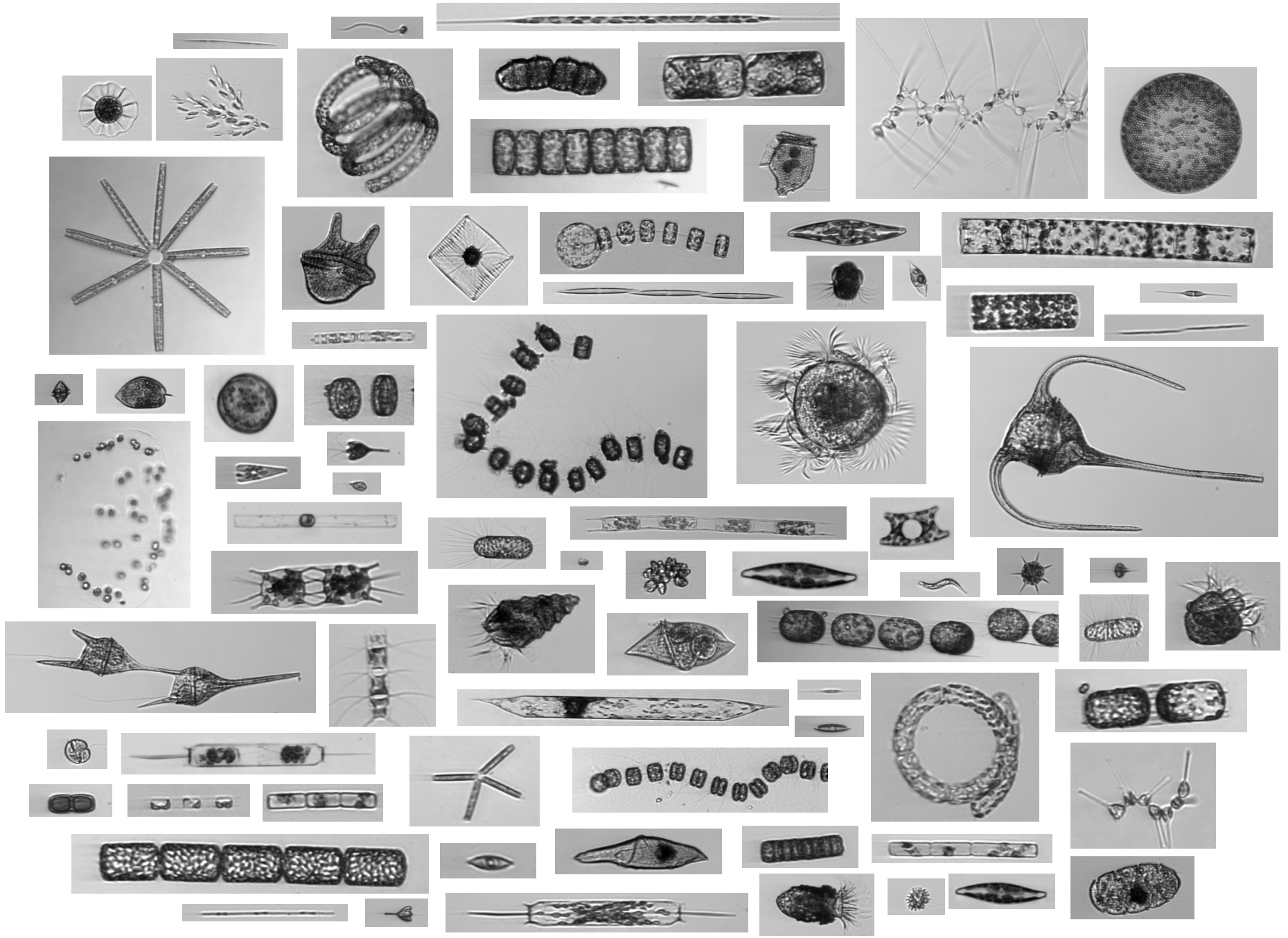
Heidi M. Sosik

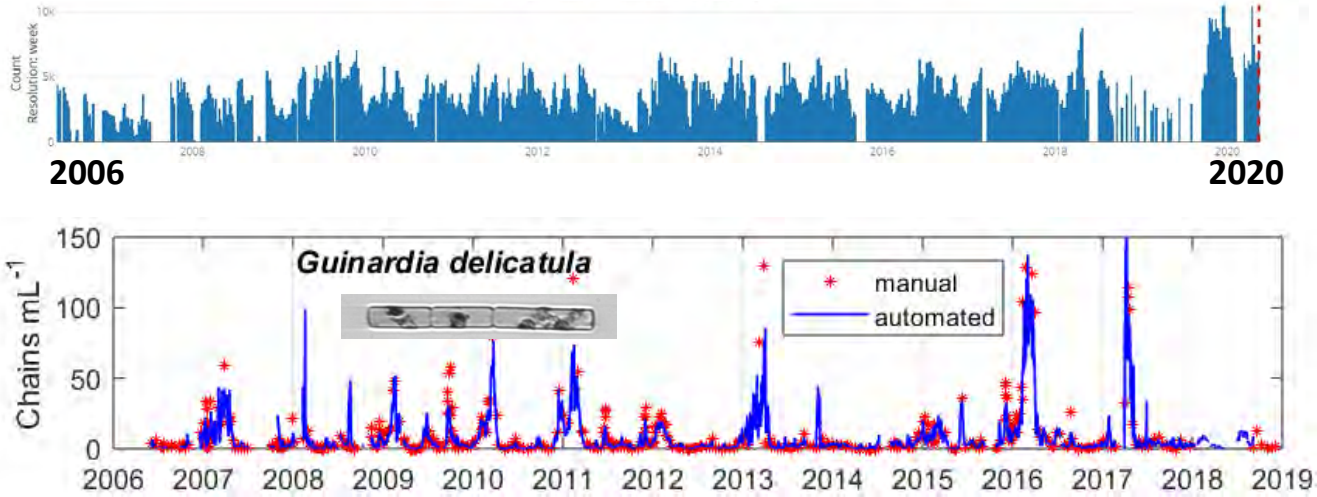
WOODS HOLE
OCEANOGRAPHIC
INSTITUTION

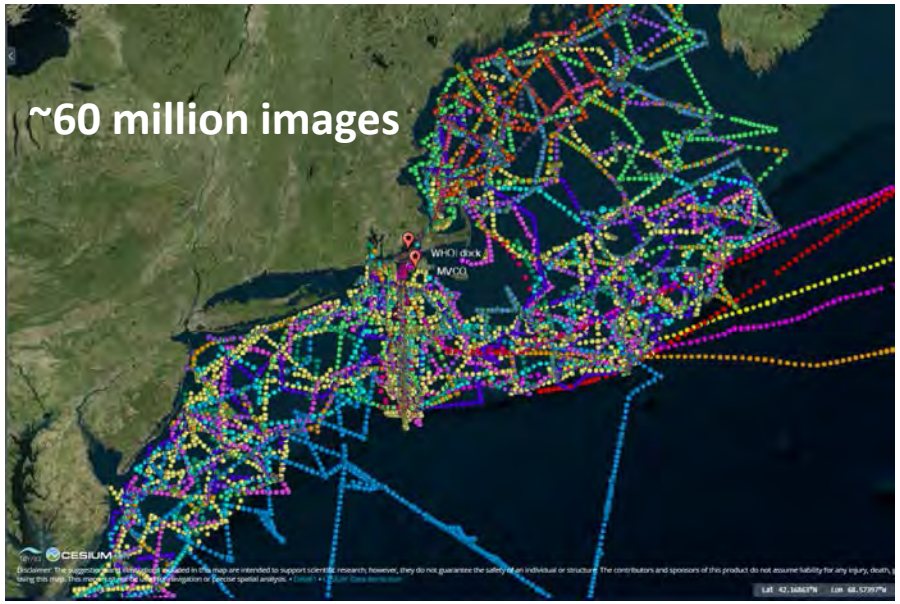


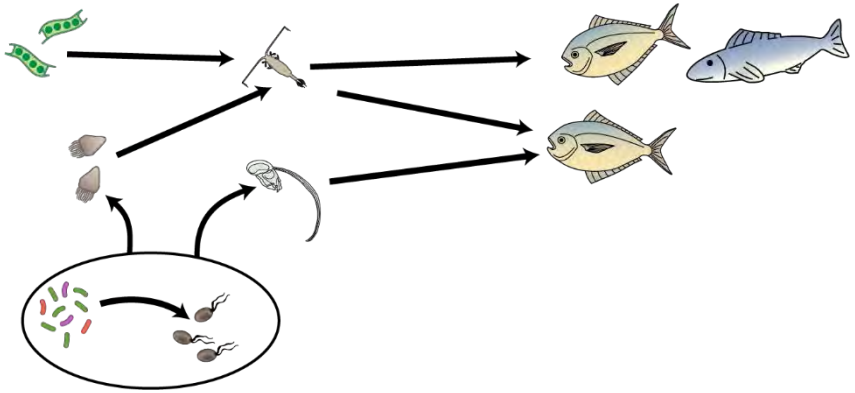
NORTHEAST U.S. SHELF
Long-Term Ecological Research

IFCB

Martha's Vineyard Coastal Observatory **>1 billion images**







Goals: Understand and predict

- **how planktonic food webs change in response to changes in the physical environment**
- **how those changes impact ecosystem productivity**

NATIONAL SCIENCE FOUNDATION
LTER NETWORK
LONG TERM ECOLOGICAL RESEARCH

WOODS HOLE OCEANOGRAPHIC INSTITUTION

WELLESLEY

UNIVERSITY OF MASSACHUSETTS DARTMOUTH 1895

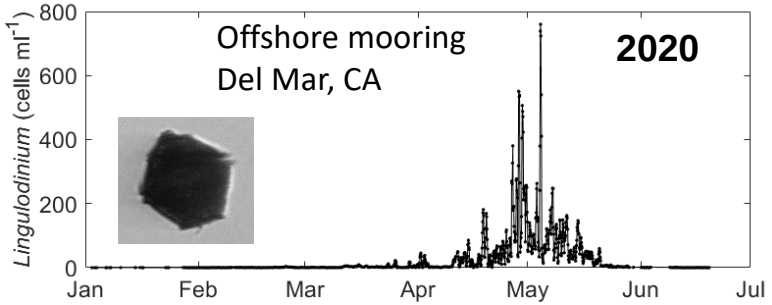
THE UNIVERSITY OF RHODE ISLAND GRADUATE SCHOOL OF OCEANOGRAPHY

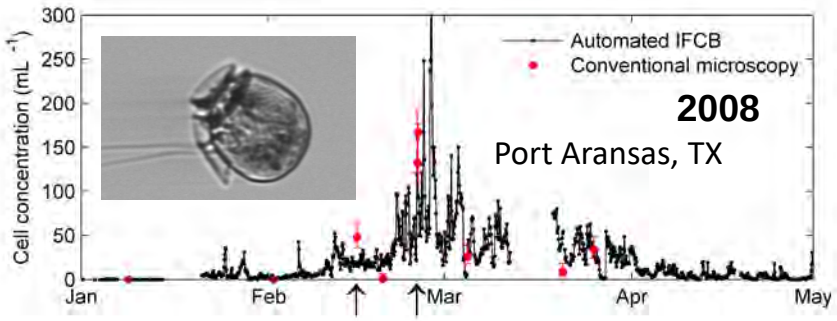
WOODS HOLE OCEANOGRAPHIC INSTITUTION 1930

NOAA FISHERIES
National Oceanic and Atmospheric Administration

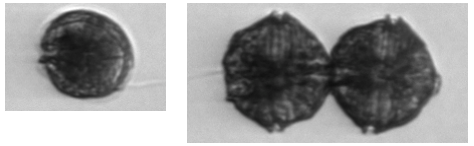
Harmful Algal Blooms

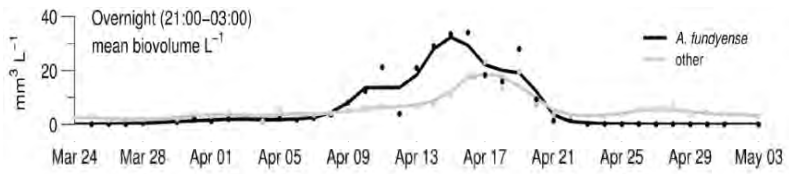
IFCB





Campbell et al. 2010





Brosnahan et al. 2015

Los Angeles Times

CALIFORNIA

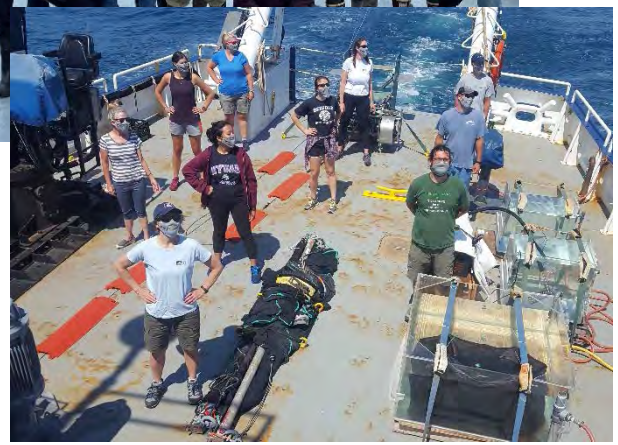
Neon blue flash gives way to rotting stench as red tide sweeps California coast

HOUSTON CHRONICLE

Waters closed to shellfish harvesting

The Boston Globe

Red tide halts shellfish harvesting off parts of Mass. coast



Multi-layered Partnerships Promote Science for Impact

EuroGOOS
European Global Ocean Observing System

Creating shared messaging for a collective impact

Dina Eparkhina

NASEM Sustaining Ocean Observations Phase 2: Workshop
16 September 2020

Strengthening the Collective Voice: Communicating the Importance of Sustained Ocean Observations

- **Collective** voice – who is in the collective? Why should there be their **voice**?
- **Communicating** – to who?
- **Importance** of **sustained** ocean obs – Who says they are important? Why should they be sustained? What is ocean obs?

Meet our stakeholders!

Otherwise called as Quadruple Helix of knowledge economy

Academia – Industry – Policy – Society Communication from ‘us’ to ‘them’

1 Communication among us

Regional systems

National oceanography
Meteorology
Hydrography
….
….

Policy lobby (EU, national…)

EuroGOOS
European Global Ocean Observing System

Thematic working groups

Technology networks

Strategic fora

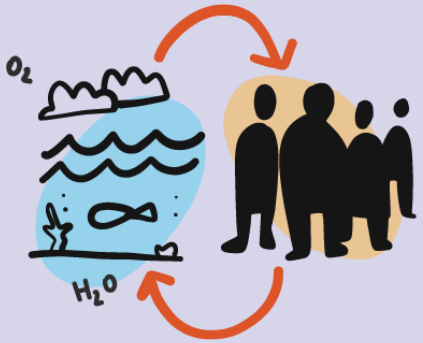
European Union projects

- Ocean obs – What?!
- Our communities = Plural
- Our stakeholders = Diverse
- Attention span = Short

THE IMPORTANCE OF OCEAN OBSERVING

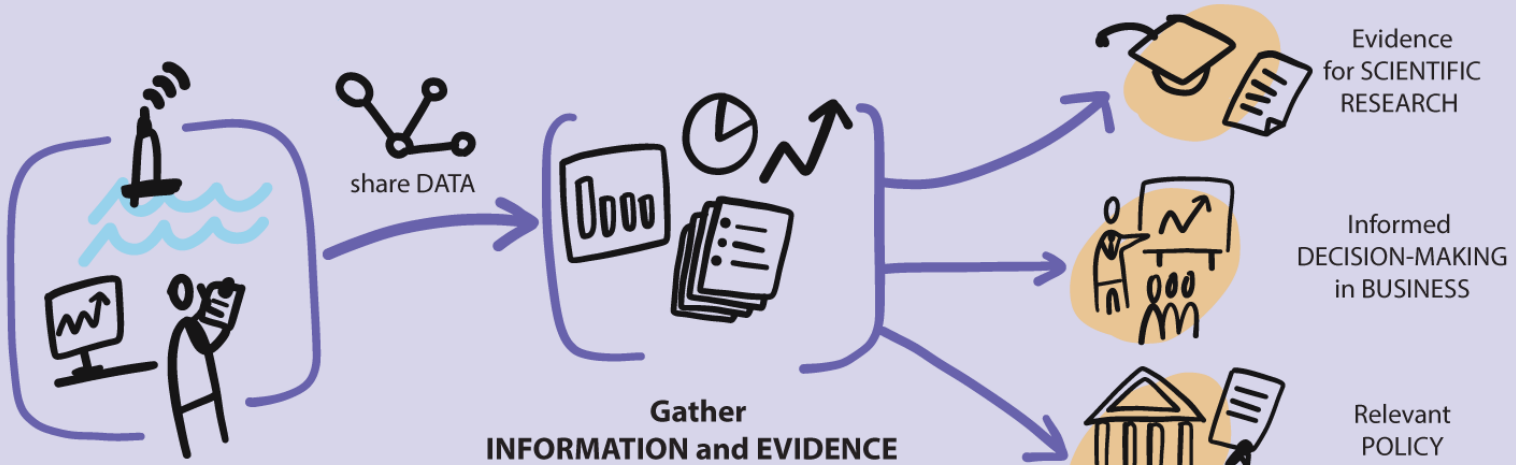
WHY?

The ocean is a basic necessity for life on Earth



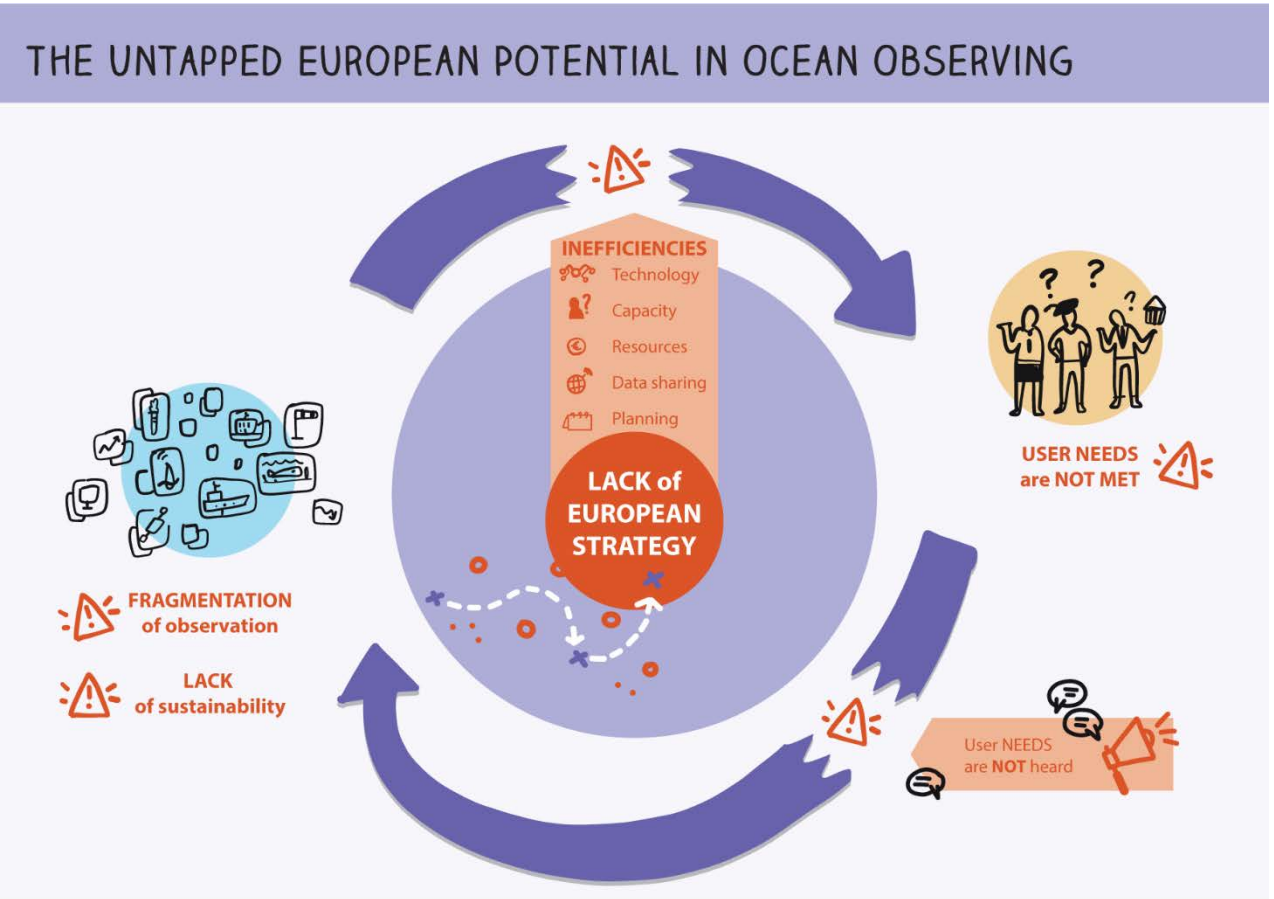
Ocean observing is a basic necessity to
UNDERSTAND OUR RELATIONSHIP
with the ocean.

HOW?

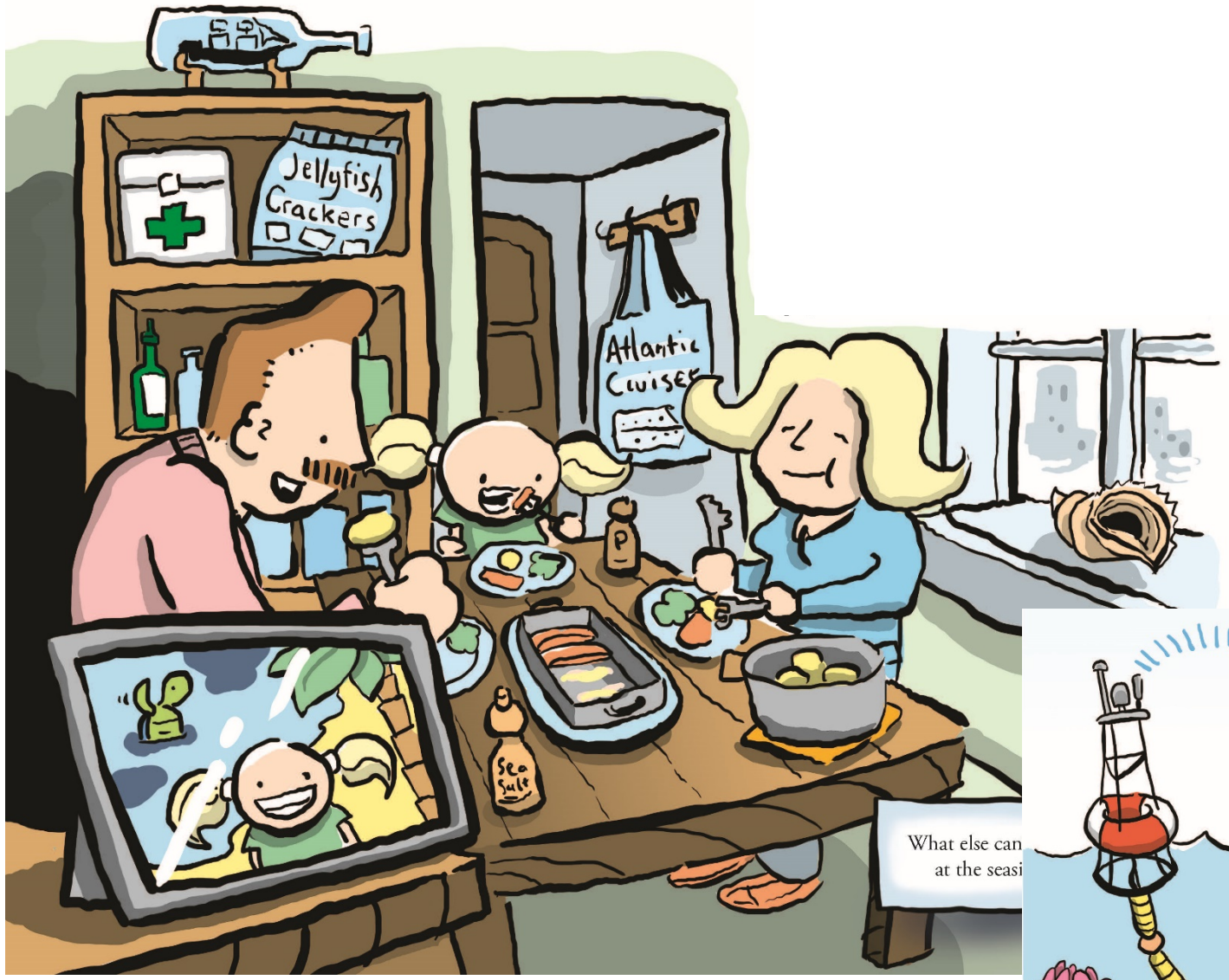


Do
OCEAN OBSERVING SUSTAINABLY
= make financial commitment
for systematic ocean measurements

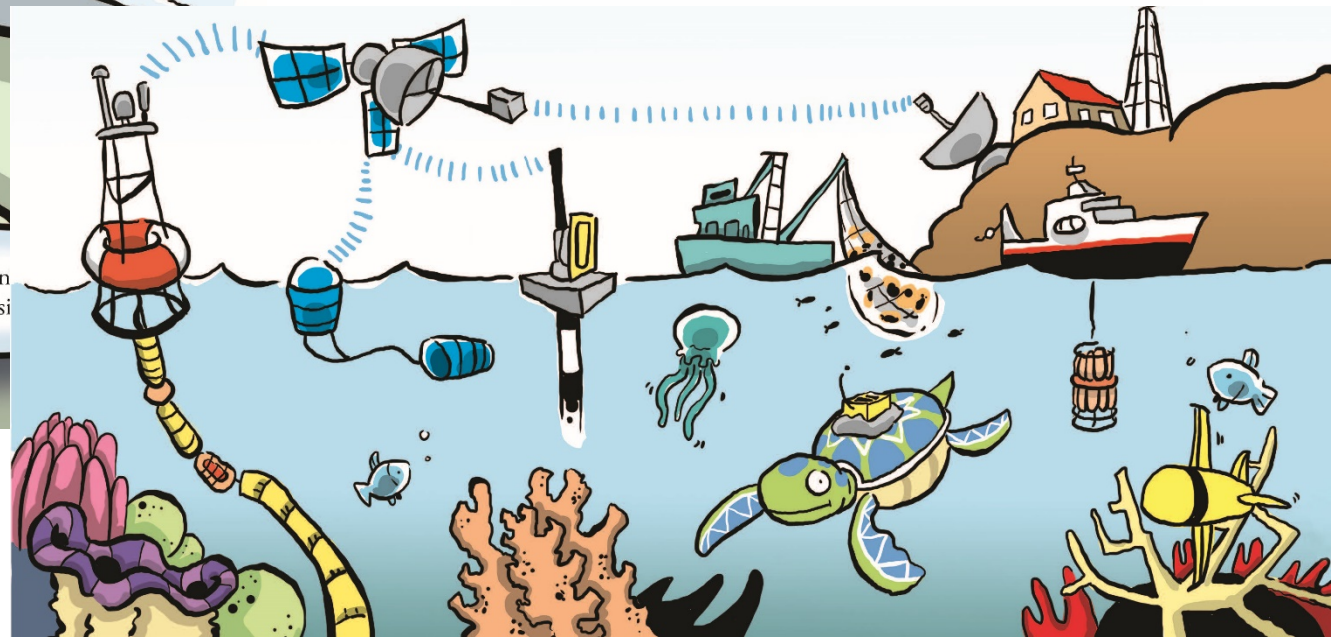
Gather
INFORMATION and EVIDENCE
= improve understanding by
efficiently managing the data


THE UNTAPPED EUROPEAN POTENTIAL IN OCEAN OBSERVING
INEFFICIENCIES
Technology
Capacity
Resources
Data sharing
Planning
LACK of EUROPEAN STRATEGY
USER NEEDS are NOT MET
FRAGMENTATION of observation
LACK of sustainability
User NEEDS are NOT heard


HOW CAN WE ACHIEVE SUSTAINABLE OCEAN OBSERVING IN EUROPE?
A shared framework for a shared understanding
Communicate the value of ocean observing
Observations mapped out
EOOS
Share technology
Fit for purpose
Efficient use of resources
Share data
SHARED VISION & STRATEGY
FOR THE EUROPEAN OCEAN OBSERVING SYSTEM (EOOS)
CO-CREATION TO MEET USER NEEDS
EUROPEAN FRAMEWORK
Perfect place to COMMUNICATE NEEDS
WE ARE STRONGER TOGETHER
Engage in building EOOS
Contact us:
info@eoos-ocean.eu
Share KNOWLEDGE, EXPERTISE and scan horizon


Jellyfish Crackers
Atlantic Cruiser
Sea Salt
What else can
at the seasi


The Ocean is my home
EuroGOOS
European Global Ocean Observing System



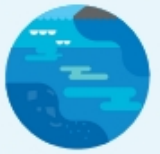
Creativity and visualization ✓

Textual narratives – OL best practice

Can we explain ocean observing in 7 basic facts that are clear to all?

The essential principles of Ocean Literacy

1. The Earth has one big ocean with many features



2. The ocean and life in the ocean shape the features of the Earth

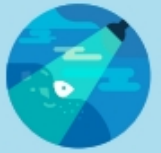
3. The ocean is a major influence on weather and climate

4. The ocean makes the Earth habitable

5. The ocean supports a great diversity of life and ecosystems

6. The ocean and humans are inextricably interconnected

7. The ocean is largely unexplored



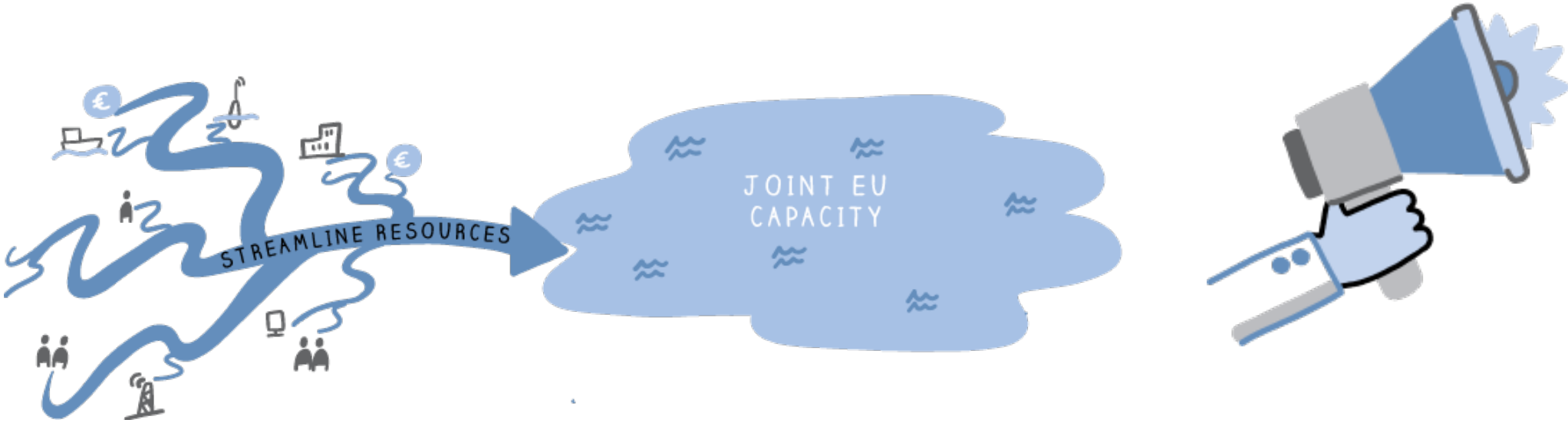
Co-design

experts and non-experts

leave the **comfort zone** of ‘knowing’

seek the **bottom line**

EuroGOOS
European Global Ocean Observing System



dina.eparkhina@eurogoos.eu

@EuroGOOS @dina_ep

www.eurogoos.eu

SCHMIDT OCEAN INSTITUTE

Jyotika I. Virmani, Ph.D.

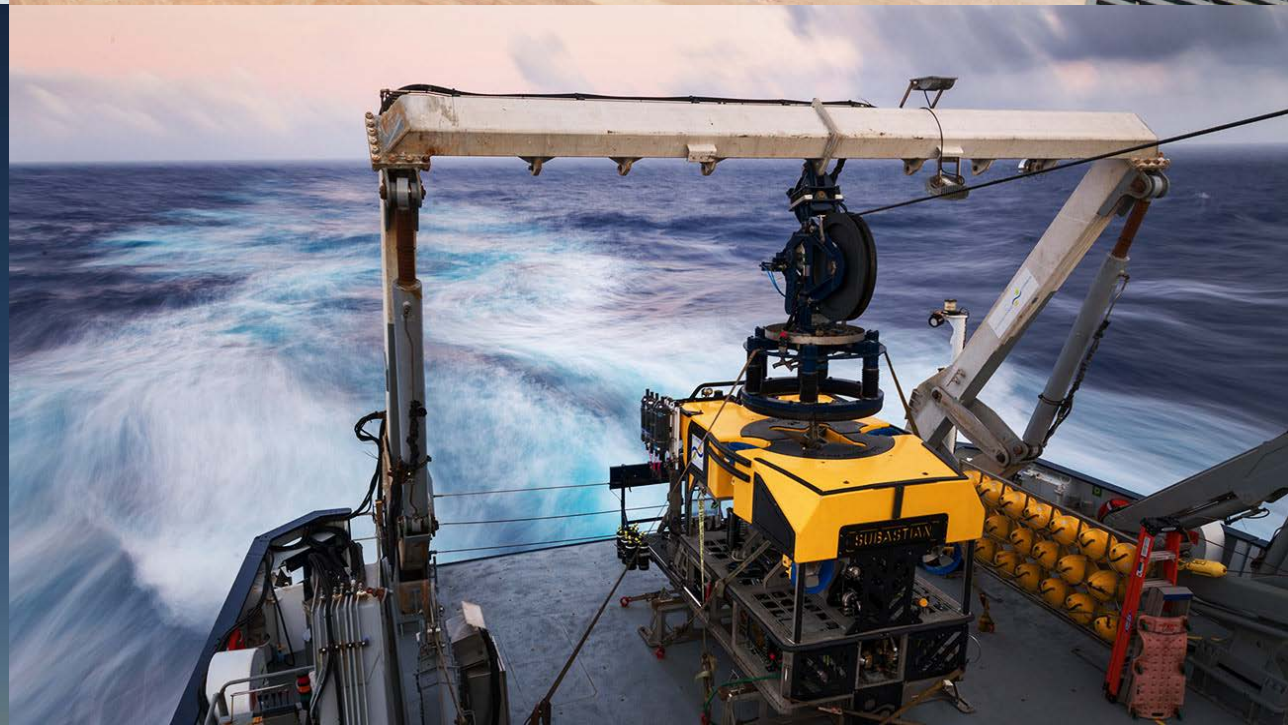
Executive Director, Schmidt Ocean Institute

@schmidtocean @jyovianstorm

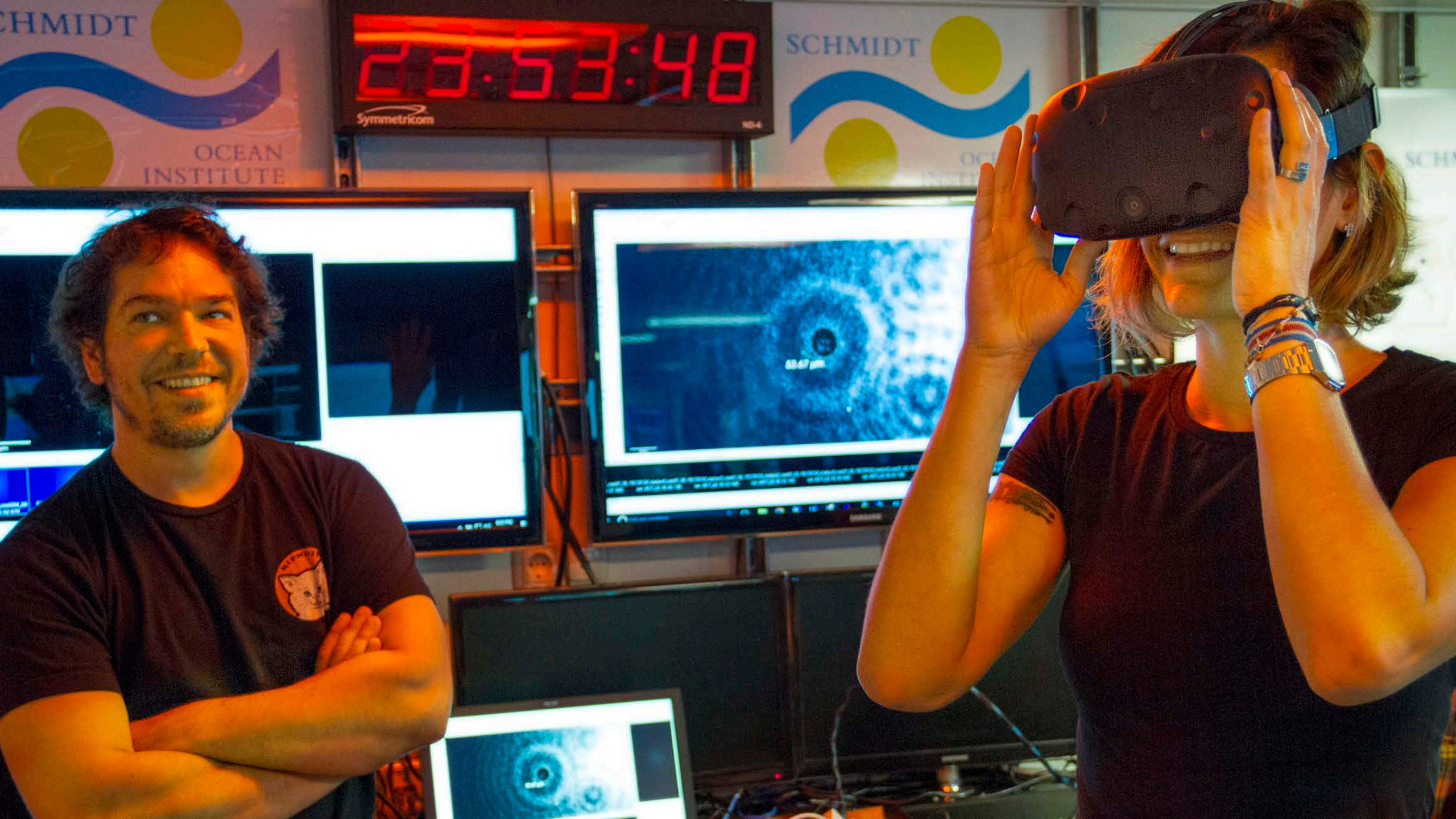

SCHMIDT
OCEAN
INSTITUTE
SAILDRONE
SAILDRONE


N18CU
N17CU


JSV MAXLIMER
OCEAN DISCOVERY
Shell
XPRIZE


SUBASTIAN


SCHMIDT
OCEAN
INSTITUTE


SCHMIDT
OCEAN INSTITUTE
23:53:48
Symmetricom
SCHMIDT


www.SchmidtOcean.org
SCHMIDT
OCEAN
INSTITUTE

The Ocean Foundation

As the *only community foundation* for the ocean, we are dedicated to reversing the trend of destruction of ocean environments around the world.

Alexis Valauri-Orton

Program Officer

Over 40 Countries

We have projects and grantees in over 40 countries around the world.

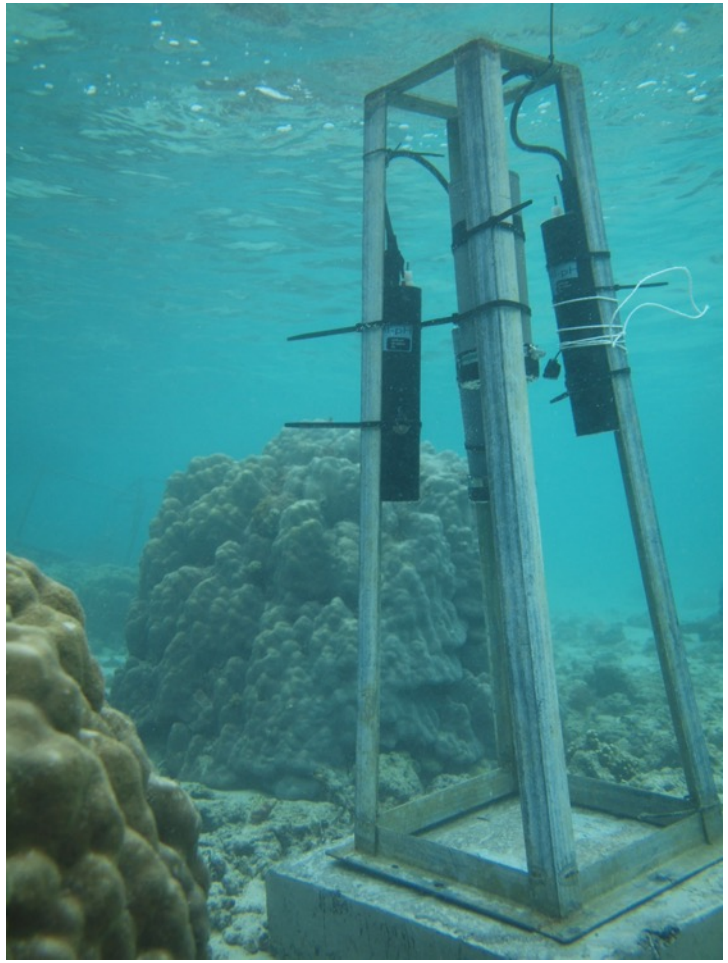
7 Continents

Our projects and work span 7 continents.

On the Front Lines

We work on the front lines around the world to preserve, conserve, and protect marine and coastal habitats.

We Are Committed to Improving Equitable Distribution of Ocean Observing Capacity



Advancing Collective Impact Through a Foundation Model:

The Ocean Foundation's priorities for the UN Decade of Ocean Science for Sustainable Development

As a community foundation we inherently employ a collective impact model. To ensure ***equitable*** distribution of ocean science capacity we plan to:

- Create the Friends of the UN Decade Fund to mobilize and distribute philanthropic support for ocean science
- Launch a pooled fund focused on ocean science capacity development (originating at Ocean Obs '19)
- Continue building regional and international policy support for ocean observing through engagement with national governments and through passage of regional resolutions
- Continue supporting ocean observation scientists by deploying rapid financial support, delivering fit-for-purpose equipment, providing on the ground training, and ensuring all countries have equal voice and capacity to address a changing ocean

For more information e-mail me at avalauriorton@oceanfdn.org

Ørsted U.S. Offshore Wind

Sustaining Ocean Observations

Ørsted

Kris Ohleth
September 2020

Nice to meet you!

Ørsted Offshore: Global overview

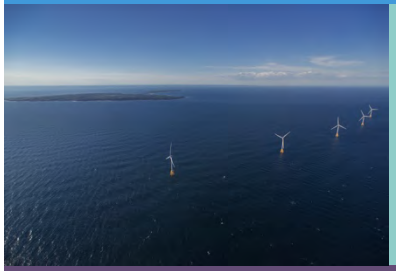
25+ years of experience and unparalleled track record

The global leader in offshore wind

- **6.8 GW** installed capacity
- **3.1 GW** under construction
- **1,500+** turbines spinning
- **26** offshore wind farms in operation

The world's first

Vindeby, 1991
5 MW

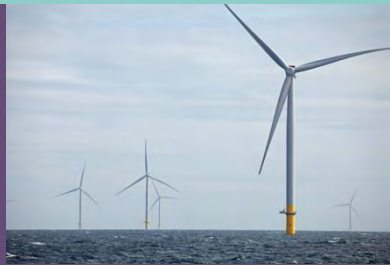


America's first

Block Island Wind Farm, 2016
30 MW

The world's largest

Hornsea 1, 2020
1.2 GW



Ørsted

Ørsted U.S. Offshore Wind portfolio

Awarded over 2,900 MW of offshore capacity on the East coast

In Operation

Block Island Wind Farm: 30MW

Awarded

Revolution Wind: 50/50 JV w/ Eversource, 704MW (400MW to RI, 304MW to CT)

South Fork Wind: 50/50 JV w/ Eversource, 132MW

Sunrise Wind: 50/50 JV w/ Eversource, 880MW

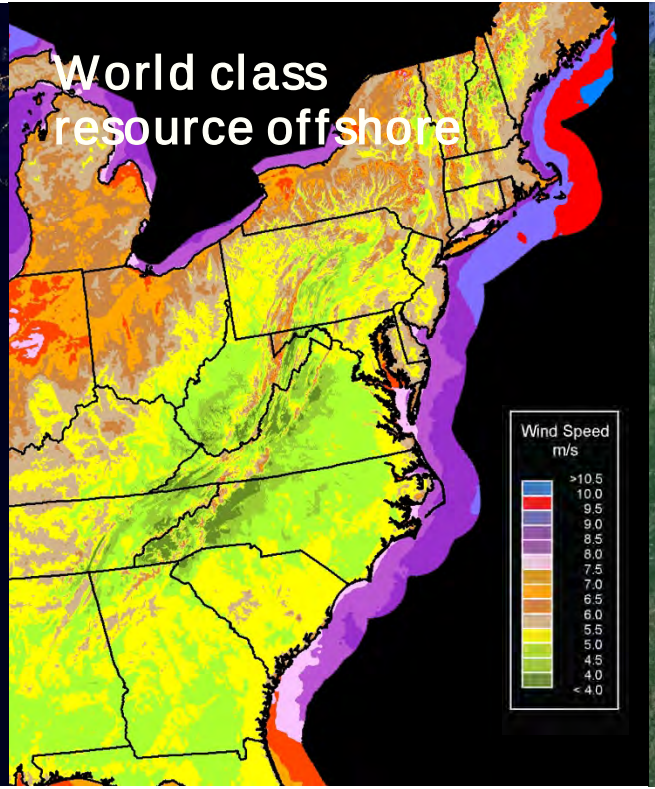
Ocean Wind: with the support of PSEG, 1,100MW

Skipjack Wind Farm: 120MW

Under Construction

Coastal Virginia Offshore Wind: EPC contract, 12MW demo project

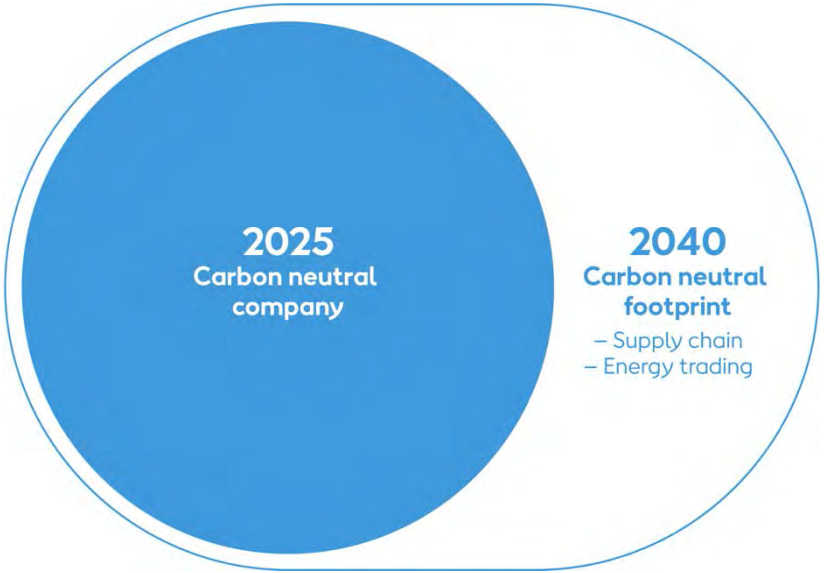
Why offshore wind



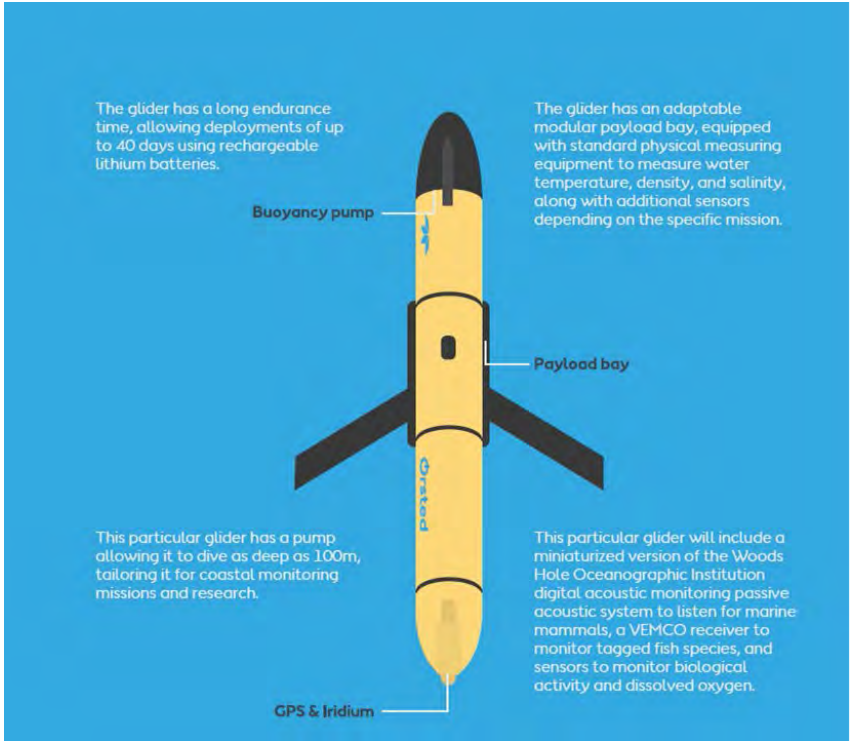
Ørsted

The first major energy company to reach net-zero emissions in its energy generation

- We will become carbon neutral by 2025.
- This will make Ørsted the first major energy company to reach net-zero emissions in its energy generation – far ahead of science-based decarbonization targets for limiting global warming to 1.5°C.
- Additionally, we've set a target of achieving a carbon neutral footprint by 2040.



Marine Mammal Detection System: Ecosystem and Passive Acoustic Monitoring (ECO-PAM) Project



A three-year project designed to:

- Better understand the habitat and behavior of the North Atlantic right whale in offshore wind lease areas.
- Provide better protection of the North Atlantic right whale during the survey, construction, and operation phases of its US offshore wind projects.
- Work jointly with Rutgers University, the University of Rhode Island (URI), and the Woods Hole Oceanographic Institution (WHOI).

The project will use data from two sound detection buoys deployed by the WHOI and one experimental buoy deployed by URI. In addition, a glider deployed by Rutgers will provide real-time oceanographic data and detections of marine mammal vocalizations.

Ørsted

ECO-PAM Glider Deployment – July 29, 2020

Thank you

Kris Ohleth
Senior Manager
Stakeholder Engagement
krioh@orsted.com

Ørsted