



OSHEN

SAIHC19, 31st August 2023
Anahita Laverack



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Any questions + what we're keen to learn from the audience

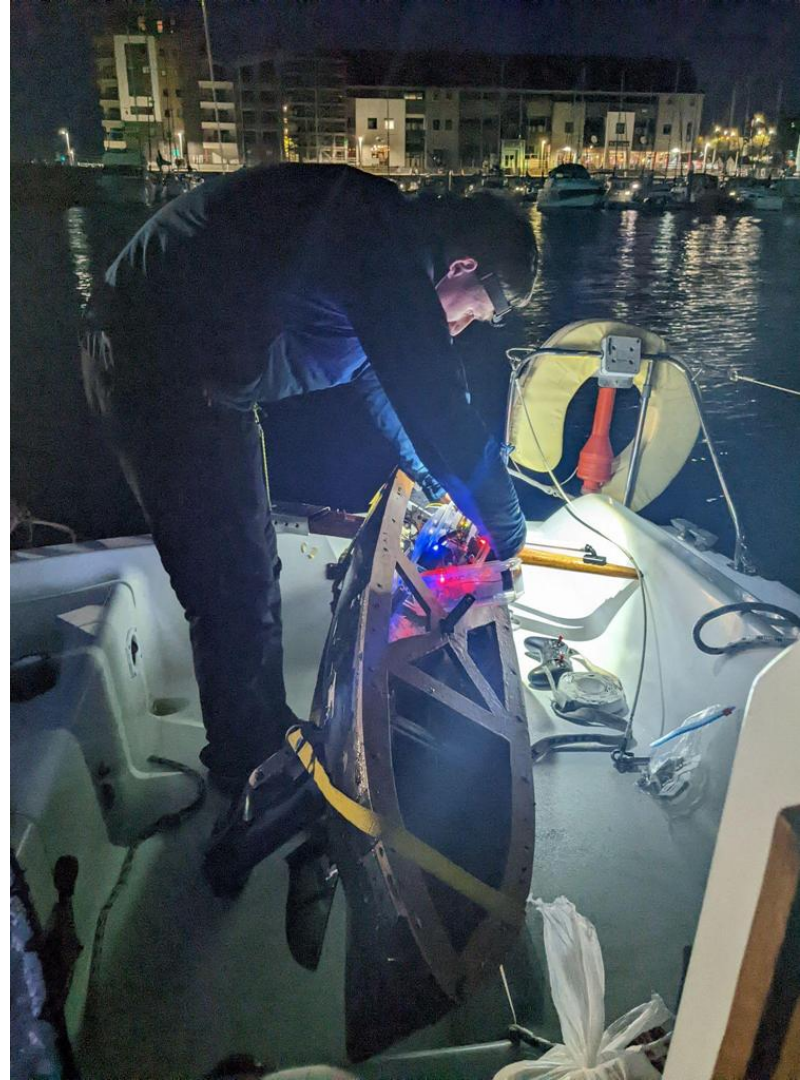
WHAT WE DO



Oshen make and will deploy micro-vessels to collect ocean data - picture a fleet of tiny, portable, sensor packages that can sail anywhere as needed.

OSHEN'S STORY

From hand-fiberglassing in a shed, world record ambitions, using a sailboat in North Wales as a workshop, to BBC coverage, Oshen's experienced a rapid journey.



THE MICROTRANSAT



**VESSELS
<2m
LENGTH**



**FULLY
AUTONOMOUS**



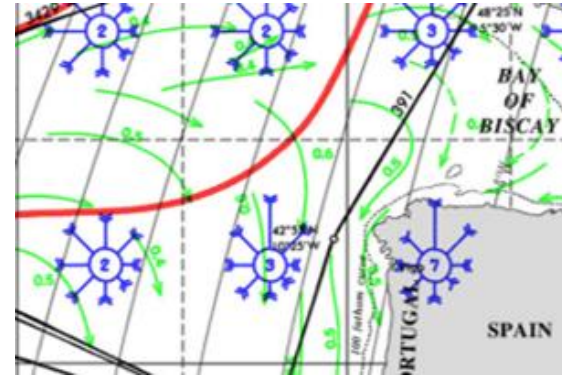
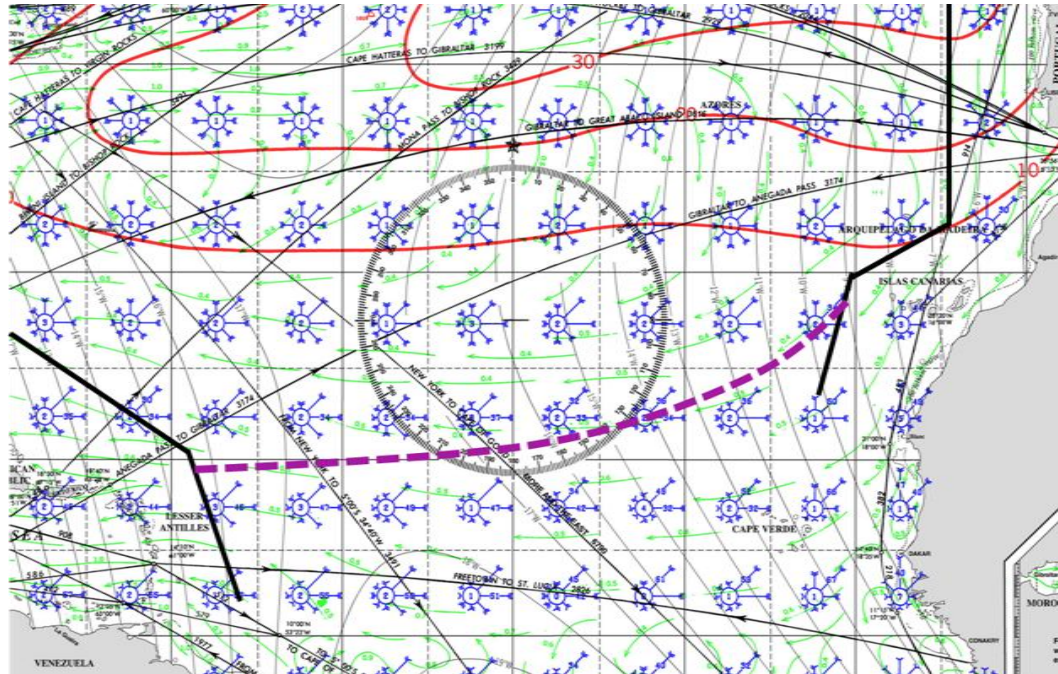
**25 nm
FINISH LINE**



**NEVER
BEEN
ACHIEVED**

NEEDED OCEAN DATA

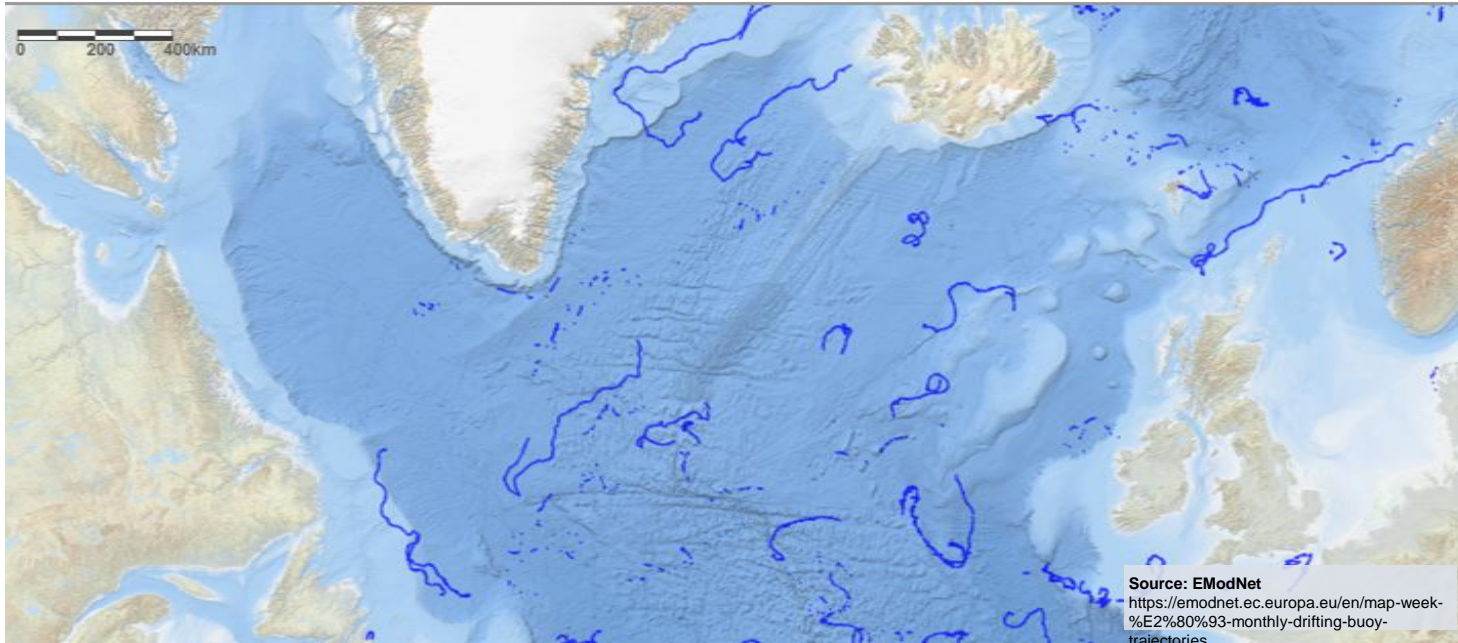
Pilot charts were the only intuitive to use option. There was just one problem: the data wasn't accurate enough.



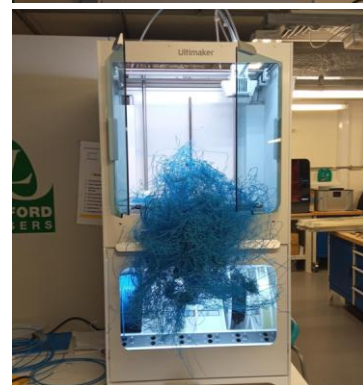
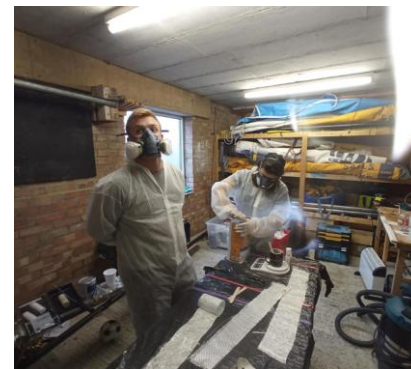
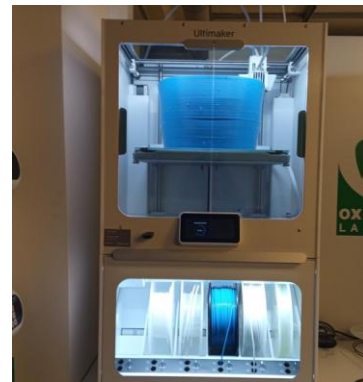
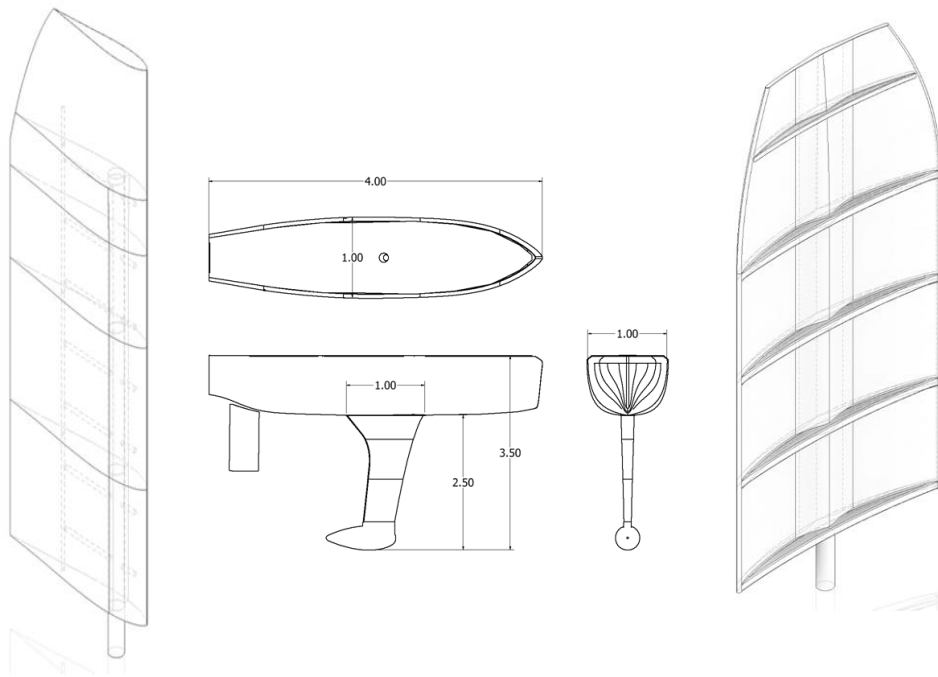
**WHERE DOES
LIVE OCEAN
DATA COME
FROM?**



WHERE DOES LIVE OCEAN DATA COME FROM?



DESIGN & PROTOTYPE



TESTING AT SEA - AFFORDABLE METHODS





COMMERCIAL

- European Space Agency grant
- DEFRA feasibility study contract awarded
- Pilot schemes for 2024 in discussion



Department
for Environment
Food & Rural Affairs



European Space Agency



Imperial College
London



IN THE NEWS

- **BBC news:** “A self-sailing robot that can help predict the weather”
- **The Guardian:** “Their craft will revolutionise ocean monitoring of temperatures, marine wildlife and more”
- **The Times:** “The young entrepreneurs making waves ... set their sights on ocean data collection”

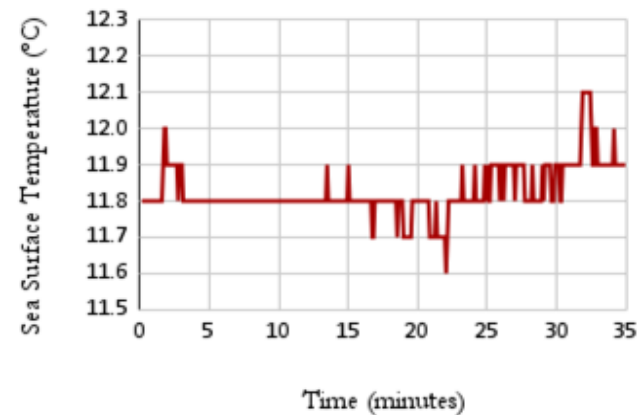


**PROGRESS +
DATA COLLECTED**

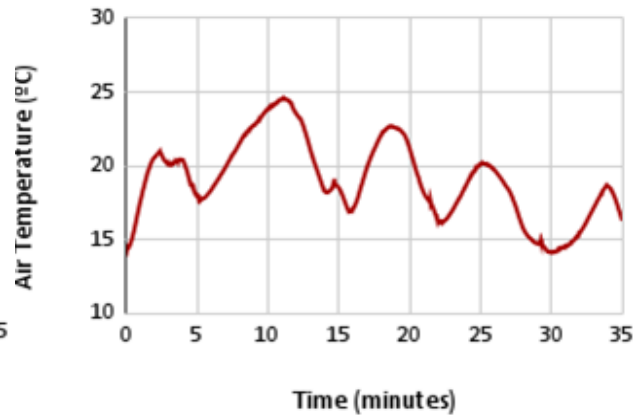
03

METOCEAN DATA - MAY 2023, IRISH SEA

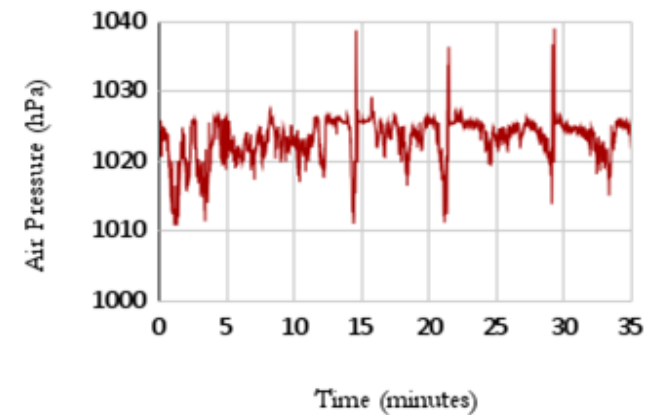
Sea Surface Temperature



Air Temperature



Air Pressure



SEA TRIALS



Operations ▾

Data Setup ▾

Administration ▾

User ▾

Progress Map



FUTURE PLANS

A wide-angle photograph of a person on a surfboard riding a wave. The person is silhouetted against the water. The sky is filled with dramatic, layered clouds, with a bright glow on the horizon suggesting a sunset or sunrise. In the distance, a range of mountains is visible. The overall mood is serene and adventurous.

04

FUTURE SENSING ABILITY



METOCEAN

SST, Pressure, Wind,
Waves, Currents



PASSIVE ACOUSTICS

Cetacean Monitoring, Underwater
Threats



VISUAL

Illegal Fishing, Biodiversity
Monitoring, Port Security



SINGLE BEAM ECHOSOUNDER

Note: Low power budget
constrains the exact
sensor type.



COMMUNICATIONS LINK

Relay to the surface for
UAVs/ ROV
communications



FUTURE PROJECTS

- Data collection trial in Bay of Biscay to test out improved limited area forecast
- Manufacture fleet of 10
- Atlantic crossing microtransat attempt
- Pilot projects for non-weather applications



THANK YOU

Contact details + more information

anahita.laverack@oshensail.com

Newsletter: <http://eepurl.com/h17UoT>

Website: oshensail.com

