



MAHLE

Driven by performance

ANNUAL REPORT 2017

DRIVING THE
FUTURE



MEET THE FUTURE

P. 08

Everyday e-mobility—from the challenges of future mobility as illustrated in Shanghai/China to new solutions from Stuttgart/Germany.

U FOR BETTER AIR

P. 18

A small oil control ring helps to significantly lower particulate emissions in vehicles.

ELECTRONICS WITH HEART

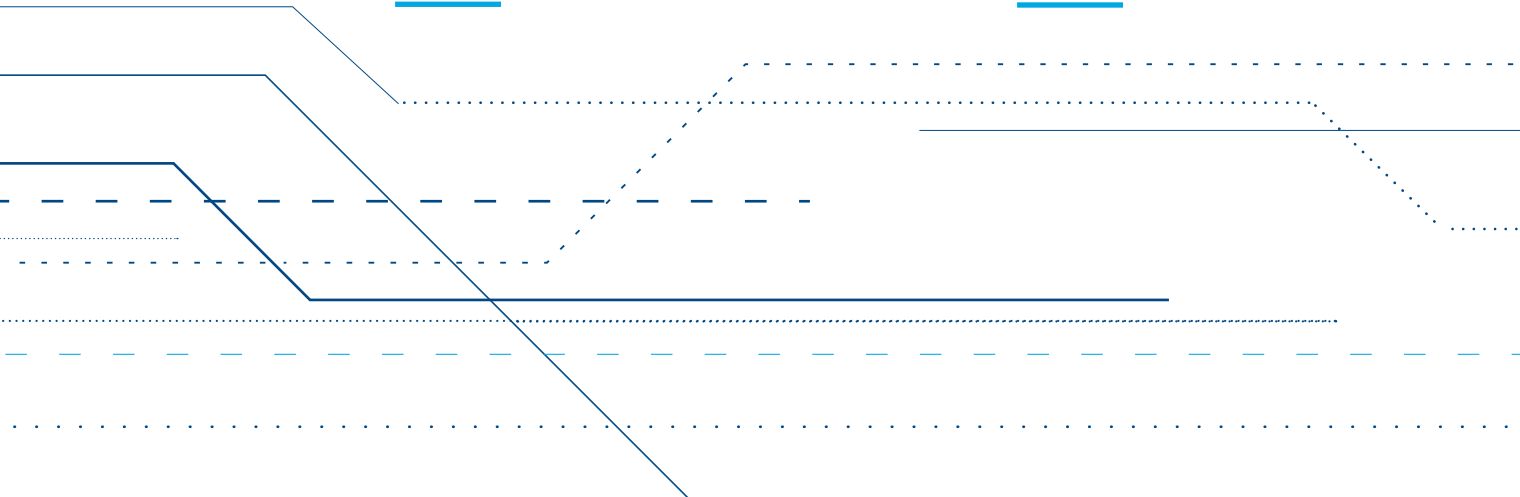
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A special acquisition and a shared vision—to shape e-mobility.

A START-UP AND ALMOST ONE HUNDRED YEARS OF EXPERIENCE

P. 32

Skills, enthusiasm, and courage—MAHLE innovations stem from these three ingredients.



THE YEAR 2017

DUAL STRATEGY

We are addressing the current change in the automotive industry through a dual strategy: as well as optimizing the combustion engine, we are focusing on new developments in alternative drive technologies.

MARKET POSITIONS

In our business segments, we occupy leading market positions.

RESEARCH AND DEVELOPMENT

With the expansion of our research and development activities, we are contributing to climate-friendly mobility.

SALES GROWTH

With a significant organic sales growth of 6.4 percent, we further expanded our market position in 2017.

EMPLOYEES

In the course of the growth of our company, our headcount rose by more than 1,600 employees in the year under review.

MAHLE GROUP FIGURES

in EUR million	2017	2016	2015
Sales	12,788	12,322	11,486
EBITDA	960	1,079	1,093
EBIT	355	473	511
Result from business activities	262	228	309
Consolidated net income	102	63	122
Tangible fixed assets	3,009	3,029	2,888
Capital expenditure on tangible fixed assets (without first consolidation)	612	563	564
Equity	2,632	2,722	2,667
Dividend paid of the MAHLE GmbH*	7.5	6.0	6.0
Employees (as at Dec. 31)	78,277	76,632	75,635

* Proposal for the specified financial year

PRODUCT PORTFOLIO

ENGINE SYSTEMS AND COMPONENTS



As a global market leader in our key market segments, we have decades of systems and development expertise as well as extensive production experience to build on. Since our company's early days, the development of piston systems and cylinder components has been a core competence at MAHLE. Because we understand the interaction of all engine components, we can deliver optimal solutions to our customers. Our products are used around the globe in two-wheeled vehicles, passenger cars, commercial vehicles, and large engines. And the range is continuously being expanded, so that emissions and fuel consumption in combustion engines can be further reduced in the future.

THERMAL MANAGEMENT



An increasing electrification of the powertrain calls for superior innovative capacity in thermal management—for batteries and the entire electric powertrain alike. As engines are downsized for the purpose of lowering emissions, thermal management plays an even greater role in improving the combustion engine's performance. What's more, air conditioning is expected to provide comfort inside the cabin while keeping energy consumption low. MAHLE is a technological pioneer when it comes to the thermal management of batteries. Our solutions ensure constant temperature levels and an even distribution of temperature between battery cells. This produces long-lasting storage systems that deliver high performance.

FILTRATION AND ENGINE PERIPHERALS



MAHLE manufactures filters, pump systems, and oil coolers for engine and transmission applications—all of which are designed to increase the engine's efficiency and service life and reduce emissions. We are thus contributing to clean air and preventing engine damage resulting from oil and fuel contamination. Engine peripherals often vary due to different regional emissions regulations, individual car body shapes, and various power classes—even for identical basic engines. As a development partner and global market leader, MAHLE has partnered with its customers in recent years to develop modular systems for every major product group.

MECHATRONICS



Mechatronic components are playing an increasingly crucial role in enhancing the efficiency of the powertrain and advancing e-mobility. With its electric drives, actuators and auxiliaries, and control and power electronics product groups, MAHLE already offers relevant solutions in this area today. These activities are founded on our expertise in the development and manufacture of electric motors, electronics, and mechatronic systems. Although these are used in a wide variety of applications, their technology is closely related, which affords synergies and economies of scale—two highly relevant factors in the automotive industry.



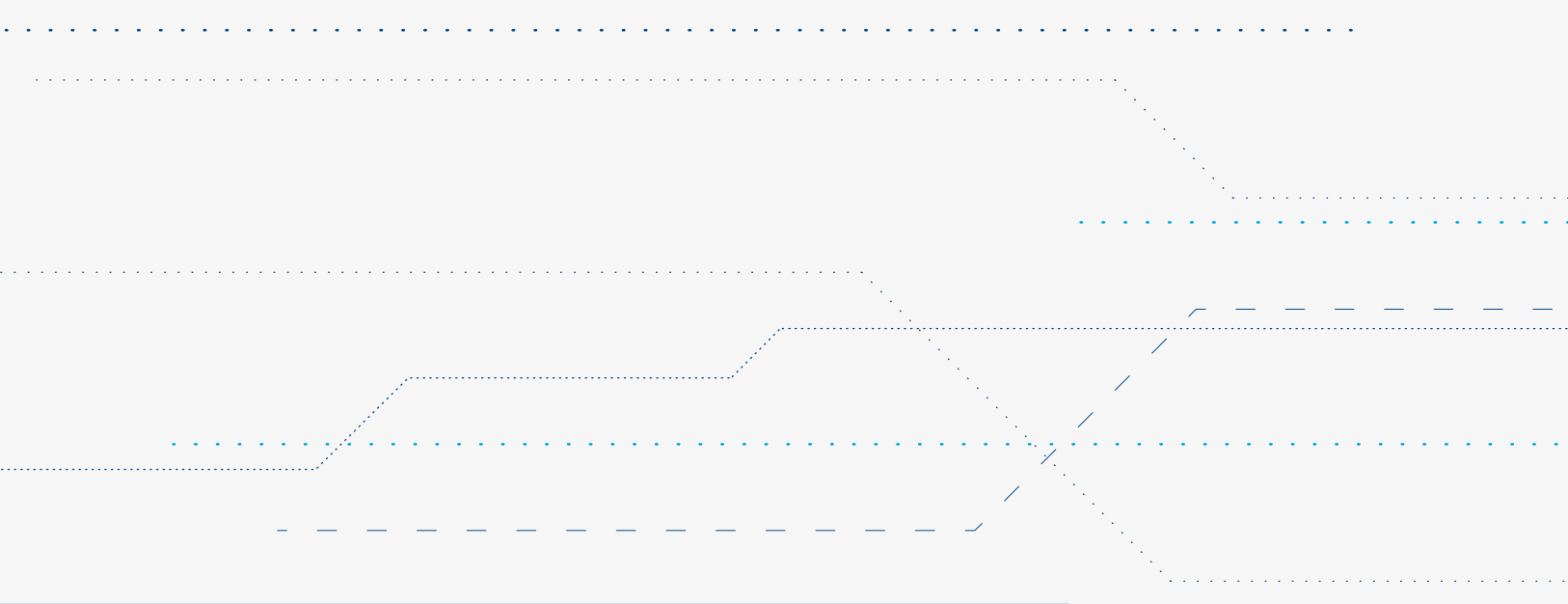
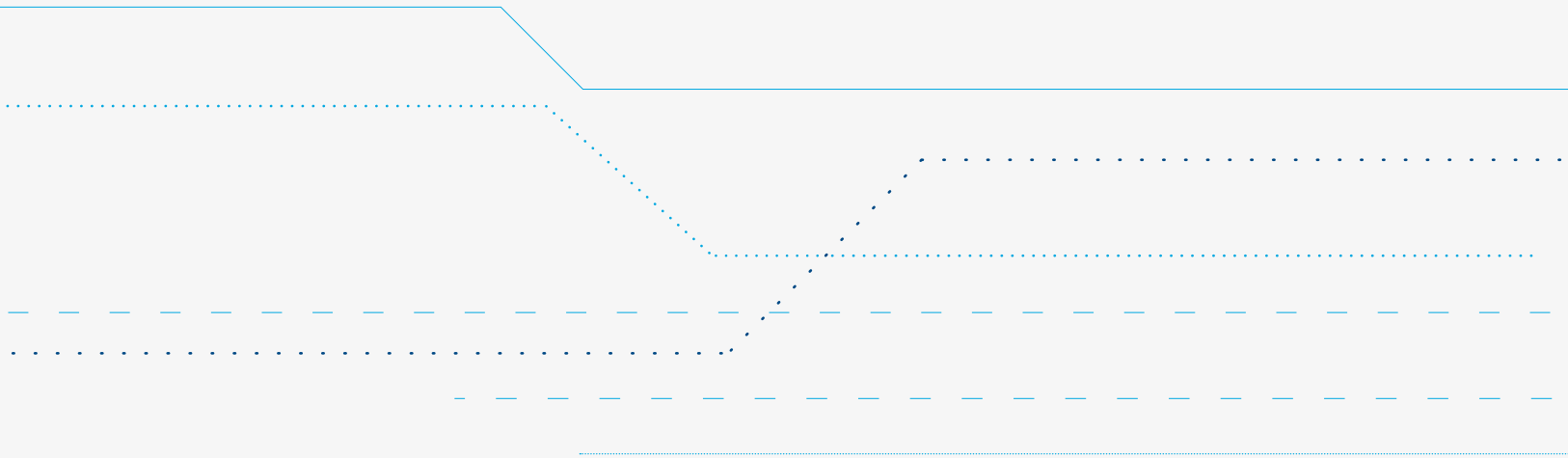
ANNUAL REPORT 2017

DRIVING THE FUTURE

MAHLE is driving the future. We are developing solutions for the mobility of tomorrow. Wherever people travel by car—we want them to reach their destination in a way that is more sustainable, more efficient, and more economical. Whether in China, Spain, Germany, the USA, or Brazil. With products that ensure clean air, energy efficiency, and driving pleasure. As a result, we are driving forward the change in the automotive industry.



This report is also available online at
www.annualreport.mahle.com



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DRIVING THE FUTURE

It is true that we made a bold choice when selecting the motto for this year's Annual Report. Of course, even at MAHLE, we cannot predict the future. However, thanks to our know-how and experience, we can reasonably foresee the solutions our customers will need in times of change. This is how we are shaping the future of automotive technology. And therefore the future of MAHLE.



+6.4%

Organic
sales growth

»For MAHLE,
'Driving the future' means
consistently pursuing
our dual strategy.«

Ladies and Gentlemen,

The last few months have been eventful—not only for the automotive industry, which is undergoing a profound change, and for the MAHLE Group, which is helping shape and develop this change, but also for me personally. It is only a few weeks since I assumed the role of Chairman of the Management Board and CEO. And now, as CEO, I am delighted that I will be driving forward the transformation of MAHLE together with our roughly 78,000 colleagues around the world.

The large number of forward-looking projects and solutions that we initiated, worked on, and implemented in the past business year show that we are on the right track to successfully managing this transformation. Allow me to single out our concept vehicle MEET (MAHLE Efficient Electric Transport), which has aroused great interest among industry professionals from around the world. MEET is an impressive demonstration of how the urban mobility of the future will look: highly efficient, electric, yet still affordable. I particularly appreciate that the technologies and know-how from the different disciplines and divisions at MAHLE have come together in MEET to create an extremely innovative overall system. You can read about MEET's other characteristic features in the magazine section of our Annual Report.

For MAHLE, “Driving the future” means consistently pursuing our dual strategy. We are continuing to optimize the combustion engine, making it more efficient and lowering its emissions. From the perspective of environmental and economic viability, it is and will remain a very important element of the drive mix of the future. In parallel, we are driving e-mobility forward and working on solutions to ensure that electric vehicles become affordable and suitable for everyday use. We are pursuing both approaches out of conviction and with one goal in mind: to make individual mobility more sustainable while continuing to strengthen the position of MAHLE as one of the world's leading development partners and suppliers to the automotive industry.

For us, the transformation process also involves continually reviewing our portfolio and bringing it in line with our strategy. In the year under review, we found buyers for our turbocharger business—Bosch Mahle Turbo Systems (BMTS), a joint venture with the Bosch Group—and for our forging activities; both buyers have ambitions for the development

of these businesses. We also successfully concluded the acquisition of the Spanish electronics specialist Nagares, now called MAHLE Electronics. We plan to develop the MAHLE Electronics location in Valencia/Spain into a competence center for our activities in the vehicle electronics sector. In the magazine section, you can read more about the excellent progress made in integrating the new MAHLE subsidiary and what we have planned for it.

As far as our financial targets are concerned, we can look back on a generally moderate business year. MAHLE Group sales rose by 3.8 percent to EUR 12.8 billion, an increase that resulted almost exclusively from organic sales growth. At 6.4 percent in 2017, this growth was significantly higher than in the preceding years. Sales in all business areas increased in comparison with the previous year. There was also a positive development in our staffing levels with the MAHLE Group employing 78,277 people as at December 31, 2017—a rise of 2.1 percent. Although our net income for the year improved in comparison with the previous year, we are still not satisfied with the result. In 2018, we are continuing to work on increasing our overall result and our operational earning power.

Our approximately 78,000 employees worldwide are especially representative of the motto “Driving the future.” With their know-how and commitment, they are making MAHLE one of the world's most highly regarded partners to the automotive industry. Many thanks to you all! Together with my colleagues on the Management Board, I would also like to thank the MAHLE Supervisory Board, the members of MABEG (the shareholders' committee with voting rights), and the employee representatives for their very constructive cooperation.

Above all, our sincerest thanks also go to our customers around the world. We are encouraged by their confidence in us, and their feedback and loyalty continue to motivate us to do our best for them on a daily basis again in 2018.

Twenty eighteen brings new opportunities and challenges. The change in our industry remains the driving force behind our activities, which are all aimed at continuing to inspire our customers in future by being a strong partner with the best products. Despite all the challenges, we are chiefly looking forward to the opportunities, and we will seize them with enthusiasm and innovative strength. After all, we will be driving the future also in 2018!

On that note, I hope you will find this report fascinating reading.



Dr. Jörg Stratmann
Chairman of the Management Board
and CEO of the MAHLE Group

REPORT OF THE SUPERVISORY BOARD

Ladies and Gentlemen,

As in the previous year, the MAHLE Group also benefited from a surprisingly stable global market development in the 2017 business year. As a result of organic growth, sales increased to EUR 12.8 billion.



First-time consolidation and deconsolidation effects as well as negative exchange rate developments led to overall sales growth of 3.8 percent. With the acquisitions of the MAHLE Behr Group, Kokusan Denki (Japan), and Letrika (Slovenia) made in the period from 2013 to 2015, the group's product portfolio underwent massive changes. Whereas in previous decades, the overwhelming proportion of sales was generated through products and systems for the passenger car combustion engine, this share has meanwhile dropped to well below 50 percent. This development is part of a long-term, forward-looking, and sustainable business policy, which we have pursued for many years. We are responding to the declining importance of the passenger car combustion engine in the MAHLE product portfolio by developing and increasing the use of intelligent substitution products. To this end, the Supervisory Board has asked the Management Board to examine and, where applicable, implement appropriate development programs or M&A activities. In this context, the complete acquisition of Nagares SA was successfully concluded during the 2017 business year, expanding MAHLE's electrics and mechatronics range with the addition of electronics and software products, and thus putting MAHLE in a position to offer complete electric systems solutions. This has met with a positive response, for example, at the IAA in Frankfurt/Germany, where the concept of a low-cost, 48-volt city car was presented, which can also greatly simplify the issue of charging infrastructures in metropolitan areas.

In addition, the Supervisory Board has called upon the Management Board to further strengthen research and development activities by pursuing a multi-strategy approach. It is important both to develop further optimizations for conventional drives and put them into series production and to drive forward systems for battery-powered electric

vehicles as well as for systems based on fuel cell technology. Seen from today's perspective, all alternative drive systems will become established as market participants in both passenger cars and commercial vehicles over the next few decades.

The Supervisory Board has also thoroughly discussed and advised on all other decisions relating to the development of a long-term strategy for the group. This includes the Management Board's mission to develop long-term, sustainable concepts for the German locations and to discuss and decide on these approaches together with the Supervisory Board and shareholders.

As in the previous year, the development of earnings in the group was not satisfactory. This was largely due to one-time effects, quality issues, and insufficient productivity and performance in parts of the various business units. In this regard, it is important that concepts are developed to enable the MAHLE Group to return to its historically established good key profit figures quickly. Only in this way can we offset and finance the necessary and costly development efforts.

In the 2017 business year, the Supervisory Board met all of its obligatory responsibilities in accordance with the law, Articles of Association, and Rules of Procedure. It held a total of three meetings in the business year. The Personnel Committee also met several times to examine current personnel issues.

In addition, regular consultations were held between the Chairman of the Supervisory Board and the Chairman of the Management Board to discuss and agree on strategic and operational matters.

During the year under report, the Supervisory Board was informed regularly, promptly, and comprehensively through oral and written reports from the Management Board and during meetings about the business development of the company, the group, its business units, its profit centers, and its participations.

Alongside operational and strategic issues, the implementation of the new law for the equal participation of women and men in managerial positions was also discussed in these meetings.

The Supervisory Board would like to thank Dr. Uwe Mohr, who stepped down from the board on June 30, 2017, for his constructive participation in the ongoing development of the company. As of July 1, 2017, Mr. Hans-Otto Assmus joined the Supervisory Board, having been elected to replace Dr. Mohr.

At the start of the business year, Mr. Bernd Eckl was appointed to the Management Board of MAHLE GmbH and has successfully managed the Engine Systems and Components business unit since April 1, 2017. As of the

same date, Dr. Rudolf Paulik—who had been responsible for this business unit since 2009—entered retirement.

In January 2018, Mr. Wolf-Henning Scheider left the company at his own request, stepping down as Chairman of the Management Board and CEO. The Supervisory Board would like to thank Mr. Scheider for his almost three years of service in this position of responsibility at the MAHLE Group. He has contributed to the sustainable, ongoing development of the company.

In an extraordinary meeting on January 31, 2018, the Supervisory Board appointed Dr. Jörg Stratmann—former Chairman of the Management Board of the MAHLE Behr Group—as Mr. Scheider's successor, with effect from February 1, 2018. Mr. Bernd Eckl, former head of the Engine Systems and Components business unit, succeeded Dr. Stratmann at the MAHLE Behr Group. In the same meeting, the Supervisory Board also appointed Mr. Georg Dietz as a new member of the Management Board. Mr. Dietz takes over responsibility for the business unit previously managed by Mr. Eckl, having already been responsible for its largest region, Europe.

The Supervisory Board expects the reconstituted management team to focus even more strongly on future-oriented technology and strong economic development by concentrating on key operational issues.

The appointed auditors PricewaterhouseCoopers GmbH audited the annual financial statements and management reports of the MAHLE Group and of MAHLE GmbH for the 2017 business year, which had been set out in accordance with the German Commercial Code (HGB), rendering an unqualified audit opinion. The Supervisory Board agreed with the results of the audit following in-depth analysis of the audit reports and the report from the auditors in the Supervisory Board meeting.

The Supervisory Board approves the annual financial statements and the management reports of the MAHLE Group and of MAHLE GmbH and does not raise any objections to the appropriation of income as proposed by the Management Board.

The Supervisory Board would like to thank all employees of the MAHLE Group for their commitment to the long-term success of the MAHLE Group.

Stuttgart/Germany, April 24, 2018

For the Supervisory Board



Professor Dr. Heinz K. Junker
Chairman of the Supervisory Board
of the MAHLE Group

THE FUTURE STARTS NOW

MEET THE FUTURE

The world's population is increasing and is continually on the move: by 2050, about two thirds of all people will live in urban areas. How can we shape the urban mobility of the future to make life in the city worth living? The required transformation in mobility can be seen more clearly in one of China's megacities than anywhere else in the world—welcome to Shanghai! More than 24 million people live in this city. On Monday morning, the alarm clock rings in Shanghai just like everywhere else in the world. Only there, many more people are waking up. And then everyone has just one goal: to get from A to B quickly and with no hassle.



8:15 A.M.—LET'S GO!

Scooters, cars, and buses on the streets, metal against metal. It's the usual chaos, but this time the sound doesn't match the image: it's quiet. While a good many scooters still carry the grime from the previous decade, the same can't be said of their means of propulsion: throughout the city center, they are now running on electricity. On the sidewalk, Lilian is waiting in line in front of the coffee shop. The wait is as long as ever, but paying is faster: simply online via an app. With coffee in hand, she heads to the metro. It's the fastest way for her to get to work at the MAHLE Aftermarket office in Pudong. Having grown up in Shanghai, she can provide a clear account of the tremendous growth her city has undergone: "When I was little, there were almost only small housing developments here. Now it has the world's second tallest building, forming a breathtaking skyline along with all the other skyscrapers."





Lilian Zheng

Born and raised in Shanghai/China, 27-year-old Lilian Zheng has been a management assistant at MAHLE Trading (Shanghai) Co., Ltd., Asia/Pacific, since 2016.

The megacity of Shanghai/China

China's most important industrial center is one of the largest metropolises in the world, with 24.2 million people living in an area of 6,340 km². In the heart of Shanghai, the district of Puxi alone is home to 22,562 residents per km². Compare that with the population density per square meter in Berlin/Germany: 3,800 residents.

2/3

In 2050, about two thirds of the world's population will live in urban areas.

8:25 A.M. – DOWN UNDER

Rush hour in the metro. Anyone who couldn't find a spot on the street is here: everywhere you look, it's a sea of humanity, streaming out of the metro carriages in unceasing waves and gushing onto the walkways and stairs. Everyone is on their way in or out. Lilian wants to go in. Since an individual spot rarely opens up, organization of the masses is key. In front of the metro, at the latest, two rows form next to the doors. There are no clashes between the people getting on and off; everyone goes with the flow. Lilian gets on and raises her smartphone, which automatically unlocks after scanning her face, to read the news. This is one example of how everything is becoming connected to our movements in an increasingly intuitive way: "On very early mornings, though, I do worry that my cell phone won't recognize me." She laughs.



55%

Rapid rise

By the end of 2017, the number of electric cars (battery-powered electric vehicles and plug-in hybrids) had risen globally to over three million – a 55 percent increase in comparison with 2016.

9:00 A.M. – 21ST FLOOR

Lilian at her work on the 21st floor of a skyscraper in the Pudong district. For the next few hours, she will deftly move between her office and the conference rooms; then a call comes, and she glances out the window. On the streets below is a steady stream of traffic. Lilian has only just arrived here, but there's always someone needing to get somewhere else: "Shanghai is growing skyward. Until you're up here, you don't fully realize what it means in terms of space down there once we all vacate these skyscrapers again. We can always build taller, but the roads can't get any wider."





12:00 NOON—LUNCH BREAK

Lunch break with coworkers. Fish in oil, steamed bamboo, dumplings. All in the middle of the table. Everyone shares, family style. There's talk of the weekend's activities. One female coworker went for a spin in her father's car. "That's often more time consuming than taking the bicycle or the metro. But it's just so convenient if you have a car right at your doorstep. Above all, it makes you independent. And who doesn't want that? Looking for a parking space, though, you can forget about independence. One time, I actually couldn't find a parking space, so I ended up driving back home. I just didn't know where else to go with my car." Laughter at the table.

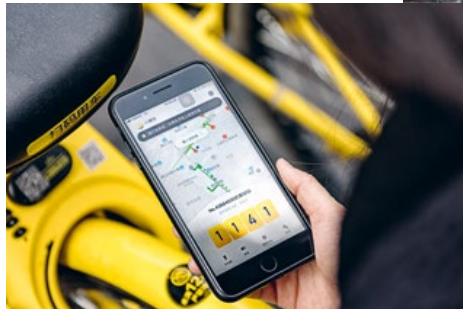
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Change in the world market

One hundred twenty-nine cars per 1,000 inhabitants (2017)—the car buyers of the future are in China. By 2025, China will dominate one third of the world market with 32 million new cars.

6:10 P.M.—WORKOUT

Quitting time on the 21st floor. Time to head to the fitness studio for a workout. Lilian quickly mounts a bike. Bike sharing is available everywhere in the city. The sidewalks are full of multicolored wheels. "There are 1.5 million shared bikes already available. The other day, someone left one smack dab in the middle of the road. It's so practical, you can drop them off anywhere—except maybe there."



7:00 P.M.—EN ROUTE

The day is drawing to a close, and cars are returning from one district to another. Most vehicles never leave the city. Lilian starts walking to the bar where she's meeting her friend Vicky. Planning your route in advance is the key to being on time in Shanghai.

7:30 P.M.—AFTER HOURS

Lilian and her friend Vicky raise their glasses in a toast. What is it that moves young people in the city, besides transportation systems? Vicky swipes her smartphone. She quickly pays her electricity bill using an app. Evenings at the bar, fitting in perfectly with her lifestyle. "That's the nice thing about our time: there are more and more ways for us to arrange our life precisely according to our wants and needs. And that's exactly what we expect from every new offer and service. They have to interface seamlessly with our daily lives."



100%

Pioneer city Shenzhen

Home to 12 million people, the Chinese metropolis of Shenzhen has already converted its entire bus fleet to electric vehicles. With over 16,000 e-buses on its streets, the city is cutting local CO₂ emissions by 1.4 million tons.



10%

Chinese standard

From 2019, all vehicle manufacturers who sell more than 30,000 cars in China will have to meet a new-energy vehicle points quota of 10 percent of their vehicles sold. Depending on their cruising range, plug-in hybrids, battery-driven vehicles, and fuel cell vehicles receive different scores in the calculation.



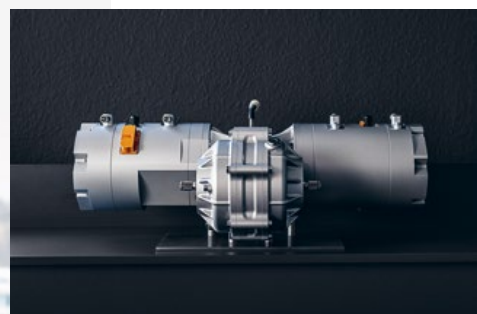
9:20 P.M.—BACK HOME

She taps her smartphone to identify her location and a minute later, Lilian is sitting in a car belonging to the ride service Didi. Today, Lilian used three mobile service providers. “A one-stop provider would also be nice. Maybe that’s what the future will look like.” She smiles, and while traffic is still heavy and plenty of people still have places to get to, Lilian now heads home.



Shanghai/China

Urban mobility in figures: 3.3 million privately owned vehicles are on the city's roads, 16 metro lines transport 8.4 million people every day, and 7 million people travel to their destinations on 1,429 bus routes every day.



Efficiency to the power of two

MEET's drive unit combines two 48-volt motors, the transmission, and electronics in an extremely efficient way, thus providing more power in city traffic.

Back in Stuttgart. It's wall-to-wall cars again today on the Neckartor, one of the most heavily traveled roads in Germany. Rush hour traffic plus construction equals gridlock. A traffic jam in Stuttgart feels just like a traffic jam in Shanghai.

Dr. Otmar Scharrer, Vice President Corporate Research and Advanced Engineering: "This is a typical urban traffic situation. In order to reproduce it, we developed what is known as the MAHLE Stuttgart cycle, a route that features a challenging topography and includes different traffic situations. Overall, this characteristic city cycle is 17 km long. We drove along it many times and adapted the design of our concept car accordingly." The result: a unique vehicle concept that addresses all the requirements of future mobility in the city—MEET (MAHLE Efficient Electric Transport).

MEET symbolizes the merger of various disciplines, techniques, and skill sets in drive technology, electronics, thermal management, and user interfaces to better and more efficiently shape the still emerging fields of e-mobility. By combining their expertise, a team of engineers has set crucial new standards.

One of these is the most efficient and most dynamic of the latest generation of motors. Designed for urban use and with a maximum power output of 30 kilowatts, the 48-volt motor represents a new peak in terms of driving dynamics. Integrated electronics increase systems efficiency and can thus be easily transferred to different vehicle concepts. Thanks to its highly efficient systems, MEET can manage with a smaller battery, which reduces systems costs.

“One short shopping trip in the city and the battery is fully recharged.” Daniel Rieger from Corporate Advanced Engineering at MAHLE’s Stuttgart location and MEET Project Manager uses this example to translate the concept’s benefits into tangible terms. MEET also quickly takes you from A to B. The motor does 100 km/h—perfect for easily getting around the city and for short trips, such as to the airport. In 2.8 seconds, it powers

Driving e-mobility forward

Daniel Rieger, MEET Project Manager, developed the vehicle concept together with his colleagues.



AGILE:

easy maneuvering for fewer parking problems—with rear-wheel drive via a central transmission

FAST:

up to 100 km/h and from 0 to 50 km/h in 2.8 seconds—ideal for urban traffic



Focusing on cruising range

MEET’s thermal management system bears his signature: Andreas Kemle, an engineer at MAHLE and expert in the management of heating and cooling in vehicles.

driving pleasure to 50 km/h. Daniel Rieger again points out the advantage in a nutshell: “While others are shifting gears, we’re already off and running.”

Speed contributes to a decisive factor in everyday urban life: time.

MEET is heading toward us. Thanks to a clever thermal management concept that uses energy efficiently and to other energy-saving measures, the vehicle’s cruising range is increasing. “Assuming an average daily commute of 20 km in urban traffic, that means seven days without charging.”

The mobility of the future is all about individuality: “We leave out everything that serves as a distraction. Functionalities clearly take precedence,” says Andreas Kemle from Corporate Advanced Engineering at MAHLE and member of the MEET project team, describing the concept’s unique character. That is why the operation is so intuitive, similar to other media that customers are already familiar with. It’s even possible to control the interface using gestures alone.

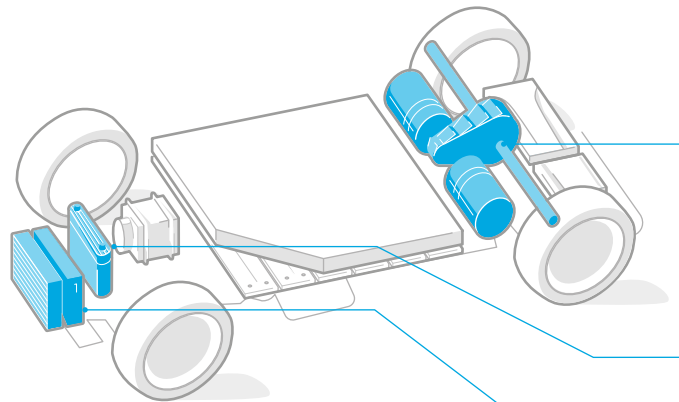
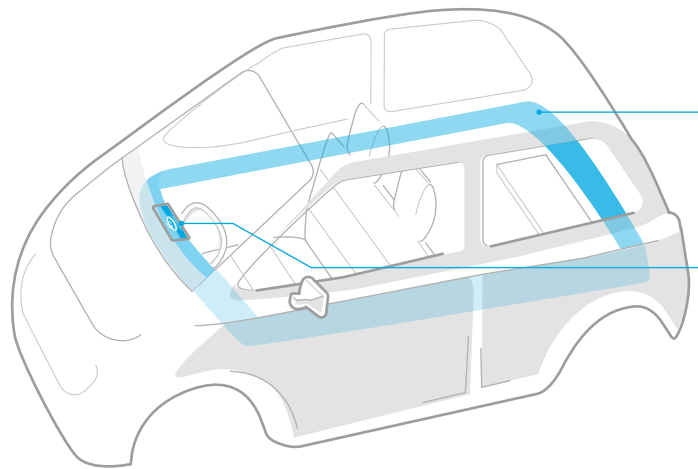
The subject of price brings a smile to the team members’ lips. The electrical voltage in the MEET remains below the 60-volt threshold. As a result, there is no need for expensive protective measures against electrical hazards. This makes systems costs significantly lower than for so-called high-voltage applications. The small battery has one other—completely different—major advantage. It has a minimal carbon footprint. Because even e-mobility is not CO₂-neutral per se.

When a holistic approach is taken to individual urban mobility, CO₂ emissions can be significantly reduced. And this is precisely what MAHLE has shown in MEET.



HIGHLY EFFICIENT:
two 48 V drive motors, each with a maximum power output of 30 kW and a torque of 110 Nm

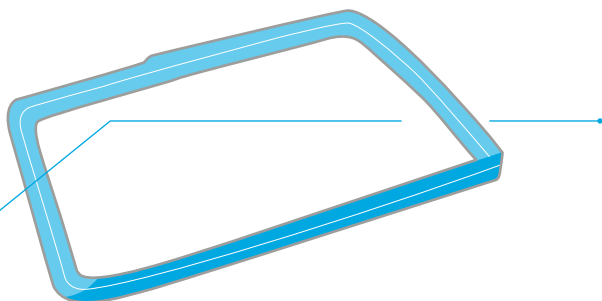
PRECISE:
intelligent thermal management efficiently controls cooling and heating



AFFORDABLE:
voltage under the 60-volt threshold lowers systems costs by 25 percent

FURTHER:
a cruising range of around 200 km without recharging

MEET: efficient, electric, and affordable city driving



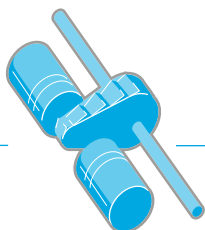
SURFACE HEATING

Efficient use of heat: heating elements in the form of thin, flexible foils on interior surfaces quickly ensure the well-being of the passenger.



CONNECTIVITY

Intuition before instruction: the MEET interface is quick and easy to control. The navigation, music system, and air conditioning as well as the current driving data and technical status of the powertrain and battery can be operated and called up via a touch screen or gesture-based control.



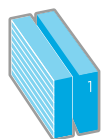
48 V TWIN POWER

Maximum efficiency and dynamics: the MAHLE IPM traction drive is an exceptionally efficient combination of a synchronous motor with permanent magnets and integrated 48-volt electronics.



HEAT PUMP

Nothing wasted: the heat pump makes ideal use of all waste heat generated in the vehicle. For an efficient and optimal use of energy.



THERMAL MANAGEMENT

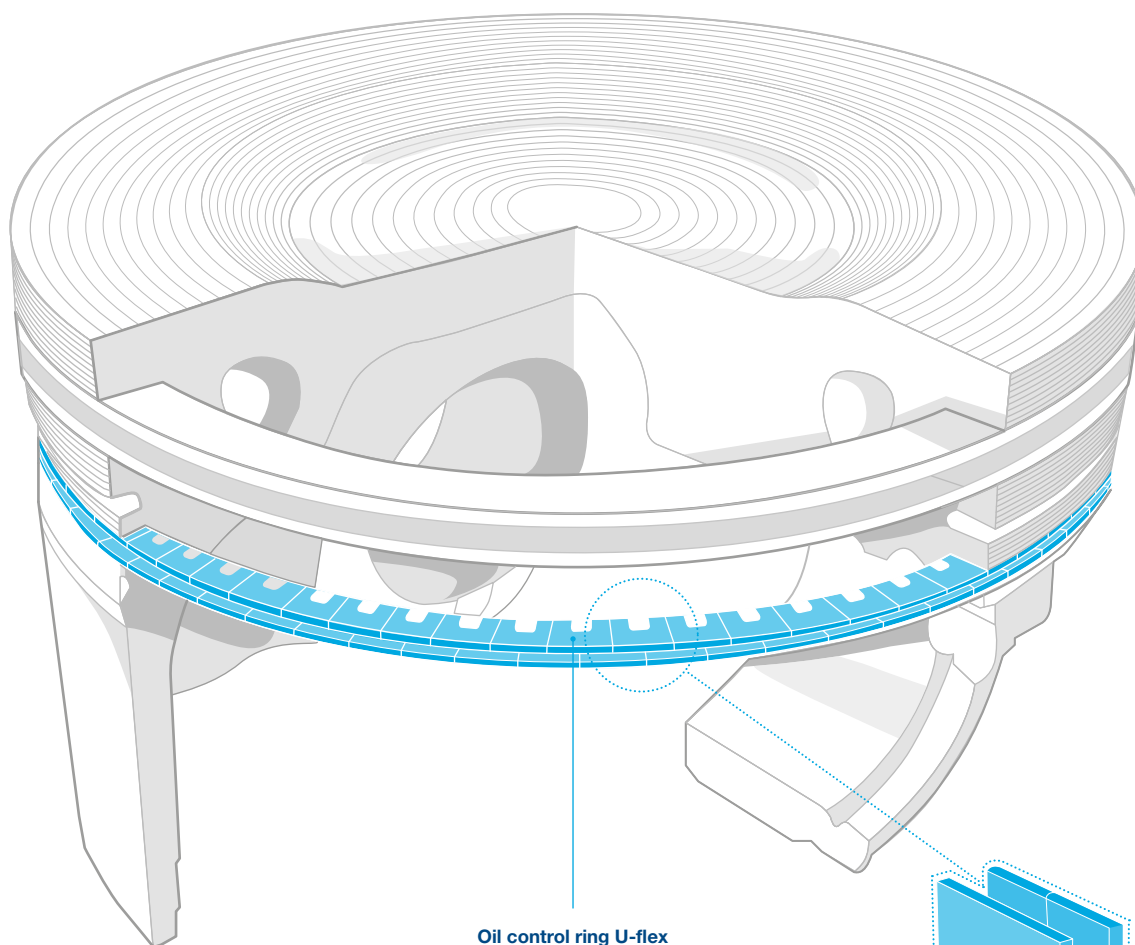
Perfect balance between heating and cooling: Performance, cruising range, charging times, and comfort—in all aspects, the intelligent thermal management system is key to ensuring the efficient use of energy and increasing the cruising range. In addition, CO₂ is used as a natural refrigerant in the R744 air conditioning circuit.

U FOR BETTER AIR

Global climate change means that we need to rethink things – including the way our mobility looks. Indeed, every single component that the automotive industry develops today can impact the climate of the future. Good solutions today are therefore also the better ones for tomorrow. And the Paris Agreement in 2015 made it official: the world of tomorrow needs us to limit the global temperature rise to below two degrees Celsius. This is a daunting undertaking that calls for effective cooperation on the part of every stakeholder in public policy, science, economy, and industry. And a task that can be accomplished primarily through one avenue: by reducing anthropogenic carbon dioxide (CO₂).

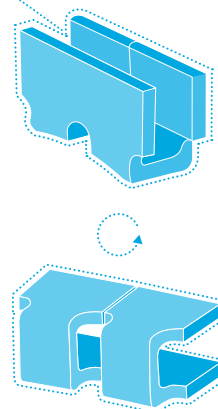


E-mobility will be a key component if the mobility of the future is to be sustainable. Yet even the combustion engine has its place in such a future. According to current predictions, global vehicle production will continue to grow and the demand for components and systems for combustion engines will also further increase along with it. This is due in part to the countless regions of the world lacking important basic conditions, such as a comprehensive power grid, that are required for e-mobility to successfully gain a foothold. On the other hand, the combustion engine is still justified as an efficient solution in the long-haul commercial vehicle sector.



**Oil control ring U-flex
of the latest generation**

Thanks to its flexible design, the U-flex ring molds to the cylinder wall and is therefore extremely efficient at scraping the oil off—even at high engine loads, speeds, and temperatures. The ring thus has a favorable impact on the vehicle's oil consumption.



U AS IN UNIQUE IMPACT

These arguments are also part of the reason why MAHLE remains convinced of the combustion engine's viability and continues to optimize it. An intelligent mix of vehicles with conventional and alternative drives will be a crucial factor and can play a key role in achieving climate targets. With regard to the combustion engine, CO₂ emissions could be reduced by up to 10 percent per vehicle in the next three to five years by means

of MAHLE components alone. What will make this reduction possible in part is a small black ring. Seemingly unimposing at first glance, in reality it is a high-tech product with a big impact: the MAHLE U-flex Generation 1 (Gen. 1) oil control ring helps to significantly lower CO₂ and particulate emissions in vehicles, thereby promoting cleaner air and quality of life. For people and the environment.



A healthy climate and clean air for everyone—the goal seems simple. But achieving it is a challenge that calls for innovative ideas and sophisticated technologies. MAHLE has accepted this challenge. Our solution is in the detail—in the truest sense of the word. The latest generation of the MAHLE U-flex ring shows that even a small component, seemingly unimportant at first glance, can be the spark that ignites a major change for the world: by lowering carbon dioxide emissions and providing cleaner air, thereby significantly improving people’s quality of life.

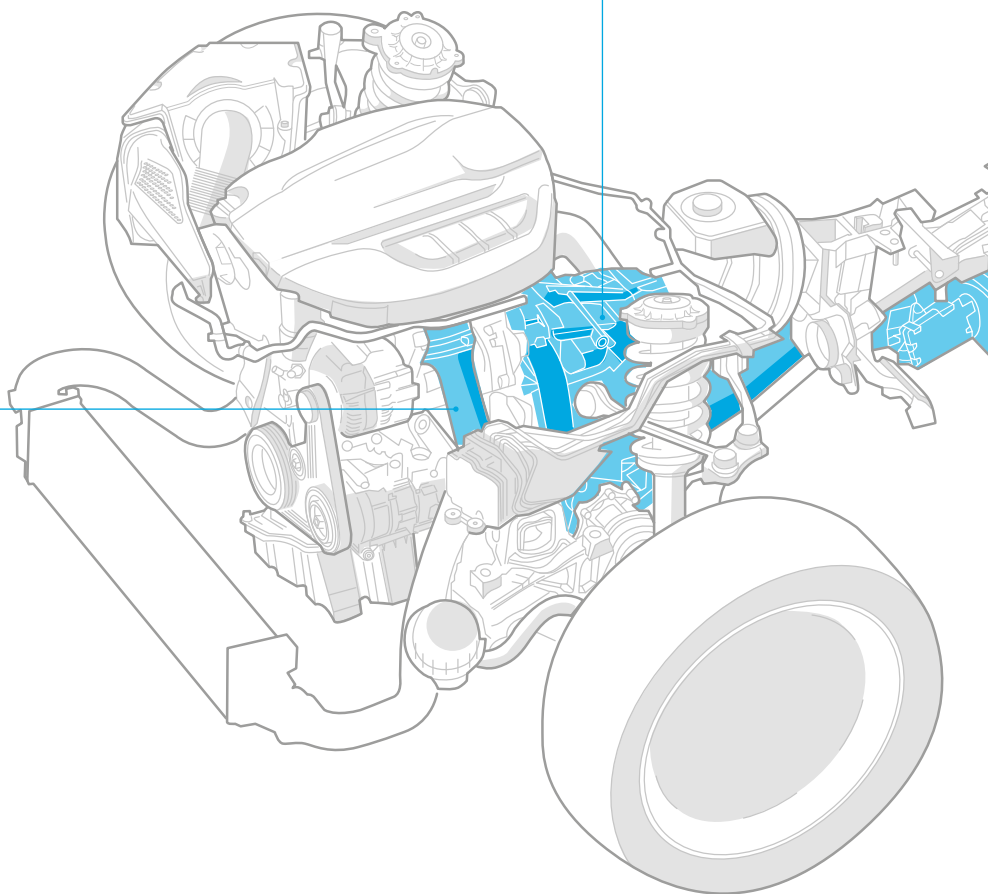
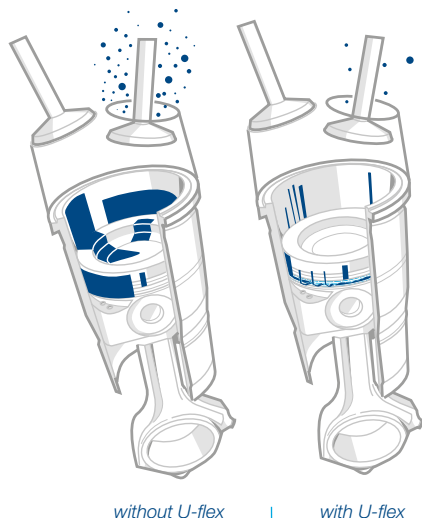
Scraping the excess oil off

The U-flex Gen. 1 ring plays a major role in the piston group: it scrapes off the excess oil from the cylinder wall as thoroughly as possible. If oil enters the combustion chamber, oil ash, a hard, granule-like substance, is produced, along with other particulate emissions.

-30%

Lower raw particle emissions

The less oil that enters the combustion chamber, the less is burned, and the lower the raw particulate emissions. The number and mass of the particulates that enter the exhaust gas system decrease significantly—by 30 percent.

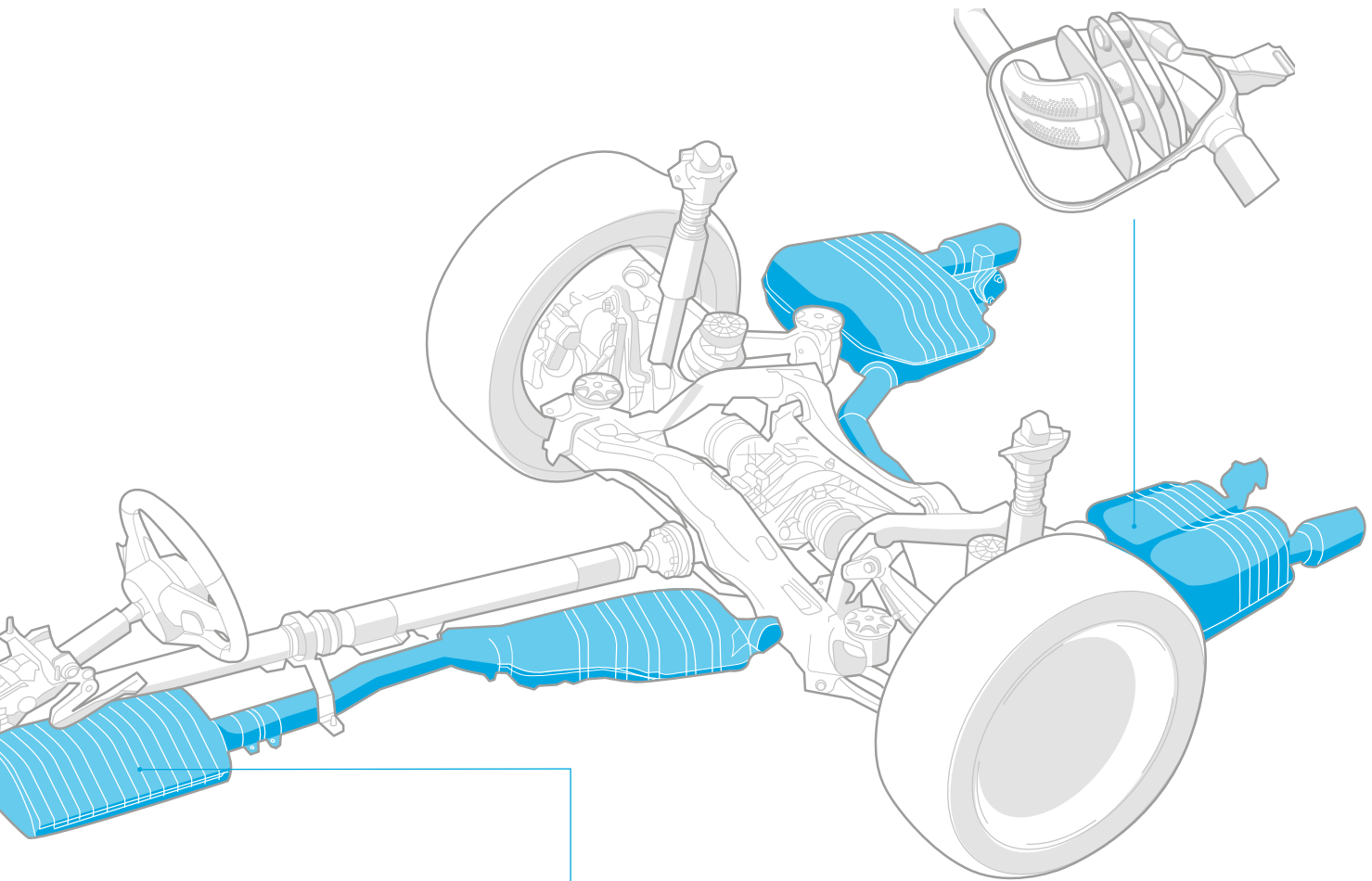


DID YOU KNOW?

The advantages of the U-flex are even greater in vehicles that run on natural gas (CNG): CNG combustion does not involve particulate matter. The particulate emissions in the exhaust gas come entirely from combusted engine oil. The U-flex ring Gen. 1 works so efficiently that the CNG engine can be operated without a particulate filter while maintaining compliance with the strictest thresholds—yet another cost advantage for the driver.

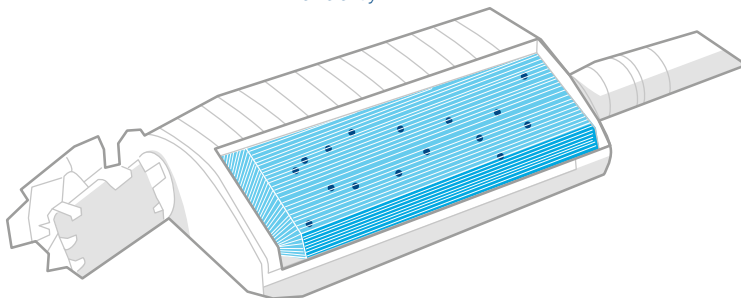
Lower maintenance cost

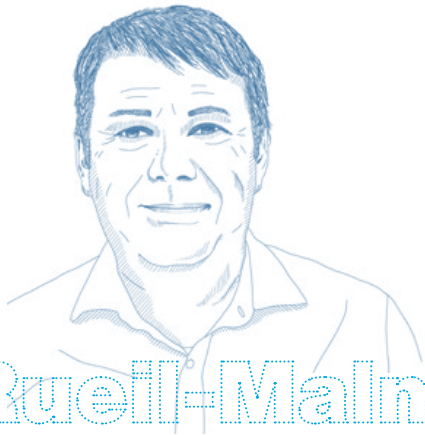
The result: a vehicle with U-flex oil control rings emits less CO₂ over its entire lifetime than a vehicle with conventional piston rings, thereby cutting costs in two areas—maintenance and fuel consumption.



Engine runs more efficiently

Fewer particulates means less wear on the particulate filter. That saves hard cash for drivers, since the particulate filter rarely requires maintenance or can even be operated maintenance free. The second direct consequence is that the particulate filter generates less counter pressure in the exhaust gas system, and the engine can run more efficiently.





Rueil-Malmaison

Remi Rabute,
MAHLE Global Product Expert
in Rueil-Malmaison/France

»You wouldn't know it by looking at this small, simple ring, but because it's so effective, we can use U-flex to save thousands of liters of oil today and in the future.«



Jundiaí

Rafael Antonio Bruno,
MAHLE Global Product Expert
in Jundiaí/Brazil

»U-flex is based on a tried-and-tested concept that is proving to be an important, relevant product for our time following our reengineering of Gen. 1: a piston ring that helps to make the air better for us all.«

»A piston ring
that helps to make
the air better
for us all.«



Stuttgart

Jochen Adelman,
Head of PCU Technology-Light Vehicles at
MAHLE in Stuttgart/Germany

»Primarily in Europe, we are confronted with increasingly strict public policy requirements regulating pollutant emissions. For us, there is no doubt that the combustion engine is a tried-and-tested technology that has a particular role to play in a more sustainable mobility. With solutions such as U-flex Gen. 1 we significantly improve the emissions footprint of the combustion engine.«



Murte de

Luis Sobral,
developer in process technology at
MAHLE in Murte de Portugal

»Our aim with U-flex Gen. 1 is to help our customers respond to the tremendous challenges posed by industry, public policy, and society with regard to climate protection.«

Innovations for a clean world

The U-flex ring Gen. 1 is just one of the components we have designed to make the combustion engine even more efficient.

MAHLE has developed a range of other solutions to further leverage the potential of the combustion engine. The combustion engine can play a key role in achieving climate targets.

=6%

Less friction means lower fuel consumption: MAHLE has optimized the power cell unit—the unit comprising pistons, piston pins, and piston rings as well as cylinder liners—to the point where it has even less friction and can work almost effortlessly using low-viscosity oils. Thanks to the fully optimized engine mechanics, consumption can be lowered by 6 percent.

Our latest generation of lightweight pistons, combined with a frictional-loss-optimized piston ring pack, results in a CO₂ reduction of more than 2 percent.

=2%

The energy efficiency of combustion engines can be further increased by regulating heat flows. This is precisely the job of the MAHLE liquid management module—a combined electric coolant pump and cooling circuit control that can save up to 2 percent in CO₂ emissions. Depending on the type, a short warm-up phase for combustion engine cold starts, rapid control of coolant flows, and the management of several circuits at different temperature levels for different components using just one pump.

100%

MAHLE has brought the first air conditioning system to use CO₂ (R744) as its refrigerant to the market. The refrigerant is 100 percent natural, climate-neutral, and environmentally friendly. The air conditioning system is already in series production in a major German manufacturer's luxury segment—securing a foothold in environmental protection for MAHLE.

MORE EXPERTISE, STRONGER FUTURE

ELECTRONICS WITH HEART

A walk through the production hall in Motilla del Palancar/Spain, a good hour west of Valencia. Humming. Beeping. Countless colorful lights flashing. Focused people stand or sit by high-tech machines.

While time follows a leisurely pace in the Spanish location, the electronic modules on this assembly line are heading into the future.

All of a sudden, one of the employees points to two boxes. On one, MAHLE is written in large letters; on the other, Nagares. She taps on both names, then, using the thumb and index finger of both hands, forms a heart and holds it out to the visitors. Only one symbol of the smooth integration of the Spanish company Nagares into the MAHLE Group. In the following interview with the four managers responsible for substantially driving forward the expansion of MAHLE Electronics in Spain, we talk about a growing partnership with a great deal of passion, about trust, and about one shared vision.

Johann Meier
*Managing Director of
MAHLE Electronics*



Luis Felipe Rodríguez
*Head of Research & Development at
MAHLE Electronics*



Alfredo Pérez
*Head of Project Management at
MAHLE Electronics*



Juan Diego Navalón
*Head of Sales & Marketing at
MAHLE Electronics*





**MAHLE and Nagares—
first and foremost, this is a
long-term partnership. What was the
reason behind joining forces?**

JOHANN MEIER The collaboration between MAHLE and Nagares began in 1997 as a conventional customer-supplier relationship. If you work together successfully on a daily basis, that builds trust. In 2016, we concentrated our activities relating to electric main and auxiliary drives globally in the Mechatronics division. We wanted to add the field of electronics to this division in order to strengthen our competence in electrification and electric drives. To achieve this, we sought the best partner. And found it with Nagares.

JUAN DIEGO NAVALÓN For some time, it had felt as if we were more than just a supplier. MAHLE was one of our best customers. When MAHLE approached us, we were not even looking for a buyer. But then we started to think about the future of Nagares. We had an attractive range of products for the mobility of tomorrow, numerous well-known customers, and a good positioning on the market. But we were approaching our limit in terms of growth.

LUIS FELIPE RODRÍGUEZ In fact, we had reached a point at which customers were hesitating to entrust us with large-volume orders, because they thought that we did not have sufficient capacity.

ALFREDO PÉREZ At that time, Nagares was already working at its maximum speed, highest volumes, and at the limits of its development capabilities. The size and complexity of the market made us realize that it was time to continue our growth through a partnership.

We knew that MAHLE was a perfect fit for our company. We are flexible, agile, and quick. These are ideal characteristics for winning projects. If we join forces with an industry giant like MAHLE, which plans far into the future, it is the perfect combination.

What is so special about the contribution of MAHLE Electronics to the MAHLE family?

PÉREZ There are two benefits. First, we have outstanding expertise in power electronics. We manufacture a variety of products for the automotive industry, including control units and power electronics for electric auxiliary components and thermal management systems, as well as power converters for e-mobility solutions. Second, we are pragmatic, decisive, and trust our intuition.

Allow me to relate a short anecdote to illustrate this. What ultimately made us a successful supplier to

the e-mobility sector goes back to a single decision made by our founder, Herminio Navalón, in 2008. This was the time of the most recent economic crisis, and our production facility was closed for two weeks in November because

we didn't have any orders. Juan and I were in Paris, meeting a customer. This customer asked us whether we would be prepared to supply him with the products that he needed for his new electric vehicles. For us, this would be a risk and a large investment. Nobody knew if it would work. Afterwards, we returned to Motilla and found Herminio in his development workshop. We told him that our customer was building new vehicles and looking for a supplier willing to invest in order to join him on the journey into e-mobility. Herminio did not hesitate for a second. "We're on board!" It was a major decision at the most difficult time. This intuitive, gut feeling is typical of us.

Alfredo Pérez

»We have outstanding expertise in power electronics and we are pragmatic, decisive, and trust our intuition.«

Well-trained employees and enthusiasm for our products are key to MAHLE's success at its production location in Motilla del Palancar/Spain.

Jennifer Moreno

»I am preparing the components that will be placed on the electronic module. I have been working in this area for seven years – I was recruited from another production line. Whether Nagues or MAHLE, we all want the same things: to do a good job and to grow. We are pleased about the change, and I'm looking forward to having even more nice colleagues.«



MAHLE Electronics manufactures control units and power electronics for electric auxiliary components and thermal management systems as well as power converters for e-mobility solutions for the automotive industry.



With the acquisition, the MAHLE Group has strengthened its competence in the field of e-mobility systems.



How will you make sure that MAHLE Electronics continues to be successful under the umbrella of the MAHLE family?

MEIER We want to be one of the world's leading partners to the automotive industry in the area of power electronics. We are on course for rapid growth. And we must grow quickly, but without losing our strengths: total customer focus and enthusiasm for our products. At our development location in Valencia, we will recruit additional employees for these future tasks.

NAVALÓN Although we now number several hundred employees, we still operate like a start-up company: quickly, with short decision paths, and, above all, with a close relationship with our customers. This ensures that each of our employees is extremely motivated. We want to maintain this dynamic.

And what do your customers think about this?

MEIER I experienced an eye-opening moment when I traveled with Juan Diego and Luis Felipe to visit one of our largest customers—a location comprising 15,000 development engineers. Despite the sheer size of the site, we couldn't go 20 meters without someone speaking to us. People know each other; they trust each other. The customer quickly got to the heart of the matter: "In large companies with established standards and processes, it generally takes longer to solve problems. In Valencia, you only need to make one call, and they immediately start looking for a solution to the problem. Everyone works in a very agile and flexible manner." This is a strength that we want to maintain in the future.

What are the biggest challenges with respect to the fundamental change that is currently taking place in the automotive industry?

MEIER We supply the entire electric powertrain with control units, power converters, and power electronics for electric motors. The range that we want to offer is initially quite straightforward. The largest challenge in terms of the market, however, is that there are not yet any dominant architectures in e-mobility. Today, some operate at 400 volts, others at 800 volts. If you look at China, the largest market for e-mobility, they are talking about 100 volts. We need to consider very carefully where and how we are investing.

NAVALÓN The whole industry is changing. It is like that time, one hundred years ago, when the first car was built. Nobody knows exactly which kind of technology will win through, or when. There is no standard yet, but a wealth of possibilities.

PÉREZ For this reason, MAHLE is working with four possible future scenarios. This exceptional forward thinking and risk management make the company flexible and are ideal preparation for the future.

RODRÍGUEZ In the process, however, we must not lose sight of one thing: Developments must be made

in step with our customers. They must be tailor-made to suit them. After all, our customers face the same challenge. Our role is to serve them and thus ultimately find future solutions.

MEIER That is precisely our unique selling proposition, now and in the future too: to develop tailor-made solutions in close proximity to the customer.

Johann Meier

»We want to be one of the world's leading partners to the automotive industry in the area of power electronics.«

Where will these tailor-made solutions be developed in the future?

RODRÍGUEZ We are in the process of expanding our development location in Valencia to become a competence center for electronics. Just a few months ago, we bought additional buildings for this purpose. In the future, we want to offer our developers some space to carry out creative work, to think, and to relax here. Everyone can put forward their ideas. People automatically work better in an environment that they are happy in.

NAVALÓN In this respect, Valencia is a very appealing location. This expansion will attract new employees. Anyone who wants to make a difference in the future can see that we are creating just the place to do this.

MEIER The message from MAHLE Electronics to its employees is clear: here, you will have the space to realize your career potential and grow as a person.

Having the right and, above all, qualified employees is crucial to a company's success. How do you intend to attract these employees to Valencia?

PÉREZ We established a relationship with the Polytechnic University of Valencia many years ago and contribute to the Chair of Electrical Engineering. As a result, we regularly come into contact with suitable, motivated students and strive to get these young people excited about us while they are still studying.

MEIER We actively search for professionals and experts with very specific skills. We are lucky that Valencia is an attractive place to live. Potential employees are proactive in approaching us.

RODRÍGUEZ And our recruitment policy is always based on a single premise: the right candidates simply need to know more than me. This keeps me on my toes. At the same time, I want to give each of our employees the utmost support so that he or she can carry out his or her job to perfection.

Where will MAHLE Electronics be in a few years' time?

RODRÍGUEZ In the future, it will remain the task of MAHLE Electronics to bring our customers' ideas to life. Often, our customers' specifications are initially difficult to implement. Accordingly, it is our job to turn the demands of our customers into something that can be realized. We will continue to outperform our competition in this respect and thereby help our customers to shine with products that surpass the usual standard in terms of know-how and quality.

PÉREZ And we must continue to internationalize, in order to be wherever our customers are. That goes without saying.

MEIER We want to carry on winning lots of projects and cooperate with well-known customers. We want to grow quickly and healthily, but without losing our DNA and our customer focus.

We want to become a global supplier for e-mobility and make our mark around the world. The automotive industry is changing at an incredible pace. And e-mobility is just one possibility when it comes to future mobility concepts. The combustion engine will also continue to have a reason to exist. At MAHLE Electronics, we will seize our opportunities. For our employees and for our customers.

Many thanks for the interview!

Luis Felipe Rodríguez

»In the future, it will remain the task of MAHLE Electronics to bring our customers' ideas to life.«

*To continue its successful growth and to be
a good partner to its customers without losing its DNA—
that is the goal of MAHLE Electronics.*

Cristina Hernández Pérez

**»I started here as a trainee, having previously lived in Paris.
At first, I only intended to stay for six months and
gain experience. That was eight years ago. I love my job.
And everyone here loves a challenge. We want competition.
The more value we can create for our customers, the
more progress we make at a personal level.«**



A START-UP AND ALMOST ONE HUNDRED YEARS OF EXPERIENCE

The idea on which MAHLE was founded was new and different, and it went one step further. This idea, conceived almost one hundred years ago, was to replace pistons made of heavy gray cast iron with light-alloy pistons, thus revolutionizing the entire automotive industry. By thinking differently, MAHLE has developed into one of the largest suppliers in the automotive industry. Today, approximately 78,000 people in 32 countries are shaping the mobility of tomorrow and driving forward its development.



At MAHLE, processes and communication channels are firmly established to guarantee the quality and supply reliability required by all its customers around the world. However, the process of change in the mobility sector and in the international automotive industry demands ever-increasing speed. One of MAHLE's responses to these new customer requirements is based on faster and more streamlined processes. This basic principle can be briefly described as corporate mode versus start-up mode. Tried-and-tested, established processes and structures are now complemented by the use of teams that are put together at short notice and are able to independently convert ideas into new projects with agility and speed, thus developing innovations, attracting new customers, and opening up new markets.

MAHLE's innovative strength is based on cooperation, creativity, and acquisition. As such, MAHLE invests in young start-ups and enters into cooperative agreements with other companies, leading MAHLE employees to work together with external start-up teams and share their knowledge. MAHLE also develops internal innovation programs, such as the MAHLE Incubator, which was launched in 2017. A glimpse behind the scenes at the innovation workshop and into another, rather unusual, project. Both of these bring to life the particular importance to MAHLE of extraordinary idea generation and the willingness to take risks. We meet employees who are coming together across hierarchies, time zones, language barriers, and cultural differences. They are all working toward one goal: they want to improve mobility for people around the world through solutions from MAHLE.

Hand in hand for innovations INCUBATOR



Mujib Bazhwal, Innovation Management

»The Incubator is the symbiosis between corporate mode and start-up mode.«

An industrial area in Böblingen, 20 km from Stuttgart/Germany. It is day four of the boot camp and a high point of the Incubator program. A total of 30 MAHLE employees have been based here for almost a week, refining their ideas.

There is no sign of MAHLE's large, blue lettering. Instead, the location is a coworking space in line with the approach that new life needs to be breathed into the world of work. This is the perfect environment for the participants in the boot camp because it is hoped that their ideas will ultimately have a real impact and improve mobility in everyday life. Instead of comfortable office chairs, there are benches—you can't get too cozy if you're going to be agile. Dynamism is important so that ideas can flow. Walls are not barriers, but rather surfaces to be painted. "This is how it was done in the past; we're thinking back to the time of cave painting," explains the operator of the coworking space. Going back to our roots to develop ideas for the future.

Magazines are spread across the table. The one on the top, a prestigious German business journal, bears a rather blunt title, roughly translated as: "The plan was crap." That's appropriate. After all, the same applies to the MAHLE Incubator: lots of ideas are developed—and many of them will fail. That is precisely what is intended and will ultimately lead to the best results. "The spearheads of innovation in this year's MAHLE Incubator are sitting here in this room, working on the final six ideas." Mujib Bazhwal, an employee in the Corporate Planning division at MAHLE, is supporting the boot camp as project manager.

chargeBIG

The idea is called "chargeBIG." It is an innovation for the e-mobility market. With the future in mind, old, gray folders and iPads now sit side by side here on the table. Employees from various departments are contributing their own particular working methods and ideas to one big, shared idea.



INCUBATOR

MAHLE INCUBATOR

Employees from various business segments across the whole of Germany submitted more than 100 ideas to the MAHLE Incubator program.

Submission of
> 100
ideas

The top 18 ideas were presented by their originators via an internal marketplace. In this process, it was also important for the originators to inspire other colleagues for their individual ideas and recruit them into the project teams.

The best
18
ideas

Following the selection of a short list, ten teams were formed from different divisions, levels of the hierarchy, and locations, and they developed their ideas at a Concept Day.

Total of
10
teams
shortlisted

At a subsequent pitching session in front of a MAHLE jury, six of these teams then qualified for the next stage: the boot camp.

6
teams
qualify to pitch to
the MAHLE jury at
the boot camp

The jury then picked the winning teams from this selection.

4
winning teams
named

Provided with their own budget and largely released from their usual tasks, up to four of these teams are now working to refine their solutions and develop them into marketable products in the next three to six months.

**Franziska Erhardt (left),
Account Manager Independent Aftermarket**

»The Incubator is a great chance to think out of the box. I can imagine that a great many people have been waiting for the chance to try out something new at some point.«

Differently. Back to front. This is how the start-up scene operates. “The Incubator is the symbiosis between corporate mode and start-up mode. The best of both worlds. It’s about opening up new business segments and developing innovative new products. Sometimes these are far removed from MAHLE’s traditional business, sometimes they are closely related to it.” The MAHLE Incubator is a melting pot of different ways of thinking, know-how, and mindsets. Colleagues from all business units as well as from purchasing, development, marketing, sales, and HR work together in small teams in the Incubator on their respective projects. The Management Board acts as the jury panel, which assesses the projects in a final pitch and decides on their future.

Start-up processes are not unusual in large companies, but it is rarely possible for everyone to get involved. At MAHLE, it’s different. “We simply sent an e-mail to all employees in Germany. More than 9,150 colleagues were asked to submit their ideas. We were struck by the fact that our colleagues in production also had very advanced ideas.” Mujib Bazhwal is really fired up by the Incubator. “The boot camp week has shown once again how much creative potential MAHLE has to offer. We will take greater advantage of this in the future.” There are already plans for an international rollout of the Incubator. Being agile and having a good plan—at MAHLE, this is not a contradiction, but rather the MAHLE start-up mode, which is becoming integrated into the company’s established standard processes as if it were the most natural thing in the world.

**Frank Rohde (right),
Head of Segment Filter Elements & Filter Media**

»The employees are really motivated; they want to take part. It’s absolutely astonishing how much potential we have in the company.«



**Yvonne Maier (right), Project Manager
Development Engine Mounted Heat Exchangers**

»We like the product because we think that MAHLE should reach everyone.«

Filling the spot with blue

“Comfort is cool, comfort is hot. MAHLE is good at helping others to succeed,” states the writing on the walls. There are bright colors and Post-it notes everywhere. A participant writes with a blue pen: “Filling the spot with blue.” Satisfaction: “I like being able to use our MAHLE blue.”



Dr.-Ing. Mario Wallisch (below), Technical Project Manager
Corporate Research and Advanced Engineering,
Thermal Management

»Everyone has a different opinion.
That helps us to reach
a common denominator.«



Drawing, designing, building
A participant draws a cloud on the wall.
"I should have drawn a prettier cloud."
Laughter. There is a good atmosphere.
Almost everyone in the room is on their
feet, walking around. People are drawing,
making things, doing calculations.
When no one is sitting down, it's another
sign of an agile team.



Dr. Walter Krepulat (below), Team Leader for
Valve Train Product Development, Engine Systems
and Components

»We all get on so well together because we
respect each other despite our differences.
And it doesn't matter whether you're a man
or a woman, young or old.«



Nicole Heinrich (above),
Account Manager Sales

»It is good that we are taken
away from our everyday
surroundings. At MAHLE, we
know what we need to do in our
jobs. Here, everything is new—
it's motivating.«



Trying everything possible to achieve the impossible

THE PROJECT

When the conversation turns to change in the automotive industry, the term “e-mobility” is often mentioned in the same breath. When a young company on the Californian coast was missing a crucial assembly for its electric vehicle, it launched a tender. This called for a concept that MAHLE had already applied in a similar way. So far, so good.

But the major challenge was to supply the customer with the desired, specific solution based on this concept within 13 months. The norm for product development of this scale is usually 24 months. This would be a risk for any supplier that doesn't make compromises in its development and production. But MAHLE accepted the challenge. An international team of experts from the USA, Germany, Japan, and Mexico was assembled. Over 13 months, it proved—across time zones and despite the shortage of time—that, however difficult it may appear to be, MAHLE is ready to make any customer idea possible. And, above all, ready to deliver an outstanding product.

Stuttgart/Germany

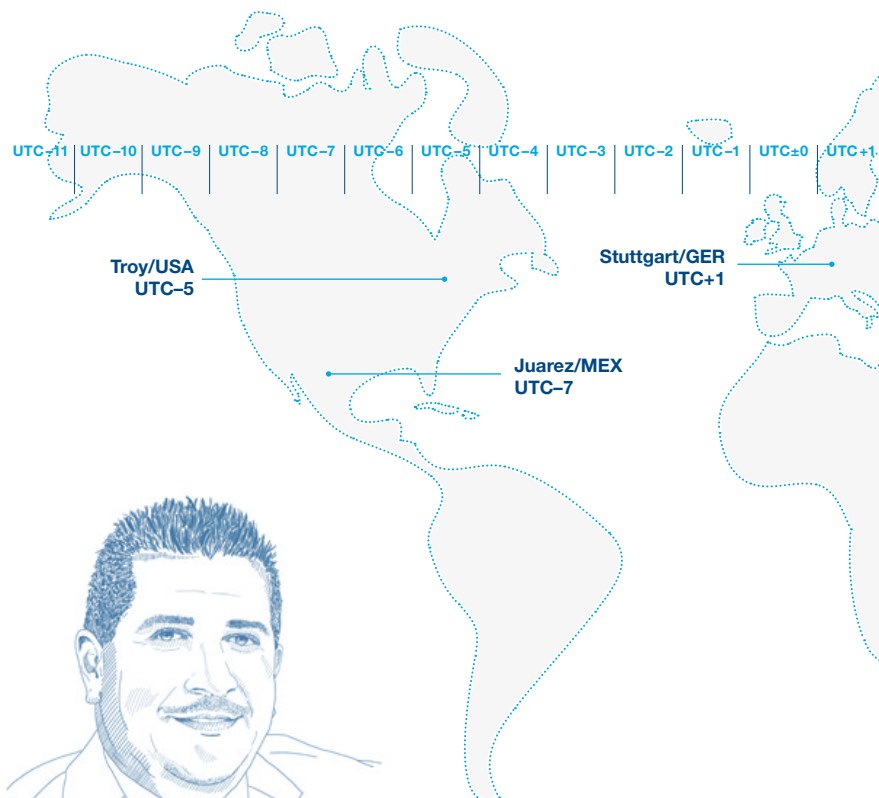
The cooling module developed for the new electric vehicle sits on the conference room table in front of Dr. Brigitte Taxis. Finished. According to plan. “It's an unusual technical concept. The whole process has been very, very dynamic.” The greatest challenges were time and the customer's completely different way of working. Dr. Taxis was responsible for the acquisition stage in Germany and remembers asking senior management the critical question in a meeting: “Our roots are in a conservative automotive industry. How does the mindset of a start-up fit into this model?” The answer: “That's precisely the challenge we want to tackle.” By putting in a huge international effort, the team pulled out all the stops to land the order. And the next steps were taken at the same pace, with lots of processes that would normally take place sequentially now running at the same time. While their colleagues in Germany were still developing the design, the team in Japan was building prototypes. “We took a big risk,” Brigitte Taxis recalls. “But many years of experience have made us at MAHLE aware of risks, and we're not afraid of them.”

Numazu/Japan

“The greatest hurdle was sharing our knowledge across continents in a project where time was not on our side.” As the Japanese project manager, Tetsuya Handa was responsible for building the motor for the cooling fan module. Overcoming time zones and language barriers is absolutely standard in a globalized business world. But what do you do if the team lacks confidence? In

Greg Belloli, engineer in the Engine Cooling department, in Troy/USA

»We had to wave goodbye to lots of things: strict schedules, conventional tools, and familiar ways of finding solutions!«



Rodrigo Ledezma, Launch Manager, in Juarez/Mexico

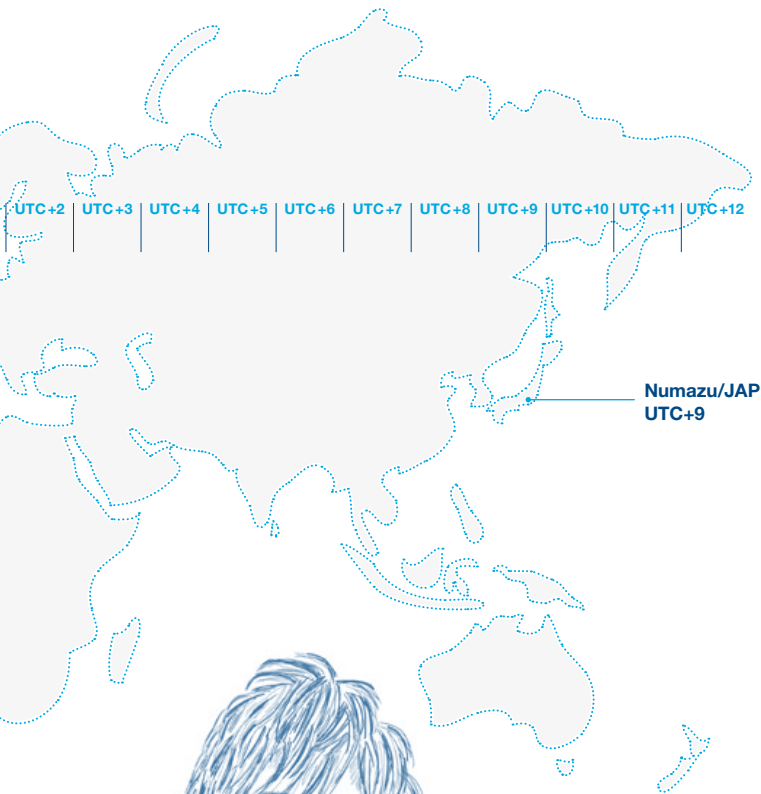
»We needed to draw on all our experience for this project and concentrate on implementing it as a team.«





Dr. Brigitte Taxis, Head of Product Development Components, Powertrain Cooling, in Stuttgart/Germany

»It's an unusual technical concept. The whole process has been very, very dynamic.«



**Numazu/JAP
UTC+9**



Tetsuya Handa, Project Manager, MAHLE Electric Drives Japan, in Numazu/Japan

»The greatest hurdle was sharing our knowledge across continents in a project where time was not on our side.«

addition to the major challenge faced by the team, Tetsuya Handa was also confronted by a significant personal task: his first order as a project manager—for a project that was totally new to MAHLE. “I had absolutely no experience of leading an international team. During the fast process, I learned at a similarly rapid pace about cultural differences and communication difficulties and, above all, that no one can manage something like this on their own. The success is down to the whole team. And the team surpassed itself. I really appreciate their huge effort and contribution. And I am thankful for my superiors, who greatly supported the launch of this challenging project.”

Troy, Michigan/USA

Greg Belloli and his colleagues Jean-Francois Battello and Justin Smolarek were the customer's direct contact partners and responsible for the design of the module. And the customer's requirements sometimes changed from week to week. “I don't like to use the word ‘micro-management,’ but we had to wave goodbye to lots of things: strict schedules, conventional tools, and familiar ways of finding solutions. We did a lot of things for the first time. Our team spirit was essential. When one of us didn't know how to move forward, another jumped in. We maintained a positive attitude at all times and kept the same vision in mind. At the kick-off meeting, 80 percent of the team was certain that we wouldn't manage it. Despite all the obstacles, all that we thought in the next 13 months, every day, in every customer meeting, in every team meeting was: ‘Yes, we can make it!’”

Juarez/Mexico

“It was my job to ensure the production ramp-up at the Juarez location in Mexico went without a hitch. The validation process was an important project step that required good coordination between MAHLE in Troy/USA, and MAHLE in Mexico—as well as between other regions. A good flow of information between Mexico and the other regions was the key to the success of the project. We are used to an energetic pace in Mexico. Nevertheless, we needed to draw on all our experience for this project and concentrate on implementing it as a team. On the other hand, the constant close communication of information about the project status with the top management in the United States and in Germany helped to ensure effective oversight of the progress of the project and thus the opportunity to make improvements. Each MAHLE location operates slightly differently, so we learned a huge amount from each other during the start-up phase. And cooperation with the customer was extremely close. To give just one example: It is normal to have a ‘black-out’ period during development—a time when you can't give any further input on the design. But we repeatedly engaged with the customer during precisely this stage. This was unusual and very complicated, but it worked—because everyone acted in concert.”





THE COMPANY

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Our self-perception

The MAHLE Group is a leading global development partner to the automotive industry and offers its customers complete systems from a product range that is unrivaled in breadth and depth. Our new developments are geared toward the further optimization of combustion engines and thermal management solutions as well as the expansion of e-mobility. We also want to set new future standards with our innovative solutions by consistently using and expanding our knowledge and innovative strength.

With our strategic orientation, we are addressing megatrends such as population growth, urbanization, globalization, connectivity, or limiting emissions to promote climate protection. We not only see these as an opportunity for further growth, but as an obligation to design our technologies so that mobility on our planet is as environmentally friendly as possible.

The Mahle brothers have bequeathed us a company structure that secures our independence and the long-term orientation of the group. In accordance with their specifications, we want to continue to successfully develop MAHLE as a leading company and attractive employer.

This also means that we stand by our values—fairness, compliant conduct, cultural diversity, and equal opportunities—and live them every day in our relationships with our employees, customers, and suppliers.

Assuming social responsibility was an objective declared by our company founders. We remain bound by this ongoing commitment, and it is reflected in our business decisions.
Now and in the future.

Highlights 2017

What impact has MAHLE made in the past business year? Which projects have we driven forward? And where have we been particularly successful? Some highlights.



inventive

MAHLE is delighted to win customer orders for the manufacture of pedelec components and a pedelec drive, which will go into series production from 2018.



**PEDELEC COMPONENTS AND DRIVE
IN SERIES PRODUCTION**

close to our customers

The new production plant for air conditioning compressors in Changshu/China, goes into operation. With this milestone, MAHLE is continuing to drive forward its activities in the Chinese market.



CHANGSHU/CHINA

award winning

MAHLE has received around 100 awards from customers and partners in the categories of quality, technology, and environment.



100 AWARDS

revolutionary

In a world debut, MAHLE presents the vehicle concept MEET (MAHLE Efficient Electric Transport) to the public at the IAA Cars in Frankfurt/Germany. MEET is systematically aligned to the needs of urban mobility.



**MAHLE EFFICIENT ELECTRIC
TRANSPORT: MEET**

electrifying

MAHLE acquires the Spanish electronics specialist Nagares, now MAHLE Electronics, and is developing the Valencia location into a global competence center for vehicle electronics.



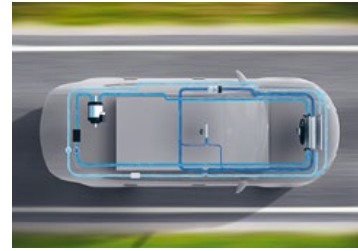
**MAHLE ELECTRONICS,
SPAIN**

prestigious

Die Welt, one of the most important daily newspapers in Germany, and Accenture, one of the world's best-known corporate consultancies, chose MAHLE as the winner of their TOP 500 Award for sustainable growth.



TOP 500 AWARD

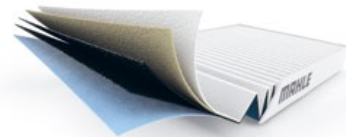


committed

Thermal management is one of the most urgent challenges for electric mobility. MAHLE is able to design the complete circuit and supply customers with the corresponding components.



**THERMAL MANAGEMENT
FOR ELECTRIC CARS**



in demand

Our customers are impressed by the MAHLE premium cabin air filter CareMetix®. Its five layers reliably filter particles, such as pollen, brake dust, and spores, and they also eliminate odors.



CAREMETIX®

A worldwide network

Our locations

Around 170 production locations
16 major research & development centers
About 78,000 employees*

Major research & development centers

EUROPE

Northampton/Great Britain
Šempeter pri Gorici/Slovenia
Stuttgart-Bad Cannstatt/Germany
Stuttgart-Feuerbach/Germany
Valencia/Spain
Foetz/Luxembourg

NORTH/SOUTH AMERICA

Amherst, New York/USA
Farmington Hills, Detroit, Michigan/USA
Troy, Detroit, Michigan/USA
Lockport, New York/USA
Jundiaí, São Paulo/Brazil

ASIA/PACIFIC

Numazu/Japan
Pune/India
Shanghai/China
Tokio-Kawagoe/Japan
Tokio-Okegawa/Japan



* As at December 31, 2017

Europe

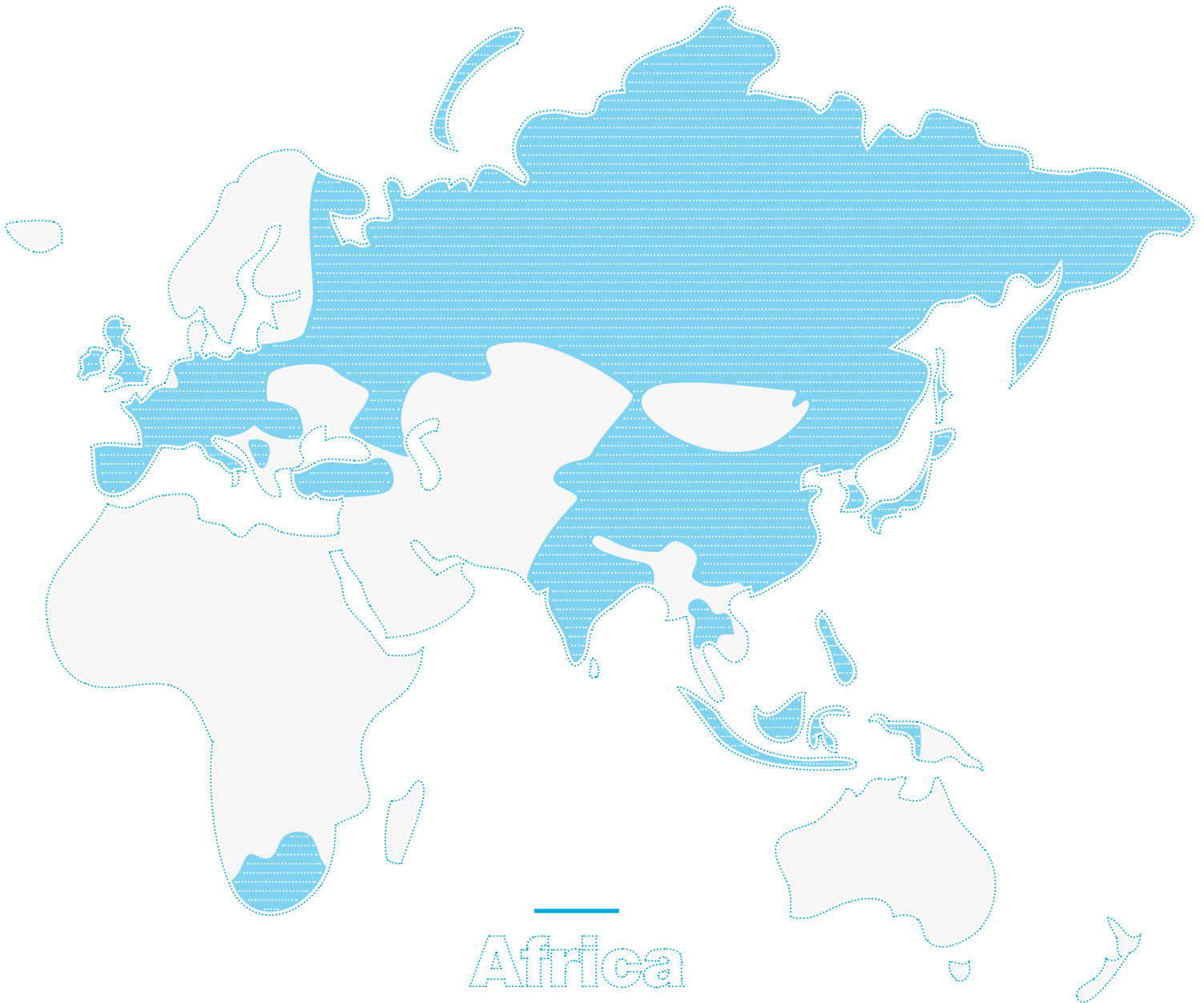
71 production locations
34,909 employees*
Sales of EUR 6,161 million

Austria, Belarus, Bosnia and Herzegovina,
Czech Republic, France, Germany,
Great Britain, Hungary, Italy, Luxembourg,
Poland, Portugal, Romania,
Russia, Slovakia, Slovenia, Spain, Turkey

Asia/Pacific

55 production locations
16,597 employees*
Sales of EUR 2,514 million

China, India, Indonesia,
Japan, Philippines,
Singapore, South Korea, Thailand



Africa

2 production locations
1,047 employees*
Sales of EUR 47 million

South Africa

Members of the Supervisory Board

Prof. Dr.-Ing. Heinz K. Junker Chairman

Former Chairman of the Management Board and CEO of MAHLE GmbH, Stuttgart/Germany

Uwe Meinhardt Deputy Chairman

Executive Director of IG Metall, administrative office Stuttgart/Germany

Hans-Otto Assmus

(since July 1, 2017)

Director Global Product Management Business Unit Engine Systems and Components MAHLE Group

Dietmar Bichler

Chairman of the Management Board of Bertrandt AG, Ehningen/Germany

Martin Bücher

Executive Secretary of the Central Works Council of MAHLE Group Germany

Prof. Dr. jur. Wolfgang Fritzemeyer

LL.M., Attorney-at-Law and Partner at Baker & McKenzie, Munich/Germany

Josef Häring

Chairman of the Works Council of MAHLE GmbH, plant Rottweil/Germany

Karin Himmelreich

Managing Director MP Transaction and Partner at MPT Jamieson, Frankfurt/Germany

Jürgen Kalmbach

Chairman of the Works Council of MAHLE GmbH, plant Stuttgart/Germany

Dieter Kiesling

Chairman of the Central Works Council of MAHLE Behr and Chairman of the Works Council of MAHLE Behr GmbH & Co. KG, region Muehlacker/Germany

Michael Kocken

Trade Union Secretary of IG Metall, administrative office Stuttgart/Germany

Prof. Dr.-Ing. Gisela Lanza

Head of the Institute of Production Science at the Karlsruhe Institute of Technology (KIT), Karlsruhe/Germany

Thomas R. Letsch

Former Vice President Sales and Application Engineering Commercial Vehicles of MAHLE Group

Dr. Uwe Mohr

(until June 30, 2017)

Vice President R&D Services MAHLE Group

Dr. Franz-Josef Paefgen

Former CEO of AUDI AG, Bentley Motors Ltd and President of Bugatti International S.A.

Prof. Dr.-Ing. Stefan Pischinger

Head of Institute, Institute for Combustion Engines, RWTH Aachen University, Germany

Uwe Schwarte

Chairman of the Central Works Council of MAHLE Group Germany and Chairman of the Works Council of the MAHLE Filtersysteme GmbH, Stuttgart/Germany

Manfred Steidle

Chairman of the European Works Council of MAHLE Group and Deputy Chairman of the Central Works Council of the MAHLE Group Germany

Annette Szegfü

Spokesperson of Management IG Metall, Frankfurt/Germany

Dr. Bernhard Volkmann

Former Member of the Management Board and CFO of MAHLE GmbH, Stuttgart/Germany

Georg Weiberg

Former Head of Global Truck Engineering, Daimler AG, Stuttgart/Germany

Members of the Group Management Board

Wolf-Henning Scheider Chairman and CEO

(until January 31, 2018)

Research and Advanced Engineering, Corporate Planning and Communications, External Affairs, Engineering Services, Motorsports, and Special Applications profit center

Dr. Jörg Stratmann Chairman and CEO

(since February 1, 2018)

Research and Advanced Engineering, Corporate Quality Management, Corporate Planning and Communications, External Affairs, Engineering Services, Motorsports, and Special Applications profit center

(until January 31, 2018)

Thermal Management business unit, Industrial Thermal Management, Compressors, Control Units, and Front-end Modules profit centers

Georg Dietz

(since February 1, 2018)

Engine Systems and Components business unit, Large and Small Engine Components profit center, Environmental Management/Safety at Work for the group

Bernd Eckl

(since February 1, 2018)

Thermal Management business unit, Industrial Thermal Management, Compressors, Control Units, and Front-end Modules profit centers

(until January 31, 2018)

Engine Systems and Components business unit, Corporate Quality Management, Environmental Management/Safety at Work for the group, Large and Small Engine Components profit center

Wilhelm Emperhoff

Filtration and Engine Peripherals business unit, Mechatronics division

Arnd Franz

Automotive Sales and Application Engineering, Aftermarket business unit

Michael Frick

Finance, Controlling, Taxes, IT Services, Insurances, Revision and Risk Management, Mergers & Acquisitions Coordination

Michael Glowatzki

Human Resources and Legal, Director of Personnel

Members of the Group Management Board

From right to left:
Dr. Jörg Stratmann
Chairman
Arnd Franz
Michael Frick
Georg Dietz
Wilhelm Emperhoff
Bernd Eckl
Michael Glowatzki
as at March 31, 2018







RESPONSIBILITY

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Committed employees

The foundation of our success

With their diverse skills, commitment, and expertise, our employees are the foundation of our success and the key to the future of the MAHLE Group.



Employees

With their diverse skills, commitment, and expertise, our employees are the foundation of our success and the key to the future of the MAHLE Group. For this reason, a central focus of our HR activities has, for many years, been on the careful selection, thorough development, and further education of our workforce. By supporting our employees as their talents grow, we not only help them in their own personal development but also generate added value for MAHLE.

In the coming years, digitization, technological change, and increasing competitive pressure will decisively shape the further development of our company and influence working environments more strongly than ever before. These challenges must continue to be actively addressed through changes in organization, processes, and employee awareness.

In order to continue to recruit, develop, and retain qualified and motivated talent as an attractive employer in the face of sustained high competitive pressure, MAHLE launched the HR Boost! strategic project two years ago. As part of the global personnel strategy, HR Boost! encompasses and combines several subprojects in the areas of employer branding, recruitment, career development, and diversity. The major objective of these subprojects is to further develop existing HR procedures and activities and introduce modern structures and new processes. In 2017, many project-related initiatives and measures were successfully implemented or launched.

Recruitment and employer branding

The primary focus of our personnel marketing activities rests on positioning MAHLE as an attractive employer and on accessing potential new MAHLE employees. Across the group, we are therefore systematically intensifying our employer branding measures, such as social media activity, moving-image concepts, recruitment events, and various talent retention initiatives.

Moreover, we have used HR Boost! to successfully accelerate the reinforcement of MAHLE as an employer brand around the world. This was also supported by the virtual reality video “Your first day at MAHLE,” which was successfully used in several languages and in many countries. Furthermore, MAHLE presents itself in 25 countries with a coordinated design on national MAHLE career websites and through various national HR Facebook pages.

It is particularly important to position MAHLE as an attractive employer among engineering students, even before and during their studies, as there is fierce competition for the best graduates. High school, university, and college marketing is therefore a fundamental element of MAHLE’s personnel marketing. Our international Key University program, for example, has been particularly successful. Following uniform guidelines, MAHLE is now associated with select key universities in 19 countries. The cooperative ventures include guest lectures from MAHLE experts at the universities, close ties to professors, as well as sponsoring activities and local events. Alongside the MAHLE

Performance Award and the Audimax MINT Award, MAHLE also grants scholarships to support young academics in recognition of special achievements.

A further important cornerstone of our HR marketing is Formula Student. MAHLE also supports this initiative around the world through investments and training measures. Globally, MAHLE sponsors 29 teams: 20 in the Internal Combustion Engine Vehicle class and 9 in the Electric Vehicle class. The MAHLE teams enjoyed particular success at Formula Student Germany 2017, with teams supported by MAHLE winning both categories for the first time. Participation in the international competitions promotes valuable key qualifications that go far beyond the students' formal engineering studies, such as team spirit, creative and interdisciplinary thinking, as well as solution-oriented approaches. In the course of the competition, MAHLE gets to know highly

motivated and committed engineering students with a competitive and team spirit as well as creative ideas for solving problems that also take the economic aspects of projects into account.

Within the MAHLE PhD program, committed young engineers have the opportunity to gain an industry-sponsored doctorate. The program is initiated in close cooperation with the relevant university and is characterized by knowledgeable support, intensive interaction between theory and practice, and complementary training activities closely connected to the graduate program.

In addition, the newly created employee referral program Friends for MAHLE—run as part of HR Boost!—motivates our staff to assist us in the search for new employees in return for a financial reward by recommending people they know outside the company who could contribute to the long-term success of MAHLE.

supported

A further important cornerstone of our personnel marketing is Formula Student. MAHLE also supports this initiative around the world through investments and training measures. Globally, MAHLE sponsors 29 teams.



FORMULA STUDENT

motivated

In Japan, as elsewhere, MAHLE works with motivation and commitment to further develop human resources management in the region. In 2017, significant progress has been made with the strategic HR Boost! project. As part of the global personnel strategy, HR Boost! encompasses several subprojects in the areas of employer branding, recruitment, career development, and diversity.



HR BOOST!

Corporate training

In our commitment to attracting the brightest minds and most capable employees, we at MAHLE have always placed great emphasis on the internal training and further education of our specialist staff. Apprenticeships and cooperative studies are of particular significance here. And we also want to find the right candidates for these programs. This is why, as part of the HR Boost! project, our training department in Germany has been involved with an initiative to increase the attractiveness of employers and has made a video that aims to motivate school-leavers to train at MAHLE. The objective is to communicate with Generation Z on their level, to bring MAHLE as an attractive employer to the attention of this target group, and to position the company successfully.

Alongside the reorganization of communication channels, advancing digitization also demands a thorough review of training profiles. Industry 4.0

and the digital revolution are important issues for initial vocational training. In cooperation with the University of Cooperative Education in Baden-Württemberg/Germany, MAHLE is therefore focusing on new study courses that address the interaction between man, machine, and services. In October 2017, the first two MAHLE students embarked upon the new Digital Business Management business administration course at the location in Stuttgart/Germany. In the coming year, the first students of informatics or automotive IT at MAHLE will begin their studies. They will predominantly focus on the development of control and monitoring systems as well as feedback control engineering in the automotive sector with local bus systems and microcontroller/sensor technology—both are important components for drive and vehicle concepts of the future.

In the German MAHLE Group companies in 2017, we trained a total of 320 apprentices in 20 occupational profiles and 134 cooperative studies students in 12 courses of study. However, it is not

only in Germany that initial vocational training is key to meeting the high demand for qualified technical personnel. In Austria, 73 young men and women took part in similar programs in seven apprenticeship opportunities. In 2017, a total of 386 young people in Brazil and 79 in Poland undertook internal training with MAHLE with the aim of subsequently being taken on as qualified specialists. In Mexico, 77 employees completed a comprehensive, 18-week internal training program that was specially tailored to MAHLE's requirements.

Many of our locations in various countries cooperate with local schools to provide students with an insight into the diversity of the professional world by means of practical projects and to make it easier for them to choose a career. In our educational partnerships, we exercise the principle of collaboration—from internships, factory tours, and parents' evenings to job application training or cooperation on projects in MINT subjects.

Executive development

Executive development at MAHLE is more than simply identifying high-potential employees. Rather, the aim is to support these high-potential employees in their further development and—in the best interests of the company—to prepare them specifically for demanding and challenging career steps. This integrated approach to the development of executives is therefore a strategic factor in the company's success: it increases the number of positions filled internally on all levels of the hierarchy, supports cross-functional and group-wide careers, and gives our employees career prospects within the company. By means of various national and international development programs, we therefore specifically prepare our employees and executives to take on new or enhanced areas of responsibility. We identify candidates for the development programs through the regular assessment of individual potential and at development conferences. In this way, we recognize the strengths of the individual employees as soon as possible and are able to work systematically to foster them. Specific training and development in leadership skills is provided. The various development programs at the different hierarchical levels not only strengthen personal and professional skills, but also serve to build and expand networks across countries and functions. In order to meet the various challenges of the different management levels and cultures, we also offer specially tailored leadership and management training activities on a regional and global basis.

Mobility

As a globally operating group, we need people who think outside the box and work together to advance the right ideas for MAHLE. We have thus consistently encouraged the mobility of our employees over the past years. Through the secondment of professionals, we support the international transfer of expertise. As a consequence, new prospects are opened up for employees and executives, their individual professional development is promoted, and they are able to expand their personal horizons. A globally binding mobility policy governs the framework conditions for worldwide secondments and helps to make them both uniform and attractive.

What is more, MAHLE even encourages foreign assignments during training and in the first few years of work. For management trainees, residing outside the home country is an integral part of the training program. Students of cooperative studies also have the opportunity to work at MAHLE locations around the globe and gather intercultural experiences as part of their practical training.

Diversity and the advancement of women

By signing Germany's Diversity Charter, MAHLE has shown its group-wide commitment as a supporter and promoter of diversity and of appropriate programs and initiatives that are conducive to the idea of diversity. At MAHLE, diversity means recognizing and respecting various characteristics, including gender, age, sexual orientation, disability, religion, nationality, and ethnic origin. An additional global subproject was therefore initiated within the framework of HR Boost! in order to support and advance the promotion of diversity across the group. The main areas of focus for 2017 were initially to further the advancement of women and family life as well as to continue to develop working time models geared toward different stages of life. This included a range of different measures, such as our Women@MAHLE Business Talk and the MAHLE Female Leadership Conference networking events and the deliberate identification of high-potential employees for management positions. In a further highlight, we developed and introduced a global training program to reduce unconscious bias and thought patterns.

Promoting the balance of work and family life

Employee-friendly working conditions, such as flexible working hours, part-time work, and working from home, have been part of our personnel

policy in many countries for some time. As we introduce greater flexibility with regard to working locations and working time, we want to further expand opportunities for mobile working. MAHLE helps women in particular to return to work during and after parental leave through special part-time models, for example. Our in-house day-care center with 40 places in Stuttgart/Germany has been making an important contribution to easing the pressure on families for years. In many countries, MAHLE either organizes its own holiday programs for the children of employees or runs them in cooperation with associations. To further promote the work-life balance, we invited an external auditor to inspect our Stuttgart locations in 2017 and we subsequently received the “audit beruf- undfamilie” certificate. In this context, we also provided the opportunity to use a Family Service, which offers support and advice with regard to the provision of childcare, health care, and home and garden services. In future, this service will be

pooled together in the international MAHLEforMe program with additional offers that were already available, such as measures from the company’s occupational health management and health promotion schemes for our workforce.

Furthermore, numerous projects and measures worldwide aim to improve the working environment and raise employees’ awareness about taking care of their own health. The activities and benefits we offer range from company sports teams, special fitness programs, and lunch services to free vaccinations and other medical services as well as health classes and advice on social issues. In particular, we attach great significance to awareness, prevention, and encouraging people to take responsibility for their own actions. Health days at the MAHLE locations in numerous countries serve to familiarize employees with health-promoting dietary and lifestyle concepts.



diversity

At MAHLE, diversity means recognizing and respecting various characteristics, including gender, age, sexual orientation, disability, religion, nationality, and ethnic origin.



DIVERSITY AND THE ADVANCEMENT OF WOMEN

Corporate Social Responsibility

People and the environment

We are committed to supporting society and manage our activities sustainably. Both principles are important to MAHLE. As a company that operates internationally, we bear social responsibility. And we are driving the future here too: our innovations, resource-efficient technologies, and modern production processes are helping to steadily reduce the pressure on people and the environment. We are working in all areas of the group to make further improvements in this respect. As a stakeholder in society, we are also steadily assuming greater social responsibility.



Environmental management

A comprehensive view of safety and environmental protection (abbreviated as HSE) is important to us. We consider not only operational process flows, but also products, based in particular on the internationally applicable ISO standards 14001 and 50001 as well as OHSAS 18001. MAHLE integrates these ISO requirements into its business processes, refines them, and develops them further. In the 2017 business year, we made significant progress. Every year, we use our HSE reporting tool to collect relevant data and, thanks to the ongoing enhancement of the tool, we are able to evaluate information including the energy consumption figures and waste quantities at 170 locations. All our locations around the world continuously strive to further reduce waste volumes and emissions as well as the consumption of energy and water. We are helped here by best practice examples and the exchange of ideas between the employees responsible at international and national level.

In the past year, we have accelerated the process of obtaining Forest Stewardship Council (FSC) certification for our filter papers. In total, seven locations in Asia as well as MAHLE's branches in Murfreesboro/USA, and Santa Catarina/Mexico, were awarded certification in 2017. As a result, we are able to offer an increasing number of customers air filtration products from sustainable forestry sources.

In 2017, MAHLE received numerous awards for outstanding achievements in the field of HSE. These included the ACMA 2017 Silver Trophy as well as the platinum Rashtra Vibhushan Excellence Award 2017 and the Gold Award in the safety at work category. These accolades serve to demonstrate the success of our work with regard to safety at work and environmental management. At the same time, they spur us on to continue to make further progress.

In the past year, MAHLE has pushed ahead with numerous energy-saving projects. At our location

in Krotoszyn/Poland, for example, we further developed our software system for the monitoring and management of different types of energy. The system comprises approximately 10,000 measurement points, which show precisely which resource is required and when—be it electricity, thermal energy, or water. Because the system also controls pumps and valves, it ensures that production facilities are supplied according to demand, thus helping to improve efficiency.

In one measure implemented in Telford/Great Britain, and in Celaya/Mexico, MAHLE has fitted injection molding machines with an additional control system, which regulates the rotational speed of their drive motors. As a result, the speed of each motor can be reduced when full power output is not required. The system thus ensures that productivity and process consistency are not affected. The outcome is a decrease in energy consumption. As well as reducing peak power consumption, it has now also become possible to discover any problems with the electric motors more quickly.

Another project intended to reduce energy usage was also launched in Ramos Arizpe/Mexico, where an adsorption chiller has now replaced the refrigeration machines that were previously in use. Energy consumption is lowered by recovering waste heat from the furnace, and, by dispensing with refrigerants, the emission of ozone-depleting gases is reduced.

Corporate Social Responsibility 2017

At MAHLE, engagement with society and the assumption of social responsibility are integral elements of our corporate culture. As a result, the MAHLE Group and its employees in many countries have been supporting numerous projects and initiatives in and around MAHLE's locations for some years. This voluntary engagement is primarily focused on the issues of social interaction, education, and the fight against poverty and disease—often in cooperation with the MAHLE Foundation.

education

In Brazil, MAHLE Formare School is one of our company's most important commitments. Each year for 15 years, MAHLE employees have looked after and taught around 130 young people in technical subjects at six MAHLE locations.



**MAHLE FORMARE
SCHOOL BRAZIL**

Inspiration

In China, MAHLE concentrates its support on youth training and environmental protection. In conjunction with the Fengxian Qingxi Middle School in Shanghai, MAHLE launched the Sprout Program that focuses on teaching practical knowledge. MAHLE employees give talks at the school, offer hands-on experience, and organize exciting competitions for the pupils.



THE SPROUT PROGRAM

Worldwide initiatives and engagement

MAHLE has supported and funded some initiatives and institutions consistently for many years, whereas other projects help to address acute problems through concerted one-off campaigns on the ground.

One such example can be found in Balassagyarmat/Hungary. Thanks to an initiative run by our location in the area, a local school for children with mental disabilities is now delighted with its new playground. While MAHLE sponsored the purchase of the equipment and the materials, MAHLE employees actively volunteered to help construct the playground. In Šempeter pri Gorici/Slovenia, MAHLE is helping to provide facilities on the Nova Gorica campus to enable mechatronics students to attain higher level qualifications. At the same time, this also presents MAHLE as a committed employer.

Another example is in Indonesia, where, in a two-day weekend initiative, MAHLE employees from the Desa Pasirranji location participated in a CSR campaign in the forests of the Panyawangan Hills in Purwakarta (West Java province). Resulting in around 200 newly planted trees and a cleaned-up area of forest, this CSR contribution by MAHLE employees supports a sustainable environment.

Commitment to education – sustainable support for self-help

Among the social initiatives that MAHLE has actively helped for many years, those involving the education and support of disadvantaged people particularly stand out.

In Brazil, MAHLE Formare School is one of our company's most important commitments. For 15 years now, MAHLE employees have been looking after and teaching around 130 young people in technical subjects at six locations. Since the

inauguration of the first Formare School in 2002, about 1,600 young people, most of them coming from socially disadvantaged families, have made successful transformations: 75 percent of them subsequently found a job, many of them at MAHLE.

The Focus on iThemba project (“iThemba” is a Zulu word meaning “hope”), with which MAHLE is involved in Durban/South Africa, also supports disadvantaged children and young people. This educational project promotes the schooling and further education of orphans. Genuine prospects have already opened up for some of them who were subsequently taken on as MAHLE employees.

Through the Science2Go initiative, MAHLE put a mobile laboratory on the road in Durban. This allows numerous school children in the vicinity of the location to gain practical experience of physics and chemistry experiments. Due to the lack of equipment in many schools in the rural areas of South Africa, this would otherwise not be possible.

In China, MAHLE concentrates its support on youth training and environmental protection. In cooperation with the Fengxian Qingxi Middle School in Shanghai, MAHLE launched the Sprout Program that focuses on teaching practical knowledge. MAHLE employees give talks at the school, offer hands-on experience, and organize exciting competitions for the students.

Sustainable assistance

MAHLE gives assistance to the Vergel agricultural community near the Mogi Guaçu location in Brazil, where around 100 small farmers operate a cooperative.

In recent years, increased support has been provided with the aim of improving the community’s social and economic environment. In the “Jovem Agricultor do Futuro” program, the next generation of farmers in the Vergel community, aged between 14 and 17, gain theoretical and practical knowledge of farming techniques and a reinforced awareness of the environment. The program has now been extended to Jardim Planalto in Mogi Mirim as well as to Mogi Guaçu and Estiva Gerbi. In 2017, 90 students were enrolled, and at least 100 more young people have already completed the program.

In 2016, together with the Instituto Mahle, MAHLE also opened the first Centro Educacional Ernst Mahle in Vergel—a full-time kindergarten for a total of 75 children from the ages of

four months to six years. We opened two more centers in 2017: one for around 110 children in Estiva Gerbi and another for about 190 children in Mogi Guaçu.

Fundraising and local engagement in health

Our North American locations have a long tradition of social engagement and fund-raising in support of general health promotion. Examples include financial support given to hospitals specializing in treating children suffering from cancer and the “Tour de Cure” cycling race organized by the American Diabetes Association, in which MAHLE is regularly involved through donations and the participation of its employees. This financial support helps to advance the development of improved treatment options for diabetes.

In Aguascalientes/Mexico, MAHLE is involved with the CRIT (Centro de Rehabilitación Infantil Teletón), a private and nonprofit rehabilitation center for children. Here, children with neuromusculoskeletal disabilities are cared for in special rehabilitation and therapy rooms.

Since September 2017, the MAHLE location in Hwasung/South Korea and its employees have taken part in the Community Chest of Korea fund-raising program, a nonprofit organization that supports local people in need.

Numerous employee volunteer initiatives

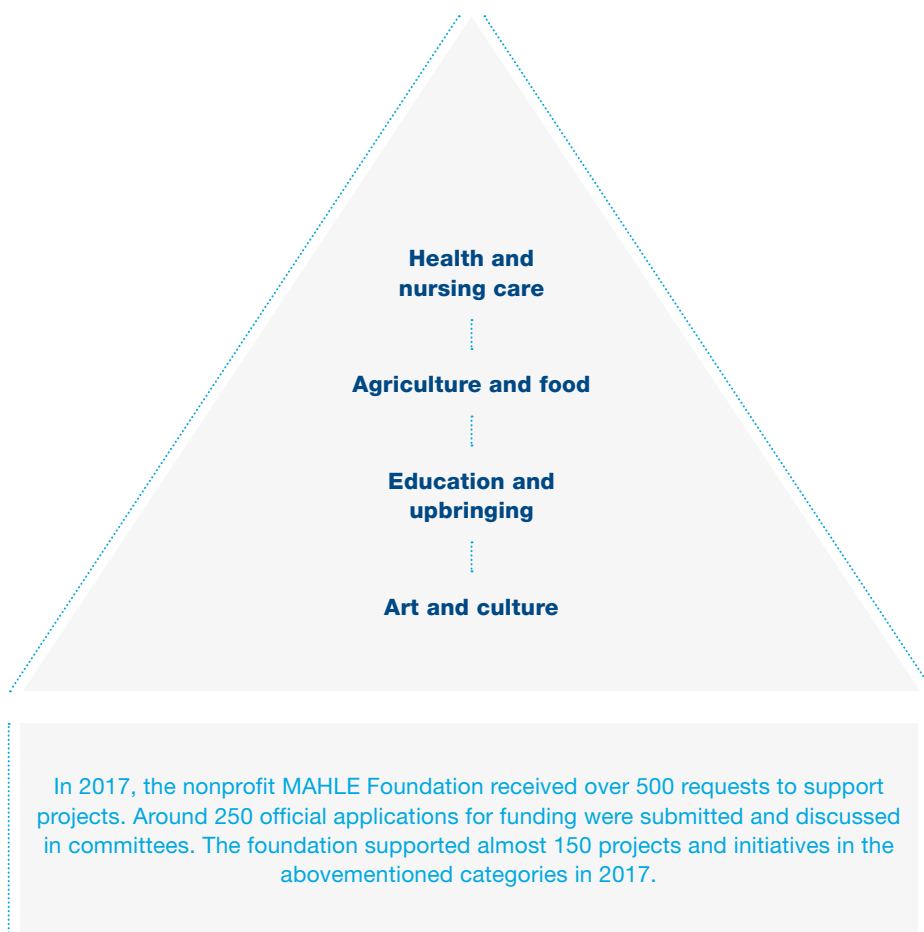
Above and beyond the aforementioned exemplary activities, MAHLE employees at our worldwide locations display a high degree of social commitment with their voluntary participation in many other initiatives—from supporting international aid organizations and hospitals, to providing help to people in need as well as children’s and old people’s homes, through to various educational opportunities designed to improve career prospects. The charitable projects, donations, and fund-raising campaigns are often instigated and carried out on their own initiative. Social commitment is an integral part of our MAHLE culture. The MAHLE Management Board would like to express its heartfelt thanks and high regard to all the dedicated helpers for their commitment.



Making a difference for a better future

The work of the MAHLE Foundation

Continuity was the dominating theme of 2017: building on more than 50 years of experience, the MAHLE Foundation supports numerous projects and initiatives.



Health and nursing care

The Filderklinik GmbH—in which the MAHLE Foundation is a 70 percent shareholder—has been working in the field of integrative, anthroposophical medicine for over 40 years. “The integrative medicine approach is continuing to grow in importance,” says Jürgen Schweiß-Ertl, managing partner of the MAHLE Foundation. “From the start, the Filderklinik has been a pioneer in this field in the south of Germany—and it still is today.” In November 2017, it founded the Kompetenznetzwerk Integrative Medizin (integrative medicine competence network) as well as nine additional clinics. The members of this network, which is unique in Germany, work on the ongoing development of the concept of integrative medicine. In accordance with the integrative approach, natural healing methods, homeopathy, and anthroposophical medicine are not primarily seen as alternatives to conventional medicine; instead, these concepts are combined to a high standard with those of conventional medicine. This gives rise to an integrative view of medicine in the sense of comprehensive patient care. For anthroposophical medicine, this integrative approach is self-evident from the outset, since it considers itself to be an extension of—and not an alternative to—modern conventional medicine. At the Filderklinik, patients therefore encounter both at a high standard: modern conventional medicine and, at the same time, anthroposophical medicine as an extension.

One example of integrative, anthroposophical medicine is the Integrative Haus der Gesundheit (integrative house of health) in Heidenheim/Germany, which is supported by the MAHLE Foundation. The medical and therapeutic center operates on the basis of holistic-integrative considerations and focuses on the treatment of patients at every stage of life. Alongside various medical practices, the Integrative Haus der Gesundheit also has a day-care center. As a health initiative, it offers a range of lectures and discussions, self-help groups, concerts, and other events.

Agriculture and food

For over 50 years, the MAHLE Foundation has worked to promote biodynamic farming. Seed breeding is one key area receiving support, in particular, the breeding of varieties adapted to their respective growing regions. The foundation works on this challenging issue with long-standing, well-known partners.



TEAMWORK IN SEVEN STEPS: FROM REQUEST TO FUNDED PROJECT

- 1. Application submission**
- 2. Review of the application**
- 3. Preparation of committee meetings and information about the projects provided to shareholders and advisory board members**
- 4. Feedback from the shareholders and advisory board members**
- 5. Decisions**
Committee meeting with decisions about the projects
- 6. Funding**
Applicant notified about funding and funding amount
- 7. Documentation of project progress and completion**

environment

The Organic World Congress is an important global forum for organic farming and environmentally sustainable agriculture: in November 2017, international representatives of the organic sector gathered in New Delhi/India.



ORGANIC WORLD CONGRESS

In November 2017, international representatives of the organic sector gathered in New Delhi/India for the Organic World Congress—an important global forum for organic farming and environmentally sustainable agriculture. At this event, Christoph Simpfendörfer represented the Demeter-certified company Reyerhof, based in Stuttgart/Germany. Biodynamic farming—a method identifiable by the Demeter label on products—was the world’s first organic farming system and still serves as a model for this form of agriculture today.

Education and upbringing

The first Waldorf school was founded around one hundred years ago in Stuttgart. In recent years, the Waldorf educational philosophy has spread, especially into countries outside central and western Europe, such as China and India. However, there are hardly any training opportunities for Waldorf teachers in these countries.



THE MAHLE FOUNDATION

99.9%

The MAHLE Foundation holds 99.9 percent of the MAHLE Group’s shares. The nonprofit organization thereby guarantees that MAHLE is able to remain an independent company. Every year, the Foundation receives a dividend, which it uses to finance its funding projects.

It is ensured that the majority of the group’s net income for the year is reinvested in the MAHLE Group.

MABEG e.V. (Verein zur Förderung und Beratung der MAHLE Gruppe e.V.) exercises the voting rights at MAHLE GmbH shareholder meetings.

Since its inception over 50 years ago, the MAHLE Foundation has supported and sponsored more than 5,000 different projects and initiatives.

Against the backdrop of this worldwide development, an internationally recognized, English-language qualification as a Waldorf teacher is becoming increasingly important. In order to preserve the fundamental principles of Waldorf schools and kindergartens, the MAHLE Foundation is promoting the training of teachers. For this reason, the foundation has supported and funded the establishment of an international English-language master's program at Freie Hochschule Stuttgart from the outset, and it has been very well received. For example, 31 participants from 19 nations took the international master's course last year.

Communicating knowledge—this summarizes the theme of the series of lectures initiated by the foundation in 2017 for MAHLE employees. At MAHLE's headquarters in Stuttgart-Bad Cannstatt/Germany, distinguished speakers gave talks on topics such as the environment, economy, and medicine. "The demand for these kinds of lectures was high, and interest in practical

philosophical issues is growing," says Jürgen Schweiß-Ertl, delighted with the response. "We therefore plan to continue our lecture series in coming years." In 2018, to complement MAHLE Inside events, the MAHLE Foundation will be holding lectures on a wide range of topics in the Stadtpalais—Museum of Stuttgart in cooperation with the City of Stuttgart's cultural office.

Art and culture

A small but distinguished private theater group has been successfully established on Stuttgart's theatrical scene for many years: the Forum Theater in Forum 3, a youth and cultural center. It stages three of its own productions every year. Including guest performances, the program comprises up to 150 performances per season. Thanks to the support of the MAHLE Foundation, the curtain also went up for noteworthy productions and for sophisticated, moving theater in the 2016/2017 season.

recognition

The foundation has supported and funded the establishment of an international English-language master's program at Freie Hochschule Stuttgart from the outset, and it has been very well received. For example, 31 participants from 19 nations took the international master's course last year.



INTERNATIONAL ENGLISH-LANGUAGE MASTER'S PROGRAM



GROUP MANAGEMENT REPORT

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MAHLE is one of the world's largest suppliers and development partners to the automotive industry. We are committed to making transportation more efficient, more environmentally friendly, and more comfortable.



In our business segments, we occupy leading market positions.



We are addressing the current change in the automotive industry through our dual strategy: as well as optimizing the combustion engine, we are focusing on new developments in alternative drive technologies.

Fundamental information about the MAHLE Group

BUSINESS ACTIVITIES AND CORPORATE STRUCTURE

As a leading international development partner and supplier to the automotive industry as well as a pioneer and technology driver for the mobility of tomorrow, MAHLE has a global presence. We are committed to making transportation more efficient, more environmentally friendly, and more comfortable by further optimizing the combustion engine, driving forward the use of alternative fuels, and laying the foundation for the widespread acceptance and worldwide introduction of e-mobility.

Based on a broad systems competence consisting of engine systems and components, filtration, and thermal management, our product portfolio addresses all the crucial issues relating to the powertrain and air conditioning technology. Thanks to our expertise in electric and electronic components and systems, we can thus also offer integrated systems solutions for e-mobility.

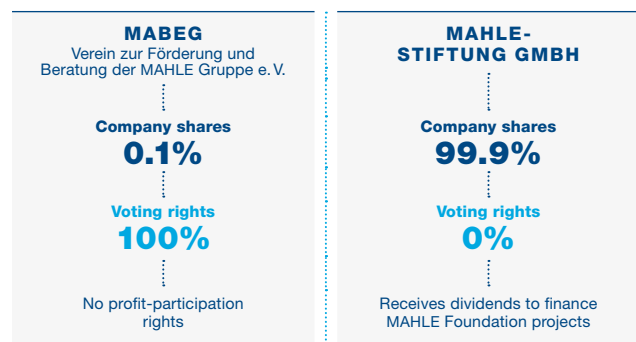
MAHLE products are used in every second passenger car produced around the world. For decades, our components and systems have also been used on the world's racetracks and off the road—in stationary applications as well as for mobile machinery, rail transport, and marine applications.

The MAHLE Group consists of four business units: Engine Systems and Components, Filtration and Engine Peripherals,

Thermal Management, and Aftermarket. Added to this are the Mechatronics division and six profit centers, which serve specific market and customer segments.

MAHLE is represented on five continents. We took advantage of the opportunities presented by globalization at an early stage and enhanced our product portfolio by strategically creating and acquiring new business activities. Today, we operate around 170 production locations and 16 major research and development centers across the world, where we employ around 78,000 people in total.

OWNERSHIP STRUCTURE OF THE MAHLE GROUP



MAHLE GROUP

Sales: EUR 12,788 million
Headcount: 78,277

BUSINESS UNITS				DIVISION	PROFIT CENTERS
Engine Systems and Components	Filtration and Engine Peripherals	Thermal Management	Aftermarket	Mechatronics	Engineering Services, Motorsports, and Special Applications
					Large and Small Engine Components
					Industrial Thermal Management
					Compressors
					Control Units
					Front-end Modules
Sales: EUR 2,799 million Headcount: 27,900	Sales: EUR 2,246 million Headcount: 10,957	Sales: EUR 4,481 million Headcount: 23,288	Sales: EUR 956 million Headcount: 1,574	Sales: EUR 407 million Headcount: 3,889	Sales: EUR 1,900 million Headcount: 10,670

As at January 1, 2018

The nonprofit MAHLE Foundation controls 99.9 percent of the company's shares; 0.1 percent of the shares are held by Verein zur Förderung und Beratung der MAHLE Gruppe e. V. (MABEG). This association also holds the voting rights and thus exercises the shareholder rights. This structure ensures our entrepreneurial independence and allows us to make long-term plans and future-oriented investment decisions.

A core management tool for the MAHLE Group is its operating result—a key figure similar to EBIT. The main difference lies in the amortization of goodwill and in the depreciation and amortization on hidden reserves, which are disclosed within the framework of purchase price allocations. We use the operating result to measure the profitability of all group areas and units. By focusing on this indicator, we ensure a high degree of transparency and guarantee target-oriented corporate development.

BUSINESS SEGMENTS

Engine Systems and Components business unit

We have decades of development and systems competence as well as a global production presence in this business unit and are the world market leader in many segments. Our product range includes steel and aluminum pistons, piston rings, cylinder

liners, and bearings, as well as valve train systems and components that are used around the globe in two-wheeled vehicles, passenger cars, commercial vehicles, and large engines. We are continuously developing this portfolio to reduce emissions and fuel consumption in combustion engines even further in future.

Filtration and Engine Peripherals business unit

In addition to filters, this business unit also manufactures oil coolers for engine and transmission applications. On the one hand, our products support air cleanliness and on the other hand, they prevent contaminants in oil and fuel from damaging the engine, thus enabling greater efficiency and a longer service life. In recent years, we have worked in close cooperation with our customers to develop modular systems for all of the major product groups in this business unit. In this way, we take into account the fact that the product environment can look very different, even in identical basic engines, depending on body shape, power class, and regional emissions legislation. Here too, MAHLE is among the global market leaders.

Thermal Management business unit

Especially when it comes to the electrification of the powertrain, our products in this business unit are critical to success. Innovative products for the thermal management of batteries, fuel cells, power electronics, and electric actuators can improve the performance, service life, and cruising range of electric vehicles—and therefore their suitability for everyday use. Thermal management is also becoming increasingly important in the performance and efficiency of combustion engines. The trend toward higher specific engine outputs places great demands on the cooling system. With our new developments and further advancements, we intend to position the combustion engines of the future as attractive alternatives to electric drives. For many years, we have worked very hard on solutions to provide even greater thermal comfort in the cabin, harnessing the potential of new vehicle architectures both for innovative design concepts and for maximum efficiency. We are the world's second largest supplier in the thermal management sector.

Aftermarket business unit

This business unit supplies a broad portfolio of products and services in original equipment quality to the trade and automotive workshops worldwide. In addition to standard MAHLE spares, such as engine parts, filters, turbochargers, and mechatronics components, Aftermarket is increasingly offering products for thermal management, such as thermostats and air conditioning compressors. Vehicle diagnostics, exhaust gas analyzers, and service equipment for maintaining HVAC systems and automatic transmissions complete the product portfolio. The products are supplemented by an extensive range of services including customer training and service information as well as technical support via our global network. In view of the diversity of today's vehicle technologies in the fleet, an innovative and solution-oriented support is key to the success of our business partners. Through adaptive product management, fast and reliable logistics processes, strong brands, and competitive price positioning along the entire life cycle and the corresponding market requirements, we offer our customers individual repair solutions in order to increase efficiency in their workshops and thereby improve customer satisfaction.

Mechatronics division

Electric components are steadily gaining in importance because they help to increase the efficiency of modern powertrains—all the way through to fully electric driving. In addition to the product groups of Electric Drives as well as Actuators and Auxiliaries, our Mechatronics division now includes the Electronics product group, which was added in 2017. These activities are founded on our expertise in the development and manufacture of electric motors, electronics, and mechatronic systems. Although these systems are used in a wide range of applications, they are technically closely related. As a result, we—and therefore our customers—can benefit from economies of scale and synergy effects.

Profit centers

Six business fields, organized as profit centers, serve special market and customer segments. Specifically, these are: Engineering Services, Motorsports, and Special Applications; Large and Small Engine Components; Industrial Thermal Management; Compressors; Control Units; and Front-end Modules for automobile manufacturers. With this structure, we offer our customers a high degree of flexibility as well as tailor-made applications and components and support them in the development of specific new products.

GROUP STRATEGY

Our group strategy is based on the analysis of relevant megatrends from which we have derived various future scenarios. Four of these megatrends are having a particularly powerful impact on the automotive industry:

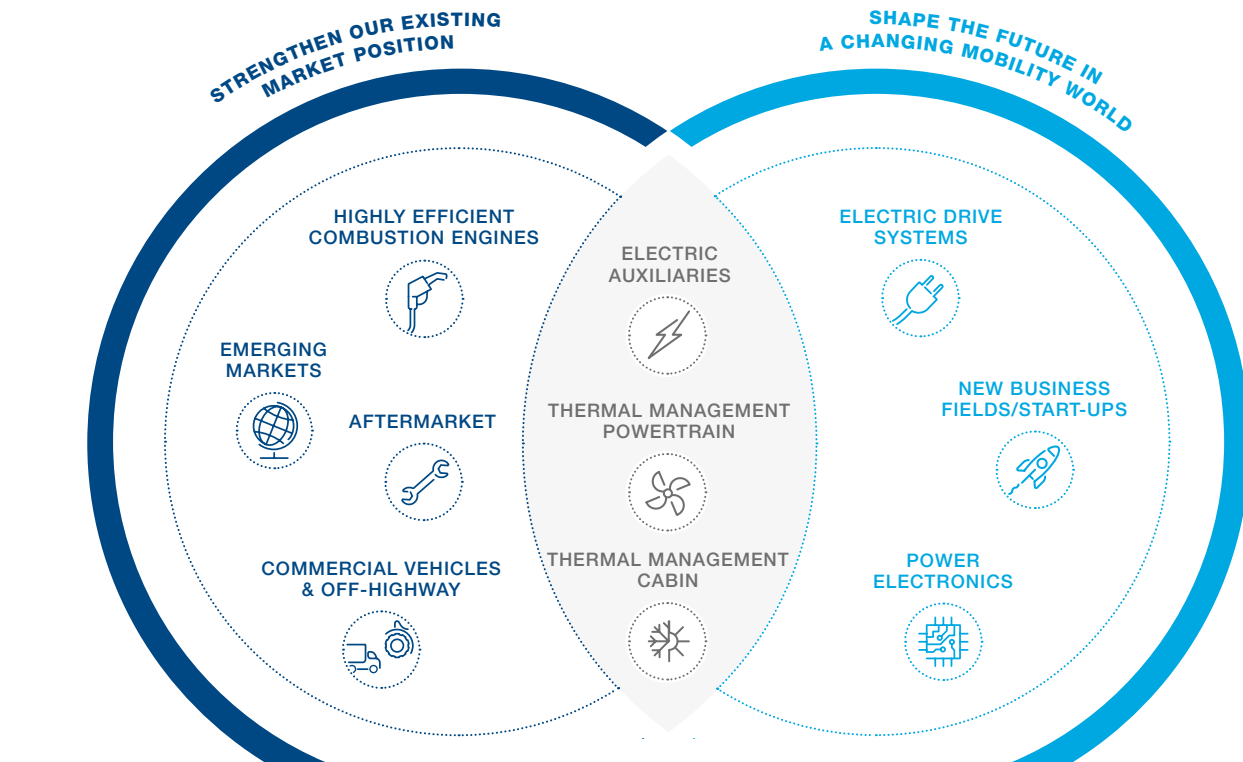
- Climate change (including the political climate targets resulting from it)
- Increasing urbanization
- Global population growth
- The increasing importance of Asia as an economic region

These megatrends call for new mobility solutions and present the automotive industry with new challenges. In addition to the expansion of car sharing and public transport, the increasing electrification of the powertrain, the growing digital networking of vehicles, and autonomous driving are taking center stage. At the same time, the customer landscape is also changing, through new suppliers of electric vehicles, for example.

How quickly this structural change will take place depends on which technical solutions will hold their ground in the market, on the one hand, and on political demands, on the other. For passenger cars and light commercial vehicles in urban distribution transport, technologies such as hybrid and electric drives will continue to gain in importance alongside alternative usage models such as car sharing. As far as heavy-duty commercial vehicles are concerned, however, alternatives to the combustion engine will play a less significant role in the short to medium term.

Overall, we expect the combustion engine to remain a central feature of mobility both for passenger cars and for commercial vehicles. In view of the worldwide increase in vehicle production and the fact that combustion engines are also used in hybrid vehicles, we anticipate that the demand for corresponding components and systems will initially continue to grow.

DUAL STRATEGY



MAHLE has derived a dual strategy on the basis of these assumptions and findings:

1. We will continue to be a technology leader in the ongoing development of the combustion engine and ensure the highest possible level of competitiveness in terms of quality and costs. In the process, we will especially concentrate on unlocking further CO₂ savings potential with regard to friction, thermal management, and the air pathway.
2. At the same time, we will push ahead with the development of innovative solutions and products for alternative powertrain technologies and expand the appropriate business segments. Business segments that are independent of the OEM business with the passenger car combustion engine are today already accounting for more than 50 percent of group sales—and we intend to consistently increase this share.

Our dual strategy is also reflected in our thermal management activities. Overall, the importance of efficient thermal management will continue to grow—both in conventional and in alternative drive systems. Over the years, we have steadily expanded this business segment, developing many thermal soaking innovations and launching them on the market. We will systematically pursue this innovative approach.

Likewise, we will substantially intensify our activities in electronics and mechatronics over the years ahead. In an initial step, we have expanded our creation of value to include electronic components and are thus able to offer our customers complete systems solutions for electric drives. Furthermore, we intend to expand our portfolio for electric motors both for passenger cars and for two-wheeled vehicles, which are gaining ever-greater importance in urban mobility around the world.

Overall, we are pursuing a holistic approach in terms of both the optimization of the combustion engine and the development of solutions for alternative powertrain technology. Our vehicle concept MEET—one of our answers for mobility in the city of the future—demonstrates that it is not the electric motor alone that determines efficiency in an electric vehicle, but instead the interplay of various technologies.

Against the background of our dual strategy, we review our portfolio as well as the strategic direction and economic performance of the group on an ongoing basis. It is our strategic goal to evenly distribute sales across the core markets of Europe, North and South America, and Asia/Pacific—with a particular focus on the Asian growth market. We continue to consider our global presence as an important prerequisite for proximity to our customers and for developing innovations in line with the demands of the individual markets.



With a significant organic sales growth of 6.4 percent, we further expanded our market position in 2017.



We have increased the result from business activities to EUR 262 million and thus fulfilled our expectation from the start of the year.



Cash flows from operating activities completely covered our cash requirements for investments.

Report on economic position

ECONOMIC CONDITIONS

Overall economic development

According to the January 2018 report by the International Monetary Fund (IMF), the broad upturn in the global economy held in the 2017 business year. The economic recovery from the second half of 2016 continued in 2017. Overall, global growth amounted to 3.7 percent, which exceeded not only the expectations from the beginning of 2017 but also the economic performance of previous years. While the advanced economies grew at 2.3 percent, the emerging markets and developing economies achieved growth of 4.7 percent.

Due to increased export figures and strong domestic demand, the economy in the euro zone expanded by 2.4 percent during the year under review and hence more strongly than in 2016. Germany saw very positive development with growth of 2.5 percent; economic growth in Italy and France also noticeably gained momentum after a lull. The continued recovery in Spain only slowed slightly with an increase of 3.1 percent.

In the USA, the economy grew by 2.3 percent thanks to the favorable business climate. Brazil broke free from the recession of previous years as a result of increasing consumption and recorded growth of 1.1 percent.

At 6.8 percent, the Chinese economy experienced a similarly strong development to 2016 (+6.7 percent), in part as a consequence of measures taken by the central government to support demand. Japan also showed positive development, with growth of 1.8 percent thanks to strong global demand and fiscal measures.

Exchange rate development

As an internationally operating company, MAHLE transacts business in foreign currencies. Exchange rate movements play a major role given that they influence the conversion of financial data for accounting purposes. In the period under report, exchange rate development was mixed.

Some major trading currencies devalued against the euro in 2017 as measured by the average market price compared with the previous year. In addition to the Chinese renminbi (-4 percent) and the Japanese yen (-5 percent), this also affected the Argentine peso and the British pound, which fell significantly by -15 and -7 percent respectively. On average over the year, the U.S. dollar also devalued slightly against the euro. The opposite was the case for the Brazilian real and the Polish zloty, which appreciated against the euro by 7 and 2 percent respectively in the year under review.

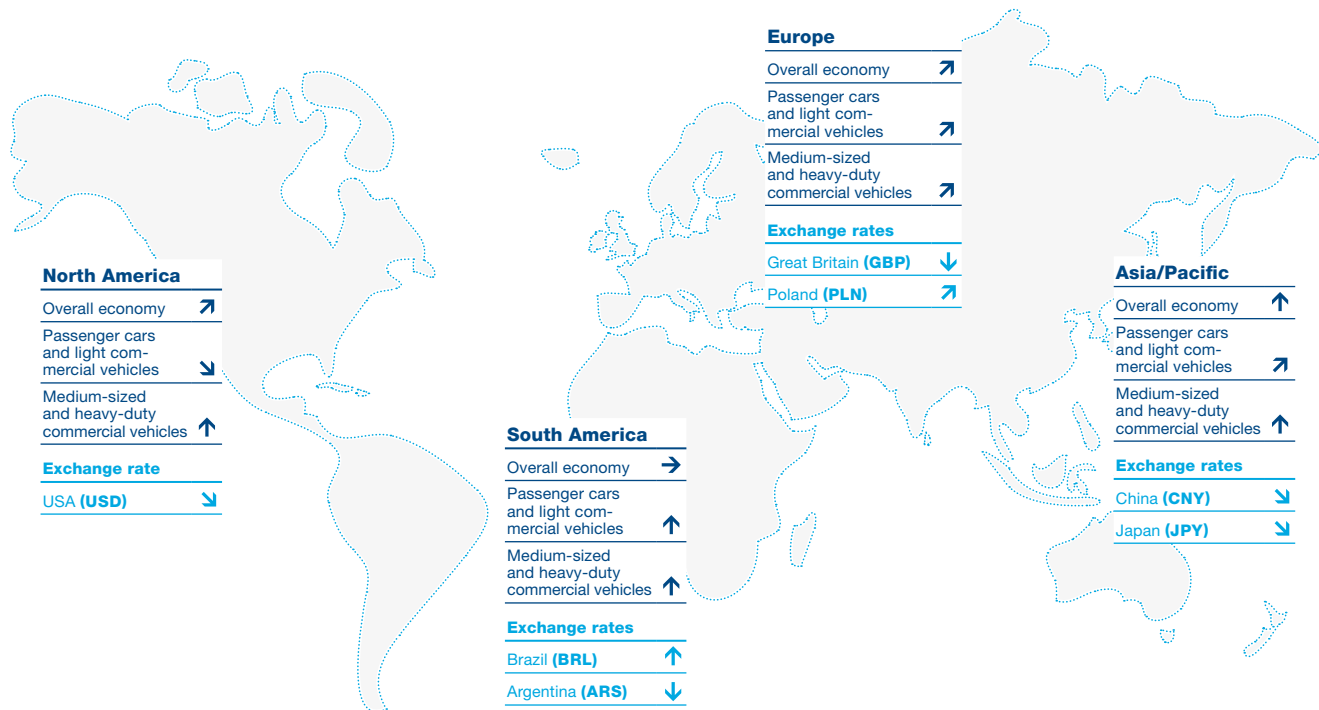
MAHLE counters the risks associated with severe exchange rate fluctuations with a process known as “natural hedging.” In this way, our strategy—of operating production locations in all major sales regions around the world—aims to increase the group’s independence from currency fluctuations.

Development of the markets for passenger cars and light commercial vehicles

As expected, global production of passenger cars and light commercial vehicles increased slightly by a good 2 percent in the 2017 business year in comparison with the previous year.

In Europe, growth of 3 percent was mainly due to the continued recovery of the Russian market; western European countries also benefited from an increase in demand in southern Europe. In North America, however, production fell by about 4 percent. This was due to sluggish demand in the USA. As expected, it was slightly below the previous year’s level, despite the replacement purchases made necessary by hurricanes at the end of the year.

DEVELOPMENT OF THE MARKETS 2017



Exchange rate development of various foreign currencies against the euro (EUR) as measured by the average market price compared with the previous year: Argentine peso (ARS), Brazilian real (BRL), British pound (GBP), Chinese renminbi (CNY), Japanese yen (JPY), Polish zloty (PLN), U.S. dollar (USD)

In South America, vehicle production increased following several years of stagnation, particularly in Argentina and Brazil. Overall, the production volume increased by 18 percent, which was attributable not only to increased demand but also to the very low stocks held by vehicle manufacturers.

The Asia/Pacific region recorded subdued growth of 2 percent compared with the previous year. In China, demand declined significantly in the year under review: the tax advantage for the purchase of vehicles with displacements of less than 1.6 liters was halved at the beginning of 2017; the market responded and, with growth of 2 percent, was only slightly above the previous year's level. In Japan, stable domestic demand had a positive effect on local manufacturing (+5 percent), while production in India rose strongly by about 8 percent.

Development of the markets for medium-sized and heavy-duty commercial vehicles

In comparison with the previous year, the production of medium-sized and heavy-duty commercial vehicles increased by around 15 percent, a significant rise that exceeded our expectations.

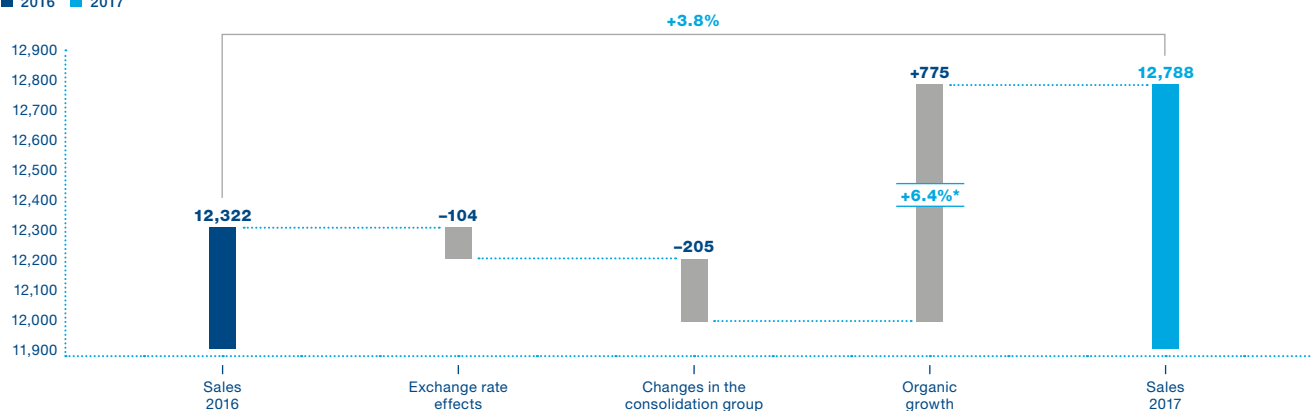
In Europe, production of medium-sized and heavy-duty commercial vehicles increased by almost 4 percent. Manufacturers benefited above all from rising demand on the Russian market—while western European markets only grew moderately. In North America, the market for medium-sized and heavy-duty commercial vehicles recovered more strongly than expected: the production increase of just under 10 percent is largely attributable to a recovery in heavy-duty trucks. In South America, the general upturn led to a rise in production amounting to around 23 percent.

With double-digit growth, development in the Asia/Pacific region was again positive. In China in particular, production expanded significantly and—contrary to our more cautious forecasts—achieved an increase of around 34 percent. This high growth can be attributed, among other factors, to new legal regulations, greater investments in infrastructure, and cyclical requirements for spare parts. In India, however, production fell by around 4 percent. This drop is due to a special effect resulting from the new Bharat IV emission standard.

SALES BRIDGE

in EUR million

■ 2016 ■ 2017



* Calculated on 2016 sales adjusted for deconsolidations

BUSINESS DEVELOPMENT

Development of the MAHLE Group

In the 2017 business year, the MAHLE Group increased its sales by 3.8 percent to EUR 12.8 billion. We thus achieved a new record high and also consolidated our market position among the world's 20 largest automotive suppliers. The increase resulted almost exclusively from organic sales growth, which was significantly higher than in recent years. The sale of the industrial filtration business in October 2016 and alterations to the consolidation group in 2017—primarily the sale of our German forging activities—had a negative impact on our sales in the amount of EUR 205 million. Exchange rate developments adversely affected group sales by EUR 104 million. This resulted in an organic sales growth adjusted for these effects of 6.4 percent, which significantly exceeded our rather moderate forecast at the start of the year.

In the year under review, the development of the MAHLE Group was dominated by the implementation of our dual strategy. This strategy drives forward the ongoing development of the combustion engine as well as innovative solutions for the electrification of the powertrain. By expanding the Mechatronics division to include the Electronics product group, we are advancing the search for alternative technologies of this kind. Since the end of May 2017, Nagares—now called MAHLE Electronics—has been strengthening our systems competence in drive systems and drive elements. This move into vehicle electronics is an important step on MAHLE's way toward integrated electric drives and units. In addition to control and power electronics for electric auxiliary components, MAHLE Electronics also develops and manufactures systems for thermal management and e-mobility.

With the acquisition of the start-up company O-Flexx, we have tapped into the field of thermoelectrics in the year under review. This technology can be used to convert heat into electrical energy and produce heating or cooling using electrical power. For us, this represents a step toward solving the conflict between electric cruising range and thermal comfort in electrically driven vehicles. With our new minority holding in the

Brain Bee company, we are also enhancing our technological expertise in vehicle diagnostics as well as in emission management, A/C servicing, and fluid management.

The realignment of the group and the associated portfolio decisions led to the sale of some business activities. We sold our German forging activities and our shares in the Brazilian components manufacturer MAHLE Metal Leve Miba Sinterizados in the year under review. Moreover, the sale of our holding in the joint venture Bosch Mahle Turbo Systems (BMTS) was agreed. This is consistent with our strategy of prioritizing investment in new technology and areas of growth.

The additional measures and initiatives introduced by MAHLE in the year under review include a project intended to optimize selling and administration expenses. The aim is to reduce these costs by means of lean management, process automation, and the development of shared service centers in Poland and Mexico. The focus is also on quality, and the quality offensive from 2016 continued in 2017. The objectives in this campaign include strengthening employees' quality awareness—and not only in production but also in other areas of the business.

Development of the business segments

In the year under review, we generated an increase in sales in all of our business units, the Mechatronics division, and the profit centers. Our Engine Systems and Components business unit in particular recorded very strong organic growth—that is to say, growth adjusted for exchange rate and consolidation effects.

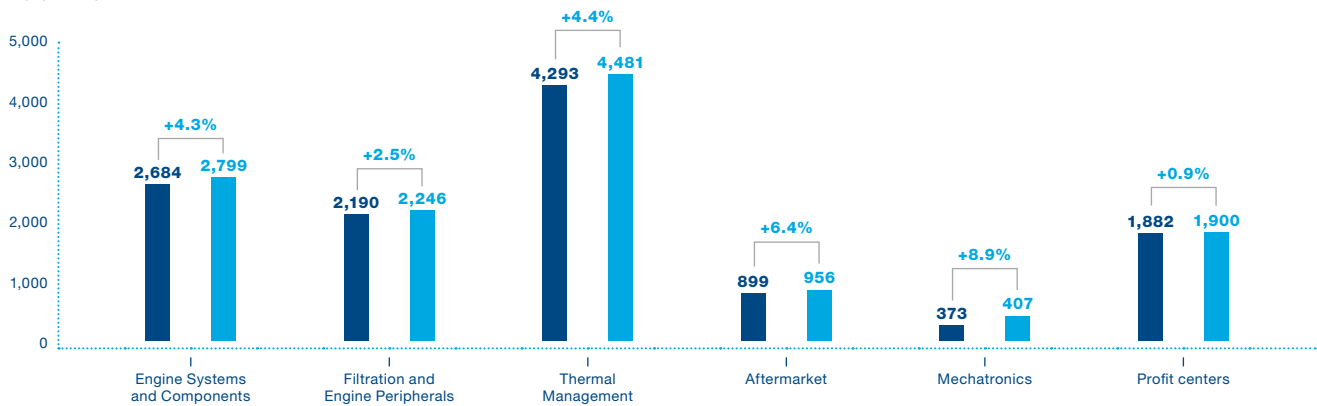
Engine Systems and Components business unit

The Engine Systems and Components business unit achieved sales of EUR 2,799 million in the year under review, which corresponds to a growth of 4.3 percent in comparison with the previous year. At around 9 percent, the business unit recorded even stronger organic sales growth. The sale of the forging activities in Germany and of MAHLE Metal Leve Miba Sinterizados resulted in a negative effect on sales of EUR 90 million. We generated our largest sales increases with steel pistons for commercial vehicles, gasoline engine pistons for passenger cars,

SALES BY BUSINESS SEGMENT

in EUR million

■ 2016 ■ 2017



and complete piston systems. The assembled camshaft business also developed very well; correspondingly, we expanded production in Germany and established an additional location in Krotoszyn/Poland. From a regional perspective, development was particularly successful in the Asia/Pacific region and first and foremost in the Chinese market for commercial vehicles.

Filtration and Engine Peripherals business unit

At EUR 2,246 million, we generated sales growth of 2.5 percent in this business unit. Adjusted for exchange rate effects, we achieved an increase of around 4 percent, with the greatest sales growth seen in Europe and China. Once again, the products generating the highest sales were air intake and air filter modules as well as oil filters; the fastest growing products included oil filters, cylinder head covers, and oil coolers. In the year under review, we also introduced a new product: our CareMetix® cabin air filter, which provides protection not only against pollen, bacteria, mold, and fine particulates, but also against unpleasant odors.

Thermal Management business unit

With sales amounting to EUR 4,481 million, the Thermal Management business unit generated the greatest sales in the MAHLE

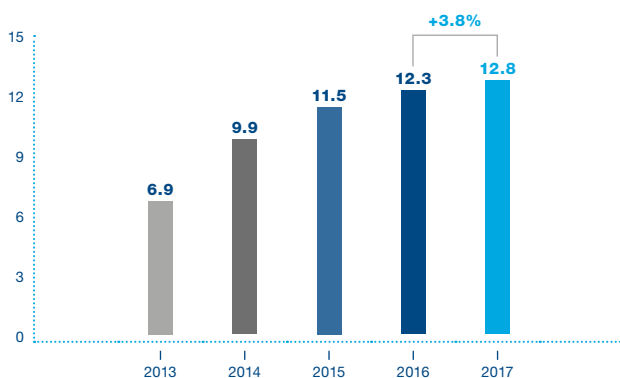
Group. Compared with the previous year, sales rose by 4.4 percent. Adjusted for slightly negative exchange rate effects, this resulted in organic growth of 5 percent. With particular regard to products for electric vehicles, we achieved significantly higher sales than in 2016, which was also the case for charge air coolers and cooling modules. From a regional perspective, Europe continues to generate our highest sales. In the Asia/Pacific region, our sales grew substantially, especially in the Chinese market where state subsidy programs and legislative changes affecting vehicles had a positive impact on our business. A slow market recovery in South America also resulted in higher sales than in the previous year.

Aftermarket business unit

In this business unit, we generated sales of EUR 956 million, a substantial 6.4 percent greater than in 2016. Adjusted for slightly positive exchange rate effects and for the financial impact of the integration of the Test Systems business area from one of our profit centers, organic growth amounted to a good 4 percent. North America and Europe were the growth engines for the Aftermarket business unit. In North America, the most important drivers—in addition to the impact of internal regrouping—were growth rates in gaskets and in the Service Solutions business area. Our business also continued to grow in the Asia/Pacific region, largely due to the demand for filter products on the Chinese market. In all regions, we experienced strong sales growth in products for thermal management.

DEVELOPMENT OF SALES 2013–2017

in EUR billion



Mechatronics division

In the Mechatronics division, we achieved sales amounting to EUR 407 million in the year under review. At EUR 24 million, the acquisition of MAHLE Electronics contributed toward the sharp increase of 8.9 percent in comparison with the previous year. We realized organic growth of around 4 percent. During the year under review, the strongest demand was seen in starter motors and alternators as well as in electric drives and actuators. The market for agricultural machines and the off-road sector developed particularly positively. Overall, the division pushed ahead with the development and industrialization of electronic traction drive systems for the e-mobility sector and thereby also intensified cross-segment collaborative projects.

Profit centers

The profit centers—which serve specific market and customer segments—increased their sales by 0.9 percent to EUR 1,900 million. Adjusted for exchange rate effects and structural changes, considerable organic growth of about 11 percent was achieved. In comparison with the previous year, the sale of the industrial filtration business at the end of 2016 has to be taken into account. Similarly, the Test Systems business area was separated from the Engineering Services, Motorsports, and Special Applications profit center and integrated into the Aftermarket business unit at the beginning of 2017. The Compressors and Large and Small Engine Components profit centers achieved substantial growth; the Front-end Modules profit center operating as a joint venture also markedly increased its sales.

Development of the regions

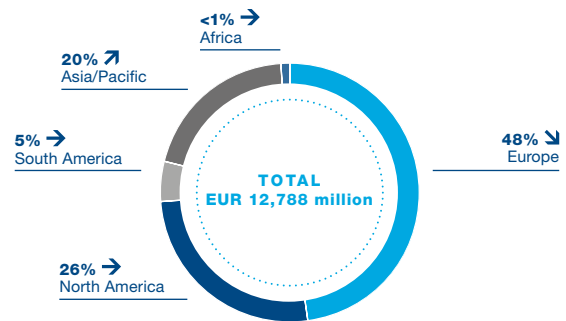
With production and development locations in 32 countries, the MAHLE Group has a presence around the globe. This international positioning ensures we are close to our customers and able to cooperate with them intensively while also responding flexibly to regional market fluctuations.

In 2017 we recorded a positive market development worldwide. In all regions other than the Africa region we achieved notable sales growth, with the South America and Asia/Pacific regions seeing the greatest increases. The detail of the development in the regions is as follows, based on sales by country of production.

Europe

In Europe we generated overall sales of EUR 6,161 million, which is 0.7 percent higher than in 2016 and once again almost half of our total group sales. Our organic growth amounted to a good 3 percent and was strongest in our markets in eastern Europe. Our products in the thermal management range experienced particularly strong demand; sales in the Filtration and Engine Peripherals business unit also increased significantly.

SALES BY REGION



The directional arrows (↗ ↘ ↙ ↚) show the change in the proportion of sales compared with the previous year

North America

At EUR 3,390 million, we realized well over a quarter of our group sales in North America. In comparison with the previous year, sales increased substantially (+3.8 percent) despite the downward trend in the U.S. market for passenger cars and light commercial vehicles. Adjusted for negative exchange rate effects, organic growth in the region amounted to around 6 percent. Our profit centers and the Aftermarket business unit performed particularly well.

South America

After years of decline due to market conditions, the South America region was back on a clear growth path in 2017. Brazil in particular contributed to strong sales growth. Overall, our sales in the region rose by 18.1 percent to EUR 676 million; we recorded a particularly strong increase in the Engine Systems and Components and Thermal Management business units. Adjusted for positive exchange rate effects—primarily as a result of the revaluation of the Brazilian real—organic growth amounted to 16 percent.

Asia/Pacific

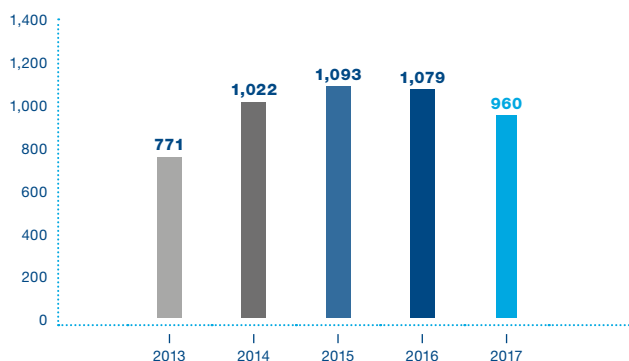
Our sales in the Asia/Pacific region increased by 8.6 percent to EUR 2,514 million. The development of two markets was particularly pleasing in this context. First, China, where we experienced both our strongest sales and our strongest growth in 2017. Growth impetus came mainly from medium-sized and heavy-duty commercial vehicles. Second, India, where sales also increased markedly. Overall, the Engine Systems and Components and Thermal Management business units showed very significant growth—that is, at a double-digit rate. Adjusted for structural changes and for strong negative exchange rate effects, organic growth amounted to a good 12 percent.

Africa

With sales of EUR 47 million, the Africa region is our smallest market; in the year under review, we recorded a drop of 2.5 percent here. Sales were mainly realized by the Thermal Management business unit, which operates two locations in South Africa.

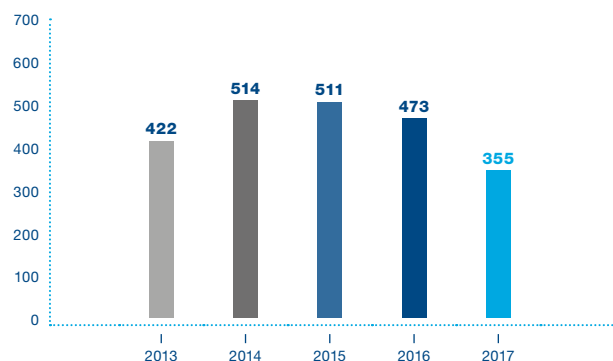
DEVELOPMENT OF EBITDA 2013–2017

in EUR million



DEVELOPMENT OF EBIT 2013–2017

in EUR million



NET ASSETS, FINANCIAL POSITION, AND RESULTS OF OPERATIONS

Results of operations

In line with the positive development of sales, the MAHLE Group improved the result from business activities from EUR 228 million in the previous year to EUR 262 million in the 2017 business year. Our expectation from the beginning of the year of achieving a significant increase in this key figure was thus fulfilled. However, our operating income figures were primarily impacted by significant increases in material prices, operational pressures in individual business segments, and special effects from high warranty expenses. EBITDA reduced accordingly from EUR 1,079 million to EUR 960 million. The operating result, a key figure similar to EBIT used for internal steering, but adjusted

for individual circumstances, was also below the previous year's value.

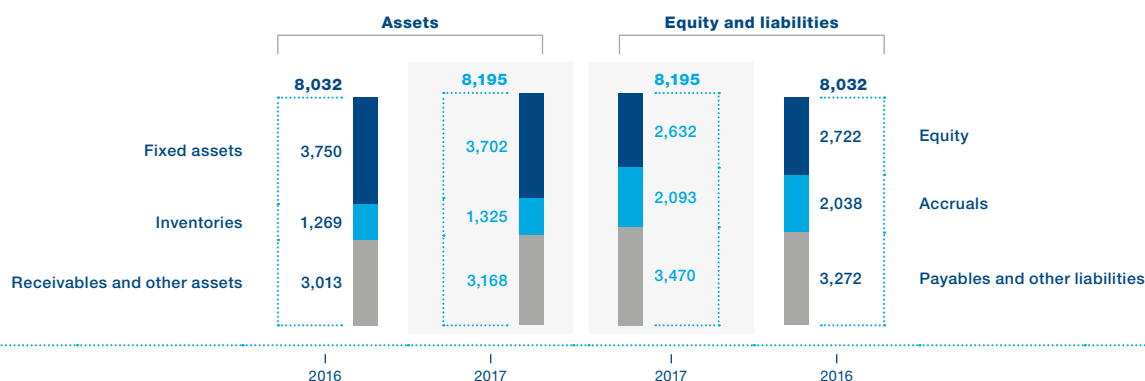
The key income statement items developed as per the following details: Cost of sales rose from EUR 9,994 million in 2016 to EUR 10,653 million in the year under review. Cost of sales also increased in relation to sales—to 83.3 percent. This increase is essentially attributable to the abovementioned increases in material prices, high expenses arising from warranty claims, operational pressures in individual business segments, and consolidation effects in connection with the sale of the industrial filtration business in 2016. In absolute terms, we maintained selling expenses and general administrative expenses at the previous year's level, which is attributable to our increased operational efforts and economies of scale resulting from the

CONSOLIDATED INCOME STATEMENT

in EUR million	2017	in %	2016	in %
Sales	12,788	100.0	12,322	100.0
Cost of sales	-10,653	-83.3	-9,994	-81.1
Gross profit on sales	2,135	16.7	2,328	18.9
Selling expenses and general administrative expenses	-1,091	-8.5	-1,089	-8.8
Research and development expenses	-748	-5.9	-753	-6.1
Other operating income and expenses	107	0.9	-13	-0.1
Financial result	-141	-1.1	-245	-2.0
Result from business activities	262	2.1	228	1.9
Taxes on income	-125	-1.0	-132	-1.1
Result after taxes	137	1.1	96	0.8
Other taxes	-35	-0.3	-33	-0.3
Consolidated net income	102	0.8	63	0.5
EBIT	355	2.8	473	3.8
EBITDA	960	7.5	1,079	8.8

BALANCE SHEET STRUCTURE OF THE MAHLE GROUP

in EUR million



larger business volume. The ratio in relation to sales fell from 8.8 percent to 8.5 percent. At EUR 748 million, our research and development expenses remained at the high level of the previous year and are supporting the targeted implementation of our dual strategy. The balance from operating income and expenses was very positive at EUR 107 million in the 2017 business year; this mainly resulted from valuation measures in connection with the agreed sale of the joint venture BMTS as well as from reduced expenses from exchange rate effects. Owing to the acquisitions made in previous years—with the exception of research and development expenses—all cost items were adversely impacted by the effects of purchase price allocations in accordance with the German Commercial Code (HGB). In total, these amounted to EUR 140 million and include EUR 49 million relating to planned amortization of goodwill.

The partly significant improvement in cost ratios relating to selling and administration expenses, research and development expenses, as well as other operating expenses could not offset the negative influences of material prices and the special effects arising from increased warranty expenses. Accordingly, EBIT decreased to EUR 355 million and the EBIT margin fell to 2.8 percent (previous year: 3.8 percent). Adjusted for the effects of the purchase price allocations and the amortization of goodwill, the EBIT margin was at 3.9 percent.

Below EBIT, we recorded a significant improvement in financial result due, among other reasons, to the impairment of the carrying amount in our joint venture BMTS, which did not have to be repeated. Expenses from the profit and loss transfer were similarly reduced in the year under review. The higher net expense from the discounting of future pension payments and the increase in the value of pension assets, however, had an opposite effect. Overall, we generated a considerably improved result from business activities.

Taxes on income amounted to EUR 125 million. This includes the tax expenses incurred in the United States from the one-time taxation of previously retained foreign profits as well as expenses from the devaluation of deferred taxes due to the reduction in the tax rate. Both effects are a consequence of the tax reform in the USA and in total amount to a sum in the low double-digit million euro range. At 48 percent, our income tax rate has fallen sharply in comparison with the previous year but remains high. This is largely due to high planned amortization of goodwill and losses from associated companies. While both issues put a burden on the commercial result, they did not lower the tax base to the same extent. As a result, we increased the net income for the year from EUR 63 million to EUR 102 million.

Net assets position

There was a slight rise of 2.0 percent in the balance sheet total to EUR 8,195 million in the 2017 business year. In comparison with sales, the balance sheet total thus grew more weakly, which is partially attributable to negative exchange rate effects as at the balance sheet date of December 31, 2017. At the same time, we reduced our net debt by EUR 70 million to EUR 1,156 million.

Fixed assets declined slightly by EUR 48 million to EUR 3,702 million in the year under review. Scheduled amortization—primarily of goodwill and the hidden reserves, which are disclosed as part of purchase price allocations—led to a substantial drop in intangible assets. Although our investments in property, plant, and equipment exceeded depreciation, foreign currency exchange rate effects in particular led to a slight decline in tangible fixed assets. The rise in financial assets was primarily a consequence of the write-up on the carrying amount in the joint venture BMTS.

As at the balance sheet date, current assets totaled EUR 4,170 million, thus corresponding to an increase of EUR 178 million

compared with the previous year. Inventories grew in line with sales, whereas trade receivables only rose disproportionately to EUR 1,980 million owing to exchange rate effects. This increase was offset by a decline in other receivables and other assets, which enabled us to improve our commitment of funds. With a plus of EUR 131 million, securities and liquid funds grew significantly to EUR 504 million in the year under review as a consequence of positive cash flows.

At EUR 2,632 million, equity was EUR 90 million below the previous year's level as at the balance sheet date, despite the positive net income for the year. In addition to dividend distributions to the MAHLE Foundation and the allocation of earnings to minority shareholders, exchange rate effects in particular played a significant role here. The equity ratio fell accordingly to 32.1 percent (previous year: 33.9 percent). Accruals increased slightly in the year under review to EUR 2,093 million. While accruals for pensions remained at the previous year's level as at the balance sheet date, additions to personnel, warranty, and risk accruals exceeded consumptions and releases. In addition, we have set up appropriate tax accruals for future payments in connection with the U.S. tax reform. Trade payables, on the other hand, decreased to EUR 1,234 million as at the balance sheet date—mainly due to exchange rate effects. Liabilities to banks increased to EUR 830 million, primarily due to the issue of German private placement loans (Schuldscheindarlehen). As no bonds were issued in the year under review, the corresponding liability remains at EUR 829 million. By contrast, other liabilities rose as at the balance sheet date by a noteworthy EUR 161 million. The increase is mainly due to liabilities in connection with warranty claims.

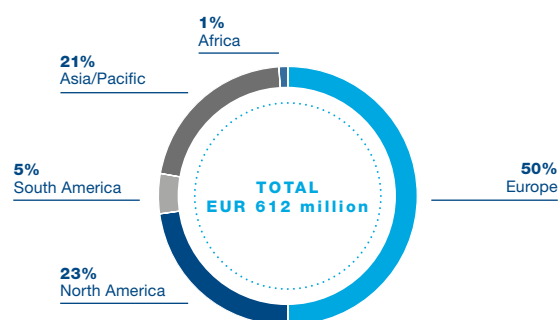
NET DEBT* REDUCED TO

1,156
million euros

* Financial liabilities to banks and on capital market less cash-in-hand, bank balances, and checks

Besides the circumstances depicted in the balance sheet, as at December 31, 2017, there were significant off-balance-sheet transactions. These consisted, on the one hand, of rental and leasing agreements for land and buildings to a sum of EUR 130 million (previous year: EUR 148 million) and, on the other, to factoring amounting to EUR 129 million (previous year: EUR 125 million), which we are utilizing to diversify financing sources.

INVESTMENTS BY REGION



Investments

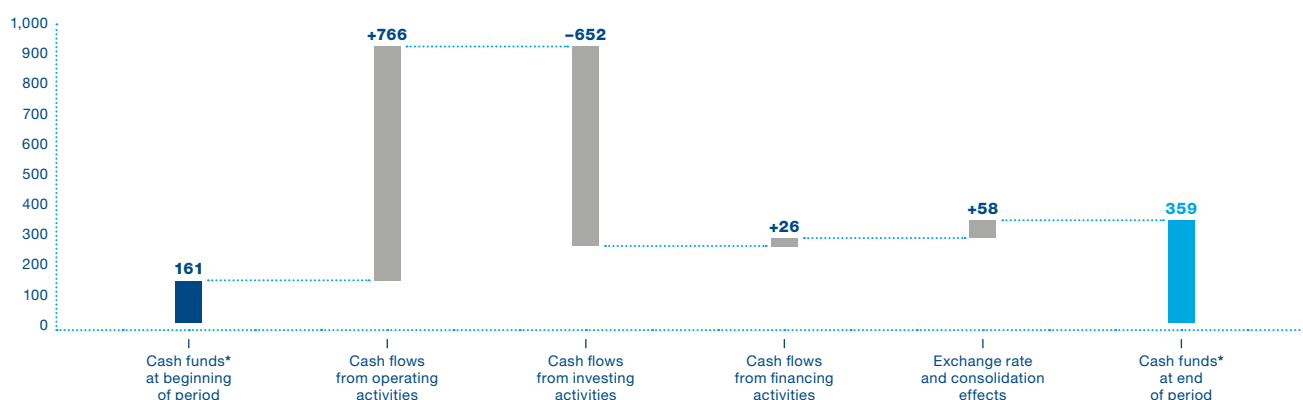
In the 2017 business year, we invested EUR 612 million in property, plant, and equipment (previous year: EUR 563 million). The investment ratio in relation to sales was 4.8 percent, up from 4.6 percent in the previous year. We also significantly increased our investments in relation to depreciation; with a ratio of around 137 percent, the investments substantially exceeded the depreciation on tangible fixed assets (previous year: 129 percent).

The regional focus of our investing activities in the year under review was again on North America and China and, in Europe, on Germany and eastern Europe. At approximately 50 percent, European markets accounted for the majority of capital expenditure on tangible fixed assets. In addition to investments connected with customer projects, as at our mechatronics plant in Slovenia, plants and production facilities were expanded particularly in Poland, Czechia, and Romania. Capacities in Germany were also expanded, such as at the Leibertingen location. Almost one quarter of the investments were made in North America, where the focus was on expanding locations in the USA and Mexico. Well over a fifth of capital expenditure on tangible fixed assets took place in the Asia/Pacific region and the majority in China, where existing plants in various locations were expanded and additional production facilities constructed. Investment was also made in plant expansions in Japan.

Alongside capital expenditure on tangible fixed assets, the strategic acquisition of MAHLE Electronics in Spain on June 1, 2017, also served to set the MAHLE Group on a course for further growth in accordance with our dual strategy. With this acquisition, we have expanded our Mechatronics division and strengthened our competence in vehicle electronics.

CASH FLOWS

in EUR million



* Cash-in-hand, bank balances with an initial term less than 3 months, and checks less liabilities to banks with an initial term less than 3 months

Financial position

Over the past few years and in line with its global growth, MAHLE has established a broader basis for its group financing and improved its diversification. Our financing portfolio not only includes syndicated credit lines, German private placement loans, and bilateral loans, but also euro-denominated corporate bonds. With our conservative financing policy, we are pursuing the objective of an implicit investment grade risk. This positioning is evident in the moderate leverage and adequate equity ratio.

In the 2017 business year, the term of the existing syndicated credit line of EUR 1,600 million was extended with our core banks by one year to July 2022. To refinance matured German private placement loans and finance the acquisition of MAHLE Electronics, among others, we issued German private placement loans amounting to EUR 250 million in June 2017. As at the end of the year, the unused but firmly committed credit lines amounted to EUR 1,710 million which, along with the liquid funds, contributed to the financial stability of the group. The cash holding is diversified across various banks that are selected according to rating criteria.

In the year under review, we achieved positive cash flows of EUR 140 million. At EUR 766 million, cash flows from operating activities were lower than the previous year's value. This was mainly due to the decrease in our operating profit figure, EBITDA. Positive impacts resulting from the change in balance sheet items could not compensate for this effect. In the 2017 business year, cash flows from investing activities were marked by high capital expenditure on tangible fixed assets and by payments in connection with the acquisition of MAHLE Electronics. Accordingly, cash outflow amounted to EUR 652 million. Overall, we were thus able to completely cover the cash requirements for investments in fixed assets through cash flows from operating activities. Cash flows from financing activities were positive. The cash receipts surplus of EUR 26 million largely resulted from the reduced level of repayments compared with the previous year.



In the course of the growth of our company, our headcount rose by more than 1,600 employees in the year under review.



With the expansion of our research and development activities, we are contributing to climate-friendly mobility.



Our MAHLE Quality Improvement Program is resulting in greater quality awareness in all areas. Our aim is to achieve “best-in-class” quality in each of our business segments.

Additional key performance indicators

HUMAN RESOURCES

As at the reference date of December 31, 2017, the MAHLE Group employed 78,277 people worldwide and thus 2.1 percent more than in the previous year, 2016. The increase of 1,645 employees resulted on the one hand from the positive development in demand, which was accompanied by an increase in staffing requirements, and on the other hand from the takeover of MAHLE Electronics. The sale of our forging activities reduced the overall headcount by 632 people.

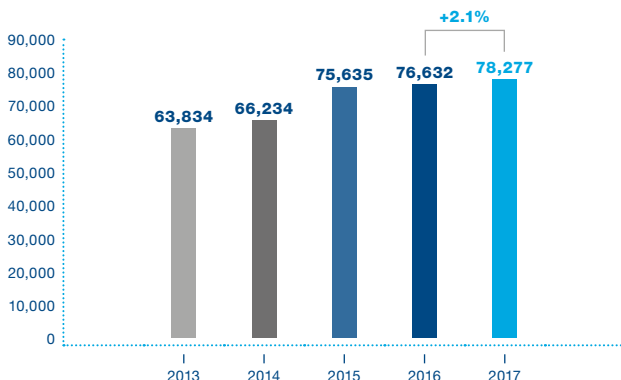
Our employees are the key to the future viability of the MAHLE Group. Their know-how, motivation, and commitment are the foundation of our successful development. This is why we once again invested intensively in the training and further education of our employees to the sum of EUR 13.0 million in the year under review (previous year: EUR 11.9 million). In addition to a variety of workplace-related briefings, our employees took part

in 107,643 qualification activities in the year under review. The global absence rate (excluding joint ventures) increased slightly in the year under review, amounting to 4.0 percent (previous year: 3.9 percent).

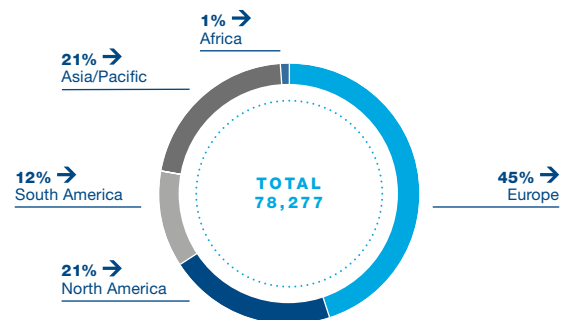
Headcount by region

In Europe, the staffing level rose slightly by 308 people in 2017 to 34,909 employees in total. This was mainly due to new appointments at our eastern European locations (primarily in Poland and Slovenia) on account of the positive market development and associated increase in production capacity utilization. A further 489 new employees joined the MAHLE Group owing to the acquisition of MAHLE Electronics. By contrast, the headcount shrank as a result of rationalization and restructuring measures in western Europe, and the number of employees in Germany fell as a consequence of the sale of our forging business. The increase in the staffing level in North America of 5.7 percent to 16,469 employees as at the reference

HEADCOUNT DEVELOPMENT 2013–2017



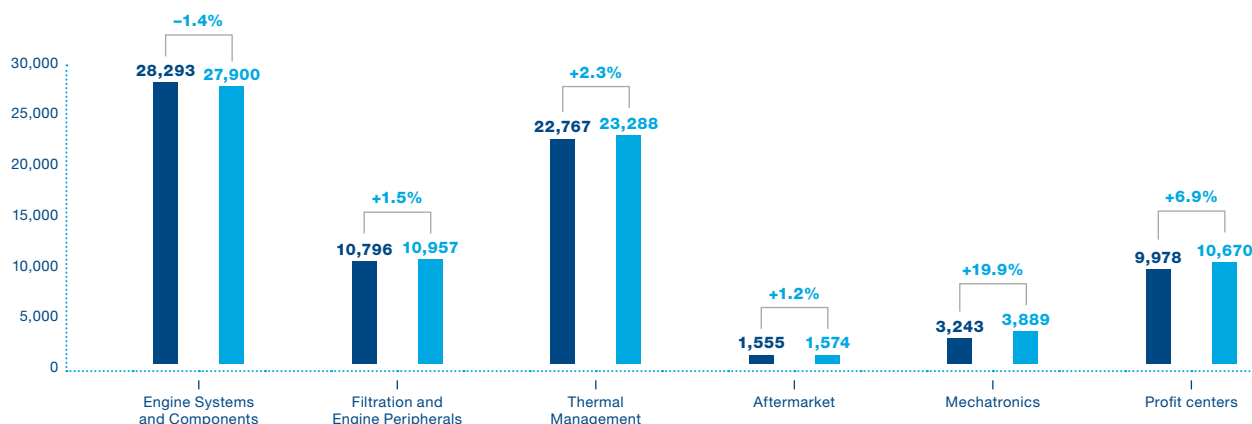
HEADCOUNT BY REGION



The directional arrows (↗ ↘) show the change in the proportion of employees compared with the previous year

HEADCOUNT BY BUSINESS SEGMENT

■ 2016 ■ 2017



date of December 31, 2017, is mainly due to the good order levels in Mexico. In South America on the other hand, primarily the sale of our participation in MAHLE Metal Leve Miba Sinterizados reduced the number of employees by 83 compared with the previous year to 9,255 employees. In the Asia/Pacific region, we expanded our locations—above all in China and India—in the wake of rising demand. This was associated with an increase in the headcount to 16,597 employees. By contrast, we recorded a slight decline in the number of people employed in Africa to 1,047.

Headcount by business segment

At the close of the year under review, 36 percent of our staff were employed in our Engine Systems and Components business unit with its 45 locations. The slight decline of 393 in the number employed primarily resulted from the abovementioned sales of business activities. We employed around 30 percent of our total workforce at the 38 locations of the Thermal Management business unit—a slight upward trend in the year under review. The Filtration and Engine Peripherals business unit also recorded a modest increase in personnel in its 37 plants and thus employed 14 percent of the entire group workforce. In Aftermarket, our smallest business unit in terms of personnel, the staffing level was marginally higher than in the previous year. Our Mechatronics division expanded particularly strongly in the year under review, above all due to the significant rise in the number of employees as a result of the acquisition of MAHLE Electronics. The headcount in our profit centers also grew significantly in 2017. This was mainly due to the good order levels in the Compressors profit center.

Statement on corporate management (female quota figures)

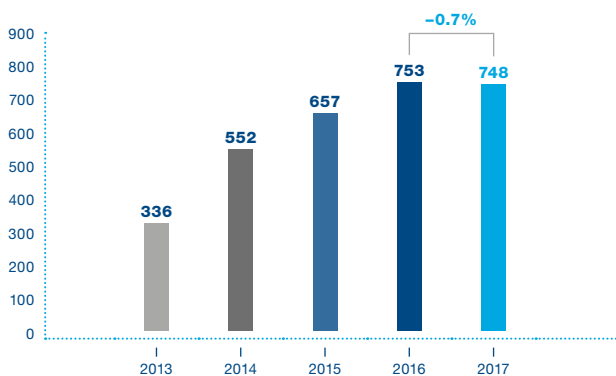
We consider the promotion of diversity in our company—be it in terms of gender, age, or culture—to be an important action area. We are convinced that diversity strengthens our innovative strength and thus our future viability. We have therefore set the following targets and deadlines for the advancement of women into management positions.

For the period until June 30, 2022, the Supervisory Board of MAHLE GmbH has set the target for the proportion of women on the Supervisory Board at 20 percent, a figure that applies both to the employee representatives and to the shareholder representatives. As at June 30, 2017, the proportion of women on the Supervisory Board was 15 percent. With regard to the Management Board, which had no female members as at June 30, 2017, the Supervisory Board has stipulated the following: for the period from July 1, 2017, to June 30, 2022, a target figure for the proportion of women on the Management Board has been set in accordance with the current proportion of women. In the medium term, the Supervisory Board aims to achieve a higher quota. In the course of redefining the target figures for the proportion of women in the first two management levels below the Management Board, the Management Board of MAHLE GmbH has set target figures for the German MAHLE companies of 5 percent for the first management level and 10 percent for the second management level by June 30, 2022. As at June 30, 2017, the proportion of women in the first two management levels below the Management Board was 3 percent.

By setting the abovementioned targets, both the Supervisory Board and the Management Board aim to do as much justice as possible to the German legislature's intention to increase the number of women in managerial positions. In doing so, the Supervisory Board and Management Board have taken into account the current proportion of women as well as the realistic change to be achieved by June 30, 2022. Independently of the legal requirements, MAHLE is pursuing the goal of increasing the employment of women in upper and middle management using targeted succession planning, the further development of female junior executives, and measures to promote a healthy work-life balance, among other initiatives. In Germany, the proportion of women across all management levels at MAHLE lay at around 10 percent at the end of 2017. We will continue to increase this proportion.

R&D EXPENDITURE 2013–2017

in EUR million



TECHNOLOGY AND INNOVATION

Research and development

We expanded our group-wide research and development activities once again in 2017, investing EUR 748 million in this area in the year under review—a figure that corresponds to 5.9 percent of sales. Our investment expenditure thus remained at a high level. We registered a slight growth in terms of personnel, employing a total of 6,067 development engineers and technicians at the end of the year under review, 1.2 percent more than in 2016. Our first filings of patents totaled 369. In addition, there were around 600 records of inventions.

NUMBER OF FIRST FILINGS OF PATENTS IN 2017

369

by 6,067 R&D employees

We are gradually expanding our development location in Valencia/Spain—which has belonged to the group since the acquisition of MAHLE Electronics at the end of May 2017—into a global MAHLE competence center for vehicle electronics. Overall, we operate 16 major research and development centers around the world.

MAHLE is systematically pursuing a dual strategy for research and development. On the one hand, we are committed to the further optimization of the combustion engine; on the other, we are working intensively on the development of alternative drive concepts.

The combustion engine continues to offer great potential for the reduction of CO₂ emissions. We want to make targeted use of our competence in the overall system to exploit this potential.

In the case of the basic engine, for example, we are currently concentrating on optimizing friction and on preventing oil from entering the combustion chamber.

When it comes to alternative drive concepts, battery-based e-mobility and fuel cells are the focus of our development work. Today, we are already supplying our customers around the world with technologies that are essential for the breakthrough of e-mobility—such as systems for the thermal soaking of drive components. Especially in combination with thermal management, this sector offers excellent opportunities for differentiation from the competition.

Innovations 2017

Friction reduction cuts fuel consumption and therefore CO₂

Besides waste heat, friction is still one of the main causes of power loss in the combustion engine. A decrease in friction has a noticeable effect at every operating point and in every driving situation—and reduces fuel consumption. Thanks to optimized clearance design, low-friction surfaces, and a decrease in friction contact surfaces, MAHLE lowers friction at the heart of the engine: the power cell unit (PCU), which consists of piston, piston pin, piston rings, and cylinder liners. In this way, improved frictional loss can increase the engine's specific output with no changes to the basic geometric dimensions. However, this also requires the PCU components to have a more robust design. This presents a developmental challenge, since the weight of the components also plays an important role in efficiency. A key element of piston development is therefore a step known as "topography analysis," which we use to determine at which locations we can save material without jeopardizing robustness.

As a result of friction reduction in the PCU, we have already succeeded in reducing CO₂ emissions by up to 2.5 percent. In addition, the new engine components have been designed to allow the use of low-viscosity oils with the consequence that the pistons require less cooling oil and the oil pump can be controlled on demand at every operating point. This saves additional fuel, particularly in actual operation.

U-Flex reduces oil particles

One challenge relating to the gasoline engine is the oil consumption via the piston ring group. If oil enters the combustion chamber, this leads to the formation of oil ash and consequently particulate emissions. With U-Flex, its new generation of oil control rings, MAHLE has developed a particularly efficient and far-reaching solution: the raw emissions are reduced directly, and thus also the number and mass of particles.

Liquid management module saves CO₂

The new MAHLE liquid management module combines an electric coolant pump for 12 or 48 volts with a cooling circuit control and an integrated fail-safe mechanism. The advantages of this are that coolant flows can be controlled more quickly—with just one pump for several circuits, which are maintained at different temperatures for various components—and the warm-up phase for combustion engine cold starts is shortened. As a result, the module saves up to 2 percent of CO₂ emissions

with minimal package requirements. The module can additionally be installed in electric vehicles, where it also has the advantages of a simpler systems architecture and greater efficiency.

LIQUID MANAGEMENT MODULE SAVES UP TO

2.0%
of CO₂ emissions

Air conditioning technology for a wide range of power outputs and applications

MAHLE is also a full-line supplier in air conditioning systems for electric vehicles. The electric compressor is the heart of the air conditioning system that has been developed in both 400- and 800-volt versions and can therefore be used for diverse power classes and in a wide array of applications.

On every journey, more than 100,000 liters of air are swept into the cabin each hour. The new CareMetix® cabin air filter from MAHLE comprises five layers to protect passengers against solid matter and gas particles from the ambient air and also even reliably eliminates odors.

Electronics for integrated powertrain solutions

We presented innovative technologies for control and power electronics for the first time at the IAA Cars 2017. This new product group means that, alongside other technologies, we are now able to supply the complete traction drive with integrated control from a single source. As well as control and power electronics—used for electric auxiliary components and thermal management systems, for example—the product portfolio additionally comprises power converters for e-mobility solutions. We are working across business segments on developments that include integrated powertrain solutions for hybrid and electric vehicles as well as battery-charging technologies.

MEET: thermal efficiency and high-level comfort combined

One such highly integrated drive unit is already installed in our demonstrator vehicle MEET (MAHLE Efficient Electric Transport). Having initially employed a MAHLE drive unit comprising two motors each with 14 kilowatts of mechanical continuous output and 36 newton meters of torque, at the IAA we were already able to present the next development step with 20 kilowatts of continuous output and 80 newton meters of torque per motor. The motors drive the rear wheels via a central yet torque split transmission.

In MEET, we achieve thermal efficiency together with a high level of comfort by means of a thermoelectric heat pump and surface heaters with two-zone air conditioning. Using this technology, MEET achieves up to seven days of inner city driving with just one charge—also supported by an increase in cruising range of 5 percent in summer and up to 50 percent in winter.

PURCHASING

From a purchasing perspective, MAHLE faced a challenging raw materials market in the year under review. The prices of those raw materials that are the most important for MAHLE, especially aluminum, steel, nickel, copper, and resins, rose over the course of 2017—a trend that was further intensified by the development of the oil price. Steel and scrap steel also became more expensive during the year under review. Overall, raw material costs increased significantly in 2017, which MAHLE's purchasing function was only able to compensate for in part elsewhere. There were also unfavorable developments in logistics; on Asian routes in particular, sea freight rates increased as a result of market consolidation, while land freight capacity in North America and Europe is becoming increasingly scarce, which is having a negative overall effect on logistics costs. Increasing trade barriers also came into play—in the form of punitive tariffs, for example—which had a negative impact on our business.

Some organizational changes took place in 2017 as part of the Global Purchasing Excellence Program that we initiated in 2016. These included the introduction of an interdivisional lead buying concept for certain production materials and for investments in machinery and tools. We also established a Corporate Purchasing department, which will drive forward topics specific to purchasing across business units. Overall, our intention is to further expand the interdivisional potential presented by purchasing. We also introduced a new risk management tool in 2016, which was installed throughout the purchasing function in the year under review following a successful pilot period. By enabling a rapid overview of factors including natural disasters, strikes, and insolvencies, the tool makes the supply chain more transparent and reduces the associated risk to us.

PRODUCTION, QUALITY, AND ENVIRONMENT

MAHLE production system

All approximately 170 MAHLE production locations and all its business areas are incorporated in our continuous improvement process. We are constantly advancing this process and discussing successful practices around the world. A global team has used the findings to identify the most important principles, methods, and standards for the MAHLE Production System. The aim of this Production System is to eliminate waste in manufacturing and thus make it more efficient. The MAHLE Compass was also developed and used to identify individual targets on the basis of the company's vision through systematic top-down processes, subsequently breaking them down across the respective levels of the hierarchy. Our executives and employees at all levels are involved in this process and are developing their own controllable targets for their particular areas on the basis of the overall vision and goals.

The pilot locations for the MAHLE Production System are our plant in Šempeter/Slovenia in Europe, the Itajubá/Brazil production location in South America, and the Tianjin/China location in Asia. At the same time, we have launched a “lean experts”

training program in all business units that is being run according to overriding standardized methods.

Quality management at MAHLE

Innovative, defect-free, and reliable products and systems are essential for our long-term success. We have therefore operated a group-wide quality management system for many years, which is integrated into all of our business processes. Quality targets are accordingly an integral part of our annual business planning process. They are regularly defined from the top down, fleshed out from the bottom up, and consolidated across the operational divisions. In addition, all business process flows in the company are audited on a regular basis—the insights gained form the starting point for the further optimization of our products and processes.

MAHLE operates according to a zero-defect principle: we rectify potential sources of defects even during product development, and our quality management system also supports series production. Should any defects occur, however, we use a standardized solution procedure to eliminate them promptly.

Our aim is to supply our customers with “best-in-class” quality. For this reason, we launched the group-wide MAHLE Quality Improvement Program during the year under review. The program aims to further improve the traceability of causes of defects and thereby increase the effectiveness of both specific solutions and quality assurance overall. This also includes supplier quality.

MAHLE RECEIVED MORE THAN

70

quality awards in 2017

Another key aspect of the program lies in the training and further education of our employees. We want to further increase the quality awareness of our employees using special workshops and began appropriate training during the year under review. The progress of all of the measures rooted in the program is assessed by a steering committee, which is directly established within the MAHLE Management Board.

Customer satisfaction

Customers expect failure-free assembly as well as reliable and smooth operation from our products and systems. At the same time, special norms and different standards apply depending on the customer. Since 2016, we have been recording this data in a group-wide database in order to be able to implement the

various requirements even more reliably and efficiently. We also operate a global database to process customer complaints, which we expanded in the previous year. This serves as an early warning system and allows us to get even closer to the customer and respond more quickly to defects.

Even though isolated quality incidents presented a heavy economic burden in 2017, overall, we have significantly reduced the number of faulty delivered products and, at the same time, the number of customer complaints. This year we again received awards from numerous customers for the quality of our products.

NUMBER OF CUSTOMER COMPLAINTS REDUCED BY

17%

compared with the previous year

Environment and safety at work

From research and development to production and recycling, we take a holistic approach to the protection of our workforce and the health of our employees and that of the environment. In 2017, our group-wide specifications and requirements for safety and environmental protection were enhanced and redefined. Together with representatives from the regions, we formulated short-term and long-term goals, from which we derived appropriate measures. In the process, we also further developed our reporting system in order to better monitor the impact and success of the measures taken.

One of our areas of focus in 2017 was safety at work. We want to establish this issue even more firmly in all our employees' minds. For this reason, we launched a safety at work offensive in the year under review. One element of this initiative involves training programs for executives and employees in order to improve communication and conduct round-table discussions on the subject of safety. Obligatory safety tours are another important element and take place regularly in all departments, not just in the production areas.

When it comes to environmental protection, our focus is on energy management. We want the operation of all our locations to be as energy efficient, as low in emissions, and therefore as environmentally friendly as possible. By using our database, which documents both lessons learned and successful processes, we are striving to realize energy efficiency potential. Furthermore, we are encouraging dialog on energy-related topics through meetings held at a national and, increasingly, also at a regional and global level.



Our risk management system is particularly geared toward identifying risks and consistently aligning our actions accordingly.



This also includes risks posed by possible shifts in technology, which we are addressing by means of our dual strategy.



There are currently no discernible risks that could endanger MAHLE's continued existence.

Opportunity and risk report

We use a management system to evaluate the opportunities and risks associated with our business operations. In this way, we gain knowledge from which we draw conclusions and adapt our actions accordingly. Our globally active internal audit regularly verifies the compliance and efficiency of our processes and control systems by means of an audit plan, which changes on an annual basis. Because our group is growing rapidly, we are constantly developing our risk management system—with the following areas of focus.

MARKET AND TECHNOLOGICAL TRENDS

We identify long-term market and technological trends using a systematic scenario approach. As a framework, it provides a baseline scenario including the developments in our business areas, regions, products, and markets until 2030. On this basis,

EXTREME SCENARIOS FOR

2030

Stress test for market and technological trends

and using “extreme scenarios 2030,” we implement stress tests for our company on various aspects—such as markets, regions,

drive types, quantities, and technologies. By taking market and technological trends into account in this systematic way, we ensure that we identify opportunities and risks at an early stage. The findings from these analyses are used to make decisions about future business segments and new production processes; we include the measures derived in the strategic or budget planning. In the management reporting, we monitor whether and how the agreed steps are implemented.

Opportunities and risks arise from the increasing environmental awareness of markets and from new standards to reduce emissions, for example. We therefore include all relevant topics in our international research and development activities at an early stage and focus our attention on a wide range of technologies to increase the efficiency of the combustion engine, on alternative drive configurations, and on a holistic, intelligent thermal management system. As a result, we are able to offer our customers competitive, innovative products. With our steadily growing portfolio of electric drives and auxiliary components, we are benefiting from the expanding market for hybridized motor vehicles. We have specifically strengthened these activities through multiple acquisitions, which have since been integrated into the group. Our mechatronics activities have thus been bundled into their own division—and so has our expertise in this growth market. Through acquisitions made in recent years, we have significantly expanded our thermal management business and our product portfolio to include air conditioning compressors. MAHLE therefore now has the necessary resources to develop electric air conditioning compressors for the growing plug-in hybrid and electric vehicle market.

Economic fluctuations or changes to the political framework in individual regions or countries can have a major impact on market developments and thus on the business development of our company. Our broad portfolio and global presence serve as important stabilizing factors and help us to counter market and customer risks. Our highly diversified customer and product portfolio also has a corresponding impact. Consequently, possible declines in demand in individual markets or from individual customers can at least be partially offset. We therefore consider a global market slump—as in the economic crisis of 2009—with a major adverse effect on profit, as one of the greatest risks for our group. We limit the repercussions by means of appropriate early warning systems and action plans.

PROPORTION OF SALES BY BUSINESS SEGMENTS

≥50%

independent of the OEM business for the passenger car combustion engine

The discussions about diesel emissions and possible bans on older diesel models are significant uncertainty factors for the whole automotive industry. By implementing suitable measures, we aim to mitigate the potential economic effects of a shift in technology at an early stage. These effects could also be due to possible legislative changes—such as a ban on combustion engines in passenger cars applicable from a certain point in time. Through our dual strategy of maintaining our position as a technology leader in the ongoing development of the combustion engine while also driving forward innovative solutions for alternative powertrain technology, we are readying ourselves for future developments of this kind. Business segments that are independent of the OEM business for the passenger car combustion engine today already account for more than 50 percent of group sales.

PROCUREMENT AND PRODUCTION

Our risk management system is also focused on minimizing the negative impacts stemming from the procurement markets. Regular supplier assessments prevent unexpected supply bottlenecks and/or price increases in purchasing. We have stepped up these activities in recent years and are making sure that the independence of our suppliers is maintained. Since the start of 2017, we have been using a new tool to monitor risks worldwide, which enables a rapid overview of factors including natural disasters, strikes, and insolvencies. This increases transparency and thereby reduces risk in the supply chain. Appropriate safety stocks and OTC hedging transactions also serve to diminish procurement risks.

To optimize our business processes further, our production plants all around the world cooperate with each other on an ongoing basis. This year, we launched our “safety first” campaign comprising extensive measures to guarantee safety at work. By means of improved production processes and high quality standards, we aim to ensure that operational risks—such as unforeseeable circumstances, unexpected technical faults, accidents, and human error—hinder production operations as little as possible. Thus far, the increasing number of extreme weather events, such as high water, floods, and droughts, have only impacted our production locations in isolated cases. MAHLE counters the associated risks using an established environmental management system.

Our group has been audited and certified in accordance with all current external standards and specifications relevant to our industry—for example, ISO standards for quality, environmental protection, and safety at work—and is thus subjected to important external checks that serve to limit risks. We have arranged an economically prudent degree of cover by means of insurance policies for plant failures resulting from damage as well as liability risks. However, there were very significant quality incidents and warranty claims in 2017. To improve our ability to avoid similar risks in future, we have defined interdivisional countermeasures. In this way, development processes in particular will be scrutinized and optimized in more detail. Financial burdens incurred in the year under review are fully included in the group result. Where legally required, financial burdens resulting from quality incidents and warranty claims originating and known as at the balance sheet date, and which are expected to result in cash outflows, are covered by accruals as part of risk provisioning.

FINANCE MANAGEMENT

Using our systematic and group-wide finance management system, we aim to ensure our optimized use of financing opportunities from the banking and capital market. The liquidity risk is covered by diversified financing facilities with staggered maturity profiles that considerably exceed our group’s foreseeable financial requirements. When designing our financing mix, we take security, flexibility, and cost factors into account. Our aim is to secure the financial independence of our group, limit the financing risks, and ensure we are able to exploit business opportunities at all times.

We detect currency risks by means of our group-wide planning and reporting system. In accordance with standardized group-wide principles, we counter these risks extensively using nonpredictive hedging transactions over a horizon of up to 24 months. As a rule, hedging transactions relate to OTC FX forwards or swaps in the form of portfolio hedges. The use of derivative financial instruments is necessarily linked to the existence of an operational underlying transaction; expected and not yet invoiced currency risks are thereby covered with

continuously declining hedging grades. The resulting hedging relationship generates valuation units in accordance with the critical term match method. The interest rate risk is subjected to value-at-risk analyses. OTC hedging activities and other financial transactions give rise to counterparty risks with financial institutions, which we identify and evaluate across the group in our uniform reporting system. If predefined thresholds are exceeded, the counterparty risk is influenced by the targeted spread of risks.

HUMAN RESOURCES, IT, AND ACCOUNTING

Highly qualified and motivated employees are a cornerstone of our success both today and in the future. That is why it is important for us to attract suitable staff, encourage them on a continuous basis, help them gain further qualifications, and retain them in our company over the long term. We have developed a comprehensive personnel marketing concept in order to establish early direct contact with potential candidates and recruit qualified employees. We thereby reduce the risk of not filling vacant positions or only with some delay. In order to guarantee our group's long-term success and take advantage of the opportunities arising from market and technological changes, our personnel requirement planning is geared toward developments in the relevant markets as well as strategically significant technologies and business segments. Performance-related remuneration systems, modern pension schemes, and advanced training activities counter the risk of losing employees in strategically important positions.

In the IT division, security technologies protect against unauthorized access to or misuse of data by internal and external parties. Server and storage systems are set up in such a way that they can be restored at short notice in the event of a disaster and in crisis situations. Defined security standards not only encompass the technical specifications of the hardware and software, but also the functional security structures and organizational provisions. Detailed backup and recovery procedures reduce the risk of severe disruptions, for example, by securing access procedures as well as mirroring and archiving data on a daily basis.

With regard to the accounting process, the internal control and risk management system is aimed at ensuring the compliance and effectiveness of accounting and financial reporting. Besides guidelines and principles, the system also includes measures to prevent and uncover reporting errors. The consolidated financial statements are compiled centrally with reporting data transferred from subsidiaries. We guarantee compliance with the MAHLE guidelines by means of systematic controls, specialist advice, and manual checks as well as through the validation of data plausibility by the group accounting department.

REGULATIONS AND LEGISLATION

The introduction and implementation of directives alongside organizational and work instructions ensures that statutory requirements are observed. By integrating internal and external experts into the processes from an early stage, we minimize risks and exploit opportunities that could arise, for example, from fiscal, occupational, competition, patent, antitrust, and environmental regulations and legislation as well as from trade provisions. Key elements of our compliance structure include the new MAHLE Business Code, a global compliance organization, a training concept for risk areas relevant to compliance, and preventive measures.

In March 2017, the European Commission concluded the investigation proceedings brought against the Behr Group—now called MAHLE Behr—in 2012 for suspected competition-restricting practices in automotive thermal products. We had already made adequate accounting provision for the risk arising from the proceedings in previous years. The investigation proceedings for suspected restrictive practices in the spare part business brought against MAHLE Metal Leve in Brazil by local antitrust authorities in the previous year were also concluded in the year under review.

OVERALL ASSESSMENT

Overall, no risks are currently observable that could endanger the continued existence of our group.



We anticipate subdued growth in the vehicle markets.



We aim to open up new areas of growth by means of innovative solutions. Accordingly, we are supporting innovative potential within our company through a variety of activities.



For 2018, we expect a higher result from business activities with slight organic sales growth.

Outlook

OVERALL ECONOMIC DEVELOPMENT

In its January report, the International Monetary Fund (IMF) projects continued growth of the global economy in 2018 at 3.9 percent. The primary drivers of this growth are the emerging markets and developing economies in Asia. However, the continuing political uncertainties—such as U.S. government policy and the consequences of the Brexit vote—and geopolitical risks could dampen growth expectations.

In Europe, the economic output of the euro zone is forecast to grow at over 2 percent. While growth in Spain is expected to deteriorate somewhat, the IMF anticipates that the year-on-year increase in economic output will remain more or less constant in Germany, France, and Italy.

Despite the persistent political uncertainty, a continued upturn is expected for the USA. The recently adopted tax reform should provide a substantial boost. The recovery that has already begun

in South America is expected to continue. In Brazil, confidence in the economy is slowly returning and growth is expected to further increase.

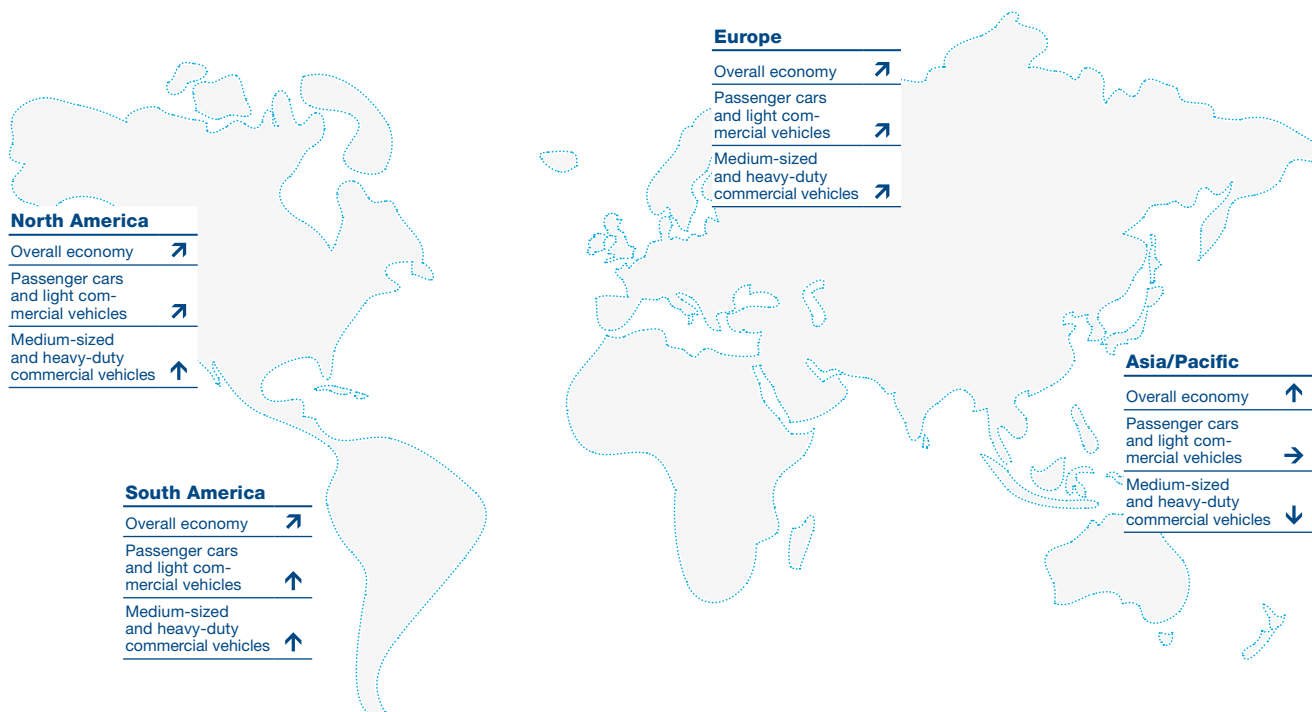
IMF FORECAST

3.9%

economic growth in 2018

Economic growth at a similar level to the previous year is anticipated in China. Strong demand from China should also benefit other countries in Asia. For Japan, however, the outlook is subdued due to weakening exports and uncertain economic policy. In India by contrast, the forecast is for further significant growth.

DEVELOPMENT OF THE MARKETS—FORECAST FOR 2018



DEVELOPMENT OF THE VEHICLE MARKETS

For 2018, MAHLE anticipates rather subdued growth in the vehicle markets. Overall, the number of passenger cars and light commercial vehicles produced will increase marginally by around 2 percent in comparison with 2017. Conversely, a low single-digit percentage contraction is expected in the global market for medium-sized and heavy-duty commercial vehicles in light of the significant decline in Asia/Pacific.

In the European market—both for passenger cars and for commercial vehicles—we predict further growth, however below the previous year's level. By contrast, the demand for passenger cars in Great Britain is forecast to decline, and a slowdown in the growth in the southern European passenger car markets is also anticipated. On the other hand, we expect growth impetus from a continued recovery in Russia.

For North America, we anticipate a slight increase in production in the passenger car and light commercial vehicles market, despite subdued demand. The reason for this is the growing rate of localization due to the start-up of new vehicle plants. With regard to medium-sized and heavy-duty commercial vehicles, we expect continued recovery and significant growth in production. In South America, we anticipate a sustained increase, although this is likely to be lower than in 2017.

For the Asia/Pacific region, we expect a significant slump in the market for medium-sized and heavy-duty commercial vehicles. This expectation is primarily attributable to China; our assumption here is that—following the very positive special effects in 2017—demand will return to normal, resulting in a contraction in production. The opposite applies to the passenger car and light commercial vehicles market, where, as a minimum, we anticipate a slight growth. In India, an increase in production figures is likely, with truck and bus manufacturing in particular predicted to stabilize at a normal level again after the decline in 2017 owing to the new emission level. In Japan, the strong domestic demand for passenger cars is expected to decline in 2018; we anticipate production of medium-sized and heavy-duty commercial vehicles to remain at the previous year's level.

DEVELOPMENT OF THE MAHLE GROUP

For 2018, we anticipate a slight organic increase in sales (adjusted for changes in the consolidation group as well as exchange rate effects) in accordance with the abovementioned industry trends. We are expecting a moderate rise in the result from business activities following the development in the period under report, which was dominated by many special effects.

We will carry forward our dual strategy in the current business year. Our goal is to be a technology driver in two fields: conventional combustion engines and alternative drives. We will continue to develop the Mechatronics division in line with this strategy. We intend to expand our development location in Valencia/Spain into a global competence center for electronics; we began the corresponding activities in 2017 and will pursue these in the current year. We will also continue to intensify our interdivisional cooperation in order to offer customers highly innovative and integrated systems solutions. Our concept vehicle MEET—in which we have combined our extensive expertise in air conditioning, thermal management, drive technologies, and electronics—is a good example of this.

FOCUS FOR

2018

**Develop growth areas
Increase innovative strength**

We are also responding to trends in the automotive industry from an organizational perspective. We are currently aware of an increasing expansion in the customer landscape. While our many years of experience, established customer relationships, and tried-and-tested standards and processes continue to take center stage in our existing business, a highly dynamic market environment is developing, particularly in new fields such as in the electric powertrain, in which customer requirements and market conditions are changing rapidly. As a result, development cycles are becoming shorter, necessitating faster project completion. In order to meet these requirements, we placed a strong focus on fast and flexible cooperation in cross-functional teams in 2017. These teams are able to develop solutions for specific requirements in close collaboration with customers. By doing this, we ensure speed and flexibility by means of lean processes and greater room for maneuver. We will continue this approach in 2018.

The development of growth areas will remain high on our agenda in the coming years. Our partnership with Faurecia is one such example. Since October 2017, we have been working together on innovative technologies for cabin air conditioning, with a focus on future mobility solutions. We are also using venture

capital to support innovative start-ups. These investments are focused on projects consistent with our dual strategy as well as on future issues outside of our current core business. In addition, we are one of the partners in the corporate start-up platform ACTIVATR, in which interdisciplinary teams from start-up companies and large organizations jointly develop ideas and new business models. Two successful businesses in which MAHLE has majority holdings have already been founded as a result of this partnership. We are also constantly increasing our internal innovative potential. Our MAHLE Incubator, which was newly established in 2017, offers MAHLE employees an environment similar to a start-up, in which interdivisional teams are able to contribute new product ideas and business models and assume responsibility for progressing them further. The objective is to identify, investigate, and develop new products and markets for MAHLE. Last but not least, we have been running the MAHLE Innovation Hub for several years—a platform for channeling ideas for innovative products, processes, services, and business models across the group. With the global expansion of this platform, we are further promoting the exchange of ideas and the networking between our innovative employees across all our business areas in order to make even more intensive use of our high innovation potential. With the help of targeted ideas campaigns, we will focus even more strongly on the opportunities offered by the changing automotive industry and thus generate successful innovations.

Our economic success provides the foundation for the realization of our forward-looking strategies. It enables us to invest in research and development, establish new business areas, and make acquisitions that complement our portfolio with a view to the future. To maintain and enhance this strong foundation, we are striving for further sales growth while increasing profitability. At the same time, financial independence and the ability to withstand potential crises always have a high priority for MAHLE. We therefore set great store by a healthy balance sheet structure and moderate net gearing—for this reason, the mainstays of our financial policy are a solid equity base and liquidity that is secured over the long term by means of our operating cash flows and diversified financing sources and instruments.

This report contains forward-looking statements that rely on current estimates of future developments and are therefore subject to risks and uncertainties that are beyond our control or precise assessment. Consequently, the actual results may differ from the statements made here.

The page features a complex background of abstract geometric lines. These lines are primarily in shades of blue and include solid, dashed, and dotted styles. They are arranged in a way that creates a sense of depth and movement, with some lines intersecting and others running parallel. The overall effect is a modern, technical aesthetic.

CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED FINANCIAL STATEMENTS

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Consolidated balance sheet

CONSOLIDATED BALANCE SHEET AS AT DECEMBER 31, 2017

in EUR '000	Dec. 31, 2017	Dec. 31, 2016
ASSETS		
A. Fixed assets		
I. Intangible assets		
1. Purchased concessions, industrial and similar rights and assets, as well as licences in such rights and assets	246,455	332,085
2. Goodwill	296,642	297,849
3. Prepayments	745	774
	543,842	630,708
II. Property, plant, and equipment		
1. Land, leasehold rights, and buildings including buildings on third-party land	939,316	958,430
2. Technical equipment and machinery	1,532,812	1,496,215
3. Other equipment, fixtures, and furniture	131,615	127,359
4. Prepayments and assets under construction	405,163	447,031
	3,008,906	3,029,035
III. Financial assets		
1. Shares in affiliated companies	4,948	2,038
2. Shares in associated companies	111,496	42,584
3. Equity investments	8,065	23,459
4. Loans to companies in which participations are held	32	1,270
5. Long-term securities	7,480	6,017
6. Other loans	17,128	14,599
	149,149	89,967
	3,701,897	3,749,710
B. Current assets		
I. Inventories		
1. Raw materials, consumables, and supplies	529,566	513,433
2. Work in process	225,199	204,766
3. Finished goods and merchandise	637,085	614,590
4. Prepayments	17,594	20,123
5. Prepayments received	-84,744	-84,073
	1,324,700	1,268,839
II. Receivables and other assets		
1. Trade receivables	1,980,232	1,956,082
2. Receivables from affiliated companies	721	762
3. Receivables from companies in which investments are held	9,411	8,706
4. Other assets	351,229	384,795
	2,341,593	2,350,345
III. Securities	429	403
IV. Cash in hand, bank balances, and checks	503,126	372,073
	4,169,848	3,991,660
C. Prepaid expenses	23,599	20,911
D. Deferred tax assets	226,413	196,183
E. Excess of plan assets over post-employment benefit liability	73,392	73,613
	8,195,149	8,032,077

in EUR '000	Dec. 31, 2017	Dec. 31, 2016
EQUITY AND LIABILITIES		
A. Equity		
I. Subscribed capital	150,000	150,000
II. Capital reserves	166,430	166,430
III. Revenue reserves	2,039,704	1,872,395
IV. Equity impact from currency translation	-169,564	-35,496
V. Consolidated unappropriated retained earnings	7,594	6,109
VI. Non-controlling interests	437,940	562,507
	2,632,104	2,721,945
B. Badwill	0	1,478
C. Accruals		
1. Accruals for pensions and similar obligations	577,797	575,336
2. Accruals for taxes	77,980	66,736
3. Other accruals	1,437,206	1,395,791
	2,092,983	2,037,863
D. Liabilities		
1. Bonds	829,000	829,000
2. Liabilities to banks	830,270	769,332
3. Payments received on account of orders	9,820	5,942
4. Trade payables	1,233,929	1,256,831
5. Liabilities on bills accepted and drawn	39,987	39,125
6. Liabilities to affiliated companies	3,899	4,712
7. Liabilities to companies in which investments are held	9,198	17,943
8. Other liabilities	438,954	267,595
<i>thereof from taxes 92,625 (prev. yr.: 95,499)</i>		
<i>thereof relating to social security and similar obligations 31,932 (prev. yr.: 32,483)</i>		
	3,395,057	3,190,480
E. Deferred Income	75,005	80,311
	8,195,149	8,032,077

Consolidated income statement

CONSOLIDATED INCOME STATEMENT FROM JANUARY 1 TO DECEMBER 31, 2017

in EUR '000	2017	2016
1. Sales	12,788,045	12,321,783
2. Cost of sales	-10,652,852	-9,993,960
3. Gross profit on sales	2,135,193	2,327,823
4. Selling expenses	-579,060	-586,809
5. General administrative expenses	-511,614	-502,326
6. Research and development expenses	-748,114	-753,315
7. Other operating income	485,200	482,882
<i>thereof from currency translation 180,420 (prev. yr.: 184,655)</i>		
8. Other operating expenses	-378,181	-495,451
<i>thereof from currency translation -207,771 (prev. yr.: -235,885)</i>		
	-1,731,769	-1,855,019
	403,424	472,804
9. Investment income	500	1,341
<i>thereof from affiliated companies 232 (prev. yr.: 914)</i>		
10. Income from profit transfer agreements	189	0
11. Income from other securities and long-term loans	542	155
12. Result from associated companies	-38,982	-52,808
13. Other interest and similar income	18,285	54,627
<i>thereof from affiliated companies 18 (prev. yr.: 24)</i>		
<i>thereof income from discounting 205 (prev. yr.: 1,074)</i>		
14. Impairment of financial assets and of securities	-257	-92,899
15. Expenses from the transfer of losses	0	-3,988
16. Interest and similar expenses	-121,241	-151,162
<i>thereof to affiliated companies -56 (prev. yr.: -32)</i>		
<i>thereof expenses from discounting -50,505 (prev. yr.: -58,248)</i>		
	-140,964	-244,734
Result from business activities	262,460	228,070
17. Taxes on income	-124,879	-132,189
<i>thereof income from deferred income taxes 60,109 (prev. yr.: 22,900)</i>		
18. Result after taxes	137,581	95,881
19. Other taxes	-35,370	-32,875
20. Consolidated net income	102,211	63,006
21. Consolidated unappropriated retained earnings prior year	6,109	6,015
22. Dividend distribution	-6,000	-6,000
23. Transfer to revenue reserves	-169,265	-56,599
24. Profit applicable to non-controlling interests	-104,951	-96,694
25. Loss applicable to non-controlling interests	179,490	96,381
26. Consolidated unappropriated retained earnings	7,594	6,109

Consolidated cash flow statement

CONSOLIDATED CASH FLOW STATEMENT FROM JANUARY 1 TO DECEMBER 31, 2017

in EUR '000	2017
1. Cash flows from operating activities	
Profit for the period (consolidated net income including profit and loss applicable to non-controlling interests)	102,211
+/- Depreciation, amortization and write-downs of fixed assets/reversals of write-downs of fixed assets	554,788
+/- Increase/decrease in provisions	64,140
+/- Other non-cash expenses/income	-37,418
Increase/decrease in inventories, trade receivables and other assets	
-/+ not related to investing or financing activities	-336,007
Increase/decrease in trade payables and other liabilities	
+/- not related to investing or financing activities	270,297
-/+ Gain/loss on disposal of fixed assets	-7,761
+/- Interest expense/interest income	103,297
- Other investment income	38,482
+/- Interest payments/receipts related to interest other than for the provision of capital	1,845
+/- Income tax expense/income	184,988
-/+ Income taxes paid	-173,346
	765,516
2. Cash flows from investing activities	
+ Proceeds from disposal of intangible fixed assets	3,115
- Payments to acquire intangible fixed assets	-15,615
+ Proceeds from disposal of tangible fixed assets	21,949
- Payments to acquire tangible fixed assets	-611,130
+ Proceeds from disposal of long-term financial assets	24,761
- Payments to acquire long-term financial assets	-71,374
+ Proceeds from disposals of entities included in the basis of consolidation	20,291
- Payments to acquire entities included in the basis of consolidation	-85,267
+ Cash receipts from the investment of cash funds for short-term cash management	93,096
- Cash payments for the investment of cash funds for short-term cash management	-44,108
+ Interest received	10,896
+ Dividends received	1,407
	-651,979

in EUR '000	2017
3. Cash flows from financing activities	
+ Proceeds from capital contributions by shareholders of the parent entity	0
+ Proceeds from capital contributions by minority shareholders	3,118
- Cash payments to shareholders of the parent entity from the redemption of shares	0
- Cash payments to minority shareholders from the redemption of shares	0
+ Proceeds from the issuance of bonds and from borrowings	412,368
- Cash repayments of bonds and borrowings	-284,806
+ Proceeds from grants/subsidies received	1,401
- Interest payment due to leasing agreements	-32
- Interest paid	-66,054
- Dividends paid to shareholders of the parent entity	-6,000
- Dividends paid to minority shareholders	-33,586
+/- Profit/loss transfer (to/from parent company)	0
	26,409
4. Cash funds at end of period	
Net change in cash funds (subtotals 1-3)	139,946
+/- Effect on cash funds of exchange rate movements and remeasurements	57,951
+/- Effect on cash funds of changes in the basis of consolidation	0
+ Cash funds at beginning of period	161,194
	359,091
Cash-in-hand, bank balances, and checks	372,073
- Bank balances with an initial term of more than 3 months	-9,629
+ Liabilities to banks with an initial term of less than 3 months	-201,250
Cash funds at beginning of period	161,194
<i>thereof from quota-consolidated entities</i>	38,692
Cash-in-hand, bank balances, and checks	503,126
- Bank balances with an initial term of more than 3 months	-4,642
+ Liabilities to banks with an initial term of less than 3 months	-139,393
Cash funds at end of period	359,091
<i>thereof from quota-consolidated entities</i>	40,912

The short term liabilities which were netted against cash balances contained EUR 86,599k (previous year: EUR 115,226k) which were related to short term liabilities based on a committed credit line with a remaining tenor of more than one year.

The option to dispense with the prior-year figures was applied in accordance with the regulations of GAS 21.

Cash funds amounting to EUR 517k that are restricted on disposal are included.

Consolidated statement of changes in equity

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FROM JANUARY 1 TO DECEMBER 31, 2017

in EUR '000	PARENT COMPANY		
	Subscribed capital	Capital reserves	Revenue reserves
As at December 31, 2015	150,000	166,430	1,811,594
Adjustment of first consolidation without effect on net income	0	0	-861
As at December 31, 2015 (adjusted)	150,000	166,430	1,810,733
Capital increase	0	0	0
Transfer to revenue reserves	0	0	56,599
Dividend distribution	0	0	0
Currency translation	0	0	0
Other items	0	0	6,599
Changes in the consolidation group	0	0	-1,536
Consolidated net income	0	0	0
As at December 31, 2016	150,000	166,430	1,872,395
Adjustment acc. to GAS 23.148 without effect on net income	0	0	524
Capital increase	0	0	0
Transfer to revenue reserves	0	0	169,265
Dividend distribution	0	0	0
Currency translation	0	0	0
Other items	0	0	-489
Changes in the consolidation group	0	0	-1,991
Consolidated net income	0	0	0
As at December 31, 2017	150,000	166,430	2,039,704

	Equity impact from currency translation	Consolidated unappropriated retained earnings	Total	Non-controlling interests	Consolidated equity
	-60,747	6,015	2,073,292	593,998	2,667,290
	0	0	-861	650	-211
	-60,747	6,015	2,072,431	594,648	2,667,079
	0	0	0	1,669	1,669
	0	-56,599	0	0	0
	0	-6,000	-6,000	-41,684	-47,684
	30,751	0	30,751	10,784	41,535
	-7,036	0	-437	-47	-484
	1,536	0	0	-3,176	-3,176
	0	62,693	62,693	313	63,006
	-35,496	6,109	2,159,438	562,507	2,721,945
	0	0	524	0	524
	0	0	0	3,682	3,682
	0	-169,265	0	0	0
	0	-6,000	-6,000	-35,388	-41,388
	-136,398	0	-136,398	-22,704	-159,102
	339	0	-150	0	-150
	1,991	0	0	4,382	4,382
	0	176,750	176,750	-74,539	102,211
	-169,564	7,594	2,194,164	437,940	2,632,104

Notes to the consolidated financial statements

CONSOLIDATION GROUP

The consolidated financial statements includes MAHLE GmbH (parent company), with the registered office and district court in Stuttgart (commercial register number 638) as well as 23 domestic and 131 foreign subsidiaries. Furthermore, 42 companies are consolidated by using the proportionate consolidation method, and nine companies were valued according to the equity method. The consolidated companies are included in the list of shareholdings.

During 2017, the following companies were fully consolidated for the first time:

- MG Immobilienentwicklungs- und Ansiedlungsgesellschaft mbH, Austria, as of January 1

In the previous years the entity was excluded from the consolidation due to immateriality.

- MAHLE Shared Services Poland Spółka z o.o., Poland, as of February 1
- MAHLE Nagares S.A.U., Spain, as of June 1
- MAHLE Electronics S.A.U., Spain, as of June 1
- MAHLE Electronics Valladolid S.A.U., Spain, as of June 1
- IQENTO GmbH, Germany, as of October 24

During 2017, the parent company completed divestitures of the following fully consolidated companies:

- Frauenthal Powertrain GmbH (previously MAHLE Motorkomponenten GmbH), Germany, as of March 31
- MAHLE Metal Leve Miba Sinterizados Ltda., Brasil, as of June 30

The divestitures of the above companies did not affect the comparability of the consolidated financial statements with the previous year.

In addition, five companies were merged.

Four companies were liquidated in the business year 2017.

In the business year, eleven companies were excluded from the consolidated financial statements due to immateriality.

Nine companies were not valued according to the equity method due to their immateriality.

Key changes to the consolidation group

During 2017, the Nagares Group which consists of MAHLE Nagares S.A.U., MAHLE Electronics S.A.U. and MAHLE Electronics Valladolid S.A.U. was acquired. The acquired assets, liabilities, and deferred income were revalued and/or recorded as part of the purchase price allocation. In addition, the customer relationships and the acquired technologies were recognized in the consolidated balance sheet. The Nagares Group, nowadays called MAHLE Electronics, is included in the MAHLE Group balance sheet with the following amounts as of the acquisition date:

in EUR '000	
Fixed assets	80,128
Current assets	28,876
Accruals	1,064
Liabilities	15,582
Deferred tax assets	5,555

Sales increased due to the acquisition by approximately EUR 24,264k. Other items in the income statement have changed accordingly.

EXEMPTION PROVISIONS FOR DOMESTIC COMPANIES

The following subsidiaries are applying the exemption according to Sec. 264, Para. 3, respectively Sec. 264b of the German Commercial Code (HGB), with regard to the disclosure of their annual financial statements and/or the preparation of the management reports:

MAHLE Aftermarket GmbH, Stuttgart; MAHLE Amovis GmbH, Berlin; MAHLE Beteiligungen GmbH, Stuttgart; MAHLE Brandenburg GmbH, Wustermark; MAHLE Filtersysteme GmbH, Stuttgart; MAHLE Immobilien GmbH, Stuttgart; MAHLE Industrial Thermal Systems GmbH & Co. KG, Stuttgart; MAHLE Industriebeteiligungen GmbH, Stuttgart; MAHLE Industriemotoren-Komponenten GmbH, Stuttgart; MAHLE Industry GmbH, Stuttgart; MAHLE International GmbH, Stuttgart; MAHLE Kleinmotoren-Komponenten GmbH & Co. KG, Stuttgart; MAHLE Powertrain GmbH, Stuttgart; MAHLE Ventiltrieb GmbH, Stuttgart; MAHLE Versicherungsvermittlung GmbH, Stuttgart

METHOD OF CONSOLIDATION

Consolidated subsidiaries, using the book value method prior to December 31, 2009, will continue to be consolidated under the same method as in prior years. Thereby, the value of the investment held by the parent company, at the time of acquisition and first consolidation, is to be offset against the attributable share of the subsidiary's equity book value. In the case of companies that were consolidated for the first time from 2010 onward, the assets, liabilities, prepaid expenses, and deferred income acquired were revalued at fair value as part of the purchase price allocation at the time that the company became a subsidiary.

At the balance sheet date, a total goodwill of EUR 296,642k is disclosed which contains a goodwill of EUR 49,403k that occurred in the financial statements of the entities included in the consolidation group. Goodwill is amortized over ten years due to the relevant markets which are dominated by a small number of suppliers and have high barriers to market entry. These markets have shown that the average useful life of acquired goodwill is historically ten years. Additionally, the recoverability of goodwill is tested (impairment test) at least once a year to determine if an impairment exists according to GAS 23.129 Sentence 1. Thereby, the amount of the write-down is determined by comparing the fair value of the investment in the subsidiary with the total of the carrying amount of the net assets held by the subsidiary in the consolidated financial statements and the net carrying amount of goodwill. Goodwill impairments in 2017 totaled EUR 59k.

The first consolidation of MAHLE Electronics resulted in goodwill of EUR 46,928k.

For the MAHLE Electric Drives Japan Corporation, a negative consolidation difference with characteristics of debt of EUR 1,478k was released through profit and loss due to realized losses in 2017.

Increases and decreases of investments in subsidiaries without affecting their status as subsidiaries are recognized as acquisitions and/or disposals.

The intra-group supply of goods and services as well as mutual receivables and liabilities were offset, and intercompany profits were eliminated.

Deferred taxes resulting from consolidation measures with effect on income were recorded using a tax rate of 23 percent.

ACCOUNTING AND VALUATION PRINCIPLES

The existing methods were retained and were also applied by the material associated companies.

Acquired intangible assets and property, plant, and equipment are valued at acquisition costs or manufacturing costs minus depreciation or amortization. Depreciation was performed on a straight-line basis using standard useful lives. If lower valuations were provided, impairments were recorded. Internally developed trademarks and similar rights and assets were not capitalized. Furthermore, the intangible assets contain hidden reserves disclosed as part of the purchase price allocation of the acquisitions. These comprise of trademark rights, customer relationships, technological licenses, and development services. Depending on the categories, the useful lives for intangible assets were based on 5 to 10 years.

Financial assets were stated at the lower of acquisition cost or fair value if the impairment is expected to be permanent.

Inventories are capitalized at acquisition cost or manufacturing cost. Unfinished and finished goods are valued by considering the appropriate share of material, production overhead, and depreciation of fixed assets. If the market prices or fair values were lower than the book values, or marketability was limited, devaluations were performed as necessary.

Receivables and other assets are recorded at nominal values. Appropriate write-downs are recorded to account for receivables with recognizable risks of nonpayment; a general valuation allowance is set up to cover the general credit risk.

Prepaid expenses were recorded for payments made before the balance sheet date for expenditures related to a specific time period after this date.

Accruals for taxes and other accruals are to adequately cover uncertain liabilities and anticipated losses from pending transactions. The valuation is based on the settlement amount taking into account necessary cost increases. Accruals with a remaining term of more than one year were discounted by using the average market interest rate of the past seven fiscal years provided by the German Central Bank. If appropriate, an average local market interest rate of the past seven years was determined for the remaining term in order to depict the actual economic situation for the discounting of obligations in foreign currency.

Accruals for pensions and similar obligations are calculated group-wide in accordance with actuarial principles (using the projected unit credit method) and discounted with the average rate of ten years in accordance with Sec. 253 of the German Commercial Code (HGB) to present value. In 2017, the calculation was based on the following discount rates: domestic 3.40–3.77 percent; foreign 1.12–4.72 percent. The option to assume a standardized remaining term of 15 years was not utilized. Expected salary increases of 1.16–5.61 percent and anticipated labor turnover rates of 2.00–5.25 percent were taken into consideration. The mortality tables recognized in each country were used as a basis for the calculation.

Assets that serve exclusively to settle pension-related obligations and cannot be utilized to settle claims of any other creditors (plan assets in the form of long-term securities) were offset against the accruals at their fair value. Excess amounts are recorded within the position “Excess of plan assets over post-employment benefit liability”.

Liabilities are stated at their settlement amount.

Receivables, bank balances, and liabilities in foreign currency with a remaining term of less than one year were valued using the mid spot rate applicable at the balance sheet date. If the remaining term was more than one year, the valuation was based on the exchange rate applicable at the acquisition date or the lower or higher exchange rate at the balance sheet date.

Changes in exchange rates, commodity price variations, and interest rates represent a risk to operational business that is very difficult to estimate. To minimize this risk, appropriate hedging transactions such as derivatives are used. These transactions are only established with banks that have a prime credit rating. Their use is based on standard guidelines, subject to strict internal controls, and restricted to the hedging of operational business as well as that of related investments and financing activities.

If effective hedging relationships existed between the underlying operating transactions and/or highly probable transactions (basically future deliveries of goods and services) and the hedging transaction, they were combined into a hedge accounting evaluation unit and valued together under the so-called “frozen value method” (“Einfrierungsmethode”).

Deferred income has been recorded for payments received prior to the balance sheet date for income related to a specific time period after this date.

Deferred tax assets and liabilities are set up to account for all temporary and quasi-permanent differences between the tax and German Commercial Code (HGB) values. Furthermore, deferred taxes for tax loss and interest carry forwards and tax credits were capitalized, provided the tax benefit was reasonably recoverable within the next five years. Deferred taxes were determined using tax rates that are expected to apply at the time of recovery and are based on the regulations adopted at the balance sheet date. Deferred tax assets and liabilities are presented as a net value. The tax rates fall within a range of 10.00–37.02 percent.

CURRENCY CONVERSION

The financial statements of foreign companies were, if not prepared in Euro, converted as follows:

Equity:

Exchange rate at the date of acquisition
(or first consolidation)

Other balance sheet items:

Mid spot rate at the balance sheet date

Income statement items:

Average exchange rate for the year

Exchange rate differences in connection with the use of the closing rate method were shown as “currency translation Jan 01” within the consolidated statement of fixed assets. Differences arising from the conversion of movements during the current year were shown in a separate column.

Any difference arising from the translation of the balance sheet items into Euro was included under “Equity impact from currency translation” in the consolidated shareholders’ equity.

The “thereof” information on currency conversion in the income statement includes both unrealized and realized exchange rate differences.

NOTES TO THE CONSOLIDATED BALANCE SHEET

Receivables and other assets

in EUR '000	Dec. 31, 2017	
	Carrying amount	Thereof with a remaining term of more than 1 year
Accounts receivables		
<i>Trade receivables</i>	1,980,232	217
<i>Receivables from affiliated companies</i>	721	0
<i>Receivables from companies in which investments are held</i>	9,411	0
Other assets	351,229	11,684
Total	2,341,593	11,901

During the previous year, trade receivables (EUR 184k) as well as other assets (EUR 10,466k) had a remaining term of more than one year.

Trade receivables are included in the amount of EUR 91k (previous year: EUR 40k) from affiliated companies and EUR 7,140k (previous year: EUR 7,108k) from companies in which investments are held.

Only other assets contain receivables against shareholders amounting to EUR 127k (previous year: EUR 135k). Prepaid expenses include, among others, the differences between net loan proceeds and liabilities to banks (debt discounts) amounting to EUR 1,391k (previous year: EUR 1,735k).

Equity

The consolidated unappropriated retained earnings equal that of the parent company and contain the amount carried forward from the previous year of EUR 109k.

Accruals for pensions and similar obligations as well as other accruals

Notes for offsetting pursuant to Sec. 246, Para. 2, Sentence 2 of the German Commercial Code (HGB).

in EUR '000	Dec. 31, 2017	
	Carrying amount	
Settlement amount of offset liabilities	486,315	
Acquisition costs of assets	231,569	
Fair value of assets	351,172	
Offset income	23,349	
Offset expenses	27,485	

The difference for discounting with the seven-year average rate according to Sec. 253, Para. 6, Sentence 1 of the German Commercial Code (HGB) amounts to EUR 83,253k.

Other accruals primarily relate to anticipated losses from pending transactions, outstanding credit notes and rebates, as well as outstanding purchase invoices. In addition, this item includes obligations arising from employment contracts, as well as guarantee and warranty risks.

Liabilities

in EUR '000	Dec. 31, 2017			
	Carrying amount	With a remaining term of up to 1 year	With a remaining term of more than 1 year	Thereof with a remaining term of more than 5 years
Bonds	829,000	0	829,000	0
Liabilities to banks	830,270	140,373	689,897	325,751
Payments received on account of orders	9,820	9,813	7	0
Trade payables	1,233,929	1,232,567	1,362	0
Liabilities on bills accepted and drawn	39,987	39,987	0	0
Liabilities				
<i>to affiliated companies</i>	3,899	3,899	0	0
<i>to companies in which investments are held</i>	9,198	9,198	0	0
Other liabilities	438,954	403,531	35,423	19,433
Total	3,395,057	1,839,368	1,555,689	345,184

During the previous year, liabilities to banks (EUR 285,626k), payments received on account of order (EUR 5,934k), trade payables (EUR 1,256,191k), liabilities on bills accepted and drawn (EUR 39,125k), liabilities to affiliated companies (EUR 4,712k), liabilities to companies in which investments are held (EUR 17,943k), and other liabilities (EUR 232,449k) had a remaining term of less than one year.

The liabilities to affiliated companies contain trade payables EUR 216k (previous year: EUR 126k). The liabilities to companies in which investments are held contain trade payables EUR 5,059k (previous year: EUR 3,291k).

As in the previous year, liabilities do not contain any payables to shareholders.

No liabilities to banks are secured by property liens or similar rights.

Deferred taxes

Deferred tax assets arise predominantly from differing accounting treatment in intangible assets, property, plant, and equipment, and accruals. The temporary differences in accruals essentially include different carrying amounts between the tax balance sheet and the consolidated balance sheet related to accruals for pensions and similar obligations and accruals that are not tax-deductible, such as accruals for anticipated losses.

The deferred tax liabilities result predominantly from temporary differences relating to tangible fixed assets due to different carrying amounts and depreciation methods in the tax and consolidated balance sheet. In addition, the identified fair values disclosed as part of the purchase price allocations of the acquisitions lead to deferred tax liabilities, in particular in intangible and tangible fixed assets.

Deferred tax assets of EUR 70,401k were set up as tax loss carry forwards of EUR 418,152k that are recoverable within five years. EUR 150,976k of deferred tax assets were written off as of December 31, 2017, as their realization is not deemed sufficiently likely.

Off-balance-sheet transactions

As of the balance sheet date, off-balance-sheet transactions exist in connection with significant rental and leasing agreements in particular for buildings and land (EUR 129,607k). Moreover, off-balance-sheet transactions are in place in connection with factoring (EUR 128,634k). These off-balance-sheet transactions led to a diversification of financing sources as of the balance sheet date. Through these transactions cash outflows are generally postponed into the future.

No material risks are anticipated from these transactions.

Contingent liabilities

	Dec. 31, 2017
in EUR '000	Carrying amount
Contingents from notes	50,943
Guarantees	364
<i>thereof to associated companies</i>	164
Warranties	173

To our knowledge, the underlying obligations can be fulfilled in all cases by the companies concerned. We do not expect the contingent liabilities to be claimed. The contingent liabilities include EUR 44,001k from quota-consolidated companies.

The contingent liabilities do not include any obligations concerning retirement benefits.

Other financial obligations

	Dec. 31, 2017
in EUR '000	Carrying amount
Purchase commitments from investments	297,221
Financial obligations resulting from rent and lease agreements	59,118
Others	64,132
<i>thereof to affiliated companies</i>	187

The other financial obligations include EUR 15,157k from quota-consolidated companies.

The other financial obligations do not include any obligations concerning retirement benefits.

Contribution of quota-consolidated companies

The balance sheet includes short-term assets of EUR 423,243k and long-term assets of EUR 167,528k belonging to quota-consolidated companies. Current liabilities of EUR 290,239k as well as long-term debt of EUR 93,904k are recognized by quota-consolidated companies.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

The income statement of the MAHLE Group has been prepared according to the cost of sales method. Sales are thus matched with the expenses incurred in their realization, which are allocated in principle to the functions production, sales, general administration, and research and development.

The cost of sales comprises of the material and production costs incurred in the realization of sales, the landed costs of the trade business, and the costs of the allocation to accruals for warranties. Furthermore, this item also contains depreciation and amortization on the hidden reserves disclosed as part of the purchase price allocations of the acquisitions. These include technologies, technical equipment and machinery as well as land and buildings. Special charges amounting to EUR 236,050k resulted in the business year from a guarantee case which could be closed in 2017.

The selling expenses include, in particular, personnel and non-personnel expenses, depreciation allocated to the sales function, as well as logistics, market research, sales promotion, shipping and handling, and advertising costs. Furthermore, they also contain amortization on the hidden reserves disclosed as part of the purchase price allocations of the acquisitions. These include trademark rights and customer relationships.

The general administration expenses include personnel and non-personnel expenses as well as depreciation allocated to the administrative function.

The personnel, and non-personnel expenses, and depreciation allocated to the research and development function are substantial to the MAHLE Group. In order to present the economic situation of the group more clearly, they have been included as a separate item in the breakdown.

Other operating income contains EUR 198,722k income relating to other periods. This income is mainly related to the reversal of accruals as well as evaluation measures, in particular the write-up of the investment book value of the joint venture Bosch Mahle Turbo Systems GmbH & Co. KG (BMTS) amounting to EUR 45,593k in connection with its upcoming divestiture.

Other operating expenses contains EUR 8,626k expenses relating to other periods. This expense is mainly related to disposals of depreciable fixed assets.

Sales by area of operation

in EUR '000	2017
Engine Systems and Components business unit	2,798,950
Filtration and Engine Peripherals business unit	2,245,710
Thermal Management business unit	4,480,890
Aftermarket business unit	956,116
Mechatronics division	406,701
Profit centers and services	1,899,678
Total	12,788,045

Sales by geographical market (target area)

in EUR '000	2017
Europe	6,065,514
North America	3,413,676
South America	612,251
Asia/Pacific	2,618,113
Africa	78,491
Total	12,788,045

Personnel expenses

in EUR '000	2017
Wages and salaries	2,324,258
Social security costs and other benefits	581,613
Old age pension costs	44,466
Total	2,950,337

Depreciation, amortization, and impairments of intangible and tangible fixed assets

in EUR '000	2017
Total	605,189
<i>thereof impairments</i>	1,411

Subsequent valuation of the purchase price allocation for the acquisitions*

in EUR '000	2017
Depreciation and amortization within cost of sales	74,325
Amortization within selling expenses	30,475
Release of subsidies within other operating income	13,722

* Concerns MAHLE Behr, former Delphi Thermal entities, MAHLE Electric Drives, and MAHLE Electronics

Contribution of quota-consolidated companies

The income statement includes income of EUR 1,407,354k and expense of EUR 1,362,015k of quota-consolidated companies.

OTHER NOTES

Average annual number of employees*

	2017
Direct employees	42,046
Indirect employees	34,657
Total	76,703

* Excluding apprentices

The total average annual number of employees includes a pro rata figure of 2,752 employees from quota-consolidated companies.

Derivatives

Derivatives in accordance with Secs. 285, 314 of the German Commercial Code (HGB) not yet settled as of the balance sheet date can be broken down as follows:

in EUR '000	Dec. 31, 2017	Dec. 31, 2017
	Nominal amounts*	Fair value**
Transactions relating to interest	6,300	-470
Transactions relating to currency	1,880,660	10,090
Transactions relating to currency and interest	5,350	-93
Transactions relating to commodities	17,890	1,671

* The nominal amounts of the derivative financial instruments are based on absolute values, that means long & short positions are being added with their nominal values.

** The fair value of currency and commodities related transactions corresponds to the market value of the derivatives as of the balance sheet date, which is identified in accordance with the net present value method. All interest related transactions are based on recognized financial/mathematical models.

The derivative contracts as of December 31, 2017 are placed in relation to third parties exclusively with banks. Evaluation units were established for hedging transactions with an effective relationship to the underlying transaction. Accruals of EUR 304 k were set up for all other hedging transactions that have resulted in anticipated losses.

Evaluation units

The following evaluation units were created from derivatives and are shown with their netted values:

in EUR '000	Type of evaluation unit	Dec. 31, 2017	Balance sheet item
		Amount of hedged transaction	
Currency exposure			
Recorded values	Portfolio hedge	70,295	Trade receivables
	Portfolio hedge	13,052	Bank balances
	Portfolio hedge	-1,134	Liabilities to banks
	Portfolio hedge	-40,860	Trade payables
Remaining currency exposure from eliminated transactions with affiliated companies	Portfolio hedge	432,129	
Future transactions	Portfolio hedge	-1,009	
Currency and interest exposure (cross currency swap)			
Recorded values	Micro hedge	-516	Liabilities to banks
Remaining currency exposure from eliminated transactions with affiliated companies	Micro hedge	4,834	
Interest exposure			
Recorded values	Micro hedge	-2,463	Liabilities to banks
Remaining currency exposure from eliminated transactions with affiliated companies	Micro hedge	0	
Commodity exposure			
Future transactions	Portfolio hedge	17,720	

	Dec. 31, 2017
	Volume of hedged exposure
	in '000
Currency exposure in transaction currency	
CAD	21,844
CNY	24,366
CZK	-91,663
EUR	18,773
GBP	11,968
HUF	-2,720,000
JPY	15,909,435
MXN	494,118
PHP	48,997
RON	34,167
RUB	-748,000
THB	-381,501
TRY	16,768
USD	-764,964
Currency and interest exposure in transaction currency	
	in '000
CNY	-39,680
<i>Interest: fixed CNY/variable 3-month-Euribor</i>	
USD	619
<i>Interest: fixed USD/variable 3-month-IDR Jibor</i>	
Interest exposure in transaction currency	
	in '000
IDR	40,000,000
<i>Interest: fixed IDR/variable 3-month-IDR Jibor</i>	
Commodity exposure in reporting currency EUR	
	in '000
Aluminum	10,641
Copper	3,950
Nickel	2,704
Tin	424

The changes in value in the underlying and hedging transactions are offset during the hedging horizon, since risk positions (underlying transactions recognized on the balance sheet) are immediately hedged by means of forward exchange transactions of the same amount, in the same currency, and with the same maturity period in accordance with the guidelines of the group risk management.

The risk of potential future changes in cash flows arising from highly probable underlying transactions, basically future deliveries of goods and services, is offset by using hedging transactions. The hedge ratio of such future transactions is reduced over time; the further such transactions are in the future. The hedging horizon for currency and commodities related hedging transactions which are included in hedge accounting relationships is generally two years and, in exceptional cases, can be extended up to three years for commodities hedging transactions. Past experience has shown that this strategy has led to an effective hedging of cash flows in forecast evaluation units.

The hedging quota of a planned exposure increases over its lifetime. When the planned exposure finally turns into a booked exposure it will have been hedged fully via consecutive individual hedging steps. At this stage the exposure is hedged via a portfolio of individual hedges which have been added gradually over time. At any given point in time a number of individual booked exposures can mature, each with their own portfolio of hedges covering the exposure. The entirety of several booked exposures with their respective hedges creates a portfolio hedge.

Currency and interest rate hedging transactions (cross currency swaps) are entered into with the same maturity profile as the respective underlying contracts and form a micro hedge with the corresponding financial liability.

The "critical term match method" is used to measure the effectiveness of the hedging relationship.

Report on post-balance sheet date events

In the reporting year, an agreement to sell the shares of the joint venture Bosch Mahle Turbo Systems GmbH & Co. KG (BMTS) to FountainVest Partners (FountainVest), a private equity investor backed by global institutional investors, was signed by the parties. The closing takes place in the first quarter of 2018.

As of January 1, 2018 MAHLE Beteiligungen GmbH increased its share in MAHLE Behr GmbH & Co. KG and MAHLE Behr Verwaltung GmbH to 55.71 percent by the acquisition of shares from other shareholders.

In March 2018 MAHLE Behr GmbH & Co. KG signed a contract to sell its shares in the joint venture HBPO Beteiligungsgesellschaft mbH to fellow shareholder Plastic Omnium. The transaction is still subject to antitrust approval.

Appropriation of earnings

Unappropriated retained earnings

in EUR '000	2017
Net income MAHLE GmbH	198,885
Transfer to revenue reserves	-191,400
Amount carried forward from prior year	109
Unappropriated retained earnings MAHLE GmbH	7,594

Proposed utilization of retained earnings

in EUR '000	2017
Unappropriated retained earnings	7,594
Dividend distribution to MAHLE-Stiftung GmbH	-7,500
Carry forward to new account	94

Remuneration of the members of the Management Board of MAHLE GmbH (parent company)

in EUR '000	2017
Supervisory Board	278
Management Board	10,160

The total remuneration of the Management Board comprises fixed and variable components. The fixed portions for 2017 amounted to EUR 4,519k and the variable compensation for 2017 to EUR 5,554k. The remuneration shown also includes an adjustment for the previous year. The fixed portions include benefits in kind, which consist primarily of the noncash benefits of having company cars.

Remunerations paid to former members of the Management Board and their descendants totaled EUR 1,819k.

An amount of EUR 23,784k is set aside for this group of persons in the pension accrual as of December 31, 2017.

Auditor's fee

The total auditor's fee for 2017 charged by the group auditor PricewaterhouseCoopers GmbH, pursuant to Sec. 314, Para. 1, No. 9 of the German Commercial Code (HGB) consists of the following:

in EUR '000	2017
Services for audit of financial statements	895
Other assurance services	32
Tax advisory services	689
Other services	320
Total	1,936

Stuttgart/Germany, March 16, 2018

The Management Board of MAHLE GmbH



Jörg Stratmann



Georg Dietz



Bernd Eckl



Wilhelm Emperhoff



Arnd Franz



Michael Frick



Michael Glowatzki

Consolidated statement of fixed assets

CONSOLIDATED STATEMENT OF FIXED ASSETS FROM JANUARY 1 TO DECEMBER 31, 2017

in EUR '000	Acquisition/manufacturing costs							Dec. 31, 2017
	BUSINESS YEAR 2017							
	Jan. 1, 2017	Jan. 1, 2017	Changes at the Group	Additions	Disposals	Reclassifications	Currency translation of current year	
	Accumulated acquisition/manufacturing costs	Currency translation						Accumulated acquisition/manufacturing costs
I. Intangible assets								
1. Purchased concessions, industrial and similar rights and assets, as well as licences in such rights and assets	776,359	-6,371	10,762	15,210	4,694	758	-36	791,988
2. Goodwill	567,930	0	46,927	597	44,546	0	0	570,908
3. Prepayments	774	-122	0	405	94	-219	1	745
	1,345,063	-6,493	57,689	16,212	49,334	539	-35	1,363,641
II. Property, plant, and equipment								
1. Land, leasehold rights, and buildings including buildings on third-party land	1,630,923	-69,877	-14,868	32,188	14,595	43,929	-608	1,607,092
2. Technical equipment and machinery	5,276,036	-257,532	-113,331	173,309	78,828	320,885	-7,140	5,313,399
3. Other equipment, fixtures, and furniture	429,232	-16,018	-12,989	34,542	13,253	18,647	-394	439,767
4. Prepayments and assets under construction	452,962	-19,835	-820	371,810	10,142	-384,000	1,002	410,977
	7,789,153	-363,262	-142,008	611,849	116,818	-539	-7,140	7,771,235
III. Financial assets								
1. Shares in affiliated companies	30,070	-2,288	0	2,345	1,779	0	-8	28,340
2. Shares in associated companies	140,741	-2	0	64,521	40,041 ¹	0	-1,159	164,060
3. Equity investments	23,567	-2,107	40	678	14,956	0	1,011	8,233
4. Loans to companies in which participations are held	1,270	0	0	0	1,238	0	0	32
5. Long-term securities	6,407	-15	0	47	7	0	-2	6,430
6. Other loans	14,631	-905	0	3,783	719	0	-46	16,744
	216,686	-5,317	40	71,374	58,740	0	-204	223,839
	9,350,902	-375,072	-84,279	699,435	224,892	0	-7,379	9,358,715

¹ Includes results from continuation of equity approach as well as disposal due to dividend payments

² Thereof shares in affiliated companies measured according to the equity method: EUR 614k

Depreciation/amortization

Net book values

BUSINESS YEAR 2017

Jan. 1, 2017	Jan. 1, 2017							Dec. 31, 2017	Dec. 31, 2017	Dec. 31, 2016
Accumulated depreciation/amortization	Currency translation	Changes at the Group	Depreciation/amortization of the business year	Write-ups of the business year	Disposals	Reclassifications	Currency translation of current year	Accumulated depreciation/amortization	Net book values	Net book values
444,274	-4,709	-2,275	110,104	0	1,588	-50	-223	545,533	246,455	332,085
270,081	0	0	48,731	0	44,546	0	0	274,266	296,642	297,849
0	0	0	0	0	0	0	0	0	745	774
714,355	-4,709	-2,275	158,835	0	46,134	-50	-223	819,799	543,842	630,708
672,493	-27,576	-21,049	53,530	168	8,350	-38	-1,066	667,776	939,316	958,430
3,779,821	-177,484	-94,901	350,615	402	72,006	431	-5,487	3,780,587	1,532,812	1,496,215
301,873	-11,988	-11,853	41,768	0	11,443	94	-299	308,152	131,615	127,359
5,931	-124	0	441	0	0	-437	3	5,814	405,163	447,031
4,760,118	-217,172	-127,803	446,354	570	91,799	50	-6,849	4,762,329	3,008,906	3,029,035
28,032	-2,179	0	91	2,543	0	0	-9	23,392	4,948	2,038
98,157	0	0	0	45,593	0	0	0	52,564	111,496 ²	42,584
108	-13	0	78	0	0	0	-5	168	8,065	23,459
0	0	0	0	0	0	0	0	0	32	1,270
390	-3	0	11	1,448	0	0	0	-1,050	7,480	6,017
32	11	0	77	504	0	0	0	-384	17,128	14,599
126,719	-2,184	0	257	50,088	0	0	-14	74,690	149,149	89,967
5,601,192	-224,065	-130,078	605,446	50,658	137,933	0	-7,086	5,656,818	3,701,897	3,749,710

Shareholdings

Shareholdings in companies included in consolidation, associated companies, companies included in consolidation on a pro-rata basis and other companies which serve the permanent business operations.

AS AT DECEMBER 31, 2017

NAME AND LOCATION	Share in equity in %	Equity in EUR '000	Result of the last business year in EUR '000
PARENT COMPANY			
MAHLE GmbH, Stuttgart/Germany			
1. Fully consolidated subsidiaries			
a) Fully consolidated subsidiaries of MAHLE GmbH with direct shareholding quota			
Conso, LLC, Wilmington, Delaware/USA	100.00		
MAHLE Aftermarket France SAS, Décines/France	100.00		
MAHLE Aftermarket GmbH, Stuttgart/Germany	100.00		
MAHLE Aftermarket Inc., Farmington Hills, Michigan/USA	100.00		
MAHLE Aftermarket Ltd., Bilston/Great Britain	100.00		
MAHLE Aftermarket Pte. Ltd., Singapore/Singapore	100.00		
MAHLE Aftermarket S. de R.L. de C.V., Lerma/Mexico	100.00		
MAHLE Aftermarket S.L.U., Alcalá de Henares/Spain	100.00		
MAHLE Aftermarket SAS, Poissy/France	100.00		
MAHLE Amovis GmbH, Berlin/Germany	100.00		
MAHLE Anéis Participações Ltda., Mogi Guaçu/Brazil	100.00		
MAHLE Behr GmbH & Co. KG, Stuttgart/Germany	50.71		
MAHLE Beteiligungen GmbH, Stuttgart/Germany	100.00		
MAHLE Brandenburg GmbH, Wustermark/Germany	100.00		
MAHLE Componente de Motor SRL, Timisoara/Romania	100.00		
MAHLE Componentes de Motor de México, S. de R.L. de C.V., Ramos Arizpe/Mexico	100.00		
MAHLE Componentes de Motor España, S.L.U., Vilanova i la Geltrú/Spain	100.00		
MAHLE Componentes de Motores S.A., Murte de Portugal	100.00		
MAHLE Componenti Motori Italia S.p.A., La Loggia/Italy	100.00		
MAHLE Composants Moteur France SAS, Chavanod/France	100.00		
MAHLE Compresores, S. de R.L. de C.V., Juarez Chihuahua/Mexico	100.00		
MAHLE Compressores do Brasil Ltda., Jaguariúna/Brazil	100.00		
MAHLE Compressors Hungary Kft., Balassagyarmat/Hungary	100.00		
MAHLE Compressors (Suzhou) Co., Ltd., Changshu/China	100.00		
MAHLE de México S. de R.L. de C.V., Ramos Arizpe/Mexico	100.00		
MAHLE Donghyun Filter Systems (Tianjin) Co., Ltd., Tianjin/China	100.00		
MAHLE Donghyun Filter Systems Co., Ltd., Hwaseong/South Korea	100.00		
MAHLE Electric Drives Bel OOO, Grodno/Belarus	100.00		
MAHLE Electric Drives Bosnia d.o.o., Laktaši/Bosnia and Herzegovina	100.00		
MAHLE Electric Drives Bovec d.o.o., Bovec/Slovenia	100.00		
MAHLE Electric Drives Japan Corporation, Numazu-shi, Shizuoka/Japan	100.00		
MAHLE Electric Drives Komen d.o.o., Komen/Slovenia	100.00		
MAHLE Electronics S.A.U., Paterna/Spain	100.00		
MAHLE Electronics Valladolid S.A.U., Boecillo/Spain	100.00		
MAHLE Engine Components (Chongqing) Co., Ltd., Chongqing/China	100.00		
MAHLE Engine Components (Nanjing) Co., Ltd., Nanjing/China	100.00		
MAHLE Engine Components (Thailand) Co., Ltd., Bangkok/Thailand	99.75		
MAHLE Engine Components (Yingkou) Co., Ltd., Yingkou/China	100.00		

AS AT DECEMBER 31, 2017

NAME AND LOCATION	Share in equity in %	Equity in EUR '000	Result of the last business year in EUR '000
MAHLE Engine Components India Private Limited, Pithampur/India	100.00		
MAHLE Engine Components Japan Corporation, Okegawa-shi/Japan	100.00		
MAHLE Engine Components Slovakia s.r.o., Dolný Kubín/Slovakia	100.00		
MAHLE Engine Components USA, Inc., Morristown, Tennessee/USA	100.00		
MAHLE Engine Peripherals and Tooling (Shanghai) Co., Ltd., Shanghai/China	100.00		
MAHLE Engine Systems UK Ltd., Kilmarnock/Great Britain	100.00		
MAHLE Filter Systems (India) Private Limited, Gurgaon/India	50.00 ¹		
MAHLE Filter Systems Canada, ULC, Tilbury/Canada	100.00		
MAHLE Filter Systems Japan Corporation, Tokyo/Japan	100.00		
MAHLE Filter Systems Land Corporation, Cavite/Philippines	66.67		
MAHLE Filter Systems North America, Inc., Troy, Michigan/USA	100.00		
MAHLE Filter Systems Philippines Corporation, Cavite/Philippines	100.00		
MAHLE Filter Systems UK Ltd., Telford/Great Britain	100.00		
MAHLE Filtersysteme Austria GmbH, St. Michael ob Bleiburg/Austria	100.00		
MAHLE Filtersysteme France SAS, Seboncourt/France	100.00		
MAHLE Filtersysteme GmbH, Stuttgart/Germany	100.00		
MAHLE Filtration Systems (Hubei) Co., Ltd., Wuhan City/China	100.00		
MAHLE Filtre Sistemleri A.S., Gebze, Kocaeli/Turkey	100.00		
MAHLE France SAS, Rouffach/France	100.00		
MAHLE Guangzhou Filter Systems Co., Ltd., Guangzhou/China	100.00		
MAHLE Holding (India) Private Limited, Gurgaon/India	100.00		
MAHLE Holding Austria GmbH, St. Michael ob Bleiburg/Austria	100.00		
MAHLE Holding España S.L.U., Montblanc/Spain	100.00		
MAHLE Immobilien GmbH, Stuttgart/Germany	100.00		
MAHLE Immobilien Schweiz AG, Grenchen/Switzerland	100.00		
MAHLE Indústria e Comércio Ltda., Mogi Guaçu/Brazil	100.00		
MAHLE Industrial Thermal Systems GmbH & Co. KG, Stuttgart/Germany	60.00 ⁵		
MAHLE Industriebeteiligungen GmbH, Stuttgart/Germany	100.00		
MAHLE Industriemotoren-Komponenten GmbH, Stuttgart/Germany	100.00		
MAHLE Industries UK Ltd., Rugby/Great Britain	100.00		
MAHLE Industries, Incorporated, Farmington Hills, Michigan/USA	100.00		
MAHLE Industry GmbH, Stuttgart/Germany	100.00		
MAHLE International GmbH, Stuttgart/Germany	100.00		
MAHLE Japan Ltd., Tokyo/Japan	100.00		
MAHLE Kleinmotoren-Komponenten GmbH & Co. KG, Stuttgart/Germany	100.00		
MAHLE Konya Motor Parçaları San. ve Tic. A.Ş., Konya/Turkey	100.00		
MAHLE Letrika (Suzhou) Automotive Electrics Co., Ltd., Taicang City/China	98.45		
MAHLE Letrika d.o.o., Šempeter pri Gorici/Slovenia	100.00		
MAHLE Letrika Italia, S.r.l., Reggio Emilia/Italy	100.00		
MAHLE Luxembourg Sàrl, Foetz/Luxembourg	100.00		
MAHLE Manufacturing Management, Inc., Farmington Hills, Michigan/USA	100.00		
MAHLE Manufacturing Service Japan Corporation, Tokyo/Japan	100.00		
MAHLE Maquiladora LLC, Farmington Hills, Michigan/USA	100.00		

AS AT DECEMBER 31, 2017

NAME AND LOCATION	Share in equity in %	Equity in EUR '000	Result of the last business year in EUR '000
MAHLE Metal Leve S.A., Mogi Guaçu/Brazil	70.00		
MAHLE Motor Parçaları San. ve Tic. A.Ş., Izmir/Turkey	100.00		
MAHLE Nagares S.A.U., Motilla del Palancar/Spain	100.00		
MAHLE Polska Spółka z o.o., Krotoszyn/Poland	100.00		
MAHLE Powertrain GmbH, Stuttgart/Germany	100.00		
MAHLE Powertrain Ltd., Northampton/Great Britain	100.00		
MAHLE Powertrain, LLC, Plymouth, Michigan/USA	100.00		
MAHLE RUS, OOO, Village Dobrino/Russia	100.00		
MAHLE S.A.U., Vilanova i la Geltrú/Spain	100.00		
MAHLE Services (Thailand) Ltd., Samut Prakan/Thailand	100.00		
MAHLE Shanghai Filter Systems Co., Ltd., Shanghai/China	95.00		
MAHLE Shared Services Poland Spółka z o.o., Wrocław/Poland	100.00		
MAHLE Siam Electric Drives Co. Ltd., Samut Prakan/Thailand	99.999		
MAHLE Siam Filter Systems Co., Ltd., Samut Prakan/Thailand	74.90		
MAHLE Sistemas de Filtración de México S.A. de C.V., Santa Catarina, Monterrey/Mexico	100.00		
MAHLE Technologies Holding (China) Co., Ltd., Shanghai/China	100.00		
MAHLE Trading (Shanghai) Co., Ltd., Shanghai/China	100.00		
MAHLE Trading Japan Co., Ltd., Tokyo/Japan	100.00		
MAHLE Tri-Ring Valve Train (Hubei) Co., Ltd., Macheng/China	65.00		
MAHLE Ventiltrieb GmbH, Stuttgart/Germany	100.00		
MAHLE Versicherungsvermittlung GmbH, Stuttgart/Germany	100.00		
MAHLE Vöcklabruck GmbH, Vöcklabruck/Austria	100.00		
MG Immobilienentwicklungs- und Ansiedlungsgesellschaft mbH, Wolfsberg/Austria	100.00		
OSCON, LLC, Wilmington, Delaware/USA	100.00		
PT. MAHLE Filter Systems Indonesia, Pasirranji/Indonesia	100.00		
PT. MAHLE Indonesia, Pasirranji/Indonesia	100.00		
S.C.I. Daudet, Décines/France	100.00		
b) Fully consolidated subsidiaries of MAHLE Behr GmbH & Co. KG with direct shareholding quota			
Behr RUS o.o.o., St. Petersburg/Russia	99.90		
IQENTO GmbH, Stuttgart/Germany	100.00		
MAHLE Behr Berga GmbH, Berga/Germany	100.00		
MAHLE Behr Charleston Inc., Charleston, South Carolina/USA	100.00		
MAHLE Behr Components Spain S.L.U., L'Espluga de Francolí/Spain	100.00		
MAHLE Behr Dayton L.L.C., Dayton, Ohio/USA	100.00		
MAHLE Behr France Hambach S.A.S., Hambach/France	100.00		
MAHLE Behr France Rouffach S.A.S., Rouffach/France	99.995		
MAHLE Behr Gerenciamento Térmico Brasil Ltda., Arujá/Brazil	99.997		
MAHLE Behr Holding Deutschland GmbH, Stuttgart/Germany	100.00		
MAHLE Behr Holding GmbH, Stuttgart/Germany	100.00		

AS AT DECEMBER 31, 2017

NAME AND LOCATION	Share in equity in %	Equity in EUR '000	Result of the last business year in EUR '000
MAHLE Behr Holýšov s.r.o., Holýšov/Czech Republic	100.00		
MAHLE Behr India Private Limited, Pune/India	60.00		
MAHLE Behr Italy s.r.l., Grugliasco/Italy	98.00		
MAHLE Behr Japan K.K., Tokyo/Japan	100.00		
MAHLE Behr Kirchberg GmbH, Kirchberg/Germany	100.00		
MAHLE Behr Korea Inc., Busan/South Korea	100.00		
MAHLE Behr Kornwestheim GmbH, Kornwestheim/Germany	100.00		
MAHLE Behr Luxembourg Sàrl, Foetz/Luxembourg	100.00		
MAHLE Behr Manufacturing Management, Inc., Troy, Michigan/USA	100.00		
MAHLE Behr Maquiladora LLC, Wilmington, Delaware/USA	100.00		
MAHLE Behr Mexico S. de R.L. de C.V., Ramos Arizpe/Mexico	100.00		
MAHLE Behr Mnichovo Hradiště s.r.o., Mnichovo Hradiště/Czech Republic	100.00		
MAHLE Behr Námestovo s.r.o., Námestovo/Slovakia	100.00		
MAHLE Behr Ostrava s.r.o., Mošnov/Czech Republic	99.98		
MAHLE Behr Ostrov s.r.o., Mnichovo Hradiště/Czech Republic	100.00		
MAHLE Behr Ostrów Wielkopolski Sp. z o.o., Ostrów Wielkopolski/Poland	100.00		
MAHLE Behr Rio Bravo, S. de R.L. de C.V., Ramos Arizpe/Mexico	100.00		
MAHLE Behr Senica s.r.o., Senica/Slovakia	100.00		
MAHLE Behr Service America L.L.C., Troy, Michigan/USA	100.00		
MAHLE Behr Service Asia Co., Ltd., Shanghai/China	100.00		
MAHLE Behr Service GmbH, Schwäbisch Hall/Germany	100.00		
MAHLE Behr Service Mexico, S. de R.L. de C.V., Ramos Arizpe/Mexico	100.00		
MAHLE Behr South Africa (Pty) Ltd., Durban/South Africa	100.00		
MAHLE Behr Spain S.A.U., Montblanc/Spain	100.00		
MAHLE Behr Thermal Systems (Jinan) Co., Ltd., Jinan/China	100.00		
MAHLE Behr Thermal Systems (Qingdao) Co., Ltd., Qingdao/China	100.00		
MAHLE Behr Troy Inc., Troy, Michigan/USA	100.00		
MAHLE Behr USA Inc., Troy, Michigan/USA	100.00		
MAHLE Industrial Thermal Systems GmbH & Co. KG, Stuttgart/Germany	40.00 ⁶		
c) Fully consolidated subsidiaries of MAHLE Metal Leve S.A. with direct shareholding quota			
MAHLE Argentina S.A., Rafaela/Argentina	100.00		
MAHLE Filtróil Indústria e Comércio de Filtros Ltda., Mogi Guaçu/Brazil	60.00		
MAHLE Hirschvogel Forjas S.A., Queimados/Brazil	51.00		
MAHLE Industry do Brasil Ltda., Mogi Guaçu/Brazil	100.00		
MAHLE Metal Leve GmbH, St. Michael ob Bleiburg/Austria	100.00		
d) Fully consolidated subsidiaries of MAHLE Industrial Thermal Systems GmbH & Co. KG with direct shareholding quota			
MAHLE Industrial Thermal Systems (Tianjin) Co., Ltd., Tianjin/China	100.00		
MAHLE Industrial Thermal Systems America, L.P., Belmont, Michigan/USA	99.00		

AS AT DECEMBER 31, 2017

NAME AND LOCATION	Share in equity in %	Equity in EUR '000	Result of the last business year in EUR '000
2. Affiliated companies, not consolidated on account of immateriality for the presentation of the net assets, financial position and results of operations			
a) Affiliated companies of MAHLE Behr GmbH & Co. KG with direct shareholding quota			
MAHLE Behr Sweden AB, Gothenburg/Sweden	100.00 ³	77	18
MAHLE Behr Thermal Noida Private Limited, Gurgaon/India	100.00 ³	133	-3
b) Other affiliated companies with direct shareholding quota			
Compañía Rosarina S.A., Rosario/Argentina	99.99 ³	531	-319
Eito Denki Co. Ltd., Gojome-machi, Minamiakita-gun, Akita/Japan	66.80 ³	191	344
FAHRTWIND GmbH, Stuttgart/Germany	100.00	35	-506
MAHLE Engine Components Australia Pty Ltd., Melbourne/Australia	100.00 ⁴	614	43
MAHLE Industrial Thermal Systems America, Inc., Belmont, Michigan/USA	100.00 ³	58	0
MAHLE Industrial Thermal Systems Verwaltung GmbH, Stuttgart/Germany	60.00	446	9
MAHLE InnoWa GmbH, Stuttgart/Germany	100.00	2,543	0
MAHLE Kleinmotoren-Komponenten Verwaltungs GmbH, Stuttgart/Germany	100.00	27	0
MAHLE Thermoelektronik GmbH, Duisburg/Germany	100.00	114	1,579
Ueno Industry Co. Ltd., Tokyo/Japan	100.00 ³	485	7
3. Proportionately consolidated companies			
a) Subgroup HBPO that is managed by MAHLE Behr GmbH & Co. KG and two more companies			
PARENT COMPANY			
HBPO Beteiligungsgesellschaft mbH, Lippstadt/Germany	33.33		
Companies included in subgroup accounts of HBPO Beteiligungsgesellschaft mbH with direct shareholding quota			
HBPO Asia Ltd., Seoul/South Korea	100.00		
HBPO Automotive Hungária Kft., Győr/Hungary	100.00		
HBPO Automotive Spain S.L.U., Martorell/Spain	100.00		
HBPO Beijing Ltd., Beijing/China	100.00		
HBPO Brasil Automotive Servicos Ltda., Arujá/Brazil	100.00		
HBPO Canada Inc., Windsor/Canada	100.00		
HBPO Czech s.r.o., Mnichovo Hradiště/Czech Republic	100.00		
HBPO Germany GmbH, Meerane/Germany	100.00		
HBPO GmbH, Lippstadt/Germany	100.00		
HBPO Ingolstadt GmbH, Ingolstadt/Germany	100.00		
HBPO Management Services Mexico S.A. de C.V., Puebla/Mexico	100.00		
HBPO Manufacturing Hungary Kft., Kecskemét/Hungary	100.00		
HBPO Mexico S.A. de C.V., Puebla/Mexico	100.00		
HBPO North America Inc., Troy, Michigan/USA	100.00		
HBPO Pyeongtaek Ltd., Pyeongtaek/South Korea	100.00		

AS AT DECEMBER 31, 2017

NAME AND LOCATION	Share in equity in %	Equity in EUR '000	Result of the last business year in EUR '000
HBPO Rastatt GmbH, Rastatt/Germany	100.00		
HBPO Regensburg GmbH, Regensburg/Germany	100.00		
HBPO Services Mexico S.A. de C.V., Puebla/Mexico	100.00		
HBPO Slovakia s.r.o., Lozorno/Slovakia	100.00		
HBPO UK Ltd., Banbury/Great Britain	100.00		
HBPO Vaihingen/Enz GmbH, Vaihingen/Enz/Germany	100.00		
SHB Automotive Modules Company Ltd., Hwaseong/South Korea	50.00		
b) Subgroup Behr-Hella Thermocontrol that is managed by MAHLE Behr GmbH & Co. KG and another company			
PARENT COMPANY			
Behr-Hella Thermocontrol GmbH, Stuttgart/Germany	50.00		
Companies included in subgroup accounts of Behr-Hella Thermocontrol GmbH with direct shareholding quota			
Behr-Hella Thermocontrol (Shanghai) Co., Ltd., Shanghai/China	100.00		
Behr-Hella Thermocontrol EOOD, Bozhurishte/Bulgaria	100.00		
Behr-Hella Thermocontrol Inc., Wixom, Michigan/USA	100.00		
Behr-Hella Thermocontrol India Private Limited, Pune/India	100.00		
Behr-Hella Thermocontrol Japan K.K., Atsugi/Japan	100.00		
BHTC Finland Oy, Tampere/Finland	100.00		
BHTC Mexico S.A. de C.V., San Miguel de Allende/Mexico	100.00		
c) Subgroup Behr Hella Service that is managed by MAHLE Behr GmbH & Co. KG and another company			
PARENT COMPANY			
Behr Hella Service GmbH, Schwäbisch Hall/Germany	50.00		
Companies included in subgroup accounts of Behr Hella Service GmbH with direct shareholding quota			
Behr Hella Comércio de Peças Automotivas S.A., Arujá/Brazil	100.00		
Behr Hella Service North America L.L.C., Peachtree City, Georgia/USA	100.00		
Behr Hella Service South Africa (Pty) Ltd., Johannesburg/South Africa	100.00		
Behr Service IAM USA Inc., Troy, Michigan/USA	100.00		
d) Proportionately consolidated group of companies that is managed by MAHLE Behr GmbH & Co. KG and another company			
PARENT COMPANY			
Shanghai MAHLE Thermal Systems Co., Ltd., Shanghai/China	50.00		
Subsidiaries with direct shareholding quota			
Chengdu MAHLE Automotive Thermal Systems Co., Ltd., Chengdu/China	100.00		
Shenyang MAHLE Automotive Thermal Systems Co., Ltd., Shenyang/China	100.00		

AS AT DECEMBER 31, 2017

NAME AND LOCATION	Share in equity in %	Equity in EUR '000	Result of the last business year in EUR '000
e) Other proportionately consolidated companies with direct shareholding quota that are managed by MAHLE Behr GmbH & Co. KG and another company			
Behr Thermot-tronik Italia S.p.A., Grugliasco/Italy	50.00		
Dongfeng Behr Thermal Systems Co. Ltd., Wuhan/China	50.00		
f) Other proportionately consolidated companies that are managed by MAHLE GmbH and another company			
Allied Ring Corporation, St. Johns, Michigan/USA	50.00		
4. Associated companies, consolidated using the equity method			
a) Associated companies of MAHLE Behr GmbH & Co. KG with direct shareholding quota			
Dongfeng-Paninco Automobile Aluminum Heat Exchanger Co. Ltd., Shiyuan/China	50.00		
HICOM HBPO SDN BHD, Shah Alam/Malaysia	40.00		
b) Associated companies of MAHLE Metal Leve S.A. with direct shareholding quota			
Innoferm Tecnologia Ltda., Mogi Guaçu/Brazil	33.33 ³	7,301	-203
c) Other associated companies with direct shareholding quota			
Bosch Mahle Turbo Systems GmbH & Co. KG, Stuttgart/Germany	50.00		
Bosch Mahle Turbo Systems Verwaltungs GmbH, Stuttgart/Germany	50.00 ²	30	3
Cofap Companhia Fabricadora de Peças Ltda., São Paulo/Brazil	31.65		
India Nippon Electricals Ltd., Tamil Nadu/India	20.52 ^{2,3}	42,478	5,746
INPRIME d.o.o., Tolmin/Slovenia	20.84 ^{2,3}	-266	0
LangFang Kokusan Electric Co., Ltd., Hebei/China	40.00		
Letrika SOL d.o.o., Šempeter pri Gorici/Slovenia	41.57 ^{2,3}	660	-70
MAHLE Behr Verwaltung GmbH, Stuttgart/Germany	23.08 ²	20,192	1,374
MAHLE König GmbH, Rankweil/Austria	50.00		
MAHLE König Kommanditgesellschaft GmbH & Co. KG, Rankweil/Austria	50.00		
MAHLE Letrika Roots India Private Limited, Coimbatore/India	50.00 ^{2,3}	580	-60
Brain Bee S.p.A., Parma/Italy	20.00 ^{2,3}	3,571	1,931
Pt Federal Izumi Manufacturing, Bogor/Indonesia	36.94		
SiEVA d.o.o., Šempeter pri Gorici/Slovenia	20.00 ^{2,3,6}	7,039	31

¹ Shareholding 50% + 1 share

² The company was not measured using the equity method on account of its immateriality for the presentation of the net assets, financial position and results of operations

³ Local financial statements

⁴ Affiliated company, consolidated using the equity method

⁵ From the Group's perspective, company is included by 100%

⁶ Previous years figures according to last available financial statement

Auditor's report

This audit report is issued on financial statements prepared in German language.

INDEPENDENT AUDITOR'S REPORT

To MAHLE GmbH, Stuttgart

Audit Opinions

We have audited the consolidated financial statements of MAHLE GmbH, Stuttgart/Germany, and its subsidiaries (the Group), which comprise the consolidated balance sheet as of December 31, 2017, the consolidated income statement, the consolidated cash flow statement, the consolidated statement of changes in equity for the financial year from January 1 to December 31, 2017, and the notes to the consolidated financial statements, including the recognition and measurement policies presented therein. In addition, we have audited the group management report of MAHLE GmbH for the financial year from January 1 to December 31, 2017. We have not audited the content of the statement on corporate governance pursuant to § [Article] 289f Abs. [paragraph] 4 HGB (Handelsgesetzbuch: German Commercial Code) [disclosures regarding women's quota] in accordance with the German legal requirements.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the requirements of German commercial law and give a true and fair view of the assets, liabilities and financial position of the Group as at December 31, 2017 and of its financial performance for the financial year from January 1 to December 31, 2017 in compliance with German Legally Required Accounting Principles, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of the statement on corporate governance referred to above.

Pursuant to §322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with §317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Other Information

The executive directors are responsible for the other information. The other information comprises the statement on corporate governance pursuant to §289f Abs. 4 HGB (disclosures regarding women's quota).

The other information comprises further the remaining parts of the annual report, – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with the requirements of German commercial law, and that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with German Legally Required Accounting Principles. In addition, the executive directors are responsible for such internal control as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, provided no actual or legal circumstances conflict therewith.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the

opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with §317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with German Legally Required Accounting Principles.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Stuttgart, March 16, 2018

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

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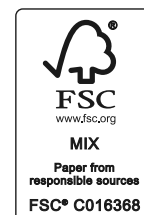
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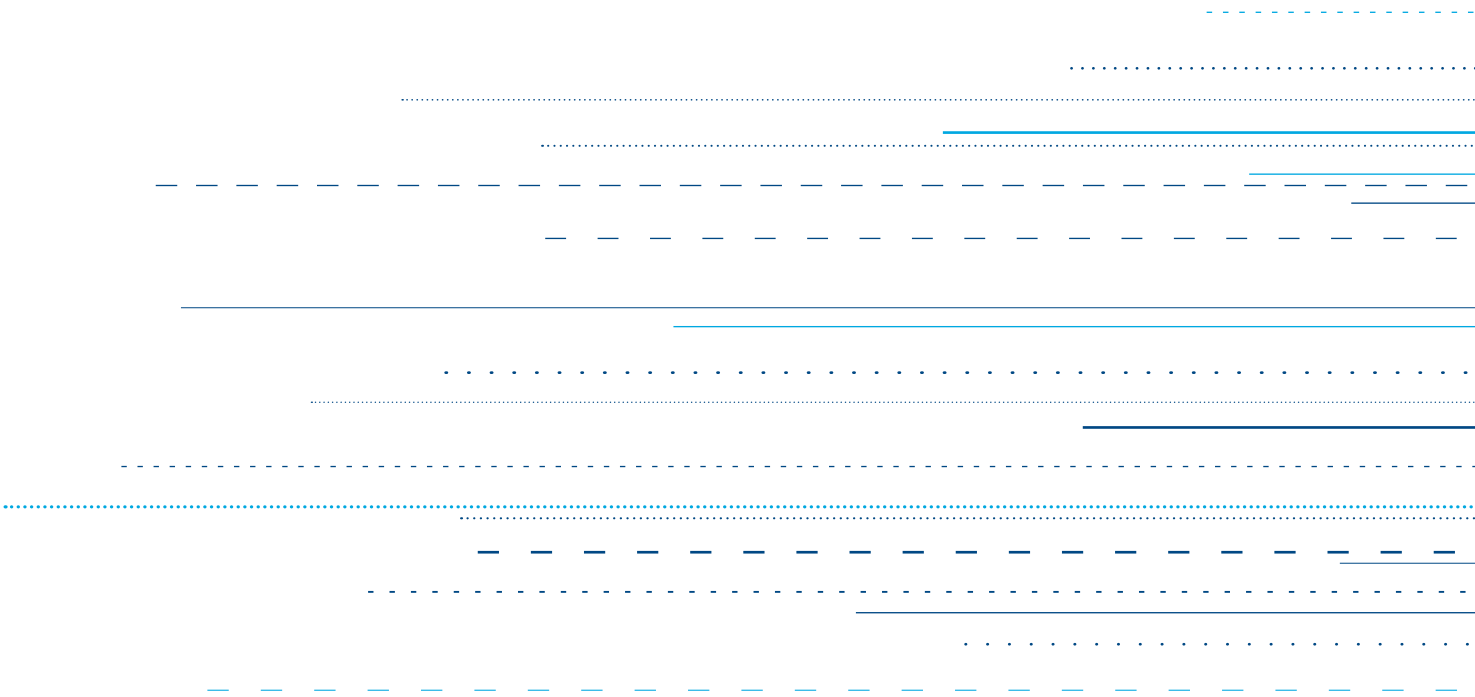
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