



HAYDI GALVEZ, ABB PORTS, TECH TOC, OCTOBER 1, 2024

Automating in the next era of terminal operations



SWL 40LT



ZPMC
上海振华

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Prepping your terminal for the future

Optimize step by step

Address the needs

- Aim for the highest density and productivity
- Improve capacity when reequipping the terminal

Grab the opportunities

- Start the automation where it gives the highest return
- Extend equipment life and enhance performance by retrofits and functional upgrades

Long-term system performance

- Find concept that fits and can later be expanded



Set your targets right

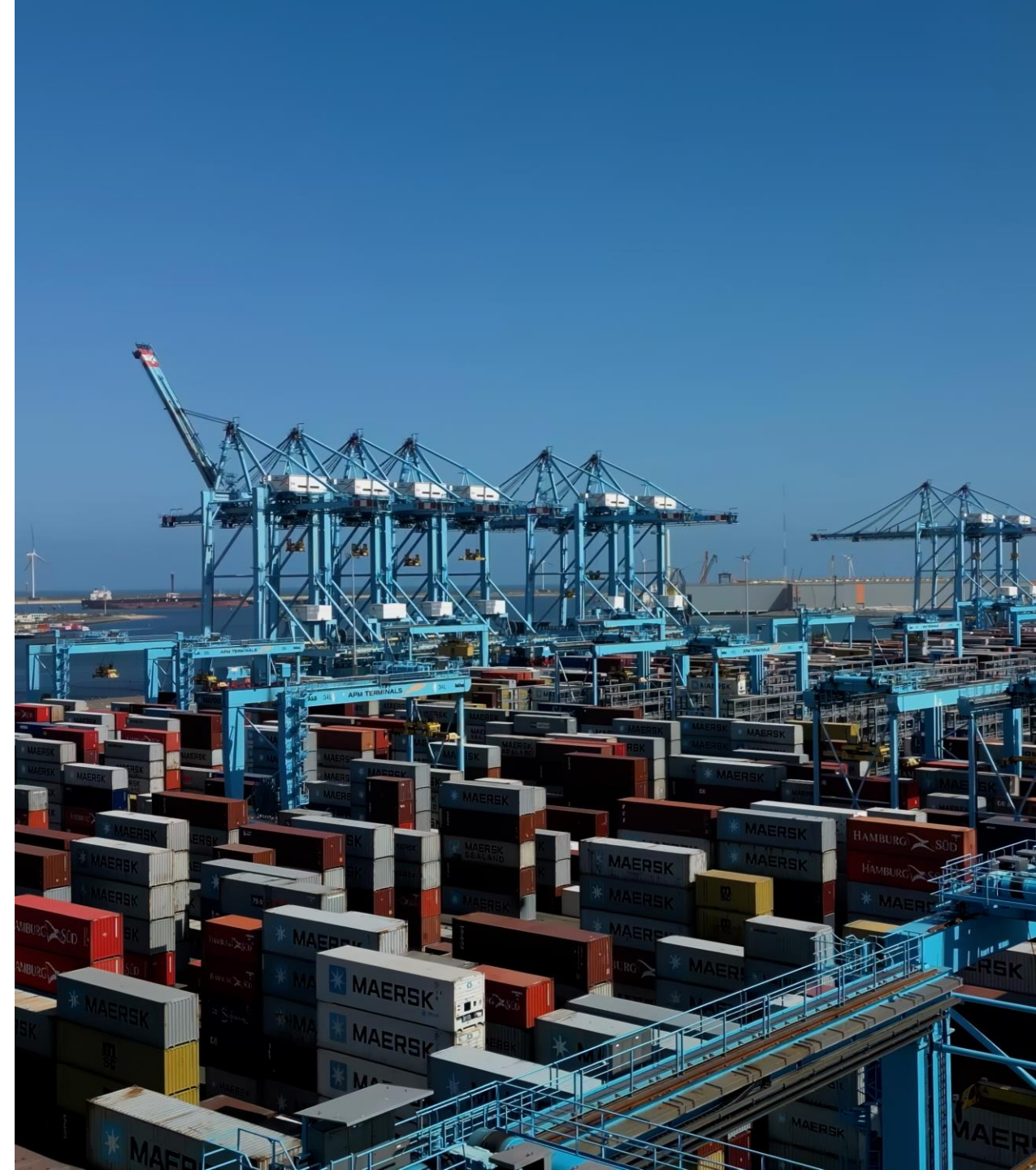
Productivity and consistency

System performance ASC

- High level of automation
- Few manual interventions
- High reliability

System performance STS

- Consistent automation system
- Great potential for increased automation
- Process optimization
- Remote operation
 - Flexibility and productivity
 - Enable pooling



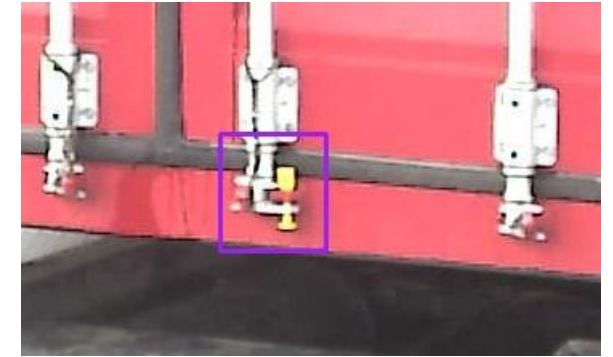
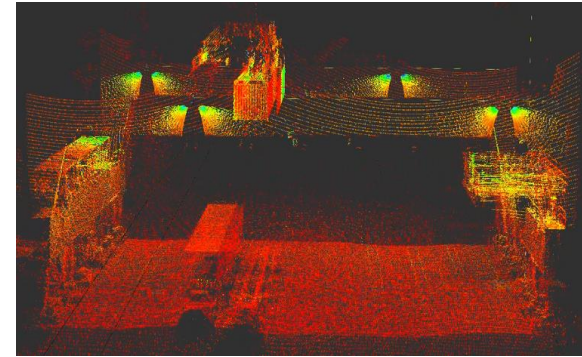


AI – a natural part of automation

Domain knowledge and leading technology

Integrated in solutions for quay, yard, gate and rail

- Increase automation and improve efficiency
- Enable and drive autonomy
- Digitalization
 - Real-time decisions on container handling and job promotion
- Reduce emissions and improve safety
 - Reduce idle time, turn times, and time under the hook



Power supply challenges

A need for smarter electrical infrastructure



New types and increments of loads

- Electrical vehicles
- Reefer loads
- Critical loads



Energy transition and lower emissions

- Solar and wind
- Green hydrogen
- Shore power



Consumption control and power quality

- Power demand costs
- Reefers optimized operation
- Lighting control
- Peak power limitations



Predictive maintenance of electrical infrastructure

- Plan ahead
- Measure data and use AI for predicting and control



Regulatory challenges

CO₂ and Cyber Security

The FuelEU Maritime regulation

- January 1, 2030, container and passenger ships greater than or equal to 5,000 gross tonnage must connect to shore power in main EU ports in the trans-European transport network (TEN-T)

NIS2 Directive – boost OT security

- The directive outlines security requirements as well as a process for incident reporting
- Essential entities in a wider range of industries





Build for the future

With leading automation and electrification

Meet us in stand B6!

ABB