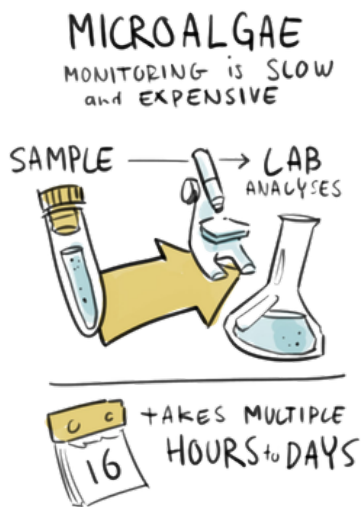




FluoroProbe

An upgraded, offshore-ready microalgae monitoring sensor for automated, in situ classification of algae groups in real time. Designed to distinguish diatoms from dinoflagellates, it provides early warning of Harmful Algal Blooms (HABs) in offshore mussel farming and environmental monitoring, reducing the risk of toxin build-up and disruption to harvesting. Validated in ULTFARMS pilots (EU Horizon Europe, grant no. 101093888) and progressing to TRL 6 as a step towards wider offshore deployment, it offers continuous, on-site data for aquaculture operators, environmental agencies, and satellite data firms.

MARKET CHALLENGE



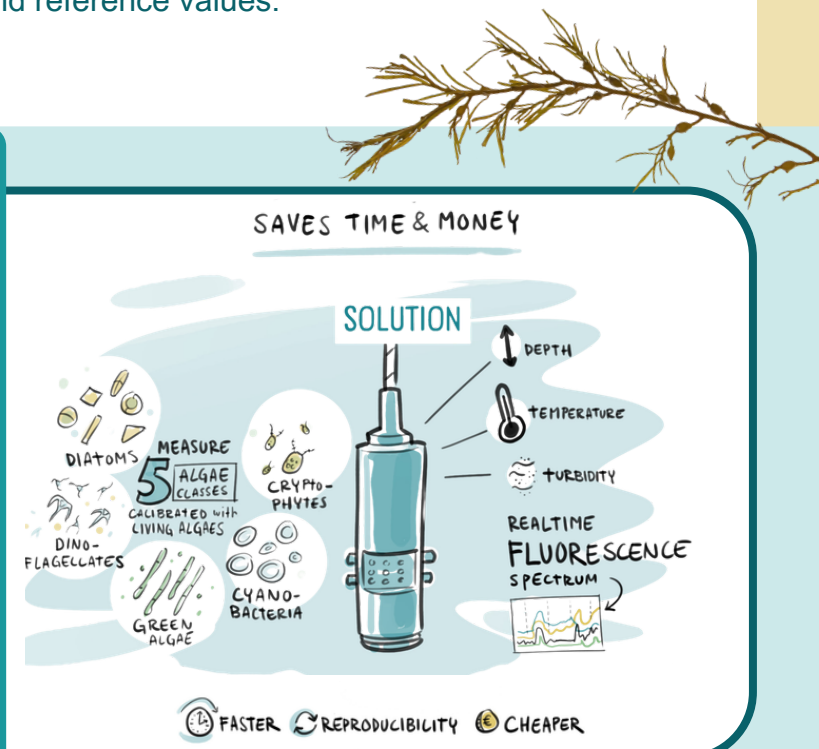
Challenges

Offshore aquaculture lacks autonomous, real-time detection of Harmful Algal Blooms (HABs), **creating risks across the value chain:**

- **Mussel farmers:** toxins from dinoflagellates and diatoms can accumulate in mussels, **risking public health, harvesting bans, economic losses and reputational damage.**
- **Environmental agencies and researchers:** manual water sampling is **slow, discontinuous and site-dependent**, with no real-time early warning.
- **Satellite monitoring firms:** **data gaps during bad weather or satellite failures** leave them without reliable ground reference values.

Solution

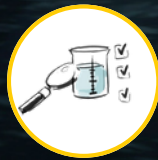
An offshore-ready sensor that turns **continuous monitoring into real-time intelligence**. It automatically classifies five algae groups, green algae, diatoms, dinoflagellates, cyanobacteria and cryptophytes, and **flags toxin-producing dinoflagellates early**. With **remote data access, autonomous cleaning and unattended long-duration operation**, it delivers **dependable offshore monitoring across demanding conditions**.



Value & Customer Segments



Aquaculture and drinking water companies:
early warning of potentially toxic algae, **better harvesting decisions**, less reliance on lab samples, and **real-time offshore data**.



Environmental agencies:
constant on-site monitoring with **less manual sampling**, and **improved HAB predictions** from a continuous time series.



Satellite data companies:
high-quality ground reference data for calibration, plus **continuity** when remote sensing is limited.

Revenue

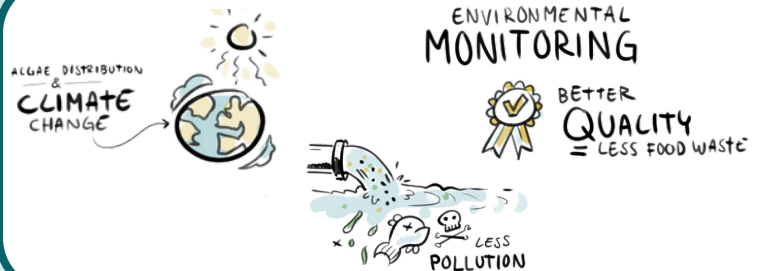


Direct sales of the sensor system with wiper, software included at no cost.

Backed by: Horizon Europe funding and research partnerships, with **continued validation in real operating environments**.

Next Steps & Go-to-Market

- Positioning as a **cost-effective remote monitoring solution**, cutting manual effort offshore
- Direct sales to aquaculture companies and research institutions to **accelerate early uptake in core user groups**
- Industry conferences and workshops to **reach operators, agencies, and data firms seeking early-warning capability**



Unique Impact

Earlier HAB detection means **safer seafood, less waste, and fewer harvest disruptions**.

Continuous offshore data supports **EU monitoring compliance** and takes the **guesswork out of HAB response**.

Beyond single farms, the system **feeds into digital monitoring ecosystems**, turning **scattered snapshots into continuous, large-scale water quality assessment offshore**

Method developed by:

bbe
moldaenke

Project coordinated by: **Deltares**

Flyer designed by:



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Learn more
about
FluoroProbe
here! →



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