ITEA Press Release

I2PANEMA optimises efficiency and sustainability in Ports with IoT Software Solution

14 September, Berlin – Ports around the world face numerous challenges, from managing increased cargo demand to ensuring efficiency and sustainability in the face of urbanisation and labour management issues. The ITEA project I2PANEMA has integrated IoT solutions and new services dealing with data in ports to enhance efficiency, sustainability, and supply chain resilience across various port business cases. With a focus on data management and analysis, the project has achieved remarkable outcomes, including noise reduction, container localisation and logbook digitalisation. I2PANEMA has won the ITEA Award 2023 for Exceptional Excellence today as they outshone in the three categories of innovation, business impact and in standardisation.

I2PANEMA, gathering 17 partners from Germany, Spain, and Turkey, has focused on the development of new services for dealing with data in ports, leading to results in optimising traffic control measures for increased efficiency and reducing environmental impact by curbing emissions, dust, noise, and energy consumption. Leveraging IoT, I2PANEMA revolutionises port operations, making them more efficient and sustainable.

Standardising and enhancing port operations

The project developed an IoT port reference architecture tailored for operational use in ports, enhancing the robustness of transport chains and establishing a robust communication infrastructure for IoT applications. The communication infrastructure provided by I2PANEMA is instrumental in helping ports more easily adopt and utilize IoT applications, thereby enhancing efficiency, sustainability, and overall operations. Data security and the integration of heterogeneous IT systems were also considered as these are critical for the success of smart ports.

Project partners are currently finalising the new ISO Standard 4891: Smart Applications for Ships. Once approved, the new standard will provide a common framework and guidelines for the development and integration of smart applications, enabling efficient communication and data exchange between different systems. By adopting a customer-centric approach, ISO 4891 is designed to meet the needs of users and promote digital transformation in the maritime industry.

Improving business and lives in port cities

Thanks to I2PANEMA, e.g. accurate prediction of ferry arrival times in Hamburg within 15 seconds is now possible, which has resulted in a 100% reduction in average processing time for stop announcements. In the Assan port in Türkiye, sensor-based container localisation has increased operations by over 10% in one shift, reduced completion time by more than 15%, and decreased accidents by over 50%, boosting both profitability and safety. Next to this operational and commercial success, port cities can be even more pleasant to live in thanks to I2PANEMA as pollution and noise can be reduced.

This project has received funding from:

Note for editors, not for publication

* The acronym I2PANEMA stands for Intelligent IoT-based Port Artefacts Communication, Administration & Maintenance

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I2PANEMA project partners
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About ITEA
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