Bosch – a global network
Shareholders of Robert Bosch GmbH
Bosch – a global network
Four business sectors

Mobility Solutions

Industrial Technology

Energy and Building Technology

Consumer Goods
### Bosch – four business sectors

**Markets and figures for 2015***

<table>
<thead>
<tr>
<th>Bosch Group</th>
<th>Europe</th>
<th>Americas</th>
<th>Asia Pacific¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ 70.6 billion euros in sales</td>
<td>▶ 53% share of sales</td>
<td>▶ 20% share of sales</td>
<td>▶ 27% share of sales</td>
</tr>
<tr>
<td>▶ 374,778 associates</td>
<td>▶ 229,599 associates</td>
<td>▶ 41,037 associates</td>
<td>▶ 104,142 associates</td>
</tr>
<tr>
<td>▶ 276 manufacturing sites</td>
<td>▶ 162 manufacturing sites</td>
<td>▶ 39 manufacturing sites</td>
<td>▶ 75 manufacturing sites</td>
</tr>
</tbody>
</table>

*As of 12/15
¹ including other countries
BOSCH – TECHNOLOGY TO ENHANCE QUALITY OF LIFE
Bosch – a global network
2015: growth through innovation

- 5,422 first-filed patents in 2015
- ~22 per working day
- EUR 6.3 bn spent on research and development
- approx. 9% of sales
- 55,000 associates in research and development
- 118 research and development locations worldwide *

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* Includes all locations with at least 50 associates (as per Dec. 31, 2015)
Rapid development of the connection of people and things

- 2020: 7 billion connected people
- 2020: 50 billion connected devices
- 1995: 15 million people have access to the internet
- 1997: 6 million computers with internet access
Live at Bosch
Important changes in recent years

- **Low priced sensors available**
- **CPU is available cheap and unlimited**
- **Data mining:** Analyse big data close to real-time
- **Internet is available worldwide**
- **Increase in soft-/hardware usability**
- **Storage is available cheap and unlimited**
- **Performance advantages by decentralized networking**
- **Worldwide GPS localization is possible**
- **Increase in soft-/hardware usability**

Bosch Group | November 2016
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Internet of things
The Bosch anti-skidding system ESP® saves thousands of lives each year.

If every car in Europe, the U.S., and Japan had ESP®, 14,000 lives could be saved each year in those countries alone.

ESP® prevents up to 80 percent of all skidding accidents – one of the most common causes of serious injury.
Bosch – technology to enhance quality of life

The car as an active part of the internet

- Bosch brings solutions for the **mobility of the future**
- Bosch is bringing new energy to the powertrain, **putting the autopilot on the road**
- Bosch has all the **essential expertise** needed for **automated driving**.
INDUSTRIAL TECHNOLOGY
Bosch – technology to enhance quality of life

Drive and Control Technology, Industry 4.0, Packaging Technology
Bosch – technology to enhance quality of life
Industry 4.0 use cases and benefits – examples

Digital Supply Chain
✓ stock saving
✓ efficiency increase
✓ transparency along supply chain

Convertible Equipment
✓ fix cost reduction
✓ efficient M2H collaboration
✓ human relief of heavy load / repetitive tasks

Shop Floor Mgmt. Information
✓ real time data
✓ fast escalation
✓ paperless

Power / Energy Management
✓ peak reduction
✓ energy cost saving

Operator Support
✓ agility & quick reaction
✓ quality increase
✓ efficiency increase

Predictive Maintenance
✓ improve OEE
✓ no sudden breakdown

Adaptive Testing
✓ increase efficiency
✓ less invest

Quality Improvement
✓ instant feedback
✓ fast identification of error sources
CONSUMER GOODS
TrackMyTools: intelligent inventory management by Bosch

- TrackMyTools gives inventory managers access to all the required data on the company's inventory whenever they need it.
- TrackMyTools tells tradespeople whether they have all the necessary equipment with them when they are about to attend a call-out or go on site.
- TrackMyTools optimizes the workflow, saves time and increases a business's productivity.

Know where your tools are at all times!
Bosch – technology to enhance quality of life
Home appliances – Series 8 ovens

- Home appliances for everyone who wants to achieve perfect results easily.

- The ovens with PerfectBake Sensor take care of the entire baking process automatically and signal when the cake is perfectly done.

- Connectivity for selected models: “With WLAN technology, they can be controlled conveniently using an app on mobile devices such as tablet PCs or smartphones”.
ENERGY AND BUILDING TECHNOLOGY
Bosch – technology to enhance quality of life

Security Systems and Bosch Thermotechnology
THANK YOU

www.bosch.com