



Environmental Monitoring Centre for Ports - EMC4Ports



PARTNERS INVOLVED: RELATECH SPA (LEAD PARTNER), SITEM SRL, PM_TEN SRL, DRAGFLOW SUD SRL, ISTITUTO INTERNAZIONALE DELLE COMUNICAZIONI
PROJECT DURATION: MARCH 2024 – AUGUST 2025.
KEYWORDS: ENVIRONMENTAL CONDITIONS (WATER, AIR) MONITORING IN COASTAL AREAS CLOSE TO PORT INFRASTRUCTURES.

PROJECT SUMMARY: EMC4Ports main objective is to create a low environmental impact, high technology ecosystem for monitoring water and air in the water area in front of and inherent to port infrastructures. The goal is to detect critical situations, provide alerts and support in the management of emergency activities and mitigation of environmental damage in the short/medium term to improve the operational efficiency, safety and sustainability of ports.

The technological ecosystem developed on board the electric boat ECB that patrol the port areas, transforms the normal monitoring sensors into intelligent and interconnected ones, able to exchange and transmit data, in accordance with the IoT concept. This allows the realisation of an ecosystem of advanced technologies by providing broad, distributed and pervasive access to information, also thanks to the use of predictive models and AI algorithms. The developed system has been demonstrated in the port of Reggio Calabria between May and July 2025, thanks to the support of the port authorities (Autorità di Sistema Portuale dello Stretto e Direzione Marittima di Reggio Calabria).



The project has been extended for further development under the name of EMC4TPorts, carried out by Dragflow Sud srl (lead partner), SITEM srl, PM_TEN srl, Istituto Internazionale delle Comunicazioni. Thanks to the support of Ente Parchi Marini Regionali della Calabria the ecosystem will be implemented in selected sites to take into account specific conditions and requirements to validate it in different contexts and demonstrate the technology replicability.

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