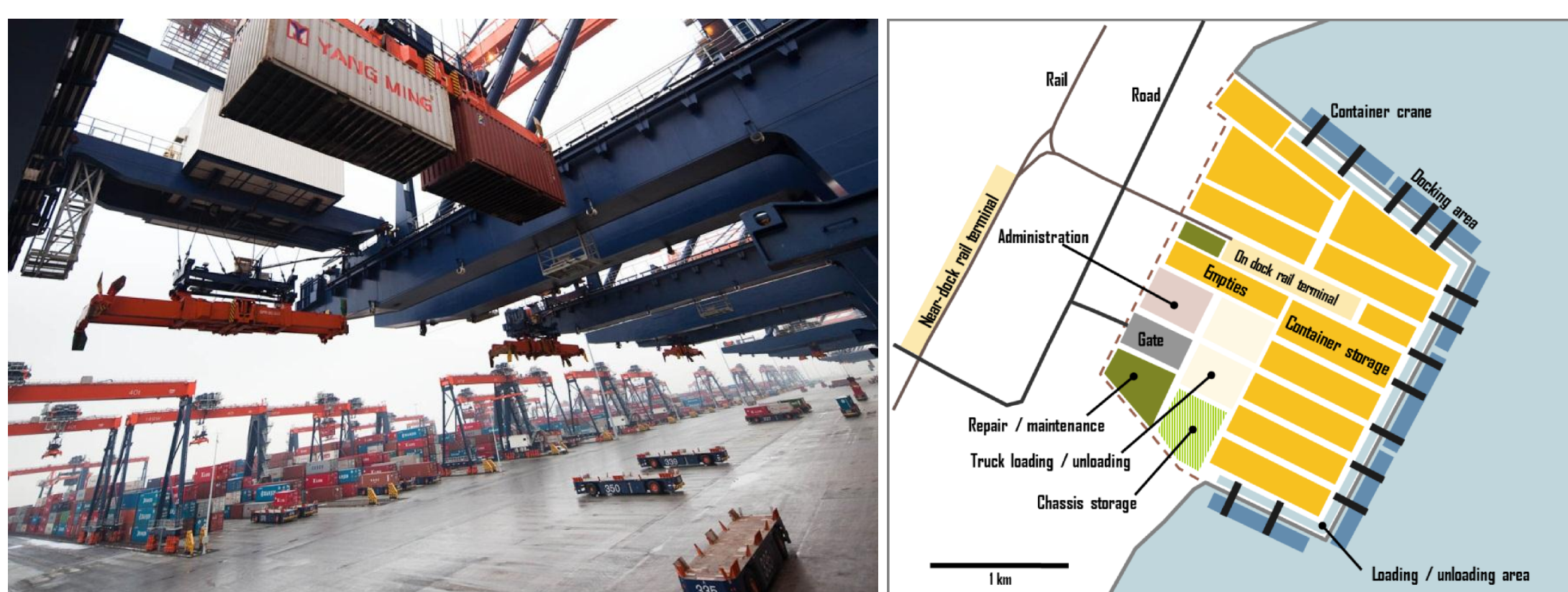


Cargo-ANTs

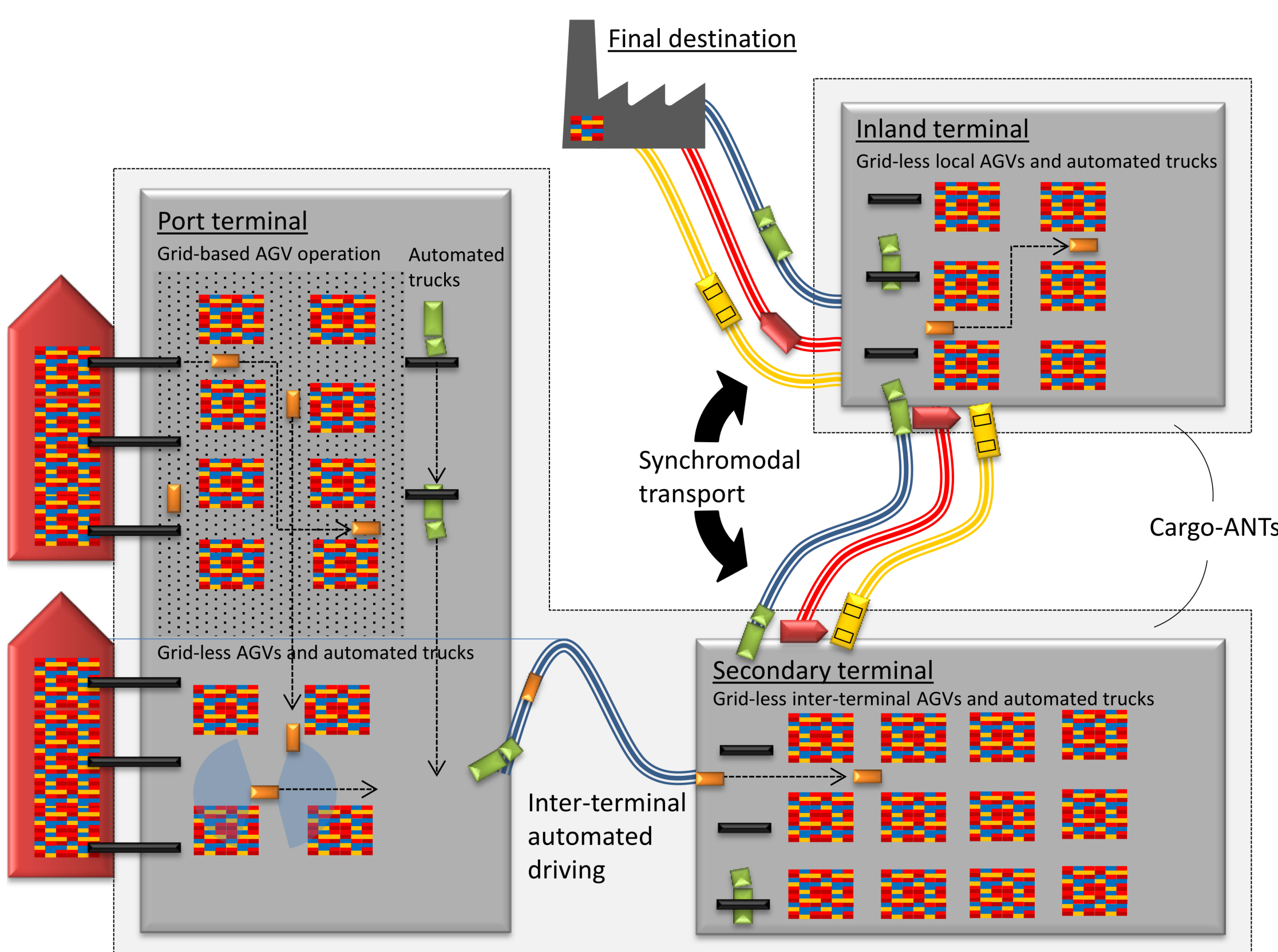
Cargo Handling by Automated Next Generation Transportation Systems for Ports and Terminals

The Cargo-ANTs project aims to create smart Automated Guided Vehicles and Highly Automated Trucks that can cooperate in shared workspaces for efficient and safe freight transportation in main ports and freight terminals. The emphasis of the project is on:

- ✓ increased performance and throughput
- ✓ development of automated shared workyards
- ✓ planning, decision, control, and safety for AGVs
- ✓ high levels of safety
- ✓ environment perception and grid-independent positioning

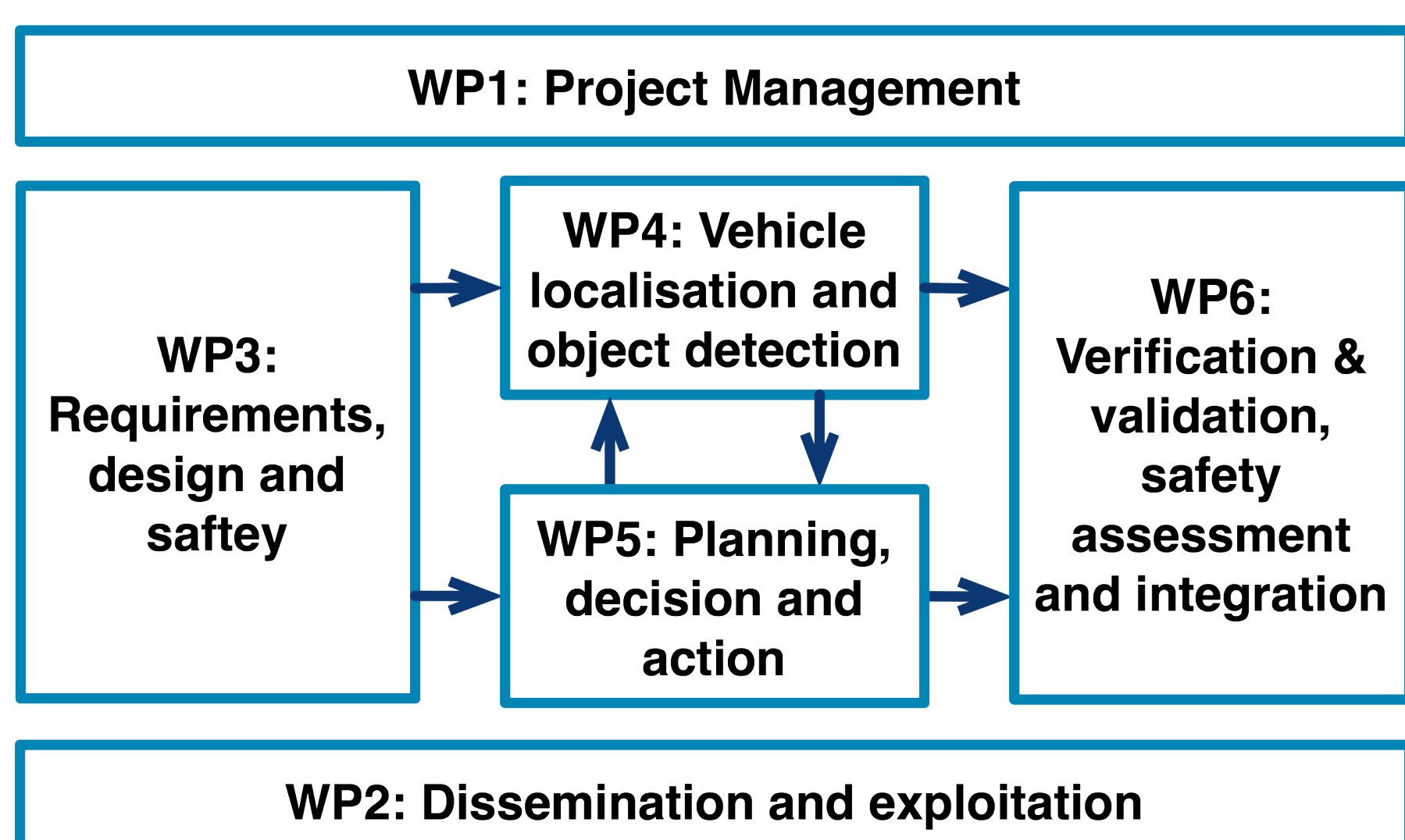


Key Figures - Cargo-ANTs is a 3-year project that started in September 2013. It has a total budget of 4.7M EUR. The European Commission contributes 3M EUR, of which 314k EUR go to the Center for Applied and Intelligent Systems Research at Halmstad University.



Research Questions

- ✓ Which combination of positioning techniques and sensors allow for reliable and accurate positioning for the proposed applications?
- ✓ How can reliable environmental perception be achieved, in particular moving and stationary object detection, drivable path detection, docking point detection, absolute and relative object positioning?
- ✓ How to set up and integrate a vehicle control system, including high-level site planning, path planning, interaction planning, and feedback control?
- ✓ How can functional safety of automated vehicles be achieved?



Our Contributions

- ✓ multi- and single-vehicle path planning
- ✓ interaction planning and adaptation

Project Partners

- ✓ TNO, Netherlands
- ✓ Volvo Technology, Sweden
- ✓ ICT Automatisering Nederland
- ✓ CSIC, Spain
- ✓ Halmstad University, Sweden