

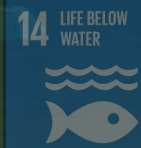


HYDROME A

AUTOMATING SUBMERGED ASSETS MONITORING WITH A REMOTE DATA ACQUISITION PLATFORM

Incontro annuale ISME
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Hydromeia

The product line



Disk Drive™

Brushless
Hubless
Oil-free
Ultra-slim

Two versions:
DD50
DD80



LUMA™

Free-space optical modems
Up to 10 Mbit/s
Up to 50 meters range
Plug&Play
Real-time video stream
Blue light and UV light available

Ultra-low power sleep mode with
optical wake-up with less than
10mW

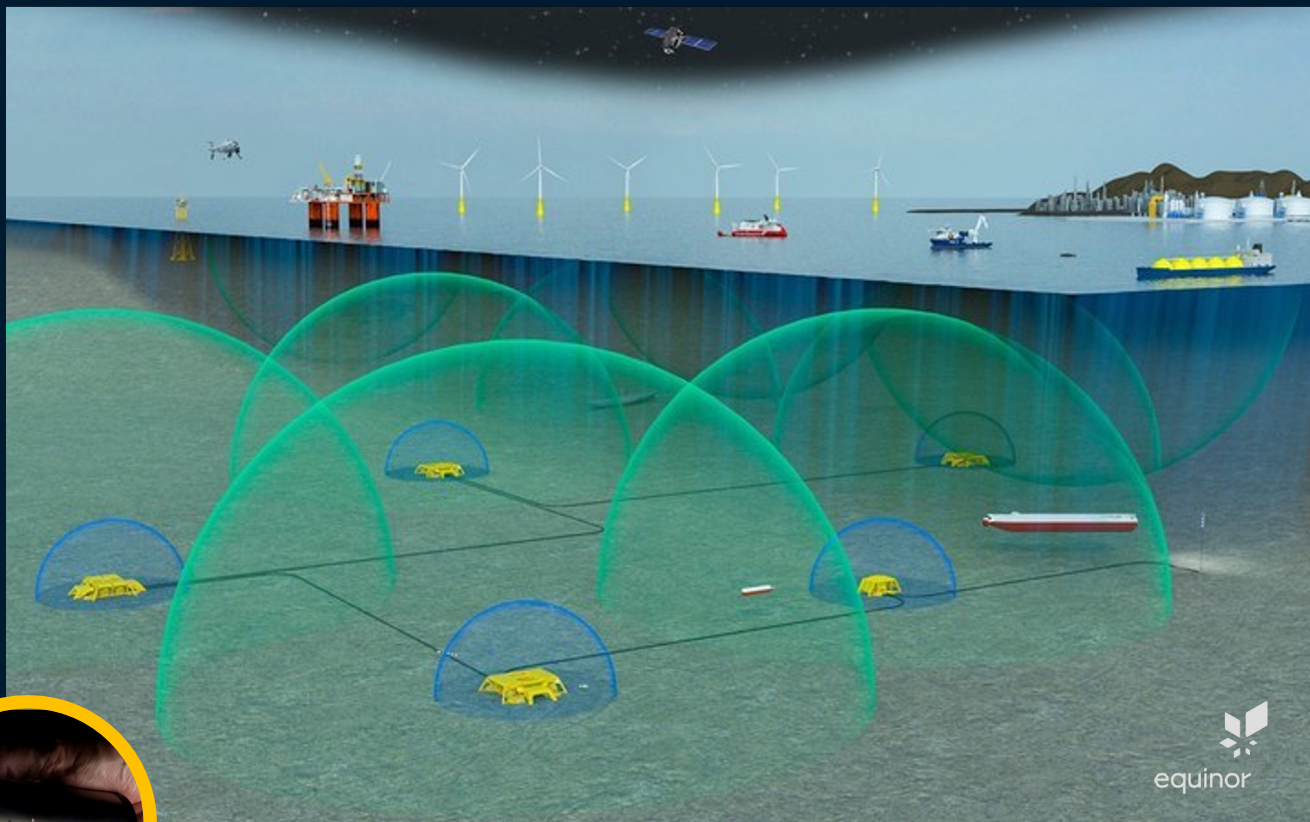


EXRAY™

The first wireless mini-ROV
Full 6 DoF
Modular payloads
One-man portable
DNV-class approved

LUMA™

A Patent-Pending Mission-Critical Communication Link

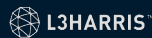


A mesh network of intelligent communication nodes enabling high-bandwidth wireless connectivity around submerged infrastructure.

Low-cost, operating under a standard industry protocol, they are the communication gateway for various agents in the underwater robotics ecosystem.

Expanding into multi-modal communication at a later stage and adding edge computing to close the loop on data acquisition at source.

Business model: Hardware sales and middleware licenses.



EXRAY™

A Patent-Pending Underwater Inspection Robot



World's first fully wireless portable robot for underwater asset integrity inspection and monitoring.

The robot enables remote inspections in complex flooded spaces such as ballast tanks (ships and floating wind), cooling towers, insides of wind turbine monopiles, various liquid storage facilities. This system is already DNV and ABS class-approved for offshore scopes.

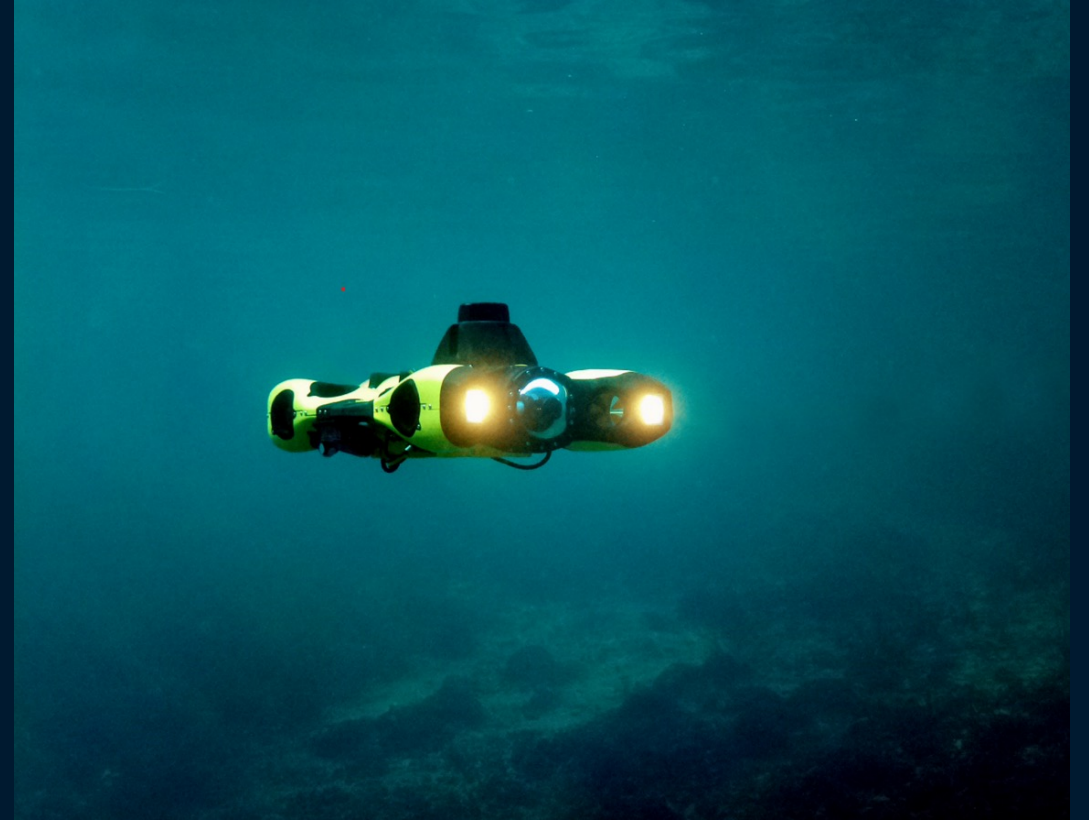
It has integrated visual, sonar and NDT payloads. It can create a 3D map and localize points of interest.

Business model: Robotics as a Service with market partners



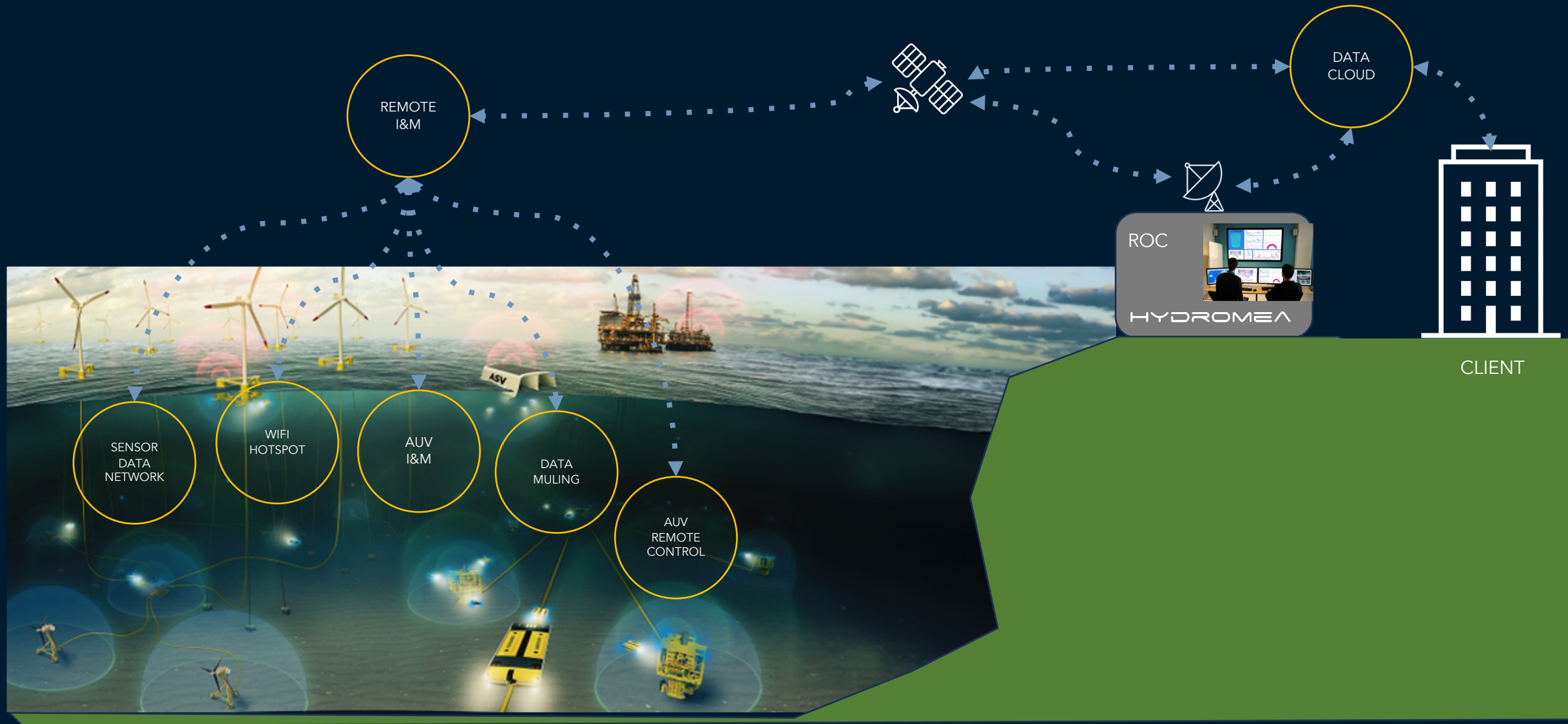
Hydromeia – Current research

Autonomous inspection of aquaculture nets



Hydromeia – What's next

An end-to-end Subsea Data Management Solution



Submerged Asset Inspections Today are Costly, Complex, Non-Standard

Use case:
Hydropower Tunnels

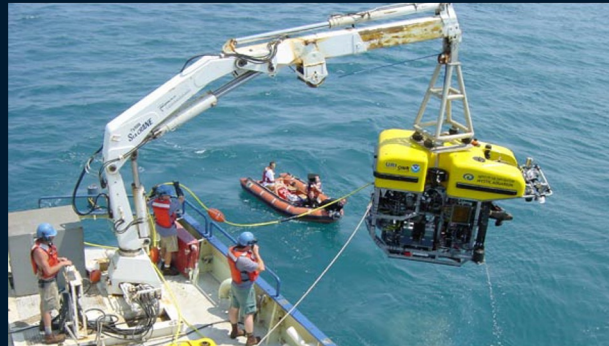


Direct costs per event:
£300k - £3m*

Plus, significant loss of MWh
during 2-3 months of idle work

*Source: Andritz 2022

Use case:
Offshore Subsea Structures



Direct costs per event:
£200k - £1.5m**

Plus, 10'000 t/year of CO₂ per
vessel***

**Source: Ashtead Technology, 2020
***Source: James Cowles, L3 Harris, 2019

Hydromeae Inspection
Solution



Total costs per event:
£10k - £100k

No vessel = no CO₂
No dewatering = no idle work

Unlocking new use cases Through collaboration

As a Swiss entity we can participate to EU funded projects

- Swiss institute will fund our budget
- No impact on the project budget
- More budget for all other partners in the consortium
- More use-cases making project more attractive

