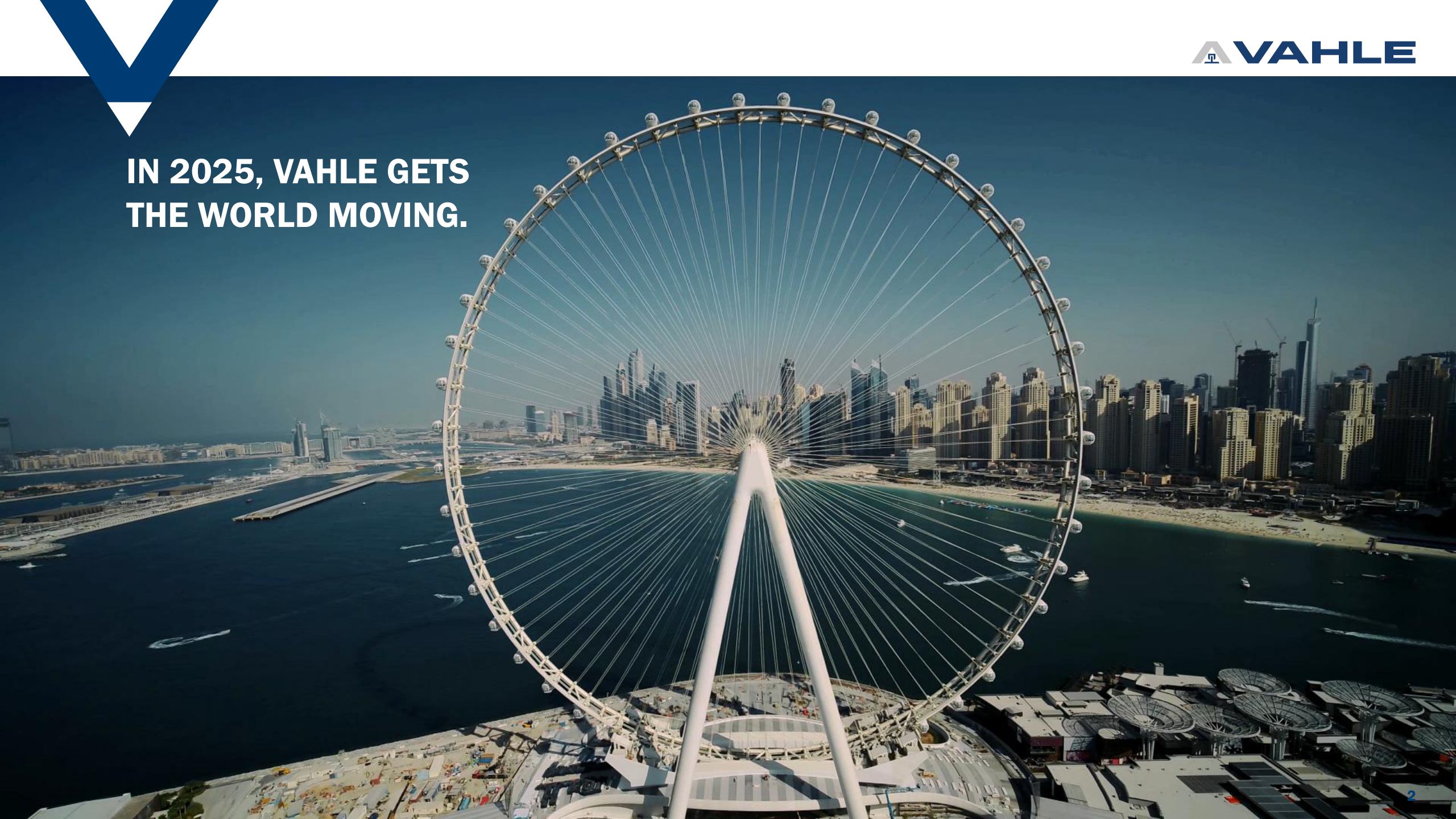




A large, stylized blue 'V' shape that tapers to a point, located in the top left corner of the image.

**IN 2025, VAHLE GETS
THE WORLD MOVING.**



 **> 200** Mio.

TURNOVER IN
EURO (2024)

 **> 825**

EMPLOYEES

 **14**

MARKET
ORGANIZATIONS

 **5**

PRODUCT
GROUPS

 **4**

TARGET
MARKETS

Simplified Container Terminal Overview



Ship to Shore / Quay Cranes



Vessels / Ferries



RMG Cranes / ASC



Mobile Equipment (AGV / TT)



RTG Cranes



Simplified Container Terminal Overview

In a changing world – 20 years ago



Simplified Container Terminal Overview

Nowadays and in the future



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)



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

2020 - 300 Mbps

2023 - 600 Mbps

2025 - 1 Gbps

4.0 - AUTOMATION

Combination of electrification, positioning and data communication for remote control



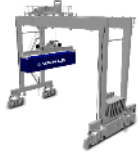
Case study – Great Britain, HPH UK – Port of Felixstowe

Innovations and Milestones

2020 – today



Greenfield



8 Remote ZPMC
AeRTGCs

17 Remote KC
AeRTGCs

Container Blocks

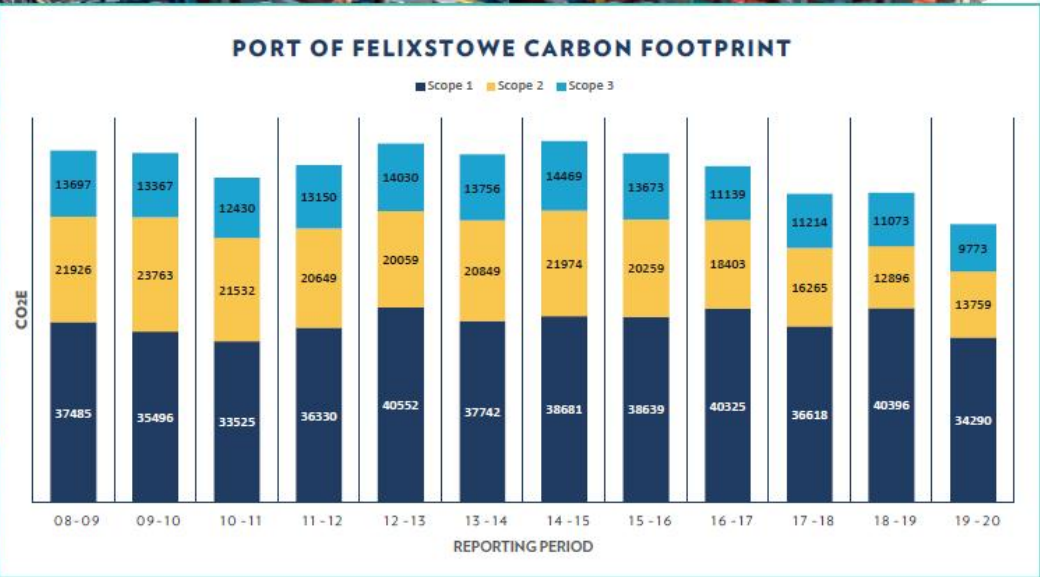
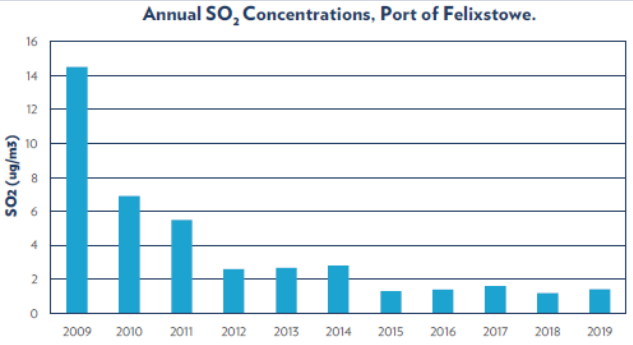


18 blocks (5,2 km)



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



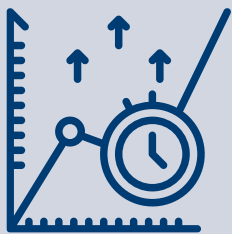
ECONOMIC

- 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

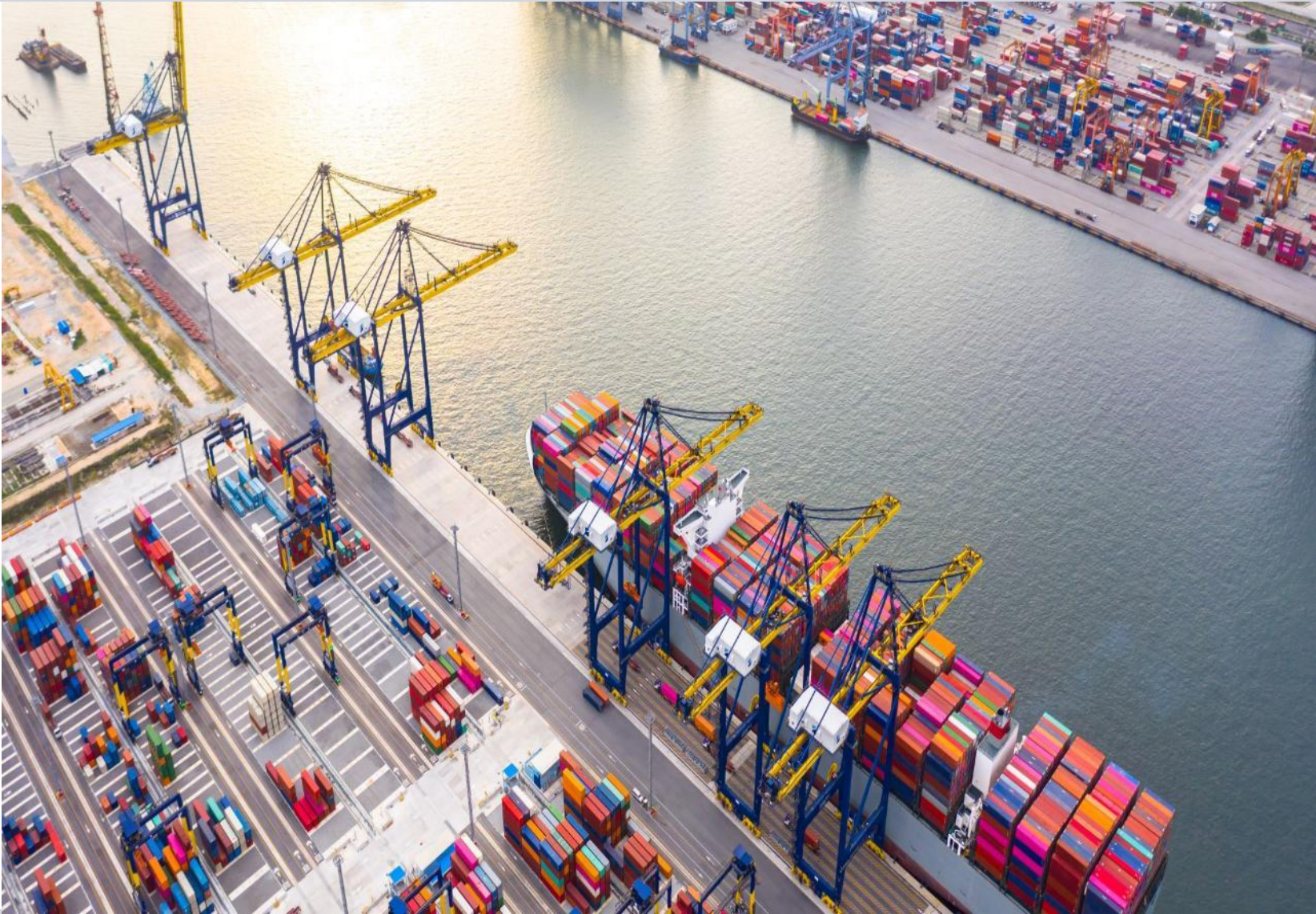


EFFICIENT

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

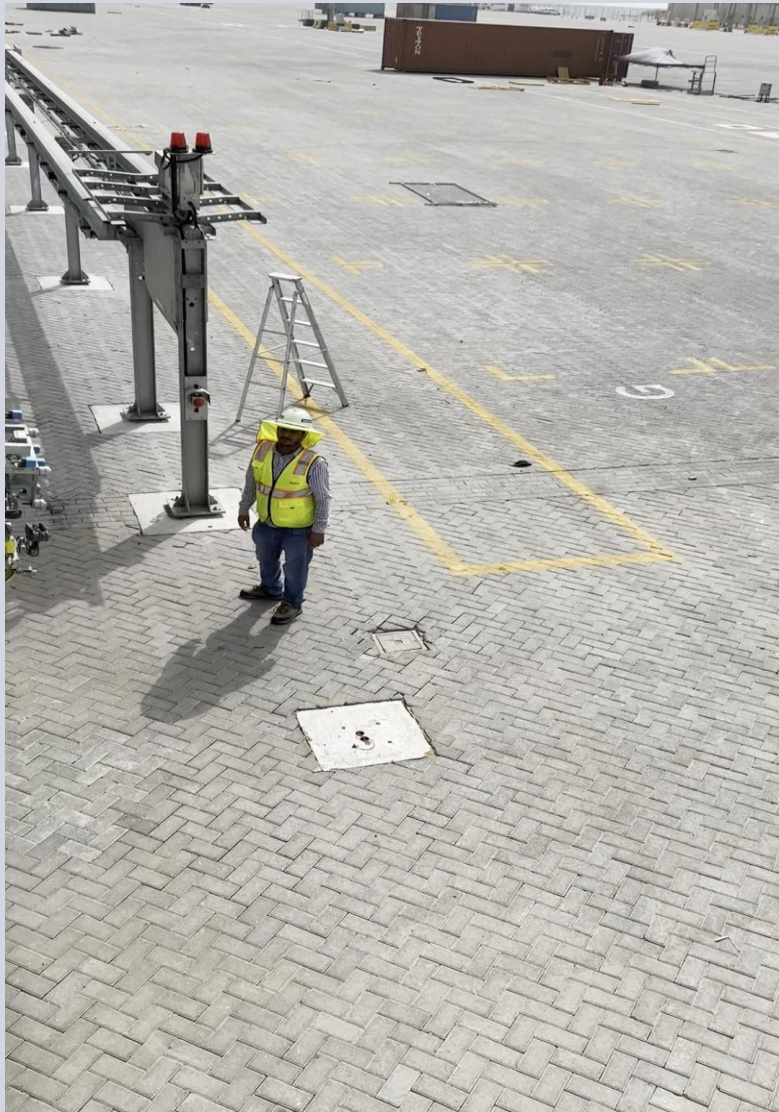
Case study – Thailand, Laem Chabang – HPT Terminal D

Container Terminal Automation



PRODUCT OVERVIEW

eRTG CRANES– Trimotion Compact



**YOUR VISION COUNTS:
WE ARE READY**

