

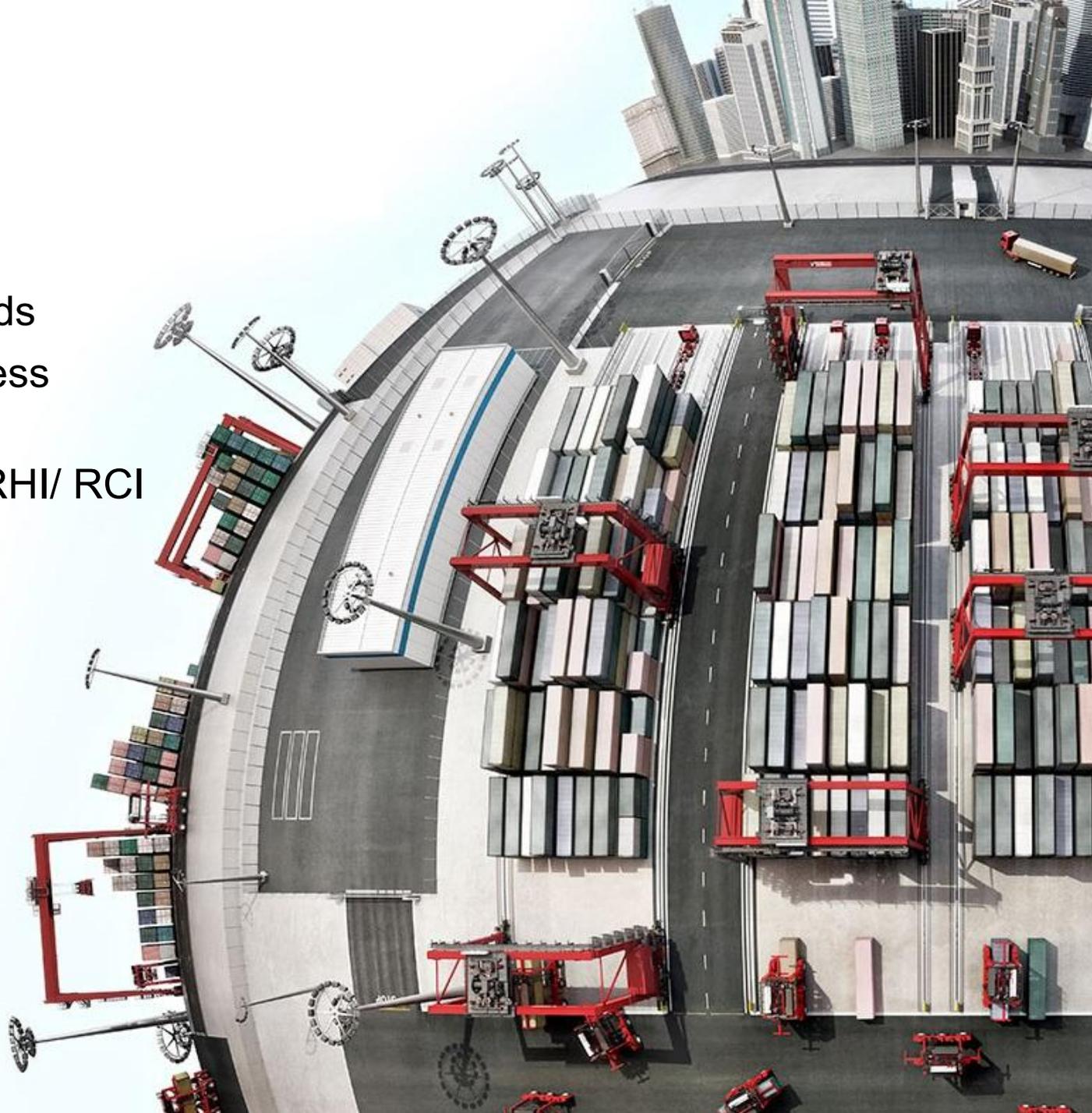
15 June 2017

One in four container movements around the globe is handled by a Kalmar solution.

Antti Kaunonen
President, Kalmar

Contents

- Overview
- Industry trends
- APAC business outlook
- Introducing RHI/ RCI



A global reach with personnel in 30 countries and sales and service in more than 100 countries.



Kalmar's operating environment



Provides integrated port automation solutions including software, services and a wide range of cargo handling equipment



TOS coordinates and optimises the planning and management of container and equipment moves in complex business environments.

Navis provides also maritime shipping solutions:

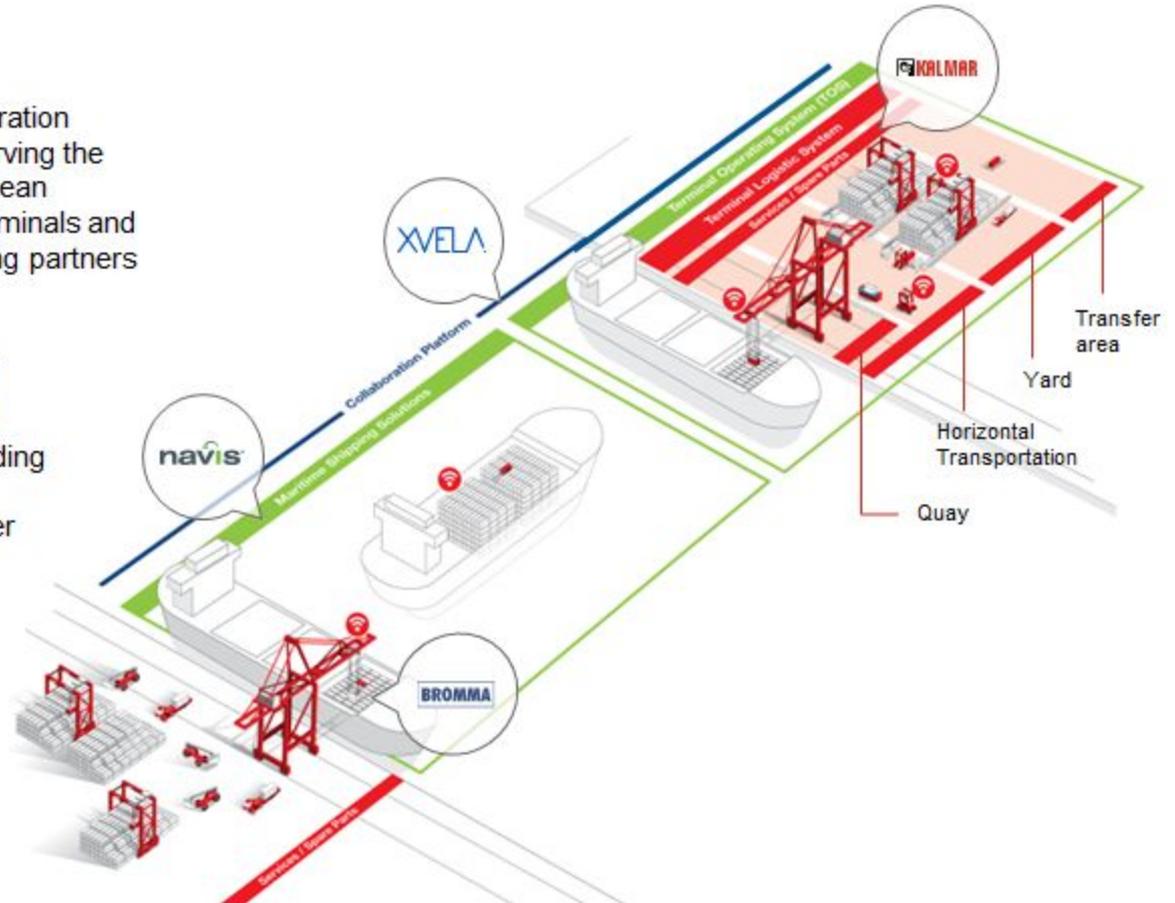
- Stowage planning
- Vessel monitoring
- Loading computer
- Route planning



The collaboration platform serving the needs of ocean carriers, terminals and their shipping partners



Industry leading spreader manufacturer



Kalmar business area solutions



Automation



STS cranes



Reachstackers



Empty container handlers



Crane upgrades



Maintenance



Navis TOS



Bromma spreaders



ASCs & RTGs



Straddle & Shuttle carriers



Terminal tractors



Forklift trucks



Spare parts



Used equipment



XVELA collaboration platform



ALP and ALS

Automation
&
Projects

Mobile
Equipment

Services

Navis
XVELA

Bromma

Mega trends



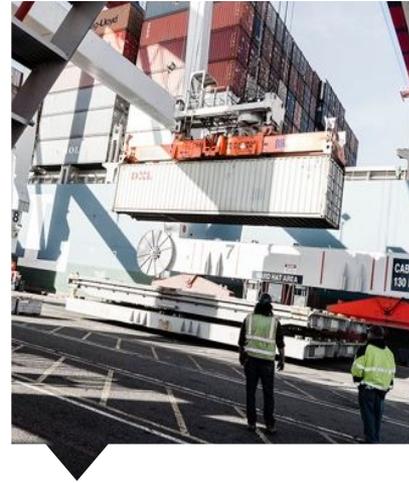
Mega vessels

Efficiency demands increase as marine transport continues to grow. Larger ships require capacity improvements from port operators.



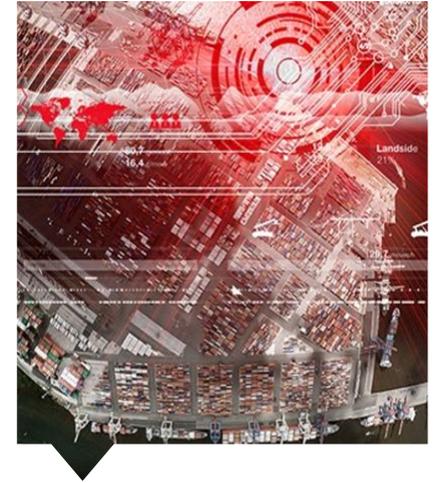
Sustainability

Strict emission requirements & growing concern for the environment increase the demand for more intelligent machines with smaller environmental impact.



Industry consolidation

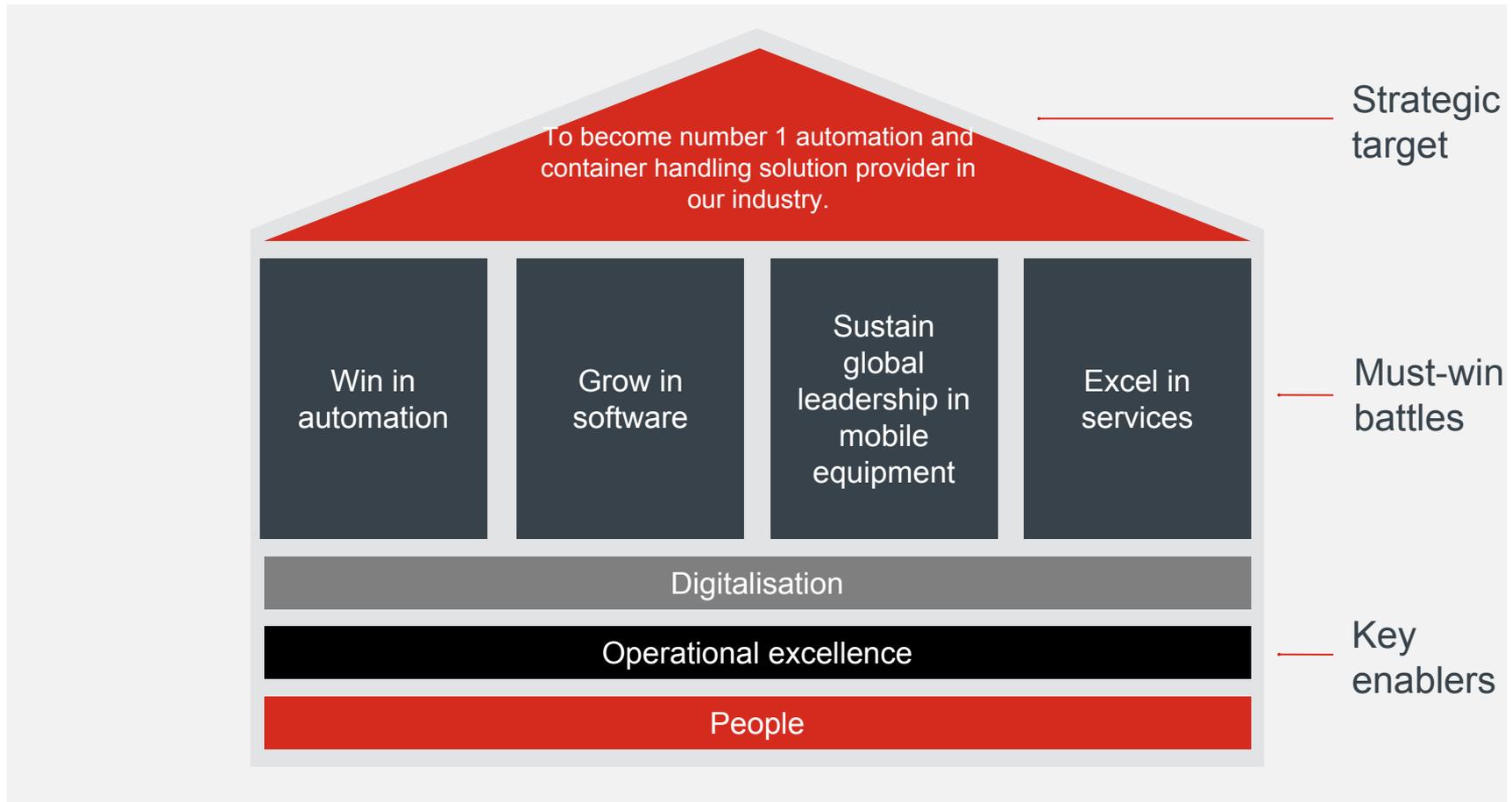
New alliances between shipping lines are impacting container traffic flows and setting new efficiency standards for port operators.



Digitalisation & automation

Digital and automated solutions provide new possibilities for port operators to improve efficiency, safety and sustainability.

Kalmar strategy: Focusing on profitable growth

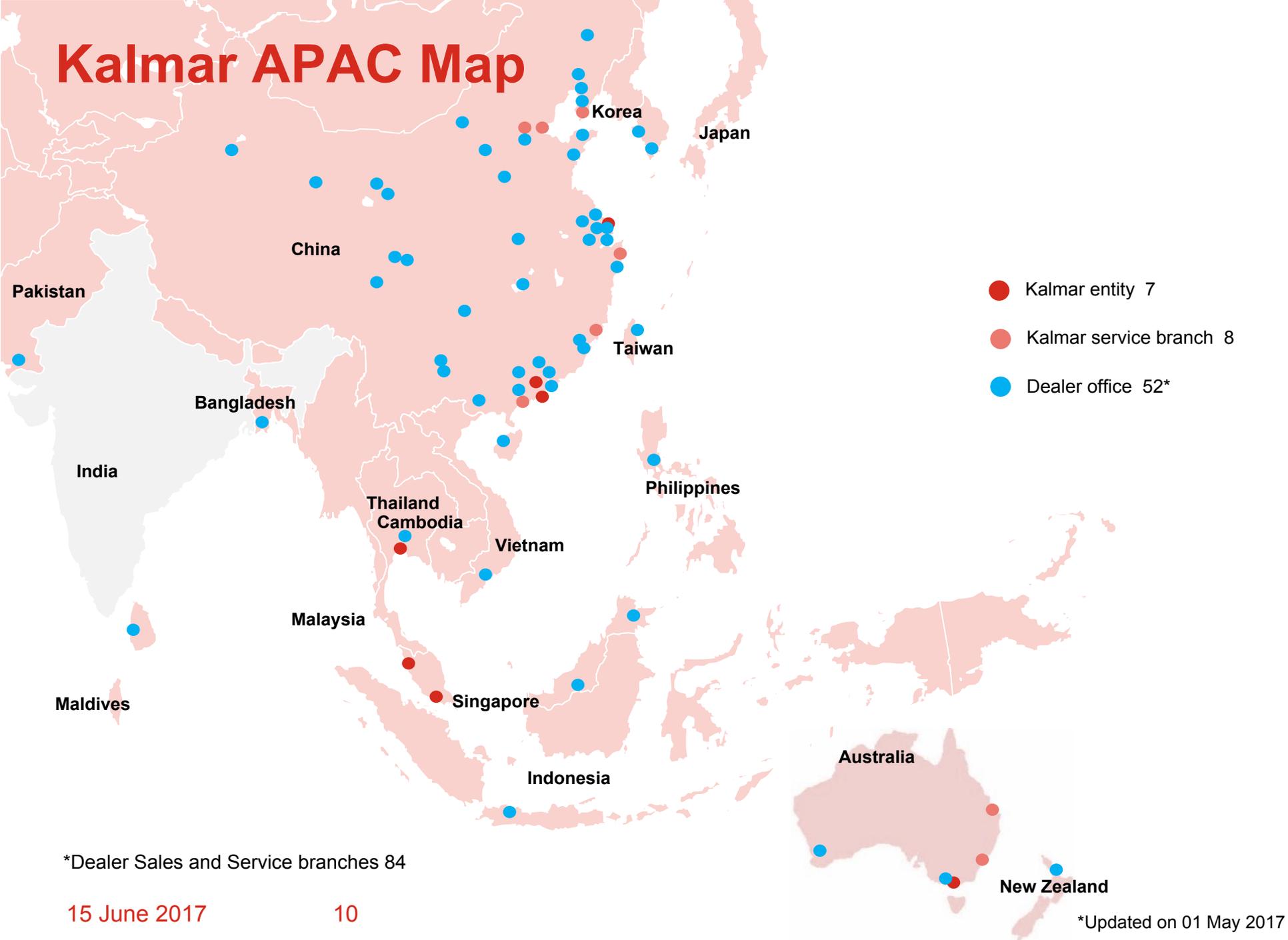


An aerial photograph of a port yard. On the left, a yellow truck is carrying a red container with 'K LINE' written on it. On the right, a red Kalmar reach stacker is positioned. The stacker has a yellow platform with the number '13' on it. The background shows a dark asphalt surface with yellow lines and some utility covers.

Kalmar has strong position in growing APAC market

Peter McLean
Senior Vice President, Kalmar Asia-Pacific

Kalmar APAC Map



*Dealer Sales and Service branches 84

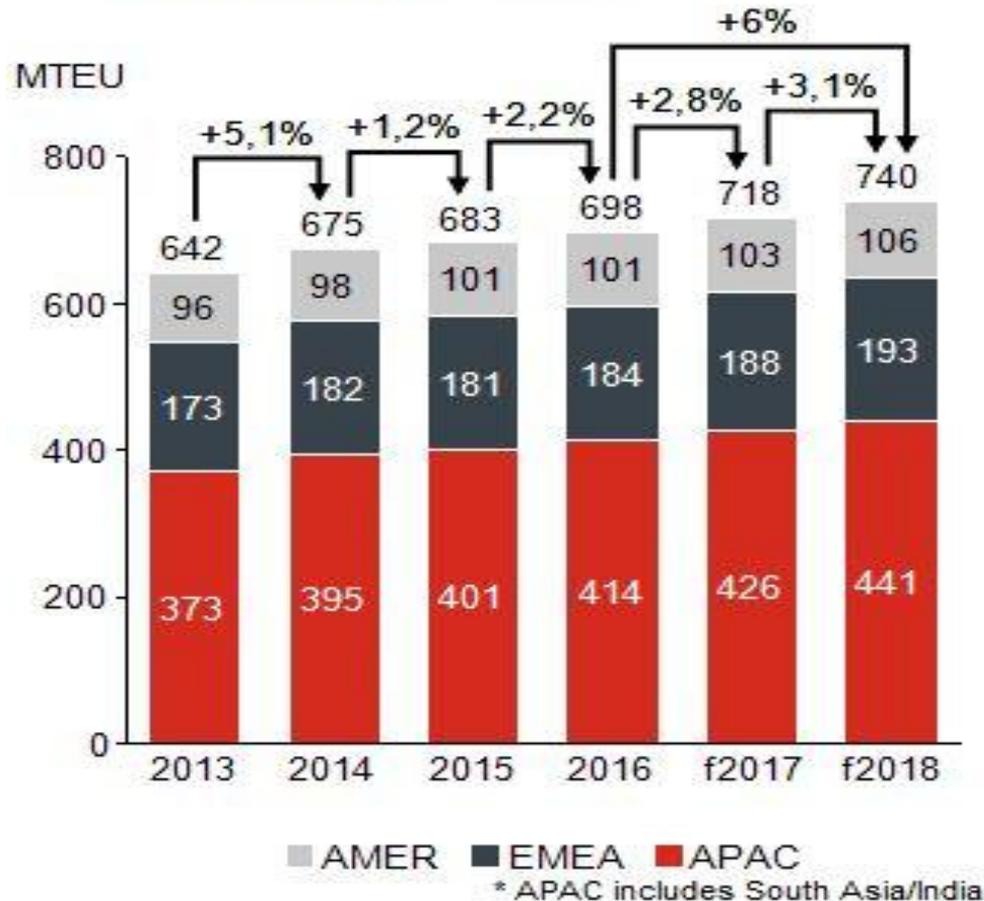
15 June 2017

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*Updated on 01 May 2017

Container throughput growth accelerating

Container throughput changes 2013-2018

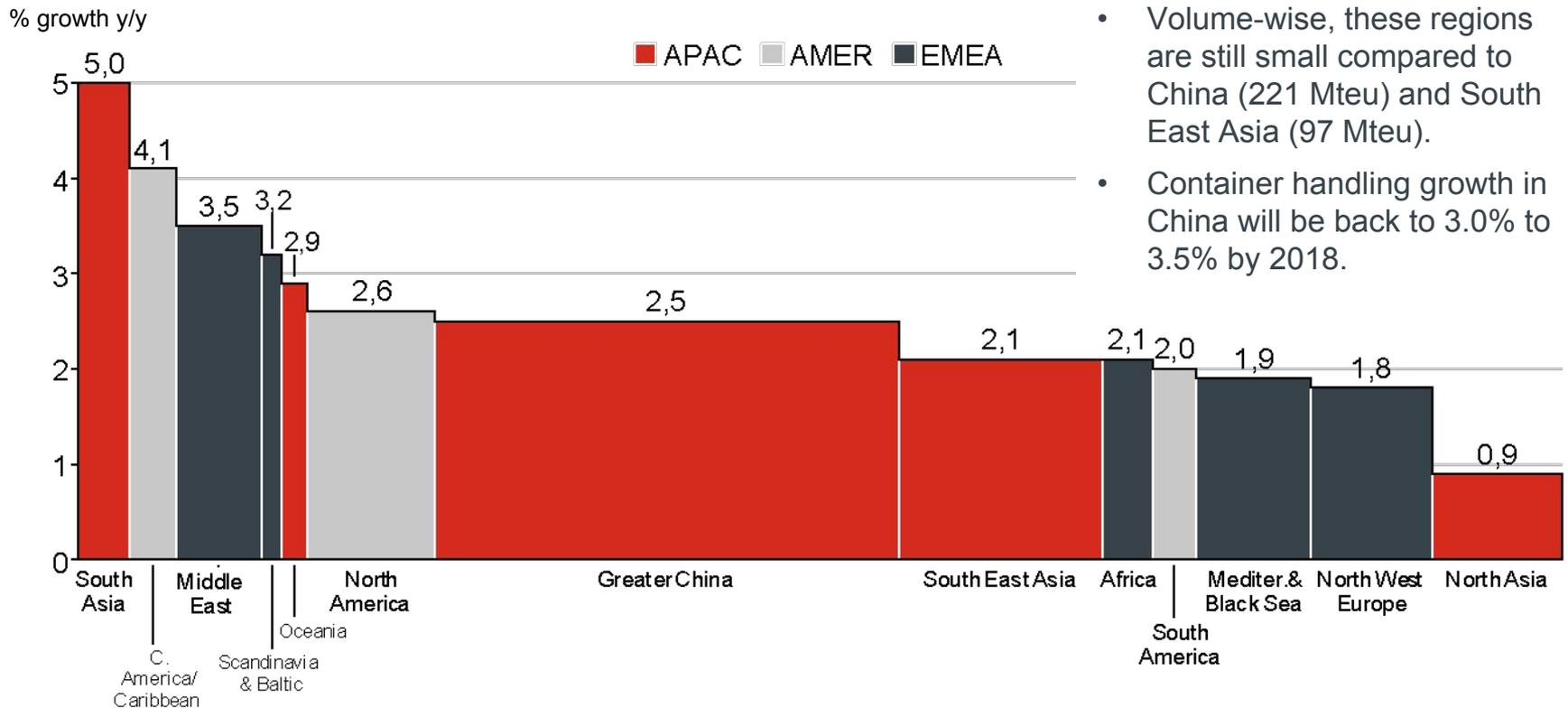


- The industry is picking up.
- APAC remains the dominating cargo house in the global market.
- The growth in Sri Lanka, Myanmar and Indonesia is promising, countries in South Asia are also on track.
- Singapore's container throughput in April increased 7.5% y/y to 2.72 million teu.
- Yantian Port in Shenzhen has potential be enlarged.

*y/y growth, Source: Drewry: Global Container Terminal Operators

Fastest growing regions vs throughput volumes 2017

- The fastest growing regions in 2017 are South Asia, Central America and Middle East.
- Volume-wise, these regions are still small compared to China (221 Mteu) and South East Asia (97 Mteu).
- Container handling growth in China will be back to 3.0% to 3.5% by 2018.



MTEU 2017	24	22	41	10	12	61	221	97	24	20	55	58	62	Total: 707 Mteu
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Market trend and key drivers in APAC

Port Operations

- Driven by logistics demand and world trade – Containerization
- Port Automation: streamline operations planning and improve customer satisfaction
- Investments in greenfield projects in emerging markets
- Trends in upgrades in existing ports

Logistics Centers

- Driven by logistics demand and world trade – E-commerce and Containerization
- Vertical integration: Terminal operators are expected to increase their influence throughout supply chains
- Terminal operators are trying to integrate more terminals in supply chains
- Shipping lines are acquiring container terminal assets worldwide

Market trend and key drivers in APAC

Road & Rail Transportation

- Driven by industrialization of all Asian countries
- Railway expansion and hinterland development by China and ASEAN countries – OBOR
- PSA leaps into China's intermodal rail network

Manufacturing Industries

- Driven by industrialization of all Asian countries
- Consolidation globally
- Investments in emerging markets/ low cost countries
- Outsourcing of all material handling activities – 3rd Party logistics
- Focus on uptime of the machines
- Driver interface / customer application

APAC development

Win in automation

Focus projects in Australia.
Instill automation thought
leadership across APAC.

Service growth

Initiatives in place and
service culture mindset to
develop Ecommerce roll-out
by end of 2017.

Sustain leadership in mobile equipment

APAC market share of
reachstackers above target.

People development

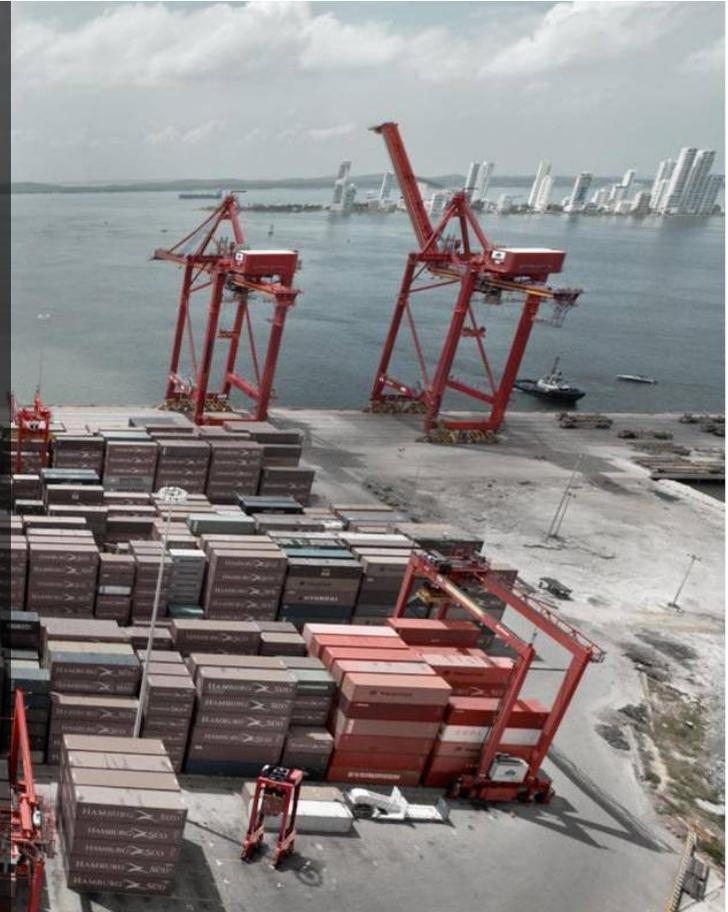
GROW program to be rolled
out in APAC to develop
leaders of tomorrow.

A man with a beard and long hair is wearing a black Oculus Development Kit 2 VR headset and orange safety gloves. He is smiling broadly, looking into the headset. He is wearing a black shirt with a red strap across his chest. The background is an industrial setting with metal railings and a red structure.

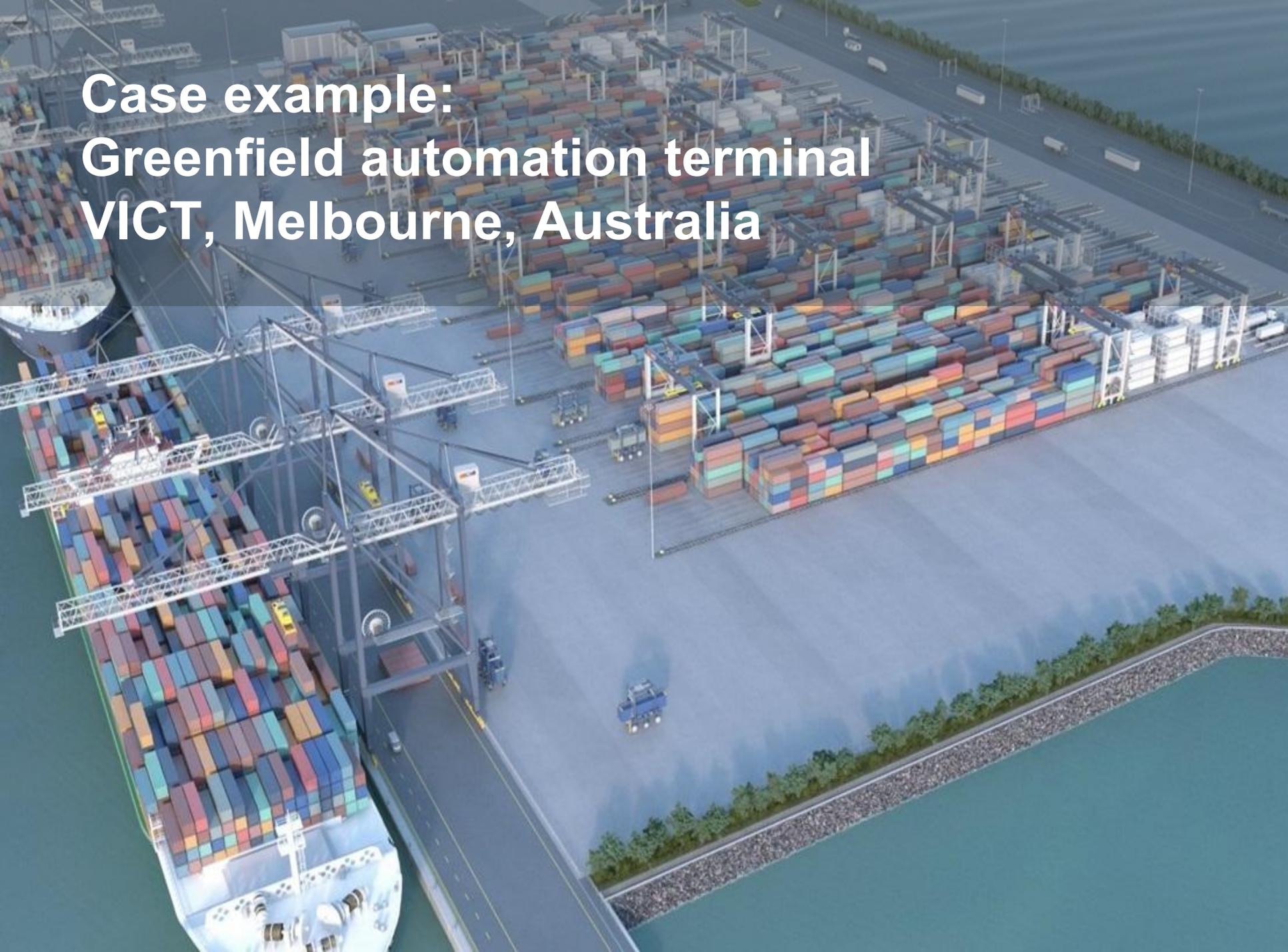
Automation: The Future of Port Operations

Success in automation

- Terminals are looking for different types of automation
- Greenfield projects = New automated terminals, expansion of current automated terminals or conversions of existing manual operations
- Brownfield projects = Automating existing manual operations
 - Development in early phase
 - Existing straddle carrier terminals & RTG terminals
- Successful cases in Australian market



**Case example:
Greenfield automation terminal
VICT, Melbourne, Australia**



Automation Projects in Australia

VICTL

Melbourne, Australia (Completed in 2017)

Terminal setup:

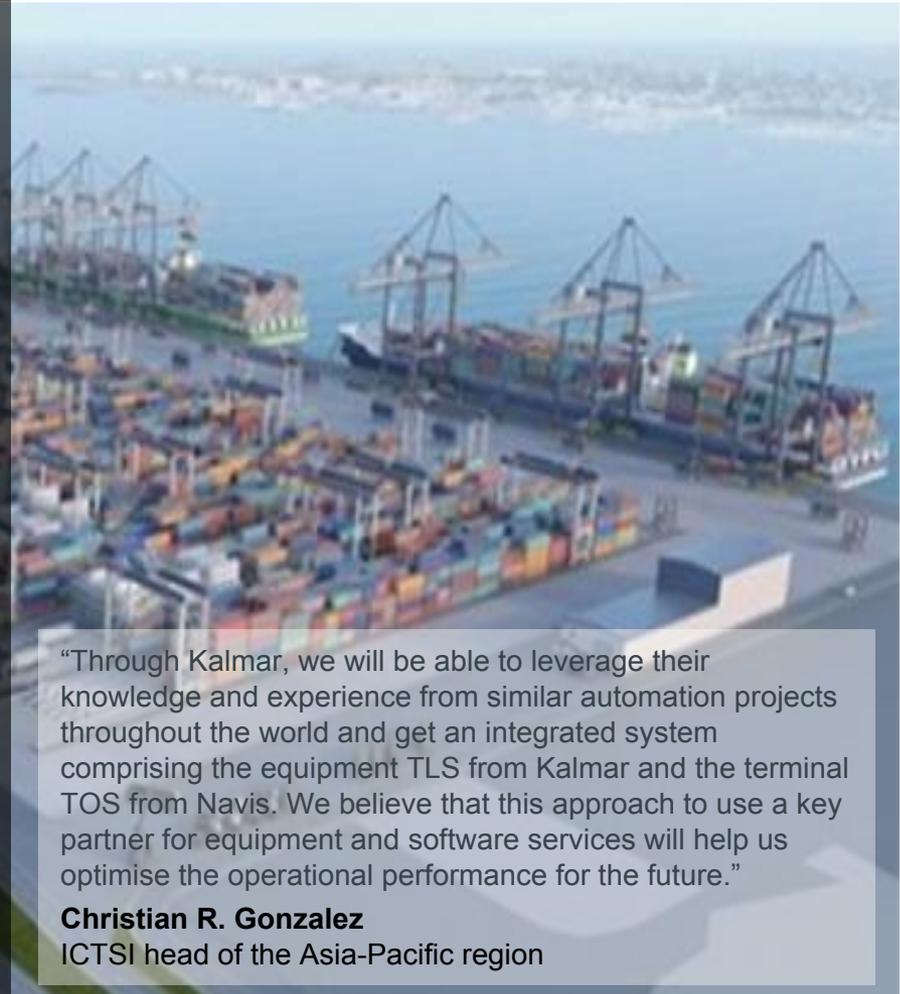
- Greenfield, fully automated
- ASCs and AutoShuttles™
- Phase 1 - 600.000TEU

Equipment & software

- 12 Kalmar ASCs
- In Phase 2, 8 ASCs more in delivery
- 11 Kalmar AutoShuttles™
- Kalmar TLS
- Kalmar Automated Truck Handling
- Navis N4 TOS
- System Integration Services

Comment

The ability to integrate and link several components into a one seamless process brings true value to the customer. As a system integrator, Kalmar provides a solution, all the way from the TOS, TLS automation, software, equipment, services and consulting to the integration services that bring an automated terminal together.



“Through Kalmar, we will be able to leverage their knowledge and experience from similar automation projects throughout the world and get an integrated system comprising the equipment TLS from Kalmar and the terminal TOS from Navis. We believe that this approach to use a key partner for equipment and software services will help us optimise the operational performance for the future.”

Christian R. Gonzalez
ICTSI head of the Asia-Pacific region

AHTS with Autoshauffles

Fully decoupled container handoffs under STS and ASC ensures best STS productivity with highest utilization of the equipment

Ship to shore cranes

SmartQuay

Autoshauffles

Auto LashingPlatform

STS operation

- Remote controlled STS with semi-automated functions
- Automated twistlock handling using ALP
- OCR for container ID recognition
- Exclusion between STS and Autoshauffles

Service Contract

TLS

Integrated fleet management solution for ASC and Autoshauffles

ASC stacks

- 2 crane ASC blocks
- Access Control System that ensures safety of the personnel
- Own inventory database

Data Centre for IT Systems

Automated Stacking Cranes

Gate operation

- OCR for container ID recognition
- RFID identification and/or LPR

N4 TOS

- Holistic optimization functions
- Automatic yard planning
- Automatic vessel/berth planning

Landside operation

- Automated truck handling using Kalmar ATH
- Remote control needed only for exception handling

SmartLanes

Anticipated Year 2025 Map Australia/New Zealand Automated Terminals



China: Where the Opportunities Are



China Eyes on Logistics Industry Development



- The logistics industry grew steadily last year amid industrial restructuring
- The total value of social logistics goods in 2016 expanded by 6.1 percent year-on-year to 229.7 trillion yuan (about \$33.2 trillion)
- China will encourage more logistics development in the next five years to bolster economic growth and deepen supply-side reform
- By 2020, 150 transportation hubs and 3,000-kilometer railway and highway lines connecting with key ports in China

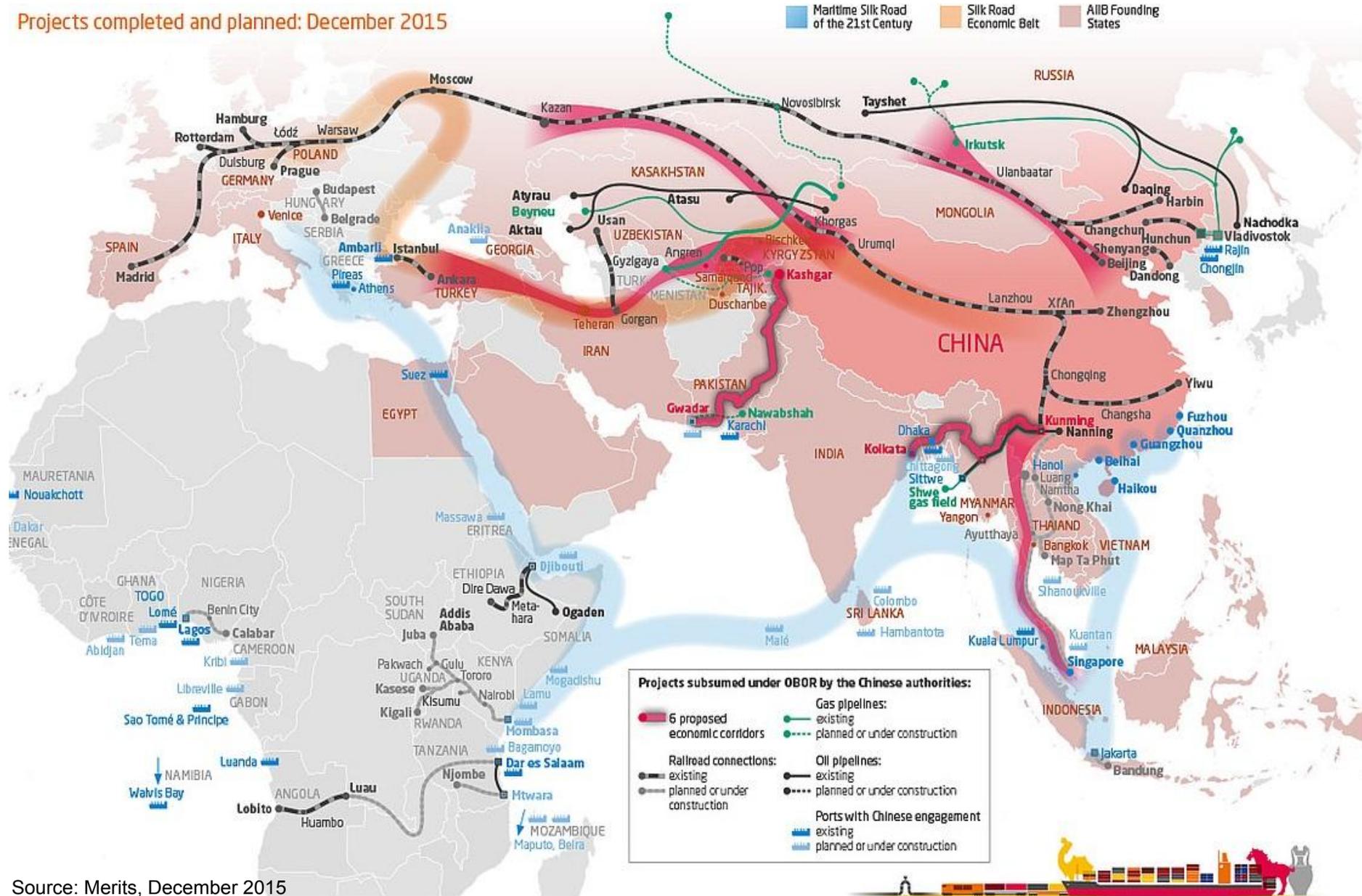
The Latest Wave of Alibaba



- Alibaba established Cainiao Logistics Company – an asset-light, smart and data-driven logistics network company
- Alibaba and Malaysia will set up a logistics and e-commerce hub in the SE Asia.
- Alibaba concluded a cross-border e-commerce cooperation agreement with the world's largest logistics network, WCA Ltd.
- Alibaba joints hand with KUEHNE+NAGEL (K+N) to offer leading e-commerce logistics solutions to China based shippers.

China: One Belt-One Road (OBOR) initiative

Projects completed and planned: December 2015



Kalmar's competitive position in China

1. Well established brand

2. Leading player in Empty Container Handler and Reachstacker markets

3. Strong and extensive agent and distribution network

4. Strong and comprehensive service support

5. Manufacturing capabilities advantage with Shanghai factory & RCI

Our winning strategy in China

- Expand sales coverage- develop hybrid model
- Expand service capabilities
- Key account management – Regional
- Manufacturing capabilities and support to develop future products
- Intermodal market: opportunities for Reach Stackers

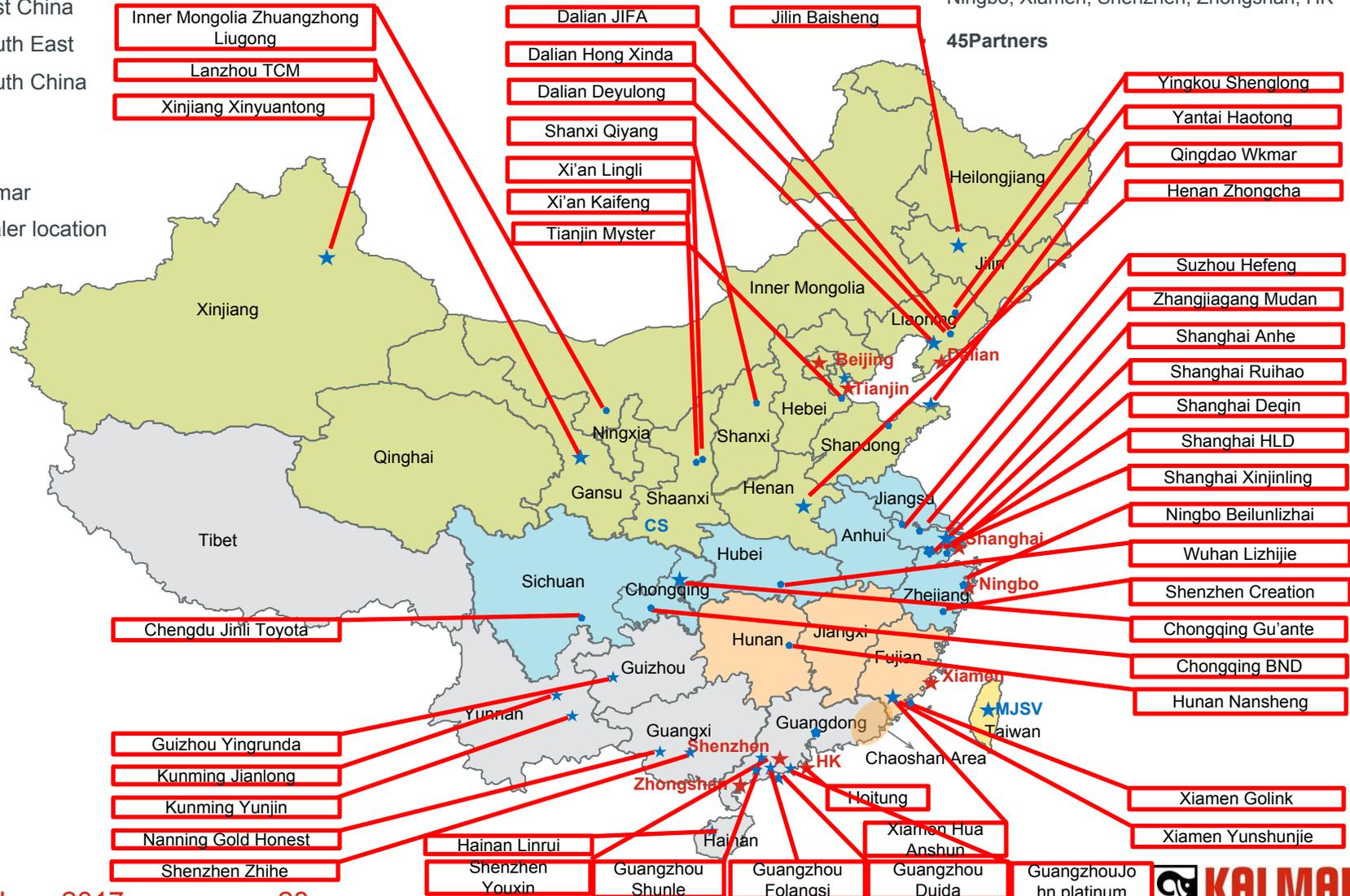
Dealer Network

- North East & North China
- East China
- South East
- South China
- HK

- ★ Kalmar
- ★ Dealer location

- **5 BU**– North East & North China(NC), East China(EC), South East(SE), South China(SC), Hongkong(HK)
- **9 Branch**– Beijing, Tianjin, Dalian, Shanghai, Ningbo, Xiamen, Shenzhen, Zhongshan, HK

45 Partners



Our winning strategy in China

- Expand sales coverage- develop hybrid model
- Expand service capabilities
- Key account management – Regional
- Manufacturing capabilities and support to develop future products
- Intermodal market: opportunities for Reach Stackers



Kalmar Manufacturing facility in Shanghai

Cargotec Industries (China) Co. Ltd. (CICL)

- Total land area 50,000m²
- No. of employees 170
- Certificates ISO 9001 | ISO 14001 | OHSAS 18001

Our winning strategy in China

- Expand sales coverage- develop hybrid model
- Expand service capabilities
- Key account management – Regional
- Manufacturing capabilities and support to develop future products
- Intermodal market: Opportunities for Reach Stackers





Profession | Innovation | Responsibility | Win-win



RHI - JIANGSU RAINBOW HEAVY INDUSTRIES CO., LTD.

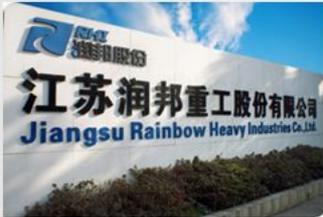
Wujian

Chairman of Rainbow Group

General Manager of RCI



Company Profile

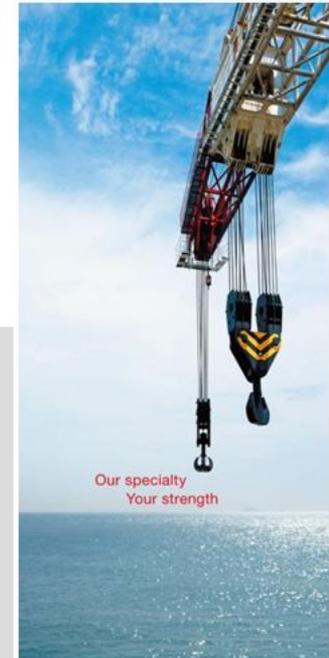


RHI is a professional heavy equipment provider.

RHI is located in Nantong and established in 2003.

RHI is listed at SZSE since 2010, stock code "002483".

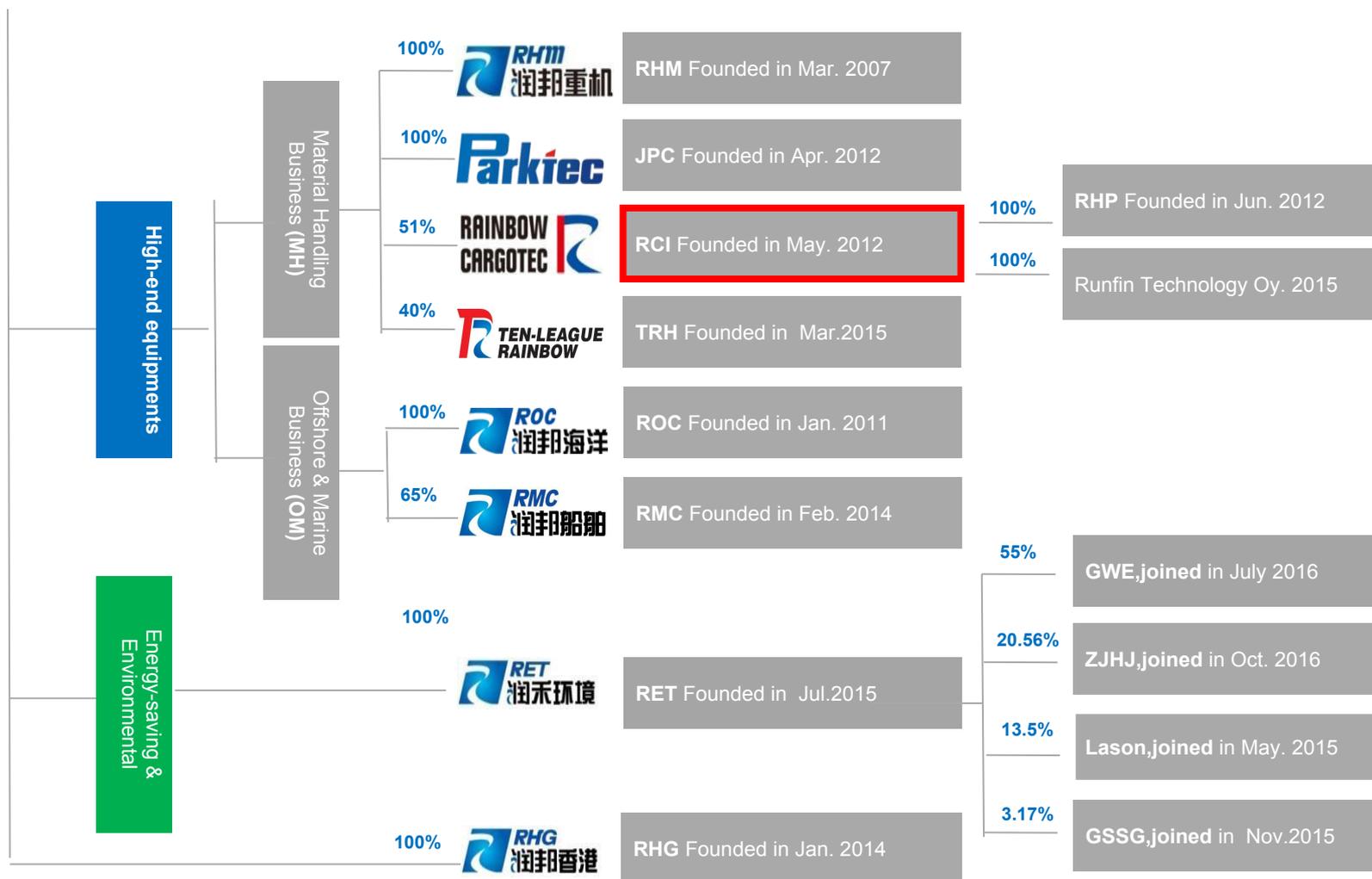
RHI is the strategic partner of Cargotec in China.



Group members



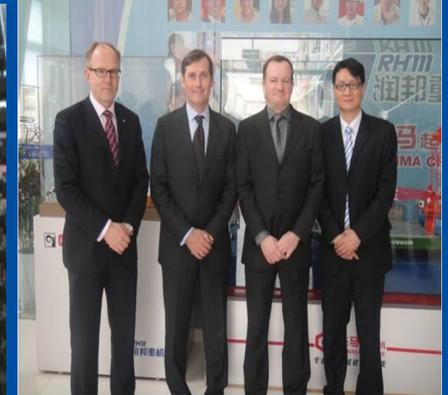
Jiangsu Rainbow Heavy Industries Co., Ltd. (RHI) Founded in Sep. 2003



We have established long-term strategic partnerships with Cargotec Group (Finland), Rio Tinto Group (Spain), Ulstein Group (Norway), IHC Group (Netherlands), AG Group (Indonesia) and other world famous enterprises.

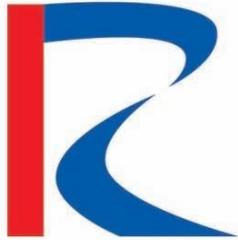
RHI is the strategy partner of Cargotec, which has long term cooperation relations:

1. RHI provide the products to Cargotec since 1999;
2. RHI/Cargotec built one joint venture(RCI) in 2012.
3. Cargotec is one of RHI owners, which holds 7.87% share;

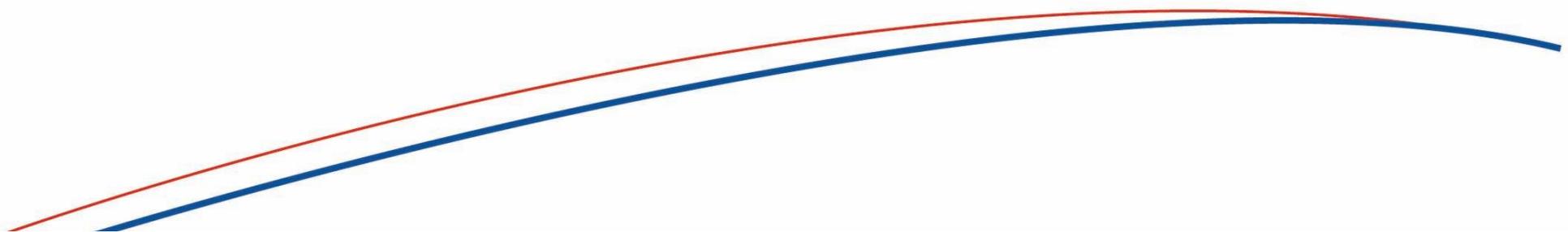




Rainbow-Cargotec Industries Co. Ltd. (RCI)

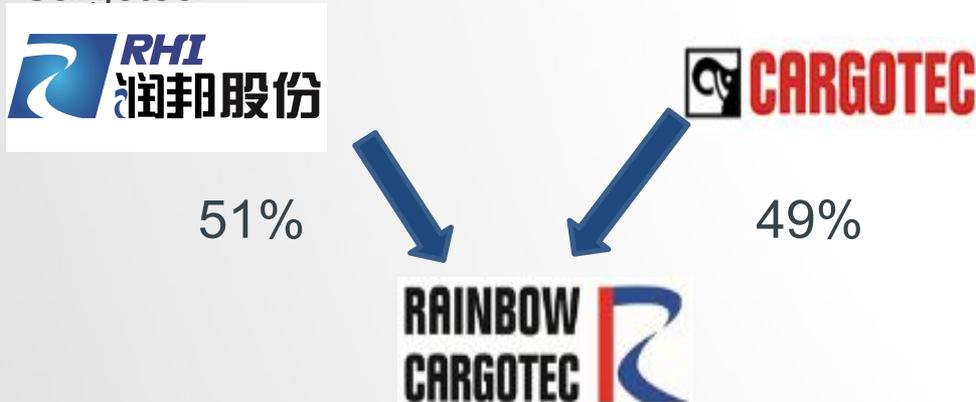
**RAINBOW
CARGOTEC** 

We Deliver Success Together



Background

- Rainbow-Cargotec Industries Co. Ltd. (RCI) is a joint venture of Rainbow and Cargotec.



- The company is authorized to produce both Kalmar and GENMA products for international and China markets respectively.





Rainbow contributions	Cargotec contributions
<ul style="list-style-type: none">• Production knowledge• Access to local labour• Strategic location• Access to some local customers• Chinese brand• Access to local government	<ul style="list-style-type: none">• Technology know-how• Customer's business knowledge• Proven routes-to-the-market• Access to global markets• Global brands• Company image and recognition



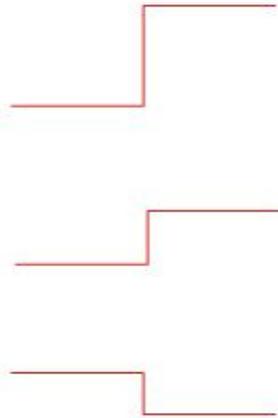
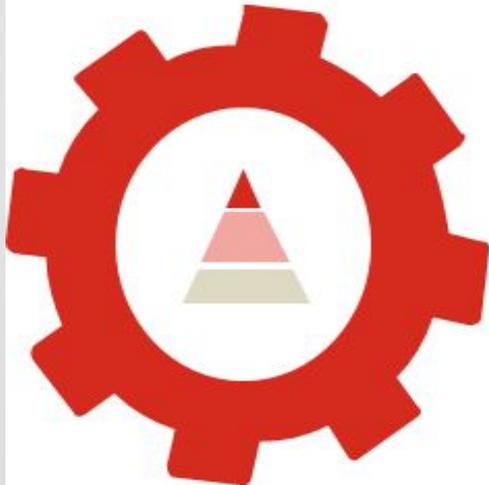
Competitive solutions for Chinese and global markets

About RCI

- Date of establishment 18 May 2012
- Business period 50 years
- Location Taicang, China
- Total land area 450mu
- Water front 365m
- Gross investment 182 MEUR
- No. of employees 348
(as of Dec 2016)
- Annual production capacity



RTG	STS	RMG & ASC	AHC
190	36	75	35



No.1 in RTG by 2018

No. 2 in STS in long term

Enter RMG market in 2017

Production Facilities



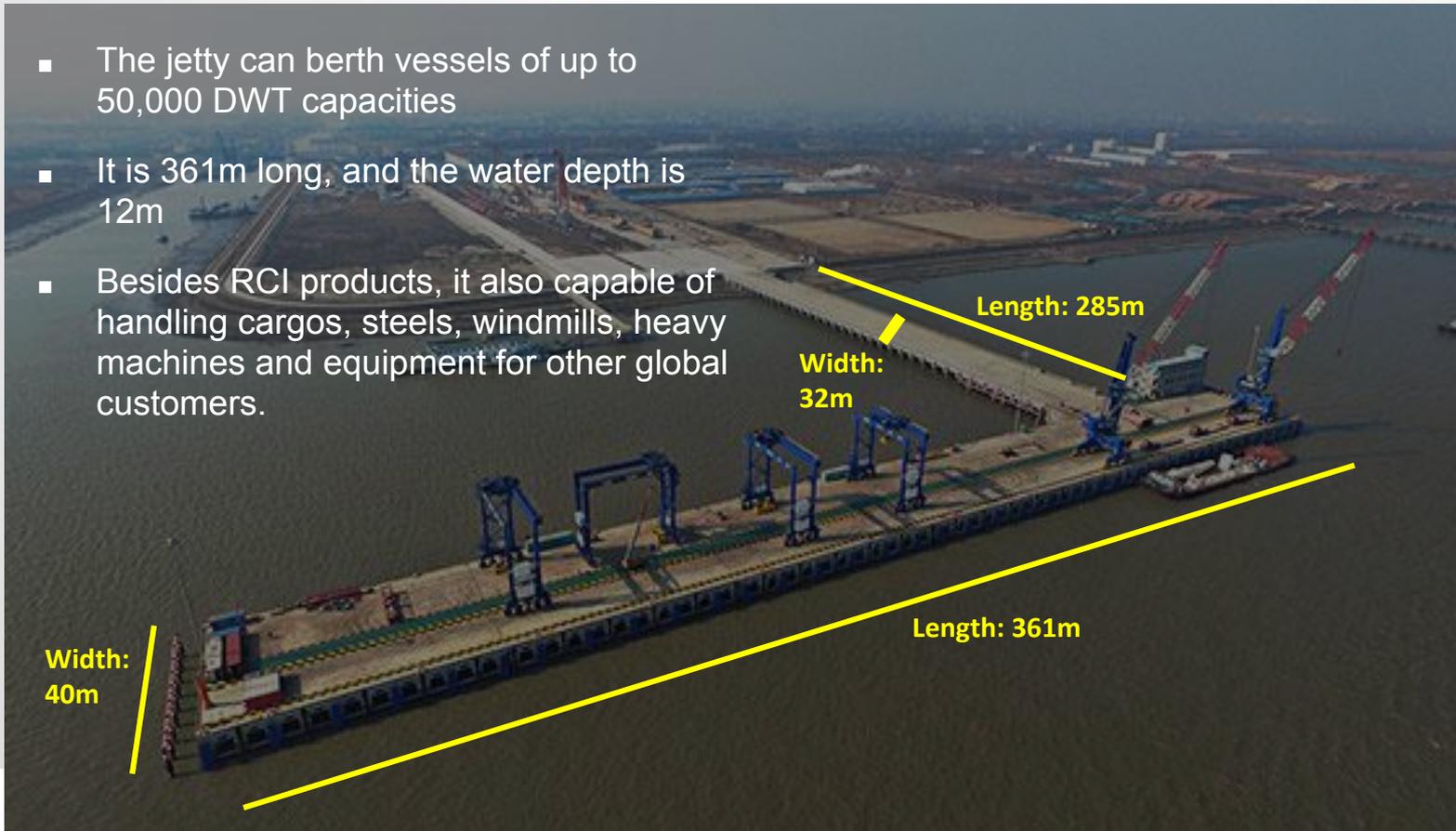
- Phase I: Workshop and offshore testing foundations – occupied about 25% of the total land area
- Phase II: Jetty – opened in early 2017
- Phase III: RTG & STS production site – will be opened in Aug 2017 (est.)
- Phase IV: ASC & RMG production site – construction will be commenced in Sep 2017.



Phase II – RHP Jetty



- The jetty can berth vessels of up to 50,000 DWT capacities
- It is 361m long, and the water depth is 12m
- Besides RCI products, it also capable of handling cargos, steels, windmills, heavy machines and equipment for other global customers.





ZERO
Incidents

Our Achievements

- Flat organisational structure; fast decision making
- Shorten the delivery time to 9 months
- All RTG orders (238 in total) handed over to customers on time, and in good quality
- Localised the engineering, production and components sourcing processes which improved the profit a lot
- Zero incidents



Making your every move count

Appendix

Automation Projects in Australia

DP World Brisbane, Australia

Terminal setup:

- Brownfield - conversion from a reachstacker operation
- ASCs and manual shuttle carriers
- 2 cranes per block
- 900.000 TEU

Equipment & software

- 16 Kalmar ASCs
- 14 manned Kalmar Electric Shuttle Carriers
- Kalmar TLS
- Kalmar Automated Truck Handling
- Navis N4 TOS

Comment

The competitive environment at the Port of Brisbane became tougher with the arrival of a third stevedore in 2012.

DP World Brisbane realised that it would have to make more effective and efficient use of terminal space while maintaining the highest standards of safety, and comply with maritime transport security regulations and customer service.

“Ultimately, we felt that a combination of ASCs and shuttle carriers would not only provide the best financial return on investment, but also the highest level of waterside productivity.”

Mark Hulme
COO, DP World Australia

Automation Projects in Australia

Patrick Terminal Brisbane, Australia

Terminal setup:

- Capacity 800 000 TEU
- AutoStrad terminal

Equipment & software

- 27 Kalmar AutoStrads™ – 3-high
- In-house TOS
- Kalmar RTCS (Real Time Control System)

Comment

The unmanned Kalmar AutoStrads™ can operate 24/7 in almost any weather conditions, ensuring smooth flow of cargo and significant cost savings.

Patrick's work force has decreased drastically, as today a crane gang of only four people is needed to operate a ship-to-shore crane and the yard and stacking area.

The transition to automation can be done quickly and at low cost.



"We went 12 months without a single lost time injury among our 160 employees."

Matt Hollamby,
Brisbane manager, terminals division, Patrick

Automation Projects in Australia

Patrick Terminal Sydney, Australia

Terminal setup:

- AutoStrad terminal

Equipment & software

- 44 Kalmar AutoStrads™ – 3-high
- Radar-based navigation system
- In-house TOS
- Kalmar RTCS (Real Time Control System)
- Kalmar Care service contract

Comment

The whole process can occur overnight and without the need for expensive overhead lighting – AutoStrads do not need to see to navigate. They use 20 per cent less fuel and incur lower maintenance costs.

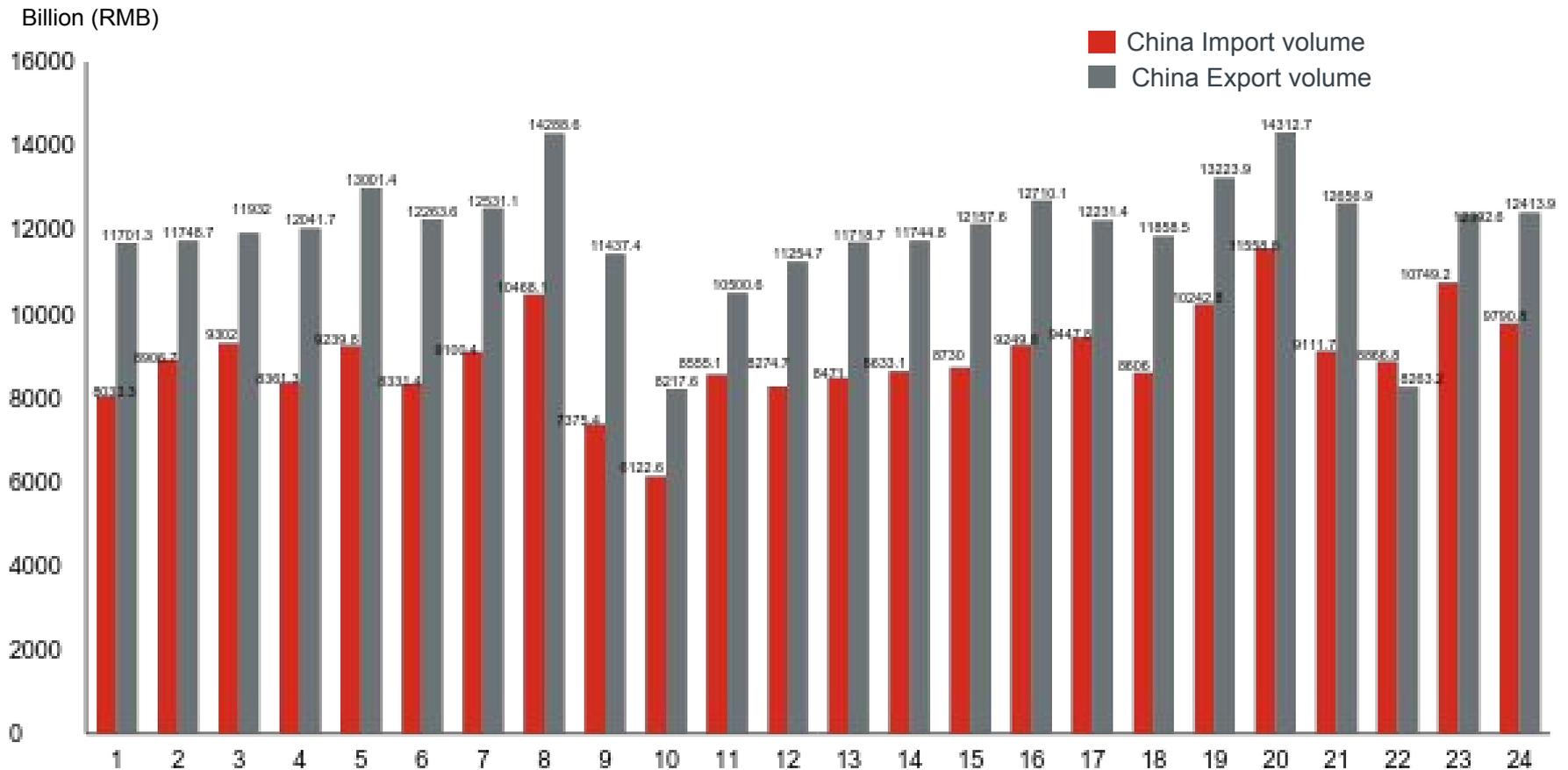
And when there's a rush on – for instance, when a bunch of truck drivers arrive to take containers away – the algorithm that controls the AutoStrads will redirect them from other tasks to focus on the most pressing job.

“This is fully automated, there are no human beings, literally from the moment this truck driver stepped out of his cabin from then onwards this AutoStrad will take it right through the quay line without any humans interfacing at all.”

Alistair Field

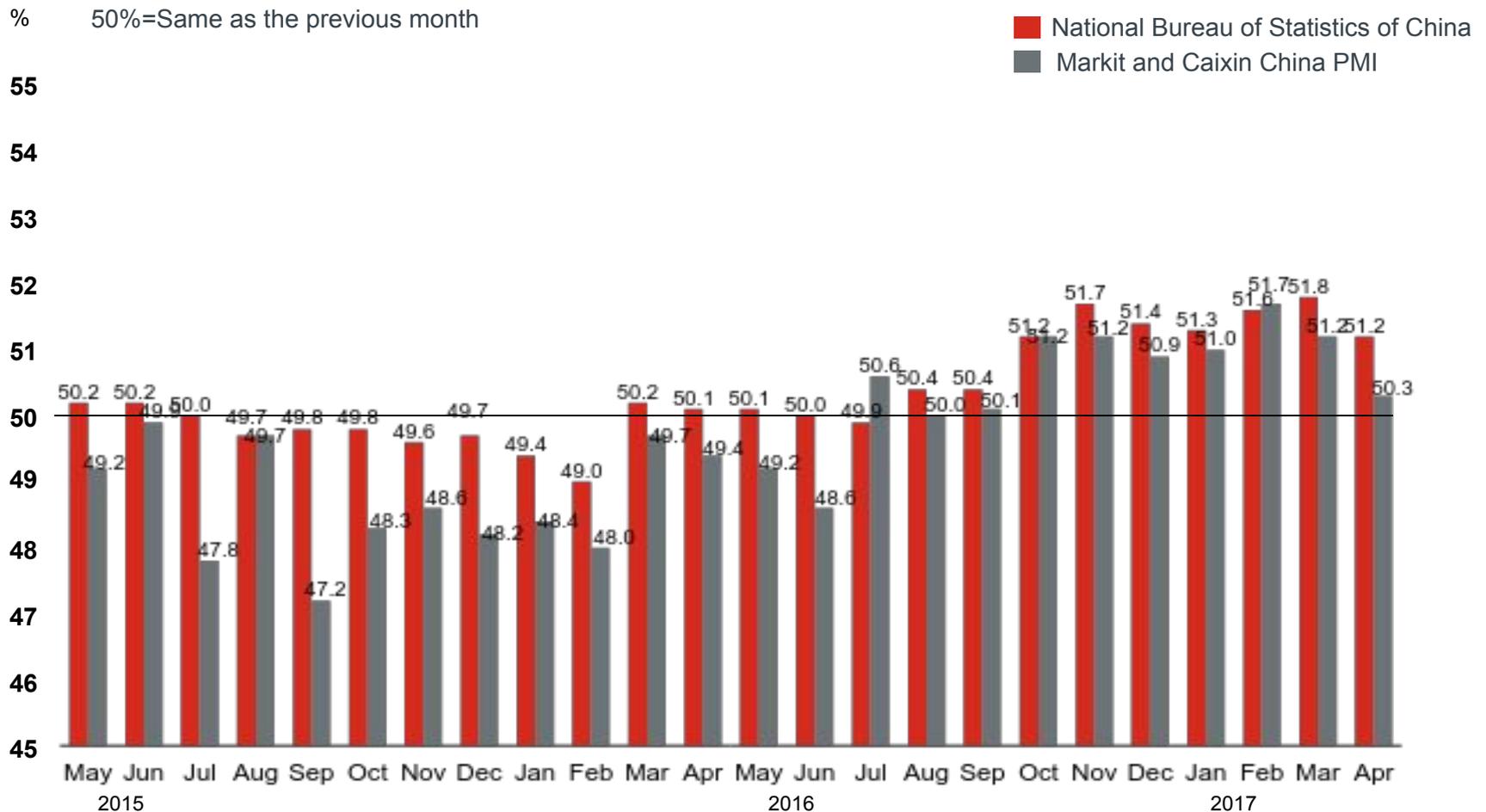
Managing director of Patrick Terminals and Logistics

China Import and Export Volume



Source: China Customs Statistics

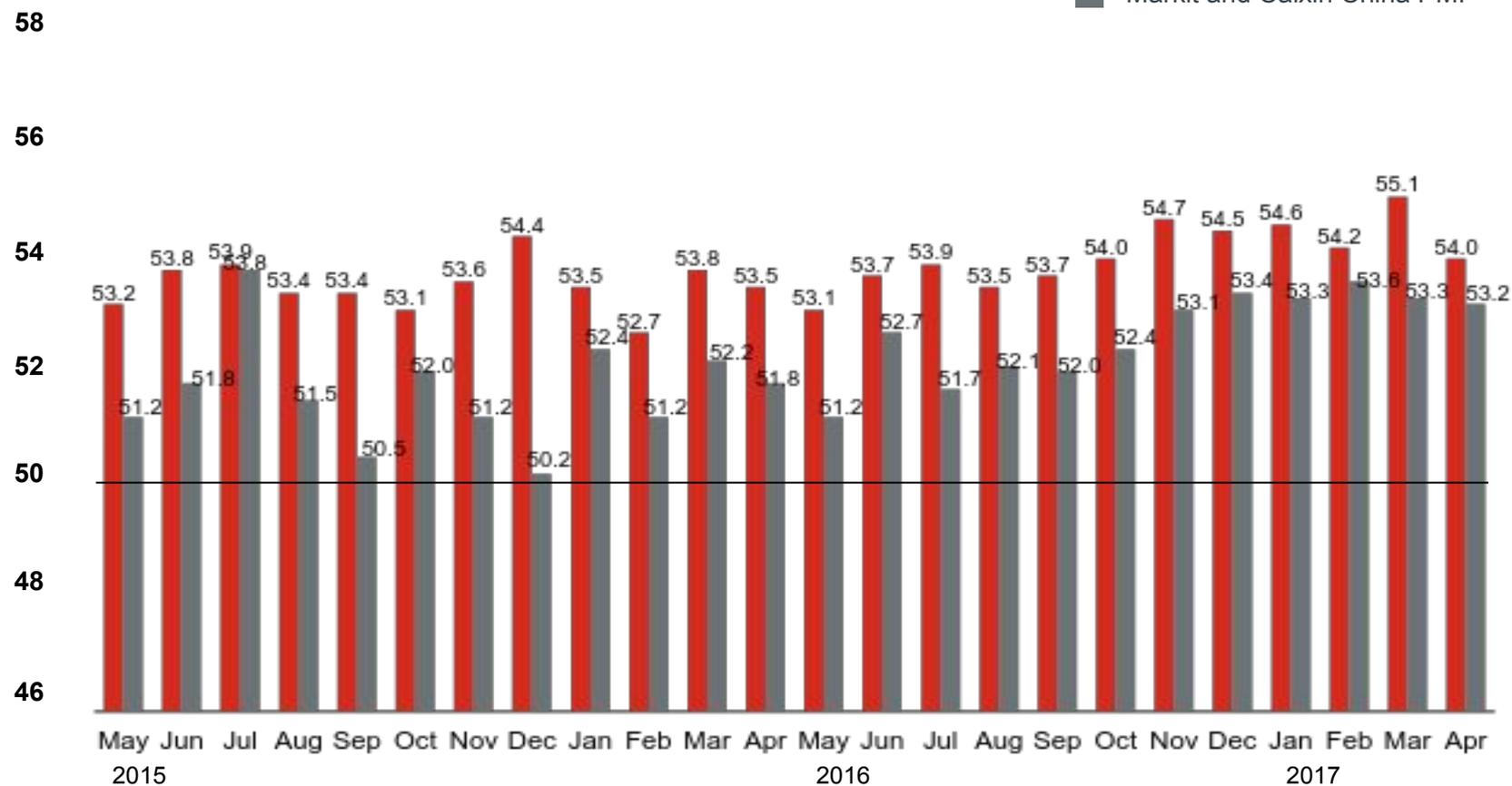
China's Manufacturing Purchasing Managers Index (PMI)



China's Non-manufacturing Purchasing Managers Index

% 50%=Same as the previous month

■ National Bureau of Statistics of China
 ■ Markit and Caixin China PMI





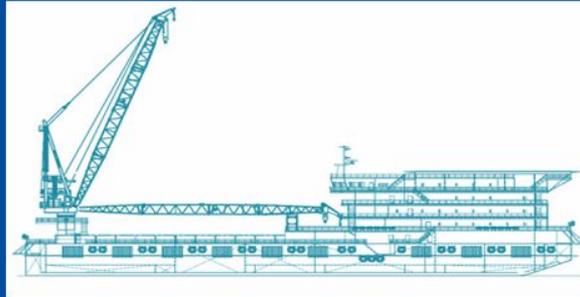
Profession | Innovation | Responsibility | Win-win



RHI - JIANGSU RAINBOW HEAVY INDUSTRIES CO., LTD.



- PSV (Platform Supply Vessel)
- AHTS (Anchor Handling & Tug Supply Vessel)
- IMR (Subsea Inspection, Maintenance and Repair)
- Accommodation Barge





Product Line

Marine Equipment



- Side Rolling types
- Lift-Away types
- Hydraulic folding types
- Lifeboat davit



Product Line

Shipyard/ yard/Factory Handling Solutions (G1)



- Gantry Cranes
- Overhead Cranes
- Metallurgy Cranes



Product Line

Offshore engineering solutions (G2)



- JACK UP System





- E.P.C in mining material/ grain/chemic/cement industry
- Material processing/ storage equipment





- Mobile Harbor Crane
- Mobile Hopper
- unloader
- Material Storage
- Conveyers





Product Line

Parking system
solutions



Parktec

- PSH Elevating & Sliding Parking System
- PPY Sliding & Elevating Parking System
- PJS Mini Mechanical Parking System
- Tower Type PSH Elevating & Sliding Parking System

Parktec

