

Integrated solutions for efficient and sustainable transport of passengers and goods

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Trendsetting technologies in locomotive business



The first electric railway at the Berlin Trade Fair of 1879 starts electric traction at rail



Welding technology introduced in locomotive production with E44 001 in 1931



Highly modular and flexible locomotive Vectron introduced to the public in 2010

Challenges

Reduction of CO₂ emissions

High safety requirements

Rapid, on-time transportation

Good service

Cross-border transportation

Highly attractive transportation media

Heavier traffic

Lower-cost transportation

Properly inspected rail cars and components

Constantly available rail cars & infrastructure



Rail Systems stands for:

Energy efficiency, sustainability, integrated mobility

SIEMENS



Efficiency

We deliver efficient rail products



Service quality

We offer individual service concepts for the entire product life cycle



Innovation

Technology and innovation are in the DNA of our business



Ecology

Energy efficiency and sustainability are part of our business model



Cost savings

We test all our products in our own service center before they go into service

Integrated mobility

We offer integrated transportation solutions throughout the world

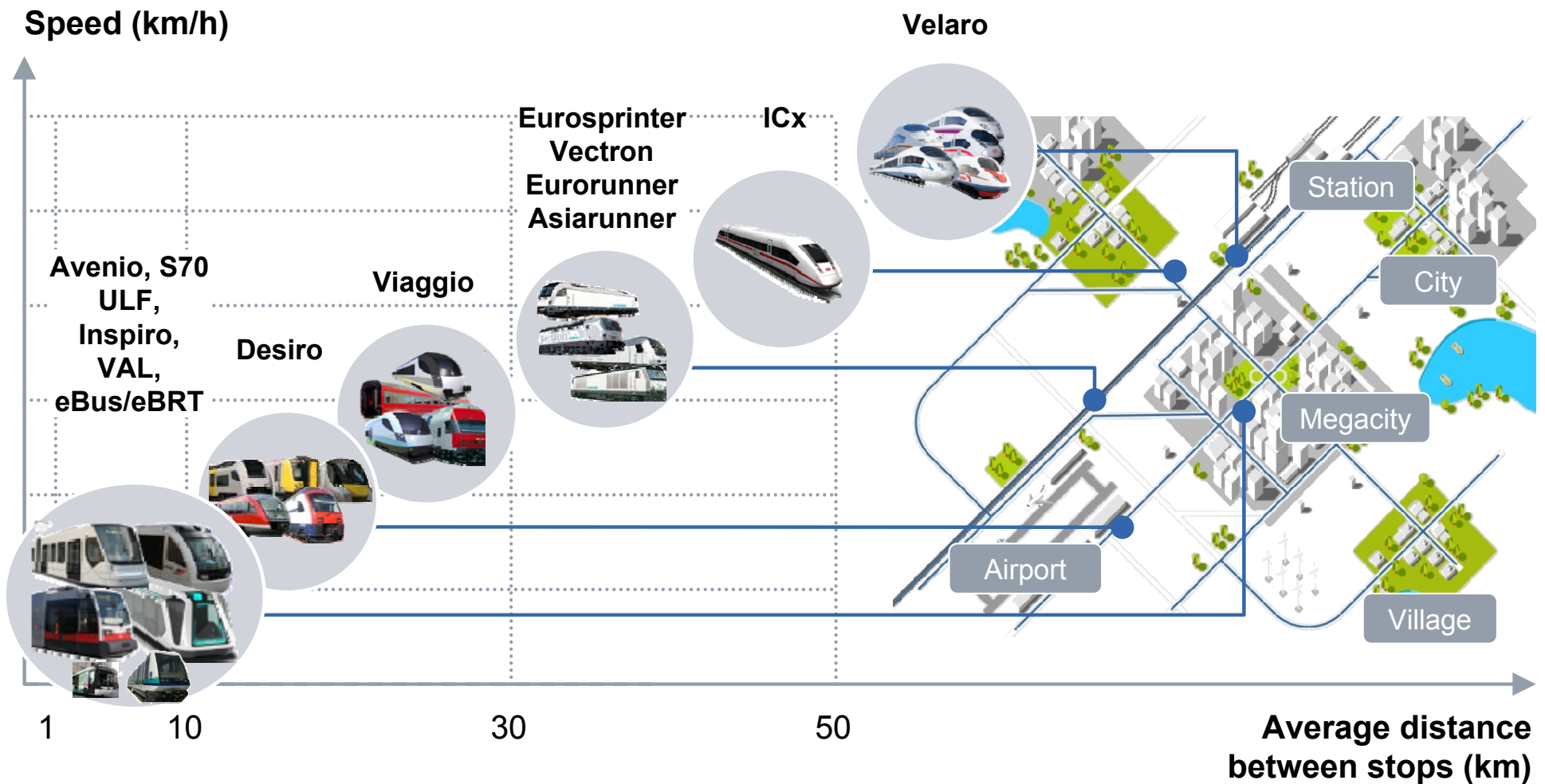
International presence

We produce on location – worldwide

Portfolio Rail Systems:

Solutions for moving people and goods

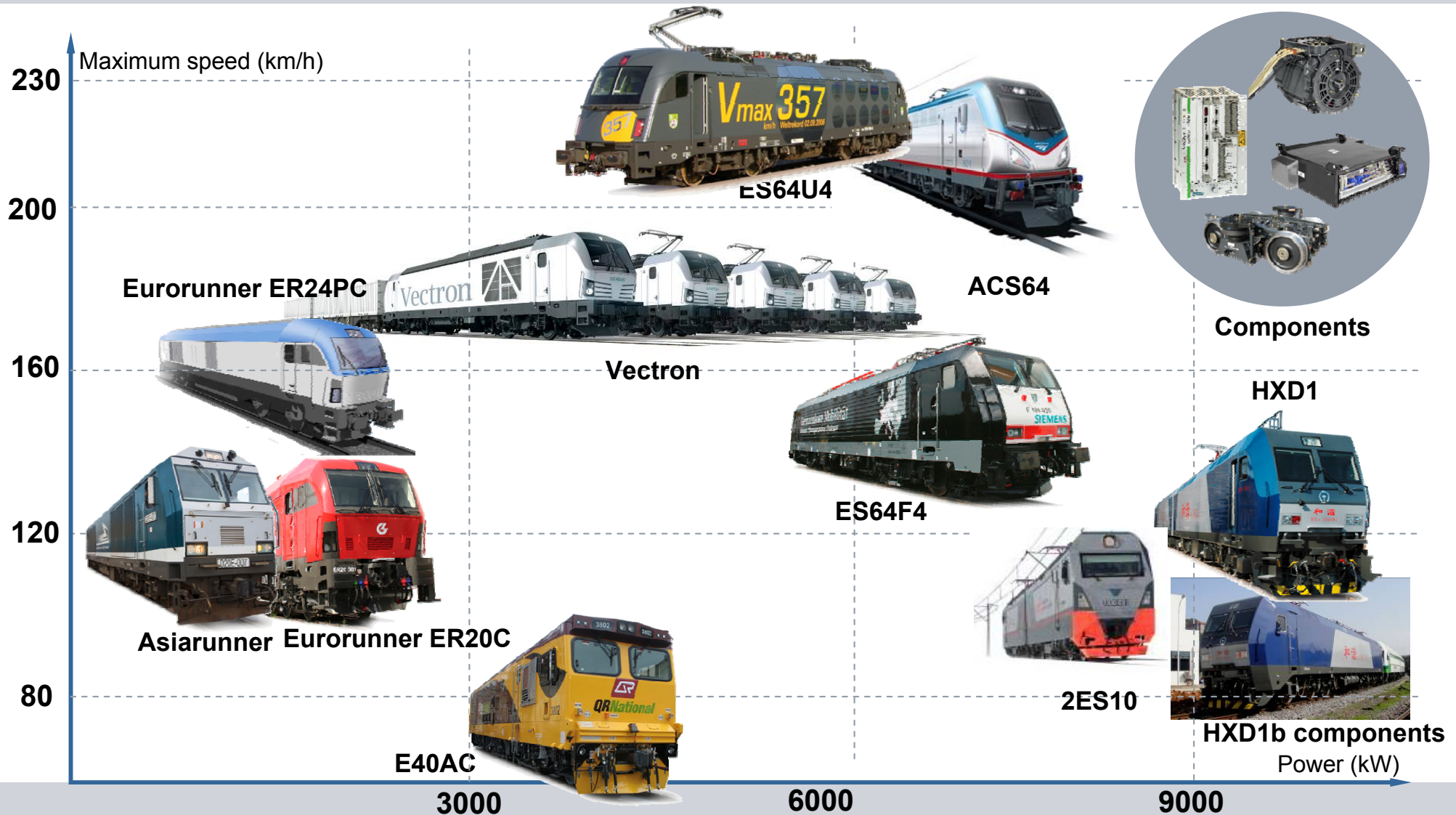
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Portfolio

Locomotives and Components

SIEMENS



Business Unit

Locomotives and Components (LOC)

SIEMENS



K.-H. Klausecker (BU CEO)

Platforms and products



Vectron



**Europrinter
ES64F4**



**Europrinter
ES64U4**



Asiarunner

Custom-designed solutions



ACS64



E40AC



HXD1



ER24PC

Components



2ES10



HXD1B



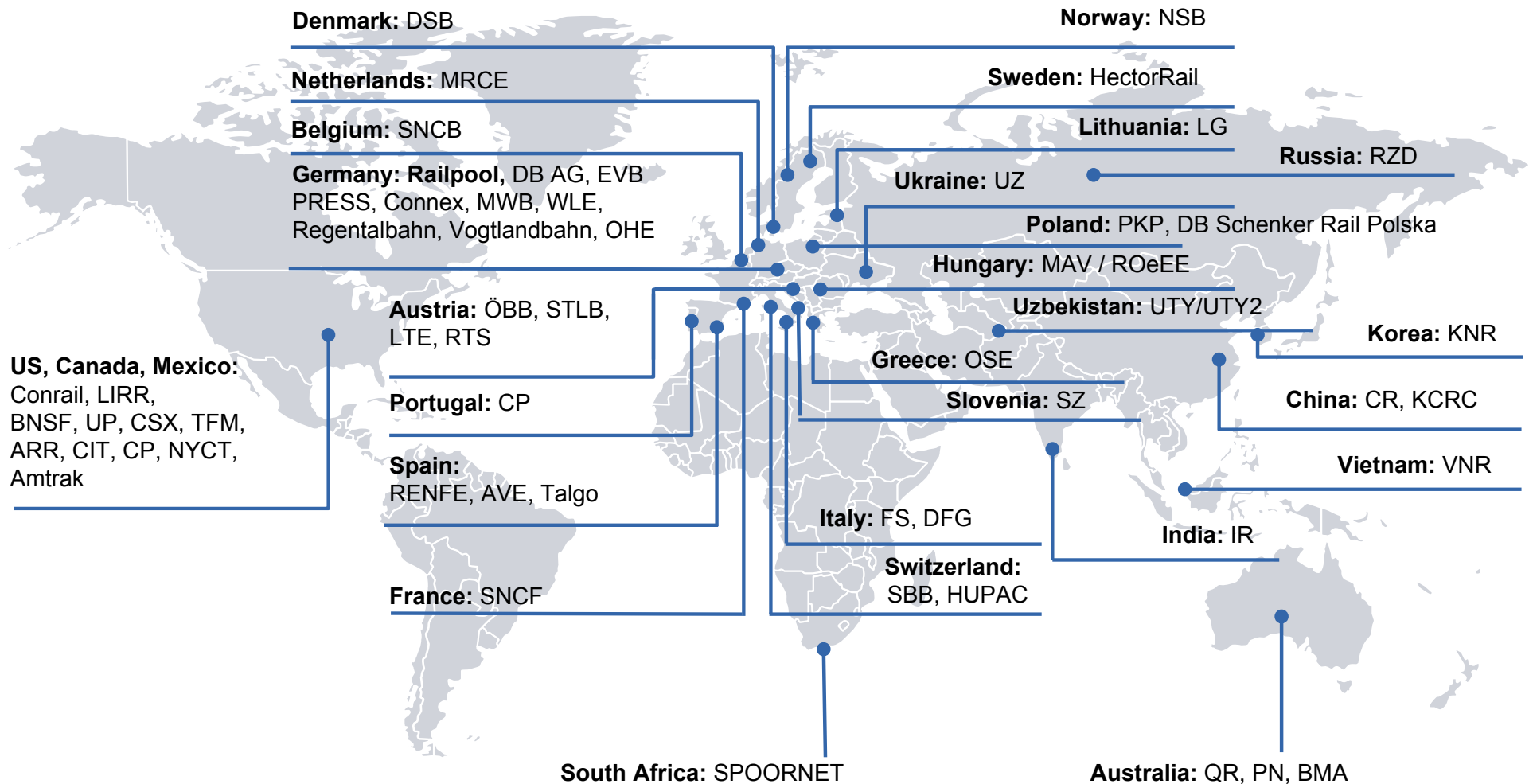
**Bogies for rail
vehicles**



Locomotives and Components

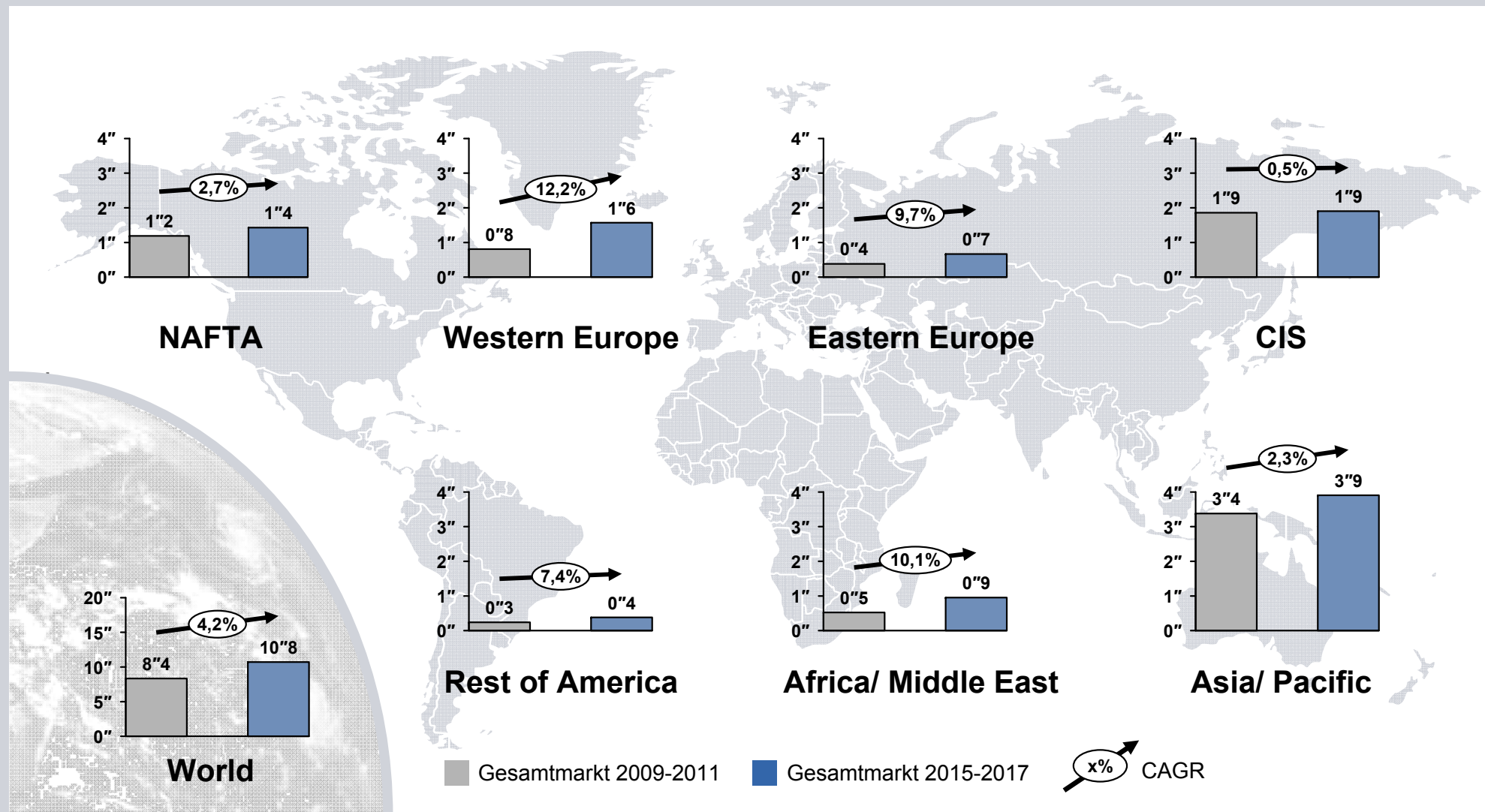
Customers worldwide

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Market prognosis locomotives 2009 to 2017:

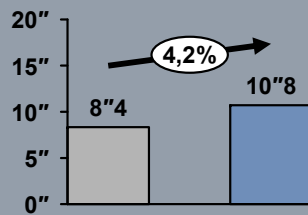
Market development by Regions



Locomotives

A growing market – we participate

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World

2009

2011

2015

2017

UNIFE:

+4,2 % p.a.

We are active in the important regions

- **Europe:** Vectron
- **CIS:** 2ES10
- **NAFTA:** ACS64
- **India:** Components

We produce locally



Munich
(Lead)



Jekaterinburg



Sacramento



Aurangabad

Source: UNIFE World Rail Market Report – comparable IC RL LOC Portfolio exkl. Service

Vectron – solution for future demands of European rail transport

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Smaller batches
Homologated,
quickly available
locomotives

Flexibility
regarding area of
operation and
configuration

Modular locomotives
European
homologation /
Platform
homologation

**High reliability and
availability (e.g.
24h spare parts
service)**



Vectron

Locomotive platform for European market

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Vectron – Creating corridors

- Flexible configuration and high economic efficiency
- Different power classes and voltage systems
- Can be deployed in passenger and freight transport services with top speeds of 160 km/h or 200 km/h
- Easy conversion or retrofit possible thanks to modularity of e.g. machine room
- Series country-customized packages and a new, intelligent train protection concept enable cross-border traffic
- Universal bogies and laser-welded car bodies set trends in design and manufacturing

Vectron DC

for Schenker Rail Polska

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Vectron DC

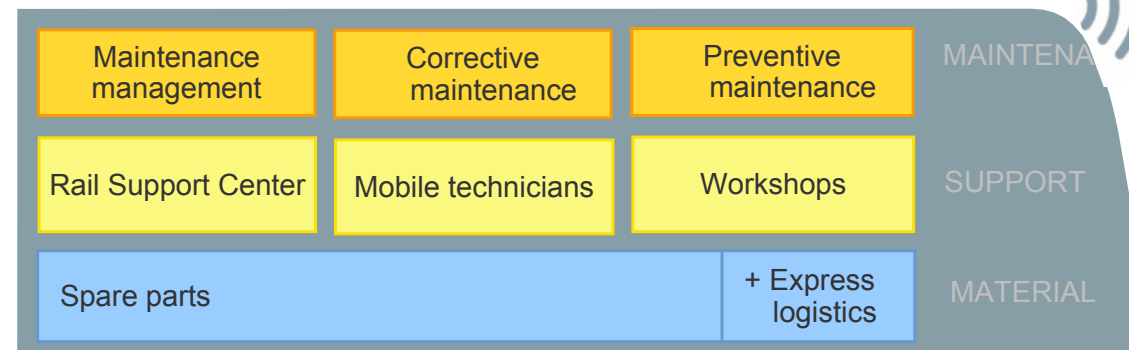
Wheel arrangement	Bo'Bo'
Power system	DC 3 kV
Rating [kW]	Max. 5,200
Starting tractive effort [kN]	300
Maximum speed [km/h]	160
Weight [t]	80
Track gauge [mm]	1,435
Units	23 plus option 13
Year	From 2012

Mobility whatever happens - Railcover



- Modules for perfectly customized services
- Local service right where it is needed
- Central, sophisticated spare parts logistics
- Optimization of maintenance coordinated with rail operation
- Exploitation of manufacturer's technical expertise

Rail Remote
Services 



Increase the availability of your fleet with Railcover