



PORTOS DA MADEIRA

Your Safe Port



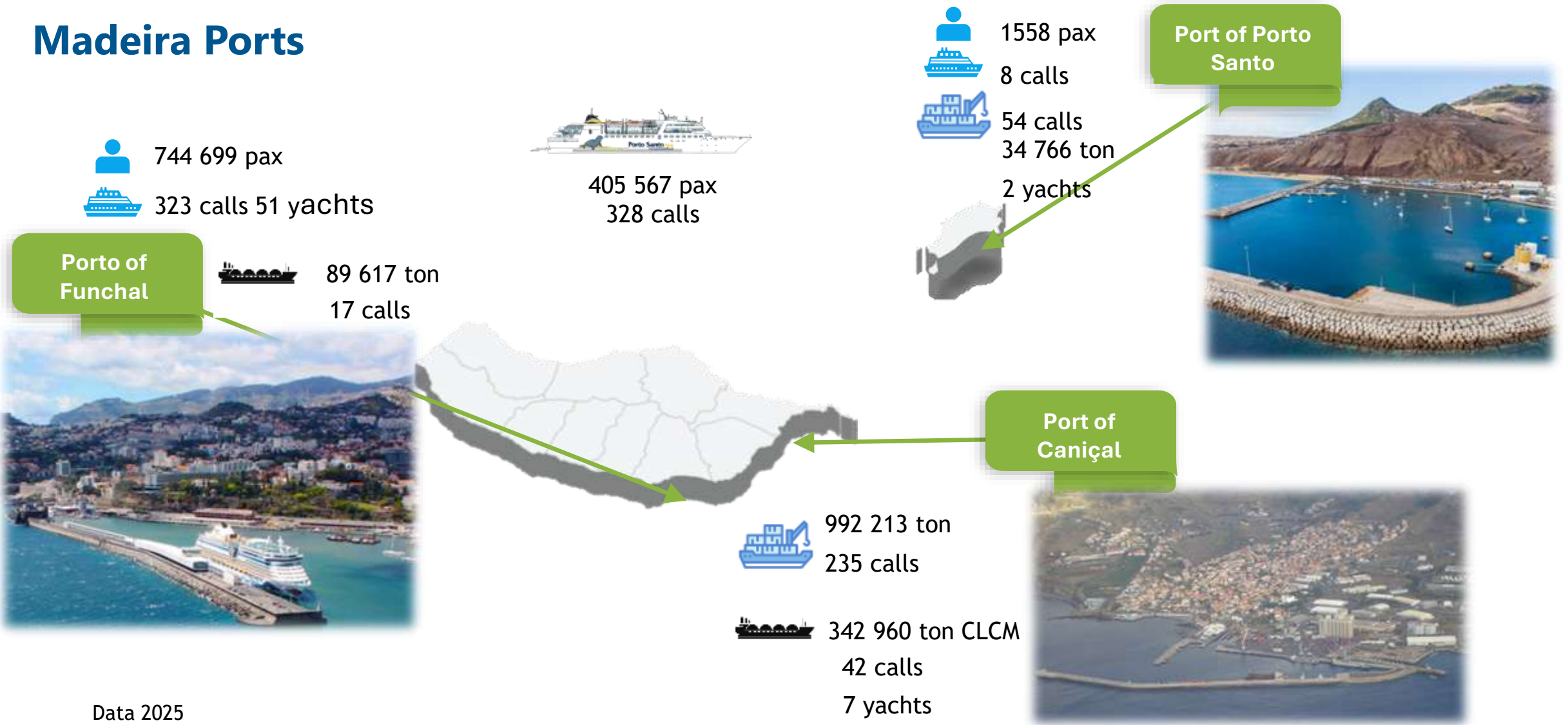
MEDITERRANEAN Ports and Logistics 2026

APRAM

Administração dos Portos da Região Autónoma da Madeira, S.A.

Ports of Madeira

Madeira Ports



Data 2025

Objectives

“The main objective of the Green Ports Madeira Study is to study the preconditions for the Decarbonization of the 3 Ports of the Autonomous Region of Madeira”

Reducing emissions CO₂

55%

2030





Objetivo Net-zero


0%


2050


Port of Funchal - Cruise Forecasts Analysis of Historical Statistics and Traffic Forecasting


 Rapid recovery of the cruise sector after the economic recession caused by covid-19


 Passengers in Funchal in 2023: 600k
Short-term increase: 4% - 5%
Long-term increase: 1% - 2.5%

 Estimate of a three-case scenario. The baseline scenario suggests that calls in Funchal will increase to 450 in 2050

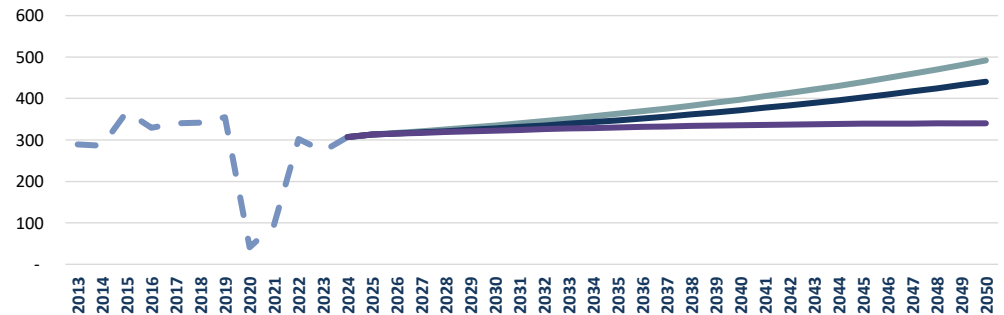
 In the case of Funchal, 90% of ships will be ready for OPS by 2035 due to the frequency of European cruise circuits

 Increase in the size of cruise ships under construction, leading to greater passenger capacity

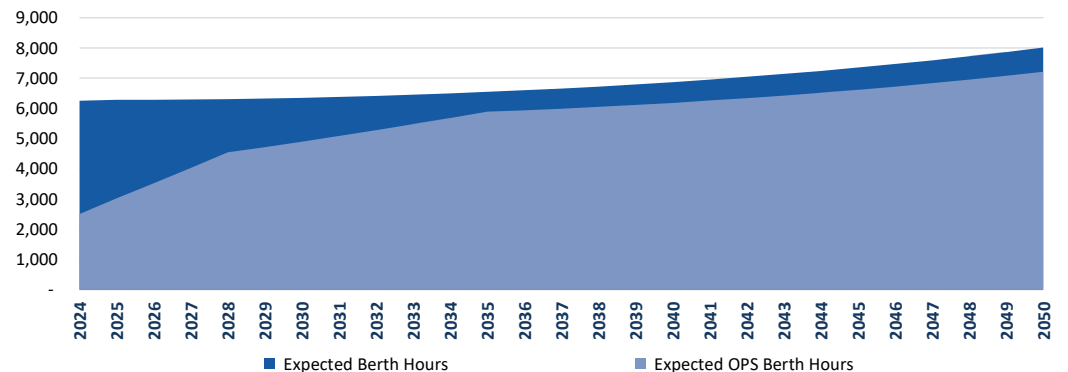
 Quay occupancy will increase at a similar rate to the number of ship calls

 Docking hours will rise from 5k to 7.1k per hour in 2050
OPS docking hours will rise from 2,000 in 2024 to 6,400 hours in 2050

Forecast - Ships calling at Funchal

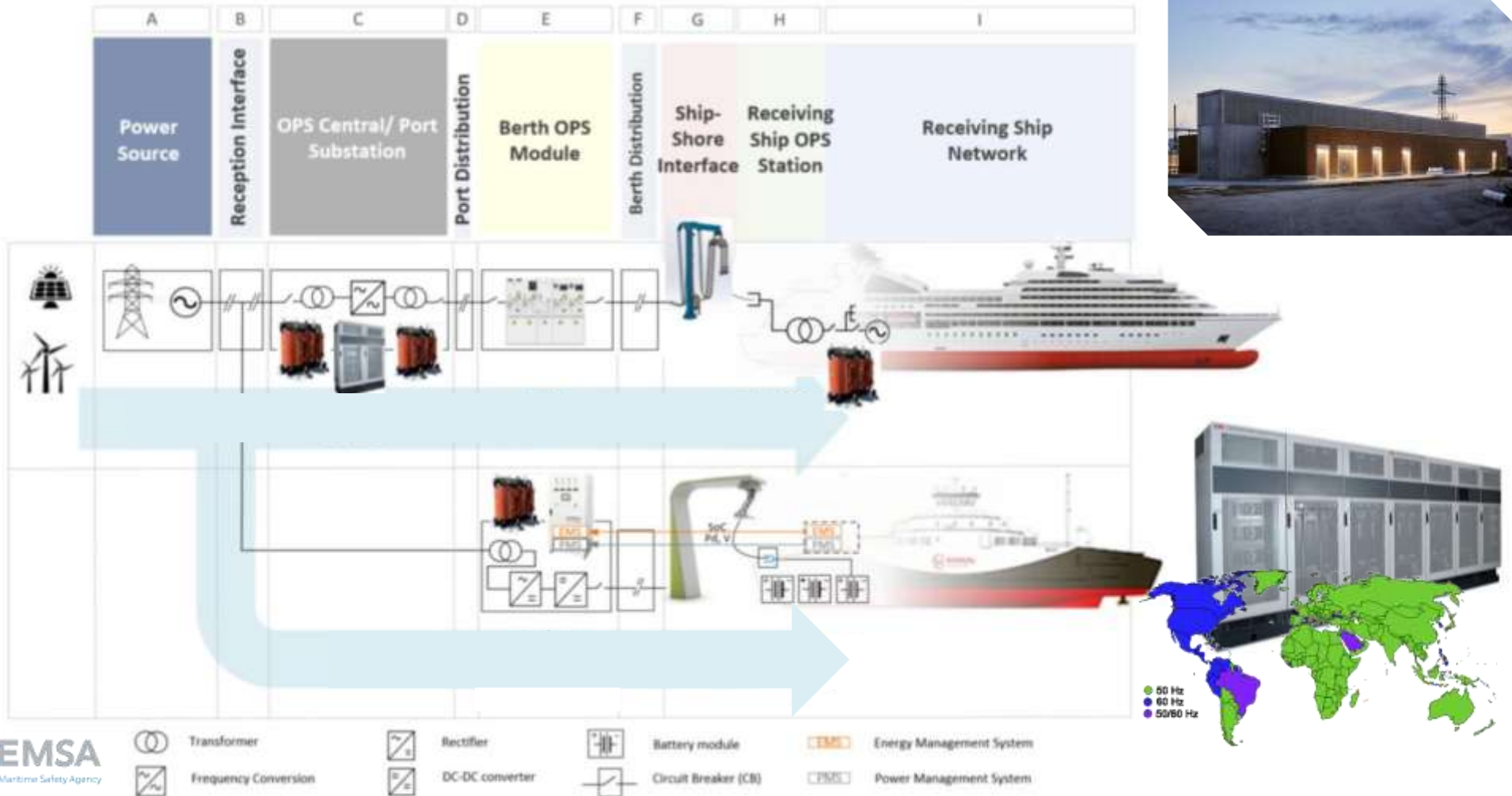


Forecast - Docking Hours in Funchal



Green Ports Madeira

Systems SSE - OPS and SBC

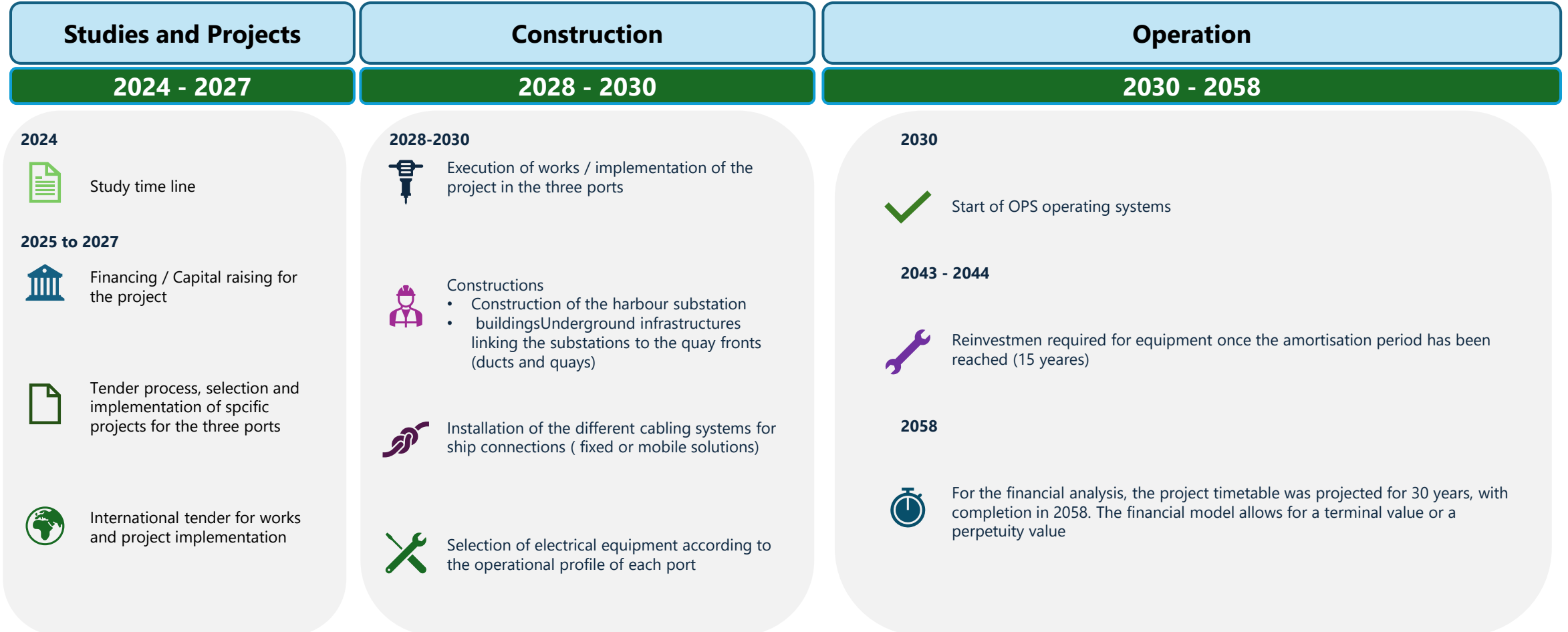


OPS study Conceptual Design Port of Funchal

- High-voltage power supply dedicated from the Vitória Thermal Power Station;
- Location of the substation on a new landfill to be built, near pier 4;
- Installation of the OPS system on piers 2, 3 and 6 for cruise ships, and on pier 1 for ferries, with operation scheduled for 2030.



Project Timeline



SHIFT2DC PROJECT

In Numbers



42 months



December 2023
to May 2027



21 partners + 6
associated



10 Countries



4 DEMOS



11 M€ EU Funding

COORDINATOR



CONSORTIUM



DC FOUNDATIONS



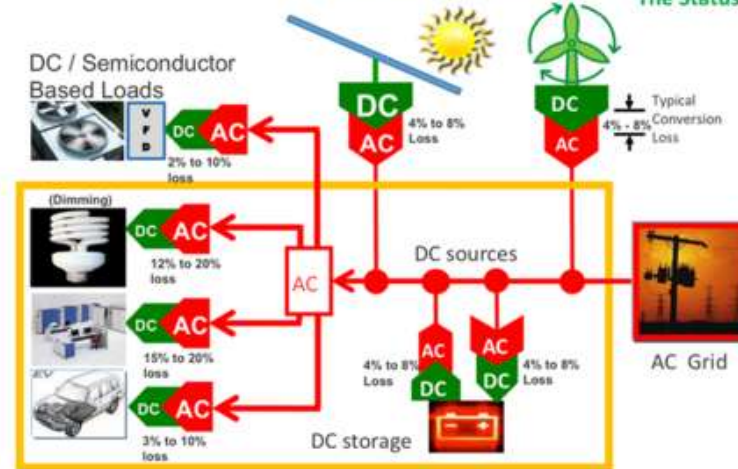
ASSOCIATED PARTNERS



Mission and Overview

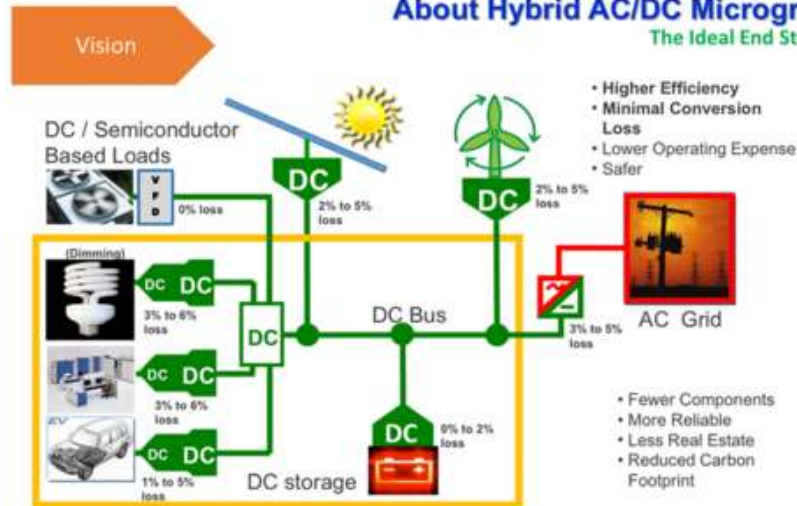
About Hybrid AC/DC Microgrids

The Status Quo...



About Hybrid AC/DC Microgrids

The Ideal End State...



APRAM Demo



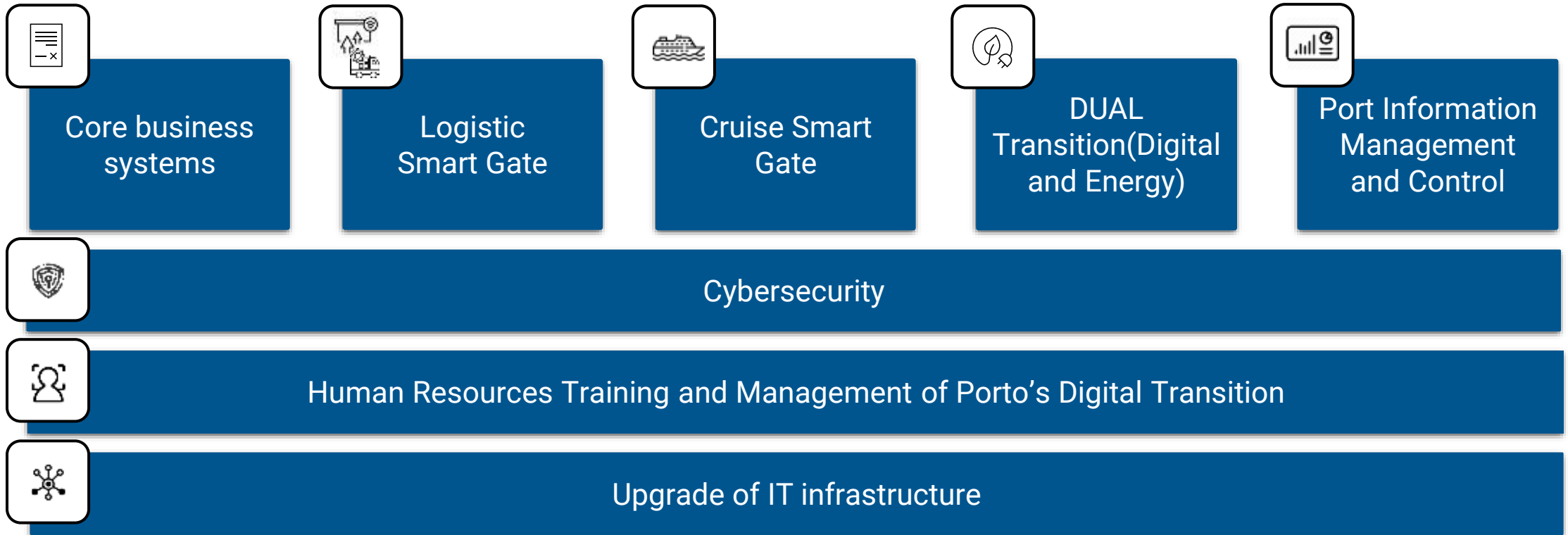
Scale UP



Port Demonstrator (Portugal)

The Port Demonstrator will be implemented in Funchal (Madeira Island) and has two main objectives: to study the potential of DC in Ports by leveraging a Digital Twin of the Funchal Port and to analyze user perspectives.

Port Community System





ENERGY EFFICIENCY

- Replacement of lighting systems;
- Optimization of the CMS
- Installation of photovoltaic systems for self-consumption



AIR QUALITY

- Installation of air quality monitoring stations;
- Implementation of a platform for tracking ship emissions.



ONSHORE POWER SUPPLY

- Construction of infrastructure for supplying electricity to ships;
- Purchase of an electric pilot boat.



WATER QUALITY IN THE HARBOUR

- Implementation of water quality monitoring plans for APRAM managed areas



ALTERNATIVE FUELS

- Study into the use of biodiesel in tugboats and pilot boats;
- Purchase of a hybrid tugboat.



SUSTAINABILITY

- Environmental management platform for monitoring environmental indicators and calculating carbon footprints.



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