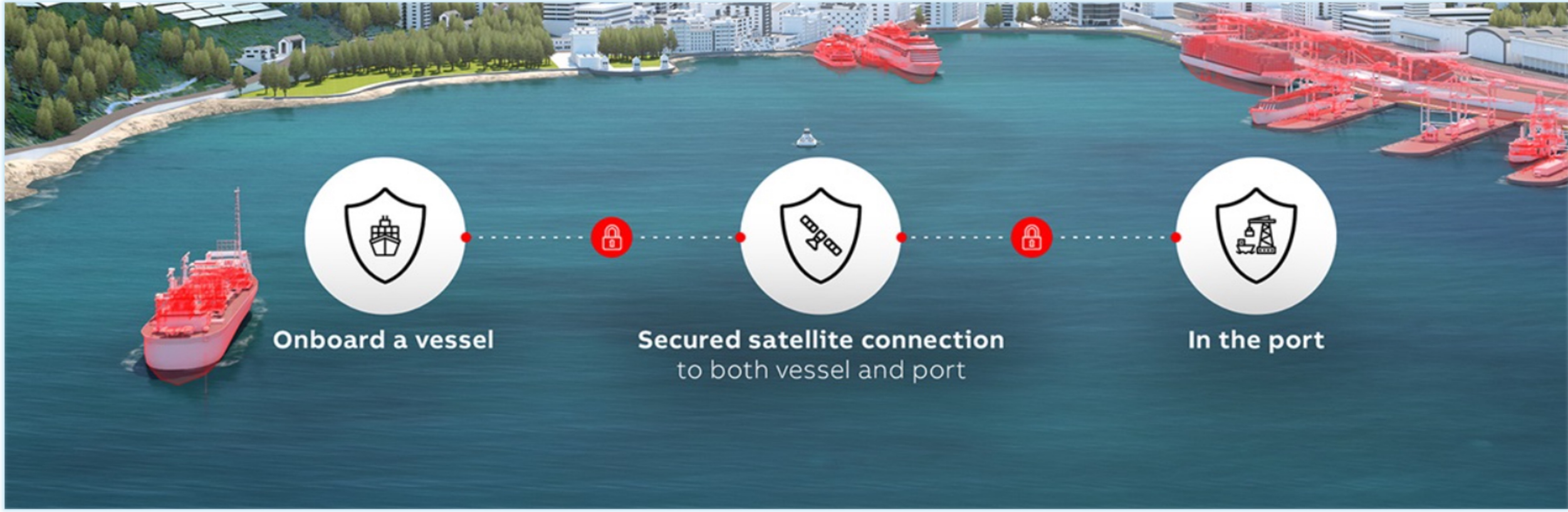


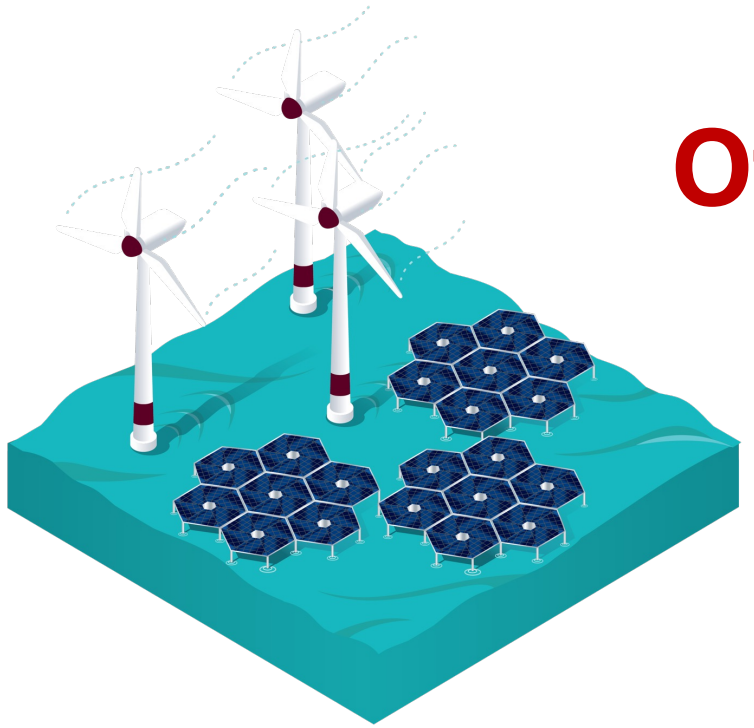
Established by the TAMU Board of Regents following passage of House Bill 2345, 86th Texas Legislature, 2019

Maritime Transportation

- supply chains and logistics,
- security (cyber) of ports and vessels

Maritime Transportation





Offshore Technology

power at sea which includes green shipping, marine aquaculture, seawater mining, wind farms, etc.

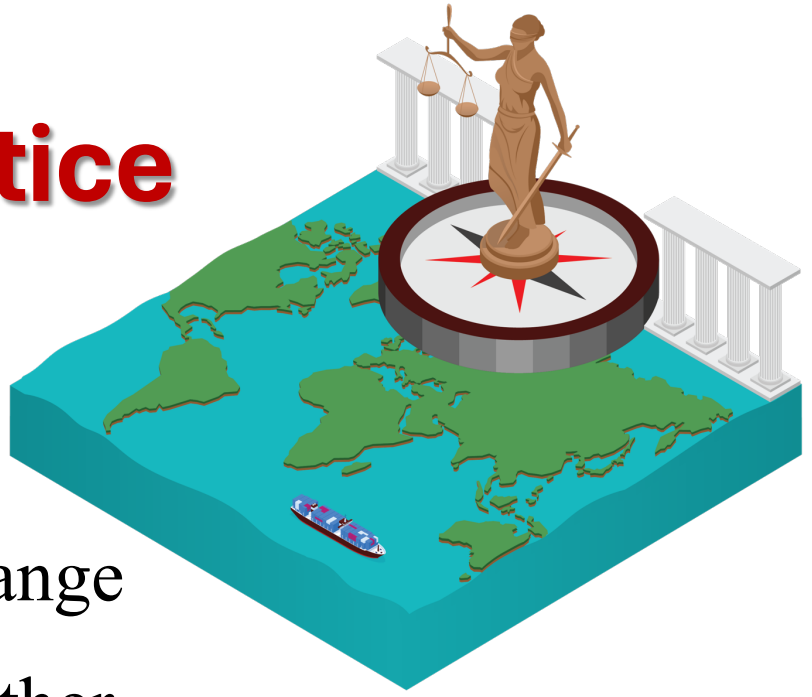
https://www.tamug.edu/cares/

CARES

Clean & Resilient Energy Systems

Sustainability Takes Priority

Blue Justice



Overarching theme:
communities in transition

The need to build capacity and empower communities to participate in adapting to climate change

(1)Livelihoods - Focus on people & communities rather than on "economy".

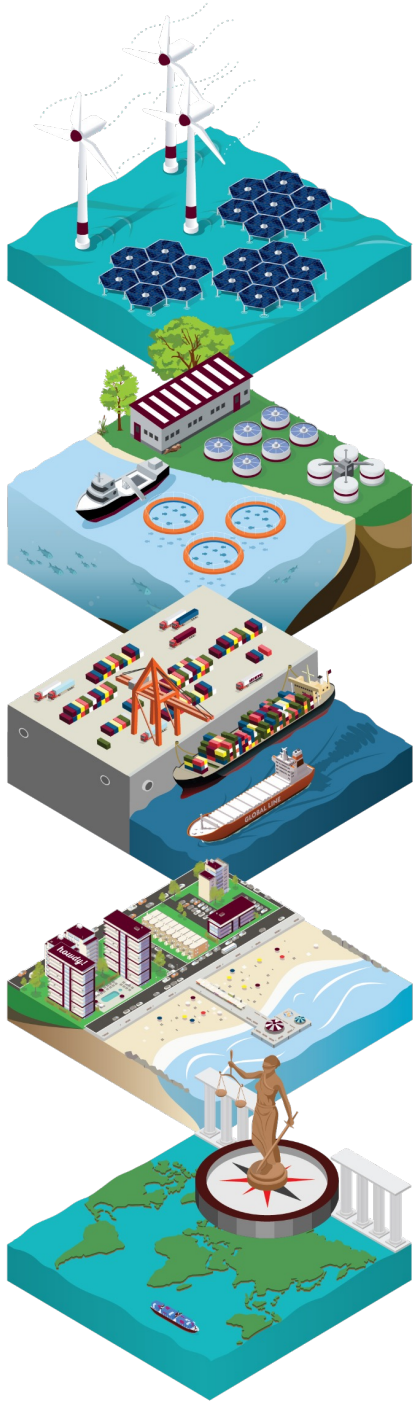
(2)Climate – Overlap with the *coastal resilience*, adaptation strategies and disaster management.

(3)Energy - infrastructure, energy security, social acceptance of renewables.

RESEARCH CHALLENGES

- Many junior faculty with little grantsmanship experience, few senior faculty and so a lack of mentoring to kick start these activities

- ***NEW*** Blue Economy offers great promise for the campus to lead in an arena, develop an identity and foster future generations of leaders amongst faculty and students

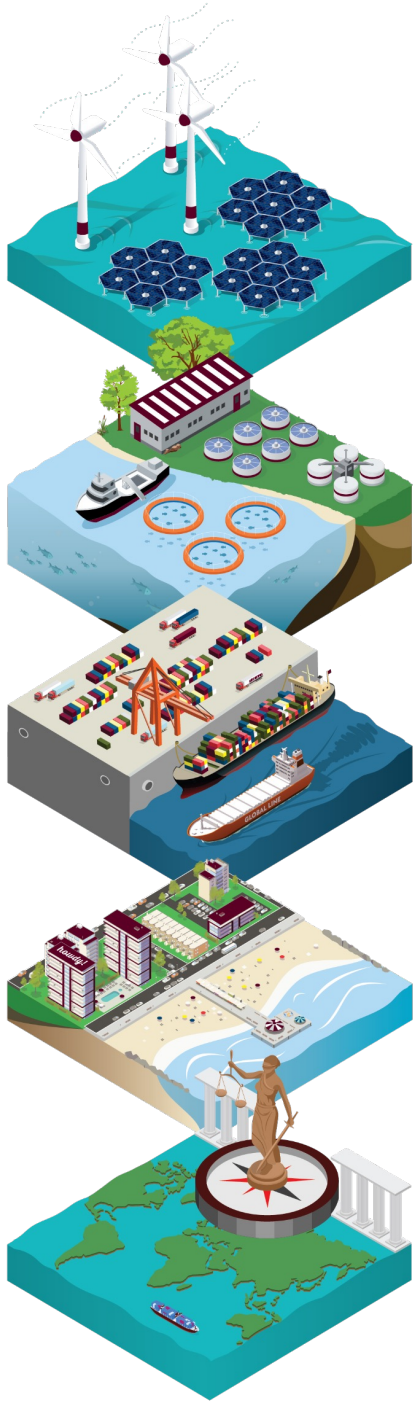


RESEARCH OPPORTUNITIES

What's "New" About the New Blue Economy?

Ocean Economy	Blue Economy	New Blue Economy
All economic activities related to the oceans, seas, and coastal regions.	Couples the promotion of economic growth, social inclusion, and the improvements of lives and livelihoods, while ensuring environmental sustainability of the ocean and coastal areas.	Uses **technology, data and information** to catalyze public and private sector innovation and inform smart decision making across all Blue Economy sectors.

https://coastalscience.noaa.gov/science-areas/coastal-and-marine-planning/blue-economy-support/



What's next ??

Future of the Galveston Campus

Engineering Classroom & Research Building

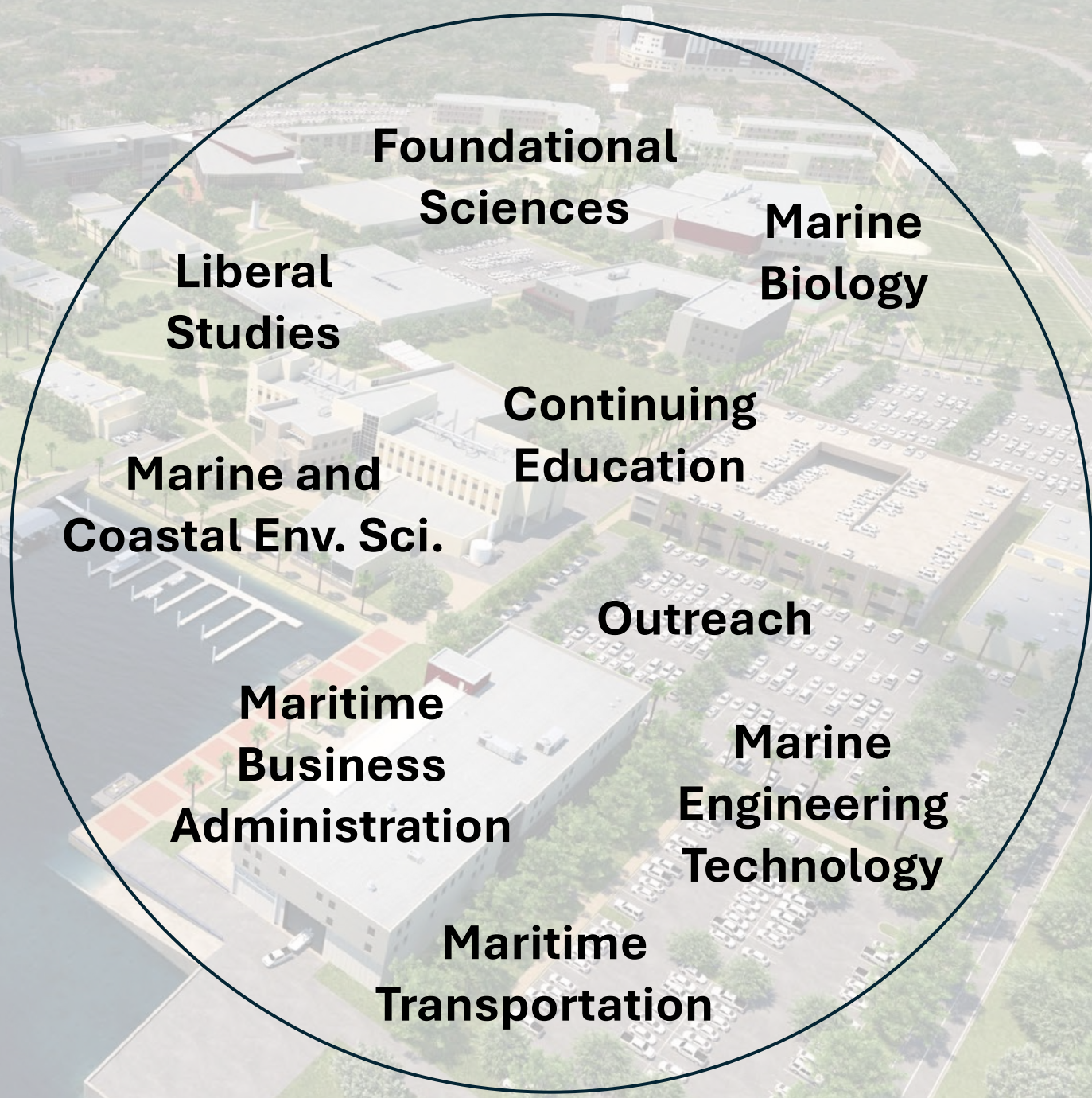
Freshman Engineering Program,
Ocean Engineering,
Computer Science and Engineering,
Interdisciplinary Engineering,
Marine Engineering Technology

Creation of the….

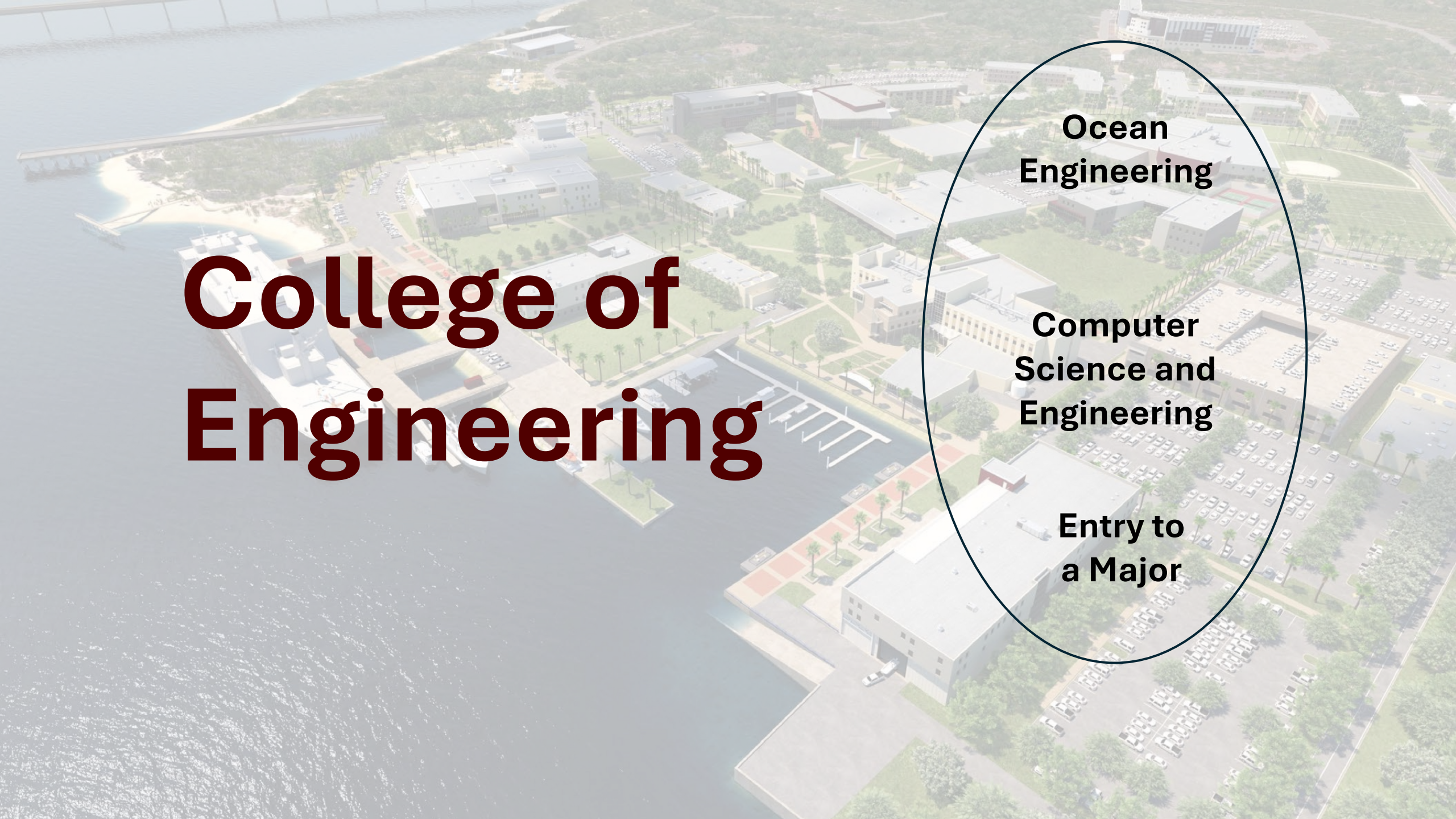
TEXAS A&M UNIVERSITY

College of Marine Sciences and Maritime Studies

College of Marine Sciences and Maritime Studies



College of Engineering



Welcome GCOOS!

TEXAS A&M UNIVERSITY
GALVESTON CAMPUS
AGGIELAND
DOESN'T STOP AT
THE WATER'S EDGE