SCHAEFFLER

# Schaeffler AG – Analyst Day

November 20, 2015

# Disclaimer

This presentation contains forward-looking statements. The words "anticipate", "assume", "believe", "estimate", "expect", "intend", "may", "plan", "project“, "should" and similar expressions are used to identify forward-looking statements. Forward-looking statements are statements that are not historical facts; they include statements about Schaeffler Group's beliefs and expectations and the assumptions underlying them. These statements are based on plans, estimates and projections as they are currently available to the management of Schaeffler AG. Forward-looking statements therefore speak only as of the date they are made, and Schaeffler Group undertakes no obligation to update any of them in light of new information or future events.

By their very nature, forward-looking statements involve risks and uncertainties. These statements are based on Schaeffler AG management's current expectations and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Actual results may differ from those set forth in the forward-looking statements as a result of various factors (including, but not limited to, future global economic conditions, changed market conditions affecting the automotive industry, intense competition in the markets in which we operate and costs of compliance with applicable laws, regulations and standards, diverse political, legal, economic and other conditions affecting our markets, and other factors beyond our control).

This presentation is intended to provide a general overview of Schaeffler Group’s business and does not purport to deal with all aspects and details regarding Schaeffler Group. Accordingly, neither Schaeffler Group nor any of its directors, officers, employees or advisers nor any other person makes any representation

or warranty, express or implied, as to, and accordingly no reliance should be placed on, the accuracy or completeness of the information contained in the presentation or of the views given or implied. Neither Schaeffler Group nor any of its directors, officers, employees or advisors nor any other person shall have any liability whatsoever for any errors or omissions or any loss howsoever arising, directly or indirectly, from any use of this information or its contents or otherwise arising in connection therewith.

The material contained in this presentation reflects current legislation and the business and financial affairs of Schaeffler Group which are subject to change.

# Agenda

| | | |
|---|---|---|
| 1 | Overview | *K. Rosenfeld* |
| 2 | Business profile and investment highlights | *K. Rosenfeld* |
| 3 | Technology and R&D | *Prof. Dr. Gutzmer* |
| 4 | Production and Operational Excellence | *O. Jung* |

# Schaeffler Group – A leading integrated automotive and industrial supplier

## Schaeffler at a glance

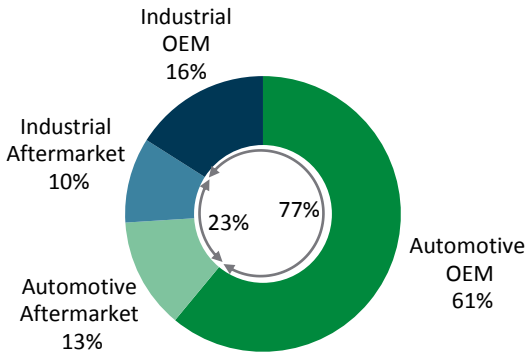
- Leading integrated automotive and industrial supplier of high-precision components and systems
- Global footprint with around 84,000 employees at about 170 locations in more than 50 countries
- Balanced business portfolio across sectors, geographies and diversified customer base with leading market positions
- Sizeable aftermarket exposure contributes to stable financial performance
- Highly attractive profitability and cash returns

## Key financials

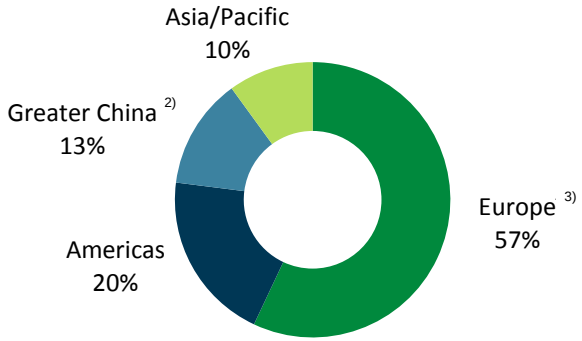
in EUR mn unless otherwise indicated

| | 2014 | 9M 2015 |
|---|---|---|
| Sales | 12,124 | 9,982 |
| *% growth (y-o-y)* | *8.2%* | *10.6%* |
| EBITDA | 2,172 | 1,765 |
| *% margin* | *17.9%* | *17.7%* |
| EBIT | 1,523 | 1,251 |
| *% margin* | *12.6%* | *12.5%* |
| *EBIT margin Automotive* | *13.8%* | *13.3%* |
| *EBIT margin Industrial* | *9.1%* | *10.2%* |

## Sales by division (2014)




## Sales by region (2014)[1)]




1) Market view (= location of customer)
2) China, Hong Kong and Taiwan
3) EMEA, Russia and India

SCHAEFFLER

# Our history – From a technological pioneer to a global player

**1946**

Dr. Wilhelm and Dr.-Ing. E.h. Georg Schaeffler establish INA

**1949**

Development of the needle roller cage

**1957**

First foreign plant in Llanelli, Great Britain

**1958**

Close to the customer: Plant opening in Sao Paulo, Brazil

**1969**

Entering a new market, North America: INA's company in Cheraw, South Carolina

**1992**

Milestone for the development of the growth region Asia: Plant in Ansan, Korea

**1995**

Schaeffler in China: establishing the INA Bearings in Taicang

**1996**

Maria-Elisabeth Schaeffler-Thumann and son Georg F.W. Schaeffler take over

**1999**

Acquisition of LuK GmbH

**2002**

Acquisition of FAG Kugelfischer Georg Schäfer AG

**2008**

Schaeffler acquires strategic stake of Continental AG

**2014**

Production of the 100 millionth dual mass flywheel

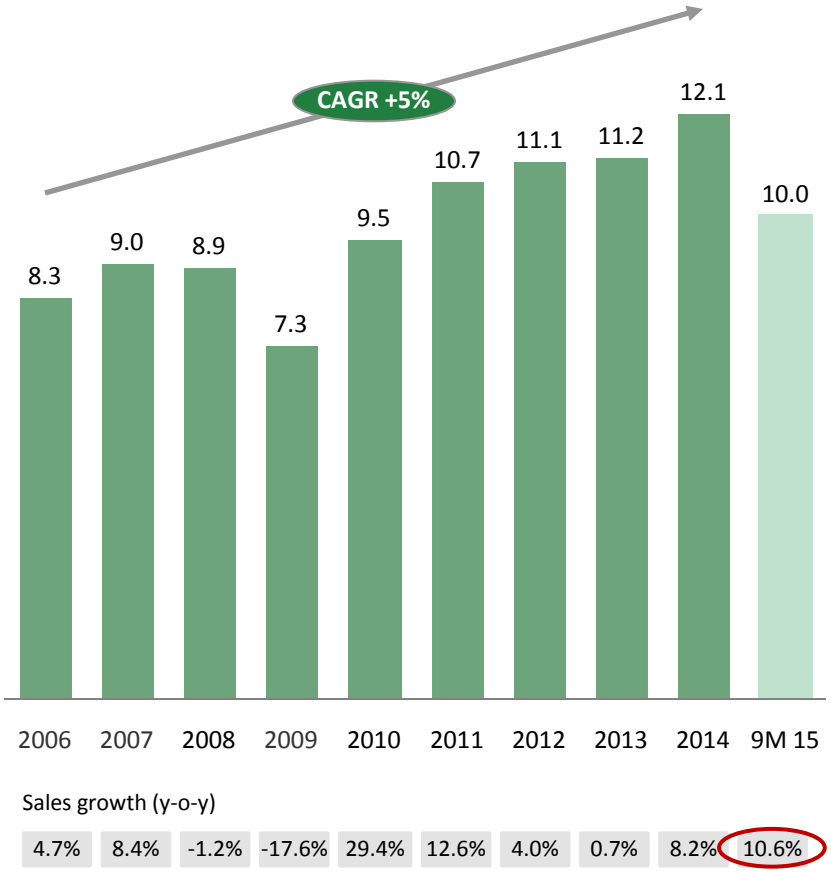
**2015**

Schaeffler AG goes public

# Strong track record of above-average growth and profitability

## Development of sales 2006 – YTD 2015[1)]

in EUR bn

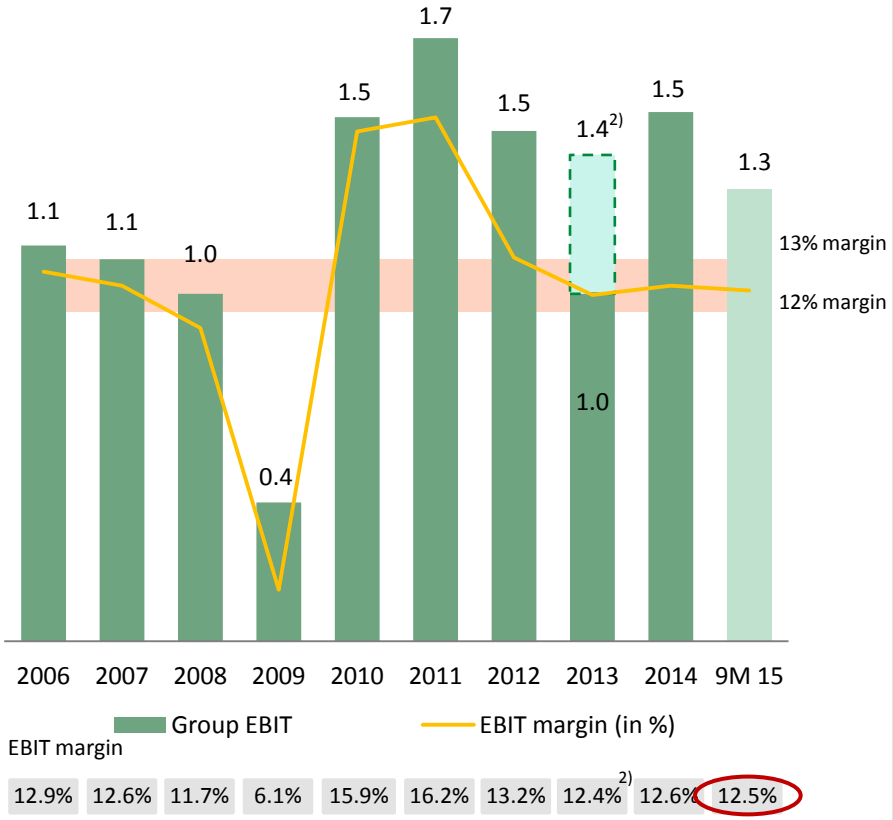



| Sales growth (y-o-y) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.7% | 8.4% | -1.2% | -17.6% | 29.4% | 12.6% | 4.0% | 0.7% | 8.2% | 10.6% |

1) 2006-2010 relates to financials of a different entity (Schaeffler VZ GmbH)

## Development of EBIT 2006 – YTD 2015[1)]

in EUR bn



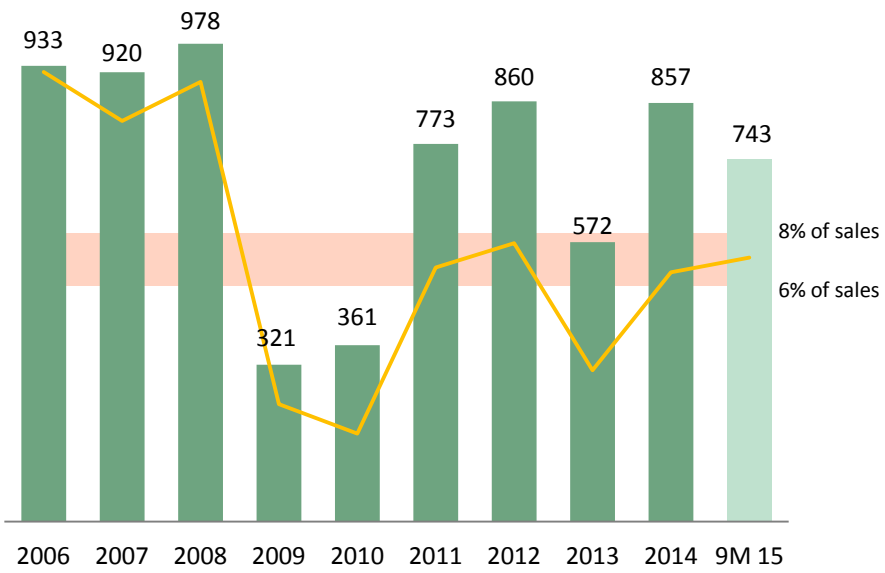

| EBIT margin | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.9% | 12.6% | 11.7% | 6.1% | 15.9% | 16.2% | 13.2% | 12.4%[2)] | 12.6% | 12.5% |

2) Before provision for EU antitrust fine of EUR 380 mn

# Proactive cash flow management over the cycle

## Development of capital expenditures 2006 – YTD 2015[1)]

in EUR mn



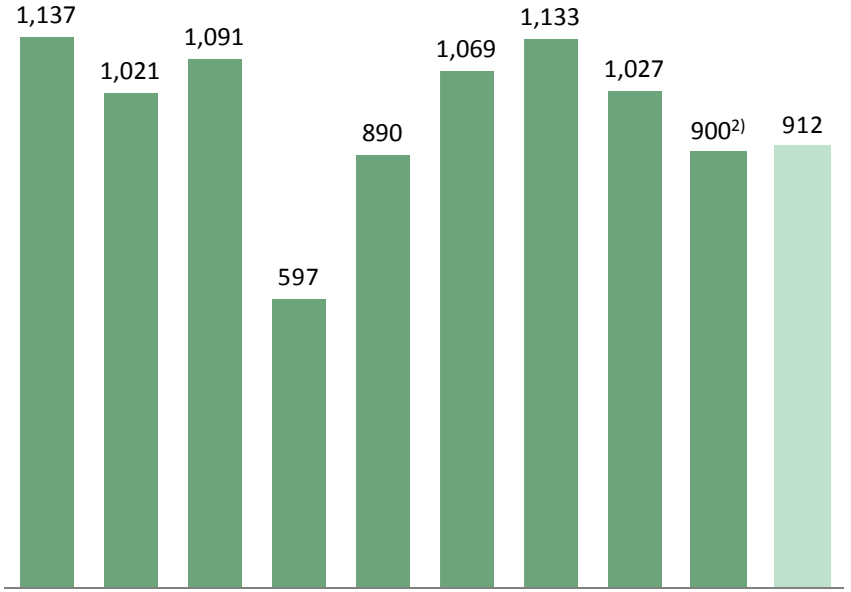

in % of sales

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 9M 15 |
|---|---|---|---|---|---|---|---|---|---|
| 11.2% | 10.2% | 11.0% | 4.4% | 3.8% | 7.2% | 7.7% | 5.1% | 7.1% | 7.4% |

1) 2006-2010 relates to financials of a different entity (Schaeffler VZ GmbH)

## Development of Operating Cash Flow 2006 – YTD 2015[1)]

in EUR mn




Free Cash Flow

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 9M 15 |
|---|---|---|---|---|---|---|---|---|---|
| 482 | 246 | 394[2)] | 393[2)] | 566 | 304 | 301 | 473 | 419[3)] | 192 |

2) Adjusted for acquisition of Continental AG
3) Adjusted for EU antitrust fine of EUR 371 mn

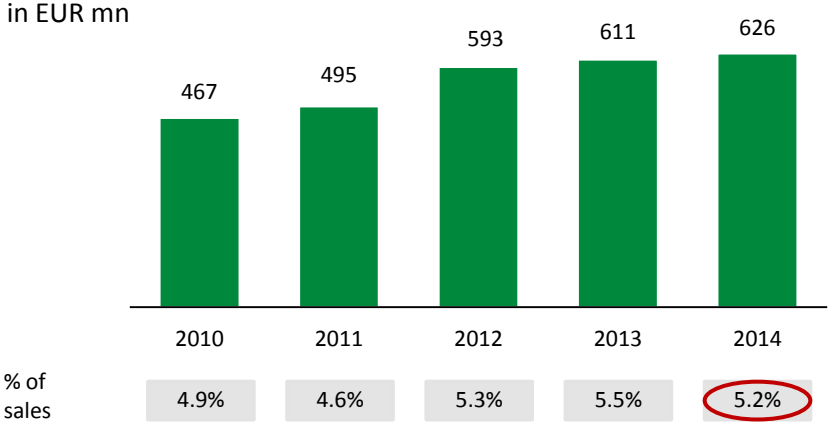
# Our success factors - Quality, technology and innovation

## Outstanding application expertise and production technology

1. Quality, Technology and Innovation:
   - More than 50 quality awards in 2014
   - State-of-the-art Plants, R&D and testing facilities
   - Rank 2 in number of patent registrations in Germany
2. High level of application and system expertise:
   - Automotive: Know-how of the entire drivetrain allows offering of customized (patented) solutions
   - Industrial: Deep bearings product know-how allows offering of high-quality standard as well as customized solutions
3. Unique manufacturing process and production know-how allowing for production of complex parts at low cost, high quality and in high volumes:
   - Technology leader in Cold Forming, Forging and Heat Treatment
   - In-house Industrial Engineering with more than 9,800 people (covers entire manufacturing process)
   - In-house Tool Management & Prototyping with more than 4,400 people
   - In-house Special Machinery department with more than 1,400 people

## Significant R&D spend[1)]

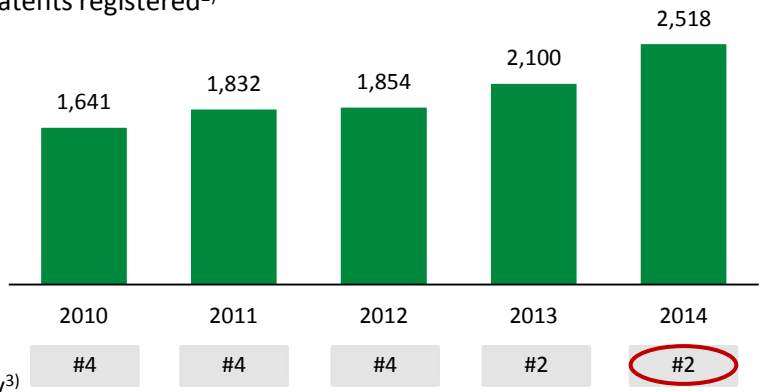
in EUR mn




1) 2010 relates to financials of a different entity (Schaeffler VZ GmbH)

## Best-in-class innovation platform

No of patents registered[2)]




2) German Patent and Trademark Office
3) Overall rank

# Customer base – Global and diversified customer base

## Automotive customers

Other customers ~40%

~ 75% of Schaeffler sales (9M 15)

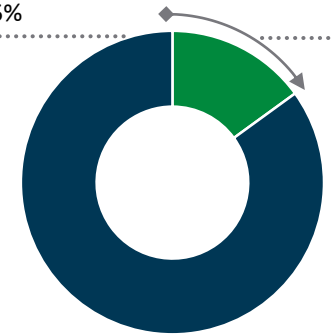
**Top 10 customers**

~60% of Automotive sales

**Total: ~7,500 customers**

## Industrial customers

Other customers ~85%



~ 25% of Schaeffler sales (9M 15)

**Top 10 customers**

~15% of Industrial sales

**Total: ~14,500 customers**

## Top 10 customers

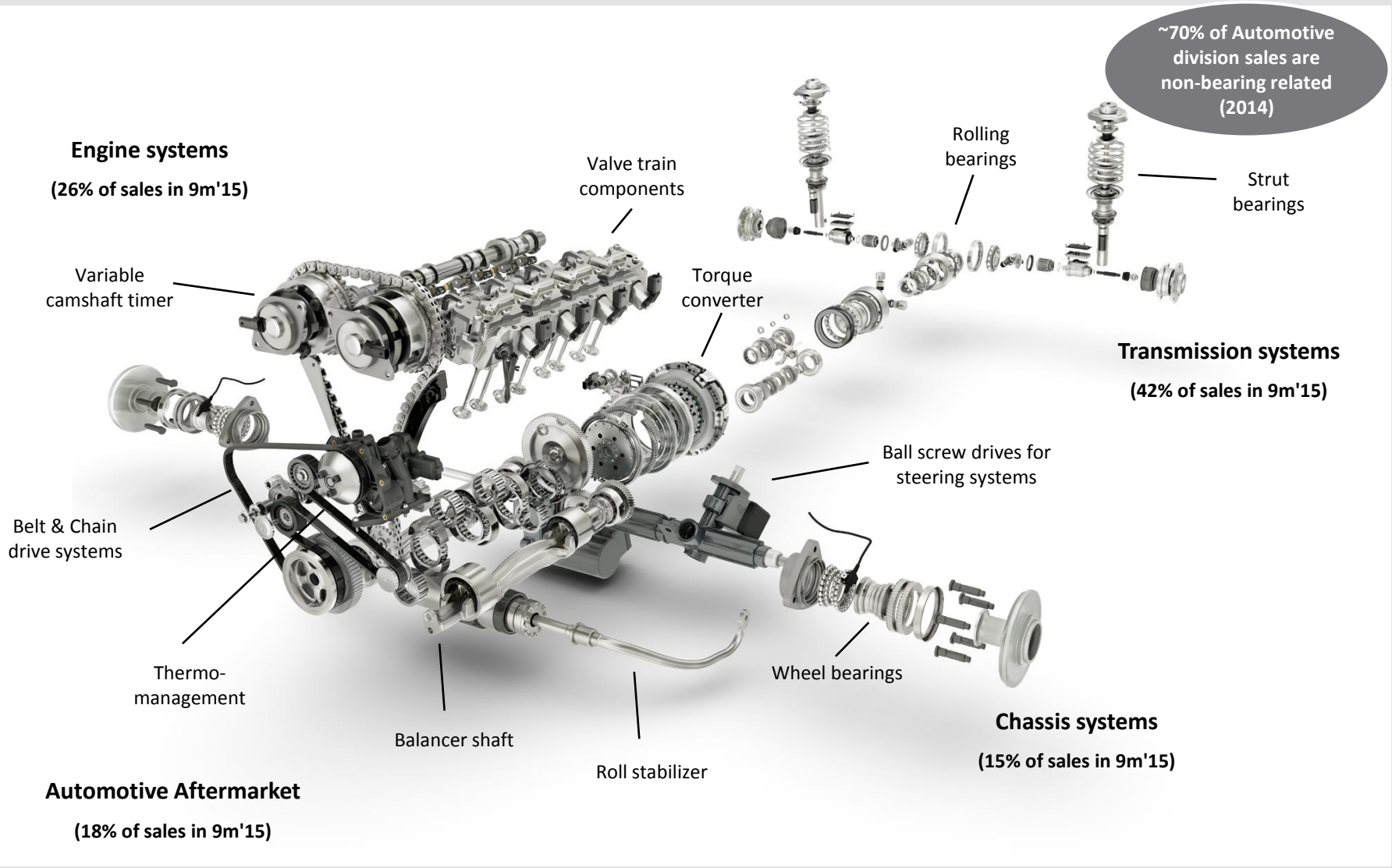
Volkswagen, GM, FCA Fiat Chrysler Automobiles, Ford, Hyundai, Daimler, Renault, ZF, Getrag, BMW

## Top 10 customers

Siemens, Rolls-Royce, United Technologies, GPC, GE, Bosch, iph, Brammer, ABB, NGC

SCHAEFFLER

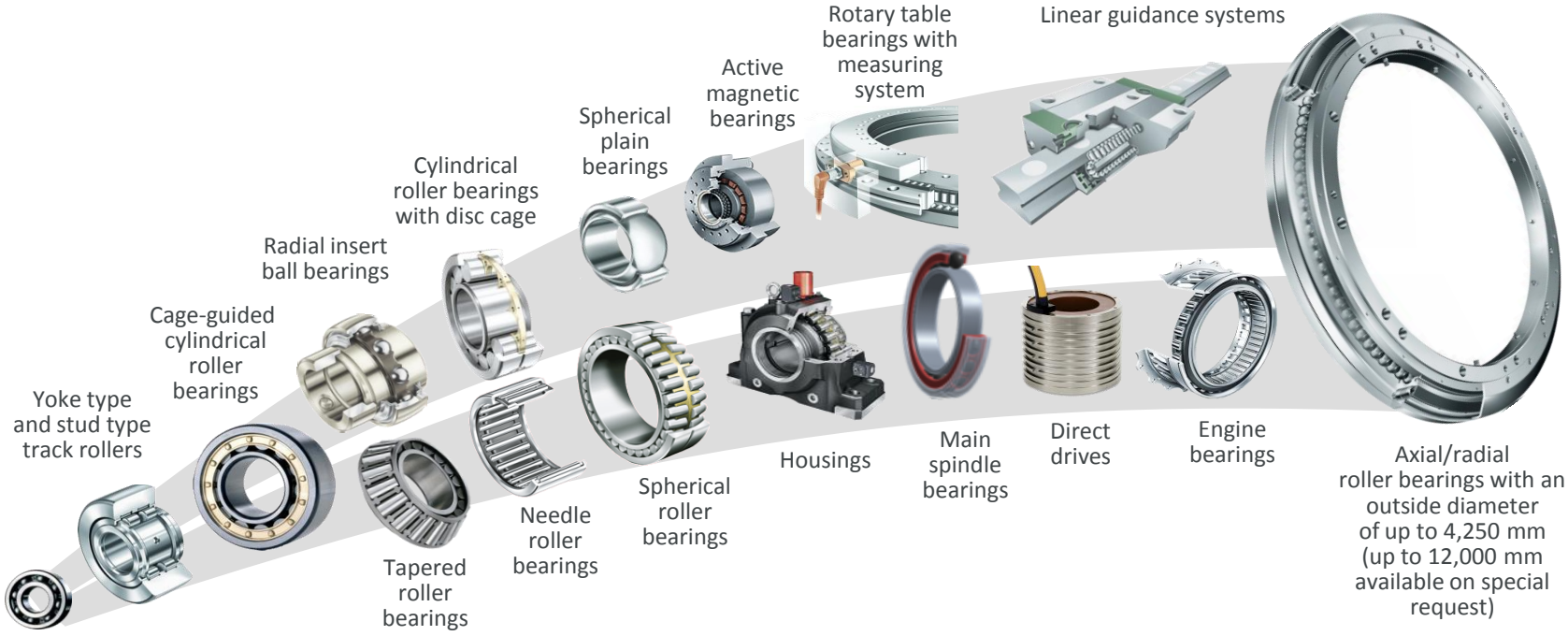
# Product offering – Leader for critical components and systems in automotive



SCHAEFFLER

# Product offering – Leading bearing supplier to over 60 industrial sectors

~ 85% of Industrial division sales are bearing related (2014)




**Industrial Applications**

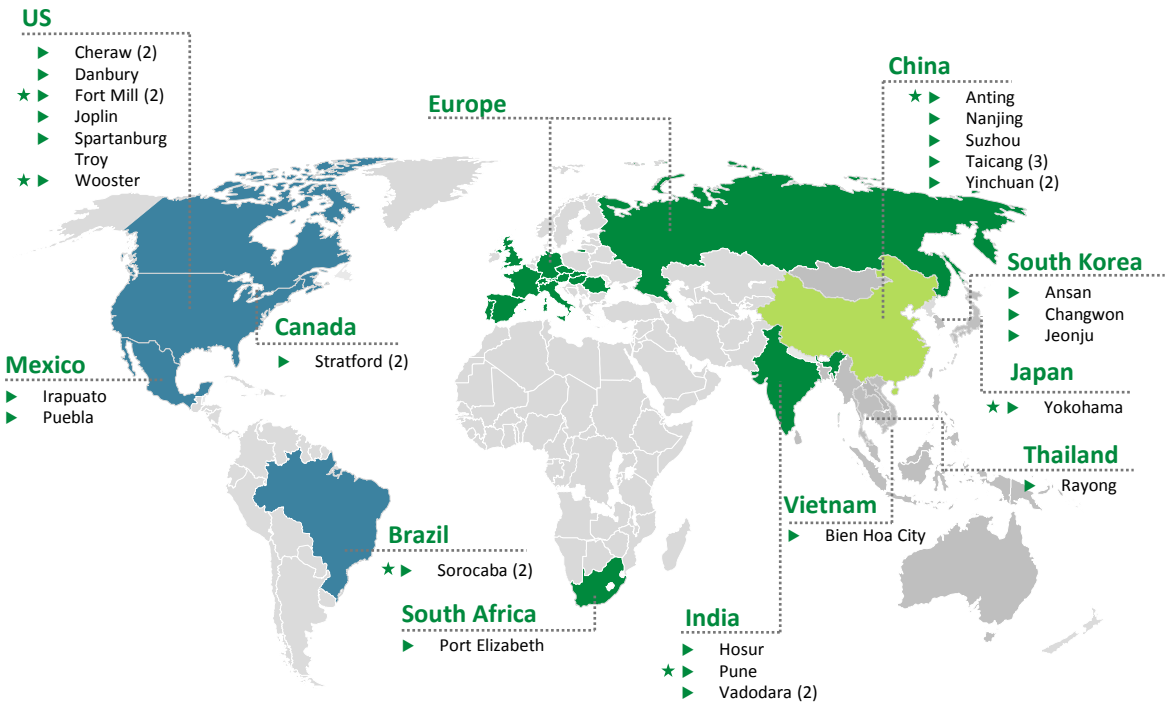
**(64% of sales in 9m'15)**

**Industrial Aftermarket**

**(36% of sales in 9m'15)**

# Footprint – Integrated global manufacturing and R&D

## Global footprint




▶ **Manufacturing sites**

★ **R&D Centers**

| | Europe | Americas | Greater China | Asia/Pacific | Total |
|---|---|---|---|---|---|
| **Manufacturing sites** | 48 | 14 | 7 | 5 | **74** |
| **R&D Centers** | 9 | 4 | 1 | 2 | **16** |

### Europe

**Germany**
- ★ ▶ Bühl
- ★ ▶ Herzogenaurach
- ★ ▶ Homburg (3)
- ★ ▶ Schweinfurt (2)
- ▶ + 17 other German sites

**Austria**
- ▶ Berndorf-St. Veit

**Czech Republic**
- ▶ Lanskroun

**France**
- ▶ Calais
- ▶ Chevilly
- ★ ▶ Haguenau (2)

**Great Britain**
- ▶ Llanelli
- ▶ Plymouth
- ▶ Sheffield

**Hungary**
- ▶ Debrecen
- ★ ▶ Szombathely

**Italy**
- ▶ Momo

**Portugal**
- ▶ Caldas da Rainha

**Romania**
- ★ ▶ Braşov

**Russia**
- ▶ Uljanowsk

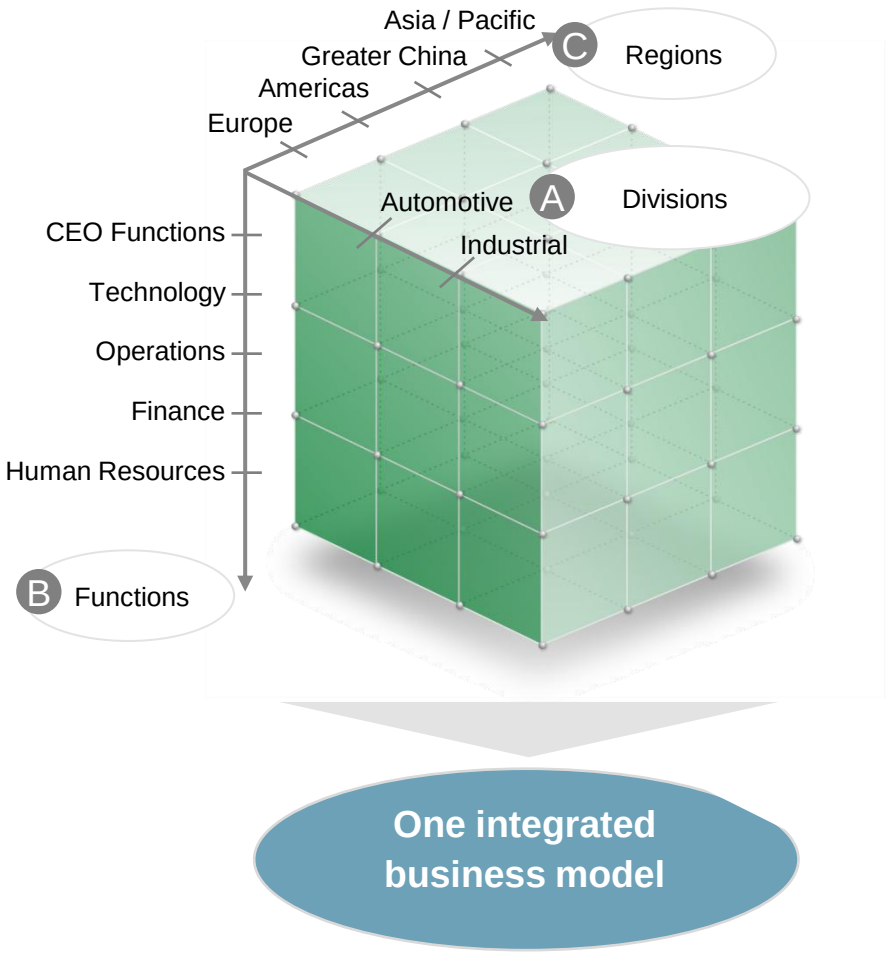
**Slovakia**
- ★ ▶ Kysucké Nové Mesto
- ▶ Skalica

**Spain**
- ▶ Elgoibar

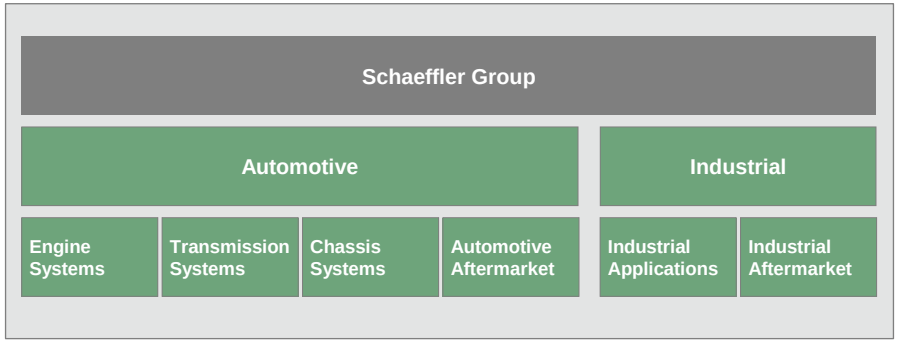
**Switzerland**
- ▶ Romanshorn

# Organisational structure and management team

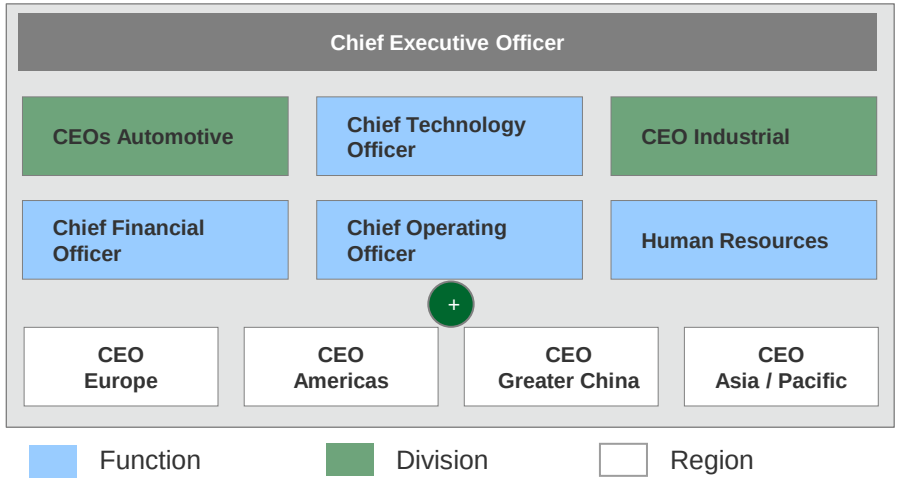
## 3-dimensional matrix




## Divisions and business divisions

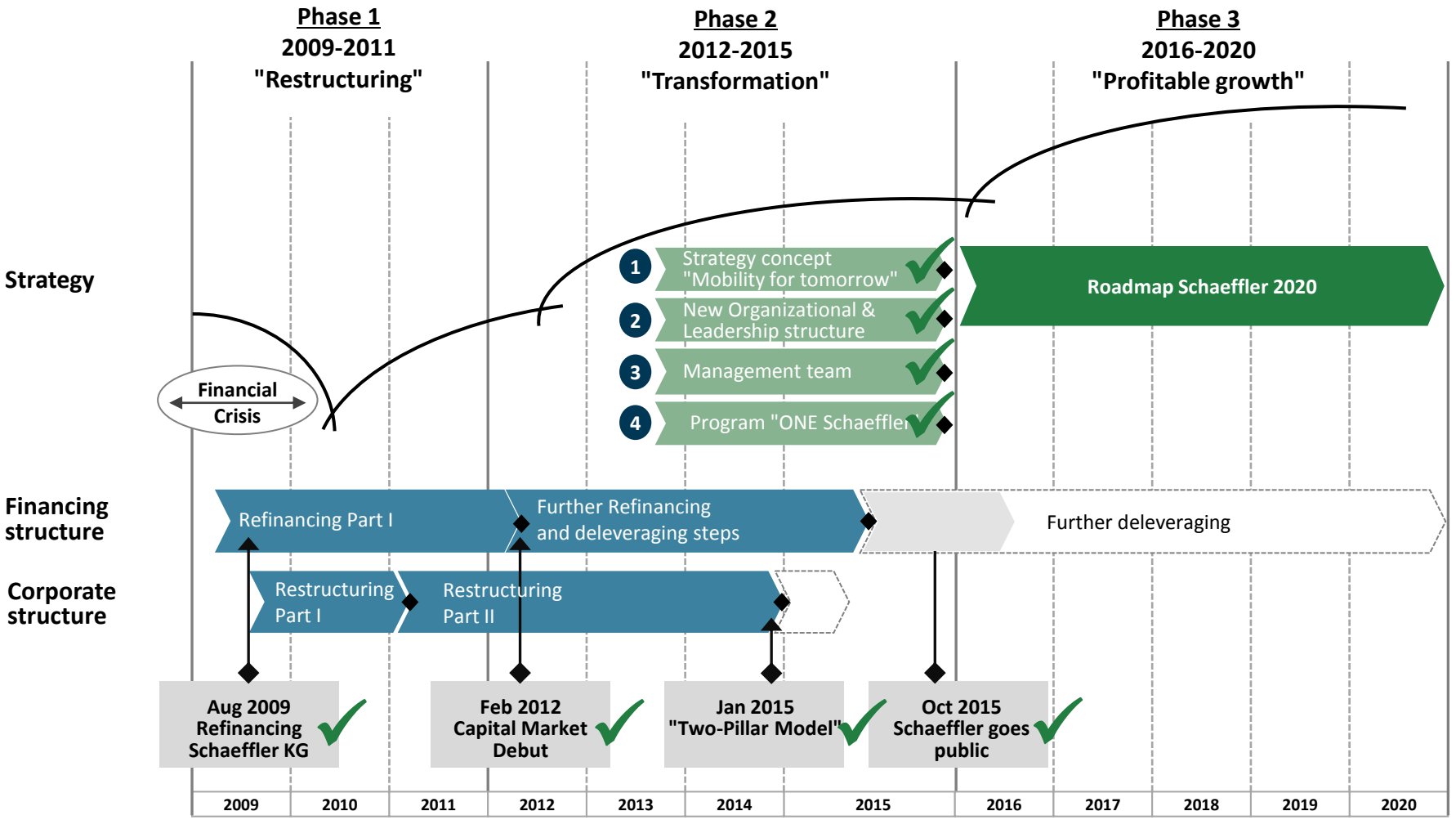



## Leadership structure



SCHAEFFLER

# Chronology 2009 – 2015 – The "Schaeffler story"



# Our strategic concept – Long-term growth from “Mobility for tomorrow”

## Key mega trends

| | |
|---|---|
| Society trends | ▶ Urbanization<br>▶ Population growth |
| Technology trends | ▶ Increasing complexity<br>▶ Digitalization |
| Environmental trends | ▶ Renewable energies<br>▶ Availability of resources |
| Economic trends | ▶ Globalization<br>▶ Affordability |

## 4 focus areas


## Offering solutions in Automotive…


## … and in Industrial

SCHAEFFLER

# Overview Strategic targets – "Roadmap Schaeffler 2020" in preparation

**Status quo analysis**

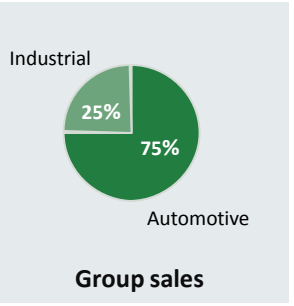
**Strategic targets**

**Strategic initiatives**

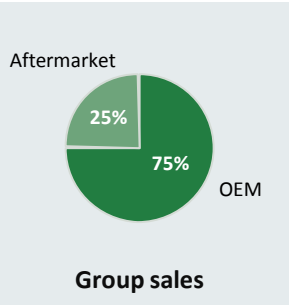
## Strategic direction

1. Continuation of a profitable growth strategy based on the key success factors "Quality, Technology and Innovation"
2. Balanced business portfolio with Top 3 market position
   - Automotive / Industrial
   - OEM / Aftermarket
   - Regional mix
3. Integrated business model using internal synergies and leveraging of superior production technology

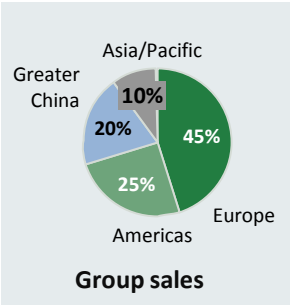
## Strategic targets 2020




**Re-energize the Industrial Division**




**Grow the Aftermarket business**




**Extend global footprint towards attractive growth markets**

SCHAEFFLER

# Schaeffler equity story

## 3 pillars

**1 Out-performance in Automotive**

- 9M FX-adjusted sales growth of 6.5%, EBIT-margin at 13.3%
- Best-in-class business with superior growth and margin profile
- Out-performance of global light vehicle production on average by 6% per annum over the last four years

**2 Margin upside in Industrial**

- 9M FX-adjusted sales growth of -2.2%, EBIT-margin at 10.2%
- Margin upside from CORE program: EBIT-margin target of 13% by 2018
- Strategic sales target: Industrial division contributes 25% to Group sales by 2020

**3 Upside on Free Cash Flow generation**

- Free Cash Flow generation of EUR 192 mn in 9M period with significant upside potential from lower interest costs going forward
- Further deleveraging from operational cash flow (EUR1bn by 2018)

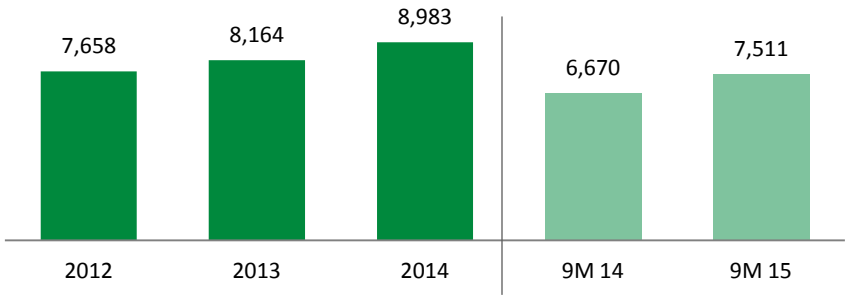
**Profitable growth**

SCHAEFFLER

# 1 Automotive division again strongly outperforms the market in 9M

## Sales and EBIT margin

in EUR mn



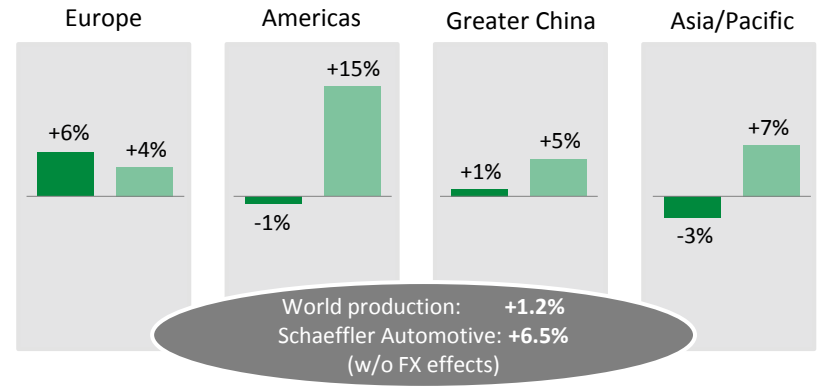

| | 2012 | 2013 | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|---|---|
| Growth rate (y-o-y) | +7.0% | +6.6% | +10.0% | +8.8% | +12.6% |
| EBIT - margin | 13.5% | 13.0%[1)] | 13.8% | 14.2% | 13.3% |

1) Before provision for EU antitrust fine of EUR 380 mn

## Sales development by business division

| | 9M 14 | 9M 15 | Δ | Δ excl. FX effects |
|---|---|---|---|---|
| Engine Systems | 1,674 | 1,937 | +15.7% | +6.8% |
| Transmission Systems | 2,814 | 3,164 | +12.4% | +5.8% |
| Chassis Systems | 1,014 | 1,098 | +8.3% | +3.0% |
| Automotive Aftermarket | 1,168 | 1,312 | +12.3% | +10.8% |
| **Total** | **6,670** | **7,511** | **+12.6%** | **+6.5%** |

## Sales and market development Automotive



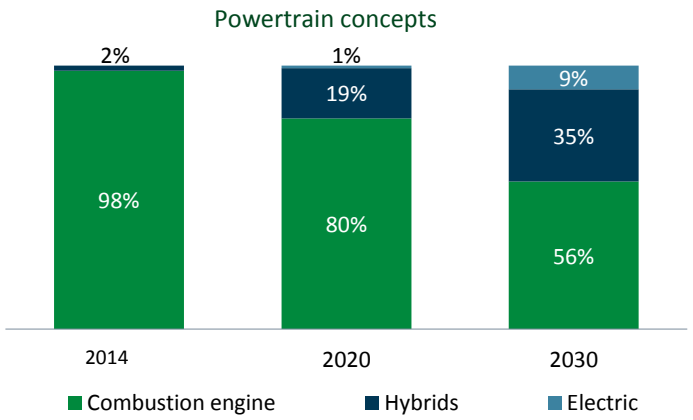

## Key aspects

- Engine Systems: Ramp-up of new TMM; strong demand for valve train components; Temporary weakness in China
- Transmission Systems: Significant growth in torque converters; growing content with local OEMs in China
- Chassis Systems: Strong demand for 3rd generation of wheel bearings and ball screw drives
- Automotive Aftermarket: Strong demand for service kits in Europe and expansion of product portfolio in Americas

SCHAEFFLER

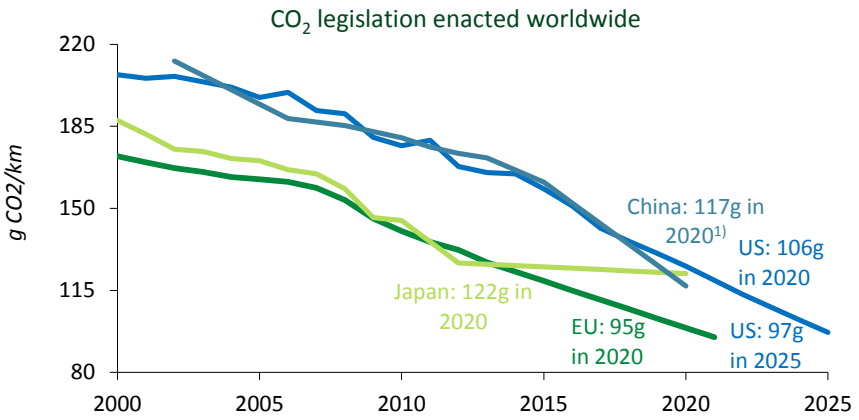
# 1 Automotive – Best-in-class business with superior growth and margin profile

## Combustion engine dominant but will be further electrified...




Source: University of Duisburg-Essen, IHS

## ...to meet $CO_2$ reduction targets




1) Proposed 2020 targets
Source: icct (November 2014)

## Key CO2 emission reduction trends...

| | | |
|---|---|---|
| **Engine** | ▶ Friction reduction<br>▶ Efficiency increase | ▶ Thermal management<br>▶ Start-Stop systems |
| **Transmission** | ▶ Friction reduction<br>▶ Torsional vibration isolation | ▶ Increased automation<br>▶ More gears<br>▶ Clutch-by-Wire |
| **Chassis** | ▶ Friction reduction<br>▶ Weight reduction | ▶ Power on demand<br>▶ 48 V solutions |
| **Hybridization Electrification** | ▶ Micro&Mild hybrid<br>▶ Full hybrid<br>▶ Plug-In hybrid | ▶ Electric Vehicle<br>▶ 48 V solutions |

## ...and our market leading solutions

- High precision components and systems for increased variability in combustion engines
- Dominant market position in valve-train components
- Innovative Thermal Management Module

- Most comprehensive product offering for all transmission technologies; broad bearings portfolio
- Outstanding know-how in damper technologies, clutches, torque converters and actuators

- Mechatronic systems offerings
- Strong market position in wheel bearings

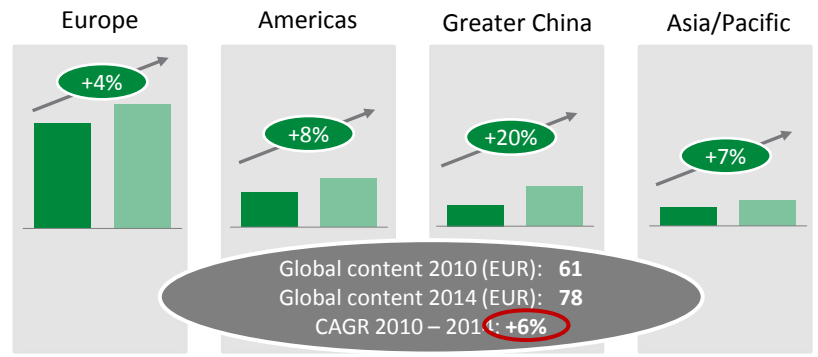
1)
- 48V and high-voltage Hybrid modules for Full and Plug-in Hybrids
- Complete electric axles for 48V and high-voltage systems for all-electric driving and implementation of all-wheel drive

1) Part of BD Transmission Systems

SCHAEFFLER

# 1 Automotive – Best-in-class business with superior growth and margin profile

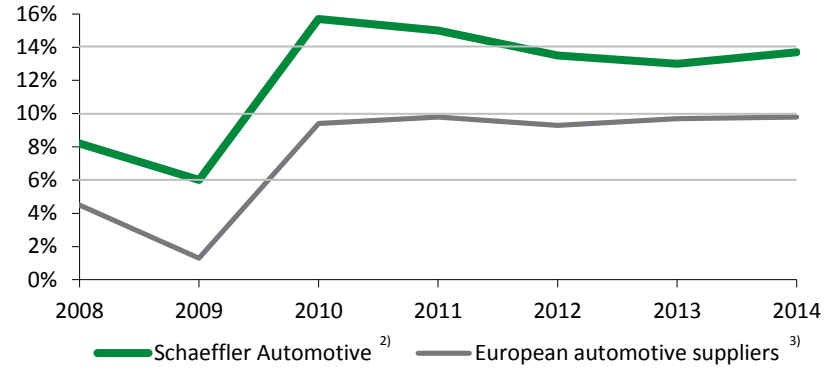
## Content per vehicle growth[1)]




1) Content per vehicle is calculated as ratio of relevant Schaeffler Automotive sales (excl truck sales, aftermarket sales and FX effects) to regional number of light vehicles produced as calculated by the Company
Source: IHS Automotive for light vehicle production

## Leading sector margins

EBIT margin (%)




2) Schaeffler Automotive 2013 EBIT margins before provision for EU antitrust fine of EUR 380 mn
3) European auto suppliers EBIT margins calculated as average of EBIT margins for Autoliv, Brembo, Continental, ElringKlinger, GKN, Hella, Leoni, Norma, Stabilus and Valeo
Source: Company filings, FactSet

## Example: Schaeffler China Concept Car

- A worldwide applicable plug-in hybrid powertrain with 6.4 kWh battery, developed in China to fulfill stringent future fuel economy targets
- Hybridized 6-speed dry DCT, enabling on-demand connection of engine thanks to P2 module with 41 kW / 180 Nm e-Motor
- 1.0l, 3-cylinder gasoline turbo engine, 92 kW / 170 Nm, front-wheel drive

## Fuel reduction potential of 25% - 65%

| |
|---|
| P2 Hybrid Module with dry disconnection clutch |
| Dry dual clutch, Electromechanical clutch & gear actuation, control software |
| Optimized combustion engine: VCT on intake-/exhaust-side & coated tappets, electric water pump |
| PROtroniC hybrid powertrain prototype control unit from Schaeffler Engineering |

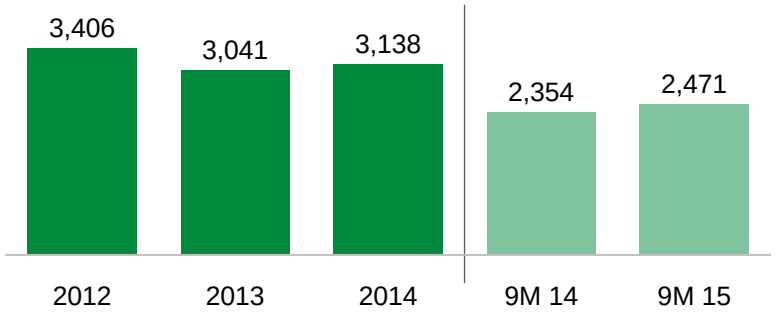
- Outstanding fuel saving compared to original vehicle:
  - - 25% with depleted battery
  - - 65% in plug-in operation
- Excellent driving dynamics (boost) & comfort

SCHAEFFLER

# 2 Industrial division with mixed development in 9M

## Sales and EBIT margin

in EUR mn

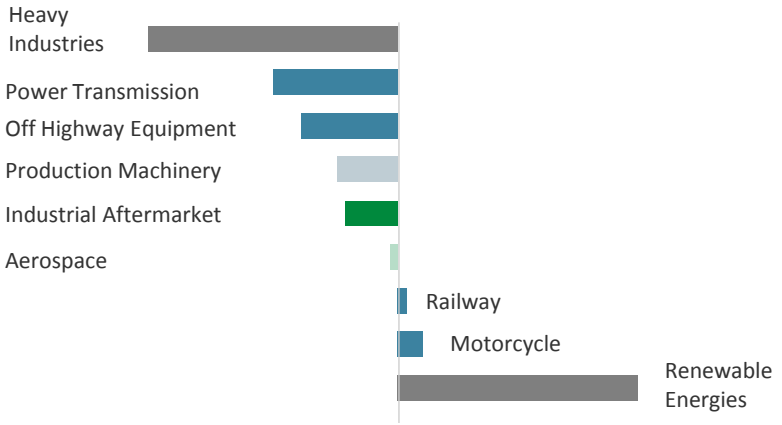



| | 2012 | 2013 | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|---|---|
| Growth rate (y-o-y) | -1.6% | -10.7% | +3.2% | +2.7% | +5.0% |
| EBIT -margin | 12.7% | 10.7% | 9.1% | 12.1% | 10.2% |

## Sales development Industrial

| | 9M 14 | 9M 15 | Δ | Δ ex FX effects |
|---|---|---|---|---|
| Industrial Applications | 1,489 | 1,571 | +5.5% | -1.7% |
| Industrial Aftermarket | 865 | 900 | +4.0% | -2.9% |
| Total | **2,354** | **2,471** | **+5.0%** | **-2.2%** |

## Sales by sector 9M 15 vs 9M 14 (FX-adjusted)




## Key aspects

- Industrial OEM business with mixed development across sectors
  - Positive development in Renewable Energies, mainly Wind
  - Continuing weak market in Heavy Industries, especially Ming and Steel; Weakness in Industrial Transmissions
- Industrial Aftermarket:
  - Stable business in Europe
  - Weakness in North America, mainly Oil & Gas and Mining related as well as in China

SCHAEFFLER

# 2 Industrial – Growth and margin upside from re-aligning the business

## Key issues Industrial division

1. Sales development and profitability below expectation
2. Decreasing market share with high-volume products
3. Delivery performance with room for improvement
4. Production footprint geared towards Europe
5. Product and business portfolio very broad
6. Organizational structure with too much emphasis on central functions

## Strategic target

Industrial business contributes 25% to Group sales by 2020

**Re-energizing the Industrial business by Program CORE**

13% EBIT margin by 2018

## Profitability target

SCHAEFFLER

# 2 Industrial – Growth and margin upside from re-aligning the business

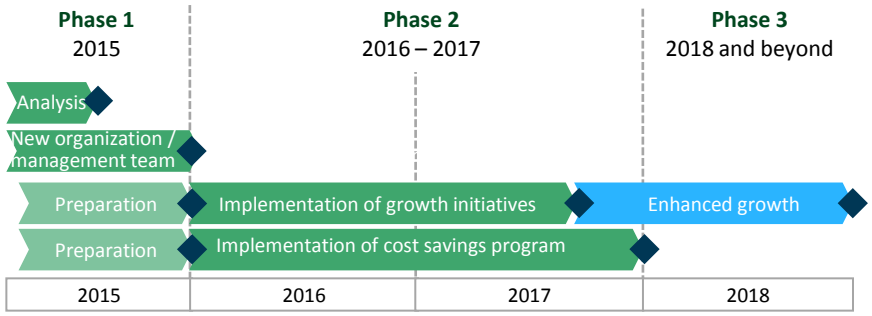
## Overview of Program CORE

| Key elements | Actions |
|---|---|
| 1 Optimized product and service portfolio | ▶ Strengthen high-volume market sales<br>▶ Balance customized product business/engineering solutions<br>▶ Enforce market penetration of service/ digitalization |
| 2 High delivery performance | ▶ Establish European distribution centers (EDC) with target investment of EUR 200 mn to ensure immediate product availability<br>▶ Increase level of standardization<br>▶ Implement high runner product program with 24/48h delivery time |
| 3 Higher customer orientation | ▶ Strengthen sales organizations in the regions<br>▶ Strengthen regional engineering/ customer support centers<br>▶ Establish dedicated global key account management |
| 4 Cost savings and efficiency improvements | ▶ Reduce workforce by up to 500 people<br>▶ Re-dimension central departments<br>▶ Drive cost saving program including material cost, efficiency gains and overhead reduction |

## Key achievements CORE in 2015

- New organization structure with strong regional focus agreed; new management team in place
- Agreement[1)] with works council regarding headcount reduction program signed
- Good progress in particular with respect to EDC[2)] (EDC North and South have already started operations)

## Indicative implementation plan




1) "reconciliation of interests" 2) EDC = European Distribution Center

SCHAEFFLER

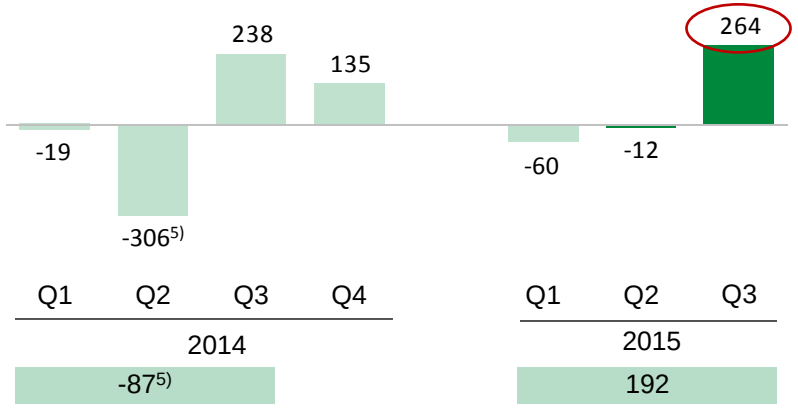
# 3 Strong underlying free cash flow generation

| | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|
| **EBITDA** | **2,172** | **1,703** | **1,765** |
| Interest paid | (520) | (388) | (430) |
| Interest received | 8 | 4 | 41 |
| Income taxes paid | (277) | (197) | (247) |
| Working capital change[1)] | (121) | (428) | (273) |
| Others[2)] | (362) | (284) | 56 |
| **CF from Operations** | **900** | **410** | **912** |
| One-time effects | 485[3)] | 485[3)] | 173[4)] |
| **CF from Op. before one-offs** | **1,385** | **895** | **1,085** |
| Capex | (857) | (500) | (743) |
| *in % of Sales* | *7.1%* | *5.5%* | *7.4%* |
| Others | 5 | 3 | 23 |
| **CF from Investments** | **(852)** | **(497)** | **(720)** |
| **Free Cash Flow** | **48** | **-87** | **192** |
| **FCF before one-offs** | **533** | **398** | **365** |

1) Working capital change incl. changes in inventories, trade receivables and trade payables. 2) Others incl. dividends received, (gains)/losses on disposal of assets, changes in provisions for pensions/similar obligations and changes in other assets, liabilities and provisions. 3) EUR 114 mn refinancing charges and EUR 371 mn reversal of EU antitrust provisions. 4) EUR 173 mn refinancing charges for early redemption of bond. 5) Includes EU-antitrust fine of EUR 371 mn

## Free cash flow development

in EUR mn




## Key aspects

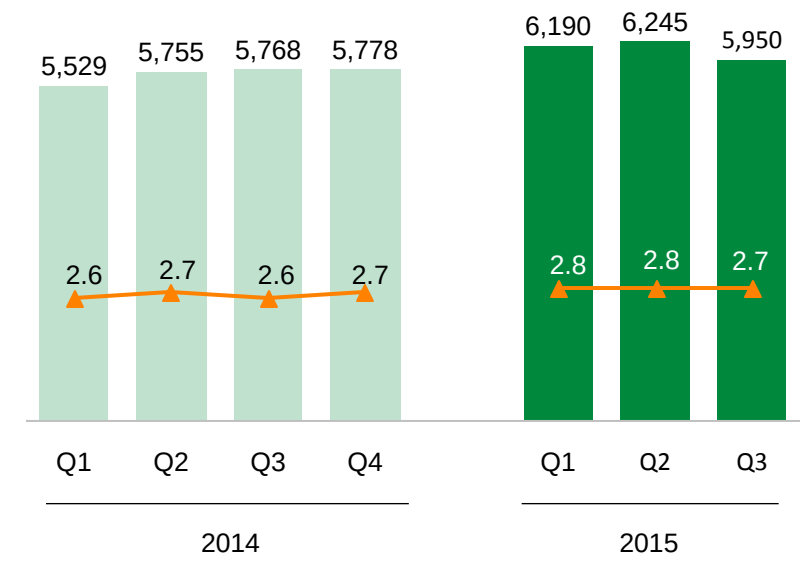
- 9M 2015 Cash Flow from operations before one-offs increased by 21% to EUR 1,085 mn
- 9M 2015 Capex significantly increased to EUR 743 mn (9M 2014: EUR 500 mn); Capex ratio of 7.4% in line with guidance
- Strong Free Cash Flow generation in Q3 2015 with EUR 264 mn

SCHAEFFLER

# 3 Cash flow generation – Further deleveraging expected going forward

## Net financial debt

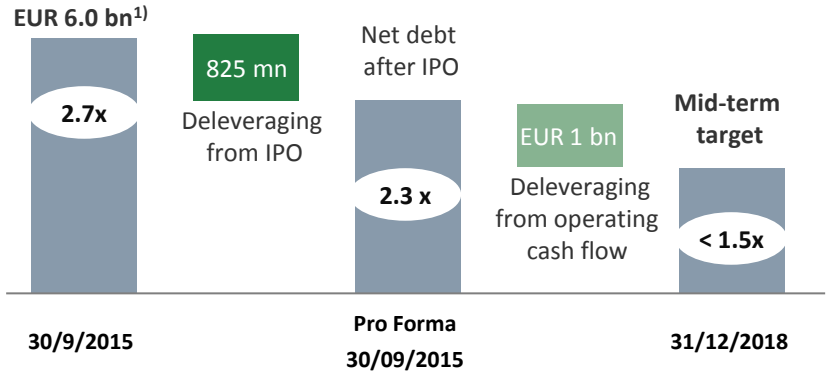
in EUR mn




Leverage ratio (Net financial debt w/o shareholder loans / LTM EBITDA)

| | Q1 2014 | Q2 2014 | Q3 2014 | Q4 2014 | Q1 2015 | Q2 2015 | Q3 2015 |
|---|---|---|---|---|---|---|---|
| Gross debt | 5,751 | 6,226 | 6,443 | 6,414 | 6,799 | 6,665 | 6,674 |
| Cash & cash equivalents | 222 | 471 | 675 | 636 | 609 | 420 | 724 |

## 2018 leverage target




1) Before Loan Note Receivable of EUR 1.885 mn

## Key elements

- Target structure implemented; Proceeds used for strategic deleveraging
- Further repayment of loan note and indebtedness expected in Q4 2015
- Pro Forma leverage ratio as of 30/09/2015 at 2.3x; Target leverage ratio 1.5x by 2018

# Key messages

| | |
|---|---|
| 1 | We are an integrated automotive and industrial supplier with a proven track-record of above-average growth and profitability |
| 2 | Based on our strategy concept we are well positioned to shape the 'Mobility for tomorrow' |
| 3 | We have a superior automotive business that consistently outperforms the market and benefits from key growth trends going forward |
| 4 | Our Industrial business shows considerable margin upside potential |
| 5 | We are targeting to significantly improve our Free Cash Flow generation going forward |

SCHAEFFLER

# Technology and R&D

**Prof. Dr.-Ing. Peter Gutzmer**

Deputy CEO and Chief Technology Officer

Schaeffer AG – Analyst Day
November 20, 2015

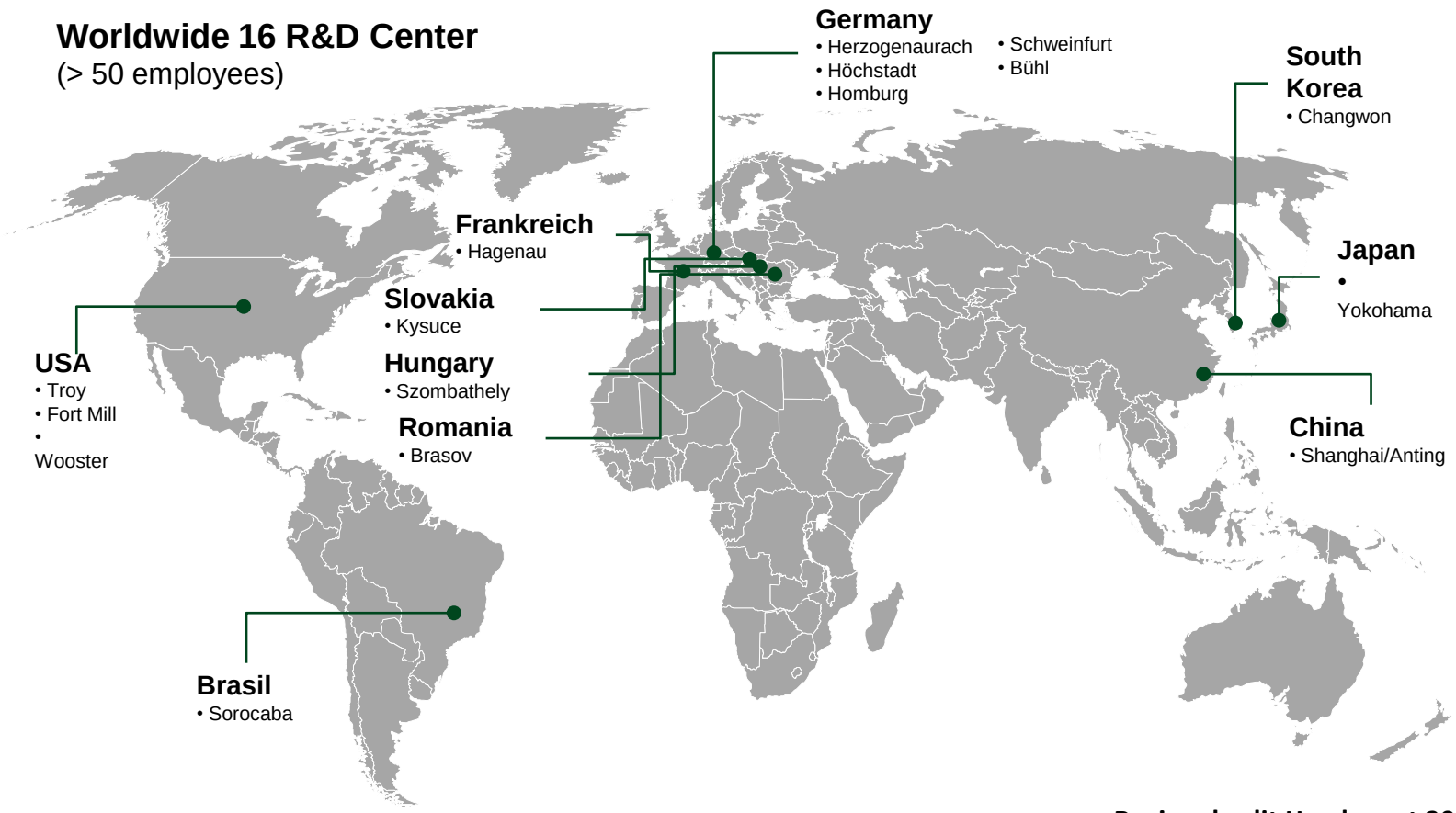
# Agenda

1 Overview

2 Technology and R&D

3 Summary

# Global R&D footprint




- **R&D headcount 2014: 6,387**
- **R&D expenses 2014: EUR 626 mn**

**Regional split Headcount 2014**:

| | |
|---|---|
| EU: | 74% |
| Americas: | 11% |
| Greater China: | 11% |
| Asia/Pacific: | 4% |

# Widespread Network of Partners and Cooperations

## Customers


## Organizations

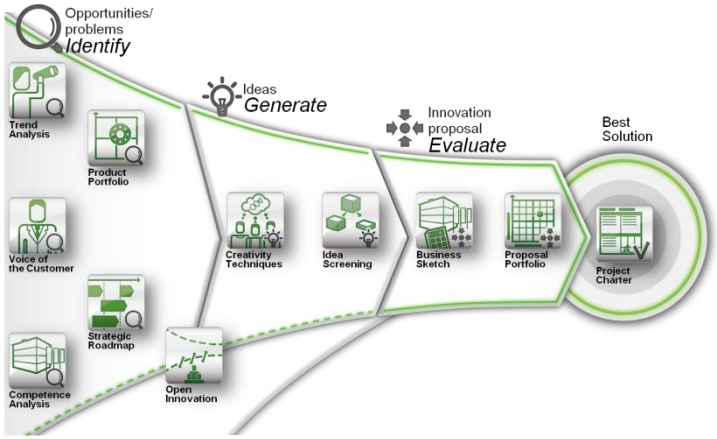

## Universities


## Sponsoring

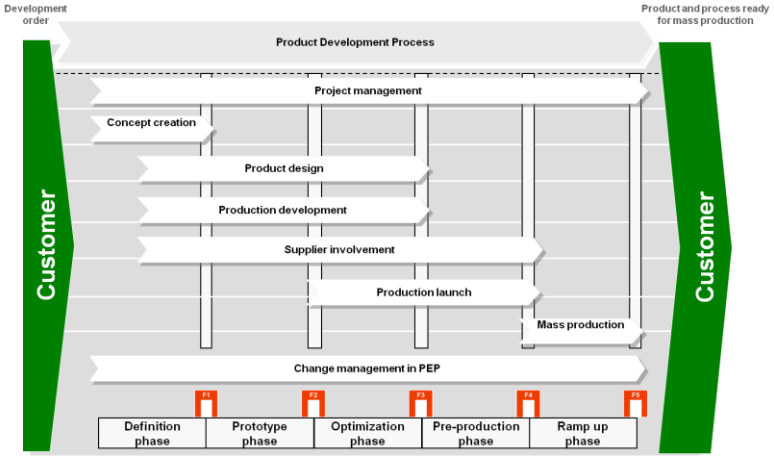
SCHAEFFLER

# Schaeffler R&D – A structured process

## Innovation process



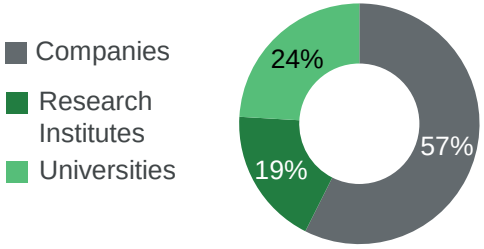

## Product development process




## Research/Innovation activities cooperation

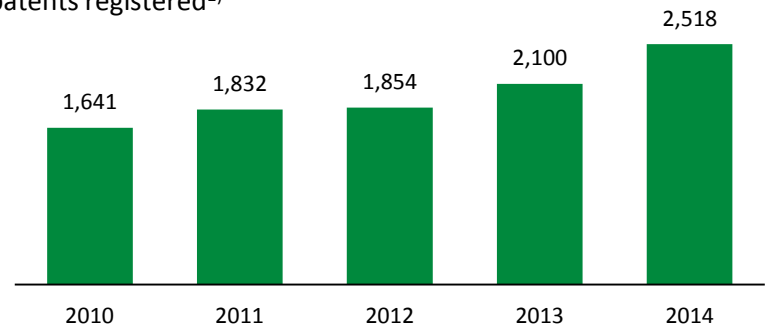
- At the **S**chaeffler **H**ub for **A**utomotive **R**esearch in **E**-Mobility at Karlsruher Institute of Technology **SHARE**
- Focus areas: Electric Drives, Energy Storage, Automated Driving

OPEN INSPIRATION




## Leading to a best-in-class innovation platform

No of patents registered[1)]

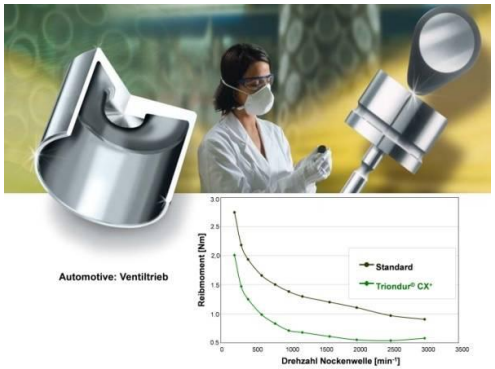



| Rank in Germany[2)] | #4 | #4 | #4 | #2 | #2 |
|---|---|---|---|---|---|

1) German Patent and Trademark Office
2) Overall rank

# Outstanding surface technology and simulation capabilities

## Surface Technology





Materialica Award 2012 & 2014

### Key aspects

- World leader in competence for functional surfaces and coatings
- Coating systems increase the lifetime of components, offer protection against wear and corrosion
- Friction reduction for energy efficiency

## Simulation and validation


### Key aspects

- Large-size bearing test rig 'Astraios' went into operation in Schweinfurt four years ago
- One of the largest and most state-of-the-art test rigs in the world
- Combination of simulation and calculation methods with measurements obtained during testing

SCHAEFFLER

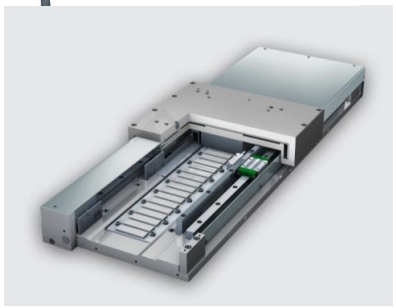
# Inhouse electronics, mechatronics and software competences

## Electronics and software

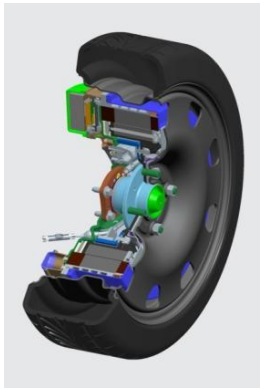

### Key aspects

- Electronics and software development
- Powertrain development
- Mechanical System Integration
- System Validation
- Vehicle Acoustics

## Drives and mechatronics



IDAM
INA DRIVES & MECHATRONICS



### Key aspects

- Design and simulation of direct drives and precision mechanics
- Power electronics design
- Control algorithms and software design
- Production technology for e-motors and precision systems

# Strategic concept: "Mobility for Tomorrow"

## Key megatrends

- **Society trends**
  - Urbanization
  - Population growth
- **Technology trends**
  - Increasing complexity
  - Digitalization
- **Environmental trends**
  - Renewable energies
  - Availability of resources
- **Economic trends**
  - Globalization
  - Affordability

## 4 focus areas

SCHAEFFLER

# Broad fleet of demonstrator vehicles for dedicated regional solutions

SCHAEFFLER

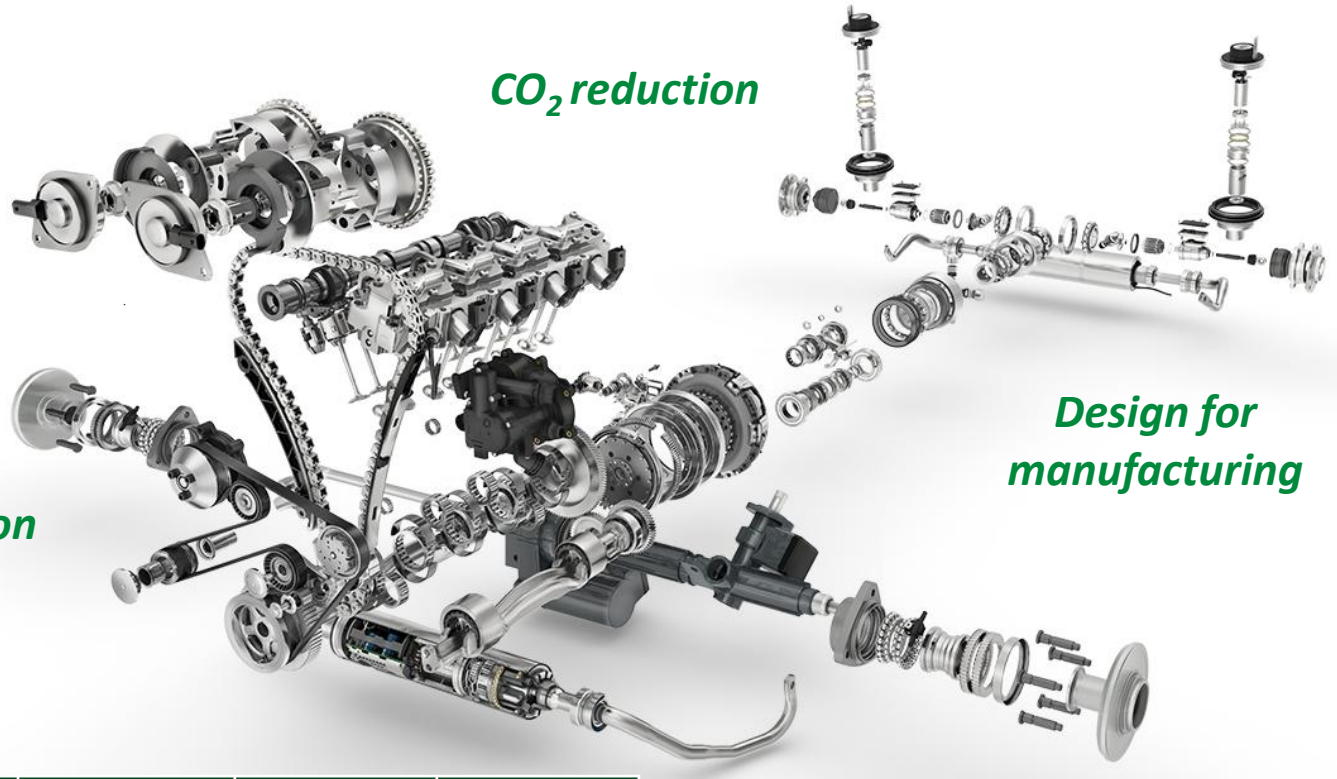
# Broadest drivetrain know-how in Automotive

*Durability*

*$CO_2$ reduction*

*Design for manufacturing*

*Weight reduction*

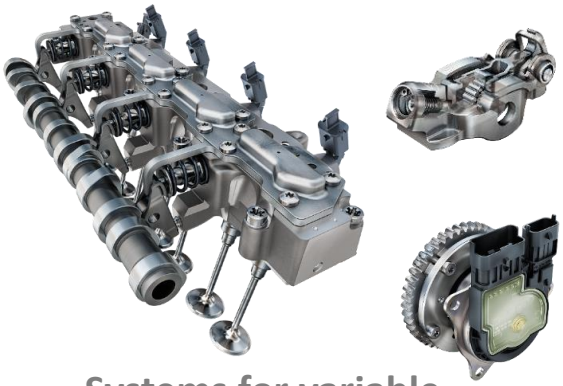


*Safe driving pleasure*

| | Engine | Transmission | Chassis | e-Mobility |
|---|---|---|---|---|
| Comp 1 | | ✓ | | ✓ |
| Comp 2 | ✓ | | | ✓ |
| Comp 3 | | ✓ | ✓ | ✓ |
| **Schaeffler** | ✓ | ✓ | ✓ | ✓ |

SCHAEFFLER

# Engine – Precision products for less fuel consumption and enhanced driving comfort



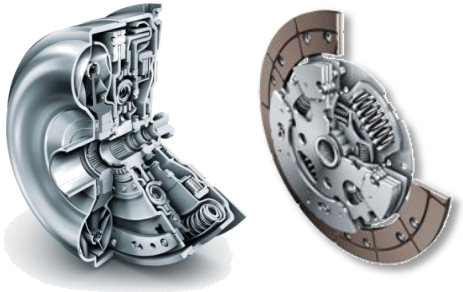
Systems for variable
valve lifting and timing

Thermal management modules
for intelligent temperature control

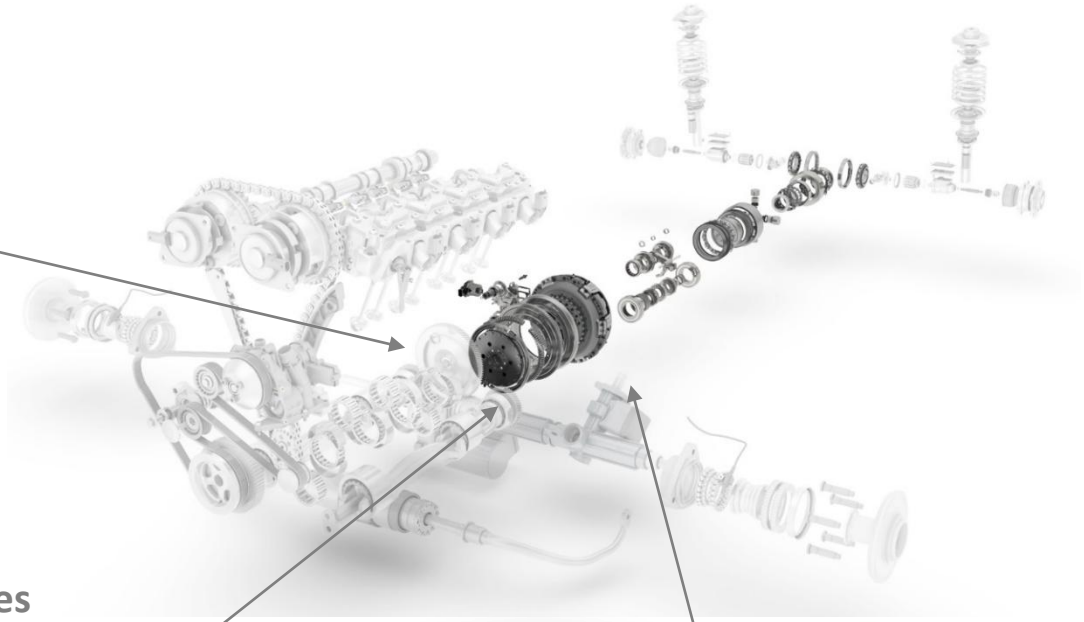
Innovative bearing solutions
for reducing weight and friction

SCHAEFFLER

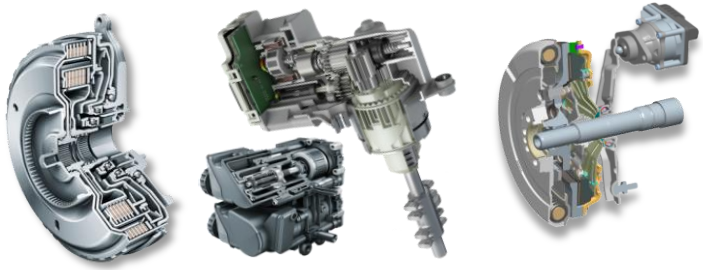
# Transmission – Innovative components and systems for all transmission concepts



Powerful damper systems
for torque converters and clutches



Dry and wet automated clutch modules
for DCT´s and e-clutch systems

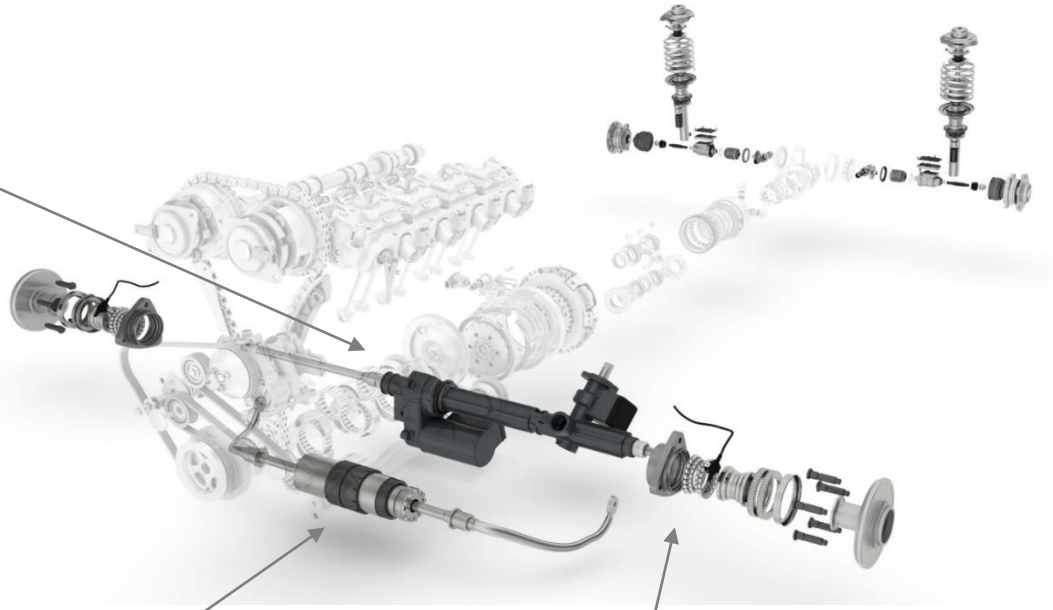


Efficient CVT systems
incl. powerful CVT chain

SCHAEFFLER

# Chassis – From bearings to complex mechatronic systems

Ball screw drives for electromechanical actuators in chassis systems



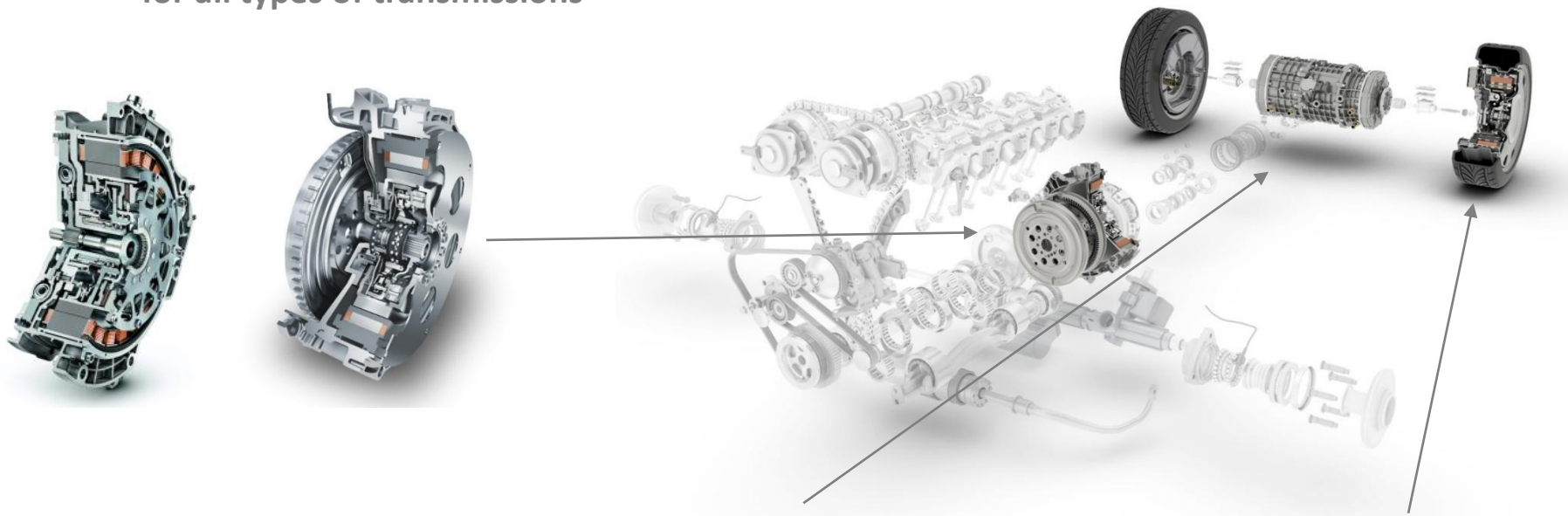
Powerful electromechanical actuators for active roll stabilization

Electromechanical actuator for ride height adjustment

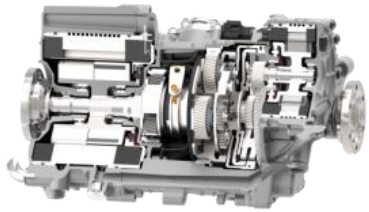
SCHAEFFLER

# E-Mobility – Systems for hybrid and electrical drive systems

## Powerful hybrid modules for 48 V and HV for all types of transmissions



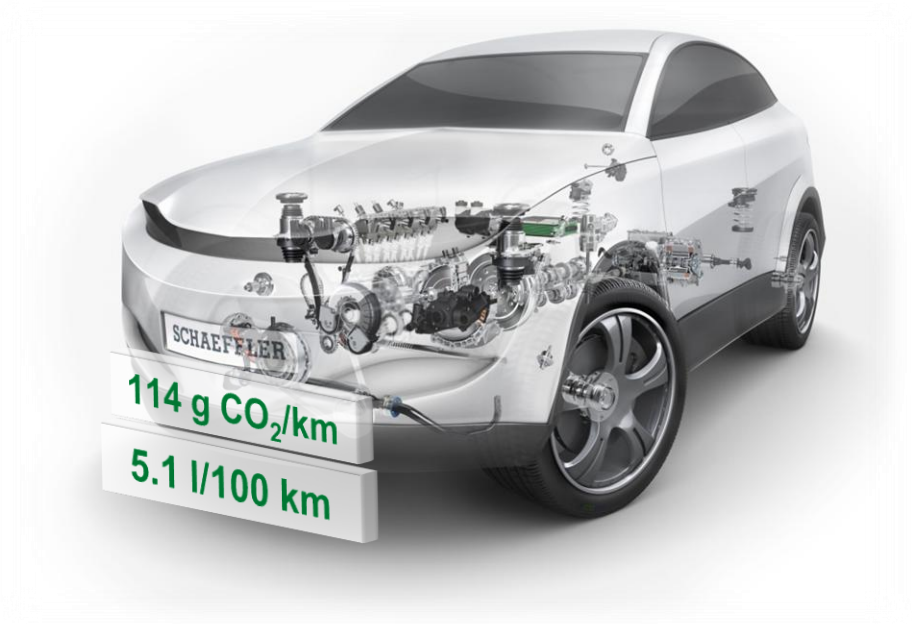
## Powerful electric axle systems for 48 V and HV



e-Wheel drive

SCHAEFFLER

# Application example – Schaeffler technologies for reduced $CO_2$ emissions




| Vehicle | Powertrain | Efficiency @ NEDC |
|---|---|---|
| ▸ C-segment<br>▸ 1380 kg incl. driver | ▸ 3 cyl. 1L gasoline w/ start-stop and smart alternator<br>▸ 6-speed MT | ▸ 5.1 l/100 km<br>▸ 114 g CO2/km |

SCHAEFFLER

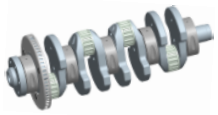
# Application example – Schaeffler technologies for reduced $CO_2$ emissions

## Engine

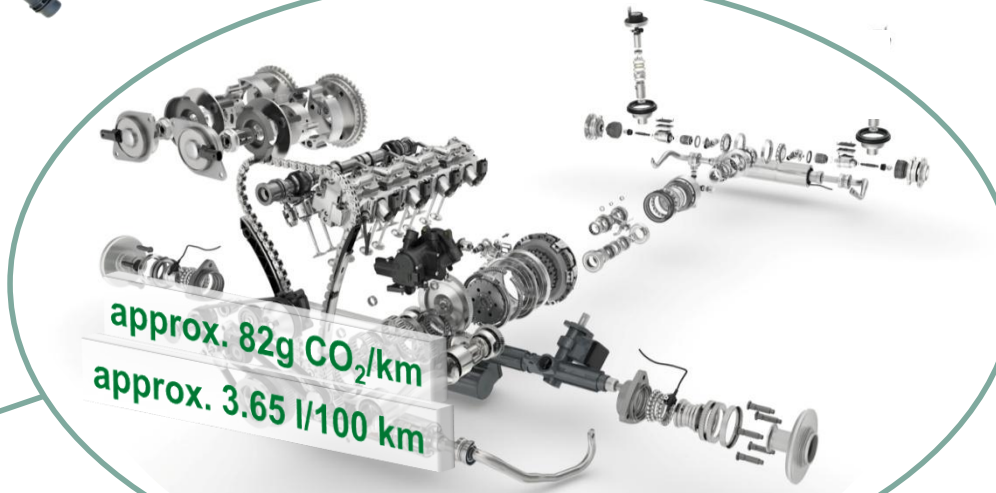
thermal management

dethrottling swichtable valve lift

FEAD friction reduction



engine friction reduction




C-segment / 3 cyl. 1L gasoline / 6-speed MT
(simulation results in NEDC)

## Hybridization

48 V P2 hybrid module

powerful damper

transmission friction reduction

Electronic Clutch Management (ECM)

long ratio differential

## Transmission

ride height adjustment

wheel bearing friction reduction

## Chassis

SCHAEFFLER

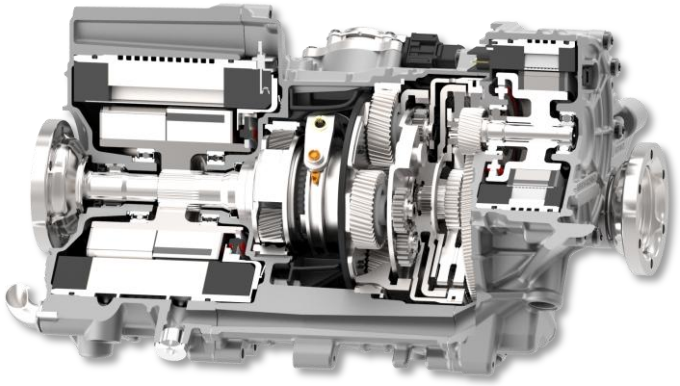
# Strong mechatronics competence – Complex systems know-how

## High-voltage P2 hybrid module

International Grand Prix Award received (OEM New Technologies category)

- The new P2 hybrid module from Schaeffler is suited for all grades of hybridization and can be used for all kind of transmissions
- Customized modular set-up
- Start of series production: 2017 in China

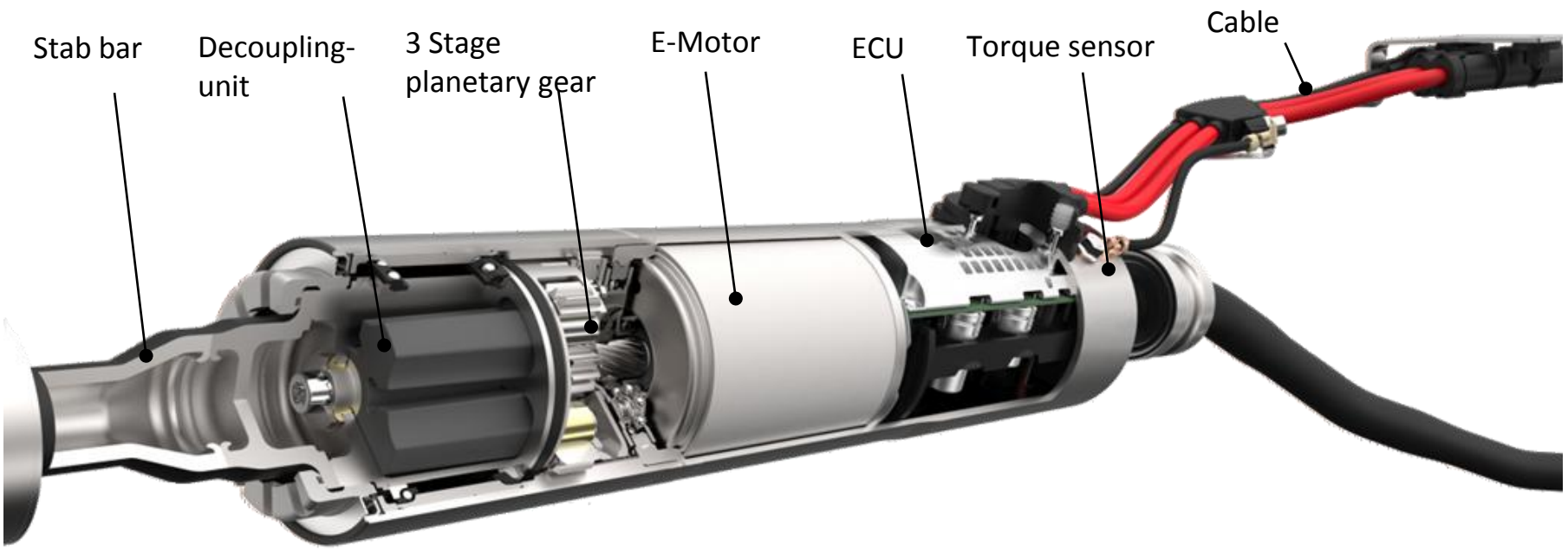
## High- voltage electric axle



- High power density
- Can be used for various vehicle concepts
- Customized modular set-up
- Start of series production: 2017

SCHAEFFLER

# Strong mechatronics competence – Example: Anti roll stabilizer




**Key aspects:**

- First-to-market mechatronics system for Smart Chassis and Automated Driving
- Key benefit: Reduction in $CO_2$ emissions and no additional weight compared to hydraulic systems
- The modular solution contains 188 registered patents
- Close cooperation with universities and suppliers
- 12V SOP with BMW in July 2015, 48V SOP with Bentley in Nov 2015

# Industrie 4.0 – Solutions from components to machine tools

Degree of electrification

A Rolling and linear bearings

B Rotary axes with measuring system, condition monitoring

C Machine tool 4.0


Optimized Bearings | Mechatronic Modules | System Expertise

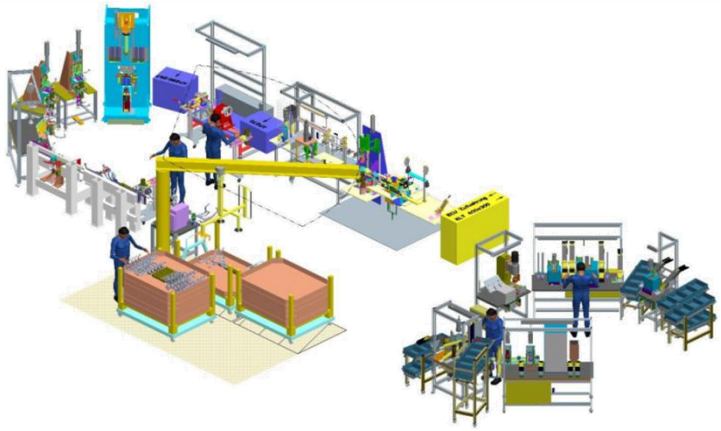
# Digital process development

## Research funding from government institutions


## Process simulation


## Global data management

## Digital factory



# Key messages

| | |
|---|---|
| 1 | Broad global R&D network of partners and cooperations |
| 2 | Our outstanding competencies in mechanics are complemented by extensive know-how in surface technologies, simulation as well as electronics and software |
| 3 | Broadest drivetrain know-how in Automotive |
| 4 | Dedicated system solutions to meet all future regional $CO_2$ emission legislations |
| 5 | Our mechatronics competencies and the move into hybrid and electric systems will lead to ever higher content per car |
| 6 | Industrie 4.0 and digitalization will lead to new business models |

# Fascination Motorsports – ABT Schaeffler Audi Sport

SCHAEFFLER

# Production and operational excellence

**Oliver Jung**

Chief Operating Officer

Schaeffer AG – Analyst Day
November 20, 2015

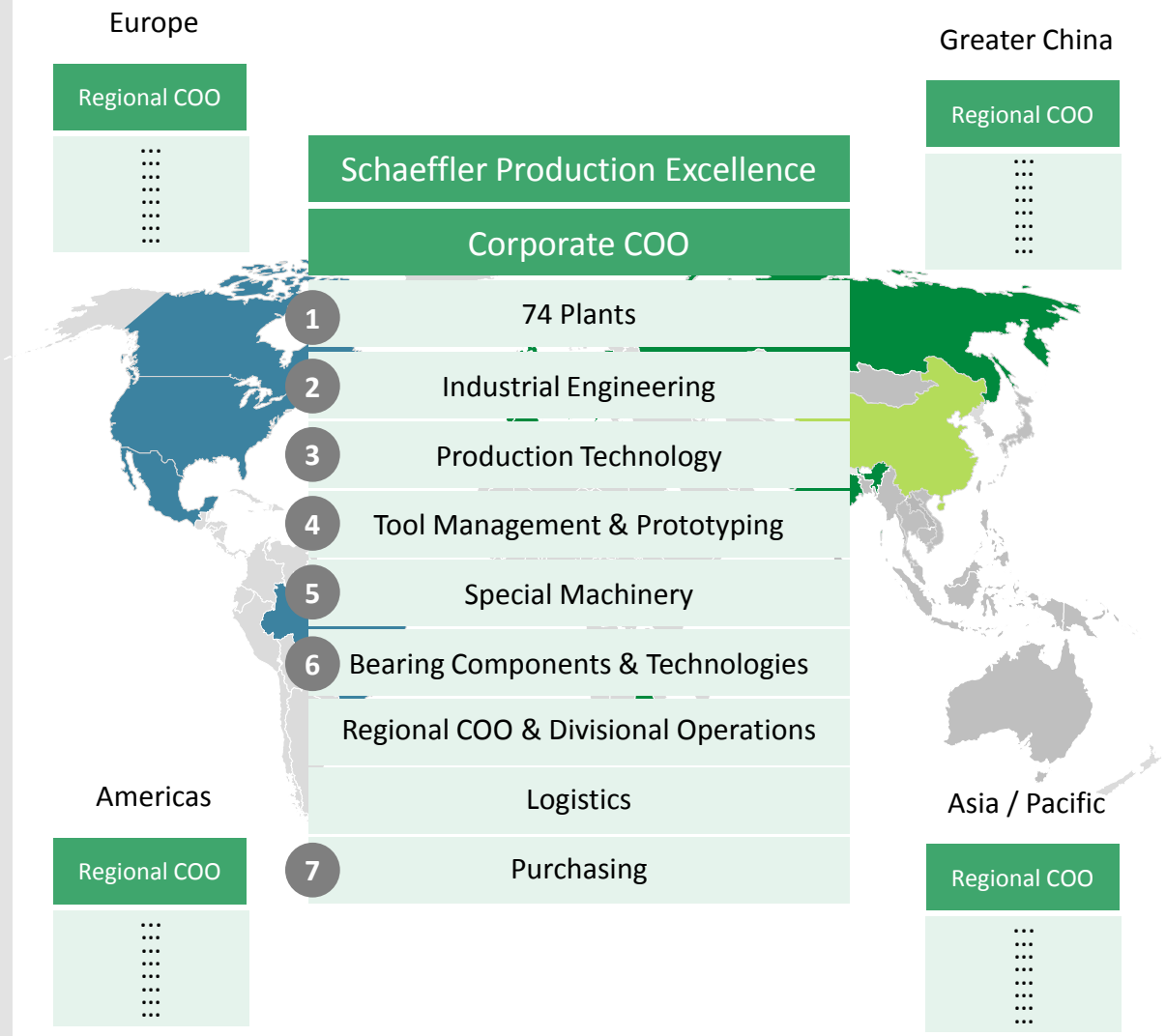
# Agenda

1 Overview

2 Production and operational excellence

3 Summary

# Global Operations Organization – Global Technology Network




**Key aspects**

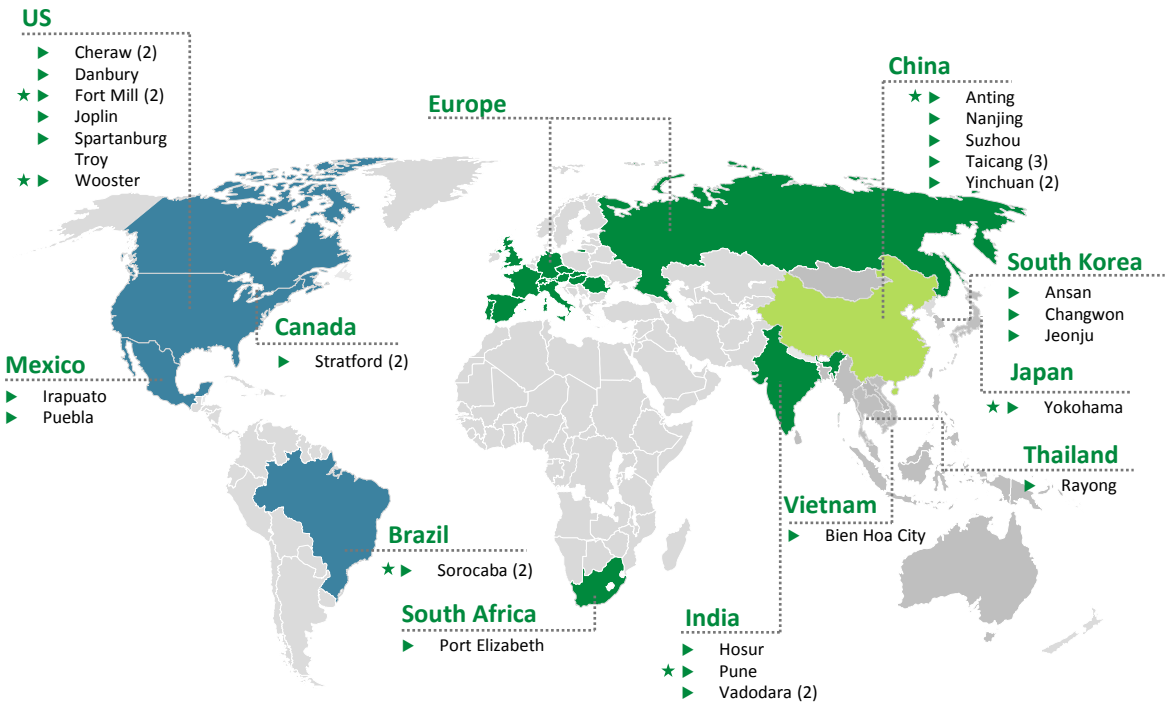
- Innovation in products and production technology
- Efficiency (plants, logistics)
- Standards
- Speed in industrialization
- Early involvement and deep influence in product development
- Own competencies in special machinery building
- Integration of external and internal added value (with Purchasing)

- **Control and improvement of a long added value chain**
  - **≈ 60 % internal added value**
  - **≈ 1 bn. € investments**
- **Contribution to the Schaeffler Production System**

# Integrated global manufacturing and R&D footprint

≈ 63,000 employees
in 74 plants worldwide
60 % of internal added value

## Global footprint




▶ Manufacturing sites
★ R&D Centers

| | Europe | Americas | Greater China | Asia/Pacific | Total |
|---|---|---|---|---|---|
| **Manufacturing sites** | 48 | 14 | 7 | 5 | **74** |
| **R&D Centers** | 9 | 4 | 1 | 2 | **16** |

### Europe

**Germany**
★ ▶ Bühl
★ ▶ Herzogenaurach
★ ▶ Homburg (3)
★ ▶ Schweinfurt (2)
▶ + 17 other German sites

**Austria**
▶ Berndorf-St. Veit

**Czech Republic**
▶ Lanskroun

**France**
▶ Calais
▶ Chevilly
★ ▶ Haguenau (2)

**Great Britain**
▶ Llanelli
▶ Plymouth
▶ Sheffield

**Hungary**
▶ Debrecen
★ ▶ Szombathely

**Italy**
▶ Momo

**Portugal**
▶ Caldas da Rainha

**Romania**
★ ▶ Braşov

**Russia**
▶ Uljanowsk

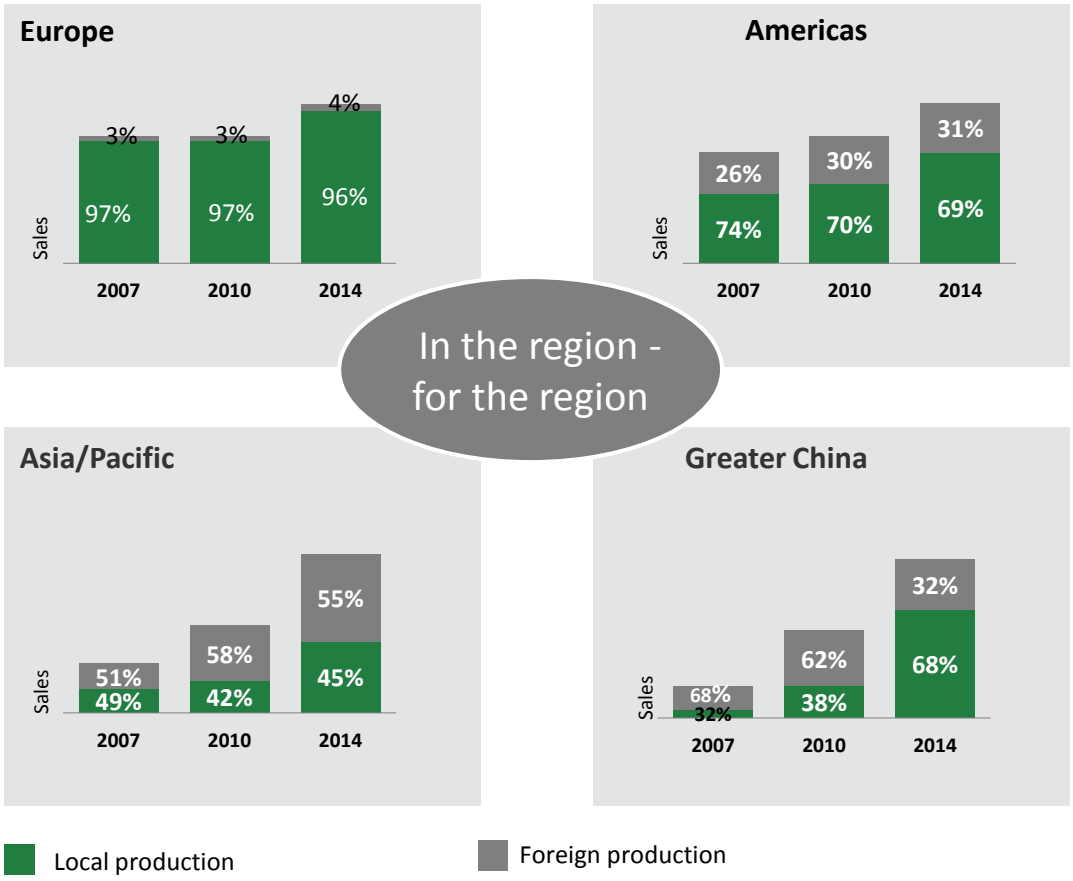
**Slovakia**
★ ▶ Kysucké Nové Mesto
▶ Skalica

**Spain**
▶ Elgoibar

**Switzerland**
▶ Romanshorn

# 1 Plants – Our base for Operational Excellence

## Localization rate constantly increasing




## Key aspects

- Strong plants operating with the Schaeffler Production System concentrated on QCD (improvements in quality, cost, delivery)
- One plant reference organization worldwide
- Closely connected in a production network (lead plant concept)
- Closely supported and controlled in QCD
- Latest production technology worldwide
- Localization rate constantly increasing

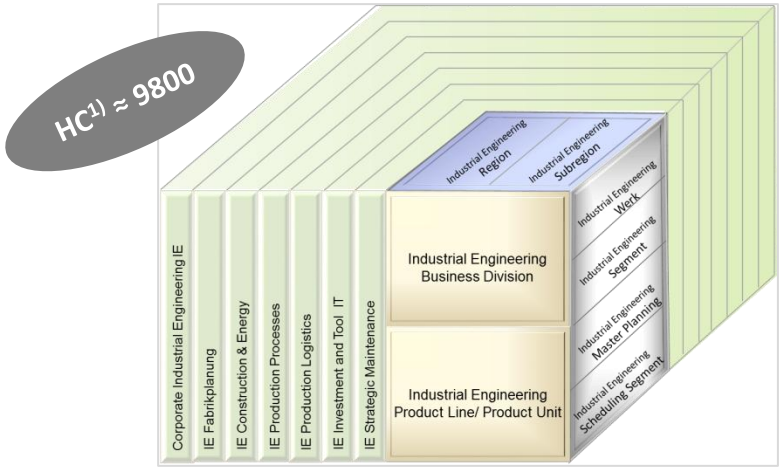
# 2 Industrial Engineering – Industrialization

## Key aspects

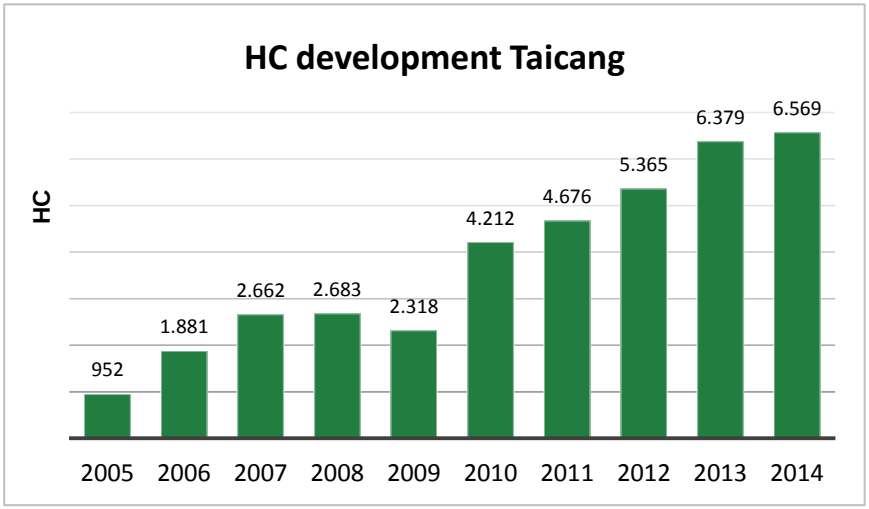
- Covers the entire industrialization process from factory planning over factory building up to the definition of methods and standards for manufacturing planning, production logistics, maintenance and investment process
- Planning and implementation of the Schaeffler Production System
- New locations in the last 3 years:
  - Ulyanowsk, RU
  - Calais, FR
  - Yinchuan, CN
  - Rayong, TH
  - Nanjing, CN
  - Savli, IN
  - Puebla, MX

## Location development Taicang


## Organization within the matrix




## HC development Taicang



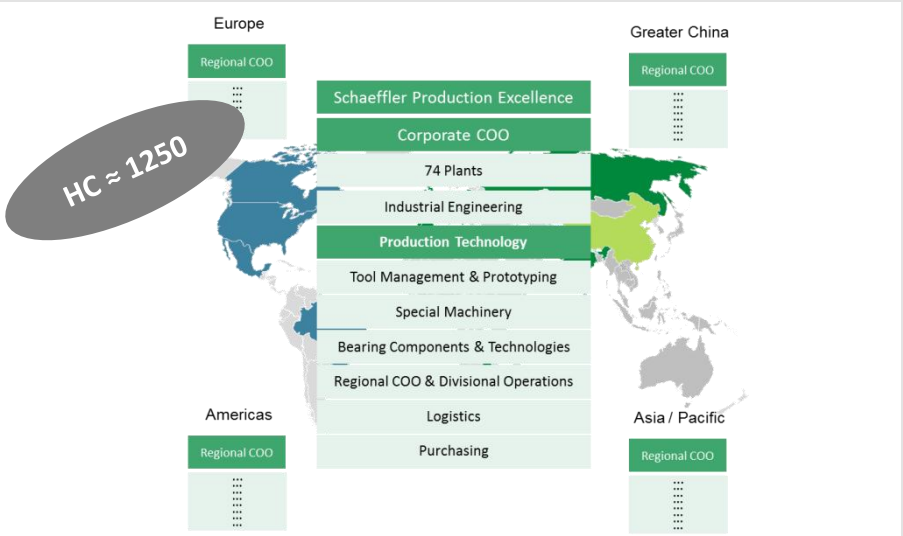

1) HC = Headcount

SCHAEFFLER

# 3 Production Technology – Innovation in production technology and products

## Key aspects

- Responsible for development and optimization of production technology processes and production machines worldwide
- Complete overview of the Schaeffler Group regarding production technology via global technology network
- Control and further development of each technology (standards)
- Core technologies are often used for both divisions - Automotive and Industrial → Integrated Schaeffler Model
- Generates efficiency, savings and innovations




## State-of-the-Art technologies

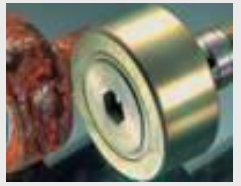
**Forging**

**Forming methods**

**Machining processes**

**Plastics technology**

**Heat treatment**



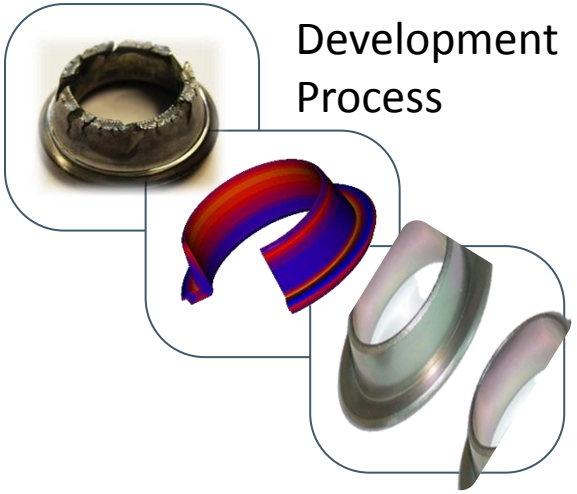
**Coating Phosphating**

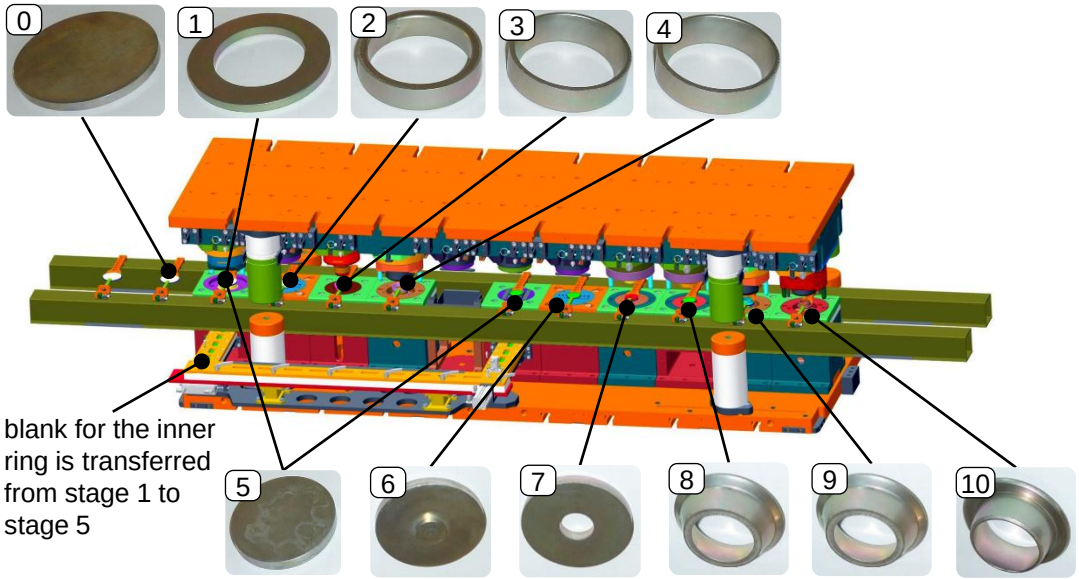
**Grinding Honing**

**Assembly**

SCHAEFFLER

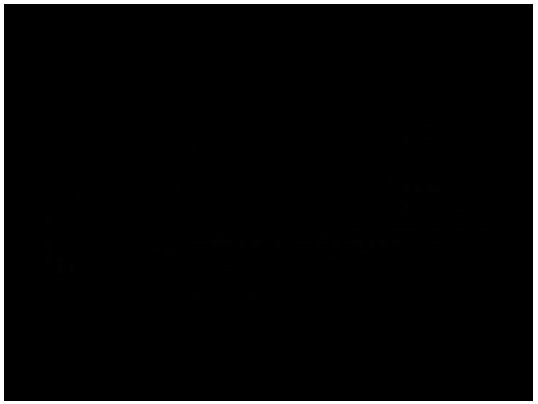
# 3 Innovative production – Cold formed tapered roller bearing ("Solid Formed Bearing")




**Key aspects**

- Deep knowledge in simulation, process and tooling leads to innovative new products
- 30% reduction of process steps
- 50% material saving
- SOP 2016



SCHAEFFLER

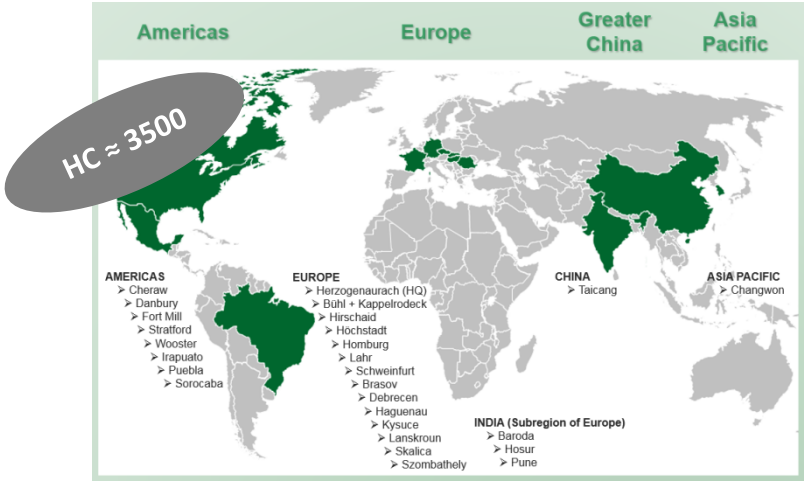
# 4 Tool Management & Prototyping – Early involvement in R&D process

## Key aspects

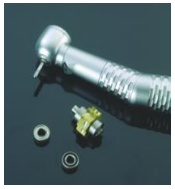
- Worldwide network of tool and prototype centers
- Development partner for new products (design for manufacturing) and manufacturing of prototypes
- Development, manufacturing / procurement and optimization of production tools
- Coordinating and tracking of worldwide tool ratio activities

**Input of production Know How in the development process generates efficiency in mass production**

## 27 locations worldwide




## Prototypes…



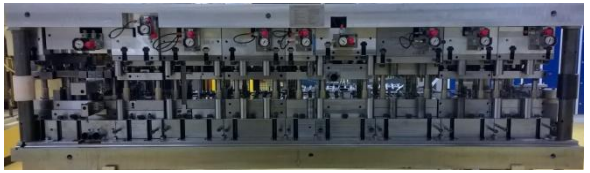
Bearing for dental drill (weight: 0.1 g)

Mechatronic system including software for the drive chain (complete unit with more than 600 single parts)

## … and tools

Minimized punch (weight: 0,8 g)

Injection moulding tool (weight: 12,000 kg)



Forming tool for finger follower (weight: 3,000 kg

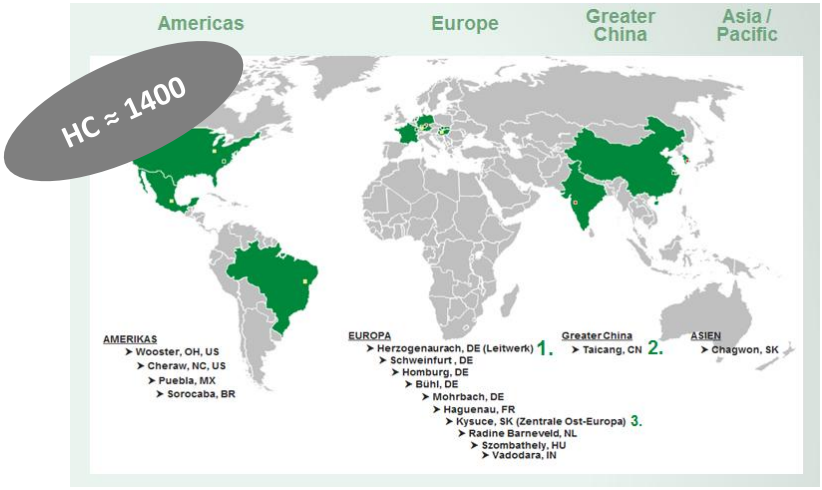
SCHAEFFLER

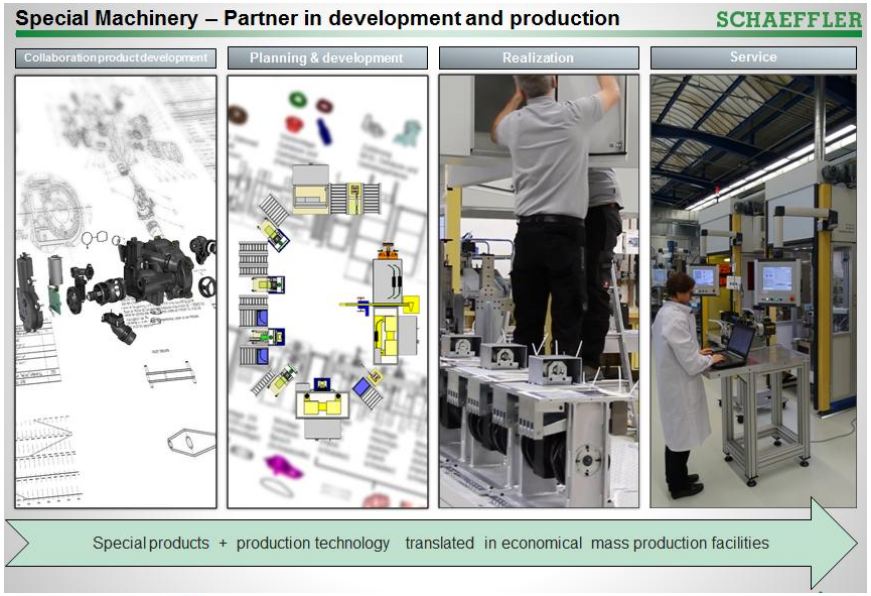
# 5 Special Machinery – Proprietary machines which are not available on the market

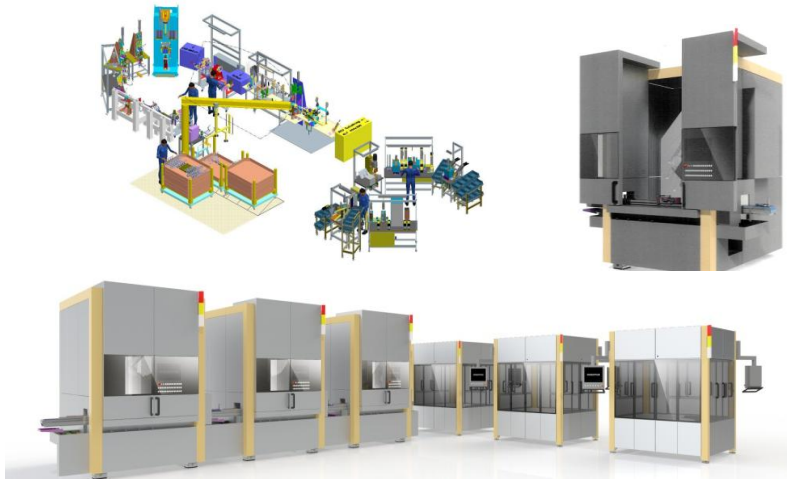
## Key aspects

- Develops and realizes the following: Production facilities, measuring and testing technology, image processing, electronic systems and control systems
- Maintains a worldwide network with flexible external resources
- Guarantees worldwide valid standards and uniform KPIs
- Turnover: approx. 260,000,000 Euro
- Projects / machines: approx. 700 up to 900 per year
- Only machines which are not available on the market and/or with own developed technology

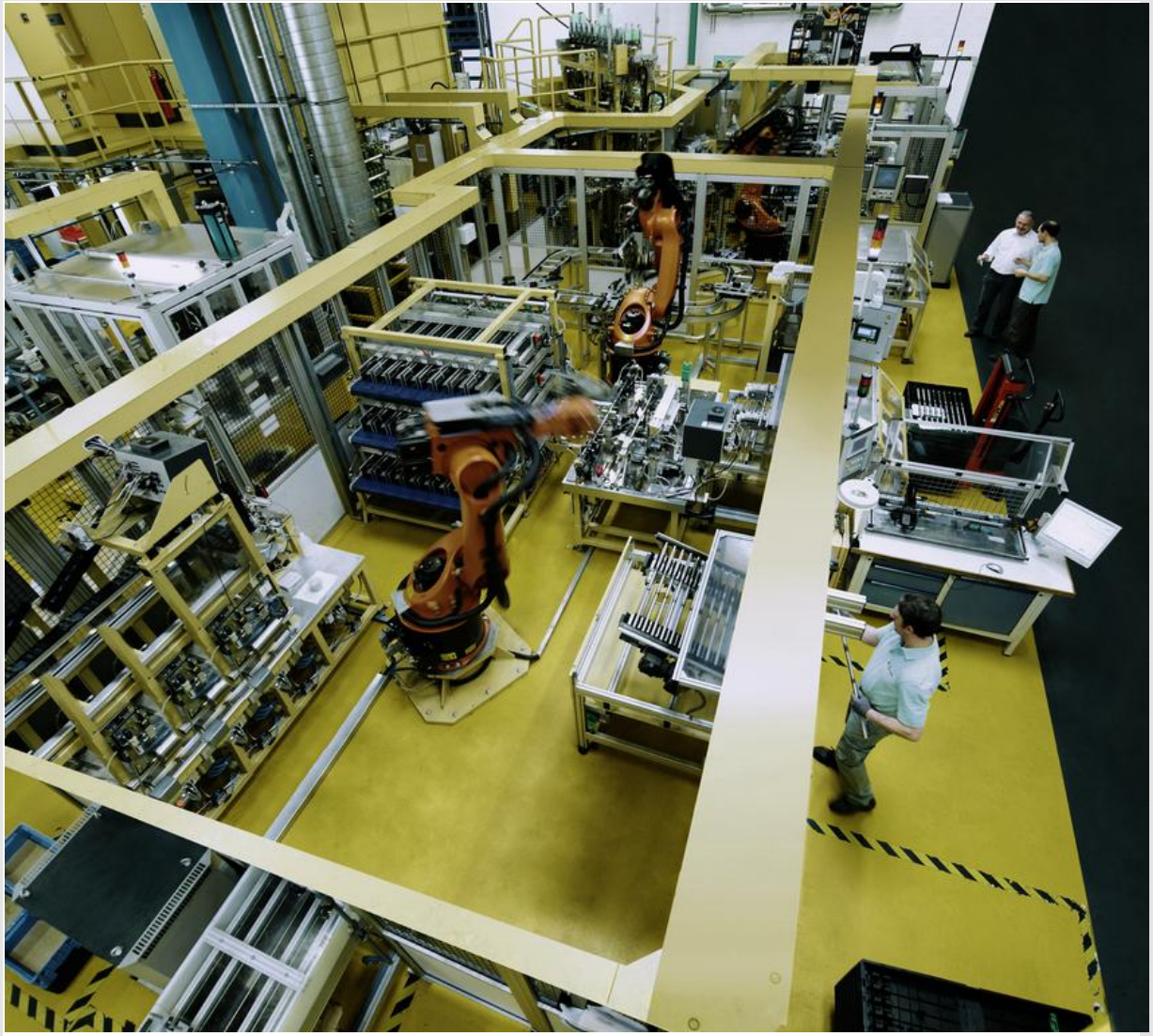
## 16 locations worldwide



# 5 High-Tech Production: Ball Screw Drives



**Key aspects**

- High-Tech Production of ball screw drives for **steering mechanism**
- Balls with tolerance **1µm**
- Grinding tolerance **2µm**
- Ball screw axial clearance **< 5µm**
- **Own competencies to design high quality equipment**
- **Fully automated** assembly line
- Output **1 million parts per year**
- **Utilization 95%**

# 6 Bearing & Components Technologies

## Key aspects

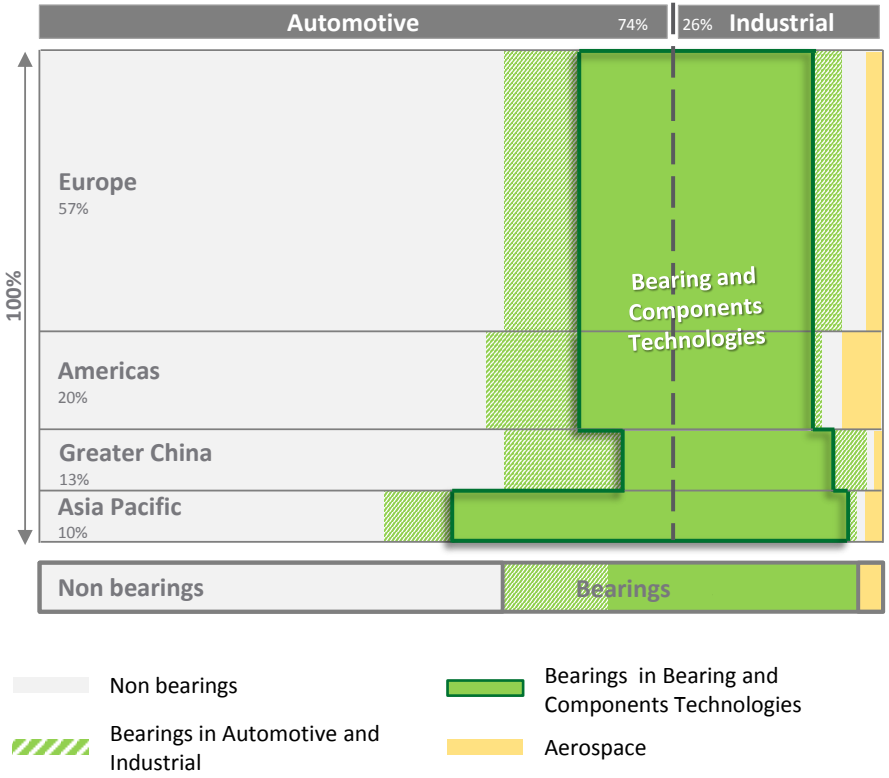
- Internal supplier for rolling bearings in the Schaeffler Group with responsibility for bearing production and development
- Plants in all regions, support Automotive and Industrial in profitable growth
- Focus on Quality, Cost, Delivery, Product Excellence
- Fully integrated into Operations resort
- Acts as the organizational umbrella for rolling bearing technology

HC ≈ 18000

## Main Products

| CRB | SRB | NRB | TRB | BB |
|---|---|---|---|---|
| Cylindrical roller bearings | Spherical roller bearings | Needle roller bearings | Tapered roller bearings | Ball bearings |

## Rolling bearing business within Schaeffler Group




- Roughly 42% of net sales 2014 were related to rolling bearing products

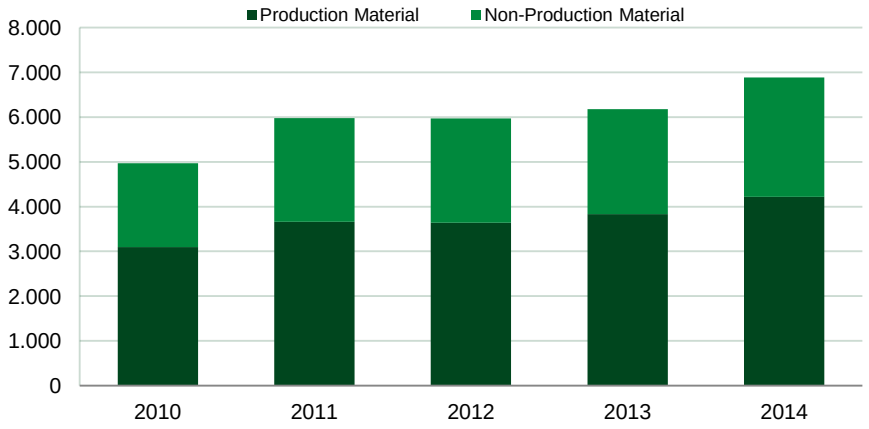
SCHAEFFLER

# 7 Purchasing – Manager of the external added value

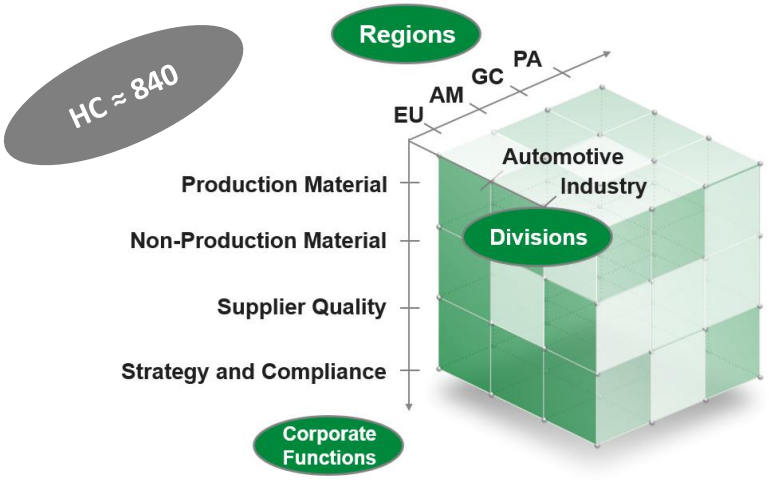
## Key aspects

- Identification of adequate supplier base
- High quality goods at competitive prices and available at the right time
- Reduction of costs through standardization, specifications and competition
- Integration of suppliers into the Schaeffler Production System
- Improve the supplier base in the regions
- Purchasing cooperation together with Continental AG

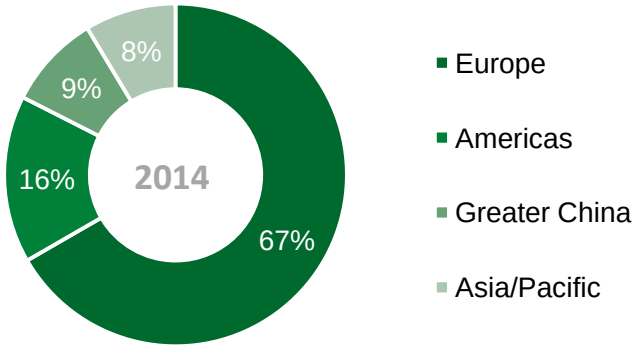
## Purchasing Volume 2010-2014 (in bn. €)




## Purchasing Organization within the matrix




## Purchasing Volume 2014 by Region

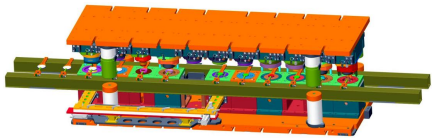


# Key messages

| | |
|---|---|
| 1 | Global network of strong plants with dedicated focus on quality, cost and delivery |
| 2 | Unique *Schaeffler Production System* providing the frame for our global plants network |
| 3 | State-of -the-art production technology enabling constant improvement in our long added value chain |
| 4 | Proprietary *special machinery building* constantly improving economies in mass production |
| 5 | Integrated production approach for both Automotive and Industrial with *Bearings and Components Technologies* as internal supplier for roller bearings business |
| 6 | Integration of *Purchasing* into *Operations* resort as a major success factor in aligning the internal and external added value |

# Plant Tour

SCHAEFFLER



**Innovative Production:**
Solid Formed Bearing

**High-Tech Production:**
Ball Screw Drives

**Efficient Production:**
High-Volume Press

**Future concepts in production:**
3D Printer

# Backup

November 20, 2015

# Profit & Loss statement 2012 – 9M 2015

in EUR mn

| | 2012 | 2013 | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|---|---|
| **Sales** | **11,125** | **11,205** | **12,124** | **9,024** | **9,982** |
| Cost of Sales | (7,836) | (8,029) | (8,654) | (6,460) | (7,153) |
| **Gross Profit** | **3,289** | **3,176** | **3,470** | **2,564** | **2,829** |
| R&D | (593) | (611) | (626) | (473) | (534) |
| Selling expenses | (759) | (761) | (827) | (596) | (687) |
| Administrative expenses | (409) | (433) | (454) | (294) | (310) |
| Other income | 35 | 72 | 49 | 54 | 28 |
| Other expenses | (94) | (435) | (89) | (25) | (75) |
| **EBIT** | **1,469** | **1,008** | **1,523** | **1,230** | **1,251** |
| Financial income | 24 | 217 | 255 | 164 | 235 |
| Financial expenses | (687) | (641) | (875) | (761) | (697) |
| Financial result | (663) | (424) | (620) | (597) | (462) |
| Income from equity-accounted investees | 1 | 2 | 1 | 0 | 0 |
| **EBT** | **807** | **586** | **904** | **633** | **789** |
| Income Taxes | (415) | (452) | (242) | (189) | (256) |
| **Net income** | **392** | **134** | **662** | **444** | **533** |
| Attributable to shareholders of the parent company | 380 | 127 | 654 | 439 | 521 |
| Attributable to non-controlling interests | 12 | 7 | 8 | 45 | 12 |
| **Additional information** | | | | | |
| **EBIT** | **1,469** | **1,008** | **1,523** | **1,230** | **1,251** |
| Provision for EU antitrust fine | - | 380 | - | - | - |
| **EBIT before provision for EU antitrust fine** | **1,469** | **1,388** | **1,523** | **1,230** | **1,251** |
| **Further one-off items included in EBIT** | | | | | |
| EU antitrust provision release | - | - | (10) | (10) | - |
| Personnel-related structural measures at the production locations in Schweinfurt and Wuppertal | - | 48 | - | - | - |

# Cash flow statement 2012 – 9M 2015

in EUR mn

| | 2012 | 2013 | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|---|---|
| **EBIT** | **1,469** | **1,008** | **1,523** | **1,230** | **1,251** |
| Interest paid | (581) | (605) | (520) | (388) | (430) |
| Interest received | 9 | 8 | 8 | 4 | 41 |
| Income taxes paid | (229) | (378) | (277) | (197) | (247) |
| Dividends received | 1 | 1 | 1 | 0 | 0 |
| **Depreciation, amortization and impairments** | **618** | **652** | **649** | **473** | **514** |
| (Gains) losses on disposal of assets | (1) | 1 | 1 | 0 | 1 |
| Changes in: | | | | | |
| Inventories | 55 | (101) | (108) | (206) | (95) |
| Trade receivables | (27) | (108) | (142) | (265) | (194) |
| Trade payables | (73) | 227 | 129 | 43 | 16 |
| Provisions for pensions and similar obligations | (39) | (44) | (27) | (29) | (9) |
| Other assets, liabilities and provisions | (69) | 366 | (337) | (255) | 64 |
| **Cash from operating activities** | **1,133** | **1,027** | **900** | **410** | **912** |
| | | | | | |
| Proceeds from disposals of property, plant and equipment | 29 | 15 | 8 | 5 | 22 |
| Capital expenditures on intangible assets | (35) | (18) | (50) | (17) | (31) |
| Capital expenditures on property, plant and equipment | (825) | (554) | (807) | (483) | (712) |
| Other investing activities | (1) | 3 | (3) | (2) | 1 |
| **Cash used in investing activities** | **(832)** | **(554)** | **(852)** | **(497)** | **(720)** |
| | | | | | |
| **Free cash flow** | **301** | **473** | **48** | **(87)** | **192** |

# Cash flow statement 2012 – 9M 2015 (continued)

in EUR mn

| | 2012 | 2013 | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|---|---|
| **Free cash flow** | **301** | **473** | **48** | **(87)** | **192** |
| Dividends paid to shareholders and non-controlling interests | (1) | (1) | (1) | (1) | (251) |
| Receipts from loans | 395 | 27 | 727 | 610 | 208 |
| Repayments of loans | (449) | (649) | (429) | (192) | (209) |
| Change in financial allocation account with Schaeffler Verwaltung Zwei GmbH | (222) | (91) | 0 | 0 | 0 |
| Successive acquisitions | (13) | 0 | 0 | 0 | 0 |
| Other financing activities | 29 | 132 | (26) | 31 | 151 |
| **Cash provided by (used in) financing activities** | **(261)** | **(582)** | **271** | **448** | **(101)** |
| **Net increase (decrease) in cash and cash equivalents** | **40** | **(109)** | **319** | **361** | **91** |
| Effects of foreign exchange rate changes on cash | (4) | (24) | 17 | 14 | (3) |
| Cash and cash equivalents as at beginning of period | 397 | 433 | 300 | 300 | 636 |
| **Cash and cash equivalents as at end of period** | **433** | **300** | **636** | **675** | **724** |
| **Additional information** | | | | | |
| **Free cash flow** | **301** | **473** | **48** | **(87)** | **192** |
| EU antitrust fine | - | - | 371 | 371 | - |
| One-off refinancing costs (early redemption fee) | - | - | 114 | 114 | 173 |
| **Free cash flow before one-off costs** | **301** | **473** | **533** | **398** | **365** |

# Balance sheet 2012 – 9M 2015

in EUR mn

| Assets | 2012 | 2013 | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|---|---|
| Intangible assets | 554 | 538 | 555 | 532 | 559 |
| Property, plant and equipment | 3,515 | 3,369 | 3,748 | 3,511 | 3,961 |
| Investments in equity-accounted | 3 | 3 | 4 | 3 | 3 |
| Other investments | 14 | 14 | 14 | 14 | 14 |
| Other financial assets | 78 | 202 | 1,960[1)] | 113 | 2,293[1)] |
| Other assets | 57 | 54 | 58 | 55 | 47 |
| Income tax receivables | 17 | 12 | 8 | 8 | 6 |
| Deferred tax assets | 358 | 218 | 455 | 434 | 508 |
| **Total non-current assets** | **4,596** | **4,410** | **6,802** | **4,670** | **7,391** |
| | | | | | |
| Inventories | 1,495 | 1,536 | 1,713 | 1,812 | 1,813 |
| Trade receivables | 1,626 | 1,676 | 1,900 | 2,016 | 2,219 |
| Other financial assets | 106 | 232 | 343 | 297 | 130 |
| Other assets | 126 | 141 | 181 | 166 | 210 |
| Income tax receivables | 81 | 92 | 42 | 39 | 63 |
| Cash and cash equivalents | 433 | 300 | 636 | 675 | 724 |
| **Total current assets** | **3,867** | **3,977** | **4,815** | **5,005** | **5,059** |
| **Total assets** | **8,463** | **8,387** | **11,617** | **9,675** | **12,450** |

1) Includes collateralized loan note receivables from Schaeffler Holding f EUR 1,885 mn as of September 30, 2015 (EUR 1,701 mn as of December 31, 2014) , secured by share pledges over approx 23 mn shares of Continental AG.

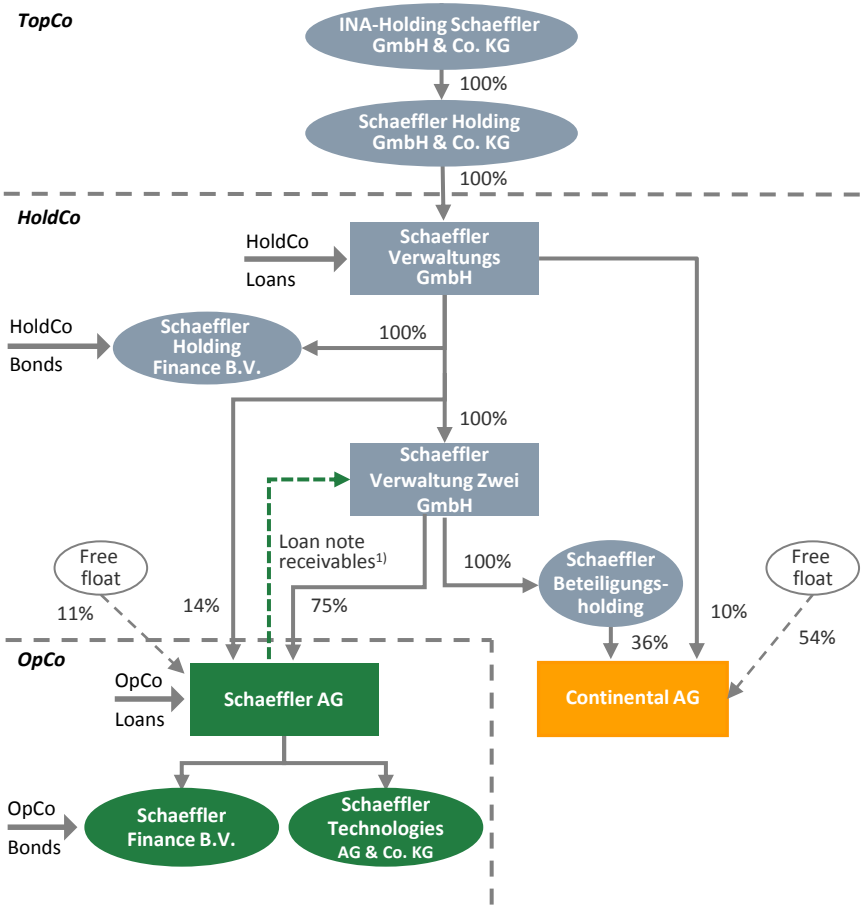
# Balance sheet 2012 – 9M 2015 (continued)

in EUR mn

| Shareholders' equity and liabilities | 2012 | 2013 | 2014 | 9M 14 | 9M 15 |
|---|---|---|---|---|---|
| Share capital | 500 | 500 | 600 | 500 | 600 |
| Capital reserves | 0 | 0 | 1,600 | 0 | 1,600 |
| Other reserves | (2,796) | (2,031) | (1,276) | (1,592) | (1,005) |
| Accumulated other comprehensive income (loss) | (362) | (492) | (737) | (641) | (649) |
| **Equity attributable to shareholders of the parent** | **(2,658)** | **(2,023)** | **187** | **(1,733)** | **546** |
| Non-controlling interests | 60 | 57 | 71 | 67 | 85 |
| **Total shareholders' equity** | **(2,598)** | **(1,966)** | **258** | **(1,666)** | **631** |
| Provisions for pensions and similar obligations | 1,545 | 1,510 | 1,984 | 1,813 | 1,959 |
| Provisions | 75 | 95 | 70 | 105 | 71 |
| Financial debt | 6,863 | 5,720 | 6,413 | 6,434 | 6,670 |
| Income tax payables | 181 | 235 | 237 | 246 | 260 |
| Other financial liabilities | 237 | 162 | 21 | 59 | 12 |
| Other liabilities | 4 | 6 | 8 | 6 | 7 |
| Deferred tax liabilities | 122 | 142 | 106 | 101 | 115 |
| **Total non-current liabilities** | **9,027** | **7,870** | **8,839** | **8,764** | **9,094** |
| Provisions | 211 | 589 | 232 | 226 | 254 |
| Financial debt | 111 | 33 | 1 | 177 | 4 |
| Trade payables | 805 | 1,022 | 1,261 | 1,099 | 1,266 |
| Income tax payables | 159 | 152 | 155 | 224 | 200 |
| Other financial liabilities | 482 | 405 | 558 | 512 | 626 |
| Other liabilities | 266 | 282 | 313 | 339 | 375 |
| **Total current liabilities** | **2,034** | **2,483** | **2,520** | **2,577** | **2,725** |
| **Total shareholders' equity and liabilities** | **8,463** | **8,387** | **11,617** | **9,675** | **12,450** |
| | | | | | |
| **Additional information** | | | | | |
| **Gross financial debt** | **6,974** | **5,753** | **6,414** | **6,611** | **6,674** |
| Cash and cash equivalents | 433 | 300 | 636 | 675 | 724 |
| **Net financial debt** | **6,541** | **5,453** | **5,778** | **5,936** | **5,950** |

# Overview on current corporate and financing structure

## Corporate structure (as of 12 November 2015)




1) Loan note receivables of EUR1,885m secured by share pledges over 23,250,361 Continental AG shares .

## Pro forma financing structure

Post prepayments from IPO proceeds in October 2015

| | Debt instrument | Nominal (mn) | Interest | Maturity | Rating |
|---|---|---|---|---|---|
| Schaeffler Holding (HoldCo) | **HoldCo Loans:** | | | | |
| | HoldCo Term Loan (EUR) | 500[2)] | E+4.25% | Oct-20 | Not rated |
| | HoldCo RCF (EUR 200 mn) | - | E+4.25% | Oct-20 | Not rated |
| | **HoldCo Bonds:** | | | | |
| | 6.875% SSNs 2018 (EUR)[3)] | 800 | 6.875% | Aug-18 | Ba3 / B |
| | 6.875% SSNs 2018 (USD)[3)] | 1.000 | 6.875% | Aug-18 | Ba3 / B |
| | 6.25% SSNs 2019 (USD)[3)] | 475 | 6.25% | Nov-19 | Ba3 / B |
| | 5.75% SSNs 2021 (EUR)[3)] | 350 | 5.75% | Nov-21 | Ba3 / B |
| | 6.75% SSNs 2022 (USD)[3)] | 675 | 6.75% | Nov-22 | Ba3 / B |
| Schaeffler Group (OpCo) | **OpCo Loans:** | | | | |
| | OpCo Term Loan B (EUR) | 345 | E[4)]+3.50% | May-20 | Ba2 /BB- |
| | OpCo Term Loan B (USD) | 590 | L[4)]+3.50% | May-20 | Ba2 /BB- |
| | OpCo RCF (EUR 1,000 mn) | - | E+2.6875% | Oct-19 | Not rated |
| | **OpCo Bonds:** | | | | |
| | 4.25% SSNs 2018 (EUR) | 600 | 4.25% | May-18 | Ba2 / BB- |
| | 2.75% SSNs 2019 (EUR) | 500 | 2.75% | May-19 | Ba2 / BB- |
| | 3.25% Unsec.Ns 2019 (EUR) | 500 | 3.25% | May-19 | B1 / B |
| | 2.50% SSNs 2020 (EUR) | 400 | 2.50% | May-20 | Ba2 / BB- |
| | 4.75% SSNs 2021 (USD) | 850 | 4.75% | May-21 | Ba2 / BB- |
| | 4.25% SSNs 2021 (USD) | 700 | 4.25% | May-21 | Ba2 / BB- |
| | 3.50% SSNs 2022 (EUR) | 500 | 3.50% | May-22 | Ba2 / BB- |
| | 4.75% SSNs 2023 (USD) | 600 | 4.75% | May-23 | Ba2 / BB- |
| | 3.25% SSNs 2025 (EUR) | 600 | 3.25% | May-25 | Ba2 / BB- |

2) Up to EUR 600 mn.
3) Senior Secured PIK Toggle Notes.
4) Floor of 0.75 %.