



SIEMENS



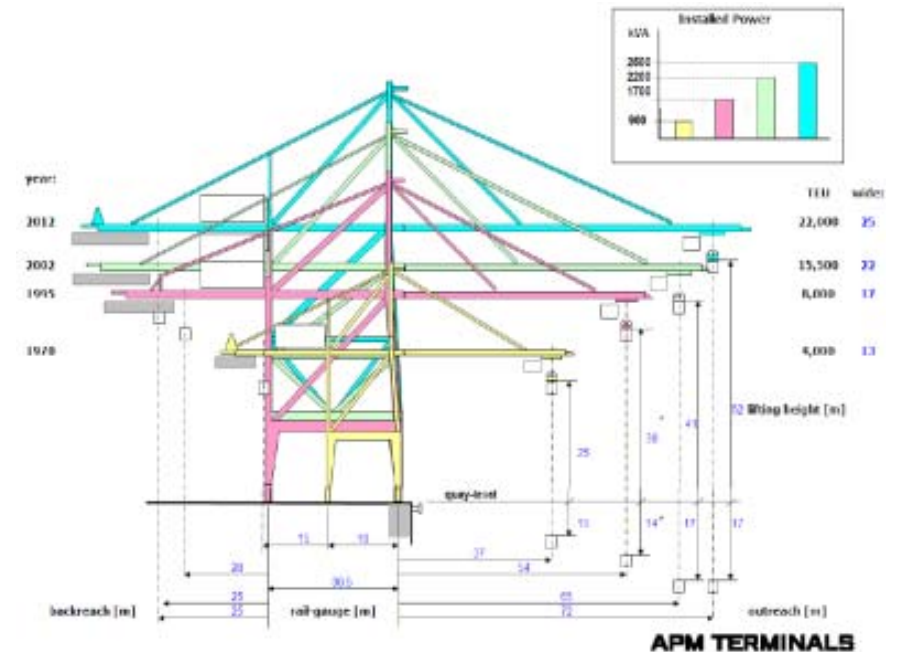
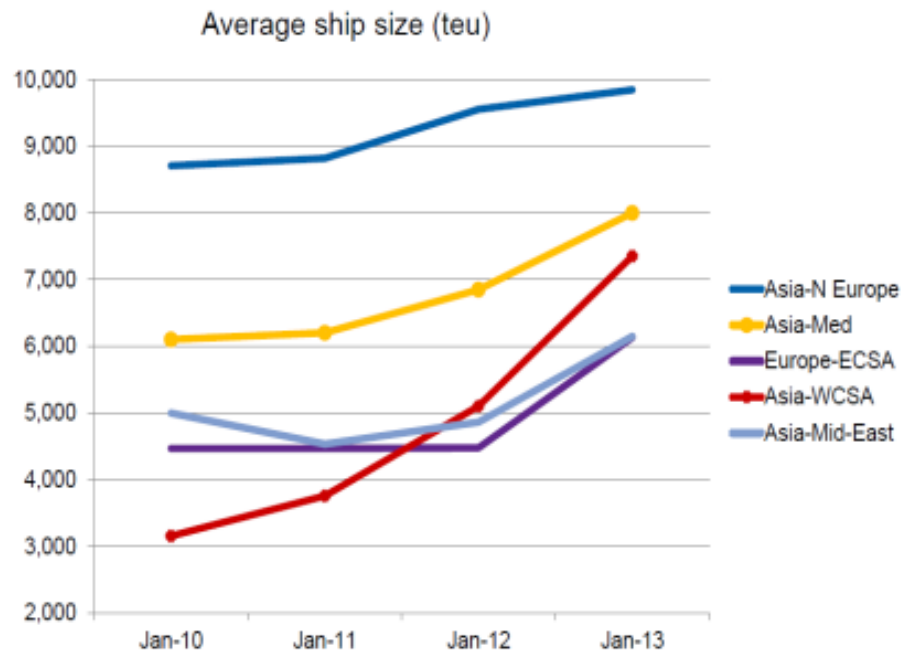
15th Intermodal Africa, Ghana – April 6th – 8th, 2016

Integrated solutions for increased efficiency in port operations

Keith Moodley
Business Development Manager
Siemens South Africa

This trend has significant influence on the world's Cranes business

Vessel cascading

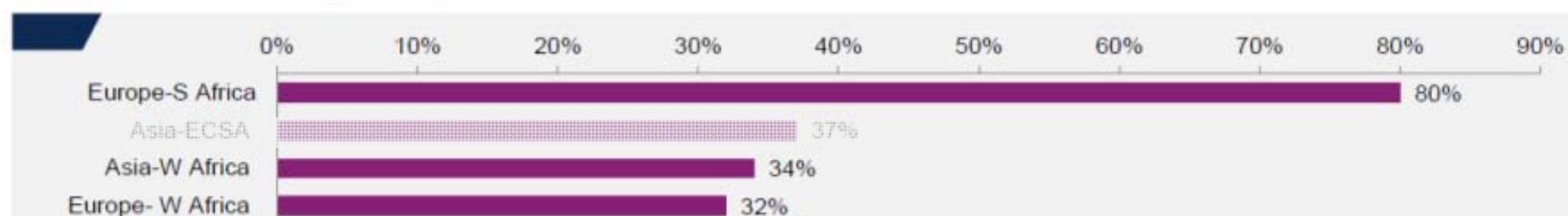


Terminals from all over the world need bigger cranes to handle bigger ships

Africa is experiencing the biggest relative increase

Vessel cascading

Increase in average ship size: 1Q 2013 - 1Q 2015



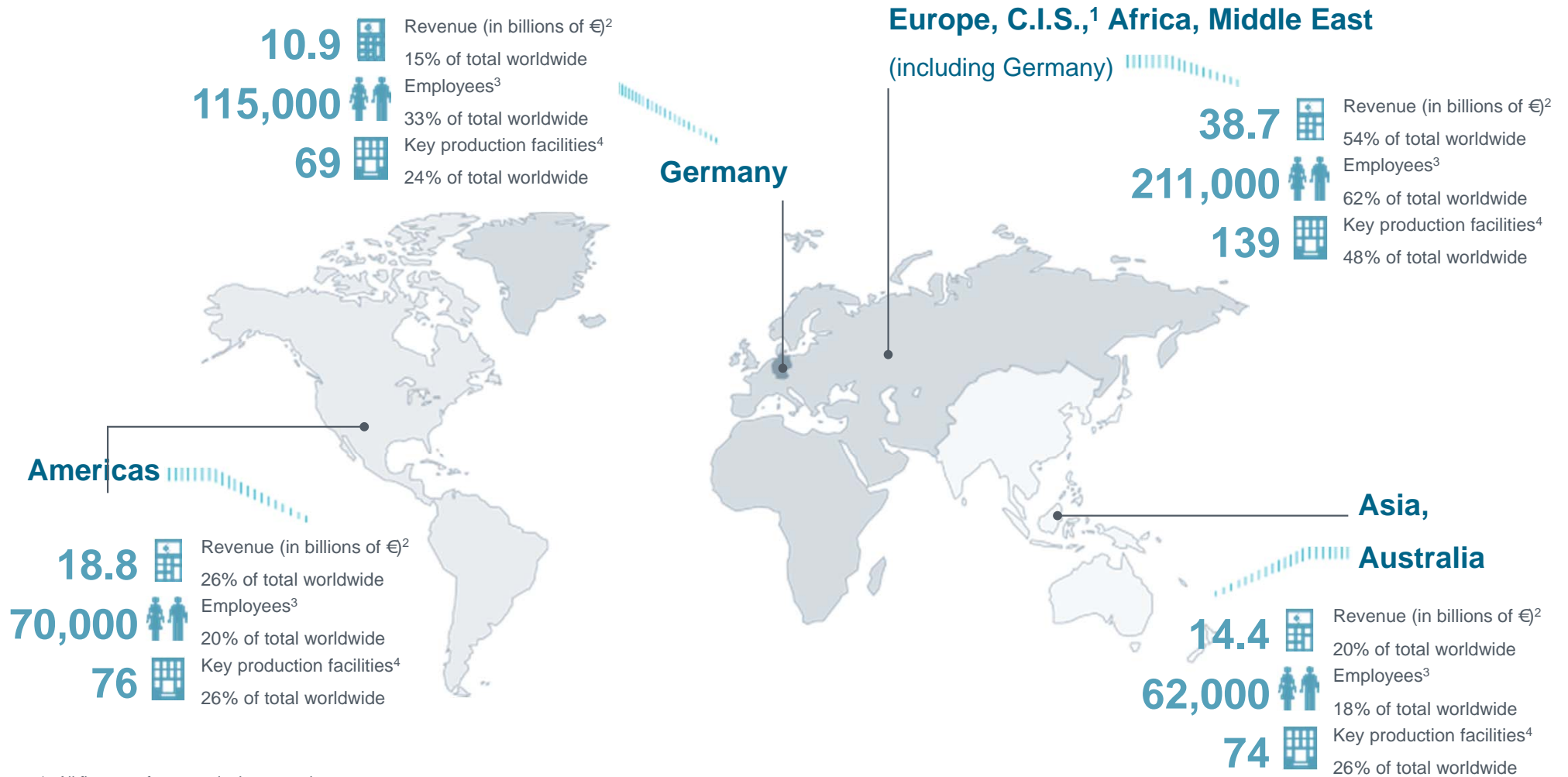
Source: Drewry Maritime Research

- Vessel cascading affects all terminals in the World
- Africa is experiencing the biggest relative increase
- Bigger Ships = Bigger Cranes !!



Siemens – Global presence

Close to customers all over the world



All figures refer to continuing operations.

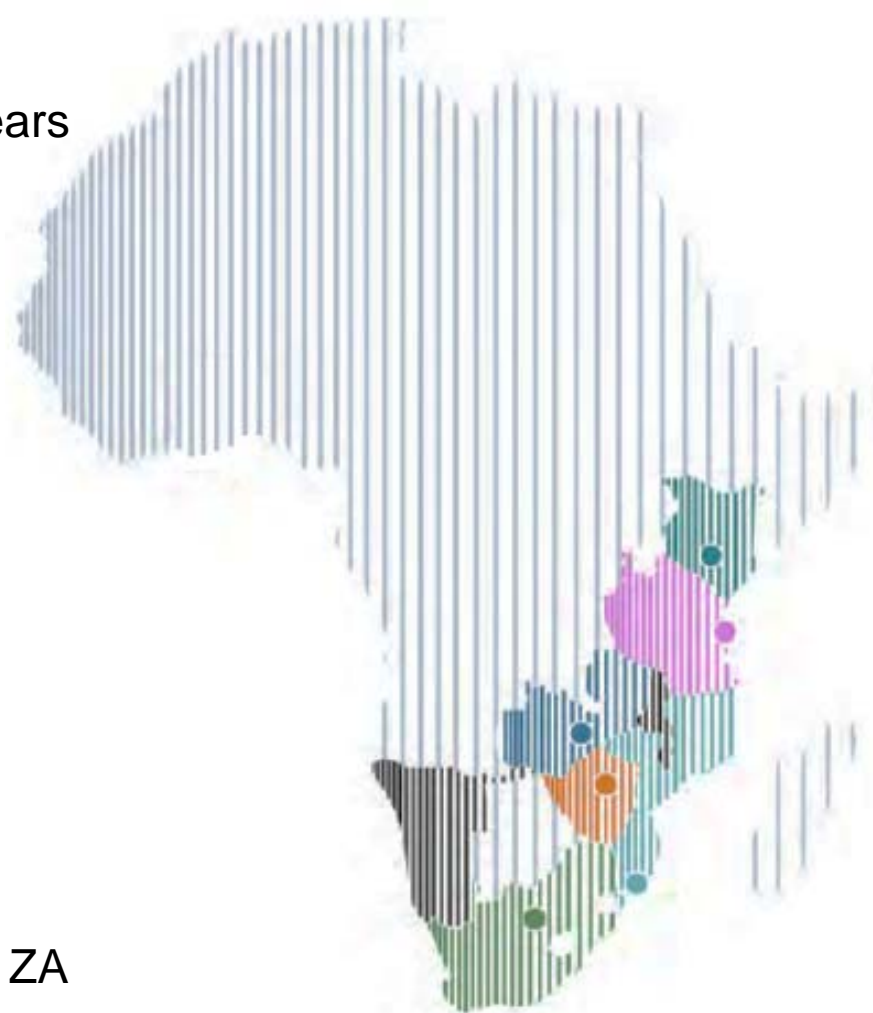
1 Commonwealth of Independent States. 2 By customer location. 3 As of September 30, 2014. 4 Fifteen employees or more.

Siemens

Presence in South and East Africa

Key Facts:

- Present for over 155 years
- Head offices in:
 - Kenya
 - Tanzania
 - Zambia
 - Zimbabwe
 - Mozambique
 - South Africa
- 4x Corporate Offices in ZA
- 5x Manufacturing and Assembly Centers in ZA



- Kenya**
 Park Palace, First Floor, Parklands
 Second Avenue, Limuru Road, Nairobi.
 +253 020 285 6000
- Tanzania**
 Ohio Street, 7th floor
 Aman Place, Dar es Salaam.
 +255 22 219 6872/3
- Zambia**
 Elunda Two, 2nd floor, Addis Ababa Roundabout
 Co Chicwa Rd/Los Angeles Boulevard,
 Rhodes Park, Lusaka. +260 977 834868
- Zimbabwe**
 13th floor, CABS Centre,
 74 Jason Mayo, Harare
 +27 72 024 7012
- Mozambique**
 Rua dos Desoportistas n° 833,
 Predio JAT 5/1 9° Ander, Maputo
 +258 21 310 424
- South Africa**
 300 Janadel Avenue,
 Halfway House, Gauteng.
 +27 11 652 2000

Siemens Cranes

Over 100 Years of Experience



Hamburg 1891

Cranes

Our competence

Automation solutions for Cranes



Ship to shore



Intermodal



Stacking



Bulk handling



Coil handling



Shipbuilding



Steel



Offshore

Siemens Drive Train Portfolio For Cranes

Drives & Motion Controller

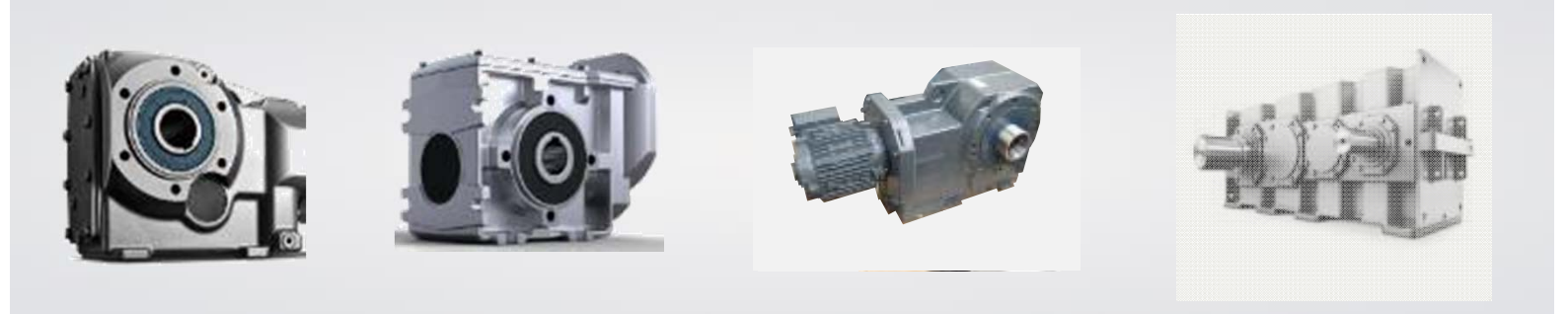
Inverters **High Performance Motion**



Motors

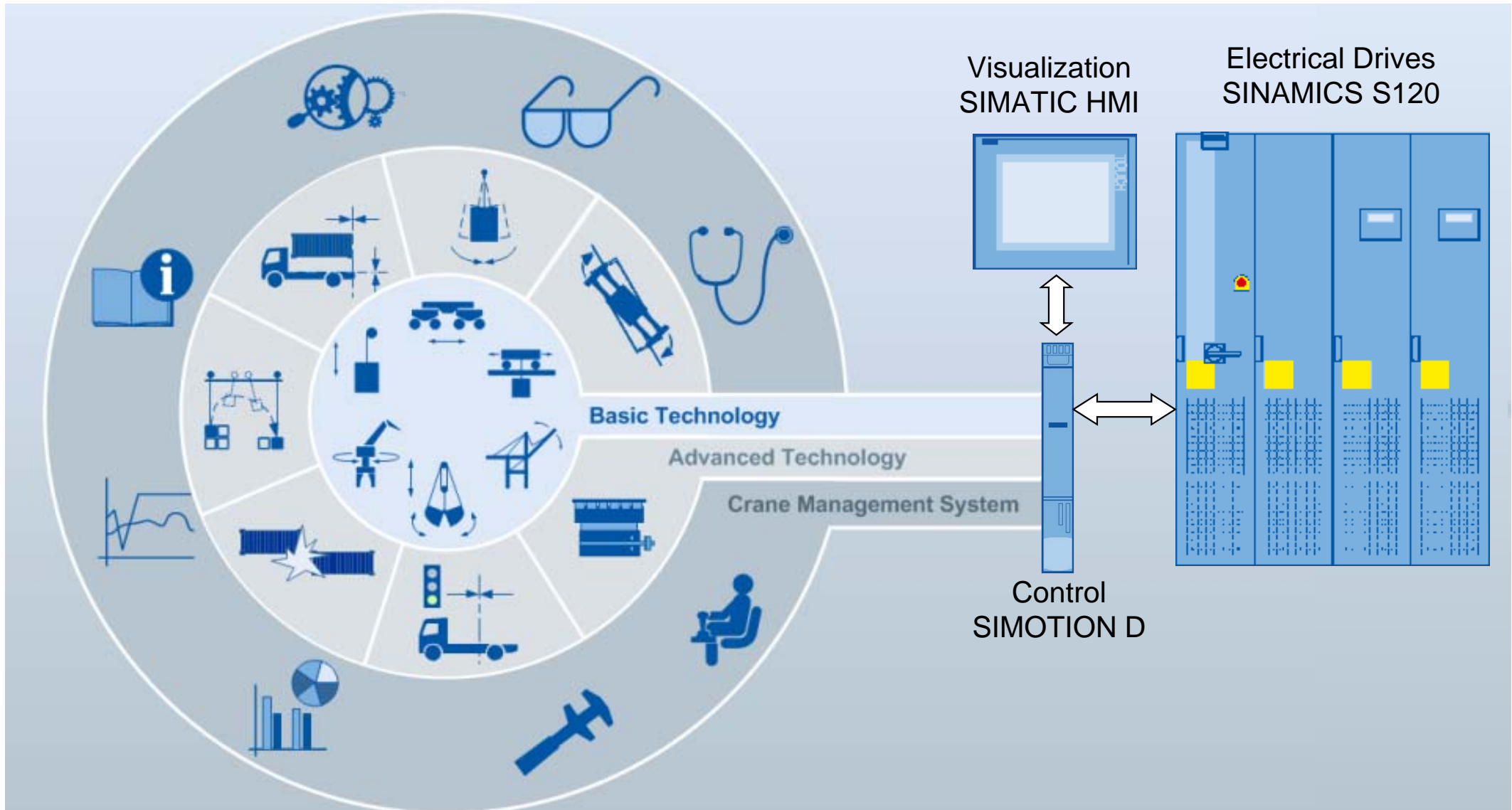


Gears & Geared Motors



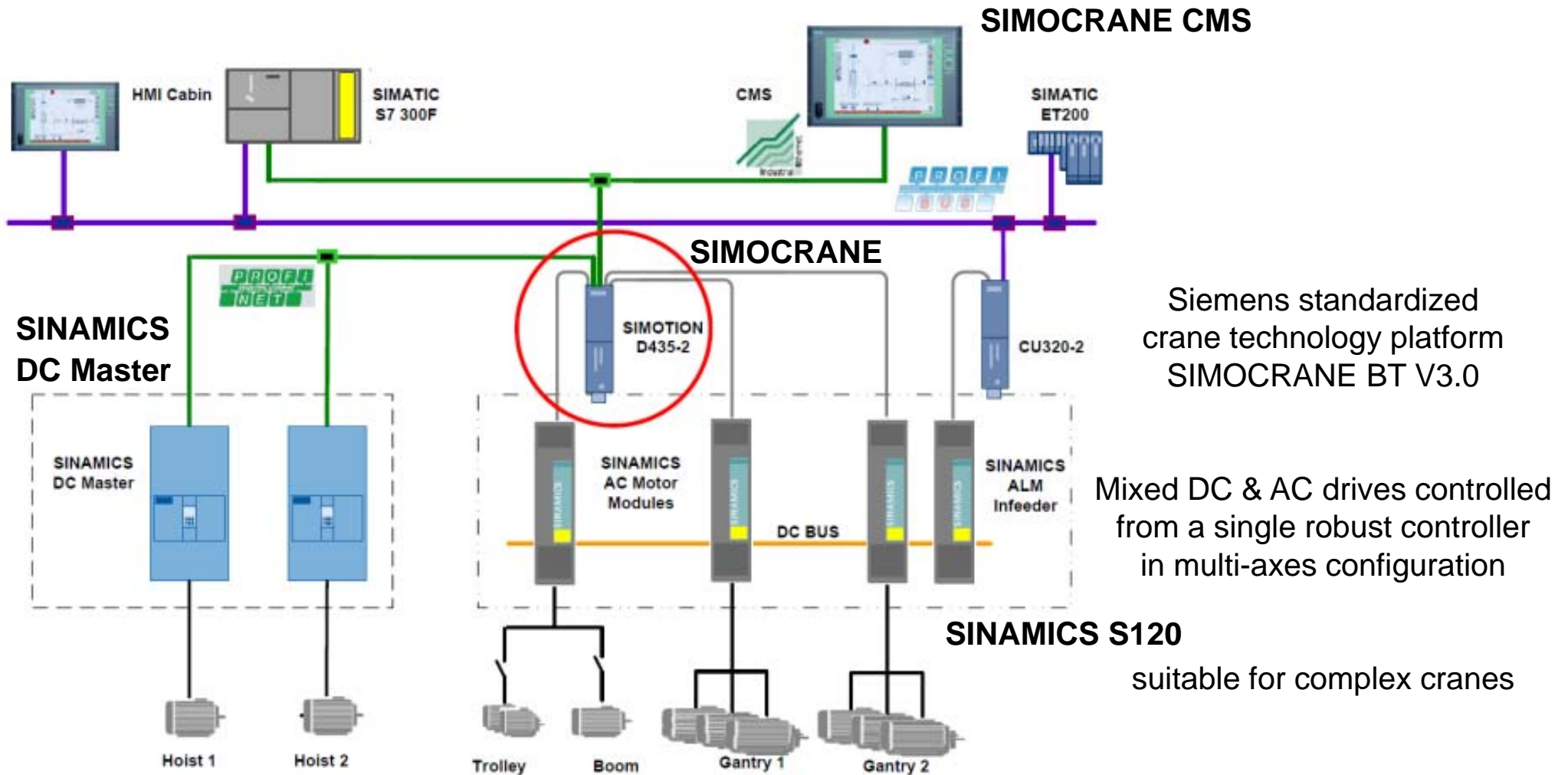
SIMOCRANE Technology

Standardization with a modular software architecture



SIMOCRANE with SINAMICS

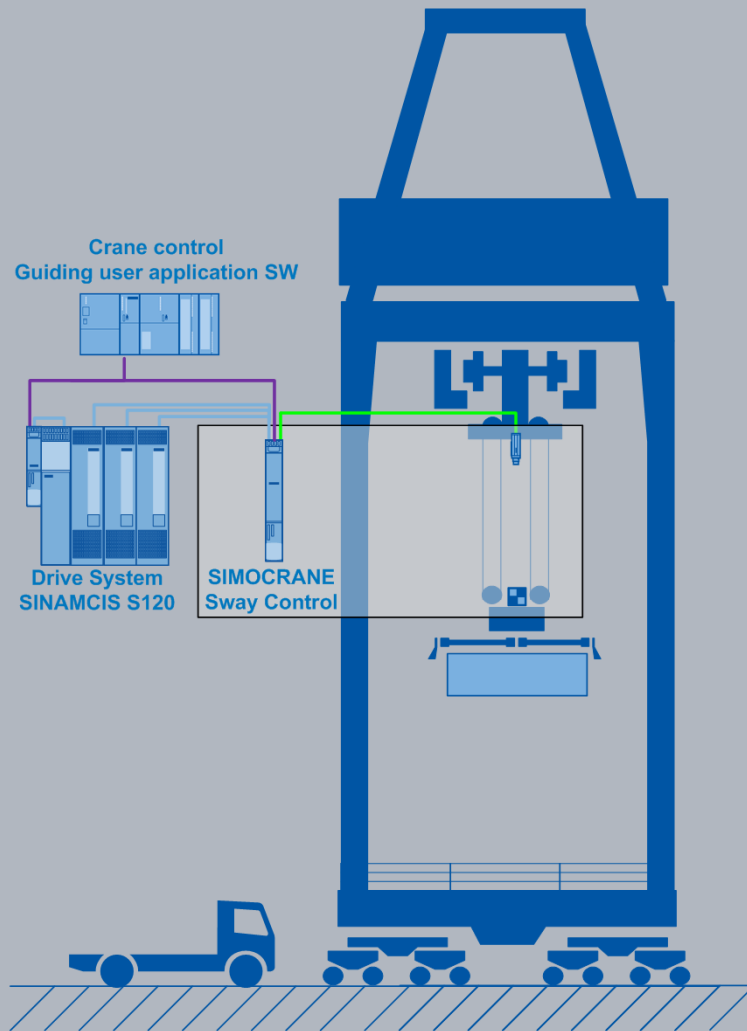
Multi-axes configuration with AC and DC Technology



Integrated full solutions

SIMOCRANE Advanced technology

Sway Control



Functions:

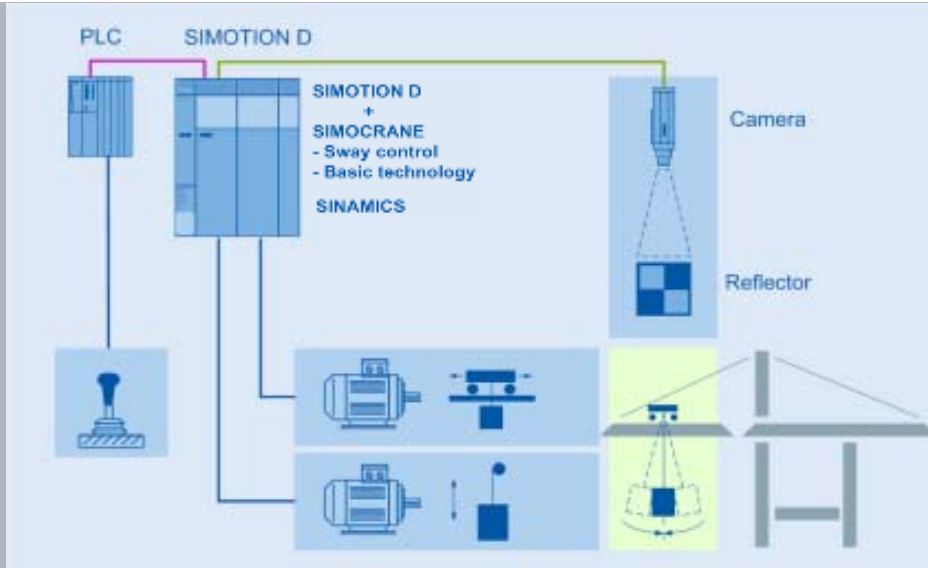
- Control of the load sway angle
- Positioning of the load
- (semi) automatic crane operation
- Smooth operation
- Trim, list and skew control

Benefits:

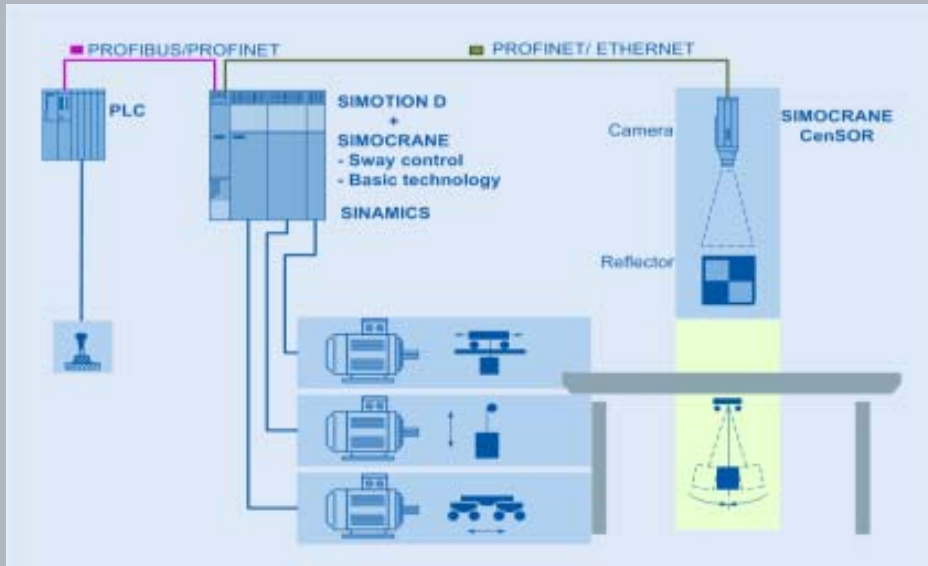
- Control of load trajectory
- Pre-requisite for remote control
- Reduction of the stressing on mechanical transmission elements

SIMOCRANE Sway Control System SC Integrated

STS, GSU



OHBC, Gantry crane

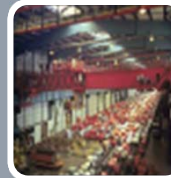


SIMOCRANE SC Integrated



STS, GSU

- Hardware: No (precondition BT)
- Version: V2.0 HF3



OHBC, Gantry crane

- Hardware: no (precondition BT)
- Version V4.2 SP1

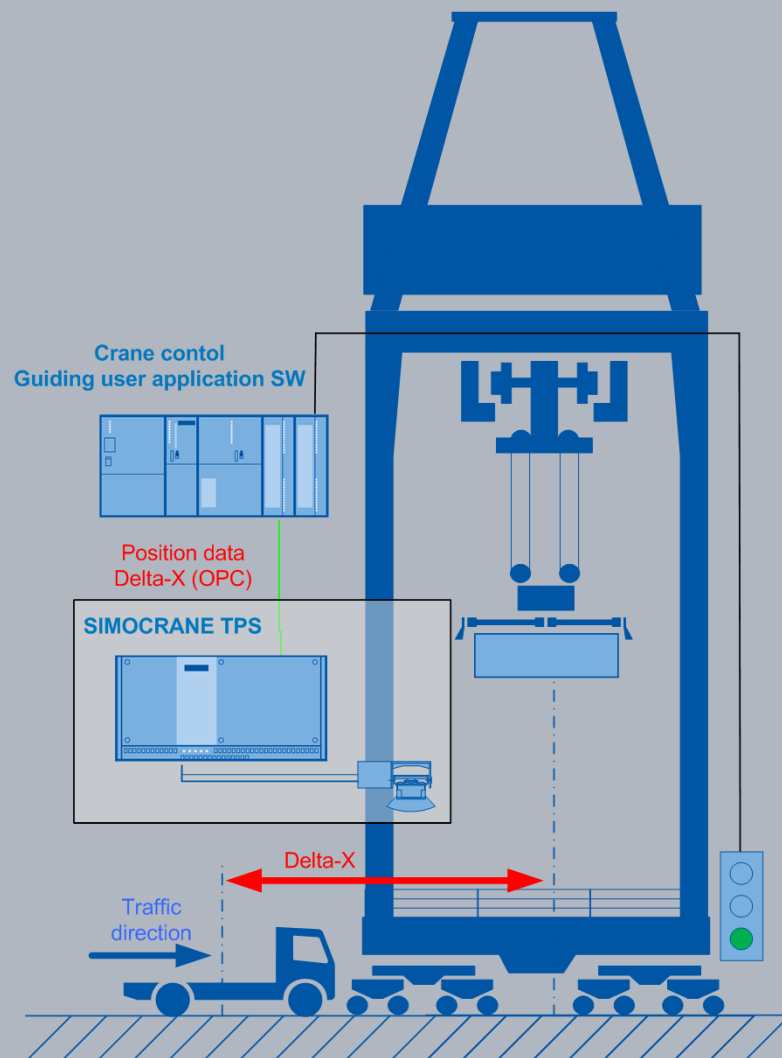


Scope of delivery

- Delivery CD (Documentation, SW.....)
- Sway control Licence

SIMOCRANE Advanced technology

Truck Positioning System (TPS)



Functions:

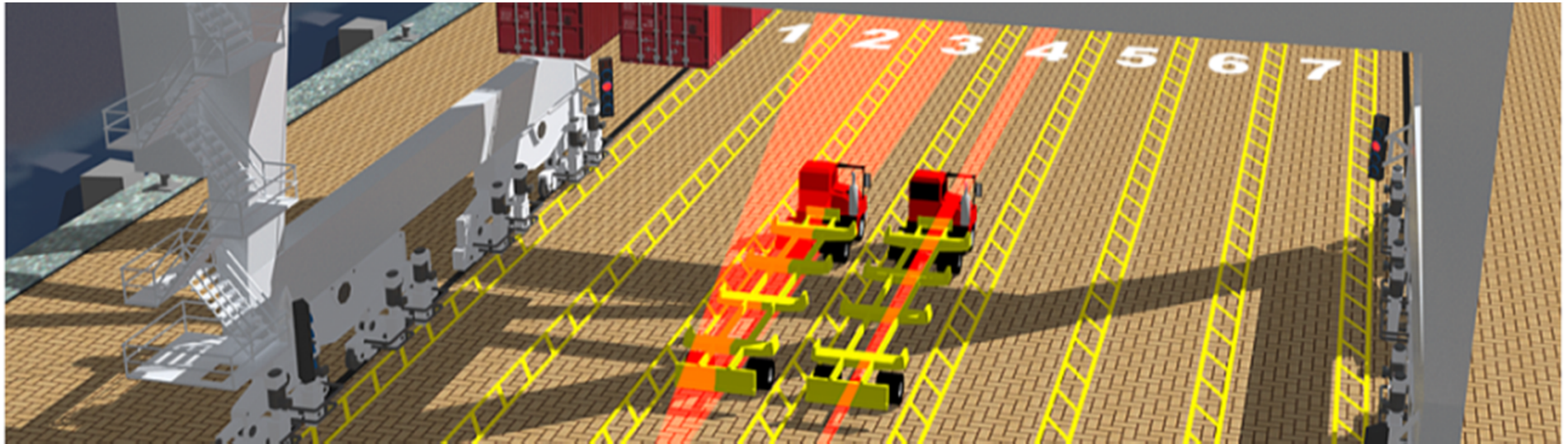
- Scan max. 2 working lanes
- Recognize parameterized objects
- Provide high precision position data of parameterized objects in 2D and 3D.
- Automatic system calibration

Benefits:

- Productivity boost (up to 10%)
- Increase safety, less interaction with personnel in the container hand-over zone

SIMOCRANE TPS

Aligning the vehicle/container with the crane



Vehicle alignment (STS)

Vehicle recognition based on 2D model mapping.
(*On the fly measurement*)



Tracking vehicle or ISO container(s) in gantry direction (X), max. 2 lanes simultaneously.
Computing gap between twin 20' containers
Transfer position data (X) to the crane control (PLC) via OPC.
Traffic control via crane control (PLC)

SIMOCRANE CMS

Crane Management System

SIMOCRANE CMS

- Crane Management System from SIEMENS based on SIMATIC WinCC
- Advanced Crane diagnosis
- Playback function
- Condition monitoring
- Retrofitting projects



SIMOCRANE CMS – User Interface

The screenshot displays the SIMOCRANE CMS WinCC-RunTime interface. The main area shows a crane overview with a 3D model and various status indicators. The interface is annotated with several callouts:

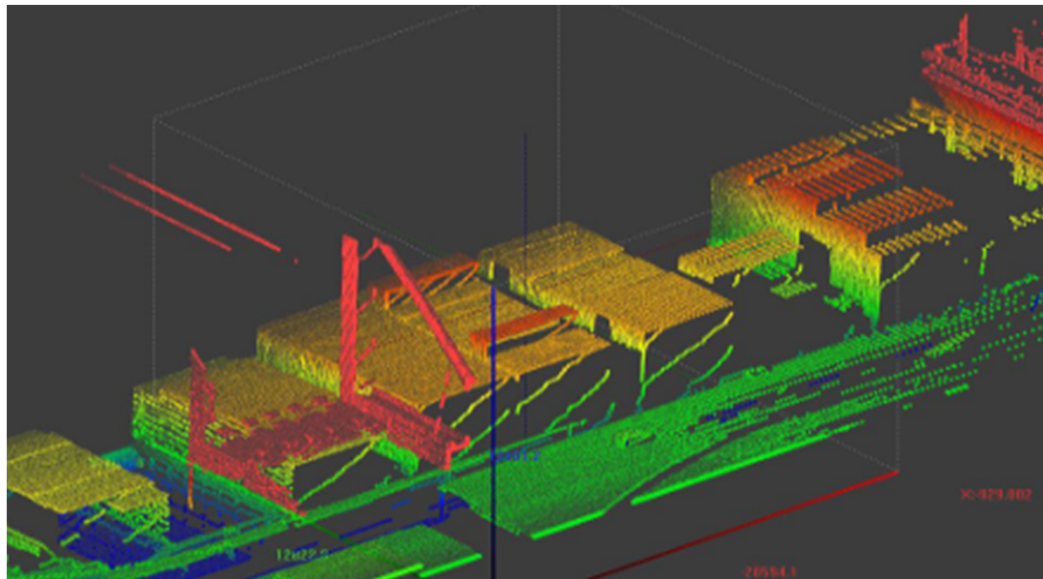
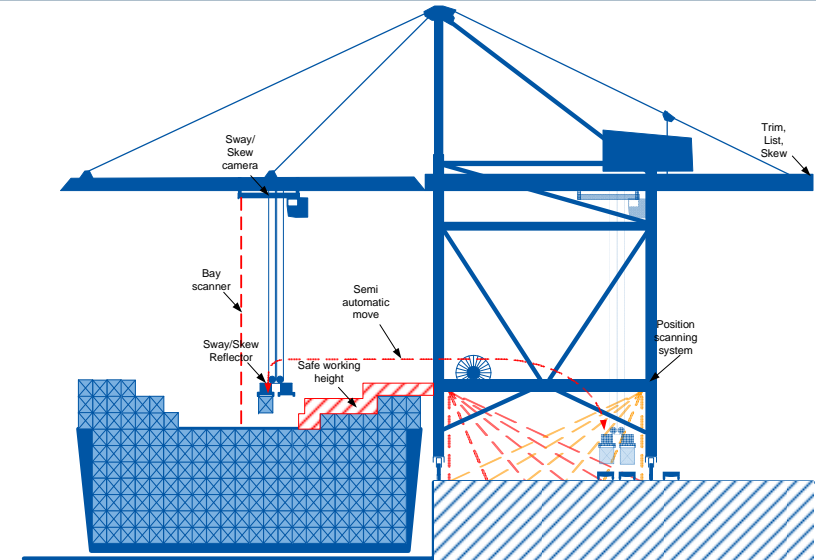
- Crane overview**: Points to the central 3D crane model.
- Navigation/Status sub-systems**: Points to the top right navigation icons.
- Details/Status sub-systems (e.g. drives, motor, brackes, drum, PLC, crane components, etc)**: Points to the hierarchical tree view on the right side.
- Status technology functions**: Points to the bottom right navigation icons.
- CMS Replay (Playback)**: Points to the play button icon at the bottom right.
- Error status bar (accumulative error)**: Points to the top left status bar.
- Navigation Main functions**: Points to the left side navigation icons.
- Status bar Operation data**: Points to the bottom status bar.
- Actual fault messages**: Points to the bottom left fault message table.

Message ID	Date	Time	Description	Category
173	11.05.10	05:26:15.584 PM	HO2 - Hoist Drive 2	HO2
13	11.05.10	05:26:16.334 PM	Group message of Hoist	HO

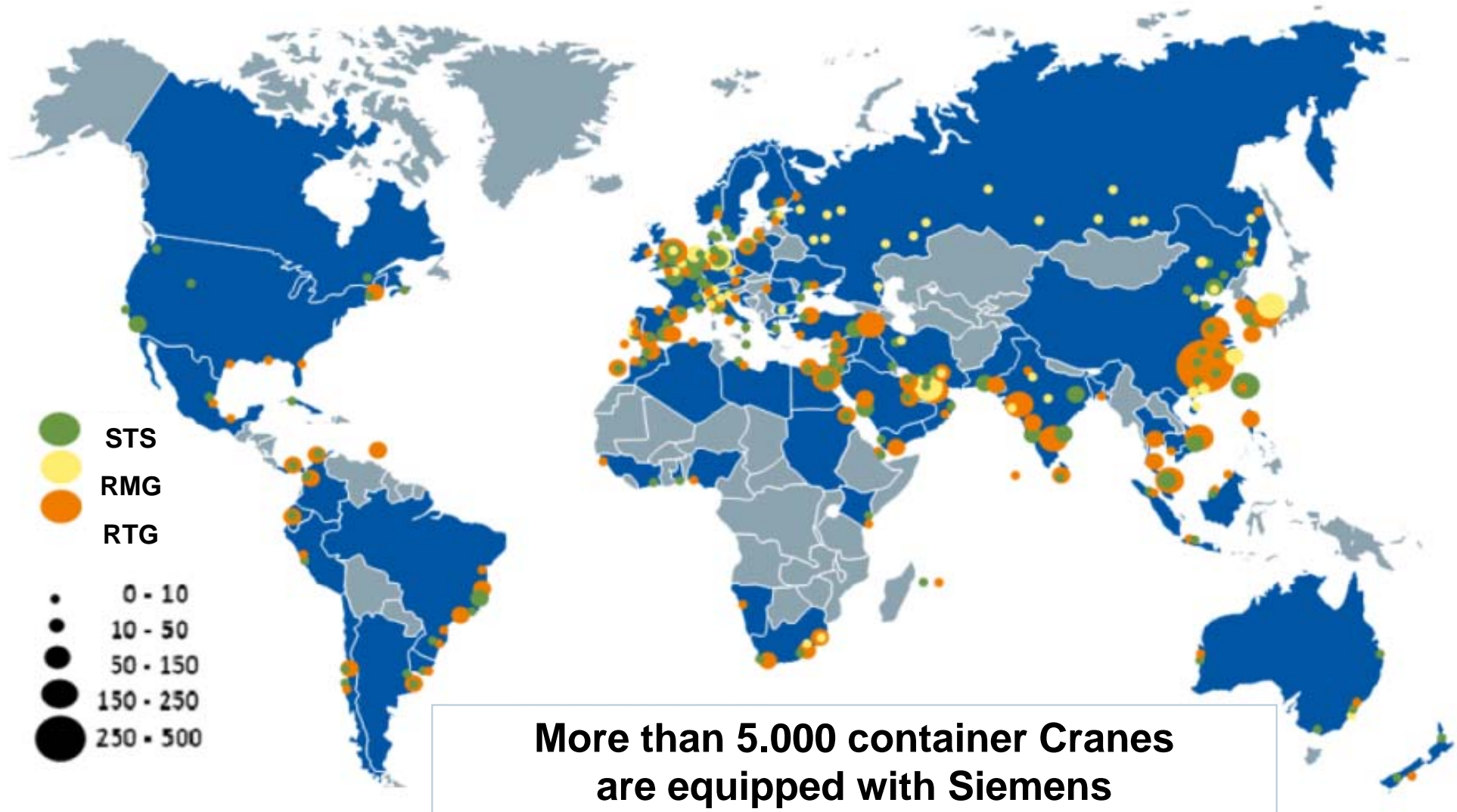
Remote Control Operation System (RCOS)

Higher productivity with STS Remote Control

- Full use of available power for trolley speed and acceleration
- Full use of sway control
- Shift changes quicker and more flexible
- Close to operations
- Better work conditions
- Diversity in operators



Siemens Cranes Installed Base - Worldwide



Siemens Cranes

Installed Base – Africa

Key facts Africa:

Higher, larger and longer Cranes brought into operation

- Vessel cascading effect

New and modernized terminals are STS operated

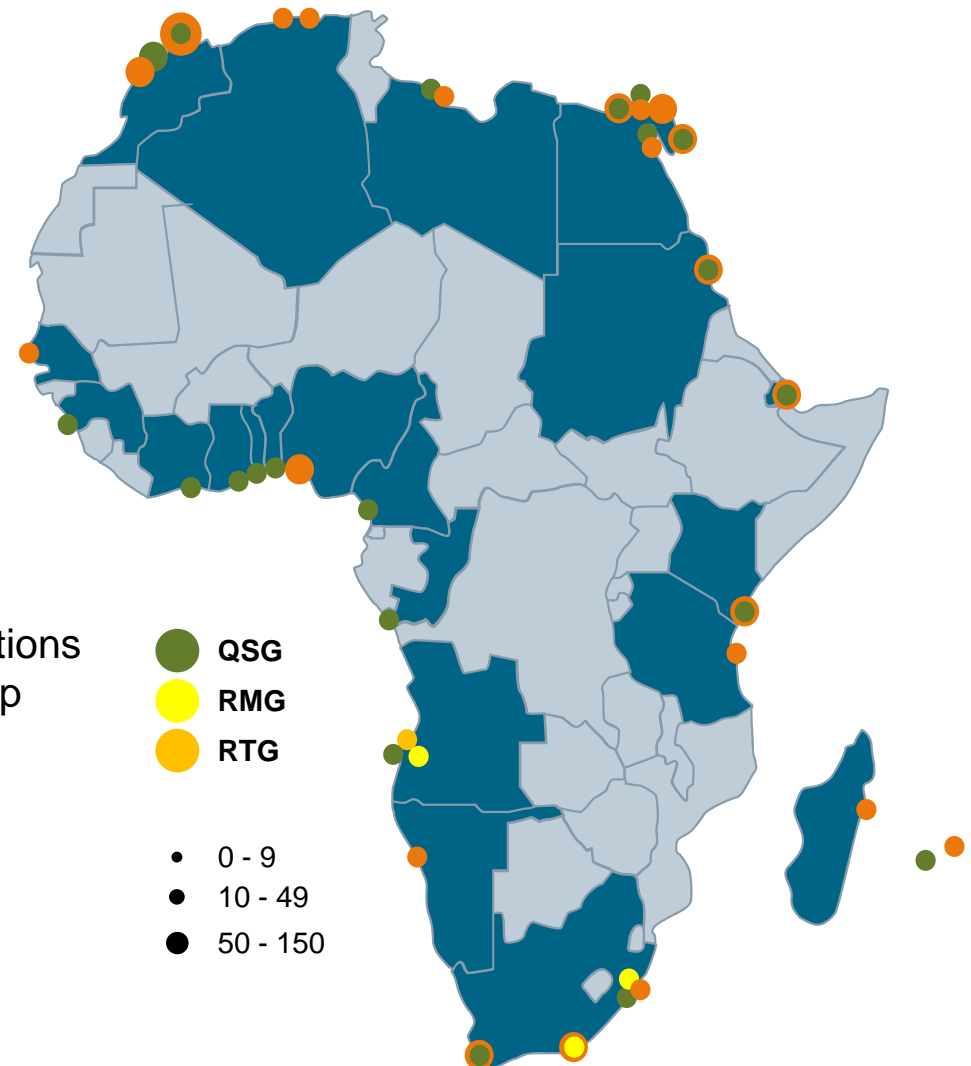
- Higher productivity required

Installed Base:

- over 100x Siemens equipped STS handle quay operations
- Harbour Cranes installed base as per locations on map

Half of these Cranes were ordered in the last 5 years

- Local Service presence
- Local know-how and repair capabilities
- Support from the Global Siemens Service Network



Testing, Research and Development

Simocrane Demo and Training Crane
Full seven axis crane



Crane Solution Partner
Abacus Automation is a certified Siemens Crane Solution Partner.



Simocrane Demo and Training Crane
One of only a few facilities like this in the world.



Simocrane Demo and Training Crane
Crane Management System



Siemens Cranes

Proven experience and competence

More than 100 years of experience in Cranes

Technical Competence in Crane Automation

Local presence in more than 190 countries

Largest installed base

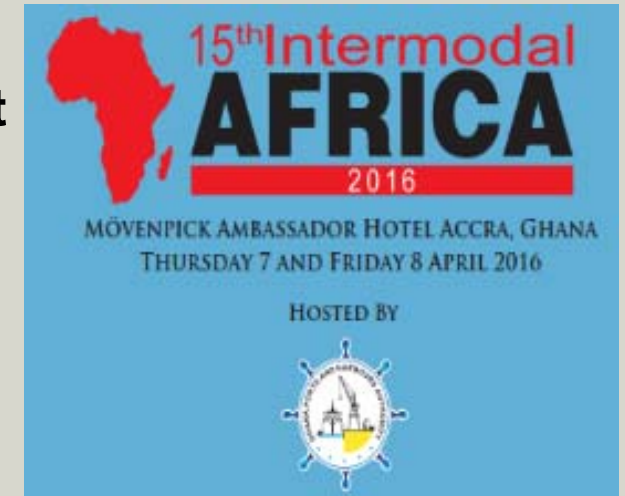
State of the art Crane products and systems

Project execution Competence

Thank you!



Pay us a visit
at Stand 9



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Business Development Africa

Siemens Cranes

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