

# Press release

## Exail integrates Elwave's electromagnetic sensing technology into R7 ROVs

14/02/2025 – Exail, a global leader in maritime robotics, has selected Elwave's advanced electromagnetic sensing technology to equip its R7 Remotely Operated Vehicles (ROVs) for an undisclosed client. As part of this collaboration, Exail will integrate Elwave's Tetrapulse sensors—powered by the innovative CEDAR (Controlled Electric Detection And Ranging) technology—into multiple R7 ROVs.

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### Enhanced target detection with electromagnetic sensing

This next-generation biomimicry sensing capability offers significant advantages in subaquatic electrical resistivity mapping. "In the context of target identification and neutralization missions, the integration of CEDAR technology enables superior operational performance in challenging environments, including turbid waters", explained Gary Bagot, Sales Director at Elwave. The R7 ROVs equipped with Elwave's Tetrapulse sensors will improve the detection, localization, and characterization of both metallic and non-metallic underwater and buried targets, including steel, aluminum, and fiberglass composites.

### The R7 ROV: A compact and versatile solution for underwater operations

Combining the agility of a mini-ROV with the capabilities of an observation-class system, the R7's modular design supports a range of sensors, tools, and payloads. This versatility makes it particularly well-suited for underwater security missions, including hazardous terrain navigation, UXO detection, and disposal operations.

"By integrating CEDAR technology into the R7 ROV, Exail and Elwave are delivering an advanced solution that strengthens operational effectiveness for underwater exploration, defense, and security applications" said Nicolas Astruc, ROV Managing Director at Exail. "This collaboration combines Exail's expertise in maritime robotics with Elwave's electromagnetic sensing technology to provide customers with a unique and powerful tool for operations in complex environments".

### About Elwave

ELWAVE is a deep-tech company established in 2018 in Nantes, France. It leverages high-level academic research from the biorobotics laboratory at Institut Mines-Télécom Atlantique on "electric sense," a perception mode developed by certain tropical fish.

ELWAVE is the first and only company in the world to develop and commercialize real-time detection systems based on its patented CEDAR® (Controlled Electric Detection And Ranging) technology, which is bio-inspired by "electric sense." ELWAVE's sensors combine high-sensitivity electronics with cutting-edge algorithms.

### About Exail

Exail is a leading high-tech industrial company specializing in cutting-edge robotics, maritime, navigation, aerospace and photonics technologies. With a strong entrepreneurial culture, Exail delivers unrivaled performance, reliability and safety to its civil and defense clients operating in severe environments. From the deep sea to outer space, Exail expands their capabilities with a full range of robust in-house manufactured components, products, and systems.

Employing a workforce of 1850 people worldwide, the company benefits from a global footprint and conducts its business in over 80 countries. [www.exail.com](http://www.exail.com)