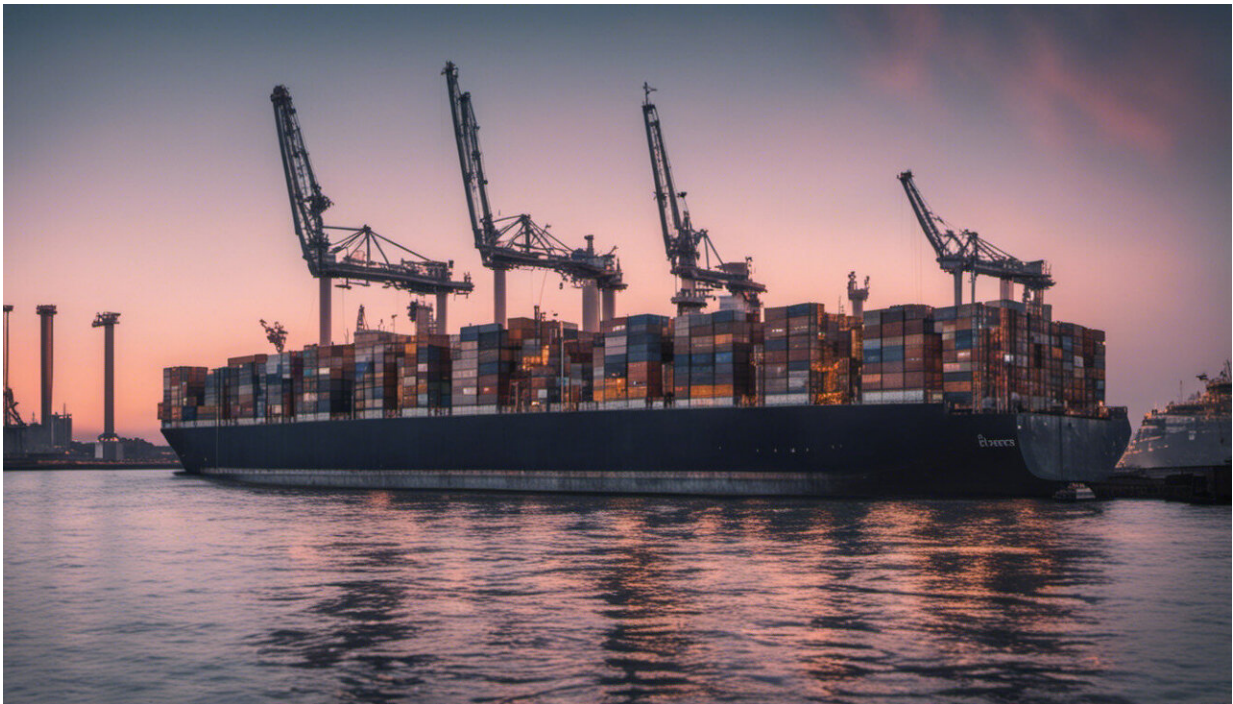


Improved port accuracy and safety through novel technology

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Credit: AI-generated image ([disclaimer](#))

Galileo, the multi-billion euro global navigation satellite system funded by the EU, will soon provide highly accurate and precise position measurements on Europe's roads. But the primary mode of international trade - the maritime industry, responsible for nearly 90 percent of world trade - still relies on outdated technology with limited precision capacity

at a high cost and with low efficiency.

Eight research institutions from six European countries are involved in the DOCKINGASSIST project, which set out to remove the guess work from the docking and maneuvering of container ships, bulk carriers and other large vessels through the development of a novel wireless network relying on a differential [global navigation satellite system](#).

Maneuvering large vessels is not an easy task, particularly for SMEs that represent the majority of the maritime sector. With sea transport expected to double over the next 15-20 years, operators will be put under significant pressure to increase their capacity and freight with larger, more frequent vessels as companies try to achieve economies of scale.

Large vessels usually enter the port with the assistance of trained pilots who are specialised in navigating in a particular port. In most cases, the pilot will use onboard equipment for navigating the vessel into a port which is comprised of either an Electronic Chart Display Information System (ECDIS) or paper charts in conjunction with a GPS receiver. This leaves the vessel at a distinct disadvantage as the errors on such systems may not be known to the pilot.

DOCKINGASSISTS's solution consists of two main parts: a Base Station (BS) installed at the harbour and a Portable Pilot Unit (PPU) installed on the ship. The portable unit can be used by the pilot in charge of docking the vessels at the port without requiring any expensive berthing systems.

This system makes it possible to increase location and speed accuracy by means of a static [base station](#) that identifies errors and transmits them wirelessly to the receiver, permitting not only the ability to transmit the correction data but to also exchange other important information between the port and the vessels including weather information, position of other vessels and tidal levels.

DOCKINGASSIST's technology will result in a reduction of transit time, therefore improving [port](#) traffic management. The team assert this is will lead to savings in time, fuel and operational expenses. Moreover, it will lead to a reduction in C02 emissions consequently lowering the environmental impact of shipping.

More information: Project factsheet:
cordis.europa.eu/projects/rcn/101015_en.html

Provided by CORDIS

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