

# Oceantech for Observation

## A snapshot from 2022



**Just Innovation**  
STRATEGIC SOLUTIONS FOR COMPLEX TECHNOLOGIES

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# Overview

Discuss some efforts underway I am personally familiar with (courtesy of philanthropy and startup partners)

- MPA Monitoring USVs & Acoustics
- New Interfaces
- Novel Platforms
- New Data tools

Highlight some other exciting developments from Oceanology International last week (courtesy of in person events)

Inspire discussion

# USV: Robo-carrier

## System Overview

Robotic team and autonomous operation



sUAS

Landing Platform

- Securing
- Charging
- Networking

WAM-V 22 ASV

- Coordinated control
- Networking
- Communications
- Power

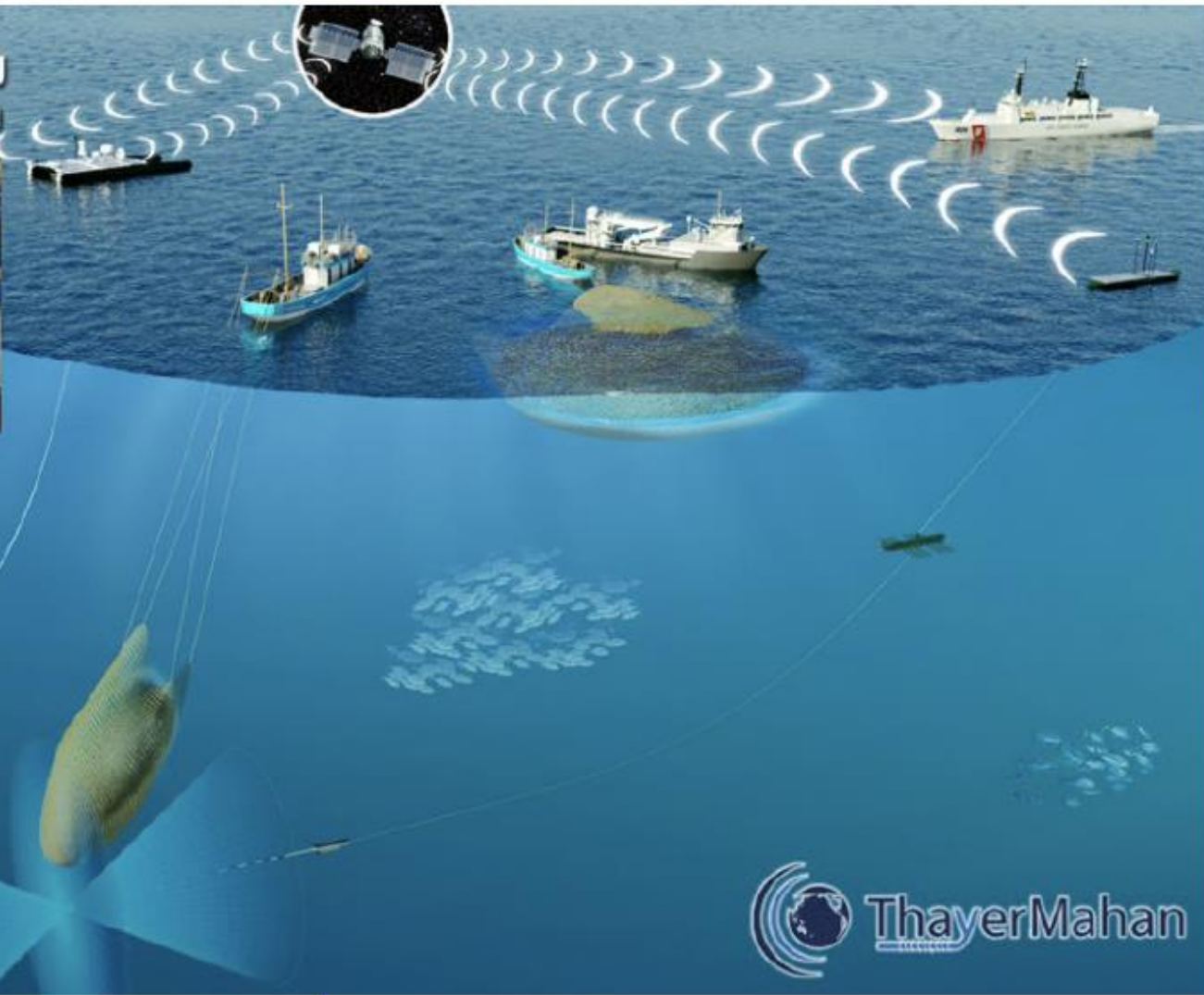
# USV: Robo-carrier





# Acoustic Surveillance

**Outpost** IUU Fishing  
Acoustic Detection System



# Solar (and Solid) USV

## Data Xplorer Technical Specifications

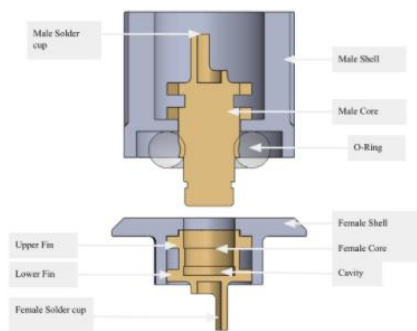
Length	3.56 Meters (11.66 feet)
Beam	0.89 Meters (35 inches)
Draft	0.46 Meters (18 inches)
Dry Weight	82 kg (184 lbs)
Payload Weight	75 kg (165 lbs)
Hull Material	Carbon fiber and S-glass

## Capabilities

Communications (1)	Satellite, 3G/4G cellular, and 900 MHz radio
Solar power (2)	300 watts
Battery (3)	3.5-10.5 kWh
Modular Sensor Payloads	Underwater (4), air (5), active sonar (6), dry (7)
Propulsion (8)	1.1 kW / 2.0 kW / 4.0 kW exchangeable pod motor
Speed	Up to 8 kts / 15 kts / 30 kts dependent on motor
Mission Duration	Up to 6 months

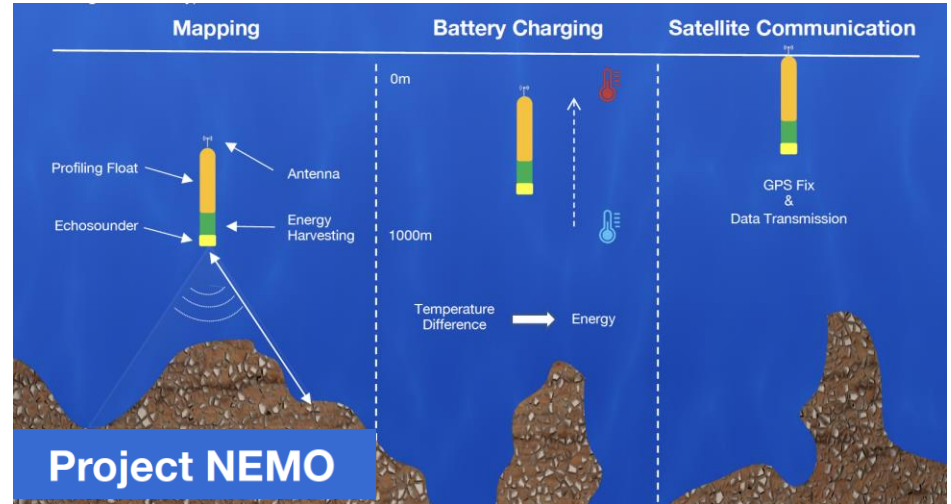


# Bristlemouth Connector: USB Subsea?!





# Novel Platforms





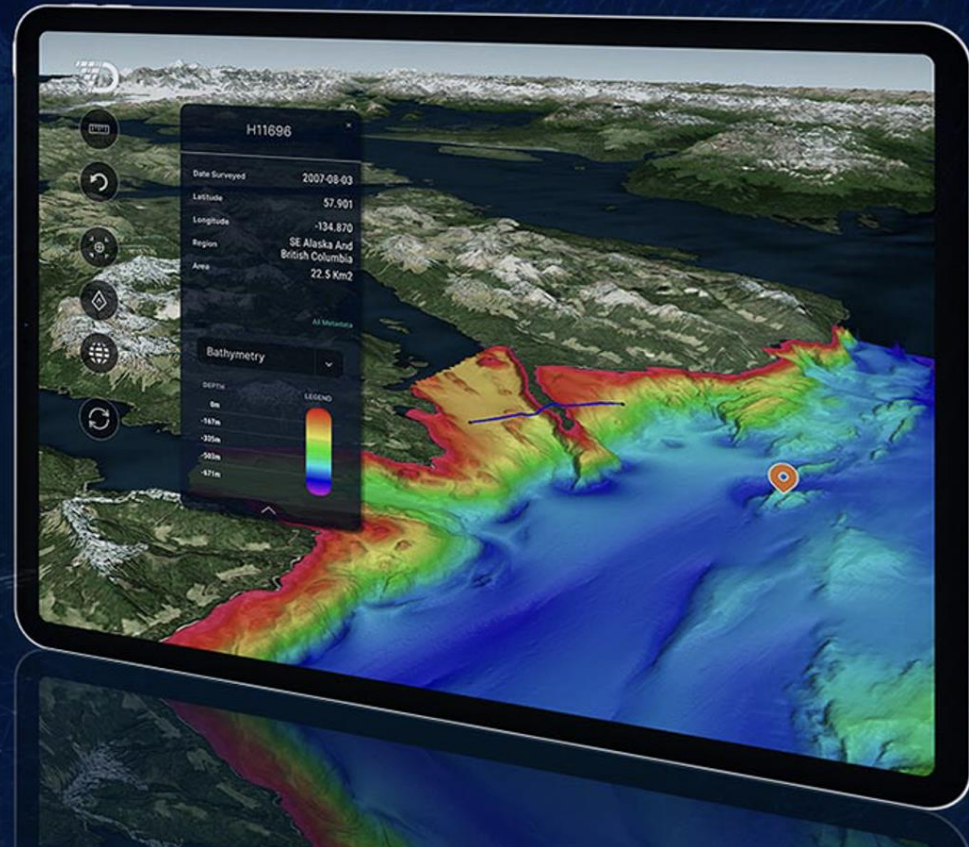
# Data as a Service



## GEOSPATIAL DATA PLATFORM

Absolute Ocean is a unique cloud-based solution that makes geospatial data more accessible. Offering secure browser-based visualizations, AO enables users to search, retrieve, share and rapidly QA/QC data with ease.

Absolute Ocean magnifies the power of Terradepth's solutions – providing ocean and seabed mapping data more effectively and efficiently than ever before.

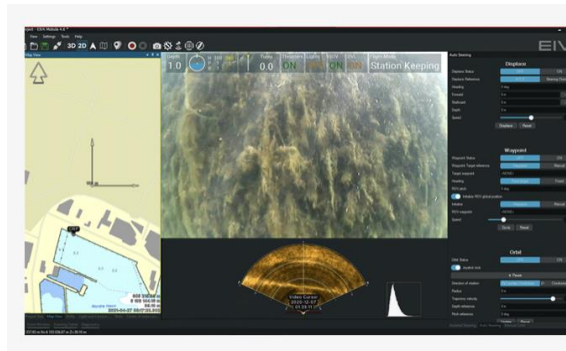


# Oceanology International: Sensors

**DOT** Dartmouth Ocean Technologies Inc  
MAKING WAVES IN DATA COLLECTION

**EIVA**

**SEICHE**  
GROUP



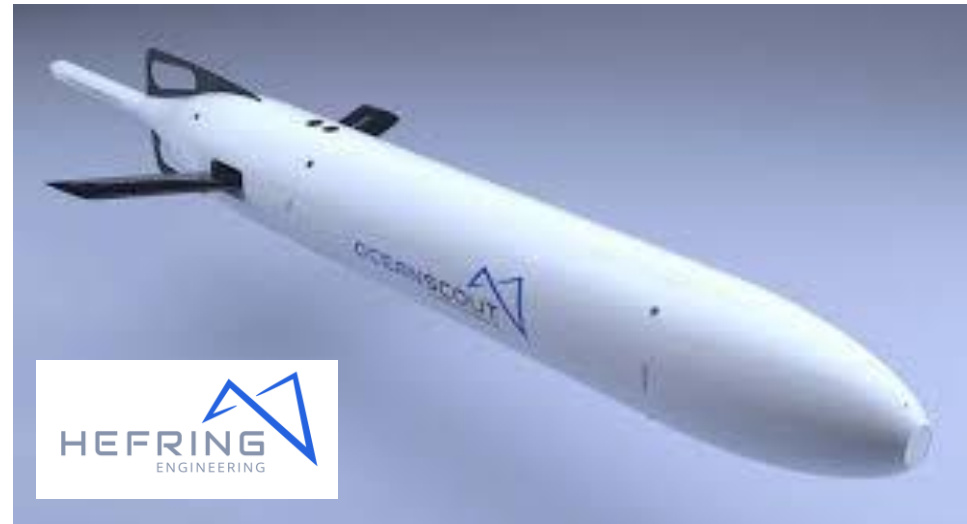
## eDNA SAMPLER

### Environmental DNA Sampling

Autonomous eDNA Multi-sampling for the Detection of Biological Genomic Signatures in Water



# Oceanology International: Platforms





# Conclusions

**Platforms are diversifying and becoming more affordable**

**New classes of sensors are emerging**

**Business models are evolving**

**Global scale ocean observing will demand a collaboration across industry, academia, government, and the broader public**

**There is so much to discuss . . .**

# Discussion

**Email/LinkedIn always welcome**

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