innovation, maritime HAROPA PORT draws the smart navigation channel
HAROPA PORT is working on an innovation program around the "smart navigation channel" project, integrating the latest AI technologies. The aim: to improve navigation on the Seine and imagine tomorrow's.
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As the interconnection of data from port users and partners develops, and shipowners design autonomous vessels, France's leading port is working on the development of an « intelligent navigation channel ».
The **Harbourmaster's Office of Rouen**, together with Pilotage de la Seine, is experimenting with **3 priority projects to imagine the future of navigation in the channel:**

Changes in water level and flow on the Seine River
AI can be used to anticipate variations in water levels and flows around berths. This would enable the port and its customers to optimize decision-making, reduce waiting times and more accurately determine the best time to dock a ship.
By integrating meteorological forecasts and oceanographic data with existing historical information, it becomes possible to predict changes in water levels and the flow of the Seine.
The port is currently testing the level of accuracy and uncertainty of this solution.

Ship mooring
HAROPA PORT is experimenting with the use of sensors to optimize ship mooring.
The information gathered will further increase navigation safety in the upstream port of Rouen during high tidal coefficients (tidal bore), in particular by minimizing the risk of ships' mooring lines breaking.

Low-water levels modeling
HAROPA PORT also uses **2D low-water level modeling** in the Caudebec-en-Caux region to study the impact of banks geometry on low water levels.

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