Global megatrends lead to increased traffic volumes

Cities will grow

By 2050: Worldwide, additional 2.5 bn people will live in cities

Travel distance increases

Since 1965: In the UK, the distance a person travels has increased by 70%

United Nations, World Urbanization Prospects: The 2018 Revision

In an era of interconnected and digitalized mobility, travel behavior is changing.

One single interface
In the face of new competition, transport operators need to expand their offering.

Digital Experience  

Last Mile Solution

Reliability  

Affordable Prices
What does this mean for railway vehicles …

… digital ride experience and enhanced passenger information systems
What does this mean for operations …

… they become automated
What does this mean for infrastructure …

… less cabling and hardware
With digitalization, we enable mobility operators worldwide to …

…make trains and infrastructure intelligent

…increase value sustainably over the entire lifecycle

…enhance passenger experience

…guarantee availability
### Our industry is consolidating

#### Revenue of rail activities (€ bn) Last available financial year

<table>
<thead>
<tr>
<th>Year</th>
<th>Acquirer</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>Wabtec (pending)</td>
<td>GE Transportation (pending)</td>
</tr>
<tr>
<td>2016</td>
<td>Wabtec</td>
<td>Faiveley</td>
</tr>
<tr>
<td>2015</td>
<td>Stadler</td>
<td>Vossloh Lokomotiven</td>
</tr>
<tr>
<td>2015</td>
<td>Hitachi</td>
<td>Ansaldo STS &amp; Breda</td>
</tr>
<tr>
<td>2014</td>
<td>CRRC</td>
<td>CNR and CSR</td>
</tr>
<tr>
<td>2014</td>
<td>Alstom</td>
<td>GE Signalling</td>
</tr>
<tr>
<td>2012</td>
<td>Siemens</td>
<td>Invensys Rail</td>
</tr>
</tbody>
</table>

#### Rank second in mobility industry

1. Announcement date  
2. Including revenue related to Rail Traction Business currently reported in Process Industries and Drives  
3. Pro-forma including Faiveley  
4. Transaction still pending  
5. For Alstom FY2017

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Page 9  June 2018
„We are Siemens Mobility“
We look back at an extraordinary journey

1847 | First alarm bell system
1879 | Railway telegraph with double-T armature
1881 | First electric streetcar in Lichterfelde
1882 | The first electric trolley bus in the world – Werner von Siemens “Elektromote”
1886 | Subway in Budapest
1891 | Siemens presents the first electric train in the world with an external power supply
1896 | Opening of Germany’s first elevated railway and subway in Berlin
1902 | Multi-purpose electric locomotive E 44
1915 | Rikagranbah – Electrification of Europe’s northernmost railway line completed
1918 | Siemens sets up Germany’s first traffic signal on Potsdamer Platz in Berlin
1924 | Siemens sets up Germany’s first traffic signal on Potsdamer Platz in Berlin
1946 | Progress in interlocking technology, first geographical interlocking system in Düsseldorf-Derendorf
1957 | Completely electronic interlocking center
1965 | 1st electronic traffic control Computer in Europe (Berlin)
1969 | Development of Sinet: End-to-end decentralized interlocking architecture
1979 | Computer in Europe (Berlin)
1982 | Elevated railway, Dortmund
1985 | InterCity Express (ICE)
1991 | Central interlocking center, Frankfurt am Main, largest pushbutton relays interlocking center in Europe
1992 | Siemens AG Austria acquires 26% of Simmering Graz-Pauken-Verkehrstechnik (SGP-VT)
1996 | Multi-purpose electric locomotive E 03
2000 | Increase in the number of electric trams in Germany
2012 | Takeover of Invensys Rail
2013 | Sinet: End-to-end decentralized interlocking architecture
2017 | Takeover of leading software provider HACON
2018 | smartGuard Web-based mobile traffic control center
2018 | Sinet: End-to-end decentralized interlocking architecture

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Page 11  June 2018  Mobility Division
We look back at an extraordinary journey
We look back at an extraordinary journey
We look back at an extraordinary journey

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---|---
1879 | Siemens presents the first electric train in the world with an external power supply
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1896 | Subway in Budapest
1896 | First alarm bell system
1902 | Opening of Germany’s first elevated railway and subway in Berlin
1930 | Multi-purpose electric locomotive E 44
1948 | Progress in interlocking technology, first geographical interlocking system in Düsseldorf-Derendorf
1948 | Railway telegraph with double-T armature
1957 | Central interlocking center, Frankfurt am Main, largest pushbutton relays interlocking center in Europe
1965 | 1st electronic traffic control computer in Europe (Berlin)
1965 | Electric locomotive E 03
1965 | Multi-purpose electric locomotive E 44
1969 | Acquisition of majority stake in Duewag AG
1980 | Elevated railway, Dortmund
1982 | Completely electronic interlocking center
1991 | Intercity Express (ICE)
1991 | Siemens sets up Germany’s first traffic signal on Potsdamer Platz in Berlin
1992 | Siemens AG Austria acquires 26% of Simmering Graz-Pauken Verkehrstechnik (SGP-VT)
1995 | 1st electronic traffic control computer in Europe (Berlin)
1999 | Acquisition of majority stake in Krauss-Maffei Verkehrstechnik GmbH
2000 | Traffic management center, Berlin
2003 | Takeover of Inevsys Rail
2012 | smartGuard Web-based mobile traffic control center
2013 | Sinet: End-to-end decentralized interlocking architecture
2017 | Takeover of leading software provider HACON
2018 | smartGuard Web-based mobile traffic control center
We are Siemens Mobility

Legally separate entity

Globally

Along the entire value chain

Shaping connected mobility!
We share a #PassionForMobility

30,453 employees worldwide

91% of employees „willing to go beyond expectations to help Siemens succeed“ (Siemens Global Engagement Survey 2017)

1,106 patent applications since 2014/2015

16,500 employees for more than 10 years with Siemens Mobility

2018 R&D employees

850 apprentices
We are close to our customers – Locations all over the world
Excellent growth and industry leading margins

<table>
<thead>
<tr>
<th></th>
<th>FY14</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue, in € bn</strong></td>
<td>7.2</td>
<td>8.1</td>
</tr>
<tr>
<td><strong>Profit, in € bn</strong></td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Profit margin, in %</strong></td>
<td>7.3</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Mobility Division only

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Page 18 June 2018
Profit margin – Stable value generation

Target margin 6% – 9%

From 2012 to 2018 Siemens Mobility underwent several organizational changes and acquisitions. Figures are therefore not comparable from year to year. Rail Traction business not included.
Siemens Alstom transaction is still pending and subject to regulatory approval and closing.
Siemens Alstom¹ – Generating more value out of a position of strength

65.000 employees
Over 60 countries

€15.6 bn revenue
€59.3 bn backlog

Siemens Alstom
A global player in Rolling Stock, Signaling, Services, and Systems

¹ Siemens Alstom transaction is still pending and subject to regulatory approval and closing.
Serving our customers along the entire value chain –
We are shaping connected mobility

Intelligent infrastructure

Rolling stock

Digital service

Turnkey projects
Shaping connected mobility with Rolling stock
A portfolio for all distances and speeds

- **Urban**
  - Speed (km/h): 1-10
  - Average distance between stops (km): High
  - Metro, Light Rail, Automated People Mover
  - Commuter Trains

- **Interurban**
  - Speed (km/h): 30
  - Average distance between stops (km): 50
  - Passenger Coaches
  - Locomotives
  - High-Speed and Intercity Trains

**Commuter Trains**
- **Passenger Coaches**
- **Locomotives**
- **High-Speed and Intercity Trains**

**Metro, Light Rail, Automated People Mover**
- **Commuter Trains**
- **Passenger Coaches**
- **Locomotives**
- **High-Speed and Intercity Trains**
Vectron

Strong platform and cross-border reach
Mireo

Modularization for flexible and comfortable commuting
New drive systems

Battery power and fuel cells
SiAPS
Super efficient auxiliary power supply for trains
Shaping connected mobility at …

InnoTrans Highlights 2018
In recent weeks, people have been spotting something ...
People already like #seeitnovo

4,170 💖

But they are wondering –

What is this test car all about?

133,497 Single interactions
Velaro Novo delivers on all targets with its key qualities

... make infrastructure intelligent

... increase value sustainably over the entire lifecycle

... enhance passenger experience

... guarantee availability
From 250 – 360 km/h

Investment -20%
Available space +10%
Maintenance -30%
Mass -15%
Energy consumption -30%


- Start R&D Project
- Concept Design Review
- #seelNovo testcar manufacturing
- Track testing
- First trainset delivery for revenue service
Shaping connected mobility with Digital service

Rolling stock

Intelligent infrastructure

Turnkey projects

Digital service
Big Data

Failure Prediction based on artificial intelligence
Barcelona-Madrid line

100 percent availability with digital service
Shaping connected mobility with Intelligent infrastructure

- Intelligent infrastructure
- Rolling stock
- Digital service
- Turnkey projects
Rail automation, electrification, road and intermodal solutions

- Mainline Rail Automation
- Mass Transit Rail Automation
- Rail Electrification
- Freight and Products Rail Automation
- Intelligent Traffic Systems
- Intermodal Solutions
Sinet Technology

Reducing amount of interlocking buildings
Shaping connected mobility with advanced infrastructure – Digitalization of the Norwegian Railway

- 4,200 km of rail
- 375 stations
- 400 new level crossings
- 4,200 point machines
- 7,000 axle counter points
- Centralized interlocking system

- No more need for physical signals
- Less maintenance
- Lower costs

- First line in operation 2022
- Scheduled completion 2034
- Service maintenance until 2059
- ETCS Level 2
- IP-based digital interlocking

10,000 balises
Move logic to cloud

Conforms with highest security levels. No more project specific hardware
Digital station

3 seconds less dwell time increases system capacity by 5%
Real-time Electrification Network Prediction
Up to 100% network availability
Data Capture Unit

Achieving cybersecurity in a connected environment
Flow AI Application

Traffic flow optimized by 4% using artificial intelligence
Shaping connected mobility with Turnkey projects

Intelligent infrastructure

Rolling stock

Digital service

Turnkey projects
Combining the entire portfolio

- Rolling stock
- Digital service
- Intelligent infrastructure
Pre-Press Conference – InnoTrans 2018

June 13, 2018 | Sabrina Soussan and Michael Peter

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