



**IN 2024, VAHLE GETS
THE WORLD MOVING.**

 **> 185** Mio.

TURNOVER IN
EURO (2023)

 **> 800**

EMPLOYEES

 **14**

MARKET
ORGANIZATIONS

 **5**

PRODUCT
GROUPS

 **4**

TARGET
MARKETS

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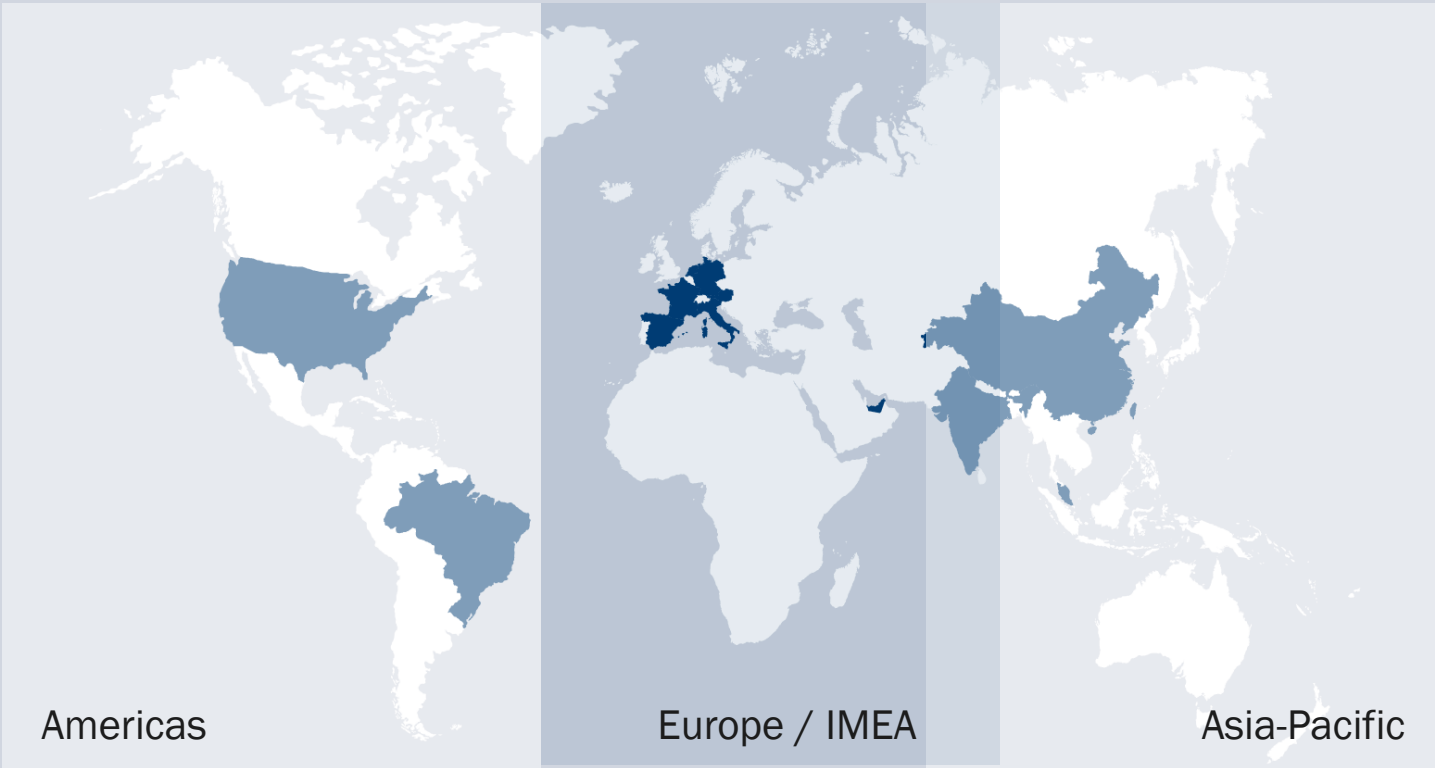
MARKET
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TARGET
MARKETS



Energy Transmission



Intralogistics



Data Communication



Crane Technology



Positioning



Automotive



Control Systems



Port Technology



System Solutions

PORT TECHNOLOGY CONTAINER HANDLING



Truck Charging

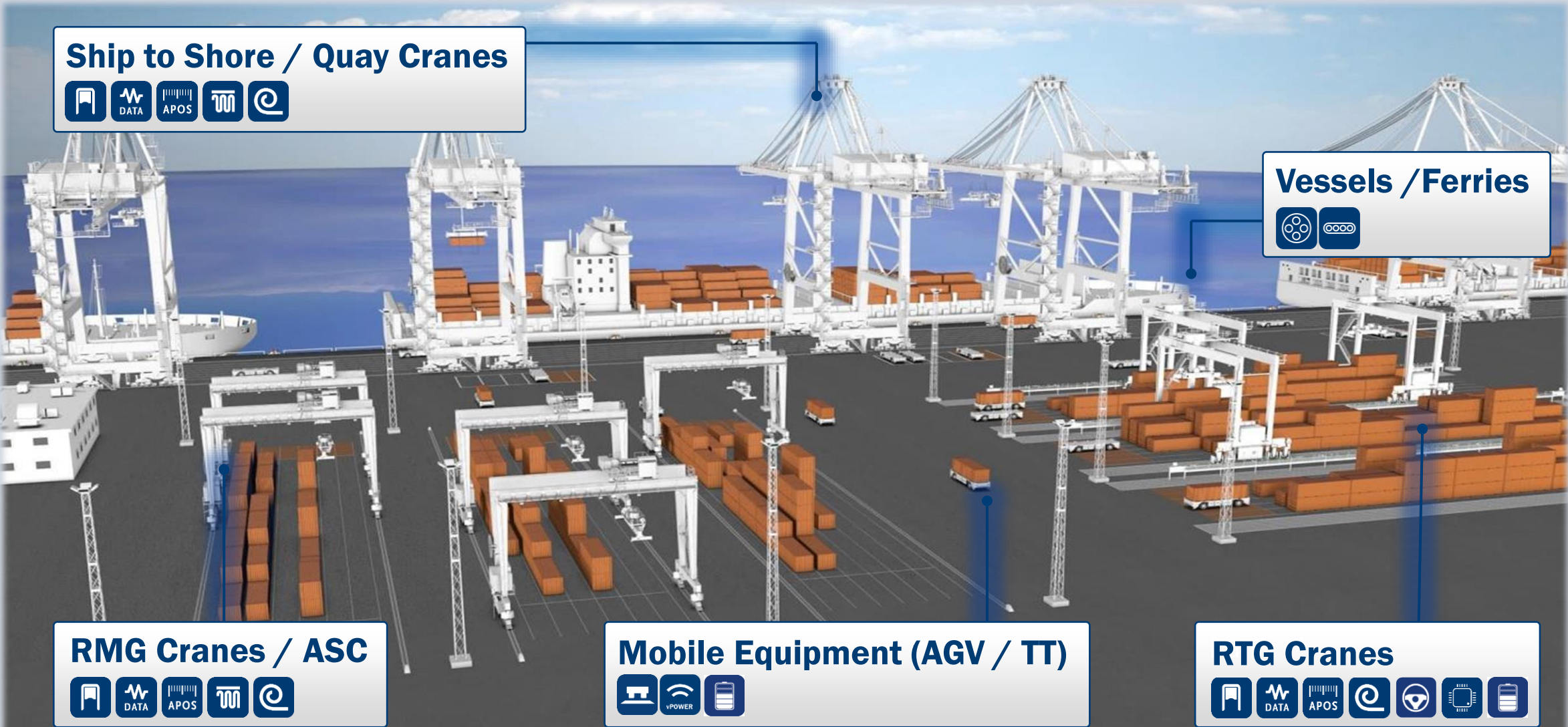


SPECIAL PROJECTS Ferris Wheels, ...



PEOPLE MOVER TRAMS, TRAINS, ...

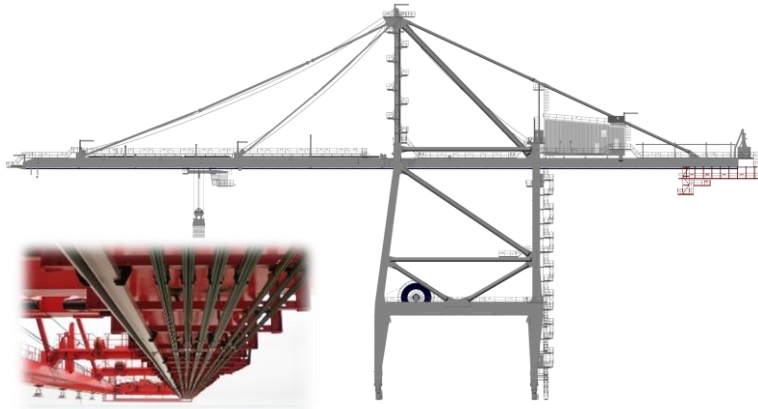
Simplified Container Terminal Overview



Automation of Port Equipment

Upgrade to any Yard Crane | Increase of flexibility

Ship to Shore Crane



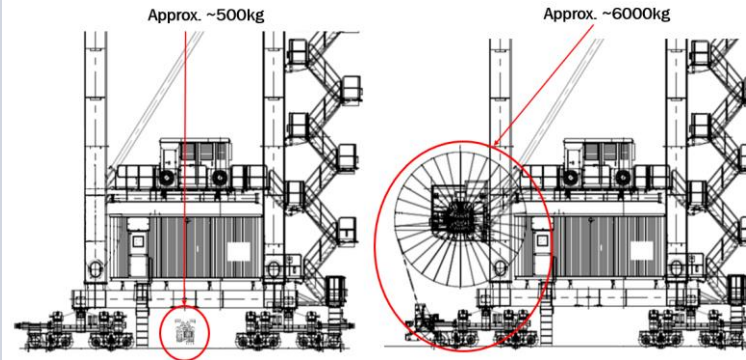
Technical benefits...

- ✓ Minimize weight movement
- ✓ High trolley speed, up to 600 m/min
- ✓ No influences by wind / heavy rain / ice
- ✓ No cable loops and no storage area
- ✓ Extremely low maintenance

Operator's benefits...

- ✓ Faster container handling through speed increase of the main hoist (trolley & lift)
- ✓ Higher container stacking level
- ✓ High availability and absolute reliable
- ✓ Optimized Total Cost of Ownership

RMG/ ASC



Technical benefits...

- ✓ Reduce weight on board of the ASC and cost of the ASC
- ✓ Reduce cost of control system (no cable reel drive, considerable smaller transformer and switch gear)
- ✓ Increase speed & performance
- ✓ Extremely low maintenance

Operator's benefits...

- ✓ Faster container handling through increased travel speed
- ✓ High availability and absolute reliable Data Communication & Positioning system
- ✓ Optimized Total Cost of Ownership

eARTGC



Technical benefits...

- ✓ Flexible yard operation
- ✓ Automatic connection system
- ✓ Autosteering
- ✓ Seamless synchronisation
- ✓ Reduced GenSet maintenance cost

Operator's benefits...

- ✓ Flexible yard operation
- ✓ Optimized OPEX by reduced fuel cost and idle time
- ✓ Reduction of CO2 and Noise Pollution
- ✓ Smart / Remote Maintenance
- ✓ Optimized Total Cost of Ownership

Container Terminal Automation

Step by step approach

1.0 Electrification

Insulated
conductor rails
1000V, 1000A
with
aluminium/
stainless steel

2.0 Positioning

precise
position
feedback with
a contactless
reading head

3.0 Data Communication

interference-
free and safe
data & video

- ✓ 2016 – 40 Mbps
- ✓ 2017 – 80 Mbps

2020- 300 Mbps

2023- 600 Mbps

4.0 - Automation

Combination of
electrification,
positioning and
data com. for
remote control



Increase of energy and
resource **efficiency**



Benefits of VAHLE Electrification & Automation Solutions



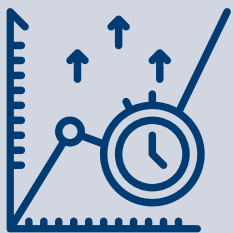
ECONOMIC

- Optimized OPEX by reduced fuel cost and idle time
- Reduced dependency on fossil fuel supplies
- Reduced GenSet maintenance cost
- Smart / remote maintenance
- Personnel costs are saved
- Productivity is increased
- Optimized Total Cost of Ownership



ECOLOGIC

- Reduction of CO₂ emissions and noise pollution
- Sustainable and green – at best with renewables



EFFICIENT

- Flexible yard operation
- Automatic connection system
- Autosteering
- Seamless synchronization
- Human Safety

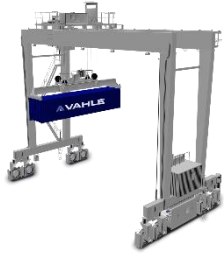


Case study – Great Britain, HPH UK – Port of Felixstowe

Container Terminal Automation



2015 – today



Retrofit

66 ZPMC RTGs

Greenfield

8 new remote ZPMC eRTGCs

2024-26 : 17 new remote Konecranes AeRTGCs



Retrofit

59 blocks (15,322 m)

Greenfield

8 container blocks



Automation with **SMGX data communication** and positioning



Case study – Great Britain, HPH UK – Port of Felixstowe

Container Terminal Automation

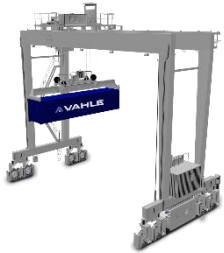


Case study – Thailand, Laem Chabang – HPT Terminal D

Container Terminal Automation



2017 - today



Remote operation with 20 new AERTGCs

Update 2024: 8 new AERTGCs
2025: 8 further new AERTGCs

**World's
first fully
automated
terminal**



Automation of 20 container blocks
in Phase 1 – 5,040 m

2024-2025: Phase 2 with 12 new
container blocks – 3,024 m

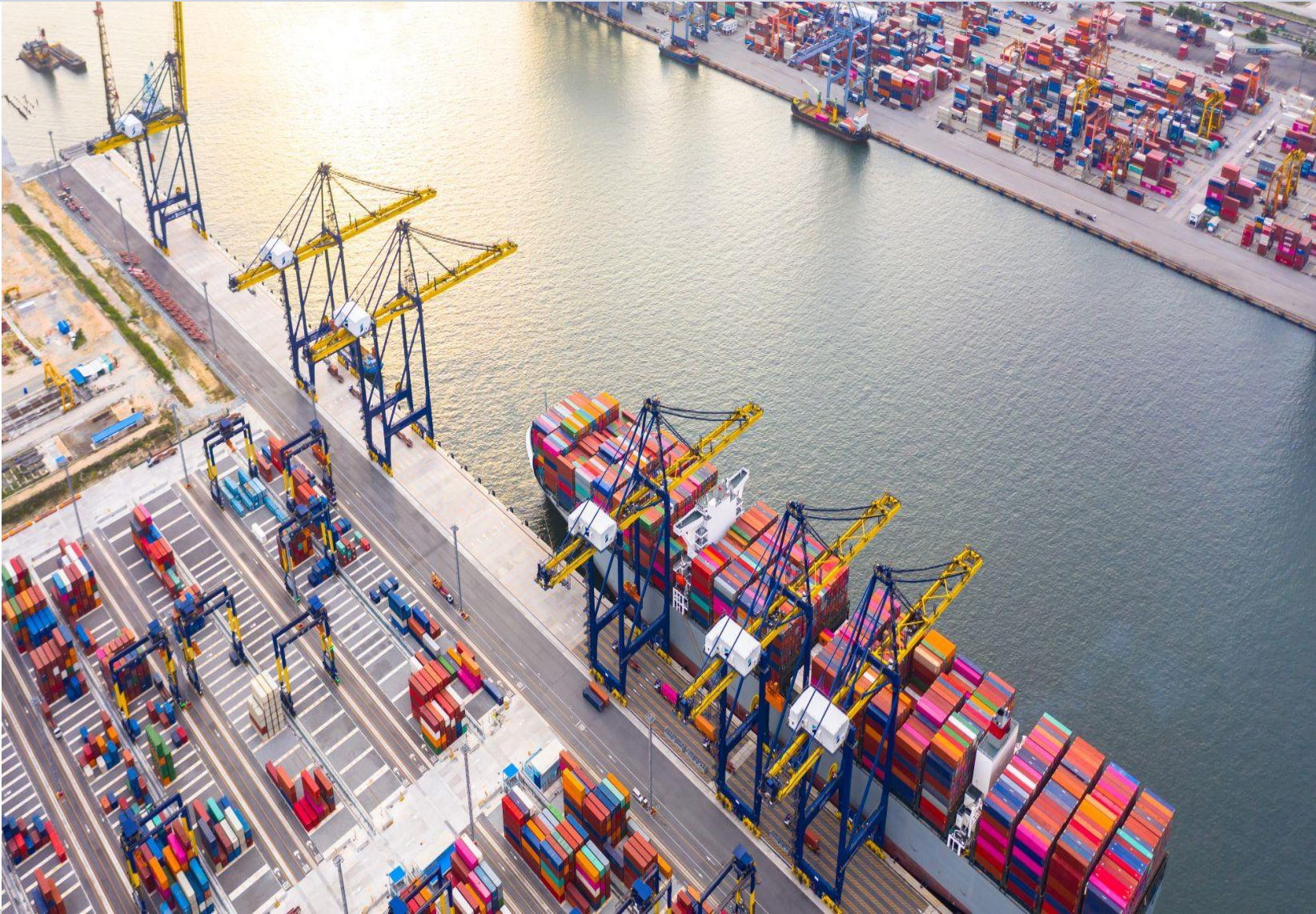
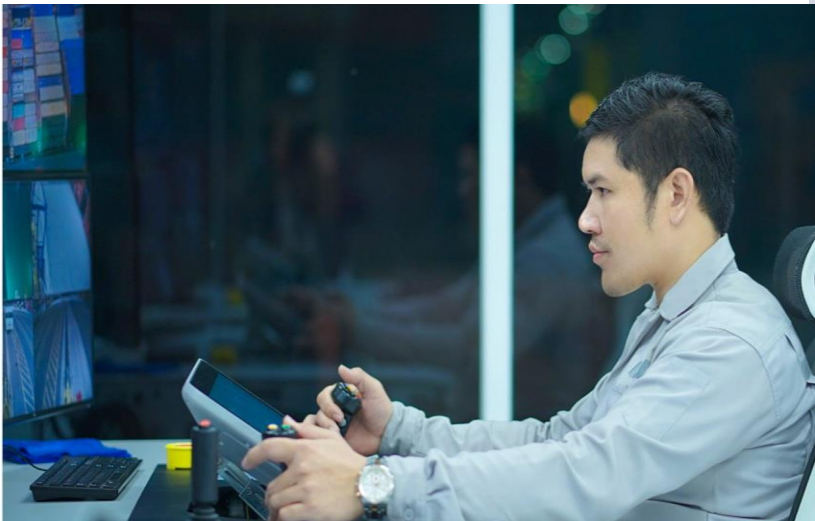


Automation with **SMGX data
communication** and positioning



Case study – Thailand, Laem Chabang – HPT Terminal D

Container Terminal Automation



PRODUCT OVERVIEW

eRTG CRANES– Trimotion



**YOUR VISION COUNTS:
WE ARE READY**

**MEET US AT:
STAND 3**



Featured Speaker

 **MEDITERRANEAN**
Ports and Logistics 2024

28 TO 30
MAY | GENERALI CONVENTION CENTER
TRIESTE, ITALY

HOSTED BY  **PORT OF TRIESTE**

STRATEGIC PARTNER  

JAROSLAW WARZECHA
DIRECTOR BUSINESS UNIT PORT
VAHLE GROUP

