Creativity
Technology
Trust



We are currently experiencing paradigm shifts that are both economic and social – fueled above all by continuing digitalization and by tangible climate change, and compounded by the impact of the coronavirus pandemic. These enormous challenges can only be met by venturing off the beaten path and pursuing approaches marked by creativity – and responsibility. With innovations sparked by inspiration, based on technological excellence, and characterized by reliability, we are shaping the future of business, society, and technology.

The digital magazine that accompanies our latest annual report highlights just some of these innovations. annual-report.bosch.com



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#### The Bosch Group

is a leading global supplier of technology and services. It employs roughly 395,000 associates worldwide (as of December 31, 2020). The company generated sales of 71.5 billion euros in 2020. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 129 locations across the globe, Bosch employs some 73,000 associates in research and development, of which nearly 34,000 are software engineers.



#### MOBILITY SOLUTIONS

Powertrain Solutions
Chassis Systems Control
Electrical Drives
Cross-Domain Computing Solutions¹
Car Multimedia²
Automotive Electronics
Automotive Aftermarket
Automotive Steering
Connected Mobility Solutions
Bosch eBike Systems

Other businesses:
Bosch Engineering GmbH
ETAS GmbH
ITK Engineering GmbH
Two-Wheeler and Powersports



#### INDUSTRIAL TECHNOLOGY

Drive and Control Technology<sup>3</sup>

Other businesses: Bosch Connected Industry Robert Bosch Manufacturing Solutions GmbH The company was set up in Stuttgart in 1886 by Robert Bosch (1861–1942) as "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant upfront investments in the safeguarding of its future. Ninety-four percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The remaining shares are held by Robert Bosch GmbH and by a corporation owned by the Bosch family. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust.

#### Shareholders of Robert Bosch GmbH



#### **Shareholding**

1% Robert Bosch GmbH5% ERBO II GmbH/ Bosch family

**94%** Robert Bosch Stiftung GmbH



#### Voting rights

7% Bosch family93% Robert Bosch

Industrietreuhand KG



#### CONSUMER GOODS

Power Tools<sup>4</sup> BSH Hausgeräte GmbH

> Other businesses not allocated to business sectors: Bosch Healthcare Solutions GmbH Bosch.IO GmbH grow platform GmbH Robert Bosch Venture Capital GmbH



#### ENERGY AND BUILDING TECHNOLOGY

Building Technologies Thermotechnology Bosch Global Service Solutions

Other businesses:
Robert Bosch Smart Home GmbH

- 1. From January 1, 2021
- 2. Until December 31, 2020
- 3. Bosch Rexroth AG (100% Bosch-owned)
- 4. Robert Bosch Power Tools GmbH

395,000
associates worldwide

# BOSC FILE

73,000 researchers and engineers worldwide

5.9
billion euros
expenditure on research
and development

1.7
billion euros
EBIT in 2020

71.5

billion euros sales revenue in 2020

# AURES

Some 4 0

subsidiaries and regional companies in more than 60 countries

#### STRATEGY AND INNOVATION

Our vision of the future is for mobility to be sustainable, safe, and exciting. We aspire to a leading position as the largest automotive supplier by revenue, even in a changing market, and to help shape change in the automotive industry.

As a company, we are committed to the Paris climate targets, even if they are very ambitious. We are pursuing a technology-neutral approach and are offering our customers a wide range of products and services. We want to help make mobility carbon neutral. Electric vehicles powered by electricity from renewables are one part of this. On the other hand, in the transitional phase and in many applications (especially in heavy-duty and long-haul traffic), the modern combustion engine will continue to play an important role. It will also feature as part of hybrid configurations for many years.



Using carbon-neutral fuels, dieseland gasoline-powered vehicles can also be climate neutral.

In electromobility, our strategy is to position ourselves as a supplier with a broad product portfolio. In our Industrial Technology business sector, new solutions arising from the convergence of electrical and hydraulic systems offer opportunities. In building technology, the use of heat pumps and renewables is playing a rapidly growing role and opening up new market opportunities.

It remains a key strategic focus to continuously expand our position in online retail, as this is playing an increasingly significant role, especially for our Consumer Goods business sector.

We want to be a data-driven AloT company. In other words, we want to use connectivity on the internet of things (IoT), combined with artificial intelligence (Al), to continuously improve our products and services. Climate action is also one of our paramount strategic focal points for the future

We intend to use connected, intelligent solutions to make life easier, more efficient, safer, and also more sustainable for as many people as possible. We regard our presence in diverse markets and industries as an advantage. This presence is a source of many insights for us.

Over the medium term, AIoT will especially help us significantly increase the proportion of annually recurring revenue, which is still low.

With respect to our goal of becoming a thoroughly customer-focused AloT company, the importance of software and information technology in the value chain is growing significantly. For this reason, we are reinforcing the expertise and structures we need to achieve this goal. The technological basis is now in place across the organization.

In the shape of the Bosch Center for Artificial Intelligence, we have a center of competence which operates at seven locations in Germany, the U.S., China, India. and Israel.

We have published a code of ethics that governs our use of artificial intelligence. Our maxim today is that humans should be the ultimate arbiter of any Al-based decision. Our aim is to develop safe, robust, and explainable Al products.

For more about our strategy, read the group management report in the 2020 annual report at annual-report.bosch.com

# MOBILITY SOLUTIONS

Powertrain Solutions
Chassis Systems Control
Electrical Drives
Cross-Domain Computing Solutions<sup>1</sup>
Car Multimedia<sup>2</sup>
Automotive Electronics
Automotive Aftermarket
Automotive Steering
Connected Mobility Solutions
Bosch eBike Systems

Other businesses:
Bosch Engineering GmbH
ETAS GmbH
ITK Engineering GmbH
Two-Wheeler and Powersports

- 1. From January 1, 2021
- 2. Until December 31, 2020

Mobility Solutions is the biggest Bosch Group business sector, accounting for 59 percent of total sales. Bosch is one of the leading automotive suppliers. In this role, it is pursuing a vision of mobility that is sustainable, safe, and exciting. As a supplier of automotive original equipment, Bosch is involved in many diverse fields. Organizationally, these are covered by the Powertrain Solutions, Chassis Systems Control, Electrical Drives, Automotive Electronics, and Automotive Steering divisions. In addition, the Cross-Domain Computing Solutions division was set up at the start of 2021. Beyond the original equipment segment, its other divisions are Automotive Aftermarket, the service provider Connected Mobility Solutions, and Bosch eBike Systems. Further activities involve two-wheelers, commercial as well as off-highway vehicles, and engineering services. In response to the profound structural change in the automotive sector, Bosch above all takes a technologyneutral stance toward powertrain development, including renewable synthetic fuels. In 2020 alone, Bosch made upfront investments of around 500 million euros in electromobility, including fuel cells. Bosch is also systematically improving its driver assistance systems for automation levels 1 and 2, working on hands-free highway assist systems, and developing automated driving to SAE levels 3 and 4. With its Cross-Domain Computing Solutions division, Bosch is responding to the changing requirements in the rapidly growing market for software-intensive electronic systems in the automotive sector.





**Mobility Solutions** 

# INDUSTRIAL TECHNOLOGY

Drive and Control Technology<sup>1</sup>

Other businesses:
Bosch Connected Industry
Robert Bosch Manufacturing Solutions GmbH

1. Bosch Rexroth AG (100% Bosch-owned)

In the business year 2020, the Industrial Technology business sector generated 7 percent of total Bosch Group sales. This business sector includes the Drive and Control Technology division, which specializes in drive and control technologies for efficient and powerful movement in machines and systems of any type and size. The division combines global application experience in the market segments of mobile applications, plant construction and engineering, and factory automation. With intelligent components, customized system solutions, and services, Drive and Control Technology creates the necessary environment for fully connected applications. The division offers its customers hydraulics, electric drives and controls, gear technology, and linear motion and assembly technology, including software and interfaces to the internet of things. Bosch's largely in-house provider of assembly systems, Robert Bosch Manufacturing Solutions GmbH, develops flexible, scalable plans for assembly systems, customized solutions in the field of testing and process technology, and related services. The Bosch Connected Industry business unit is also part of Industrial Technology. With a focus on Industry 4.0, it develops software solutions and carries out projects for internal and external customers.



Sales revenue in billions of euros 2019–2020





**Industrial Technology** 

# CONSUMER GOODS

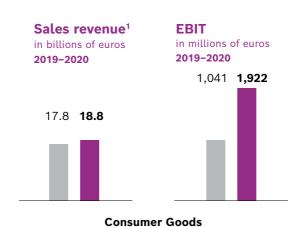
Power Tools <sup>1</sup> BSH Hausgeräte GmbH

1. Robert Bosch Power Tools GmbH

The Consumer Goods business sector contributed some 26 percent of total Bosch Group sales in 2020. Its Power Tools division is a supplier of power tools and garden tools, power-tool accessories, and measuring technology. Its extensive product range is aimed at both professional users in trade and industry and the DIY market. One of the division's focal points is convenient, high-performance cordless tools, and increasingly also web-enabled tools and services. The key pillars of the division's strategy are innovativeness, continuing digitalization, strong brands, the continued growth of online retail, and expansion of business in emerging markets. User experience - the focus on user needs in product and service development is a decisive success factor in these endeavors. The Consumer Goods business sector also includes BSH Hausgeräte GmbH, which offers a broad range of modern, energy-efficient, and increasingly connected household appliances. Its product portfolio ranges from washing machines and tumble dryers through refrigerators and freezers, stoves, ovens, extractor hoods, and dishwashers, to small appliances such as vacuum cleaners, coffee makers, and food processors. The strategy of BSH Hausgeräte focuses on product innovations, on services triggered by connectivity, and on the expansion of digital business models. In the shape of Home Connect, BSH Hausgeräte offers an ecosystem with a cross-brand digital platform for home appliances. Here, it collaborates with many different partners. It aims to use the possibilities offered by digitalization to further expand direct consumer contact.

bosch-pt.com bsh-group.com





1. Including other activities

# ENERGY AND BUILDING TECHNOLOGY

Building Technologies
Thermotechnology
Bosch Global Service Solutions

Other businesses:
Robert Bosch Smart Home GmbH

In 2020, the Energy and Building Technology business sector generated 8 percent of total Bosch Group sales. Its Building Technologies division has two areas of business: the global product business for security and communications solutions, and the regional system integration business. The latter offers solutions and customized services for building security, energy efficiency, and building automation in selected countries. Both units focus on commercial buildings and infrastructure projects. The product portfolio encompasses video-surveillance, intrusiondetection, fire-detection, and voice-alarm systems, as well as access-control and professional audio and conference systems. The Thermotechnology division offers solutions for heating and indoor climate control, hot water, and decentralized energy management to customers worldwide. It provides heating and air-conditioning systems, plus energy management for residential buildings, water heaters, and plant construction business for commercial and industrial heating and airconditioning systems. Electrification and renewables are also becoming increasingly important due to tougher requirements for reducing CO<sub>2</sub> emissions. Here, the division is focusing on innovation, in addition to improving the efficiency of existing products and enhancing the connectivity capability of its devices. The Bosch Global Service Solutions division provides business processes and services, primarily for customers in the automotive, financial services, and logistics industries, and in information and communications technology. Robert Bosch Smart Home GmbH offers web-enabled, app-controlled products for the home.

boschbuildingtechnologies.com boschservicesolutions.com bosch-thermotechnology.com bosch-smarthome.com



## Sales revenue in billions of euros 2019–2020

## EBIT in millions of euros 2019–2020





Energy and Building Technology

# Highlights **2020**



#### Jan. 6 - Las Vegas, USA

#### CES 2020: Bosch garners two Innovation Awards

The awards are conferred on two innovations for cars: a new 3D display and a digital, Al-based virtual visor.

#### Feb. 19 - Berlin, Germany

#### **Bosch Connected World 2020**

Bosch showcases smart solutions for connected vehicles, houses, and factories, presents its new AI code of ethics, and announces the establishment of Bosch.IO GmbH. This new company will pool the Bosch Group's IoT and digital expertise.

#### Mar. 26 - Stuttgart, Germany

#### New rapid PCR test for coronavirus

A test that can identify a coronavirus infection on the spot in less than two-and-a-half hours: in just six weeks, Bosch has developed such a test for its Vivalytic analytic device. This is followed in September by a test that delivers a result in 39 minutes, and in December by one that can detect a positive sample in under 30 minutes.

03







02



04

#### Apr. 23 - Grasbrunn, Germany

#### Bosch premieres INTEOX camera platform

The first completely open platform of its kind, it offers users, system integrators, and app developers new possibilities for innovations and customized modifications to security solutions.

#### May 12 - Stuttgart, Germany Bosch debuts 24/7 protection for lone workers

GuardMe is a certified app solution. In combination with a special smartphone, and via a link to monitoring centers, it performs

all the functions of a personal emergency response system.



#### June 15 - Stuttgart, Germany Bosch makes electromobility even more practicable

Bosch's recharging network, which drivers can access from one central app platform, counts more than 150,000 charge spots. This makes it one of Europe's biggest networks.

#### June 16 - Taichung, Taiwan Bosch eBike Systems opens new Asia Pacific HQ

The new division is tenaciously continuing its global expansion.









#### June 25 - Reutlingen, Germany Bosch debuts automatic emergency call for e-bikes

Thanks to a smart algorithm, the COBI. Bike app can detect when a rider has fallen off their e-bike. The premium function Help Connect then places an emergency call.



#### May 15 - Stuttgart-Feuerbach, Germany **Bosch starts** mask production

In the fight against coronavirus, Bosch puts its first production line for face masks into operation.

#### May 19 - Stuttgart, Germany 25th anniversary of Bosch ESP®

The ESP® electronic stability program. which Bosch and Daimler-Benz first launched in S-class vehicles in 1995. keeps vehicles safely on track in critical situations.



In the shape of Help Connect, Bosch has developed a digitally connected emergency call system for motorized two-wheelers. It automatically alerts emergency services via smartphone, speeding up the rescue process.



#### Bosch sensors revolutionize navigation

If a GPS signal becomes temporarily unavailable, Bosch's new SMI230 MEMS sensor takes over, ensuring that the navigation system keeps its bearings.



#### July 9 - Stuttgart, Germany

#### CO₂ advisory service:

#### **Bosch Climate Solutions set up**

Bosch announces a new unit that will pass on the knowledge and experience the company has gained from achieving carbon neutrality, as well as from the projects it has implemented worldwide.





July 21 - Stuttgart, Germany

#### Bosch pools its software and electronics expertise

With the aim of playing a leading role in mobility, Bosch announces that a new Cross-Domain Computing Solutions division with some 17.000 associates will start operations from the start of 2021.



Sep. 16 - Stuttgart, Germany,

Bosch and Weichai Power set new benchmark for truck diesel engines Together, the two companies have boosted the efficiency of diesel engines for heavy trucks to 50 percent - a four-point increase.

and Weifang, China





08

#### Aug. 6 - Reutlingen, Germany 5G tests start in Reutlingen wafer fab

As an Industry 4.0 pioneer. Bosch believes 5G will be a key building block of digitalization and connectivity in manufacturing and logistics.



Sep. 23 - Stuttgart, Germany

#### Robert Bosch Hospital made national center of tumor disease

The hospital is a globally leading authority in the field of genetic influences on drug response. This distinction, conferred by the German government, recognizes its outstanding work.

#### Sep. 29 - Taicang, China

#### Start of mass production of Bosch e-axle

Within two years, a team at United Automotive Electronic Systems Co., Ltd. developed the platform for the new e-axle, which is the most important part of the electrical powertrain.

#### 10



Oct. 7 - Stuttgart, Germany A world first from Bosch: adaptive cruise control for motorcycles ARAS, the world's first radar-

based assistance system for motorcyclists, enhances safety considerably.



Nov. 5 – Worcester, United Kingdom Bosch premieres new hydrogen-powered domestic boiler

The new boiler can be run on a mixture of gas and up to 20 percent hydrogen. It illustrates how green hydrogen can future-proof domestic heating.



#### Apcoa, Bosch, and Mercedes-Benz announce world's first commercial automated valet parking (AVP) service at Stuttgart airport

In this undertaking, Bosch premieres camera-aided infrastructure as a way of identifying aisles and obstacles.



Nov. 26 – Stuttgart-Feuerbach, Germany

#### Bosch puts its first 5G campus network into operation

At its lead plant for Industry 4.0, the company wants future manufacturing to be done under previously unheard-of conditions: data will be transmitted ultrareliably and ultra-fast.





Nov. 4 - Stuttgart, Germany

#### Bosch announces achievement of carbon neutrality ahead of schedule

According to its own calculations, Bosch and its 400 locations worldwide have been carbon neutral since February 2020 – the first major industrial enterprise to achieve this goal.



Dec. 6 - Horsham, United Kingdom, and Stuttgart, Germany

#### Bosch announces mass production of stationary fuel cells

In 2024, the company plans to start the mass production of distributed power stations based on solid-oxide fuel-cell technology. To achieve this, it has agreed to intensify its collaboration with Ceres Power.

# THE BUSINESS YEAR **2020**

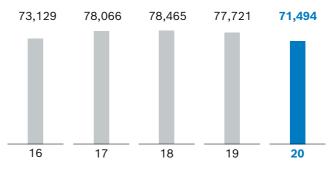
In 2020, the Bosch Group generated sales of 71.5 billion euros. Following the steep drop in sales in the second quarter as a result of the coronavirus pandemic, it was thus possible to make a significant recovery in the further course of the year. Once again, the company's broad diversification across different business sectors paid off. Year on year, sales declined 8.0 percent, or 5.9 percent after adjusting for exchange-rate effects. Without consolidation effects resulting from the divestment of packaging machinery activities effective December 31, 2019, the fall in sales is 6.4 percent, and 4.3 percent after adjusting for exchange-rate effects.

The Bosch Group has handled the economic consequences of the coronavirus pandemic well. Despite the considerable challenges it presented, the Bosch Group reports positive EBIT of 1.7 billion euros for 2020, compared with 2.9 billion euros the previous year. It should be pointed out that the previous year's figure included a non-recurring extraordinary positive effect resulting from the divestment of the packaging machinery business. Bosch Group EBIT from operations fell to 2.0 billion euros in 2020, compared with the previous year's figure of 3.3 billion euros. In light of the pandemic, the margin of 2.8 percent from operations is encouraging. In addition to the general market recovery and the sharp rise in demand in the Consumer Goods business sector, the positive result was helped by extensive cost-cutting measures.

#### **Development of sales revenue and EBIT**

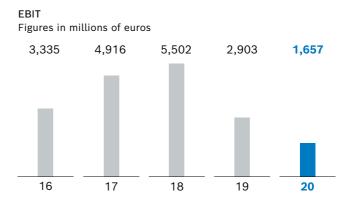
Bosch Group, 2016-2020

#### SALES REVENUE Figures in millions of euros



The Mobility Solutions business sector was hit particularly hard by production shutdowns, which were at times extensive. In addition to the impact of the pandemic, the Industrial Technology business sector felt the effects of the prolonged downturn in key machinery markets. By contrast, the Consumer Goods business sector benefited from increased demand for home-related products over the course of the pandemic. Here, Bosch was able to increase its sales over the year as a whole. Sales in the Energy and Building Technology business sector dropped only to a limited extent.

The second-quarter slump in sales left its mark on all regions, albeit to varying degrees. The sharpest drop in sales for the year as a whole was in the Americas. Developments in Asia Pacific were more favorable, due to the early, strong recovery of the Chinese market. The share of sales generated in Europe stands at 53 percent, followed by Asia Pacific with 30 percent and the Americas with 17 percent.



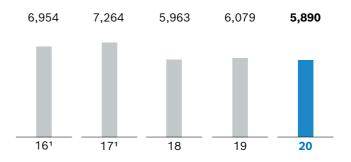
### AREAS OF FUTURE IMPORTANCE REMAIN IN FOCUS

Research and development cost came to 5.9 billion euros in 2020, compared with 6.1 billion euros the previous year; this means research and development intensity, at 8.2 percent, rose from the previous year's figure of 7.8 percent. This underscores the significance ascribed to areas of future importance during the pandemic as well. The Mobility Solutions business sector again accounted for the largest share in 2020, at 75 percent (previous year 72 percent). The main focus of these upfront investments continues to be electrification including fuel cells, driver assistance systems including automated driving, automotive electronics, and sensors.

#### Research and development cost

Bosch Group, 2016-2020

#### TOTAL EXPENDITURE Figures in millions of euros



1. Including development work charged directly to customers

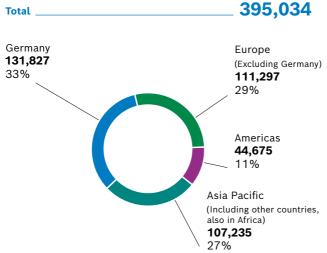
### **HEADCOUNT –**SLIGHT DECLINE

The total number of Bosch Group associates fell to 395,034 at the end of 2020, compared with roughly 398,200 at the end of 2019. Consolidation effects play only a minor role. The 2019 headcount figures already took account of the divestment of the company's packaging machinery activities. In terms of business sectors, the workforce structure changed only slightly year on year.

#### **Associates**

Bosch Group 2020 (year-end figure)

#### BY REGION



#### SUSTAINABILITY



Bosch is deeply committed to sustainability and continuously looking for ways of extending its commitment. The strategic foundation for this is our "New Dimensions – Sustainability 2025" vision, which we developed on the basis of current megatrends. In each of the dimensions we define – climate, energy, water, urbanization, globalization, and health – we focus our activities on those areas in which we can make the most valuable contribution, for people and the environment. But our understanding of corporate social responsibility goes even further: we want to foster social progress and to make an active contribution, also beyond our core business activities. Here, we are especially committed to education and science. For us, this is an investment in the future.

Through economically, ecologically, and socially responsible action, we want to improve quality of life and secure the conditions in which present and future generations can thrive.

For more information about what Bosch is doing for sustainability, go to: sustainability.bosch.com



#### Climate

1 | CO<sub>2</sub> Scopes 1 and 2 2 | CO<sub>2</sub> Scope 3

Bosch is a climate action pioneer, and its business operations have been climate neutral (Scopes 1 and 2) since 2020. Along the entire value chain, Bosch contributes its knowledge and technologies, multiplying the influence it has on the reduction of greenhouse gas emissions (Scope 3).



#### **Urbanization**

- 1 | Resource efficiency
- 2 | Digitalization

Bosch wants to minimize its ecological footprint, and strives to create social benefit. In this endeavor, Bosch puts its faith in the principles of the circular economy and the opportunities presented by digitalization.



#### **Energy**

- 1 | Energy efficiency
- 2 | Renewable energy

Bosch encourages the expansion of renewables and strives continuously for energy efficiency – from development to manufacturing to the finished product.



#### Globalization

- 1 | Responsibility
- 2 | Human rights

Bosch takes on responsibility and respects human rights – along the entire value chain.



#### Water

- 1 | Water scarcity
- 2 | Water quality

For Bosch, water is a resource to be treated sparingly. Regions in which water is scarce are a special concern.



#### Health

- 1 | Occupational health and safety
- 2 | Substances of concern

Bosch contributes to human health – with innovative products and services and by ensuring that people and the environment do not come to harm in its production processes.

#### ROBERT BOSCH STIFTUNG

Since it was established in 1964, Robert Bosch Stiftung GmbH has been carrying on the company founder's public welfare endeavors. It helps smooth the path toward viable solutions for social challenges. The support it provides can take the form of projects of its own, of partnerships, and of grants for third-party initiatives. The Stiftung finances its work from the dividend it receives as a shareholder in Robert Bosch GmbH.

Last year, the Robert Bosch Stiftung completed its fullest ever review of its strategy, and put itself on a new footing. In the future, its work will focus on three areas of support: healthcare, education, and global issues.

In the global issues field, attention will center on peace, inequality, climate change, democracy, migration, and immigration society. The education field will focus on learning by individuals and school development/development in pre-school and daycare. In its support for healthcare, the Stiftung will direct its attention at people in the healthcare system and work toward making this system viable.



**Celebrating Germany's best school:** In 2020, the German school prize went to the Otfried Preußler School in Hannover. The school teaches gifted children and children with disabilities in the same classroom.

#### The following institutions also belong to the Stiftung:

- Robert Bosch Hospital
- Dr. Margarete Fischer-Bosch Institute for Clinical Pharmacology
- Institute for the History of Medicine of Robert Bosch Stiftung
- Die Deutsche Schulakademie
- Robert Bosch College UWC
- Robert Bosch Centrum für Tumorerkrankungen
- International Alumni Center iac Berlin

While carrying out this strategic realignment, the Stiftung has continued its programs. The Covid-19 pandemic affected the implementation of many projects and initiatives. In view of the huge challenges schools are facing, the Robert Bosch Stiftung and the Heidehof Stiftung have announced a special competition for this vear's Deutscher Schulpreis (German school prize): in 2021, awards will be given to pioneering ideas that schools have developed in response to the pandemic, and that have the potential to change classroom interaction over the long term. As a partner of the United Nations' "UN75" anniversary campaign, the Stiftung supported the world's biggest ever survey of people's expectations of international cooperation.

By supporting the Covid-19 Solidarity Response Fund of the World Health Organization and through an emergency program to improve medical care in Greek refugee camps, the Stiftung worked to mitigate the immediate effects of the pandemic.

#### bosch-stiftung.de/en

#### **Total project grants 2020**

Figures in millions of euros

80.37

**19.70** Global issues (aggregated)

**12.94** Research at institutes and the Robert Bosch Hospital

**7.32** Strategic partnerships and Robert Bosch Academy

6.34 Education

**5.83** Die Deutsche Schulakademie gGmbH

**5.63** Capital expenditure for the Robert Bosch Hospital

5.09 Healthcare

5.08 Science

**1.73** Robert Bosch College UWC GmbH

1.66 International Alumni Center gGmbH

9.05 Other grants

#### BOSCH AS AN EMPLOYER

#### What we stand for

For more than 130 years, we have offered our associates around the world the opportunity to shape the future with a leading global supplier of technology and services. Beneficial innovations that improve the quality of people's lives, and save resources, drive our work. We encourage our associates to be individuals and see diversity as an asset. Our company enables its associates to strike a healthy balance between professional and personal aims, as we see this as a decisive means of promoting creativity and job satisfaction. This balance also shapes the foundation of our associates' outstanding performance. Lifelong learning and a regular change of perspective are firmly anchored in our leadership culture. Our areas of activity are every bit as diverse as our locations around the world.

Welcome to a place where your ideas lead to something big. Welcome to Bosch.



#### Make your mark

Give your job a meaning. With solutions "Invented for life."

At Bosch, we are committed to developing innovative, beneficial, and fascinating products and services. Enhance with us the quality of life worldwide, and leave a lasting mark on the world.



#### Shape tomorrow's world

The future offers many opportunities.

Be among the first to take advantage of them.

With regard to global megatrends and new technical capabilities, we create solutions for a connected life. And there is much more potential for us to tap. Create your vision of the future with us, and witness how your ideas shape tomorrow's world.



#### Find your place

You know how you can work best. We offer you the conditions needed.

One global company, many ways of working: from startups to established corporate structures, we offer a wide range of working environments. Join in, and find the place that's right for you.



#### Balance your life

Make your job match your lifestyle.
We provide you with individual support.

You know that there is more to life than just work. That's why we actively support you in finding a healthy balance between your private and professional lives. Join us, and let life happen.



#### Walk the talk

Wherever you are – our team spirit is with you.

Robert Bosch founded our company over 130 years ago, and we still live by the values he embodied. Discover a culture that is based on respect and responsibility, and carry our values further.



#### Discover new directions

Your journey might change – we will stay by your side.

We welcome change and encourage you to switch between positions and working fields. Tell us about your goals, and let us put them into practice.



#### Be yourself

Your diversity makes us special. Enrich us with your own unique personality.

Everyone is different. We appreciate your individuality and believe that diversity is an asset for our company. Show us your way of thinking, and let us drive great innovations together.



#### Pay it forward

We love our business and our environment. Let's save them both for future generations.

At the core of our DNA is social responsibility. That's why, with us, you can achieve business success and support social and environmental projects at the same time.

Let's be remarkable.

bosch-career.com

# THE BOSCH GROUP IN GERMANY

#### **Corporate headquarters**

Gerlingen near Stuttgart

#### Research and development locations

Abstatt, Berlin, Bochum, Braunschweig, Bretten, Bühl/Bühlertal, Dillingen, Ditzingen, Elchingen, Erbach, Frankfurt am Main, Giengen, Grasbrunn, Hildesheim, Holzkirchen, Homburg, Horb, Immenstadt, Kusterdingen, Leinfelden, Leonberg, Lohr, Lollar, Ludwigsburg, Nuremberg, Planegg-Martinsried, Plochingen, Regensburg, Renningen, Reutlingen, Rülzheim, Schwäbisch Gmünd, Schweinfurt, Schwieberdingen, Stuttgart, Traunreut, Waiblingen, Wernau

#### Manufacturing locations – Mobility Solutions

Ansbach, Arnstadt, Bamberg, Berlin, Bietigheim, Blaichach/Immenstadt, Breidenbach, Bremen, Bühl/Bühlertal, Dresden, Eisenach, Göttingen, Hildesheim, Homburg, Kusterdingen, Munich, Nuremberg, Plochingen, Pollenfeld, Reutlingen, Salzgitter, Schwäbisch Gmünd, Stuttgart, Waiblingen

#### Technical sales offices for automotive original equipment

Berlin, Braunschweig, Cologne, Frankfurt am Main, Munich, Waiblingen

#### Manufacturing operations - Industrial Technology

Augsfeld, Chemnitz, Elchingen, Erbach, Homburg, Horb, Ketsch, Lohr, Murrhardt, Nuremberg, Schweinfurt, Stuttgart, Volkach

#### Manufacturing operations – Consumer Goods

Bretten, Dillingen, Giengen, Leinfelden, Murrhardt, Nauen, Ravensburg, Sebnitz, Traunreut, Willershausen

#### Manufacturing operations - Energy and Building Technology

Eibelshausen, Gunzenhausen, Lollar, Straubing, Wernau, Wettringen

#### Sales and service centers

Berlin, Bochum, Böblingen, Braunschweig, Chemnitz, Cologne, Ditzingen, Dresden, Düsseldorf, Essen, Fellbach, Frankfurt am Main, Fürth, Garching, Grasbrunn, Hainburg, Hamburg, Hannover, Holzkirchen, Ichtershausen, Karlsruhe, Leipzig, Magdeburg, Munich, Nuremberg, Pollenfeld, Ratingen, Stuttgart, Wetzlar, Willershausen

#### Bosch.IO GmbH

Berlin, Immenstaad, Waiblingen

#### **Associates in Germany:**

131,827

#### (as of December 31, 2020)

This list includes locations with 100 or more associates, including the locations of non-consolidated subsidiaries.



# THE BOSCH GROUP IN EUROPE (OUTSIDE GERMANY)

#### Austria 2.937 associates

Manufacture of automotive technology and industrial technology; engineering; sales; locations: Hallein, Linz, Pasching, Vienna

#### **Belgium** 1,434 associates

Manufacture of automotive technology; sales; locations: Brussels, Mechelen, Tienen

#### Bulgaria 214 associates

Engineering; sales; location: Sofia

#### Czech Republic 8,046 associates

Manufacture of automotive technology, industrial technology, household appliances, power tools, and heating systems; engineering; sales; locations: Brno, České Budějovice, Jihlava, Krnov, Mikulov, Prague

#### **Denmark** 645 associates

sales: locations: Ballerup, Esbierg

#### Finland 215 associates

Sales: location: Vantaa

#### France 6,715 associates

Manufacture of automotive technology, industrial technology, household appliances, and heating systems; engineering; communications services; sales; locations: Drancy, La Ferte-Bernard, Lipsheim, Marignier, Mondeville, Moulins, Paris, Rodez, Saint-Ouen, St-Thégonnec, Vendôme, Vénissieux

#### Greece 450 associates

Manufacture of household appliances; sales; location: Athens (Koropi)

#### **Hungary** 15.578 associates

Manufacture of automotive technology and power tools; engineering; sales; locations: Budapest, Eger, Hatvan, Maklár, Miskolc

#### Italy 6.057 associates

Manufacture of automotive technology, industrial technology, and power tools; engineering; sales; locations: Bari, Cernusco, Fagagna, Milan, Nonantola, Offanengo, Pavullo nel Frignano, Turin, Udine, Vezzano, Villasanta

#### Netherlands 3.236 associates

Manufacture of automotive technology, industrial technology, and heating systems; engineering; sales; locations: Amsterdam, Boxtel, Breda, Deventer, Eindhoven, Hoevelaken, Tilburg

#### Poland 7,676 associates

Manufacture of automotive technology, power tools, and household appliances; engineering; sales; locations: Goleniów, Łódź, Mirków, Warsaw

#### Portugal 5,600 associates

Manufacture of automotive technology, heating systems, and security systems; engineering; communications services; sales; locations: Aveiro, Braga, Lisbon, Ovar

#### Romania 8.167 associates

Manufacture of automotive technology; engineering; communications services; sales; locations: Blaj, Bucharest, Cluj, Timişoara

#### Russian Federation 3,444 associates

Manufacture of automotive technology, household appliances, and power tools; communications services; locations: Engels, Kazan, Khimki, Moscow, Samara, St. Petersburg

#### Serbia 2,203 associates

Manufacture of automotive technology; sales; locations: Belgrade, Pećinci

#### Slovakia 1.056 associates

Manufacture of automotive technology and household appliances; engineering; sales; locations: Bernolákova, Michalovce

#### **Slovenia** 1,590 associates

Manufacture of industrial technology and household appliances; engineering; sales; locations: Nazarje, Škofja Loka

#### Spain 8.623 associates

Manufacture of automotive technology and household appliances; engineering; communications services; sales; locations: Aranjuez, Barcelona, Castellet, Lliçà d'Amunt, Madrid, San Sebastián, Vigo, Zaragoza

#### Sweden 1,741 associates

Manufacture of industrial technology and heating systems; engineering; sales; locations: Kista, Lund, Mellansel, Stockholm. Tranås

#### Switzerland 2,006 associates

Manufacture of industrial technology and power tools; sales; locations: Buttikon, Frauenfeld, Geroldswil, Solothurn, St. Niklaus

#### Turkey 18,374 associates

Manufacture of automotive technology, industrial technology, heating systems, and heating systems; development; sales; locations: Bursa, İstanbul, Manisa

#### **United Kingdom** 4,671 associates

Manufacture of industrial technology, power tools, and heating systems; engineering; communications services; sales; locations: Cirencester, Clay Cross, Denham, Glenrothes, Greetland, Liverpool, Milton Keynes, St. Neots, Stockport, Stowmarket, Worcester

#### (as of December 31, 2020)

This list includes countries and locations with 100 or more associates, including the locations of non-consolidated subsidiaries.

Further locations are also to be found in Belarus, Croatia, Estonia, Georgia, Ireland, Kazakhstan, Latvia, Lithuania, Luxembourg, and Norway.

# THE BOSCH GROUP IN REGIONS AND COUNTRIES OUTSIDE EUROPE

#### Argentina 198 associates

Sales; location: Buenos Aires

#### Australia 1,244 associates

Manufacture of automotive technology and industrial technology; engineering; sales; locations: Clayton, Sydney

#### Brazil 8,558 associates

Manufacture of automotive technology, industrial technology, power tools, and heating systems; engineering; communications services; sales; locations: Aratú, Atibaia-SB, Campinas, Curitiba, Itatiba, Joinville, Pomerode, São Paulo

#### Canada 540 associates

Manufacture of industrial technology; sales; locations: Mississauga, Welland

#### Chile 129 associates

Sales; location: Santiago de Chile

#### China 52.633 associates

Manufacture of automotive technology, industrial technology, power tools, household appliances, heating systems, and security systems; engineering; communications services; sales; locations: Beijing, Changchun, Changsha, Chengdu, Chongqing, Chuzhou, Dongguan, Hangzhou, Hefei, Hong Kong, Jinan, Liuzhou, Nanjing, Ningbo, Qingdao, Shanghai, Shenzhen, Suzhou, Taicang, Wuhan, Wuhu, Wuxi, Xi'an, Yantai, Zhuhai

#### Costa Rica 264 associates

Communications services; location: Heredia

#### India 31,843 associates

Manufacture of automotive technology, industrial technology, power tools, and household appliances; software development; engineering; communications services; sales; locations: Ahmedabad, Bengaluru, Bidadi, Bommanahalli, Chakan, Chennai, Coimbatore, Hyderabad, Jaipur, Koramangala, Mumbai, Naganathapura, Nashik, New Delhi, Pune

#### Indonesia 208 associates

Manufacture of automotive technology; sales; location: Jakarta

#### Japan 6,509 associates

Manufacture of automotive technology and industrial technology; engineering; sales; locations: Higashi-Matsuyama, Izumozaki, Misato, Musashi, Odawara, Shibuya, Shiki, Tochigi, Tokyo, Tsuchiura, Yokohama. Yorii

#### **Korea** 1,663 associates

Manufacture of automotive technology and industrial technology; engineering; sales; locations: Busan, Buyong, Daegu, Daejeon, Yongin

### Malaysia 4,073 associates

Manufacture of automotive technology and power tools; engineering; sales; locations: Penang, Petaling Jaya

#### Mexico 17,183 associates

Manufacture of automotive technology, power tools, and security systems; engineering; sales; locations: Aguascalientes, Cuautitlán Izcalli, Guadalajara, Hermosillo, Juárez, Mexicali, Ciudad de México, Queretaro, San Luis Potosí, Toluca

#### Morocco 490 associates

Sales; location: Casablanca

### Peru 538 associates

Manufacture of household appliances; sales; locations: Callao, Lima

### Philippines 362 associates

Communications services; sales;

location: Manila

### Singapore 741 associates

Engineering; sales; location: Singapore

#### South Africa 963 associates

Manufacture of automotive technology and industrial technology; sales; locations: Johannesburg, Kempton Park, Midrand

### Taiwan 401 associates

Manufacture of industrial technology; engineering; sales; location: Taipei

#### Thailand 1.198 associates

Manufacture of automotive technology; sales; locations: Amata City, Bangkok, Hemaraj

### **United States** 17,218 associates

Manufacture of automotive technology. industrial technology, power tools, household appliances, heating systems, and security systems; engineering; sales; 75 locations, including: Albion/IN, Allen Park/MI, Anderson/SC, Atlanta/ GA, Bethlehem/PA, Broadview/IL, Burnsville/MN, Charleston/SC, Charlotte/NC, Fairport/NY, Farmington Hills/MI, Florence/KY, Fort Lauderdale/ FL, Fountain Inn/SC, High Point/NC, Hoffman Estates/IL, Irvine/CA, Kentwood/MI, Lincoln/NE, Lincolnton/ NC, Los Angeles/CA, Mount Prospect/IL, Oakbrook Terrace/IL, Owatonna/MI, Phoenix/AZ, Plymouth/MI, St. Joseph/MI, Sunnyvale/CA, Warren/MI, West Memphis/AR

### Vietnam 4,529 associates

Manufacture of automotive technology; creation of software; engineering, sales; locations: Ho Chi Minh City, Long Thanh

#### (as of December 31, 2020)

This list includes regions, countries, and locations with 100 or more associates, including the locations of non-consolidated subsidiaries.

Further companies operate in Algeria, Botswana, Colombia, Egypt, Ghana, Iran, Israel, Kenya, Laos, Lebanon, Mozambique, Myanmar, Namibia, New Zealand, Nigeria, Pakistan, Panama, Qatar, Saudi Arabia, Sri Lanka, Tunisia, United Arab Emirates, Uruguay, Uzbekistan, Venezuela, and Zambia.

# **MILESTONES**

### IN COMPANY HISTORY

from its establishment to the present day

#### 1861

Robert Bosch is born in Albeck near Ulm on September 23

## 1886

Establishment of the company: opening of the Workshop for Precision Mechanics and Electrical Engineering in Stuttgart on November 15



#### 1897

First successful installation of the Bosch low-voltage magneto ignition device in a motor vehicle

### 1898

First Bosch sales office outside Germany opens in the United Kingdom





# 1902

Delivery of the first high-voltage magneto ignition system with Bosch spark plugs

### 1905

First Bosch manufacturing site outside Germany opens in Paris

Start of production in Bosch's first U.S. plant, in Springfield, MA

### 1913

At the main plant in Stuttgart, establishment of an apprentice training department with a dedicated workshop

Market launch of the Bosch automotive lighting system

### 1918

Gottlob Honold designs the new Bosch logo – the "armature in a circle"

# 1921

The first Bosch Service repair shop is opened in Hamburg



### 1927

Start of production of Bosch injection pumps and nozzles for diesel engines

### 1928

Market launch of the Forfex hair trimmer, the first Bosch power tool

# 1932 First power drill



### 1932

Acquisition of heating systems business of Junkers & Co. GmbH in Dessau, Germany

Market launch of the first mass-produced car radio in Europe

### 1933

Launch of the Bosch refrigerator

# 1940 Opening of the Robert Bosch Hospital



### 1942

Robert Bosch dies in Stuttgart on March 12

### 1951

Start of production for gasoline injection systems for passenger cars

### 1963

Acquisition of Erich Wetzel Verpackungsmaschinen GmbH, entry into packaging technology

### 1964

The not-for-profit organization Vermögensverwaltung Bosch (from 1969 Robert Bosch Stiftung GmbH) acquires a majority stake in Robert Bosch GmbH

### 1967

Start of production for the D-Jetronic electronically controlled gasoline injection system

# 1967

Establishment of Bosch-Siemens Hausgeräte GmbH (known after 1998 as BSH Bosch und Siemens Hausgeräte GmbH and since 2015 as BSH Hausgeräte GmbH)



Production of lambda sensors for three-way catalytic converters begins

# 1978

Start of production of ABS, the electronically controlled antilock braking system

### 1991

Start of production of Motronic with controller area network (CAN)

### 1995

Start of large-scale production of MEMS sensors (micro-electro-mechanical systems)

Start of production of ESP®, the world's first electronic stability program



### 1979

Start of production of the Motronic digital engine management system

### 1986

Start of production of the TCS traction control system

### 1989

Launch of TravelPilot IDS, the first independent vehicle navigation system in Europe

#### 1997

Start of production of the common-rail high-pressure diesel injection system

### 1999

ZF Lenksysteme GmbH joint venture (since 2015: Robert Bosch Automotive Steering GmbH) set up with ZF Friedrichshafen AG

Production of the DI Motronic gasoline direct injection system

### 2001

Industrial leadership of Mannesmann Rexroth AG, and its merger with the Automation Technology division to form Bosch Rexroth AG

### 2003

Launch of the Ixo cordless drill/ driver with lithium-ion rechargeable battery



### 2003

Acquisition of Buderus AG, Wetzlar, Germany

### 2005

Start of production of the Night Vision driver assistance system

### 2008

Acquisition of Innovations Softwaretechnologie GmbH in Immenstaad, Germany (since 2020: Bosch.IO GmbH)

### 2010

Full parallel hybrid powertrain for passenger cars goes into

Start of production of the predictive emergency braking system

#### 2011

Start of production of drive components for e-bikes in Mondeville, France

### 2012

Bosch sets up a joint venture with the Chinese manufacturer Polaris, thus entering the e-scooter market

### 2013

Start of production of MSC motorcycle stability control

### 2015

Bosch opens new research campus in Renningen, Germany



Bosch launches its own cloud for web-based services

### 2017

The new year sees the Bosch Center for Artificial Intelligence (BCAI) begin its work. The new center's objective is to enhance expertise in the field of artificial intelligence

### 2017

Bosch debuts its e-axle. This compact new drive unit for electric vehicles comprises motor, power electronics, and transmission





### 2020

With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since February 2020

### 2018

New Bosch diesel technology already stays below the limits for nitrogenoxide emissions scheduled to come into force from 2020

#### 2019

Bosch and Daimler obtain first-ever official approval for automated valet parking – driverless parking without human oversight – in the parking garage of the Mercedes-Benz Museum

# 2020

Within six weeks, Bosch launches a PCR rapid test for coronavirus



# **BOARD OF MANAGEMENT**

**01** Prof. Stefan Asenkerschbaumer Deputy chairman

**02** Dr. Volkmar Denner Chairman

03 Filiz Albrecht

04 Dr. Christian Fischer

05 Uwe Raschke

06 Dr. Michael Bolle

07 Dr. Stefan Hartung

08 Dr. Markus Heyn

09 Harald Kroeger

10 Rolf Najork













# SUPERVISORY BOARD

Franz Fehrenbach Chairman

Frank Sell Deputy chairman Nadine Boguslawski
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Prof. Elgar Fleisch
Klaus Friedrich
Mario Gutmann
Jörg Hofmann
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Matthias Georg Madelung
Kerstin Mai
Dr. Wolfgang Malchow
Oliver Simon
Karin Solda
Peter Spuhler
Dr. Richard Vogt
Prof. Beatrice Weder di Mauro

**Prof. Hermann Scholl** Honorary chairman of the Bosch Group

### HOW TO CONTACT US

For press inquiries, contact the

corporate department Communications and Governmental Affairs.

Bosch Media Service: bosch-press.com

For information on career opportunities in the Bosch Group, contact the **corporate department Human Resources** at **bosch-career.com** 

Companies wishing to become suppliers to Bosch should contact the **corporate sector Global Business Services** at **purchasing.bosch.com** 

For an **online version of the annual report**, go to: **annual-report.bosch.com** 

**PDF versions** of the annual report and Bosch today are available at: annual-report.bosch.com

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Printed in Germany





# FIVE-YEAR SUMMARY OF THE BOSCH GROUP

### Figures in millions of euros

	2016	2017	2018	2019	2020
Sales revenue	73,129	78,066	78,465	77,721	71,494
percentage of sales revenue generated outside Germany	80	80	79	80	79
Research and development cost <sup>1</sup>	6,911	7,264	5,963	6,079	5,890
as a percentage of sales revenue	9.5	9.3	7.6	7.8	8.2
Capital expenditure	4,252	4,345	4,946	4,989	3,312
of which in Germany	1,580	1,546	1,757	1,718	1,469
outside Germany	2,672	2,799	3,189	3,271	1,843
as a percentage of sales revenue	5.8	5.6	6.3	6.4	4.6
as a percentage of depreciation	141	140	159	146	101
Annual average number of associates (thousands)	384	403	407	408	395
of which in Germany	133	137	138	136	133
outside Germany	251	266	269	272	262
at Dec. 31	389	402	410	398	395
Total assets	81,875	81,870	83,654	87,861	91,369
Equity	36,084	37,552	39,176	41,079	40,166
as a percentage of total assets	44	46	47	47	44
EBIT	3,335	4,916	5,502	2,903	1,657
Profit after tax	2,374	3,274	3,574	2,060	749
Dividend of Robert Bosch GmbH	138	241	242	119	67

<sup>1.</sup> Up to 2017, including development work charged directly to customers

### Robert Bosch GmbH

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