

A CORRIDOR OF MODULAR DOCKING STATIONS FOR ENERGY CONTAINERS

Scope

Feasibility study for emission-free inland waterway transport network (Antwerp-Willebroek-Venlo corridor) using energy containers and modular docking stations for barges.

Goal

Enable inland vessels to operate on energy containers instead of diesel fuel, supporting decarbonization of inland waterway transport.

Benefits

- **Environmental:** Eliminates diesel emissions from inland shipping
- **Technical:** Modular design enables efficient deployment across multiple locations
- **Strategic:** Creates emission-free transport corridor supporting modal shift
- **Flexible:** Compatible with battery-electric, hydrogen, and biodiesel alternatives

Results

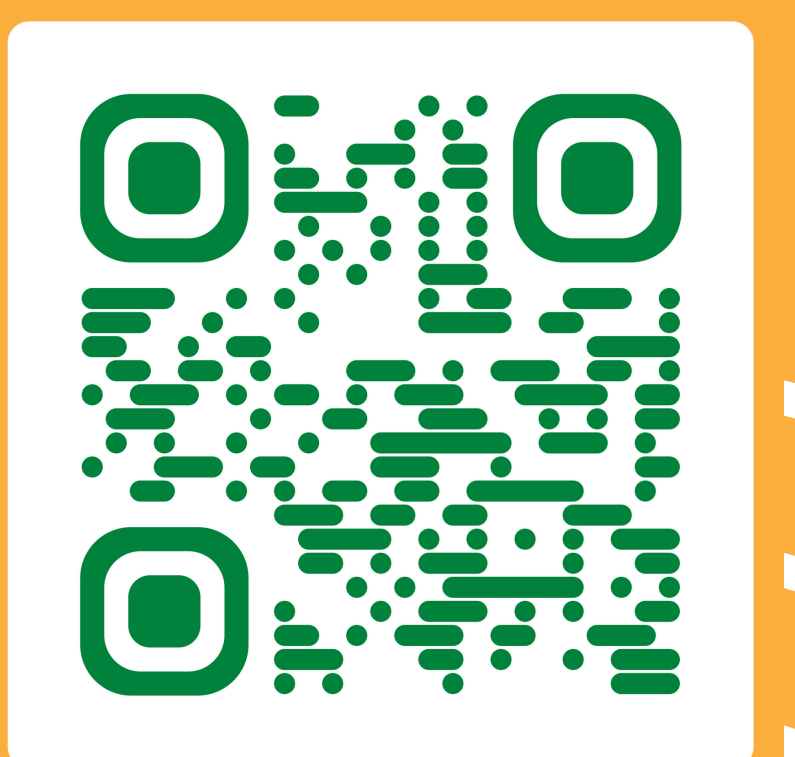
- ☒ Completed comprehensive business case and location analysis (D4.4)
- ☒ Delivered vessel investment requirements report (D4.5)
- ☒ Validated technical feasibility for Willebroek, Antwerp, and Venlo locations
- ☒ Identified diesel-electric propulsion as optimal vessel-side solution

Upscaling

- **Ready:** Technical specifications and implementation roadmaps completed
- **Challenge:** Requires supportive policy frameworks for commercial viability
- **Transfer:** Methodology applicable to other European inland waterway corridors
- **Impact:** Provides foundation for subsidy program development and investment planning

Lessons Learned

- **Additional funding** required beyond existing schemes for economic viability
- **Integrated system analysis** needed (vs. separate infrastructure/vessel analysis)
- Comprehensive operational data essential for accurate **range/location optimization**
- Strong port authority **partnerships** crucial for stakeholder coordination



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