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ECCENTRIC

AI improvement for digital twins in ports

Sector: Marine monitoring & surveillance

Short description of the needs:

Apply digital twins in ports, integrate TOS, AIS, GPS, IoT, and logistics platforms and improve in-shore tracking. Engine telemetry is frequently disconnected, limiting accurate monitoring. As a result, carbon footprint calculations are often based on estimates instead of real operational behaviour. The challenge is to integrate AI support to transform raw data into reliable predictions and decisions.

Develop a unified data architecture for port digital twins by integrating systems, high-precision in-shore tracking, and engine telemetry to generate auditable carbon footprint calculations. Use AI for prediction and optimization, and Large Language Models as a natural-language interface to query the twin, explain anomalies, and produce operational and sustainability insights

Participate into collaborative research and development projects to test and validate AI integration into port digital twins' application. Collaborate with AI and digitalization specialists and with end user operators.

More info: For more information apply to carlo.kraskovic@marefvg.it or alessandro.bosco@marefvg.it

Point of contact for the brief/challenge: Maritime Aerospace Renewable Energies Technology Cluster FVG

Company position in the value chain: Tier 1