

THE ZERO EMISSION TERMINAL - HOW TO CONNECT TO THE GREEN FUTURE





 **> 185** Mio.

TURNOVER IN
EURO (2023)

 **> 800**

EMPLOYEES

 **14**

MARKET
ORGANIZATIONS

 **5**

PRODUCT
GROUPS

 **4**

TARGET
MARKETS

VAHLE at a glance

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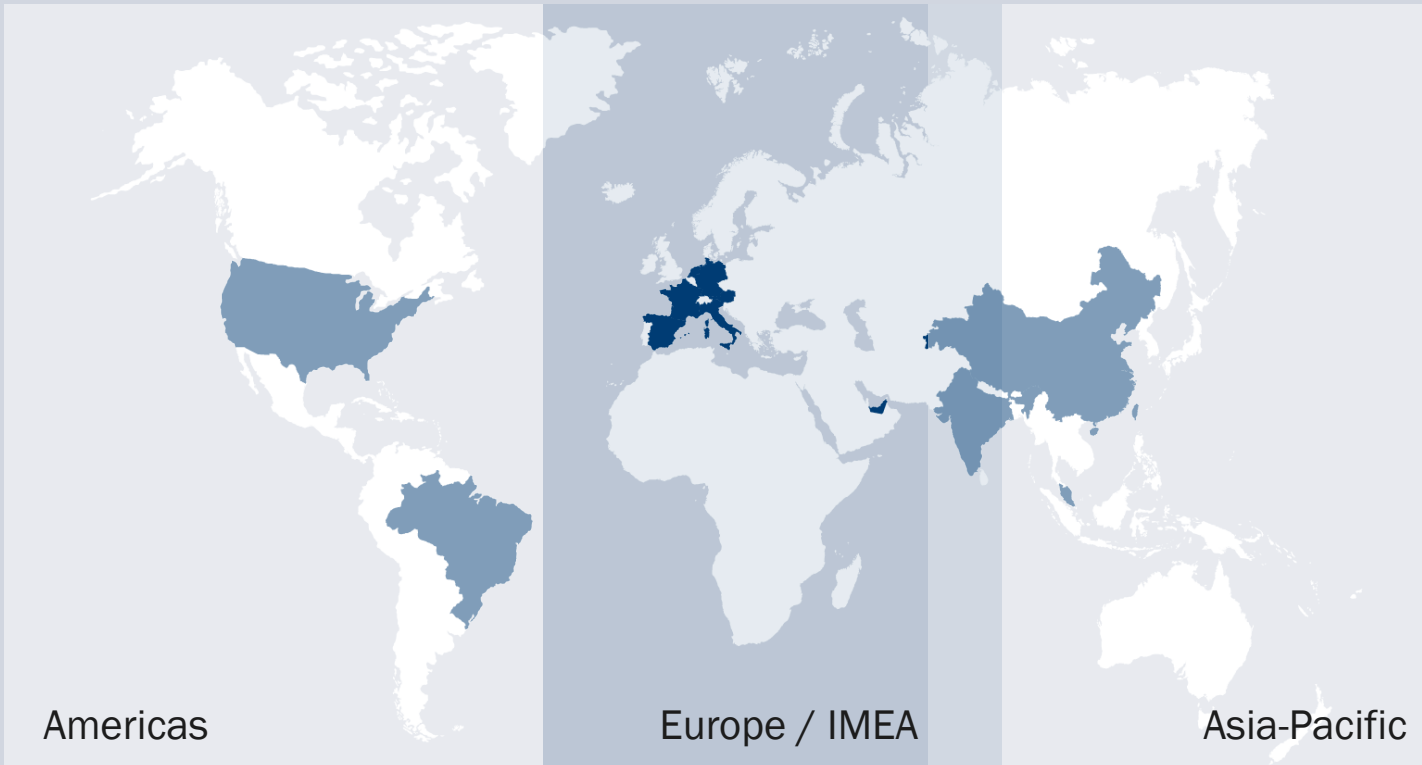
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TARGET
MARKETS



Americas

Europe / IMEA

Asia-Pacific



Energy Transmission



Intralogistics



Data Communication



Crane Technology



Positioning



Automotive



Control Systems



Port Technology



System Solutions

PORT TECHNOLOGY CONTAINER HANDLING



**Motorized
Cable Reels**



**Festoon & USMG
Solutions**



eRTG Systems



Shore Power



Truck Charging



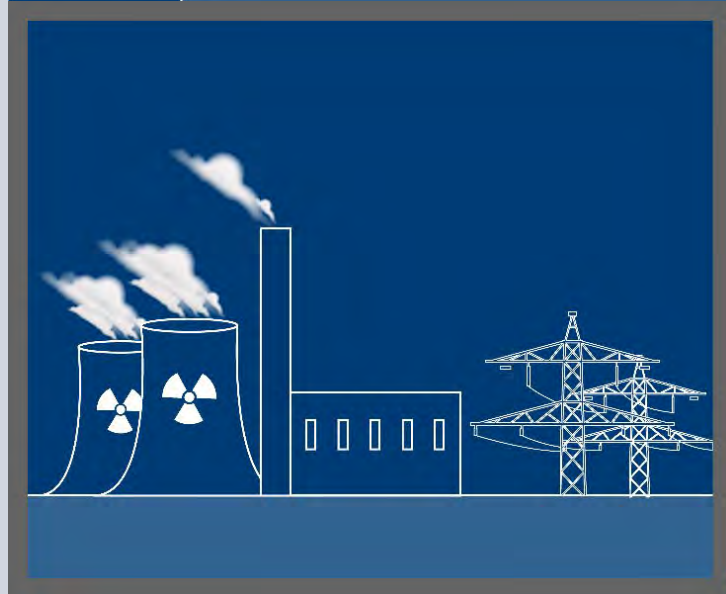
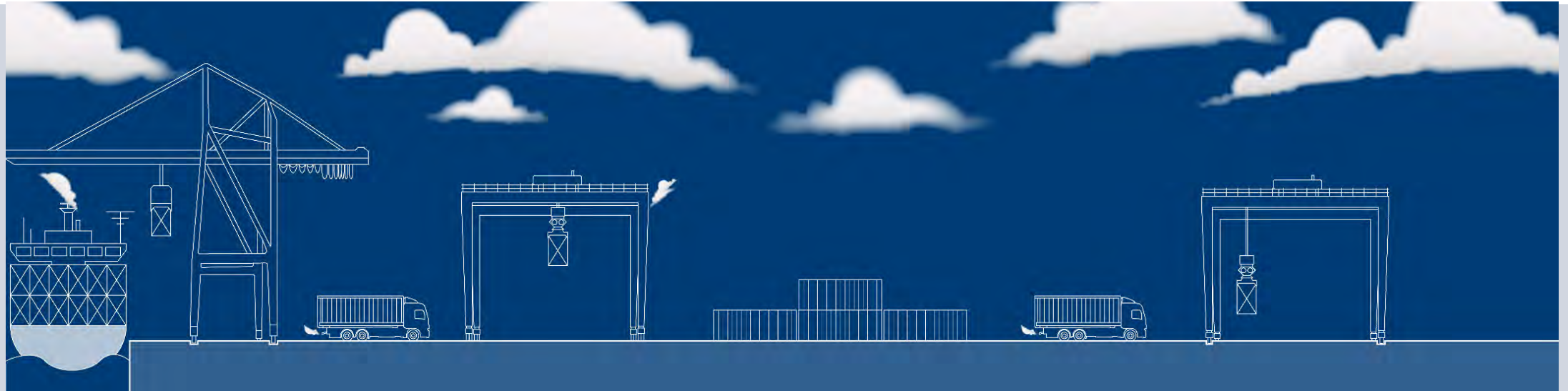
SPECIAL PROJECTS Ferris Wheels, ...



PEOPLE MOVER TRAMS, TRAINS, ...

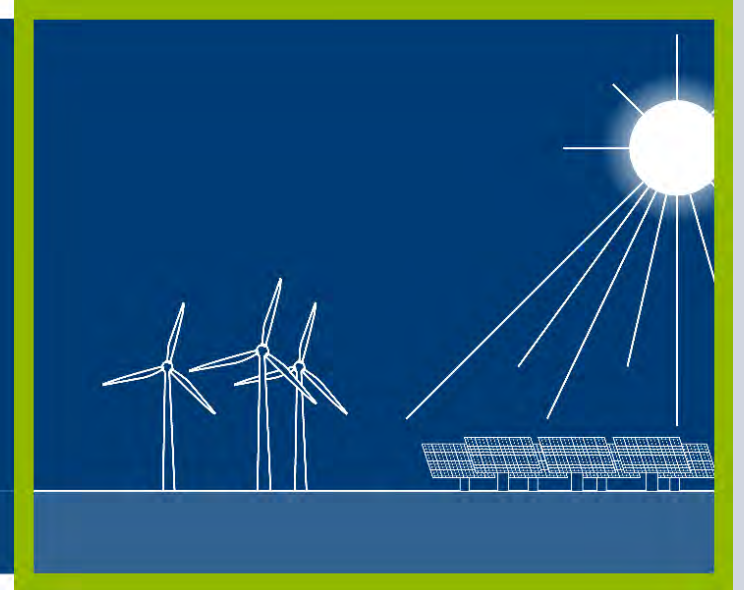
Simplified Container Terminal Overview

In a changing world – 20 years ago



Simplified Container Terminal Overview

Nowadays and in the future



Simplified Container Terminal Overview



Ship to Shore / Quay Cranes

Icons: Book, DATA, APOS, T, @



Vessels / Ferries

Icons: Vessel, Ferry



RMG Cranes / ASC

Icons: Book, DATA, APOS, T, @



Mobile Equipment (AGV / TT)

Icons: AGV, vPOWER, TT



RTG Cranes

Icons: Book, DATA, APOS, @, Vessel, T, @



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

Innovations and Milestones

2014 – today



Brownfield

66 ZPMC RTGs



RTG Retrofit

59 blocks (15,3 km)



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

2020 - 300 Mbps

2023 - 600 Mbps

2024 - 1 Gbps

4.0 - AUTOMATION

Combination of electrification, positioning and data communication for remote control



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

Innovations and Milestones

2020 – today



Greenfield



8 Remote ZPMC

AeRTGCs

17 Remote KC

AeRTGCs

Container Blocks

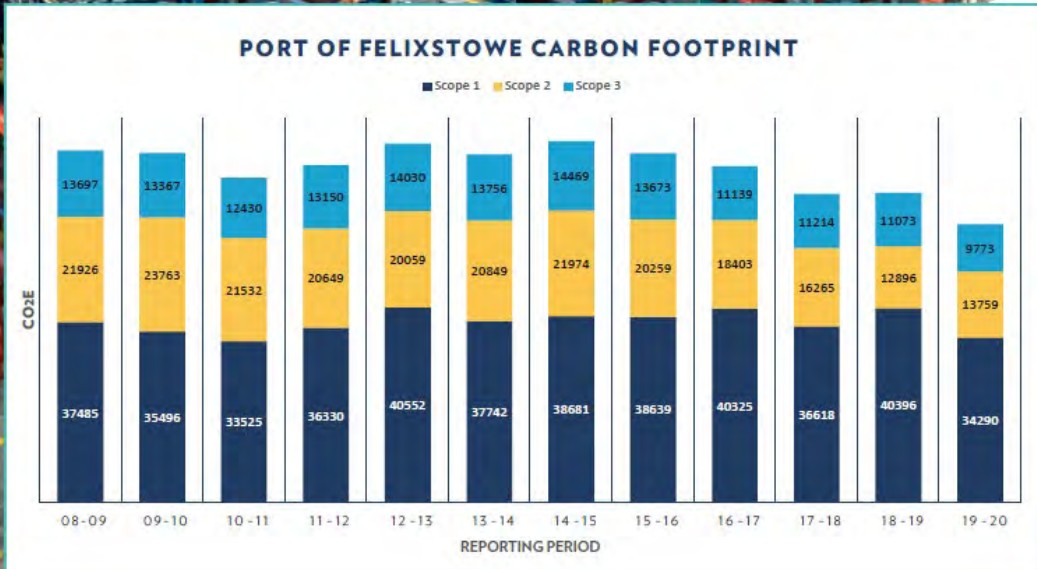
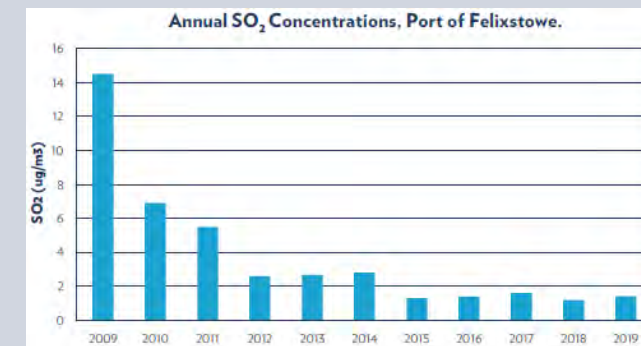


18 blocks (5,2 km)



ENVIRONMENT REPORT 2019-2020

PERFORMANCE



Scope 1 (direct) emissions produced on-site by fossil fuel combustion; mainly by RTG cranes, internal movement vehicles and port vehicles.

15% REDUCTION IN SCOPE 1 EMISSIONS WHEN COMPARED TO THE PREVIOUS PERIOD.

10% REDUCTION IN OVERALL CARBON FOOTPRINT.

20% REDUCTION IN OVERALL CARBON FOOTPRINT IN THE LAST TEN-YEAR PERIOD.

37% REDUCTION IN SCOPE 2 EMISSIONS SINCE RECORDING BEGAN.

Total savings since 2015:

89.620 tons CO₂

Source: PoF Environment Report 2020



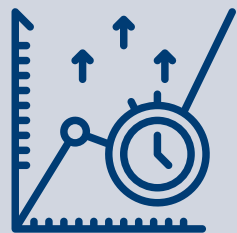
ECONOMIC

- 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

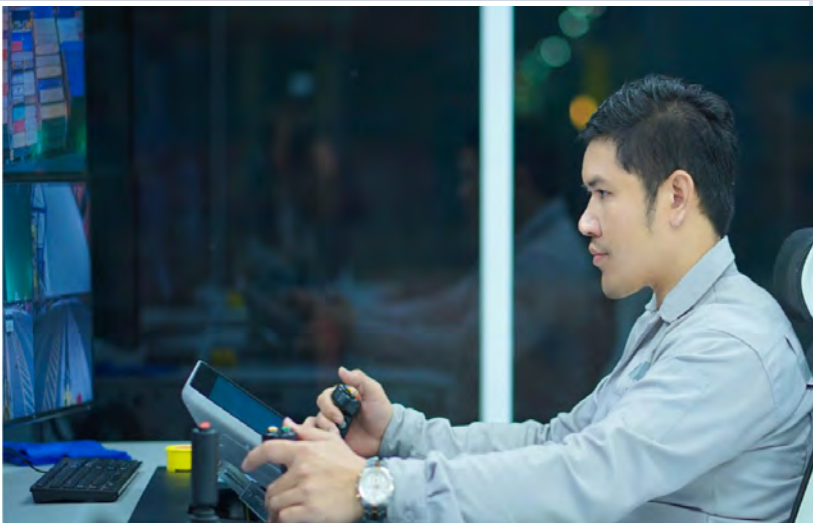


EFFICIENT

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

Case study – 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



**Black and
Caspian Sea 2024**
PORTS & LOGISTICS
Creating Synergies Through Connecting The Black, Baltic and Caspian Economies

3 AND 4 | Hotel Del Mar Mamaia
JULY | Constanta, Romania

HOSTED BY  STRATEGIC PARTNERS  

JAROSLAW WARZECHA
DIRECTOR BUSINESS UNIT PORT
VAHLE GROUP

**Featured
Speaker**