

Nothing is more impressive than a clever  
idea that no one expected.  
We pioneer motion

# Schaeffler E-Mobility – Growing our customer reach

## HSBC Fireside Chat

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## Agenda

- 1 Where we stand
- 2 Where we play
- 3 How we win
- 4 How we create value

# 1 Where we stand

# Automotive Technologies – Driving the transition to innovative Propulsion and Chassis Technologies

**SCHAEFFLER**

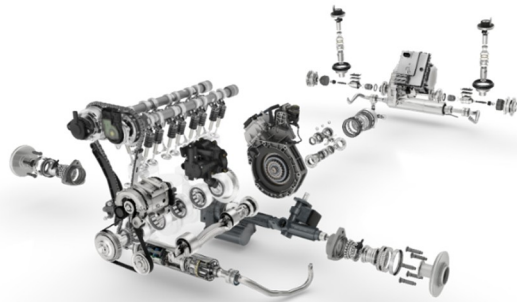
Adjusted  
Comparative  
Figures 2020

Electric and Hybrid  
Propulsion

13% of sales<sup>2</sup> in 2020

Engine Components  
and Systems

26% of sales in 2020



Transmission  
Components and  
Systems

45% of sales in 2020

Chassis Applications

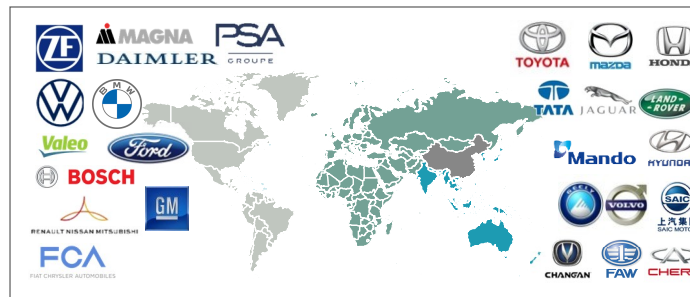
16% of sales in 2020

Europe

37% of sales in 2020

Greater China

26% of sales in 2020



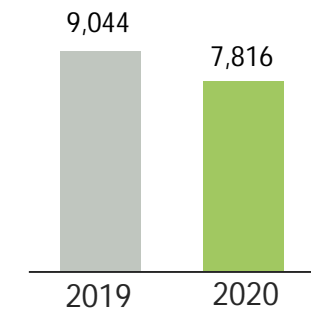
Americas

22% of sales in 2020

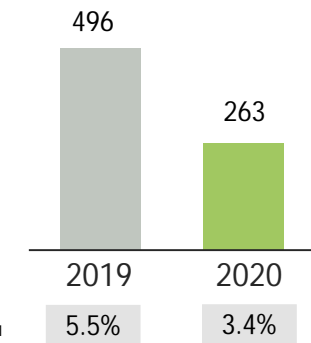
Asia / Pacific

15% of sales in 2020

Revenue  
in EUR mn



EBIT<sup>1</sup>  
in EUR mn



EBIT  
margin<sup>1</sup>

5.5% 3.4%

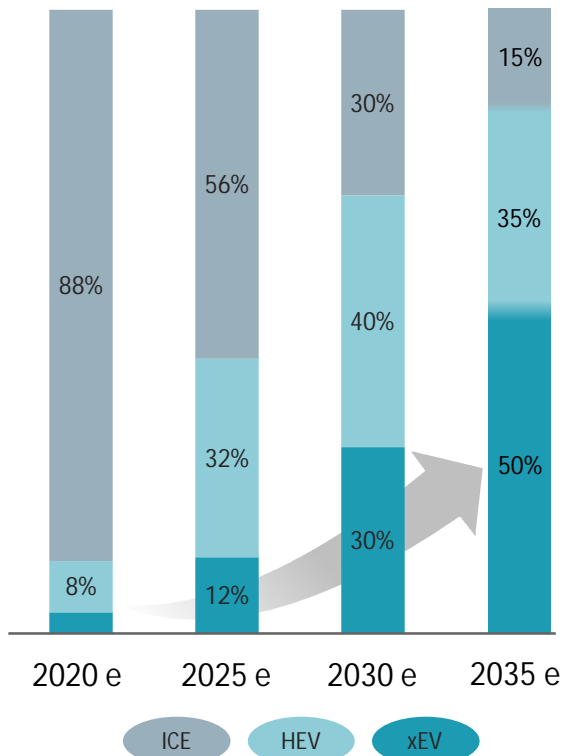
<sup>1</sup> Before special items

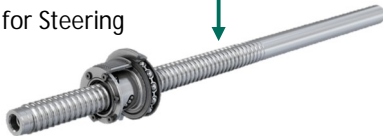


<sup>2</sup> Including Chassis Mechatronics Systems, Fuel Cell & Thermal Management Systems 4

## 2 Where we play

# Harvesting the Mature, Growing the New – Today we focus on E-Mobility

Vision Powertrain 2035  
Global Light Vehicle Production



	Mature Business		New Business	
	Products for ICE and HEV	Powertrain agnostic <sup>1</sup> products	Powertrain agnostic <sup>1</sup> products	Products for Electrified Powertrains
ICE	↘	↘	↗	
HEV	↗	↗	↗	↑
xEV		↑	↑	↑
Example	Ball Screw Drive for Steering 		Rear Wheel Steering 	3in1 E-Axle 

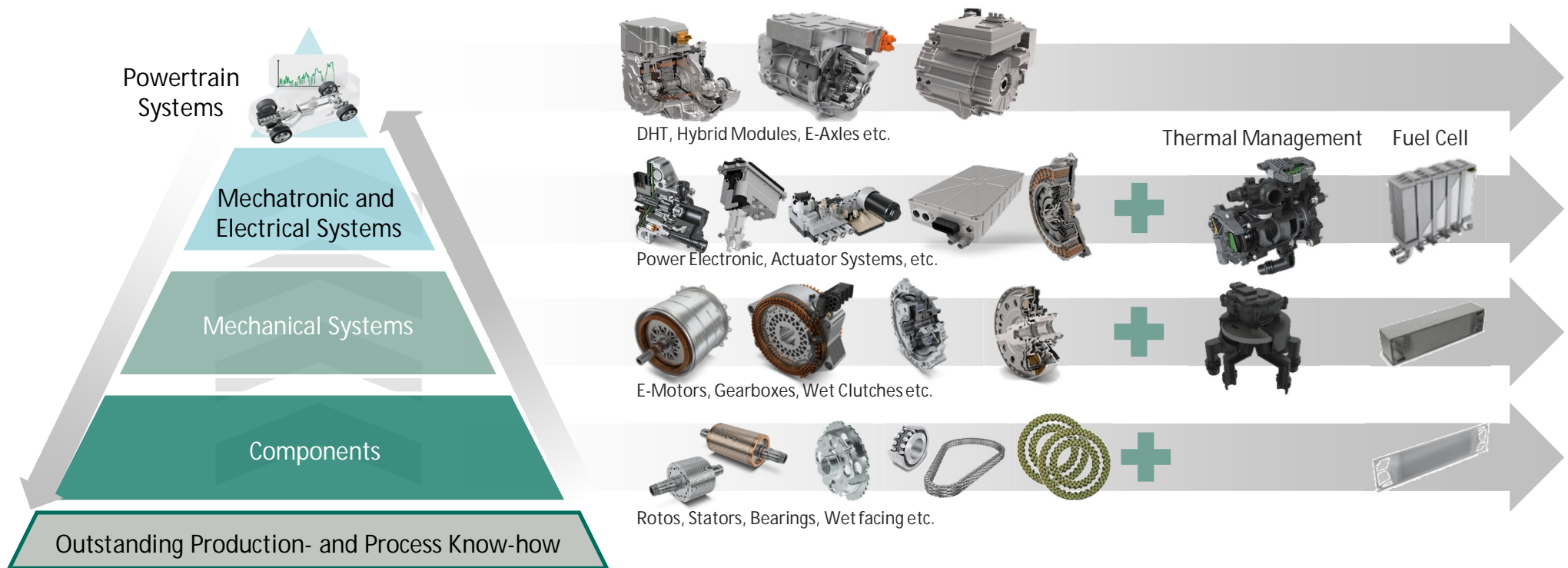
<sup>1</sup>Independent from powertrain type

↘ Decreasing potential

↗ Increasing potential

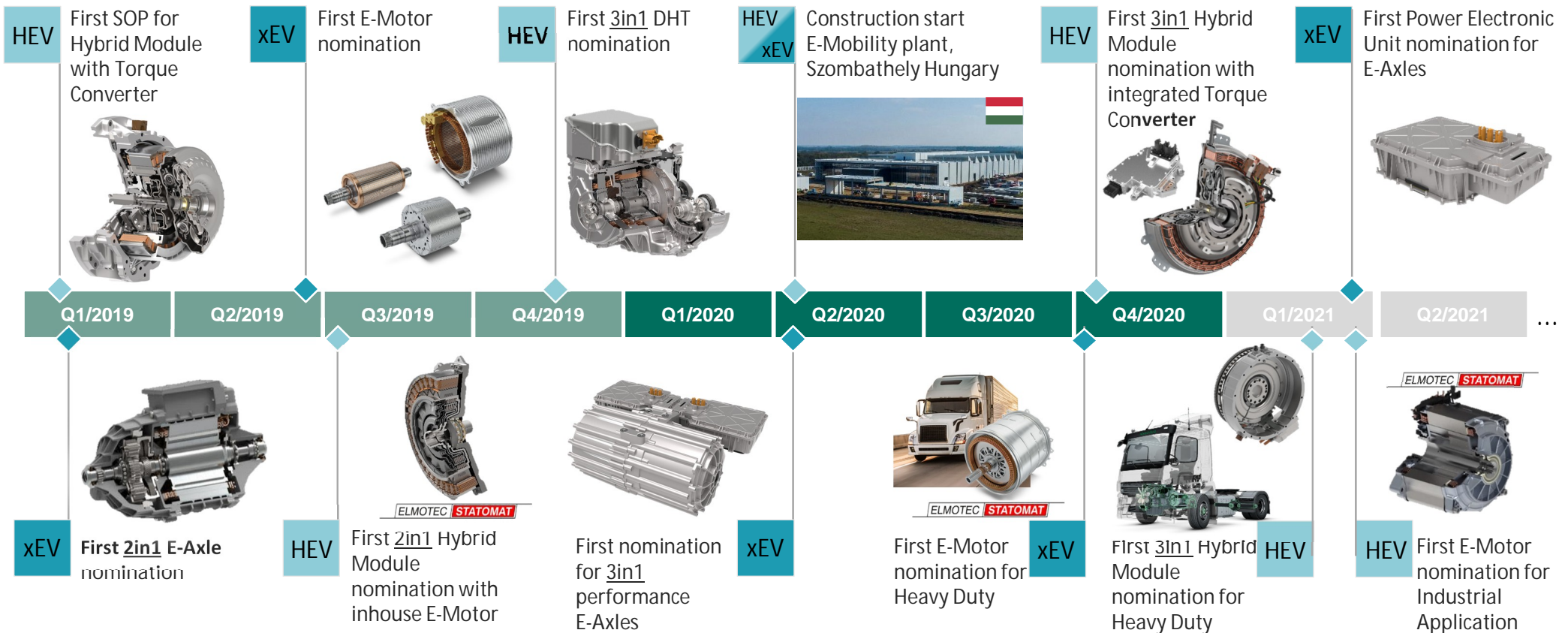
↑ Strongly increasing potential

## E-Mobility Propulsion portfolio today – Components and Systems



We are extending our portfolio of E-Mobility due to high relevance for future powertrain systems

## Focused and fast-paced E-Mobility portfolio expansion since 2019





# 3

## How we win

## Heavy Duty applications – Supplying E-Motors and Hybrid Modules

Modular  
strategy for  
Heavy Duty

Highly  
Integrated  
3in1 System

P1 Hybrid  
Module

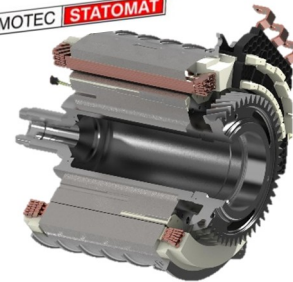


### New Business

GROW



ELMOTEC STATOMAT



1st Nomination for a E-Motor for  
Heavy Duty (2020)



1st Nomination for a Hybrid  
Module for Heavy Duty (2021)

#### Key Aspects:

- Market Entry Heavy Duty with Hybrid Modules for Schaeffler
- 3in1 System with integrated Power Electronics
- Recuperation of braking energy
- Supporting to achieve CO<sub>2</sub> & NO<sub>x</sub> targets for the customer

We are electrifying the Heavy-Duty sector and supporting our customers in achieving their CO<sub>2</sub> targets.

## Industrial applications – Leveraging Schaeffler's Auto and Industrial DNA, Capturing New Growth Opportunities with Cross-Fertilization

Wave-Winding Technology

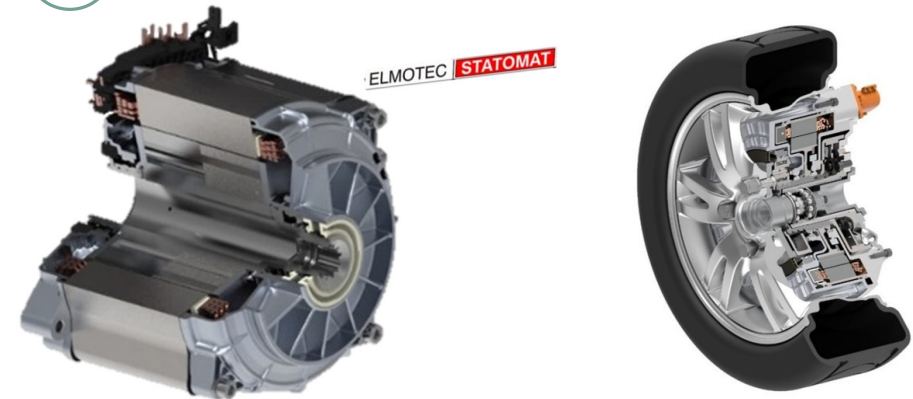
Market entrance in Industrial for E-Motors

Market entry in Industrial for eWheel



### New Business

GROW



#### Key Aspects

- Modular platform for Heavy Duty and Industrial in Production
- High max. power and max. torque application
- New important market fields for Schaeffler

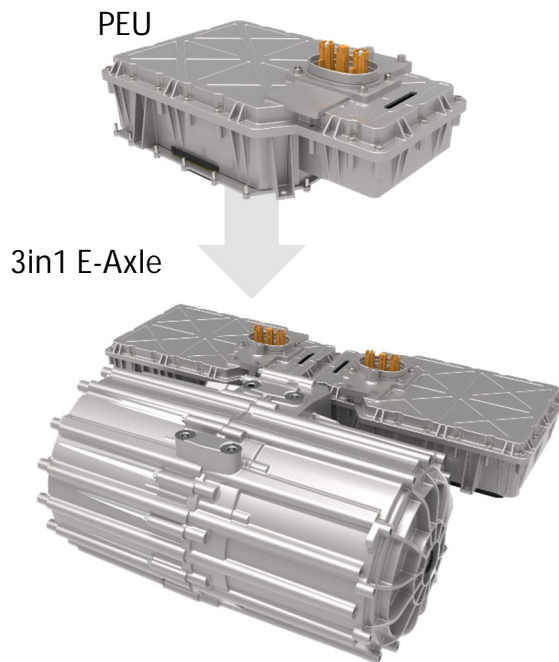
We are further expanding our business with our first E-Motor and eWheel nomination in the industrial sector.

## Power Electronic Unit Application – Extending our 3in1 Powertrain Portfolio

PEU for E-Axle

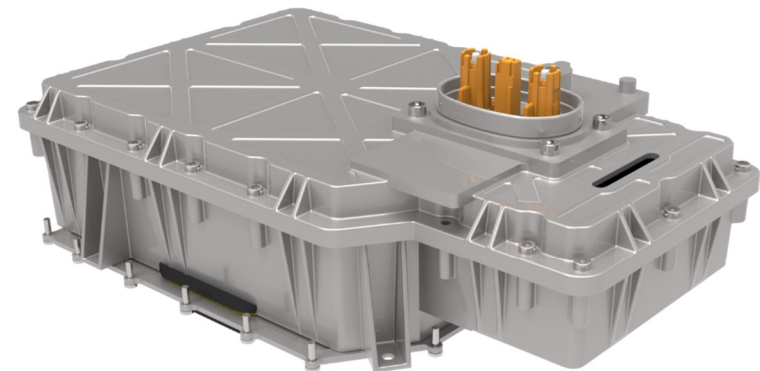
SiC<sup>1</sup> Inverter

800 V  
Performance  
Applications



### New Business

GROW



#### Key Aspects

- First Inhouse Power Electronic Unit for Schaeffler
- E/E<sup>2</sup> Innovations and Competences build up internally
- Accomplishing our 3in1 product portfolio in E-Mobility
- Integration of power electronic system actuation functions

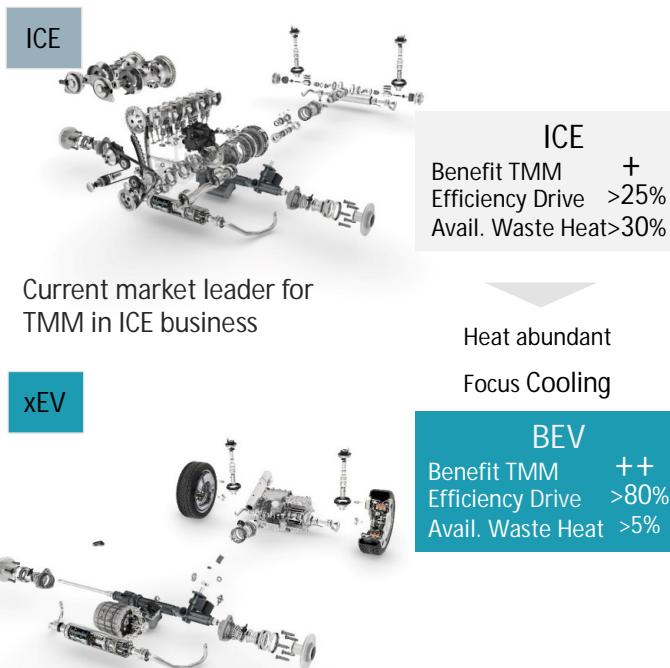
With our new inhouse PEU solution we harness our E/E<sup>2</sup> competences and increase business opportunities.

## E-Axles – Reinventing E-Axles by combining all our Components with a Thermal Management System

Cross fertilization from mature ICE Business

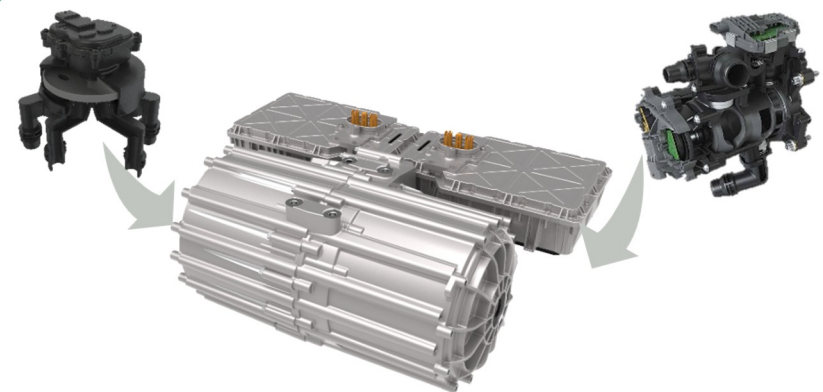
Increase of Efficiency and EV range

Full vehicle heat control



## New Business

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### Key Aspects

- We enable our customers offering more efficient drives by integrating innovative thermal management components

We have a deep system understanding of thermal management, necessary to optimize an electric powertrain system.

## Fuel Cells – Joining Forces: Schaeffler's Industrialization Power Combined with Refire Fuel Cell System Know-How

Strategic  
Cooperation

Development of  
Key Components

Accelerating  
time to market

**SCHAEFFLER**

&

**REFIRE**

### New Business



#### Key Aspects

- Development of Bipolar plates and Thermal Management Systems
- Increasing speed in the industrialization process
- Compounding our capabilities in the fuel cell ecosystem

The cooperation with Refire is strengthening the market position of Schaeffler and speeding-up the development and market entry.



## Sustainable Investments in Europe – New E-Mobility production plant in Hungary

Competence  
center for  
manufacturing

Production of  
systems &  
components

CO<sub>2</sub> neutral



### Key Aspects

- 18,000 m<sup>3</sup> thereof 15,000 m<sup>3</sup> production space (30 hectares area)
- DGNB<sup>1</sup> Gold certification and highly efficient production processes
- Photovoltaic system & Green service-, rain- and wastewater treatment

<sup>1</sup> German Sustainable Building Council

We will officially open the plant in Hungary in September 2021.

# 4

## How we create value



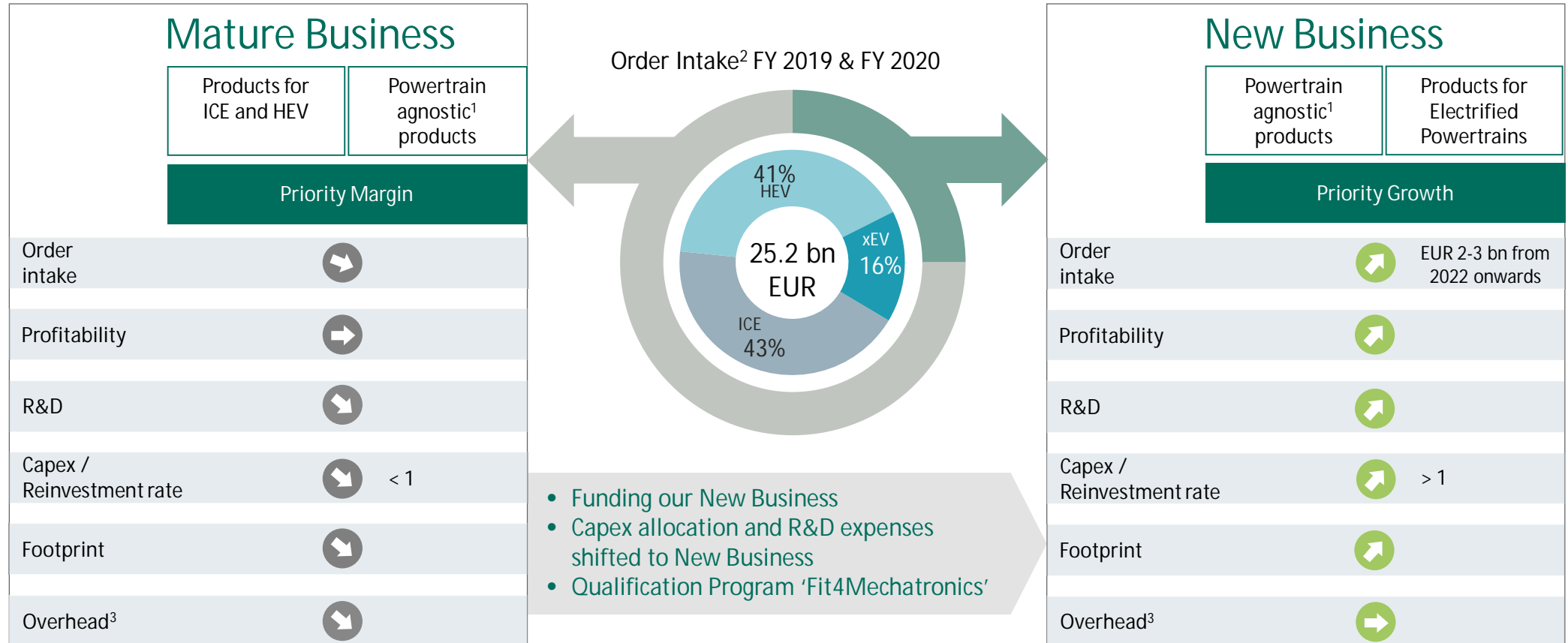
## What is Schaeffler's role as an Automotive Supplier in an EV world?

We are a strong partner to our Customers and our Customer portfolio grows in reach and scope

- 1 We build on our strong foundation of integrated customized technological solutions in automotive components and systems and combine it with our successful, focused and fast-paced transformation
- 2 We drive innovation on several levels and with maximum flexibility, thanks to competence leveraging and transfer from R&D up to production
- 3 We harness the power of our critical mass in purchasing, we share investment in R&D and Industrialization in a win-win mode with our Customers
- 4 Lastly, modularity and multi customer approach enable agile development, let products mature and production processes adjust, making our proposition compelling

Fast learning curve in E-Mobility due to broad product portfolio and accelerating customer projects.

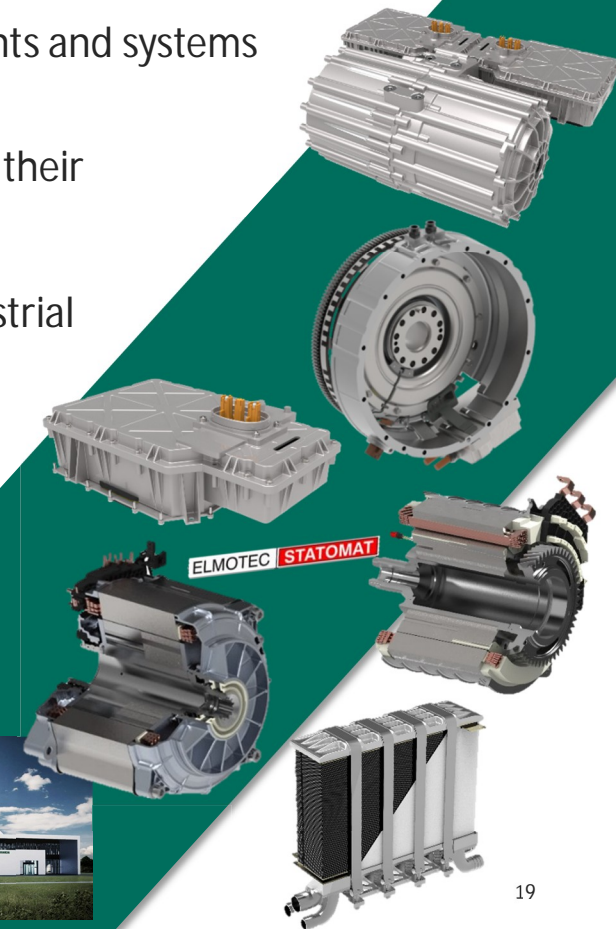
## How we Fund our own growth and create value



<sup>1</sup> Independent from powertrain type | <sup>2</sup> Powertrain split of Order Intake without Heavy Duty | <sup>3</sup> Selling & Admin expenses

## Conquer leadership position in Electrified Powertrains

- 1 We continue to gain a high order intake in electrified powertrains, both for components and systems
- 2 We are electrifying the Heavy-Duty sector and supporting our customers in achieving their CO<sub>2</sub> targets
- 3 We are further expanding our business with our first E-Motor nomination in the industrial sector
- 4 We are proving our E/E competences and increase business opportunities with our new inhouse PEU application
- 5 We are strengthening the market position of Schaeffler and speed-up the development and market entry with the cooperation with Refire



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