

# Autonomous Subsea Data Operations

A collaboration between Subnero and HydroSurv for vessel light subsea data.



## The Challenge

For decades, the rule has been simple. If you want data from the seabed, you send a vessel to get it. Crews mobilize. Landers come up. Weeks pass before the data reaches the people who need it. Every campaign repeats the cycle, and every repeat means cost, risk, and lost time.

Offshore wind, oil and gas, and ocean science programs have outgrown this model. The sensors are ready. The science is ready. The bottleneck is the journey from seabed to shore.

This challenge spans a wide range of applications, including:

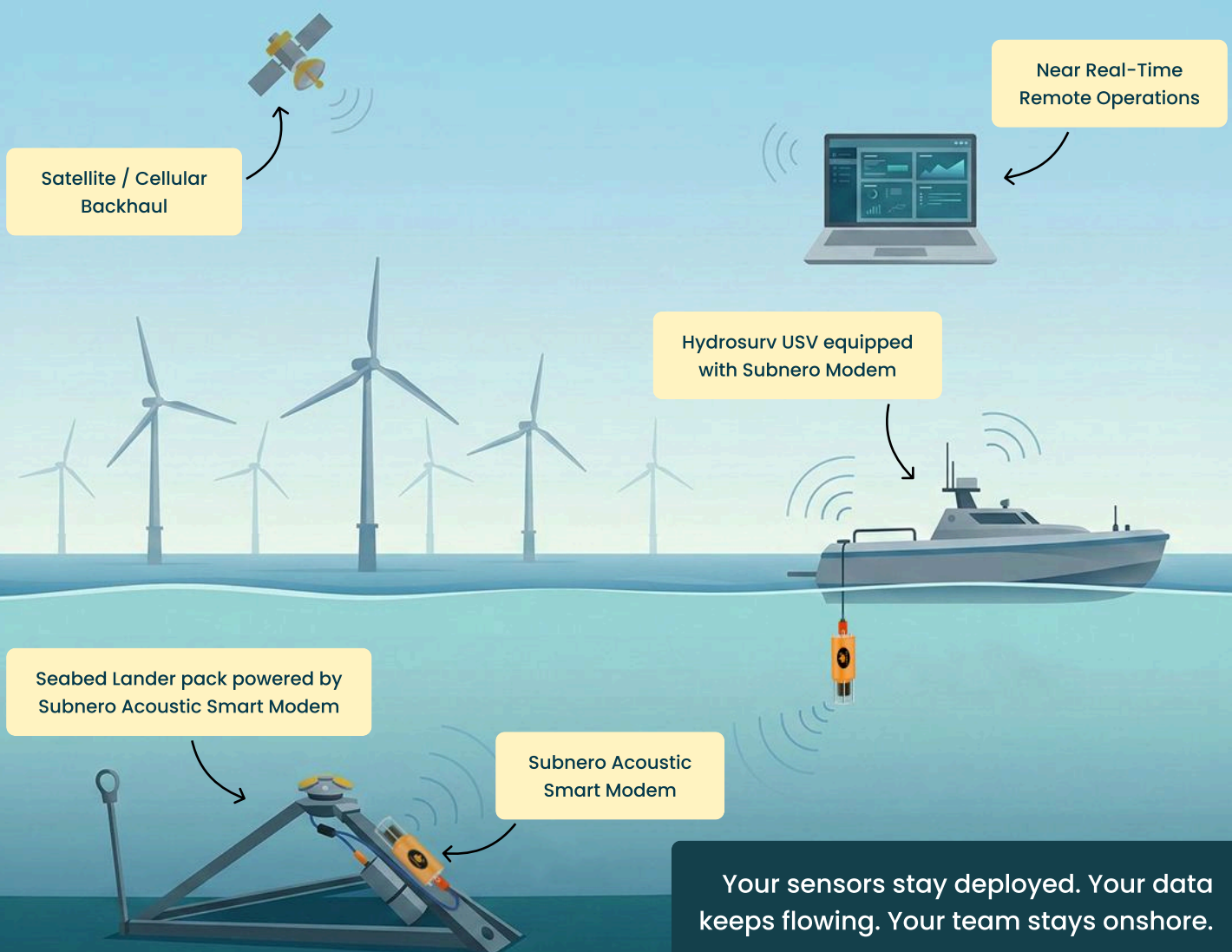
- ✓ Offshore wind site characterization and metocean monitoring
- ✓ Subsea cable and pipeline intrusion detection
- ✓ Oil and gas asset and environmental monitoring
- ✓ Aquaculture and fisheries monitoring
- ✓ Passive acoustic monitoring and underwater noise mapping
- ✓ Seagrass, blue carbon, and coastal habitat studies

## The Collaboration

Subnero is collaborating with HydroSurv, a UK based designer and operator of uncrewed surface vessels purpose built for the global survey industry. The collaboration brings this platform to customers who need a complete operational offering.

Subnero's Autonomous Subsea Data Operations platform

delivers the communications layer that connects seabed sensors to user endpoints worldwide. Together, the two companies offer customers a way to reduce their reliance on recovery vessels for long term subsea monitoring. This is achieved by combining HydroSurv's autonomous USVs with Subnero's end to end communication layer.



## The Combined Offering

### What HydroSurv Brings

HydroSurv's autonomous USV fleet. Long endurance, low emission, and built for recurring missions with minimal shore support. Each vessel can carry a Subnero Acoustic Smart Modem and environmental sensor suite, ready for routine data harvest operations across offshore wind, hydrographic, geophysical, and oceanographic survey applications.

### What Subnero Brings

Subnero's Autonomous Subsea Data Operations platform. Acoustic Smart Modems at the seabed and on the USV, edge processing that turns sensor streams into the information that matters, and a software defined networking stack that routes data across satellite, cellular, or terrestrial links all the way to the user's endpoint.



HydroSurv's autonomous Unmanned Surface Vessels



Subnero smart modems


## How It Works

1. Seabed landers fitted with the customer's chosen sensors are deployed for extended monitoring campaigns.
2. On schedule or on demand, a HydroSurv USV equipped with a Subnero modem transits autonomously to the site.
3. The USV's Subnero Acoustic Smart Modem harvests processed information from one or more landers across the underwater network.
4. Information is relayed over satellite or cellular link to the customer's cloud endpoint or operations center.
5. The right information lands in the customer's environment, ready for their analytics, their models, their decisions.

## The Operational Shift


Recurring autonomous data harvests, reducing reliance on crewed recovery vessels. Lower day rate, fuel, and crew costs from every campaign. Faster access to subsea data. Personnel onshore. A surface platform optimized for survey operations, paired with a communications layer that spans seabed to shore.


### Key Advantages

 Fully autonomous operation

 Order of magnitude cost reduction

 Data in days, not weeks

 Stronger HSE posture

 Scalable underwater networks

 Decarbonized by design

 Open data, your stack

## The Ocean, Always On

The next decade of offshore activity will demand more data, from more sensors, in more places, more often. Sending a vessel for every dataset is no longer the answer. Autonomous Subsea Data Operations is built for an ocean that is always monitored, always connected, and always delivering.

## Proven in the Field

The combined Subnero and HydroSurv offering is currently in active deployment for a seagrass habitat monitoring program, with seabed landers harvesting data over a period of months. The deployment is hardening the integrated solution against real ocean conditions and informing the catalog of sensors, mission profiles, and environments it will support.



## Get in Touch

To discuss deployments, pilots, or partnerships:



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