



HAROPA PORT: an incubator for collective innovation

The goal is to promote collaboration between RDI (Research – Development - Innovation) actors in the port and logistics domain, and between the private and public sectors.

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5G Lab

In 2018, “**5G Lab**”, a collective, was set up, based around the port and the Le Havre Seine Métropole urban district authority and including three industrial organisations – **Nokia, Siemens and EDF** – with the aim of identifying and testing 5G use cases that could be developed along the Seine axis.

The following were among the practical cases identified:

- optimisation of port operations essential to safe navigation in the port,
- collection of a wide range of data (weather, seabed status, etc.) to enhance precision and efficiency,
- assistance for cargo handling (straddle carrier operations, equipment maintenance, troubleshooting),
- detection of issues and breakdowns in ro-ro terminal vehicle fleets.

Partners: *Siemens, EDF, Nokia, CIRCOE, Hub One, Synerzip-LH, the terminal operators, industrial companies, shipping and transport logistics actors, ARCEP and Orange.*

This project is part of the programme *Le Havre, ville portuaire intelligente*.

In partnership with Hub One and CIRCOE, HAROPA PORT is **currently conducting a trial at the Normandy Terminals (TN) at Le Havre. Specifically, straddle carriers have been equipped with this technology to test data transmission fluidity and effectiveness:** feedback from operations and carrier maintenance, transmission of task orders, coordination of teams on the ground to prevent collisions, and so on.

Trafis Lab

TRAFIS, a scientific interest grouping (GIS), is a **public/private research laboratory focused on the facilitation of international trade within the limits set by customs procedures.**

Partners: *French Customs, SOGET and ISEL – Le Havre Normandy University.*

CIDN DRONES - Normandy Drone Innovation Centre

HAROPA PORT is a participant in CIDN Drones. The purpose of this project is to organise a “drone sector” in order to position Normandy as a national and international region of excellence for the development of drone-based solutions. The Normandy Drone Innovation Centre conducts field trials by pooling the equipment and resources of its partner members. Anti-drone measures, air quality surveillance, 5G, etc. The objective is to develop drone-based solutions relevant to maritime and port operations.

EVOLEN'UP

Since 2020, HAROPA PORT has been a partner in EVOLEN'UP, a trade association comprising firms in the energy field. The EVOLEN'UP programme and its start-up accelerator allow HAROPA PORT to remain up to date with the latest innovations in the energy sector.

EVOLEN'UP also provides a testbed close to the R&D departments of the partners of its programme, many of which are HAROPA PORT customers.

The start-ups that have been selected also have an opportunity to test their solutions in the field.

HAROPA PORT also has an international outreach ...

MAGPIE

Led by the port of Rotterdam, and including HAROPA PORT, the port of Sines (Portugal) and Delta Port (Germany), this **unique European collaborative project supports the development of innovative technologies for greener maritime transport.**

PASSport

As a member of the International Association of Ports and Harbors (IAPH), HAROPA PORT is a contributor to the **PASSport project**: this **operational platform manages a fleet of semi-autonomous drones** using the satellite global positioning system. Its purpose is to enhance the safety and security of port areas. PASSport supplements current surveillance systems in order to provide a high level of safety and security for all European ports (cf. EU directive 2005/65/EC).

Ecole 42

HAROPA PORT is also involved in Ecole 42 Le Havre, whose **disruptive, participatory IT training will help add significantly to the invaluable professional skills for development of our digital innovation ecosystem in the Seine axis region**.

This is an opportunity to witness the emergence of future entrepreneurs able to assist France's leading port in its digital transition projects for ports along the Seine Axis.



*71, quai Colbert, 76600 Le Havre
+33(2) 79 18 05 00*