



Offshore Industries & Environmental Actions

Long-endurance unmanned surface vessel (USV)



The technology: The **SailBuoy** is an **Unmanned Vessel (USV)** that complements research vessels, gathering oceanographic and meteorological data in an eco-friendly manner, using wind power for propulsion. The Sailbuoy can be used for a **wide variety of ocean applications**: From measuring ocean and atmospheric parameters to tracking oil spills or acting as a communication relay station for subsea instrumentation.



The collaboration: **Offshore sensing AS** was established as a spin-off from the former Christian Michelsen Research (now NORCE).



Towards green transition: The SailBuoy is **100% emission free**, using wind power for propulsion and solar power for the electronics and actuators. In addition, Sailbuoy can be deployed in high-risk environments, such as during severe storms, in polar regions, or in areas affected by toxic spills, without the need for human presence. This **significantly reduces the risk of injury or fatalities** associated with manned missions.

Joint work
between research
players to nurture
a technology

Leading to a spin-
off creation

Offshore Sensing

100% **emission free**

Significantly **reduces human risk**

Autonomous ocean navigation

Collects data at a fraction of the **cost** compared to traditional methods.

Technical Data

2,0 m
length

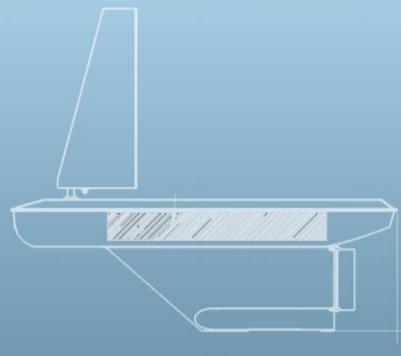
60 kg
Displacement

15 kg / 60 dm³
Payload

1-2 knots
Average speed

2 - 20 m/s
Navigable wind speed range

12 months
Maximum mission duration



1st Atlantic crossing by an unmanned surface vehicle

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Successful Missions



Successful **missions and sea trials** to assess navigational accuracy, to acquire different types of data, to assess performance in varying wind/current conditions, for ice edge control, among others



Sailbuoy technology developed



Offshore sensing AS was established



Offshore Sensing introduced **key technological upgrades** to the SAILBUOY, including more advanced sensors, improved data transmission systems, and enhanced autonomous capabilities.

SAILBUOY achieved global deployment, conducting successful missions in various regions, including extreme environments like the Arctic and deep ocean zones. Its long-term monitoring capabilities were widely recognized.



Expansion to market

Offshore Sensing expanded into **new markets**, including **offshore energy, climate research, and shipping**. The eco-friendly and autonomous nature of SAILBUOY made it an attractive solution for companies looking for sustainable maritime operations.



The SailBuoy has been used and/or is **currently in use in polar regions, Europe, Australia and the Americas**, and the company plans to expand into commercial areas such as fisheries and offshore wind farms. **Areas** of application for the time being are towards **research, metrological/climate, mapping, surveillance, marine/maritime, fisheries, fish and biomass, offshore wind, and military**.

UN Sustainable Development Goal **14**
Life below water