

## Strong brands under a shared umbrella

Presentation of Bosch Thermotechnology

## Agenda

1. Bosch Group
2. Current market situation
3. Bosch Thermotechnology
4. Renewable energies



# 1. Bosch Group

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- **34,200<sup>1</sup> researchers and developers work at Bosch: at 86 locations<sup>2</sup> worldwide, in a single network.**
  - **Bosch files 15 patents on average each working day.**
  - **This makes Bosch a global leader in patent applications, and puts it in first place in Germany.**

<sup>1</sup>As of January 1, 2011 <sup>2</sup>R&D locations with ≥50 associates, as of January 1, 2011

# 1. Bosch Group

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- **Bosch is one of the world's most innovative technology companies.**
  - **Bosch has invested more than 30 billion euros in research and development over the past ten years.**
  - **For innovations that make life safer, more comfortable, and more environmentally friendly – “Invented for life.”**



# 1. Bosch Group

## Independence and financial strength



Bosch is not listed on the stock exchange. Instead, **92 percent** of the company is owned by the charitable foundation **Robert Bosch Stiftung**, 7 percent by the Bosch family, and 1 percent by Robert Bosch GmbH. The majority of the voting rights are held by Robert Bosch Industrietreuhand KG, which carries out the entrepreneurial ownership functions.

- This structure, which is specified in the corporate constitution, ensures the Bosch Group's **entrepreneurial independence**.
- In 2010, the **equity ratio** was roughly **50 percent**.
- Capital expenditure was financed solely by cashflow, which totaled 5.5 billion euros in 2010. At the end of 2010, liquidity was some 3.8 billion euros.

# 1. Bosch Group

## 2010 key figures

**Bosch Group total**

- 47.3 billion euros in sales
- 283,500 associates including 34,200 in research and development



**Automotive Technology**

- 59% share of sales
- World's largest supplier of cutting-edge automotive technology



**Industrial Technology**

- 14% share of sales
- World's leading manufacturer of large gearboxes and of powertrain, packaging, and process technology



**Consumer Goods and Building Technology**

- 27% share of sales<sup>1</sup>
- World's largest power tool manufacturer, leading the field in household appliances, heating and cooling, and security systems



<sup>1</sup> Including other segments

# 1. Bosch Group

## Markets and figures for 2010

**Bosch Group total**

- 47.3 billion euros in sales
- 283,500 associates including 34,200 in research and development
- 285 manufacturing sites



**Europe**

- 59% share of sales
- 187,000 associates
- 171 manufacturing sites



**Americas**

- 18% share of sales
- 33,500 associates
- 49 manufacturing sites



**Asia Pacific<sup>1</sup>**

- 23% share of sales
- 63,000 associates
- 65 manufacturing sites



<sup>1</sup> Including other regions

# 1. Bosch Group

## Organizational structure

### Robert Bosch GmbH

Business sector  
Consumer Goods and  
Building Technology

Business sector  
Industrial  
Technology

Business sector  
Automotive  
Technology

Thermotechnology division  
Bosch Thermotechnik GmbH

overall 17  
business sectors at Bosch

Regional companies of  
Bosch Thermotechnik GmbH

6 Business units  
6 Sales regions



# Bosch Thermotechnology

Heating

Ventilation

Air Conditioning

Domestic Hot Water

Decentralized Power Generation



## 2. Current market situation

# Expected developments until 2020

### Business environment

#### Technology

- Highly efficient systems + electrical
- Convergence of heating & VAC
- Changes in the building structure

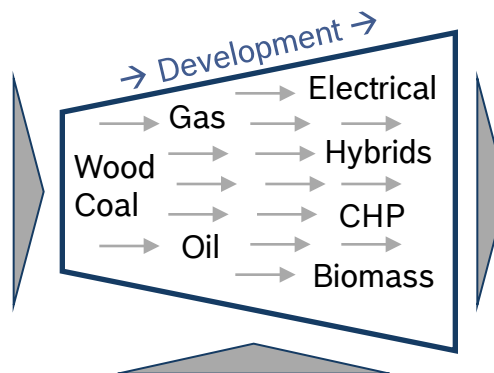
#### Market and customer requirements

- Energy price trend
- Trend towards renewable energies
- Growing demand for cooling

#### Political environment

- Reduction of CO<sub>2</sub> emissions
- Subsidies for renewable energies
- Primary energy mix
- Energy Plus Home

## HVAC



### New market structure

Manufacturers of AC systems

Utilities

Contracting providers

### Consequences for HVAC industry

#### New technologies

- Reversible heat pumps (+ cooling)
- CHP
- Increasing systems complexity and control

#### Value added

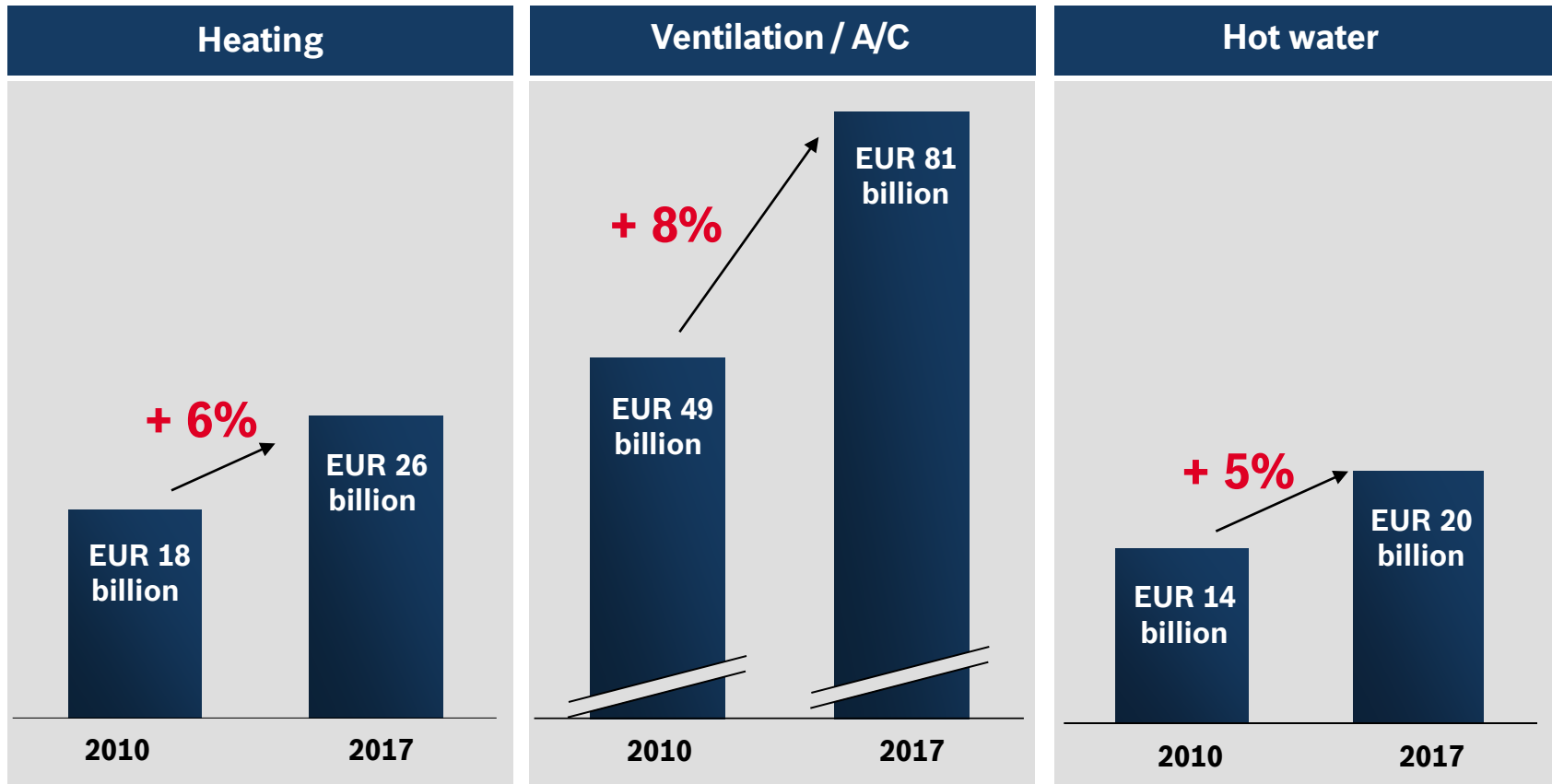
- Worldwide competition
- Increasing local value added

#### Sales organisation and customers

- New business models
- Increasing demand for advice and service

## 2. Current market situation

# HVAC core markets



Ventilation and A/C offer strongest long-term growth

# Vision

**World-leading supplier of energy-efficient, environmentally friendly and innovative solutions for heating, hot water comfort and decentralised energy management**

- ➔ Profitable growth – internal and external
- ➔ Strong brands with excellent products and services for residential and non-residential buildings



**Portfolio expansion**



**Renewable systems**



**Internationalisation**



**Energy Plus Home**

### 3. Bosch Thermotechnology

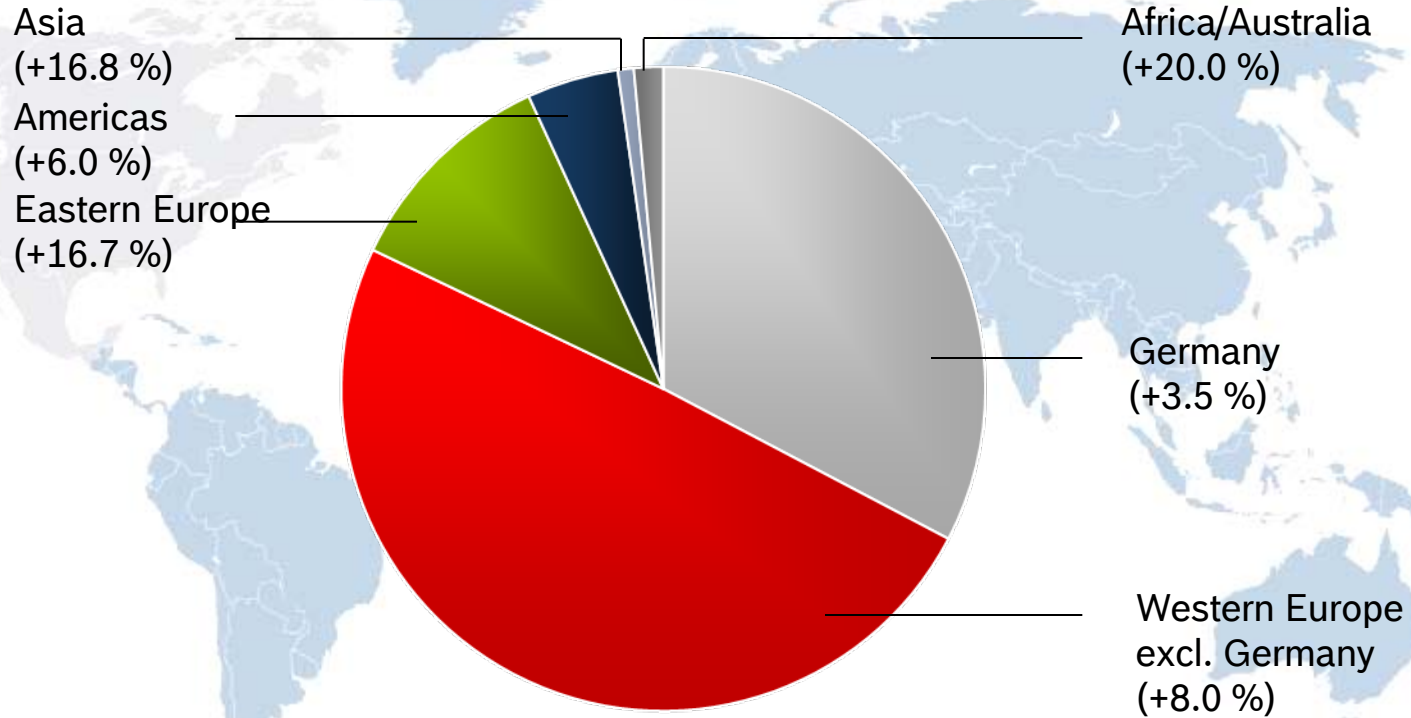
## Business performance in 2010



	2010
<b>Sales</b>	EUR 3.1 billion
<b>Sales share of renewables systems</b>	15 %
<b>Research and development</b>	EUR 115 million
<b>Capital expenditure</b>	EUR 40 million
<b>Associates</b>	13,449
thereof in Germany	5,906
thereof outside Germany	7,543

### 3. Bosch Thermotechnology

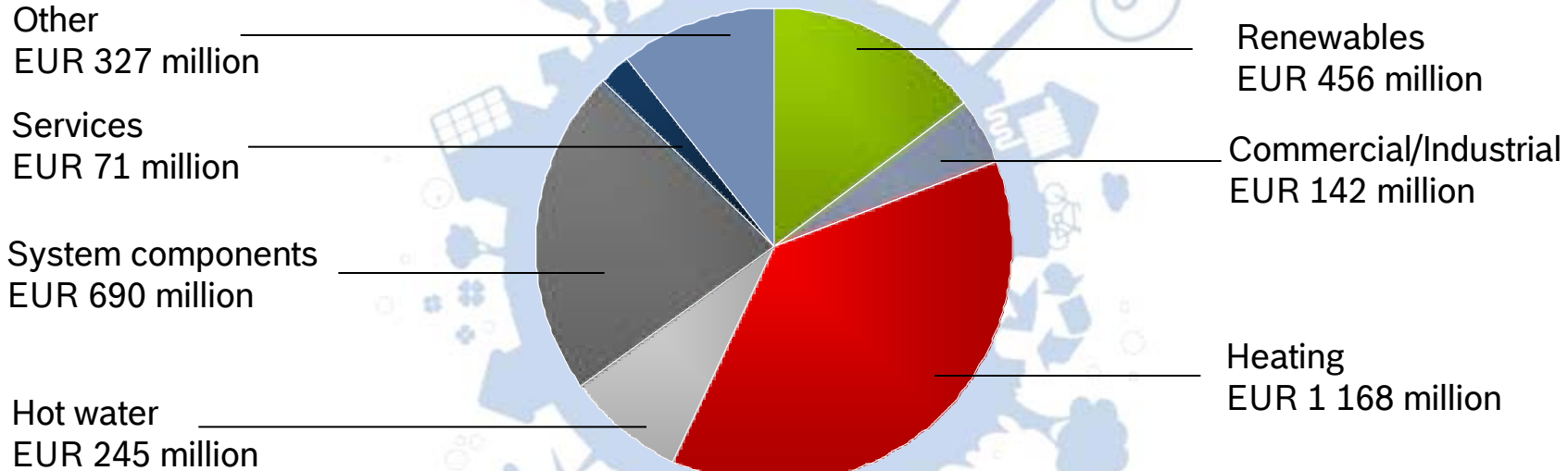
## 2010 sales by regions



Strong growth in Latin America, Eastern Europe and Asia

### 3. Bosch Thermotechnology

## 2010 sales by segments



Focus on growth fields

## 3. Bosch Thermotechnology

# Management Bosch Thermotechnik GmbH

### Chairman of the supervisory board



**Rudolf Colm**

Member of the management of the Robert Bosch GmbH

### Management board



**Uwe Glock**  
Chairman



**Thomas Bauer**  
Sales



**Jörg Fischer**  
Finance



**Ulrich Schmidt**  
Manufacturing



**Jürgen Sterlepper**  
Development

### 3. Bosch Thermotechnology

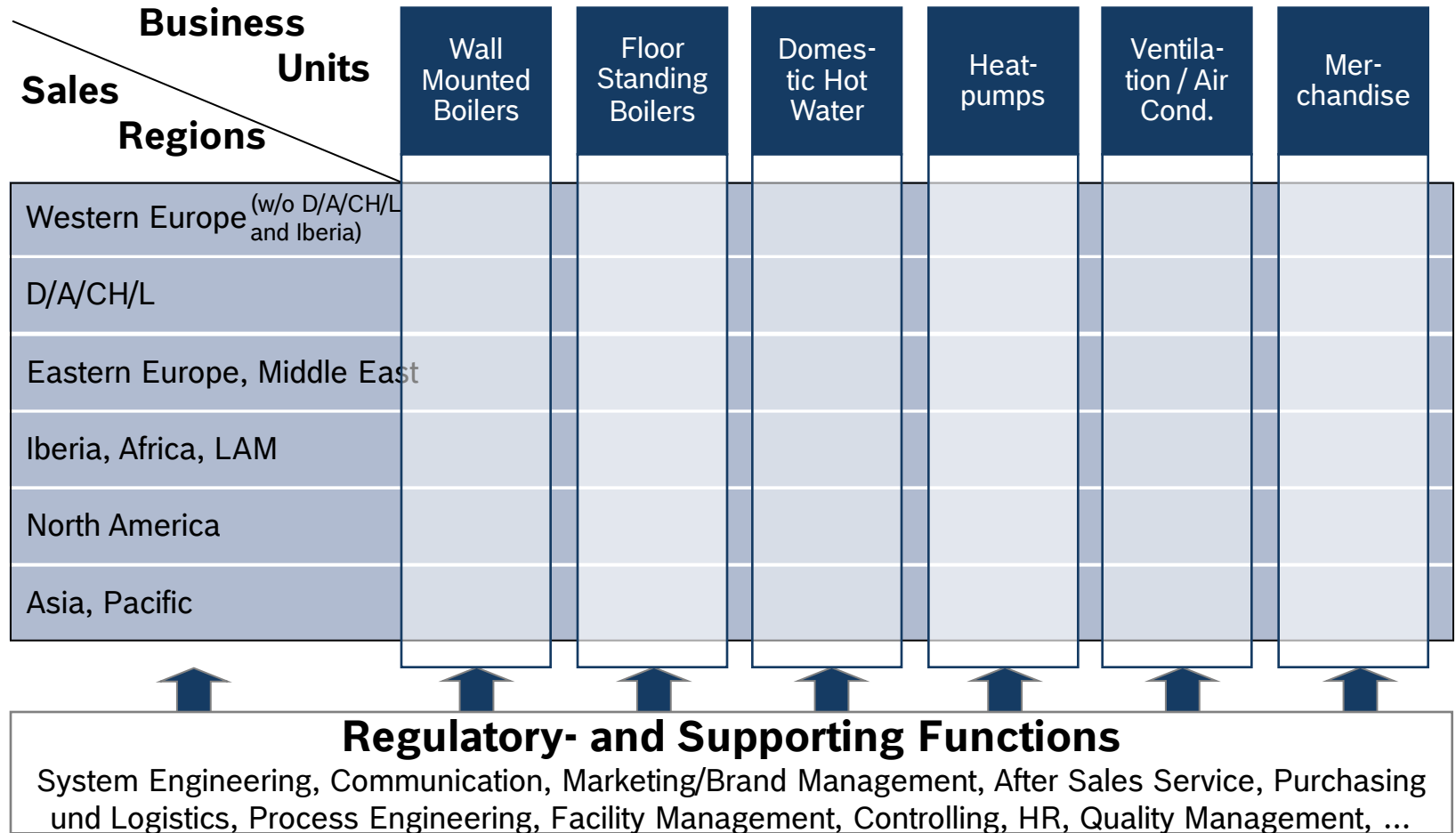
## 6 global Business Units

Business Units have global responsibility for their products and associated production sites



### 3. Bosch Thermotechnology

## New organizational structure



## 3. Bosch Thermotechnology

# The Business Units

### Wall Mounted Boilers



- Headquarter: Wernau
- Products:
  - Condensing gas boilers
  - Conventional gas boilers
  - Controller

### Floorstanding Boilers



- Headquarter: Lollar
- Products:
  - Gas/Oil boilers
  - Industrial boilers
  - Solid fuel boilers
  - Radiators

### Domestic Hot Water



- Headquarter: Aveiro/Portugal
- Products:
  - WW heater
  - Solar systems
  - WW storage tanks

# 3. Bosch Thermotechnology

## The Business Units

### Heatpumps



- Headquarter: Trans/Sweden
- Products:
  - Heatpumps for heating
  - Accessories

### 20 Ventilation / Air Conditioning



- Headquarter: Ft. Lauderdale/USA
- Products:
  - Reversible Heatpumps
  - For heating and cooling

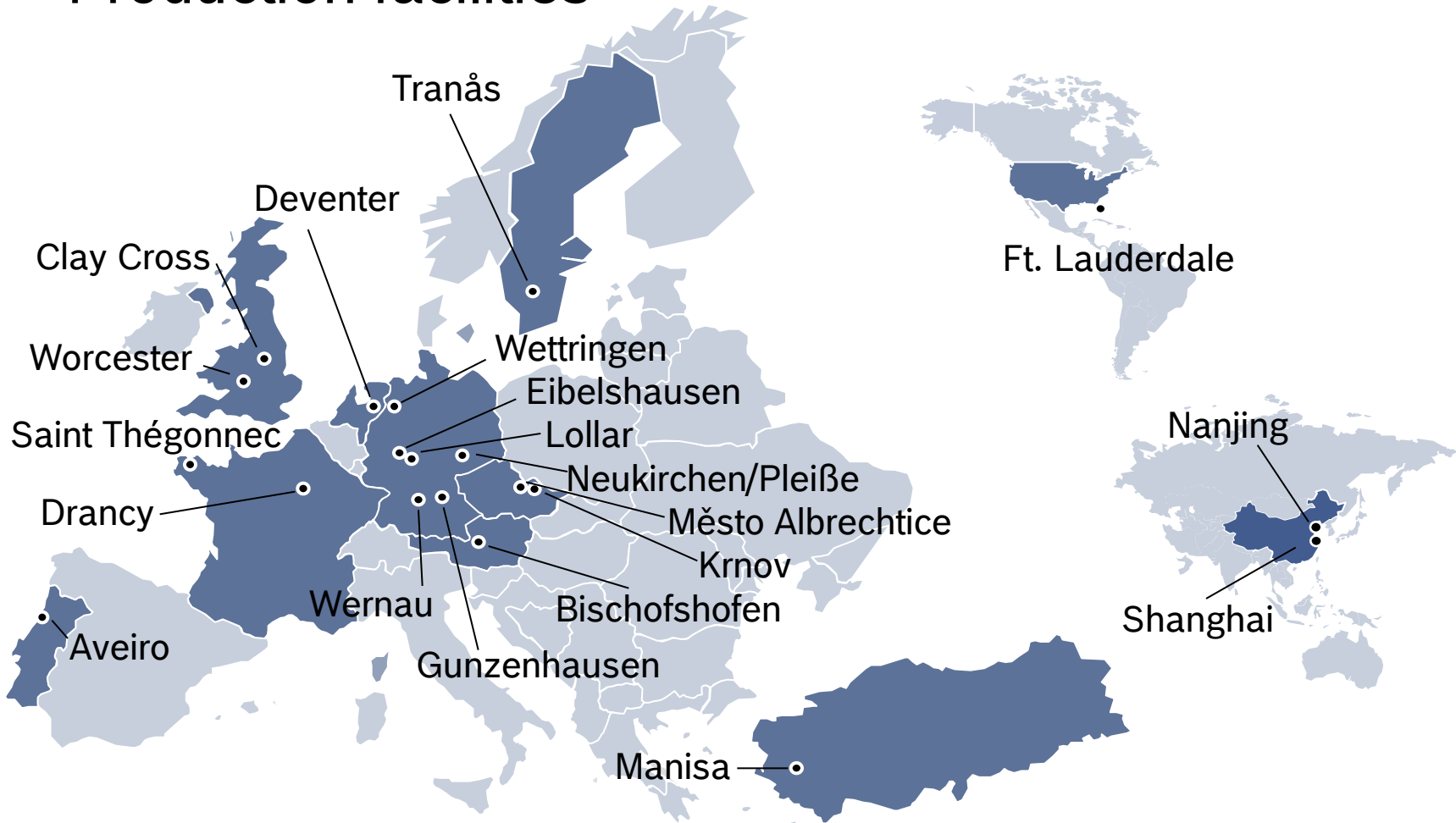
### Merchandise



- Headquarter: Wetzlar
- Products:
  - Merchandise
  - OEM merchandise

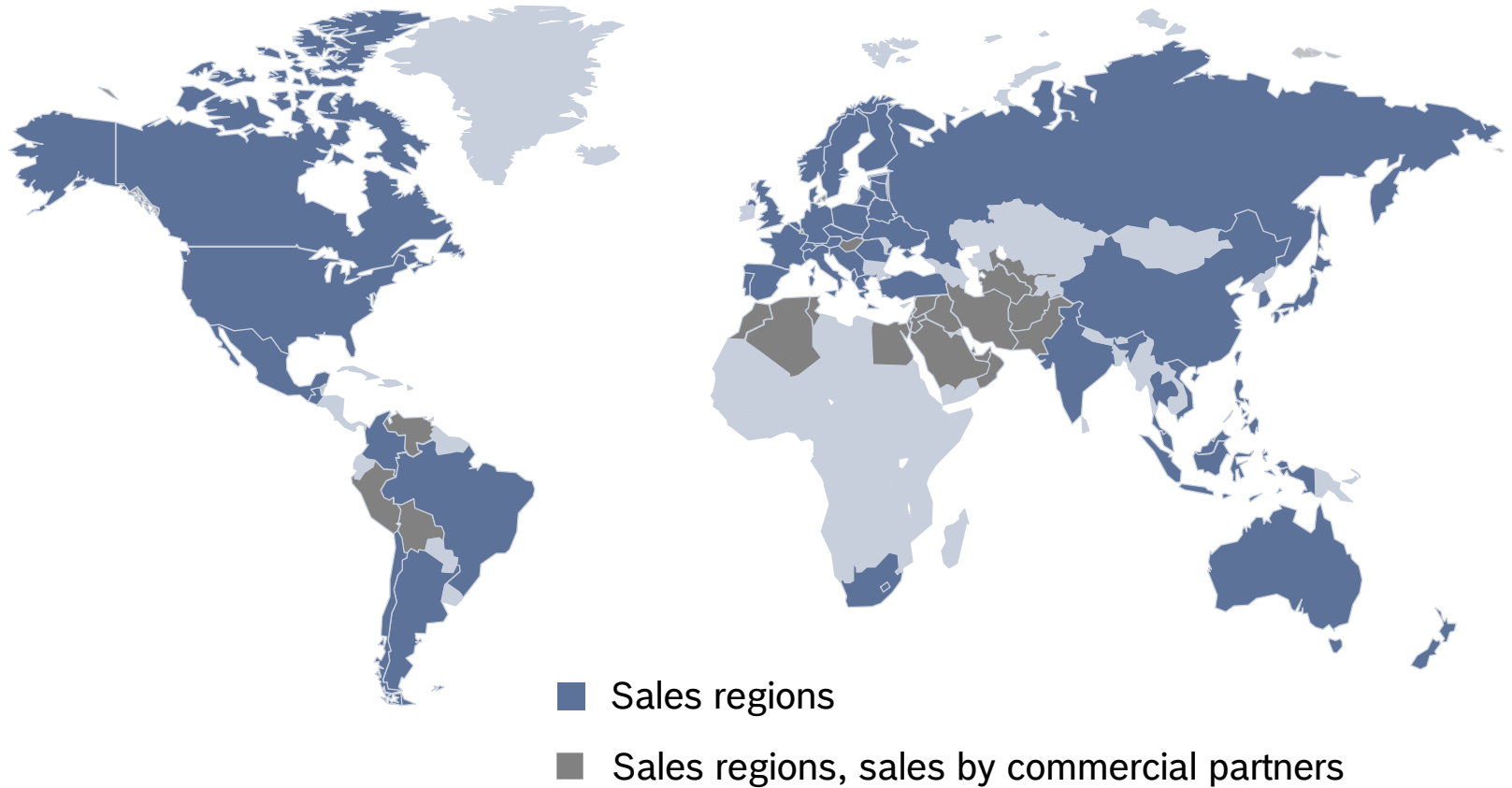
### 3. Bosch Thermotechnology

## Production facilities



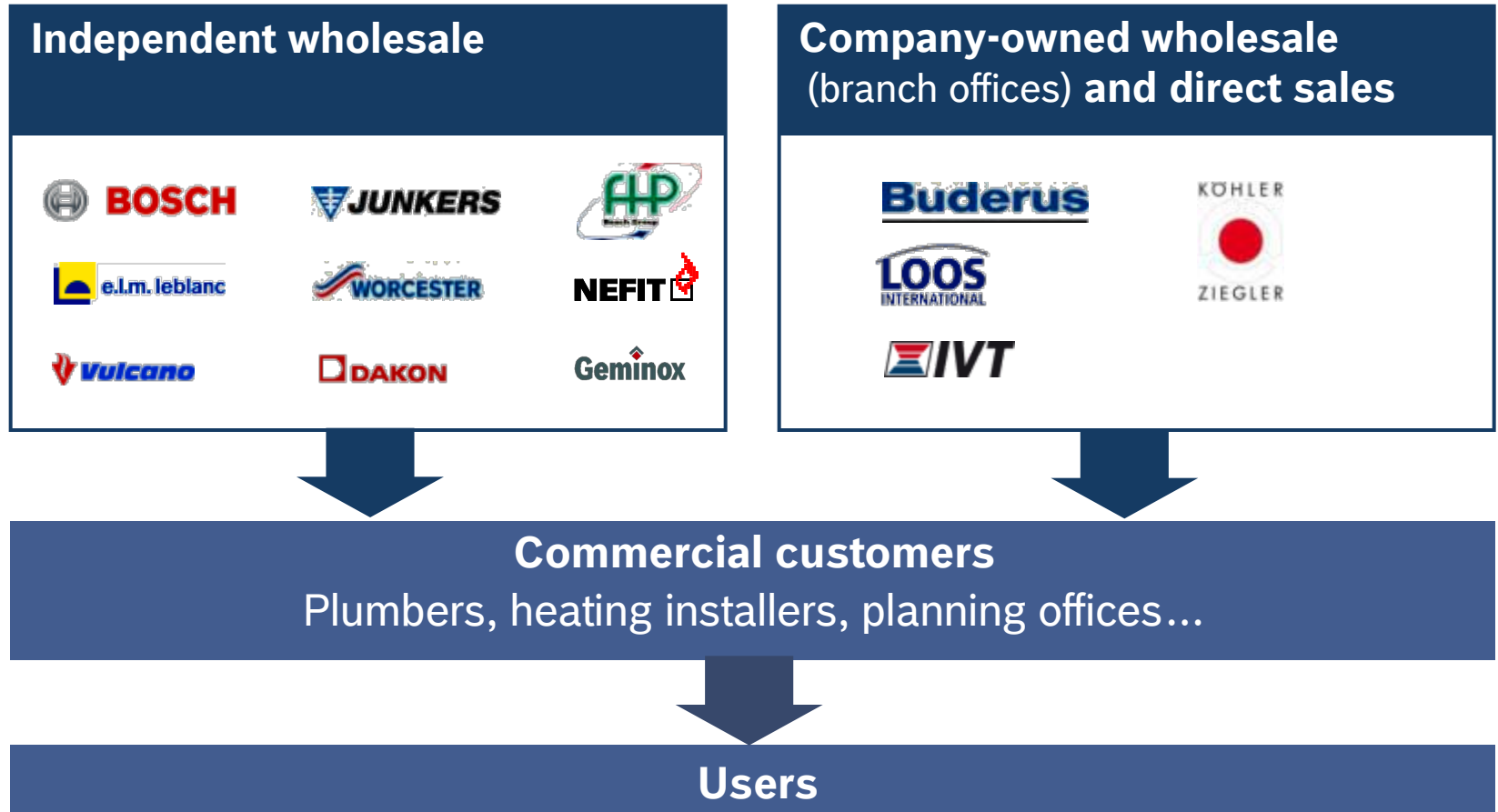
### 3. Bosch Thermotechnology

# Global distribution network



### 3. Bosch Thermotechnology

#### Brands and sales channels



## 4. Renewable energies

# Thermotechnology has the major key to reach climate targets

- Energy consumption in buildings accounts for about 40% of the CO<sub>2</sub> emissions worldwide.
- By 2050, energy consumption and CO<sub>2</sub> emissions would have to be reduced by 60% in order to limit global warming to 2 K.
- This means that about as much CO<sub>2</sub> would be saved in buildings as is currently being generated in the global transport sector.

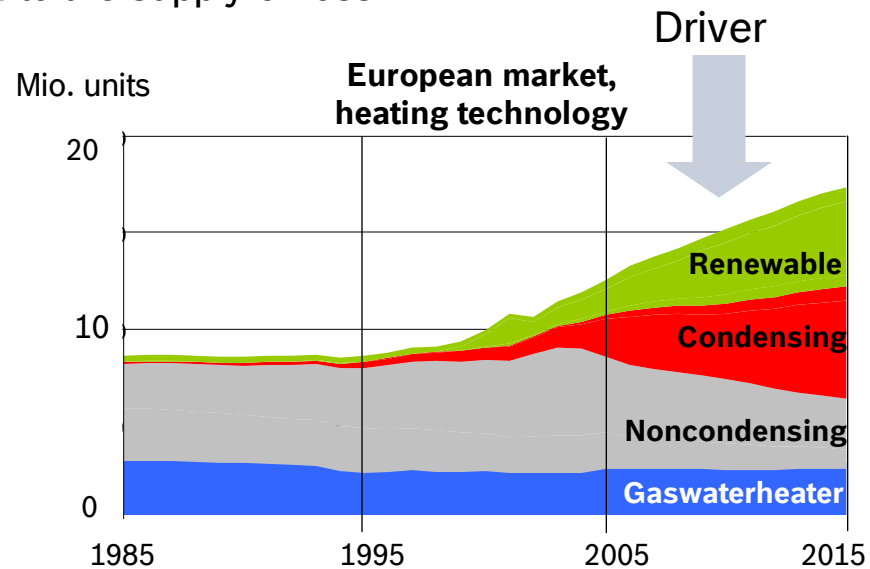


Source: Study "Energy Efficiency in Buildings", World Business Council for Sustainable Development, 2009

## 4. Renewable energies

# Climate change leads to structural change

- Limited availability of fossil fuels
- Price increase and insecurity with regard to the supply of fossil energies
- CO<sub>2</sub> emissions and climate change
- Increasing pressure for CO<sub>2</sub> reduction and energy efficiency
- High demand for renewable energies
- Guidelines and subsidies are important drivers
- Increasing demand for comfort
- Future building standards



Condensing technology and systems that use renewable energy are gaining importance

## 4. Renewable energies

# Energy Plus House - the standard of the future

An Energy Plus Home  
is a house ...



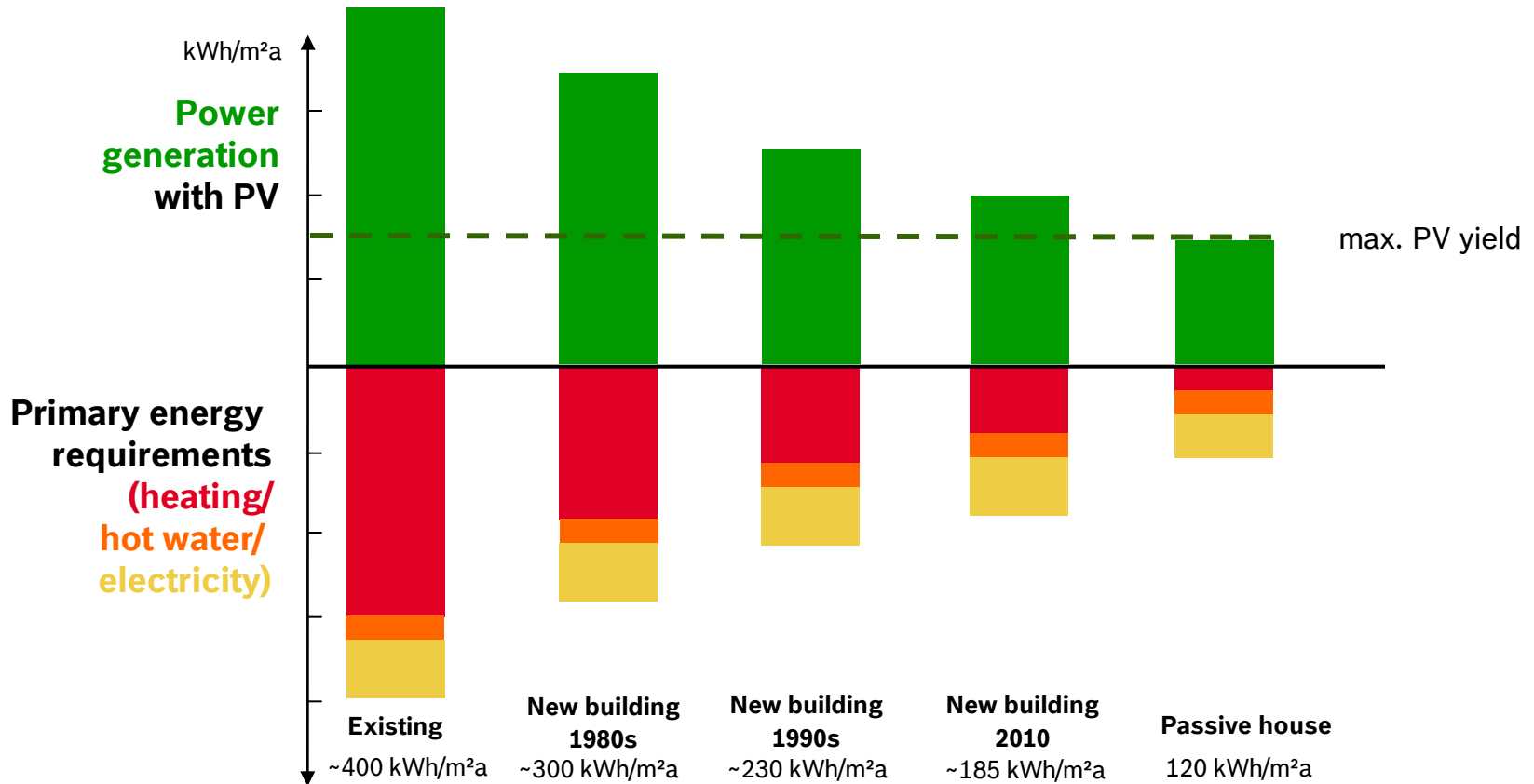
... that generates more  
energy than it consumes  
over the year.

- The Energy Plus House is the right solution for achieving the climate targets. It can be realised using the technology that is available today – for new buildings and most existing ones.
- This is certainly a very ambitious goal which can be reached only step by step.
- What is more important than a fixed timeframe is that all parties involved work consistently towards this goal.

**The Energy Plus House should become the standard for new and existing buildings**

## 4. Renewable energies

# How is the additional energy generated?



Maximisation of energy efficiency / Generation of renewable electricity

## 4. Renewable energies

# Energy Plus House: Decentralised energy transformation

- Three steps to convert energy-consuming buildings into producers of heat and electricity:
- Reduce the energy demand of the building
- Meet its residual energy demand as efficiently as possible
- Generate as much electricity as possible
- Homes can be small “power stations” with good efficiency ratings



**Bosch Thermotechnology systems allow to build Energy Plus Houses already today.**



Thank you very much!