

# From Lab to Field: Turning Environmental Sensor Innovation into Real-World Impact

*How do sensors move from lab to field? Experts highlight usability, reliability and collaboration as keys to real-world environmental impact.*

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/EINPresswire.com/ -- How do you turn cutting-edge sensor technology into something people can actually use in the field? That question sat at the heart of the “From Lab to Field: Next-Gen Environmental Sensors” workshop, held at the University of Brest, France, on March 4, 2026. The event was hosted by [CEDRE](#), the French expertise centre for accidental water pollution and a key partner in both the [IBAIA](#) and [RAVEN](#) projects.



Participants of the “From Lab to Field: Next-Gen Environmental Sensors” workshop gathered outside the University of Brest, France, on March 4, 2026.

The workshop brought together researchers, industry experts and end users from across Europe, creating space for practical conversations between those developing technologies and those who rely on them in real-world situations.

The event took place under the Horizon Europe IBAIA and RAVEN projects, both of which aim to improve how we monitor our environment. RAVEN is developing compact, high-performance sensors for air pollutants and greenhouse gases, while IBAIA focuses on multi-sensing systems for real-time water quality monitoring. Together, they represent a new generation of tools supporting Europe’s environmental and climate goals.

The programme combined technical presentations with direct input from end users, covering advances in photonics as well as the latest developments from both projects. A clear message emerged early on: while sensor technologies are becoming increasingly advanced, their success depends on how well they fit into real operational contexts. Discussions highlighted that proven real-world performance, regulatory acceptance, ease of integration and long-term support are critical factors in adopting new technologies. Cost remains important, particularly when considering the full lifecycle.

A key strength of the workshop was hearing directly from end users who deploy and maintain sensors in demanding conditions. Through discussions and live polling, participants shared what really influences their decisions when adopting new technologies. Proven performance in real-world conditions was a clear priority, along with regulatory acceptance, ease of integration and reliable long-term support. Cost remains important, particularly when considering the full lifecycle.

Participants also pointed to barriers to wider deployment, such as data management capacity and maintenance workload. Moving from pilot to routine use remains a major challenge, with reliability over time and organisational buy-in playing key roles. End users also expressed a clear preference for processed information and decision-support tools rather than raw data alone.

The discussions also reinforced a simple but important point: there is no single sensor that will meet every need. Different users prioritise different things, whether that is accuracy, cost, robustness or ease of use, and trying to address all of these in one system can make it too complex and expensive. Instead, participants emphasised focusing on specific use cases and designing adaptable solutions. Clarity is equally important: users are not just looking for more data, but for actionable information that supports quick and confident decision-making.

A central takeaway was the importance of ongoing dialogue between developers and end users. Being hosted by CEDRE, the workshop benefited from a strong practical perspective, keeping discussions focused on real operational challenges such as installation complexity, maintenance demands and the need for accessible data outputs. These are not new issues, but having them discussed directly between developers and users made it easier to identify where changes are needed.

There was also strong interest in greater cross-sector collaboration. Technologies like photonics are well established in some fields but underused in areas such as marine and environmental monitoring, representing an opportunity to accelerate progress by applying existing solutions in new contexts.

The workshop made clear that progress in environmental sensing is not only about developing better technology, but ensuring it works in real-world environments. By bringing researchers, developers, and end users together, initiatives like IBAIA and RAVEN are helping to close this gap by supporting solutions that are not only innovative but also practical and impactful.

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