



ASKO a front-runner in green conversion

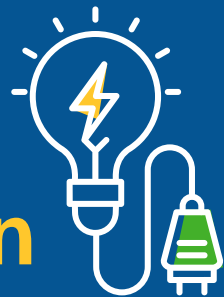


Infographic showing the ranking of four energy sources by CO2 emissions:

1. Elektrisitet
2. Grønn hydrogen
3. Biogass (fra avfall, med utnyttelse av biorest)
4. Bioetanol og biodiesel (HVO)



All electric transportation chain



- Automated warehouses
- Electric transportation chain at sea and on land
- Autonomous vessel and terminal tractor
- Efficient seamless logistics with shared information throughout the whole value chain
- Dynamic planning of cargo operations at the terminal and the vessels



Partners

Project

FLOWCHANGE

Consultant and project assistance

WIKBORG|REIN

Legal assistance for contracts



Cluster - autonomi



University autonomy, simulation, training

GSP Pilotprogram



KONGSBERG
Technology developer



Regulations, autonomy



KYSTVERKET
Regulations support port planning



Electricity infrastructure in port



NMD regulations, specification design

ENOVA

Authority financial support

Port- terminal



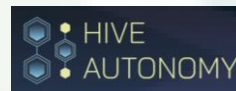
Mooring and charging solution vessels



Charging solution trucks



Battery Electric terminal tractors



Autonomy system terminal tractor



Battery bank, used batteries



Detailed prospecting port development.

The Wessels



Ship designer



Shipyard



KONGSBERG
Main technology supplier



Bimco Superman, Bimco Shipman and Remote Operation center



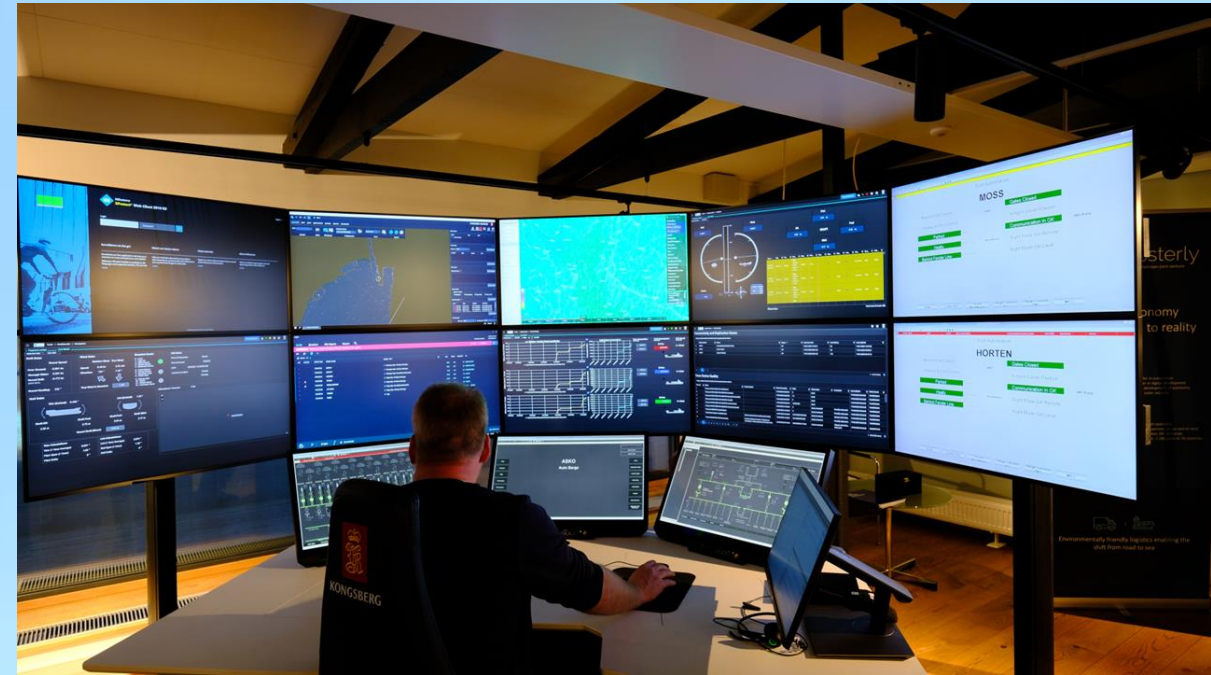
DNV ship classification



NMD Public Control of the Seaworthiness of Ships

Status of the all electric transport chain

- Vessels in commercial operations with reduced frequency
- Operates autonomously with a reduced amount of crew
- Awaiting delivery of our all electric tractors
- Distribution in Østfold from the port of Moss
- Inbound transport for ASKO Transport
- ASKO OSLOFJORD started usage of sea drones in May 2023
- Zero emission sea service for EUOPRIS
- Zero emission sea service for NOAH to Langøya -Aug



The way forward.

Our priorities are to succeed with our first vessel's.

Scale up with the same type of vessel between other ports.

Zero emission Rocon vessel that reduces road transport and enables the switch to battery-electric trucks.

Zero-emission sea transport between Nordic port.





Our voyage together for an efficient and sustainable value chain