

„Port of Hamburg – A nascent digital zero-emission port“

Abstract

The Port of Hamburg is not only characterised by an enormously high level of performance (the third largest port in Europe in terms of sea cargo handling), but also by its unique geographical location. As the port is located in the heart of the city, challenges arise in terms of efficient land use and emissions.

For this reason, the Port of Hamburg is fully committed to the transformation to a zero-emission port and a strong use of innovative digital technologies.

A shore power system has already been in operation since 2016 and by 2025 all container terminals and cruise centres will be fitted with shore power units. This measure is flanked by the planning and development of a complete hydrogen value chain in the Port of Hamburg, so that the entire mobility on road, rail and water can be upgraded into the post-carbon age. The additional advancement of digitalisation, for instance in the introduction of the world's first real-time road network or the use of digital twins, not only makes it possible to achieve an efficiency increase and an emission decrease but also underlines Hamburg's leading role and the possibility to adapt and thrive through innovation.