

# Retrofitting of two straddle carrier in the Port of Barcelona

## EPM3

EPM3 aims to adapt 2 existing straddle carriers (one hydraulic and one electric) within two container terminals in the Port of Barcelona in order to analyse their feasibility and benefits before a larger scale deployment.



## Partners involved



The terminals that are adapting their straddle carriers are TCB Terminal and Best Terminal. Both modifications are ongoing.

- **EPM3:** This IPS develops an innovative solution consisting on the adaptation to LNG fuel of two different technologies straddle carrier (hydraulic and electric) currently in use within two different container terminals in the port Barcelona. As a result, its feasibility and suitability as well as its added value before deploying it on a larger scale will be analysed. No straddle carrier equipment powered by LNG operates in the Mediterranean corridor at the moment (to be notice the recognition to the Green cranes EU project as main precedent).

This pilot sub-activity consists of a design and implementation of two straddle carriers powered by natural gas in a container terminal. The project seeks to break down barriers to put into service gas powered container terminal equipment at medium term.

It is the study of diesel-electric and diesel-hydraulic engines of two existing off-road machines, each operating in one of the two container terminals in the port, in order to see the viability of having them replaced with a LNG or CNG gas engine, and subsequently the feasibility of its approval.

As a result of this study, two pilots will be carried out which will consist of modifying the diesel engine by a gas-powered one, and by replacing the diesel tanks with the LNG or CNG ones.

Once the engine is coupled to the machine, testing and monitoring of their performance will be conducted.

The two container terminals of the port of Barcelona will participate in the pilot, each one handing over a Straddle Carrier machine to make the transformation.