

# S CO2 n Í

## Sustainability report 2020 | factbook

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### Dear Readers,

In my new position as member of the board of management, I am taking responsibility for sustainability at a proud moment for our company. In an emphatic demonstration of determination, we have achieved an ambitious goal within a very short time: since 2020, Bosch has been climate neutral worldwide at our more than 400 company locations. Over 1,000 associates have contributed to this achievement with their knowledge and



innovative energy united as a virtual team – from systematic energy management in San Luis Potosí, Mexico, to smart IoT solutions for controlling air-conditioning technology in Campinas, Brazil, through to clever shutdown management of energy-intensive soldering systems in Suzhou, China.

This outstanding outcome of our joint efforts shows

that sustainable, responsible action is already deeply ingrained in our corporate culture. And it drives home how working together is the best way of overcoming major challenges. In fact, by getting more and more people on board, we can achieve incredibly ambitious goals. That is how we can realize our far-reaching ambition to improve the quality of life of people and safeguard the livelihoods of present and future generations while acting in an economically, ecologically, and socially responsible manner.

Going forward, we will continue to place this aspect at the center of our activities and cultivate a culture of sustainability within the company. Everyone at Bosch can make a contribution - and is explicitly invited to do so.

Working as a team, we are intent on persevering on our path to greater sustainability and mastering the challenges ahead. First and foremost, this concerns climate action, an area in which we want to further refine our measures and pursue a comprehensive approach with our scope 3 target. But many creative contributions are needed in other areas as well, including in our endeavors to counter water scarcity, the sustainable design of our supply chains, and the social projects in our communities.

Our latest factbook makes our commitment to sustainability transparent and shows you the specific goals we have set ourselves for the coming years. Supplemented by spotlights magazine, which highlights selected topics, we are providing a comprehensive picture of our activities.

I am delighted that you are accompanying our company's journey to even greater sustainability. And I look forward to your comments and suggestions regarding our activities. On that note, I wish you an informative and stimulating read!

Yours sincerely,

filit Mbrest

Filiz Albrecht Member of the board of management and director of industrial relations

This factbook reports on all facts, figures, and nonfinancial information concerning the Bosch

Our spotlights magazine highlights selected topics of the "New Dimensions - Sustainability 2025" target vision.

About this report

# Group's sustainability activities.



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# **Foreword** by the board of management



#### Dear Readers,

Rethink and reset - that was the ultimate lesson of the Covid-19 pandemic last year. We all had to adapt as fast as we could. Climate action is another, equally pressing issue. It will take creativity, perseverance, and determination to preserve our planet for future generations. We are determined to do our part. By making our business operations carbon neutral, we have shown that climate-compatible entrepreneurship is possible – if we are willing to take decisive action. The Bosch Group with its more than 400 locations worldwide has not left a carbon footprint since February 2020, making it the first global manufacturing company in the industrial sector to make its operations carbon neutral. We received official confirmation to this effect from an independent audit firm in March. With the same determination, we are now setting our sights on the next milestones of our climate action strategy. But let's be clear: if we want to effectively limit global warming, we have to do more. At Bosch, for instance, we are working to minimize the proportion of carbon offsets we need to stay carbon neutral. To replace them, we are continuously expanding our measures to enhance energy efficiency and increase the volume of renewable energy generated from new plants. With our scope 3 strategy, we are looking beyond our company's boundaries and setting ourselves the goal of reducing the emissions produced by our suppliers, in logistics, and particularly when our products are used. Working shoulder to shoulder with our partners throughout the value chain, we aim to cut back these emissions by 15 percent in absolute terms by 2030.

In this way, we are also making climate protection a joint task. In fact, the cooperation of our suppliers and partners is essential to achieve this goal. I am convinced we will succeed here, too. Because we, at Bosch, do not see energy efficiency and the reduction of emissions as a threat to our business model but rather as an opportunity to differentiate ourselves from the competition - and we want to persuade the companies we partner with of the truth of this logic. A clear manifestation of this thinking, our newly established Bosch Climate Solutions operating unit is sharing our experience reaching carbon neutrality with other companies, thereby multiplying our impact further afield. In this way, not only are we paving the way to a climate-neutral economy but also opening up new growth areas for Bosch.

Our "Invented for life" strategic imperative also encapsulates the promise to devote our deep engineering knowledge to progress, improving quality of life, and protecting the environment. We are resolutely committed to the technologies that make a decisive contribution to this end. For instance, with investments in the billions, Bosch has been actively driving forward the development of electromobility for years. We are also committed to the introduction and expansion of hydrogen applications – from automobiles to heating systems. This is an essential step as we progress toward our ambitious climate targets. By drawing on key technologies, we are working to create new avenues. Seeking to take the lead as an AloT company, Bosch is creating opportunities to

Dr

capture substantial savings potential through energy and resource management powered by the fusion of artificial intelligence (AI) and Internet of Things (IoT). Our Energy Platform and our building automation solutions are just two examples of our many services with a promising future.

First and foremost, it is our attitude that will determine our success in our common fight to counter climate change and protect the environment. It is up to us to jointly and resolutely tackle this task and to persevere as we rethink and reset.

In this factbook, we share with you our compass on the journey to sustainable development. I appreciate your interest and wish you an informative read.

Yours sincerely,

Volkwas Denner

Dr. Volkmar Denner Chairman of the board of management

# Company

Our ambition: By acting in an economically, environmentally, and socially responsible manner, we want to improve people's quality of life and safeguard the livelihoods of present and future generations.

three pilot projects that put nomic, environmental, and social impact of its operations within its internal value creation and the wider supply chain.

the downstream value chain.

► In 2020, Bosch implemented

## **Compliance at Bosch**

Bosch wants to be a pioneer in values-based conduct that runs deeper than mere compliance with the law.

► The mandatory compliance training courses currently offered have been taken over **920,000** times.

the Bosch whistleblower system and the protection of whistleblowers is planned for 2021.

Bosch is a founding member of the Value Balancing Alliance e.V. (VBA)

# **1.1 Bosch Group profile**

The Bosch Group is a leading global supplier of technology and services. It employs roughly 395,000 associates worldwide (as of December 31, 2020) and generated sales revenue of 71.5 billion euros in the 2020 business year (previous year: 77.7 billion euros). The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiaries 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.

Bosch improves quality of life worldwide with innovative products and services that are "Invented for life" and spark enthusiasm. As a leading IoT provider, we offer innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. We use our expertise in sensor technology, software, and services, as well as our propitiatory IoT cloud, to offer our 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 assistance. The basis for our company's future growth is our innovative strength. At 129 locations around the globe, Bosch employs some 73,000 associates in research and

#### 01 | Headcount

Bosch Group by region, as of December 31, 2020



<sup>1</sup> Without Germany

development, including some 34,000 software engineers. In 2020, Bosch invested roughly 5.9 billion euros in research and development.

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 up-front investments in 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 a company owned by the Bosch family and Robert Bosch GmbH. 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.

## Business sectors and business fields

The Bosch Group pursues its objective to develop and bring to market solutions that are "Invented for life" in four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods and Energy and Building Technology.

#### **Mobility Solutions**

Mobility Solutions is the largest business sector in the Bosch Group, accounting for 59 percent of total sales. This makes Bosch one of the leading automotive suppliers. The Mobility Solutions business sector pursues a vision of mobility that is safe, sustainable, and exciting.

As an automotive supplier of original equipment, Bosch is engaged in a very wide range of activities that are organized into the Powertrain Solutions, Chassis Systems Control, Electrical Drives, Automotive Electronics, and Automotive Steering divisions, as well as the Cross-Domain Computing Solutions division, which was established at the beginning of 2021 and with which Bosch is adapting to the changing requirements in the rapidly growing market for software-intensive electronic systems in the automotive sector. Beyond the original equipment segment, its other divisions are Automotive Aftermarket, the service provider Connected Mobility Solutions, and Bosch eBike Systems. This is supplemented by the business units dedicated to technology for 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.

## **Robert Bosch Stiftung**

Robert Bosch Stiftung GmbH is one of the major foundations in Europe. Active in the areas of health, education, and global issues, it contributes to the development of viable solutions to social challenges through its charitable work. To this end, the foundation implements its own projects, enters into alliances with partners, and supports third-party initiatives. Robert Bosch Stiftung is committed to upholding the values and example of its founder Robert Bosch and continuing his philanthropic work in keeping with the times. The Foundation benefits from over 50 years of experience and a comprehensive global network of experts and practitioners. With the

#### Industrial Technology

In the 2020 business year, the Industrial Technology business sector generated seven percent of the Bosch Group's total sales revenue. This business sector includes the Drive and Control Technology division, which specializes in drive and control technology 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 applications with full connectivity. The division offers its customers hydraulics, electric drives and controls, gear technology, and linear motion and assembly technology, including software and interfaces to the IoT.

Bosch's provider of assembly systems (primarily for in-house use), the business unit 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. Industrial Technology also encompasses the Bosch Connected Industry business unit. With a focus on Industry 4.0, the business unit develops software solutions and carries out projects for internal and external customers.

Robert Bosch Academy, it supports interdisciplinary exchange between decision makers and opinion leaders. The Foundation also supports the work of high-profile, practice-focused think tanks.

Robert Bosch Stiftung holds roughly 94 percent of the shares in Robert Bosch GmbH and funds its operations from the dividends it receives from this shareholding. Since its establishment in 1964, Robert Bosch Stiftung has invested roughly 1.8 billion euros on charitable work. For further information on Robert Bosch Stiftung and its projects, visit www.bosch-stiftung.de/en.

### **Consumer Goods**

The Consumer Goods business sector contributed some 26 percent of total Bosch Group sales in 2020. It includes the Power Tools division, a supplier of power tools and gardening 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 Power Tools strategy are innovativeness, continuing digitalization, strong brands, continued growth in online retail, as well as the expansion of business in emerging markets. In this context, user experience – that is, the focus on user needs in product and service development - is a decisive determinant of success.

The Consumer Goods business sector also includes BSH Hausgeräte GmbH, which offers the full spectrum of modern and energy-efficient household appliances, which are increasingly also Web-enabled. Its product portfolio ranges from washing machines and tumble dryers through refrigerators and freezers, stoves and ovens, extractor hoods, and dishwashers to small appliances such as vacuum cleaners, coffee makers, and food processors. BSH Hausgeräte focuses on product innovations, on services triggered by connectivity, and on the expansion of digital business models.

#### **Energy and Building Technology**

In 2020, the Energy and Building Technology business sector generated eight percent of the Bosch Group's total sales revenue. Its Building Technologies division has two business fields: its global product business for security and communications solutions and its regional systems integration business. The latter comprises 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, intrusion-detection, firedetection, and voice-alarm systems, as well as accesscontrol and professional audio and conference systems.

The Thermotechnology division offers solutions for heating and air-conditioning, hot water, and decentralized energy management to customers worldwide. It provides heating and air-conditioning systems for residential buildings, water heaters, and commercial and industrial heating and air-conditioning systems. Electrification and renewable sources of energy are becoming increasingly important due to tightening requirements to reduce carbon 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, as well as in information and communications technology. Robert Bosch Smart Home GmbH offers Web-enabled, app-controlled products for the home.

## Business developments in 2020

From the perspective of the board of management, the Bosch Group came through 2020 well - a year dominated by the global Covid-19 pandemic. Once again, the Bosch Group's broad diversification proved its worth. In the second half of the year, the group was able to offset much of the sharp second-quarter drop in sales. Despite the fall in sales, the result achieved was clearly positive. This was helped by the overall improvement in the second half of the year and extraordinarily high demand in the consumer goods sector but also by substantial cost savings. In addition to implementing extensive measures to swiftly contain the economic impact of the Covid-19

#### 02 | Sales revenue

Bosch Group 2020 by region, in billions of euros



pandemic, good progress was made with the company's performance program, which is aimed at sustainably strengthening competitiveness, as well as with a large number of strategic projects. For further details on Bosch's business situation, see the <u>annual report 2020</u> (page 46 et seq.).

## Strategic approach

The starting point for our goals and strategies is the objective of securing the company's future as enshrined in the will of the company's founder Robert Bosch – in other words, ensuring the company's strong development and securing its financial independence. Our enduring ambition is to develop products that are "Invented for life," that fascinate, that improve quality of life, and that help conserve natural resources. In this respect, "products" are not only physical products and services but also the software-based solutions that go with them. We are driving forward innovations in both products and business models, operating in new business fields, and modifying our organization in the process. We want to be a data-driven AloT company. In other words, we want to use connectivity on the IoT, combined with AI, to continuously improve our products and services. Climate action is also one of our paramount strategic focal points for the future.

The Bosch Group is undergoing a phase of fundamental change in technologies and markets. Besides digitalization, increased connectivity via the IoT, and the opportunities that AI opens up, this is also due to growing global concern about climate change, geopolitical developments, and social trends such as increasing urbanization. Connectivity is affecting all our areas of business - from mobility solutions, industrial technology, and consumer goods such as household appliances and power tools through to building and energy technology. Increasing electrification is revolutionizing our business, too, especially in automotive technology but also in industrial technology and energy and building technology. In this context, the Covid-19 pandemic is accelerating the trend toward digitalization in many areas of our lives.

#### Mission statement and values

As affirmed in our "We are Bosch" mission statement, one of our strategic focal points is shaping change, taking into account the aspects of connectivity, electrification, energy efficiency, automation, and emerging markets. It is our ambition to play a part in molding the far-reaching changes in markets and technology. Apart from shaping change, our strategic focal points are customer focus and excellence.

Customer focus means having a precise understanding of customers' needs and using this understanding to find the best possible solutions for products and business models. Excellence in all areas is essential in order to achieve our business targets over the long term. In this respect, we measure ourselves against our best competitors. We believe that efficient processes, lean structures, and high productivity will help us maintain and increase the value of our company. A business environment that is changing at an ever faster pace also calls for a very high degree of adaptability and agility. To achieve this, we are redefining our understanding of leadership, collaboration, organization, and communication, as well as the models based on these concepts.

When putting our strategy into practice, we build on the Bosch culture, our high level of innovation - also measured in terms of our research and development spending - and quality, as well as our broad global presence. Our actions are based on the Bosch values: future and result focus, responsibility and sustainability, initiative and determination, openness and trust, fairness, reliability and credibility, legality, and diversity.



WE ACT PRUDENTLY AND **RESPONSIBLY FOR THE BENEFIT OF** SOCIETY AND THE ENVIRONMENT.

# **1.2 Sustainability strategy** and organization

At Bosch, sustainability is defined as a central task that the various business sectors tackle together on the basis of ambitious goals and systematic sustainability management. The contents, tasks, and related controlling are anchored in the processes, while clear responsibilities and decision-making channels ensure the efficiency of our actions. It is also our ambition to play a leading role in sustainability management: by acting in an economically, environmentally, and socially responsible manner, we want to improve people's quality of life and safeguard the livelihoods of present and future generations.

We use a materiality analysis to determine which aspects of sustainability to focus our activities on. The analysis is regularly compared against the outcome of our trends monitoring and adjusted as necessary. Accordingly, we

updated our materiality matrix most recently at the end of 2019. To this end, more than 1,000 international stakeholders - including business partners, representatives of the scientific community, policymakers, the capital market, and of relevant nongovernmental organizations, as well as associates and prospective job applicants - gave their assessment of the relevance of sustainability issues. The fields of action identified as being of material importance for Bosch and its stakeholders are shown in the following matrix. The survey confirmed in particular the high relevance of climate action and energy efficiency, data security and data protection, and compliance and integrity. The outcome of this analysis also forms the basis for the choice of topics in this factbook.

#### 03 | Materiality matrix

#### Sections: | Company | Products | Environment | Associates | Society

	Occupational health Sustainability awareness	Compliance and integrity Climate action and energy efficiency Data security and data protection
Water Sustainability reporting Diversity	Air quality Associate development Social commitment Resources and waste Environmental and social standards in the supply chain Occupational safety	Mobility transformation Employer attractiveness Sustainable product develop- ment
Demographic change Land consumption Biodiversity Investor relations Donations	Fire protection	Digitalization (IoT) and artificial intelligence (AI) Entrepreneurial freedom
Moderate	Relevance for Bosch	Very high

#### Clear vision sets the direction

Developed in 2018, our "New Dimensions - Sustainability 2025" target vision describes six fundamental dimensions, each of which is specified and elaborated further by reference to two key aspects with clearly defined, medium-term targets. Derived from the megatrends affecting our company and the findings of our materiality analysis, the dimensions set the stage for our activities in the years ahead.

## 04 | Target vision

Climate

Health

hoods of present and future generations.



In 2020, we defined our target vision for sustainability more precisely and - within the globalization dimension - replaced the general aspect of "supply chain" with "human rights" as a more specific field of action. In the urbanization dimension, we will focus on resource efficiency with our new circular economy strategy. In addition, with the aspect of "digitalization", we are underscoring the importance of a responsibly managed digital transformation for the economy and society. Data security and data protection as well as IoT and AI are the key topics in this context.

## Our ambition: By acting in an economically, environmentally, and socially responsible manner, we want to improve people's guality of life and safeguard the liveli-

#### 05 Goals and goal achievement

#### Reducing by 25 percent absolute water withdrawal at company locations in regions with water scarcity by 2025 Dimension Goals 2020 status and outlook **UN SDGs** section). CO<sub>2</sub> scopes 1 and 2 Since 2020, Bosch and its over 400 company locations worldwide 13 **CLIMATE** ACTION Operating climate-neutral have been climate neutral (scopes 1 and 2). The task now is to con-Water quality from 2020 onward and continuously refine the measures through 2030 to make the greatest ( Sug Increasing the quality of tinuously improving the mix possible contribution to climate action and the energy transition wastewater flows of measures until 2030 (see the "Environment | Energy and climate action" section). CO<sub>2</sub> scope 3 In 2020, we further increased the granularity of our calculation for the key scope 3 categories and identified key drivers. Lowering absolute scope 3 CO<sub>2</sub> emissions by 15 percent **Resource efficiency** • "Goods and services purchased" category: In 2020, we identiby 2030 Increasing resource efficiency fied the largest CO<sub>2</sub>-emitting supplier groups. In 2021, we want by strengthening the circular to record the emissions of relevant suppliers along with progress economy reducing those emissions so we can measure their contributions (see the "Supply chain | Social and environmental requirements for approach" section). suppliers" section). • "Logistics" category: In the field of logistics, we will focus in Digitalization particular on avoiding airfreight. In 2020, a pilot project to switch Pursuing responsible from air to sea freight resulted in potential for lowering CO<sub>2</sub> emisdigitalization sions by roughly ten percent in the first year. The extent to which the measures can be rolled out to additional logistics segments is currently being examined (see the "Supply chain | Social and environmental requirements for suppliers" section). Responsibility • "Use phase of products" category: In 2020, we identified Making sustainability more additional potential for further reducing CO<sub>2</sub> emissions in the use transparent and measurable phase. Pertinent levers are increasing energy efficiency, shaping the product portfolio, and using the transformation of the energy sector (see the "Products | Sustainable products and services" and "Environment | Energy and climate action" sections). **Energy efficiency** Since 2019, we have initiated more than 2,000 energy-efficiency Human rights Saving 1.7 TWh through projects worldwide, with some 1,000 new projects added in Increasing transparency and increased energy efficiency 2020 alone. With them, we have captured a savings potential of respect for human rights by 2030 0.38 TWh (see the "Environment | Energy and climate action" along the value chain section). ers" section). Renewable energy In 2020, we generated 69 GWh of power from renewable sources in-house at our company sites. Accordingly, we already reached Increasing own renewable generation at our sites to 17 percent of our target value. In parallel, in 2020 we entered Occupational health 400 GWh and significantly into long-term supply agreements with three energy suppliers and safety expanding purchase of green in Germany, thus enabling the construction of new renewable Reducing the accident rate electricity from new plants energy plants. As a result, more than 100,000 megawatt-hours of to 1.45 accidents per million power will flow annually from the public grid to Bosch locations in by 2030 hours worked or less by 2025 Germany. We are planning to conclude similar supply agreements in other regions in 2021 (see the "Environment | Energy and climate action" section). Substances of concern

Continuously upgrading materials data management

Water scarcity

Bosch handles substances of concern responsibly. To efficiently manage prohibitions and restrictions on materials, we are continuously upgrading our IT-based Material Data Management for Compliance and Sustainability (MaCS) system (see the "Products | Product responsibility" section).

Since 2019, we have launched some 50 projects and reduced water withdrawal by 23.1 percent compared to 2017 at company locations in regions with water scarcity. The company locations were identified using the WWF's Water Risk Filter. We plan to update the database in 2021 (see the "Environment | Water and wastewater"

6 GLEAN WATER 

In 2020, Bosch's wastewater volume decreased to 14.5 million m<sup>3</sup>. To improve the guality of wastewater flows, we have centrally recorded what guantities are involved where as well as how they are treated and discharged. We have defined wastewater quality standards that are binding worldwide and monitor their compliance (see the "Environment | Water and wastewater" section).

In 2020, we developed a circular economy strategy that takes into account environmental and social impacts along the end-to-end value chain. In 2021, we are now systematically analyzing the main materials used in Bosch products and developing an action plan to strengthen the circular economy (see the "Products | Management

Bosch uses the opportunities offered by data, AI, and the IoT to develop technology-driven solutions that serve people and nature. With our code of ethics for AI, we have set concrete guidelines for the responsible development and application of AI (see the "Products | Sustainable products and services" section).

Bosch is a founding member of the Value Balancing Alliance e. V. (VBA). The initiative is developing a model for the holistic assessment of entrepreneurial activities. In 2020, Bosch implemented three pilot projects that put a monetary value on the economic, environmental, and social impacts of business activities in its internal value creation and the wider supply chain (see the "Company | Sustainability strategy and organization" section).

Bosch is currently working on a systematic analysis of social and environmental risks along the value chain. In 2020, the focus was on working conditions in raw materials extraction. Taking the risk analysis as a basis, a risk matrix is to be created in 2021 that will allow concrete measures to be directly derived from it (see the "Supply chain | Social and environmental requirements for suppli-

We had aimed to lower the accident rate at Bosch to 1.7 accidents per million hours worked by 2020. With an accident rate of 1.5 in 2020, we have achieved this goal. Building on what we have already achieved, we are now setting ourselves a new objective: by 2025, we endeavor to lower the number of work accidents at Bosch to 1.45 accidents per million hours worked (see the "Associates | Occupational health and safety" section).







## Clear responsibility for sustainability

At Bosch, the highest technical committee for sustainability is the corporate social responsibility steering committee under the aegis of the CEO. This committee brings together the board of management member responsible for sustainability as well as the competent corporate department heads, including for HR, Real Estate and Facilities, Purchasing, EHS (environment, health, safety) and Sustainability, and Corporate Communications and Governmental Affairs. The steering committee concerns itself with Bosch's strategic orientation in relation to sustainability, whereas goal agreements and management review for all sustainability-related issues are the responsibility of the CEO and the board of management member responsible for sustainability.

#### 06 How sustainability is organized at Bosch



The EHS and Sustainability corporate department is responsible for sustainability management, which mainly entails setting and tracking goals, designing and supporting programs, preparing concepts for further development, and reporting on sustainability. From a content point of view, the Communications and Governmental Affairs corporate department focuses on sustainability communications and stakeholder engagement.

Responsibility for worldwide implementation of the sustainability strategy and monitoring the achievement of goals rests with the competent specialists at headguarters and in the divisions. The structure we apply in sustainability management is one that has already served us well in other areas: strategy and framework conditions are defined centrally, and the divisions focus on compliance with the standards and processes, right through to certification. Our associates in the regions and at the more than 400 Bosch sites worldwide then have the task of putting the respective requirements into practice locally and ensuring compliance with the legal framework conditions. In order to reduce the complexity of our sustainability management, we use a central core process that is based on the ISO standard process definitions, especially ISO 31000.

#### **Commitment and cooperation**

We want to make a relevant contribution to overcoming global social challenges and are therefore involved in numerous joint initiatives. For instance, Robert Bosch GmbH has been a member of the United Nations Global Compact since 2004. We are committed to the ten Global Compact principles relating to human rights, labor standards, environmental protection, and anti-corruption measures. With this factbook, we also satisfy the related requirement to report on the progress we made in 2020 in terms of these principles.

We also support the United Nations Sustainable Development Goals (SDGs) adopted in 2015. Accordingly, we regularly benchmark our sustainability activities against the 17 SDGs. The following are of particular relevance for our company: zero hunger (SDG 2), good health and well-being (SDG 3), quality education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), decent work and economic growth (SDG 8), industry, innovation, and infrastructure (SDG 9), sustainable cities and communities (SDG 11), sustainable consumption and production (SDG 12), and climate action (SDG 13). Bosch's diverse activities also support aspects of other UN goals.

Our reporting makes Bosch's commitment transparent. We support various reporting formats, such as the German Sustainability Code, CDP (formerly "the Carbon Disclosure Project"), or the Standards of the Global Reporting Initiative (GRI). In addition, we are active members in a large number of other sustainabilityrelated initiatives - including, since 1995, as a corporate member of Transparency International Deutschland e.V. and, since 2007, as a member of the Forum Compliance & Integrity. We are also active on the executive board of the econsense association (Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e. V.) and in several of its working groups, including on the topics of climate, energy, supply chain, human rights, sustainable financing, and reporting.

#### Exchange with internal and external stakeholders

To obtain the best possible understanding of our stakeholders and so that we can benchmark our actions against their needs, we engage in continuous dialogue with all groups - as cooperative and intensive exchange with them is essential for us to align our efforts so they can achieve their maximum potential and meet the expectations of the various stakeholder groups. As a company with global operations and an extensive product portfolio, we face the challenge of addressing a wide range of stakeholders with often widely diverging requirements.

#### Customers

We are in regular and intensive dialogue with companies from various industries. A key issue in the automotive industry is the future of mobility. In other industrial sectors, we share ideas on a range of topics, including energy efficiency and connectivity in the fields of mobility, buildings, and industry. In the consumer business, our customers' feedback as an important yardstick against which we can measure our actions (also see the "Products | Product responsibility" section).

#### Suppliers

Our responsibility for the environment and society stretches beyond our company boundaries and across the entire supply chain. Accordingly, we include our suppliers in our sustainability efforts. To foster dialogue with our suppliers, we regularly hold supplier days on specific topics in the respective regions. In addition, Bosch has regularly presented the Bosch Global Supplier Award since 1987 to honor outstanding performance and further strengthen the reputation of the best-performing suppliers (also see the "Supply chain | Further developing and strengthening cooperation" section).

#### Universities and research institutes

We maintain dialogue with research institutes by promoting research projects in areas of relevance for Bosch such as digitalization, renewable energies, and electrification. In addition, we offer students and graduates the opportunity to write their bachelor or master thesis and dissertations on sustainability topics of practical relevance (also see the "Associates | Learning and development" section).

#### Policymakers

Read more about the Value Balancing Alliance in the sustainability report 2020 | spotlights p. 24: "On track to the 360° balance sheet"

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As a global supplier of technology and services, we believe it is our responsibility to put our deep technology expertise to work for the benefit of society and to point out concrete opportunities as well as solutions to current challenges in society. With this in mind, we help shape opinions at a government policy level, in associations, and in various forums in society. Bosch is a soughtafter partner and thought leader in the political process, with broad technical expertise in key technologies such as AI, hydrogen, and connected, automated driving. Similarly, our experience reaching carbon neutrality is also attracting interest (also see the "Society | Political lobbying and dialogue with stakeholders" section).

#### Associates

The conviction held by our company founder Robert Bosch also finds its expression in our corporate culture: we want to create work conditions for all associates that allow them to reach their full potential and release their creativity. Dialogue with associates includes, for example, regular feedback talks with their respective managers. To measure employee satisfaction and identify specific improvement potential in the company, we have been regularly surveying our associates for many years. Currently under development, a new feedback landscape will replace the former survey format (also see the "Associates | Leadership and collaboration" section).

Further important stakeholders in our company include the communities worldwide in which our company locations are embedded as well as environmental and social nongovernmental organizations and representatives of public authorities. With them, too, we engage in discussions. In the context of our involvement in civil society forums and our work in associations and committees, we continuously review our extensive activities.

#### **Commitment to the Value Balancing Alliance**

As one of the seven founding members of the Value Balancing Alliance e. V. (VBA), since 2019 we have been working together with other internationally operating companies on developing and testing a global standard for the holistic evaluation of entrepreneurial activities. To this end, the Alliance aims to shed transparency and put a monetary value on the social, environmental, and economic impact of entrepreneurial activities as well as on the interdependencies along the value chain and how they affect corporate value. Several universities, NGOs, and audit firms are also involved in the project.

In 2020, the members of the VBA developed an initial set of indicators backed by a corresponding methodology. This is intended to provide the basis for an "impact statement" that makes the value creation (or destruction) of a company - or even of individual decisions transparent. All member companies were invited to trial the indicators in pilot projects to determine the extent to which they are relevant and practical. In this context, Bosch has focused on the supply chain, its own value creation, and a specific business decision (changes to packaging materials). The findings from pilot projects are fed back into the process of refining the indicators.

Findings from the analysis of the supply chain and Bosch's own value creation underscore the insights from the materiality analysis, thereby confirming the target vision for sustainability. Bosch's activities have the greatest impact in the environmental dimension through the emission of greenhouse gases. They are effectively countered by achieving carbon neutrality and through activities to lower scope 3 emissions. Bosch generates the greatest positive impacts in the economic dimension through payments to suppliers for purchased goods and services, and through the wages and bonuses paid to its associates. Training measures for associates constitute the single most important factor in the social dimension.

Within the framework of the VBA, the methodology will be refined in the course of 2021, enabling a more detailed guantitative documentation and presentation, among other aspects. Aside from developing individual indicators further, in the medium term the set of indicators will be supplemented with new topics covering, for example, social aspects such as respect for human rights. Last but not least, the downstream impact of entrepreneurial activities will also be taken into account in the future. With this in mind, Bosch plans to carry out a corresponding project in 2021 that will allow coverage to be extended across the entire value chain.

#### 07 | VBA's set of indicators



The final results of the analysis of the specific business decision are still pending. The case analyzed concerned changes to packaging material for windshield wipers. In this context, the Plastic-free Set Packaging project was launched at the Tienen plant in Belgium to dispense with plastic in packaging and to make the packaging for windscreen wipers more environmentally friendly. Following a life cycle assessment (LCA), the VBA methodology was applied to all packaging options. Thus, for each option, the social and environmental costs have been determined, providing a basis for future decisions.

# **1.3 Corporate governance** and compliance

Bosch is expressly committed to taking responsibility, obeying the law, and behaving ethically. As our mission statement says: "We promise only what we can deliver, accept agreements as binding, and respect and observe the law in all our business transactions."

#### **Responsible corporate governance**

The board of management of Robert Bosch GmbH defines the strategy for the entire company and leads the company as a whole. Its responsibilities are set out in the board of management organization chart. The Robert Bosch GmbH supervisory board appoints, monitors, and advises the board of management. In making appointments to the supervisory board, Robert Bosch GmbH is subject to the German "Mitbestimmungsgesetz" (Codetermination Act). In view of the company's size, the supervisory board has 20 members. Ten members are appointed by the shareholders with voting rights. The other ten members are elected by the employee representatives.

The industrial trust Robert Bosch Industrietreuhand KG acts as partner. In line with the mission handed down in the will of the company's founder, Robert Bosch, the trust is responsible for safeguarding the company's long-term existence and, above all, its financial independence. The aim is to guarantee that the company remains independent and able to act at all times. For further information on the board of management and the supervisory board, see pages 6 and 10 of the annual report 2020.

#### **Risk management**

In the Bosch Group, risk management encompasses the entire company, including all essential operations, functional areas, divisions, regional organizations, and business sectors. It is thus a core responsibility for all managers on every level of the Bosch Group. As a rule, responsibility for risk management is assumed locally on all group management levels, with certain governance tasks being organized at the corporate level. This means that, as far as possible, risks are identified and managed where they arise: in other words, above all in the divisions and their regional subsidiaries. The latter are also primarily responsible for introducing measures to reduce or control risks. In addition, corporate departments for areas such as compliance management, legal services, tax, and the corporate office for the risk management system support, direct, and monitor the operating units' control activities. Internal auditing, which additionally reports directly to the managing partners of Robert Bosch Industrietreuhand KG, has responsibilities including assessing the appropriateness and effectiveness of the tasks described and, if necessary, proposing that the board of management initiate remedial measures. Measures are implemented based on instructions issued by resolution of the board of management meeting.

The Bosch Group risk management system takes its lead from the relevant standards: ISO 31000, COSO III (ERM), and IDW AuS 340. The main risk-management principles include the systematic detection, tracking, and prevention of relevant risks, as well as structures to promote and monitor legally compliant and rule-compliant conduct. In this context, the corporate coordinating office for the risk management system is responsible for making risk management fit for the growing tasks ahead. This has included the preparation and publication of a risk management directive that is valid for the entire Bosch Group. Introduced in 2019, the directive was largely implemented in 2020. In certain units, there were delays as a result of the Covid-19 pandemic. The directive serves to ensure greater clarity regarding basic

principles and responsibilities. The corporate coordinating office also began work introducing a new, standardized electronic risk information system across the Bosch Group in 2019, which helps risks to be recorded and analyzed and improves transparency. Most features of this system have now been implemented. In addition, a cross-functional risk committee is tasked with identifying significant risk areas across the divisions and pinpointing potentially disruptive technological and strategic risks.

For further details on our risk management system and a description of significant risks, see the annual report 2020 (page 60 et seq.). The main antitrust and legal risks are also described there.

Compliance at Bosch

Compliance refers to the observance of legal requirements and company guidelines. At Bosch, this is an integral part of our corporate values. To this end, we have unequivocally defined our position on legal requirements and ethical issues in our globally applicable Code of Business Conduct. Together with the Bosch values, it provides a foundation that we believe is key to Bosch's success in business. And because responsible and lawful conduct is important beyond company boundaries, we have formulated our expectations of our business partners in a corresponding <u>code of conduct</u> (see the "Supply chain | Social and environmental requirements for suppliers" section).

#### **Company-wide compliance** management system

The group-wide compliance management system (CMS) constitutes an integral element of the operationalization of corporate governance in the Bosch Group and comprises all structures and processes for ensuring compliance at an organizational level. It aims to ensure compliance and thus contribute to the company's longterm success on the basis of integrity and value-based conduct.

The CMS is preventive in nature and is designed to encourage all associates in the Bosch Group to identify compliance risks and violations at an early stage and to respond appropriately. The aim is thus also to reduce risks for the Bosch Group, its associates, and its corpo-

In addition, the compliance committee's role has been strengthened. It supports the implementation of the Bosch Group CMS and coordinates the compliance issues in the organization. In addition, the compliance committee contributes to the risk-based further development of the CMS, for example, by assessing the regulatory environment and other developments to identify new compliance risks. The compliance committee comprises the heads of the Compliance corporate department, legal services, the internal auditing department, and other members appointed by the board of management. It is chaired by the chief compliance officer.

The compliance organization was further developed in terms of content and strengthened in terms of personnel in the period 2018 through 2020. In this way, we underscored our commitment to taking responsibility, obeying the law, and behaving ethically. In 2020, the corporate compliance organization also assumed responsibility for information security and data protection from the internal auditing department. The directive governing the CMS was also revised in 2020. It describes the CMS and sets out the responsibilities for different areas of compliance. For instance, the compliance expert function has been explicitly included in the directive's scope. Compliance experts are responsible for implementing corporate governance in their respective areas of responsibility, such as anti-corruption, antitrust law, money laundering, product compliance, occupational health and safety, fire protection, environmental protection, materials compliance, and labor and social legislation.

rate bodies. At the same time, the aim is to protect and cultivate the reputation of the Bosch Group, which is the basis of our business partners' trust.



COMPLIANCE EXPERTS ARE RESPON-SIBLE FOR IMPLEMENTING CORPORATE **GOVERNANCE IN THEIR RESPECTIVE** AREAS OF RESPONSIBILITY.

The chief compliance officer also heads the Compliance Management corporate department, which is responsible for the specialist area of anti-corruption and for key elements of the Bosch Group's CMS (e.g. compliance training; setting up, operating, and further developing the compliance whistleblower system; serving as point

#### BOSCH WANTS TO BE A PIONEER IN VALUES-BASED CONDUCT THAT RUNS DEEPER THAN MERE COMPLIANCE WITH THE LAW.

of contact for reports of misconduct; and conducting internal investigations). The chief compliance officer sets the goals for the corporate compliance organization and reports directly to the member of the board of management responsible for compliance. If necessary, he is entitled to contact the chair of the supervisory board directly.

Compliance offices have been set up in the regions and divisions. Their heads report directly to the corporate compliance organization. The core task of the compliance offices is to support the operating units to which they are assigned in fulfilling their obligations under the CMS. The compliance officers have unrestricted authority to demand information and perform audits to fulfill their duties. In the performance of their duties, they are independent and bound only by the instructions of the Compliance corporate department.

As of January 2020, the regional compliance officers had already been given responsibility for their objectives and integrated into the Compliance corporate department. The compliance officers of the divisions followed at the end of 2020. These measures will further strengthen the independence of the compliance officers, without compromising their proximity to the divisions and regions. In essence, we are continuing to drive forward the development from rule-based compliance to a primarily values-based approach. We want to be a pioneer in values-based conduct that extends beyond mere compliance with the law.

Notwithstanding the constantly evolving environment, we are intent on keeping our policies and procedures up to date. That is why we continuously monitor the effectiveness of our CMS within the area of responsibility of the corporate compliance organization and consistently develop it further. To this end, we carry out regular risk analyses. For example, a global analysis of corruption

risk conducted in 2019 served to collect information at the company level on the thematic, regional, and organizational distribution of risk and to derive countermeasures. The next analysis is scheduled for 2021.

In addition, at the end of 2019, we initiated a cross-functional review of money laundering risks along the entire value chain in collaboration with an external consulting firm. Aside from geographical risks, the analysis included in particular customer and supplier risks, product risks, and the risks inherent in the various distribution channels. The analysis was completed at the end of 2020. We are currently reviewing the recommendations made and defining systematic risk mitigation measures.

The implementation of corporate governance within the framework of the CMS – in particular, the decentralized implementation of binding company-wide specifications by the compliance officers – is reviewed in the course of internal audits. Responsibility of the audit rests with the corporate internal auditing department. Design and effectiveness of the CMS and its individual elements are also within the scope of the internal audits. In addition, we monitor our CMS in the course of external audits, which have repeatedly attested the system's effectiveness in recent years. We always take the results as an opportunity to further develop and optimize our CMS.

#### **Code of Business Conduct**

The Code of Business Conduct provides guidance for all Bosch associates on values-based and thus ethical and legally irreproachable conduct. It outlines the basic rules of conduct in the company and provides guidance on issues such as how to deal with insider information, whether to accept gratuities, or how to avoid conflicts of interest. Our aim is to set clear guidelines and, at the same time, to protect our associates, our company, and our business partners. The guidelines are specified in

corresponding central directives and additional local regulations. These also contain, for example, reference parameters for associates such as specific limits. In Germany, for example, the acceptance and issue of gratuities exclusively constituting a private benefit is permissible up to a limit of 35 euros per year and recipient.

The Code of Business Conduct also encompasses our commitment to social responsibility - in particular with regard to respecting human rights and the prohibition of forced or child labor. Our code also extends to our business partners. The code is available to all associates in 33 languages and has been expressly communicated by the CEO to all associates exempt from collectively bargained agreements worldwide. They have confirmed their acknowledgment of the code. In addition, an abbreviated version of the code with the key messages is provided to all associates. The Code of Business Conduct is available on the Internet and on the intranet.

#### **Product Development Code**

In product development as well, we observe unequivocally formulated basic principles as summarized in our Product Development Code and reflected in the Code of Business Conduct. Our actions are always based on legal conduct and our "Invented for life" ethos. Specifically, legality and the Bosch values take precedence over customers' wishes. After all, Bosch products should deliver in everyday use the specified quality and safeguard human life while conserving resources and protecting the environment to the greatest possible extent. It is not permitted to develop functions for cycle/test recognition, nor is optimization solely for the purpose of official test cycles.

Our ethical guiding principles in the Product Development Code go beyond what is required by law and apply throughout the Bosch Group and to all Bosch products



and services. If a customer does not observe these principles, we do not take part in their invitations to tender. In the event of noncompliance with the Product Development Code in the course of existing business relations, measures can encompass a delivery stop.

#### **Dual use**

Bosch does not conduct basic research for military applications. Some of our products feature technology that might permit what is known as dual use or deployment for military purposes. Dual use means that the products leaving our plant are in principle constructed to enable their potential use in a wide range of applications. We adhere to export control regulations without exception in this regard.

#### **Compliance of business partners** and company acquisitions

Bosch takes a holistic approach to corporate social responsibility. Therefore, clear policies and procedures also apply with respect to our business partners. For instance, we regularly submit our partners to standardized and risk-based compliance checks. This encompasses both customers as well as suppliers, possible partners in the establishment of joint ventures, and potential acquisition and takeover targets. The depth and scope of the checks depends on various factors, such as the nature of the business relationship. Corporate and personnel structures can also play a role. The findings are assessed using a standard process and appropriate measures are defined and introduced to the extent necessary. These can range from a more in-depth assessment right through to withdrawal from the business relationship or project.

In our Code of Conduct for Business Partners, we have formulated what we expect from business partners in terms of compliance. The code of conduct is handed out to all suppliers at the start of our business relationship. Through a reference in the Terms and Conditions of Purchase, it is an integral contractual element. Moreover, there are additional internal policies that provide clear guidance on responsible conduct and define further processes with respect to our business partners. The "Supply chain" section of this report describes in detail how we discharge our responsibility in the supply chain.

#### **Training and communication**

We use extensive training and communication measures to sensitize our associates to issues such as compliance, our social responsibility, and the importance of observing human rights. The compliance training program is available to all associates as Web-based or classroom training courses. Participation is mandatory for certain groups of associates, including associates without collectively bargained contracts due to their special responsibility as specialists or managers but also numerous associates in selected areas or in special functions. The mandatory compliance training courses currently offered have been taken over 920.000 times.

Our compliance training courses focus on five areas: business ethics, product compliance, anti-corruption, antitrust, and export control. The content of classroom training or Web-based training (WBT) must be repeated regularly, usually at two- to three-year intervals. Our training courses are regularly refined and updated to accommodate new content and developments. Feedback from the training participants is always taken into account. For the first time, an international basic WBT on the topic of "gratuities (anti-corruption)" was offered in 2020. The WBT was developed jointly by the Compliance Management corporate department and the competent compliance offices in the regions. The aim was to develop a foundational WBT that can be used worldwide. Accordingly, the WBT was designed to convey the general principles while at the same time taking into account specific regulations in individual countries.

### **Compliance dialogue**

The compliance dialogue enables intensive and open exchange between managers and associates on compliance issues. Supplementary to the mandatory training, the dialogue is a voluntary offer that encourages teams to discuss and resolve specific dilemmas. In the year under review, we expanded the compliance dialogue

to include new practical cases relating to the Product Development Code as well as the topics of gratuities and antitrust law. These cases can be used in the compliance dialogue to address critical topics in everyday work. Last but not least, the topic of compliance is also addressed in annual feedback talks held between associates and their supervisors.

## Complaint mechanisms and whistleblower system

If there is any suspicion of possible misconduct, such as a violation of applicable law or the Code of Business Conduct, associates as well as business partners and other third parties can submit a report to the compliance organization - also anonymously in accordance with legal requirements. To this end, we have set up a global whistleblower system that is available in 14 languages on the Internet and our intranet. To help users, Bosch's whistleblower system offers thematically predefined reporting categories. The objective is to make it as easy as possible for whistleblowers to submit reports. At the same time, it is made clear that the system is available without restriction for reports on the full spectrum of conceivable misconduct. Naturally, Bosch associates can also directly contact their superior or the respective compliance officer in their division or region. The compliance organization follows up all reports without delay and involves additional experts in individual cases. Progress and the corresponding assessment of the matter are recorded in a central database and monitored. Not all reports are necessarily handled by the compliance organization. Cases are often handed over to the specialist departments responsible for further processing. For instance, HR is responsible for handling cases of discrimination without implications under criminal law.

## Internal communication supports compliance

We want our associates to know, experience, and embrace what compliance means at Bosch. We use the full range of internal media – in particular, the intranet and internal social media - to make the topic of compliance and the corresponding contact persons more visible within the company. A dedicated compliance channel on the internal Bosch Tube video platform offers more than 60 videos on the subject.

In 2020, we relaunched the Bosch compliance app, which is pre-installed on the cell phones of some 80,000 Bosch associates worldwide. Having extensively reworked the user interface and content, the app now provides guick and precise access to a variety of compliance topics. Most information is accessible offline, for instance, in flight mode. It is also possible to directly contact the competent compliance officers in each country and division using the app. In addition, the app includes links to various compliance videos, describes actual compliance cases at Bosch, and provides access to internal regulations related to compliance. Users can also take a quiz to test their compliance knowledge.

Great importance is attached to the protection of whistleblowers throughout the process of handling cases. This concerns both identity protection and protection against possible discrimination. Protecting whistleblowers is already explicitly anchored in the Code of Business Conduct and will soon be additionally flanked and specified in a separate regulation. Aside from reflecting the specific requirements of the EU Whistleblower Directive to be implemented by EU member states by the end of 2021, the regulation is intended to ensure that all whistleblowers worldwide enjoy the same protection, even in cases where whistleblowers have less protection under applicable national law. In the event of indications of disadvantage due to whistleblowing or of obstruction of whistleblowing, these are to be pursued as a separate compliance case.

In 2020, 732 reports (previous year: 883) were recorded via the whistleblower system. We have seen a steady increase in the number of reports over the last few years - a development we primarily attribute to the comprehensive measures in the field of compliance and the resulting increased awareness of compliance issues. The decrease in reports in 2020, contrary to this trend, is due to the Covid-19 pandemic, as reports continued to increase up to the end of the first guarter of 2020, only decreasing again later in the year.

A global awareness campaign on the Bosch whistleblower system and whistleblower protection originally planned for 2020 had to be postponed due to the Covid-19 pandemic. It is now scheduled for 2021 and is intended for associates, executives, employee representatives, and pertinent HR staff. In addition to further raising awareness of the issues, the campaign aims to make the work of the compliance organization more transparent and thus help to further strengthen the trust of associates in internal reporting and whistleblowing channels at Bosch.

# Products

Our ambition: Invented for life. We want our products to spark enthusiasm, improve quality of life, and help conserve natural resources.

Sustainable products

ment. A new strategy for the circular economy aims to include not only environmental aspects but also social criteria along the value chain.
Bosch generates around

aspects are already taken into account during product develop-

40 percent of its sales revenue with products that contribute toward sustainable development.

## Reducing scope 3 emissions

• In 2020, Bosch identified potential for reducing  $CO_2$  emissions in the **use phase of products.** 

► Three levers are in focus: increasing energy efficiency, shaping the product portfolio, and using the transformation of the energy sector.

► The goal is thus to lower
CO₂ emissions generated in the upstream and downstream stages of the value chain (scope 3) by 15 percent by 2030.

# 2.1 Management approach

Bosch has a broad product portfolio that is arguably unique in terms of its variety. Our products ensure safe and sustainable mobility, are durable companions in the home, and control industrial plant and machinery efficiently and reliably. As varied as our products are in detail, they share a common ethos: "Invented for life." We want our products to spark enthusiasm, improve quality of life, and help conserve natural resources. To measure up to this standard again and again, we defined the principle of Design for Environment (DfE) many years ago. The principle helps us ensure that our products are increasingly environmentally friendly and sustainable. In 2020, we took the next major step: we developed a circular economy strategy at Bosch that shifts the focus from the product to the materials used. In addition to ecological aspects, we also consider social criteria along the value chain. In this way, we want to contribute to sustainable development with our products. The outcome is a clear requirements profile for our products that encompasses the entire value chain.

## Design for Environment

At Bosch, environmental aspects are already taken into account during product development. With this in mind, the Bosch standard N33-6, which is applicable companywide and has been in force for more than 20 years. frames the DfE principle. The standard includes concrete design and manufacturing rules for developers and product owners that cover the entire life cycle of products - from materials used and efficiency in the product evolution process to recycling or environmentally compatible disposal at the end of the product life cycle. Compliance with the standard is reviewed as part of the quality process (see the "Product responsibility | Our quality policy" section).

Specially trained DfE coordinators support the divisions involved, helping them with requirements and questions relating to green product design. In addition, all divisions are in contact with each other via the DfE network. A differentiated approach is taken in implementing the DfE principle.

In the development of new products, environmental aspects are anchored in the various phases of the product evolution process. A checklist based on the product life cycle helps to factor in all relevant aspects in the individual process stages and to evaluate them accordingly (see Fig. 08).

▶ When existing products are upgraded, life cycle analyses are used to identify relevant environmental aspects. As a result, it is possible to identify the stages of product development at which improvements can be made from an environmental vantage point.

#### Life cycle assessments

Based on the idea of a closed-loop or circular economy, we have been systematically conducting life cycle assessments (LCAs) for all major product groups since 2017. This entails an evaluation of product-specific environmental aspects in each phase of the life cycle from purchasing to production and through to disposal. Among the evaluated aspects are, for example, the use of materials, including raw materials and substances of concern (SoC); the consumption of energy and resources in the use phase; recycling and the use of recycled



raw materials

#### 08 | Environmental aspects of Design for Environment



\* FeNO measuring device for asthmatics

materials; and remanufacturing at the end of the product's life cycle (also see Fig. 09). In some cases, such as for hot spot analyses, we also perform these assessments in compliance with ISO 14040 and ISO 14044. The products in guestion are selected with reference to clear criteria. For example, an LCA is carried out when new materials, new technologies and system components, or new consumables are used. Additionally, it is often also a good idea to conduct an LCA whenever fundamental changes are made to a product's manufacturing process or if new business models are adopted that influence its life cycle.

# 50%

of Bosch's sales are generated with products that have been subject to LCAs.

Today, we generate 50 percent of our sales revenue with products that have been subject to LCAs. In this way, we have been able to glean important general insights, including into the effects of specific materials or processes, for example. With the resulting foundation, we can now extend our analytical scope. For example, we intend to take an integrated view of environmental aspects in the future, particularly as part of our new circular economy strategy, which focuses on the materials used and thus permits influence to be exerted throughout the entire product portfolio by developing concrete measures.

THE CIRCULAR ECONOMY STRATEGY TAKES INTO ACCOUNT NOT ONLY ENVIRONMENTAL BUT ALSO SOCIAL ASPECTS.

## Circular economy strategy

We want to make our products as sustainable as possible by taking an integrated approach. For this reason, in 2020 we developed a circular economy strategy that encompasses both environmental and social aspects. Accordingly, individual, product-specific life cycle analyses are replaced by a clear focus on the materials used. This approach allows us not only to influence the sustainability of individual products but also to initiate changes across the entire portfolio.

To elaborate an effective and practicable methodology given our wide variety of products, we initially concentrated our analysis on those materials that are of most relevance for Bosch. Three criteria are decisive for this assessment: the environmental impact, the volumes purchased, and the cost of the materials. The materials identified in this way are examined for negative or positive impact along the six dimensions of our vision for sustainability. In implementing the measures derived from the circular economy strategy, the principle applies that negative impacts should be remedied wherever possible by means of measures based on the circular economy. Bosch can either close the loop directly or via third parties (see Fig. 10). The essential criterion for this decision is a measure's economic viability. In 2021, we want to complete the analysis of the materials and, together with the divisions, define concrete goals and derive corresponding measures. Starting in 2022, we intend to report regularly on our progress reaching the targets.

#### Circular economy - here and now

A variety of examples are already showing the potential inherent in the concept of a circular economy for a sustainable product portfolio.

▶ With "BlueMovement," BSH Hausgeräte GmbH has been offering a lease-based model for household appliances in the Netherlands for three years now: similar to a subscription model, customers receive a modern. resource-efficient appliance, while BlueMovement remains the owner and is therefore responsible for maintenance, reconditioning, and recycling. A BSH pilot project Papillon in Belgium is expanding this offer and helping underprivileged households in society to use efficient household appliances.

► The Bosch eXchange program offers reconditioned replacement parts, such as starter motors and generators. All parts subject to wear and tear as well as critical parts are replaced with original Bosch components. Replacement parts reconditioned in this way are subject to the same quality requirements as new products and have the same guarantee conditions. This model reduces consumption of materials by roughly 90 percent, halves energy consumption, and lowers CO<sub>2</sub> emissions by around 25,000 metric tons a year compared with the manufacture of new products.

▶ With SmartGrow Live, a newly developed, fully automated indoor growing system, Bosch is demonstrating its forward-looking commitment to the circular economy with a specific product. Many of the system's plastic elements are made of recycled material, and attention has also been paid to durability in the use of materials - not least in packaging. At the end of the use phase, many of the system's components can be processed into granulate that can be recycled in the manufacture of new systems.

## Research for greater sustainability

Bosch employs some 73,000 associates in research and development at 129 locations around the globe. Some 34,000 of those are software engineers working on digital transformation and the development of foundational technologies such as AI. In other words, one in five Bosch associates is directly involved in innovative topics set to shape our future. As regards sustainability, the focus is on three fields of innovation.

E-mobility and electrified systems: Bosch is conducting research in the field of battery technology and is working on the deployment of fuel cells for mobile applications. To this end, the company is developing concepts for electric drive vehicles and is working on integrated powertrains at both system and component level.

#### Sustainable innovations for resource and energy

efficiency: In view of the scarcity of resources, any sustainable development strategy must find solutions for



**10** | Closing product and material cycles



reduction in materials used is possible thanks to reconditioned replacement parts from Bosch's eXchange program.

decoupling economic growth from resource consumption. In this context, we see the circular economy as a promising solution. Accordingly, Bosch research is working on a project to evaluate and optimize the product life cycle (life cycle costing and assessment – LCC/LCA).

Chemical energy conversion: In order to mitigate global warming with all its negative effects, it is imperative to lower greenhouse gas emissions. This requires the generation of electricity from renewable sources along with its climate-compatible storage. What we need are innovative technological solutions for the production of hydrogen as an energy carrier and storage medium or for use in fuel cell systems. In the field of chemical energy conversion, Bosch is already developing the systems that will significantly lower carbon emissions in the future.

# **2.2 Product responsibility**

Outstanding quality is our strength. The products we deliver meet the highest standards in safety, quality, and reliability. This is how we fulfill the wishes and expectations of our customers. Whenever we develop and manufacture products and render services, our actions must always measure up to the principle of legality and our "Invented for life" ethos.

## Our quality policy

Quality guides our actions at Bosch and is at the core of our brand promise. Each of our products offers utmost quality and reliability - regardless of where it was produced or where it will be used. Binding quality principles apply throughout the Bosch Group. Quality management is coordinated and steered by the corporate department for quality. Local officers are responsible for operational implementation at individual company locations. The majority of our development and production sites have a quality management system certified according to ISO 9001. All sites that manufacture vehicle components are certified according to IATF 16949 standard, which is based on ISO 9001 and was developed by the International Automotive Task Force (IATF).

Due to our wide-ranging product portfolio, we apply a large number of different laws and regulations governing guality assurance. We take these requirements on board already in the product evolution process, and we have defined various policies for that purpose. Applicable throughout the company, the Quality Policy and Quality Management guideline plays a central role to this end. It creates a binding framework for setting quality objectives and commits the organization to continuously work to improve the quality management system. Environmental aspects are taken into account in the product evolution process as part of a checklist that takes account of the DfE principle.

To ensure highest quality with unwavering consistency, we are active in various task groups dedicated to refining the pertinent standards. For instance, since 2020 Bosch has headed the Automotive SPICE (Software Process Improvement and Capability Determination) working group of the German Association of the Automotive Industry, which deals with aspects of cybersecurity in the processes of software-based system development. Its aim is to develop a new edition of Automotive SPICE and to elaborate the corresponding guideline. In addition, we also foster outstanding achievements in the realm of quality within our company, which the board of management regularly recognizes with the internal Bosch Quality Award.

### **Product safety**

The safety of our products has utmost priority and constitutes a central element of our quality policy. A central directive applicable worldwide regulates the corresponding responsibilities. It ensures compliance with both legal requirements and our customers' specifications with regard to product safety. In addition, it sets out rules for the delivery of error-free and safe products.

At every stage of the product evolution process, attention is paid to product safety. Starting with product development, we attach great importance to safety testing and comply with standards, such as ISO 26262, which deals with the functional safety of systems in passenger vehicles. Products are only released for series production if all safety aspects have been fully clarified. In addition, compliance with pertinent specifications must be established and demonstrated with appropriate tests. For safety-relevant products, all operating units are required to assign adequate resources to conducting analytics covering the end-to-end product life cycle. Bosch's globally applicable Product Development Code prescribes that human life must be protected as best we can. Accordingly, our products offer the best possible

protection for users or, at the very least, the standard of safety that can be expected given the current state of the art. To this end, they are designed, developed, and manufactured such that they do not pose any unacceptable risk.

Each operating unit and each associate is responsible within the scope of their work for ensuring that only safe products leave the factory. Avoiding errors is a major priority. Comprehensive training establishes the preconditions for ensuring that all associates are committed to, and put into practice, Bosch's quality standards. Executives regularly instruct their associates in the fundamentals of product liability in accordance with the standards applicable for the respective product categories. For associates whose activities directly influence product quality, our compliance training also includes Web-based modules on product safety and product liability, which must be renewed in set cycles. In 2020, some 20,000 associates took part in this training. To deepen their knowledge, the product liability officers of the various divisions have access to more in-depth classroom training.

#### Information and documentation requirements

We consider it a matter of course to provide concrete and up-to-date information on our wide range of products, and we comply with the corresponding information and documentation obligations at all times. User manuals are designed to ensure adequate safety when the product is used as intended or in a foreseeable manner. At a minimum, user manuals contain a description of the product's intended use and operating environment, as well as the limits and restrictions on use. In addition, they contain warnings of possible hazards and safety risks, especially if these are not directly and unambiguously

#### **BOSCH'S GLOBALLY APPLICABLE** PRODUCT DEVELOPMENT CODE PRESCRIBES THAT HUMAN LIFE MUST BE PROTECTED AS BEST WE CAN.

recognizable by the user. The descriptions provided also include information on how to avoid possible hazards and safety risks when the product is used as intended.

Where necessary, product use instructions are also imparted in appropriate training courses. BSH offers training courses for dealers and sales teams as well as for consumers. Bosch Rexroth and Powertrain Solutions offer similar services. Safety data sheets are available for handling substances and mixtures; in the Automotive and Power Tools divisions, these are also available online.

## Use of substances of concern

At Bosch, SoC are all substances in production aids or products that are classified as prohibited or subject to declaration duties by law, under customer agreements, or pursuant to our in-house requirements. We are continuously working to identify SoC in our products and processes, adopt substitutes, and reduce or altogether avoid hazardous substances in the long term wherever possible. For example, we want to dispense with substances on the REACH candidate list in new developments, in so far as it is technically feasible. Our DfE internal standard, which among other things defines the requirements for handling SoC, supports product development in this respect. If SoC are unavoidable in the production process for technical reasons and they are legally permitted, hazard assessments are carried out to ensure suitable protective measures are taken when handling such substances.

#### Systematic management of data on materials

At present, there are more than 13,000 legal, industryspecific, and customer-specific regulations worldwide governing materials restrictions and declaration duties. which are additionally continually subject to amendments and addenda. Around 1,100 of these regulations are currently relevant for Bosch worldwide, including the European Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and the Toxic Substances Control Act (TSCA) in the United States. Keeping a permanent eye on all the resulting requirements and initiating the adjustment measures needed in response to any changes is a central challenge for Bosch.

We have built a central IT system – MaCS (Material Data Management for Compliance and Sustainability) - to efficiently manage materials prohibitions and restrictions, in particular for products. The EHS and Sustainability corporate department is responsible for the technical coordination and continuous development of the IT system and processes. An external specialist service provider also supports the permanent process of updating and managing the data in MaCS. All SoC are rendered in the MaCS system using unique identifiers such as Chemical Abstracts Service (CAS) numbers. This approach takes into account the intended use and the respective sales market as well as information on materials restrictions or defined limits. The MaCS system currently covers over 20,000 identifiers. Algorithms that map the relevant materials restrictions and declaration regulations automate the process of matching product parts lists and associated supplier declarations against the pertinent requirements.

To enable checks, MaCS maps the individual components of a product in the form of a product parts list. It also includes the supplier declarations that are

made available to us via systems such as the International Material Data System (IMDS), Compliance Data Exchange (CDX), and Bosch's declaration format. These indicate for individual components the substances contained and their concentration levels. By linking parts lists and supplier declarations, it is possible to make accurate statements about the substances contained in each component.

#### **Specifications for suppliers**

Publicly available, Bosch's standard N 2580-1 regulates the nature and scope of suppliers' declaration duties visà-vis Bosch with regard to SoC in materials. It is an integral part of the materials specifications Bosch contractually agrees with its suppliers. Applicable throughout the company, the requirements are based on the relevant European regulations, although they are significantly stricter in some cases. Where non-European regulations impose tighter requirements, those are applied. Industry standards such as the Global Automotive Declarable Substance List (GADSL) or the requirements of specific customers are also taken into account.

We require our suppliers worldwide to apply the N2580-1 standard and confirm this via a defined process. An expert group with representatives from all operating units reviews and updates the standard's content every six months. In addition, our Group Policy for Conflict Raw Materials regulates the handling of conflict minerals (also see the "Supply chain | Social and environmental requirements for suppliers" section).

#### 11 | MaCS - Material Data Management for Compliance and Sustainability

Some 13,000 legal as well as industry- and customer-specific regulations on materials restrictions and declaration duties worldwide

Some 1,100 regulations are currently of relevance for Bosch worldwide



## IT security and data protection

IT security is an elementary component of our quality standards at Bosch. We see trust in the security of systems and data as well as their resilience to attacks involving manipulation as a crucial determinant of success for IoT. Our data protection and data security principles are documented in our IoT Principles. In this context, we take into consideration the requirements of our customers in particular: it is our duty to handle their data in a secure and transparent way and protect their privacy.

Overall responsibility for IT security at Bosch rests with the chief digital officer. A steering committee reports directly to the board of management twice a year in a meeting exclusively dedicated to this topic. We take a holistic approach to information security and always look at the entire life cycle. This is true both as regards data protection and also the security of computer networks and infrastructure within our company. Furthermore, we have set up a separate corporate office that is responsible for the IT security of our products. A clearly documented process ensures that IT security is widely integrated in development activities. Related guidelines and central directives cover all relevant areas of information security at Bosch.

Binding for all associates, the "Information security and data protection" group guideline defines principles, responsibilities, and tasks relating to company information security and data protection. Technical rules on operating servers and other IT systems are contained in the "IT security" central directive, which also applies throughout the group. All central directives on IT security are revised and updated regularly. Our subsidiary ESCRYPT also provides the necessary know-how to develop safe products.

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Despite all precautions, there is no such thing as a foolproof security system. That is why we have established the Bosch Product Security Incident Response Team (PSIRT). The team serves as a central point of contact for security researchers, partners, or customers who detect vulnerabilities in our products. Security gaps can also be notified through our whistleblower system (also see the "Company | Corporate governance and compliance" section). When a solution has been found, we make it transparent online for all our customers.

To promote trust in digital systems and products, we are committed to intensive dialogue with policymakers, the scientific community, and the general public. Accordingly, Bosch has signed up to the High-Level Expert Group on Artificial Intelligence, a body appointed by the European Commission in Brussels to examine issues such as the ethical dimension of AI (also see the "Society | Political lobbying and dialogue with stakeholders" section).

Launched by Bosch in 2019, the Digital Trust Forum also serves as a forum for experts from leading international associations and organizations to discuss the topic of IT security. In 2020, its members convened at Bosch ConnectedWorld in Berlin.

## Customer satisfaction

The trust of our customers in our services and in the quality of our products is our highest priority. The diverse customer services offered by our divisions range from a knowledge database with interactive learning programs though to maintenance advice and a service portal for energy-related refurbishment. At the same time, we make use of all opportunities to engage in direct and indirect dialogue with customers – for example, through our service hotlines, by email, or in direct talks. In fact, we view our customers' feedback as a reliable yardstick against which we can measure our actions. In the markets where we generate the greatest sales revenue, we regularly assess Bosch's corporate reputation. At present, the survey covers 19 countries. The results of this study form the basis for deriving appropriate measures at various levels

#### Marketing and sponsorship

When we market our products, we refer to our Bosch values for guidance as well as four central principles: value cultural diversity, make reliable and credible statements, be fair, and respect national rules. In addition, we are committed to maintaining a quality level in all our marketing activities that match our products' performance standards. In this respect, advertising can be humorous, creative, and competitive, but never unprofessional or untrue. To ensure that our principles are applied and messages are consistent across the complete media mix worldwide, overarching marketing communication is organized centrally and closely coordinated with the regional organizations and divisions. Product marketing is mostly managed locally by the respective divisions.

Our sponsorship activities mainly serve promotional purposes – that is, strengthening our brand. They are governed by a central directive, which was revised and bundled with other brand-related regulations in 2020. These regulations stipulate, among other things, that sponsorship measures must be integrated into an overall communications strategy or concept. The objective of measures also has to be clearly defined and focused on increasing brand recognition and reputation, promoting sales, or attracting qualified talent. Corporate headguarters must be consulted for sponsorship measures in excess of 30,000 euros. Binding criteria apply to the selection of sponsorship commitments, such as the principle of customer neutrality: we do not engage in sponsorship with individual clients. Moreover, only sponsorship measures are pursued that directly communicate the strengths of the Bosch brand or other brands of the Bosch Group and in which these are clearly profiled.

Motor sports is one of the focal points of our sponsorship activities: Bosch has been a DTM technology partner and sponsor for many years. Since the end of 2020, Bosch is also technology partner and official sponsor of the Japanese Super GT500. And since the end of 2018, Bosch has additionally been official partner of the ABB FIA Formula E Championship, the world's first racing series for fully electric formula racing cars.

## **2.3 Sustainable products** and services

Today, Bosch already generates around 40 percent of its sales revenue with products that contribute toward sustainable development. True to our "Invented for life" ethos, our products contribute toward achieving various Sustainable Development Goals (SDGs) of the United Nations (see Fig. 12). In this section, we take a closer look at this contribution with selected examples.

#### **Reducing scope 3 emissions**

Bosch products are already rigorously designed for energy efficiency today and keep CO<sub>2</sub> emissions to a minimum, making them climate compatible. Against the backdrop of our climate action strategy, we have identified additional potential for reducing CO<sub>2</sub> emissions in the use phase of our products in 2020. Accordingly, we are intent on achieving our goal of lowering the CO<sub>2</sub> emissions generated in the upstream and downstream stages of the value chain by 15 percent (scope 3).

Roughly 90 percent of scope 3 emissions are produced in the product use phase. To lower these emissions further, our strategy is to concentrate our efforts wherever we can make the greatest contribution to protecting human life and the environment. We currently see the greatest potential for lowering CO<sub>2</sub> emissions in the fields of mobility, thermotechnology, industrial drive and control technology, and household appliances. The focus is on three leverage points in each case: boosting energy efficiency, shaping the product portfolio, and using the transformation of the energy sector through the use of green electricity, hydrogen, and biogas (see the "Environment | Energy and climate action" section).

### **Contribution to the** mobility transformation

We firmly believe that the mobility of the future should have no negative repercussions in terms of global warming and air quality and should remain affordable for most people. With our products, we are making an important contribution to this vision. The Mobility Solutions business sector is a systems supplier for highly efficient drive systems. Furthermore, it is playing a key role in driving the development of electric drives, while investing in fuel cell stacks and leveraging digitization to enable further efficiency gains. Take, for instance, its mobility-based services such as "Battery in the Cloud," a solution that uses intelligent software analytics to reduce battery aging by up to 20 percent. Already today, Bosch components power more than 2.5 million electric-drive vehicles worldwide. In this way, they protect the environment while helping us achieve our ambitious CO, targets.

As far as Bosch is concerned, however, the mobility transformation has implications that extend far beyond the powertrain. To drive electrification further and make it successful on the mass market, we are therefore also focusing our activities on the corresponding ecosystems. Examples of these efforts include solutions such as the Pay&Go app, which makes it easier to find and book charging stations as well as permitting payment on the spot. And in the United States. Bosch charging stations in private garages are providing the infrastructure electric vehicles need. In addition, Bosch is making sustainable micromobility a reality in cities with e-bikes. We also apply our know-how to innovative digital solutions such as connected parking. In this way, we are helping to reduce the volume of traffic, especially in conurbations, and to cut CO<sub>2</sub> emissions.

#### 12 Contribution of Bosch products to selected SDGs

Product sectors and topics

#### Mobility

		40.1
Contribution to the mobility transformation	Innovative powertrain systems and electrified mobility: electric drives, fuel cells, e-bike systems	13 :
	Mobility services: optimized battery management, connected charging solutions, connected parking, fleet management	11:
Innovation for better air quality	Air quality solutions: Immission measurement systems, scalable dispersion simu- lation of emission sources, real-time traffic emission data, traffic management	3:
	Innovative vehicle technologies: powertrain technology for low-emission vehicles, long-life iDisc brake disc rotors, regenerative braking	11 i
Road safety	Driver safety systems: antilock braking system (ABS), electronic stability program (ESP®), pedestrian protection system, occupant protection system	33
	Driver assistance systems: automatic emergency braking, adaptive cruise control (ACC), cloud-based wrong-way driver alert	

#### Energy systems, industrial and building technology

Implementing distributed energy grids	IoT solutions for energy systems: balancing energy network, grid optimization management, gateway manager	
	Stationary fuel cell for decentralized power generation	7 SERVERANE AND DEAN CHERKY
Efficient industry – efficient use of resources	Industry 4.0 software platforms and sensors for analyzing data and controlling processes: Nexeed, Energy Platform, Transport Data Logger, Connected Industrial Sensor Solution	8 recontinuos us recontinuos us references 9 recontinuos us recontinuos us recont
	Energy-efficient machines: cross-technology expertise by Rexroth 4EE	
Energy-efficient buildings	Renewable energy: heat pumps, hydrogen boilers for industrial applications and residential buildings	
	Intelligent energy management: Energy Manager in the smart home	
Sustainable home		
Resource conservation and the sustainable home	Energy efficiency: Bosch tumble dryer with heat pump technology, PerfectDry dishwasher	12 ESPOSEE Intervention Intervention
	Water efficiency: i-DOS washing machines and dishwashers with ActiveWater technology	6 CLEAN MAILER AND COMPUTERN

Fresh for longer and conscientious shopping: fridge-freezer combinations with VitaFresh freshness system, Home Connect function and integrated camera in the refrigerator compartment

Durability: Bosch Power Tools AdvancedDrill 18 screwdriver

Health		
Progress with smart farming	Sustainable agriculture: Intelligent Planting Solution System (IPS), smart spraying	2 xee seer (((
Contribution to global health and pandemic response	Healthcare and medical technology: Vivalytic for molecular laboratory diagnostics, Vivatmo respiratory gas analysis equipment, high-performance ceramics for medical technology	3 000 HEADS AND WELFORDS 

#### **UN SDGs**

#### Innovation for better air quality

Worldwide, metropolitan areas are attracting more and more people. In 2050, more than six billion people will live in large cities. Around the globe, cities face the challenge of ensuring personal mobility for people and the transport of goods while at the same time improving air quality. Bosch supports cities in this endeavor and has developed an immission measurement system. The compact monitoring boxes deliver reliable data on local air quality. This enables the creation of real-time air quality maps that can be used for adopting appropriate measures. Such boxes are already in operation in London and Stuttgart. Working together with the competent authorities, Bosch also collects anonymous data for traffic optimization with the aim of reducing traffic-related emissions. It is on this basis that Bosch is advising cities on traffic planning and traffic management. Appropriate measures can lower traffic-related emissions by up to 20 percent per vehicle.

Last but not least, Bosch is making a fundamental contribution to improving air quality through innovative vehicle technology. Bosch's latest diesel and gasoline technology makes it possible to significantly lower nitrogen oxide emissions and particulates. This technology is now being gradually rolled out in production vehicles. Yet the focus is not limited to powertrain technology alone: Bosch's iDisc reduces the amount of particulates emitted into the air during braking by up to 90 percent compared with conventional brake discs.

#### **Road safety**

With its products in the vehicle safety segment, Bosch supports Vision Zero, which seeks to reduce the number of fatalities on roads to as close to zero as possible by 2050. As the market leader for brakes as well as active and passive safety systems, Bosch has already achieved important milestones here in the past through pioneering innovations. One example is the invention of electronic stability control, which was first used in a series-produced vehicle 25 years ago and has since saved some 15,000 lives and prevented almost half a million accidents involving personal injury.

From 2022, it will be mandatory to install active brake assist in new vehicle models - a move the UN Economic Commission for Europe estimates could save 1,000 lives in the EU every year. With the further development of a large number of advanced driver assistance systems and its commitment to automated driving, Bosch is intent on pursuing Vision Zero. Al is helping to make driver assistance systems even more efficient and smart: for example, the automatic active break assist can react even more reliably when Bosch's AI-supported camera additionally detects partially concealed pedestrians in automated driving mode.



BOSCH SUPPORTS VISION ZERO, WHICH SEEKS TO REDUCE THE NUMBER OF FATALITIES ON ROADS TO AS CLOSE TO ZERO AS POSSIBLE BY 2050.

#### Implementing distributed energy grids

Bosch products also play a pivotal role in the energy transition, helping to create an energy supply without fossil fuels in the long term. IoT solutions from Bosch.IO Energy help utilities administer smart meter gateways, manage metering points and metering data, and steer grid rollouts. As a result, solutions are being created for tomorrow's energy market, which will have to handle the fluctuating output of renewable energy sources. Smart systems for managing demand and supply permit the smoothing of peaks in output and demand, improving the energy system's efficiency. The environmental benefit is evident: the system can accommodate a larger volume of renewable energy, CO<sub>2</sub> emissions are reduced, and fewer power lines are needed.

#### SERIES PRODUCTION OF SOLID OXIDE FUEL CELLS IS SCHEDULED TO BEGIN AT BOSCH LOCATIONS IN GERMANY IN 2024.

One particularly promising Bosch product development is currently on the verge of industrial implementation: the solid oxide fuel cell (SOFC). Functioning like a small distributed power plant that converts hydrogen into electricity, it enables a decentralized and sustainable energy supply in cities, factories, trade, and commerce. Specific areas of application can range from data centers to electric charging infrastructure. In addition, the SOFC technology helps increase the resilience of power systems when it is deployed as an emergency power generator. As a result, the technology can replace the

diesel generators commonly used at present for such applications, providing a much more environmentally friendly solution. With the SOFC, Bosch is continuing to drive the expansion of distributed power grids, while at the same time pursuing its declared goal of supporting climate action with its products. Series production of the distributed power plants is expected to begin in 2024 at the Homburg, Bamberg, and Wernau manufacturing facilities.

#### **Efficient industry – efficient** use of resources

Industry 4.0 stands for optimal interaction between people, machines, and data. Or to put it differently, it's all about the right connectivity. That is precisely what Bosch solutions make possible. The combination of artificial intelligence (AI) and the Internet of Things (IoT), or AloT for short, optimizes manufacturing processes while ensuring their adaptability. As a result, the efficiency of industrial operations increases while conserving valuable resources. By connecting manufacturing plants and machines using IoT systems and enabling real-time transmission of their data, it is possible to obtain a permanent transparency of a factory's entire value chain. As a result, it is immediately clear where resources can be saved and processes streamlined. Bosch offers special solutions to this end, such as software platforms for analyzing data and controlling processes (e.g. Nexeed, Energy Platform) and the corresponding sensors needed for this purpose (e.g. Transport Data Logger, Connected Industrial Sensor Solution). The corresponding solutions are used in our own manufacturing operation as well as offered to customers.

In the industrial drive and control technology segment, Bosch Rexroth is working resolutely to continuously enhance the efficiency of its products - particularly its industrial machines - through energy recuperation, reducing flow losses, and needs-adjusted pressure oil generation, among others. Such measures lower the energy consumption of machinery – and the climate is better off for it.

### **Energy-efficient buildings**

Buildings account for one-third of energy consumption worldwide. Bosch products help to reduce their consumption. To this end, Bosch Thermotechnology brings renewable energies into the home and enables their efficient use. Take, for instance, the heat pump: a technology in which Bosch intends to invest an additional 100 million euros in the coming years (as announced in 2020). The focus is on digitally assisted system solutions that are easy to install. Bosch is also preparing for increased use of hydrogen in heat generation. In fact, Bosch already has an industrial boiler in its product range that is 100 percent hydrogen ready. Also unveiled in 2020 was a prototype fully hydrogen-ready boiler for household use. Bosch is thus gearing up for the defossilization of energy supply. The adjustments to our Thermotechnology product portfolio directly support our climate action goals.

In residential buildings, smart thermostats help to save energy by factoring in local weather data in the temperature management system. In addition, Bosch Thermotechnology's Energy Manager software intelligently connects a variety of components, among them heat pumps, photovoltaic systems, and household appliances. As a result, it is possible to efficiently manage energy consumption, generation, and storage, while enabling both the use of self-generated electricity and efficient heating.

Operators and the environment benefit equally: by combining heat pumps and photovoltaic systems alone, the Energy Manager can lower electricity consumption by as much as 60 percent.

On top of that, Bosch Building Technologies offers individual system solutions, technologies, and services to optimize the energy consumption of buildings. In a first step, our experts get an overview of the building's total energy consumption. They then develop a tailor-made and future-oriented energy concept that perfectly fits the given building.



lower electricity consumption is possible with the Energy Manager by combining a photovoltaic system and a heat pump.

#### **Resource conservation and** the sustainable home

With innovative products for home and garden, BSH and Bosch Power Tools help households save energy, water, and resources every day. For example, a Bosch dishwasher with natural zeolite mineral consumes up to 20 percent less energy than conventional appliances. Furthermore, Bosch tumble dryers equipped with heat pump technology can lower energy consumption by as much as 68 percent compared with conventional condenser dryers. Year after year, the BSH division also aims to consistently phase out less efficient products from its portfolio, thus providing additional support for our CO<sub>2</sub> targets.

# 20%

in seed can be saved by farmers using the Intelligent Planting Solution System (IPS).

> Solutions such as the automatic dosing of detergent in fully automatic washing machines or our efficient dishwashers also reduce water consumption. In fact, a household with a Bosch dishwasher saves up to 8,500 liters of water a year compared with washing dishes by hand. And because food stays fresh longer in Bosch refrigerators thanks to the VitaFresh freshness system, Bosch technology is also an effective ally in the fight against food waste. Last but not least, Bosch products contribute to the conservation of resources through their durability. Take, for instance, Bosch Power Tools such as the AdvancedDrill-18 screwdriver, which is equipped with a brushless motor for a significantly longer service life and greater power. More than that, the motor features electronic control, lower heat dissipation, contactless and non-wear operation, and optimal operating efficiency.

## **Progress with smart farming**

Bosch is leveraging digitization and technological innova-Read more about smart farming in tion to make agriculture more sustainable, helping to the sustainability report 2020 lower the use of fertilizer and conserve resources. For | spotlights, p. 22: "Technoloexample, Bosch is cooperating with BASF on a system for gies for better the target-based application of fertilizers and intelligent seed placement. To this end, Bosch is contributing its Intelligent Planting Solution System (IPS). The system enables farmers to effectively optimize seed planting in particular based on automatic seeding control. Bosch developed the components and interfaces that were needed for the project and is responsible for the overall system integration of the planting and seeder machines. IPS can save growers up to 20 percent in seed. In addition, precision dosage of fertilizer prevents over-fertilization of the soil. As a result, crop yields are optimized and

the environmental burden reduced.

harvests'

#### **Contribution to global health** and pandemic response

Bosch Healthcare Solutions develops products and services that contribute to better health and improve people's quality of life. Quick and simple diagnostics combined with regular preventive checkups, at home or at the doctor's office, afford patients greater peace of mind, flexibility, and autonomy in their everyday lives. With this in mind, Bosch Healthcare Solutions is focusing on three areas: diagnostics for respiratory diseases. therapy management, and medical technology components made of high-performance ceramics.

For example, the universal platform Vivalytic for molecular diagnostics enables fully automated analysis of a variety of samples (including for Covid-19 and pneumonia). As a result, infectious diseases can be diagnosed quicker and more easily. Vivalytic is thus also making an important contribution in the fight against the Covid-19 pandemic. Bosch had already launched a rapid test for its Vivalytic analysis device at the end of March 2020, after a development phase of merely six weeks. Within only two and a half hours, it was possible to simultaneously test samples for SARS-CoV-2 as well as for nine other respiratory diseases. This was followed up with a new, even faster test at the end of September. Exclusively designed for SARS-CoV-2, the test provides a reliable result in 39 minutes, making it the fastest polymerase chain reaction (PCR) test worldwide at present. Since the end of the year, software enhancements have made it possible to obtain results for positive samples in less than 30 minutes.

In the field of therapy management, the Bosch subsidiary is developing fast and easy-to-use measuring devices for doctors' offices and for home use, thus establishing an important prerequisite for the best possible therapy and progress monitoring of asthmatic conditions. The Vivatmo FeNO measuring device enables straightforward daily monitoring of chronic respiratory diseases.

Specifically for use in medical technology, Bosch manufactures technical ceramics from sustainable materials that are opening up new possibilities in the operating room. To enable a flexible and high-precision response to the specifications required by customers, Bosch accompanies them throughout the end-to-end manufacturing process, develops materials in-house, and supports the component design and manufacturing process.

## Code of ethics for AI

In 2020, Bosch issued its code of ethics for AI, which enshrines how the company deals with AI. The rules are consistent with the core principle that AI should not be allowed to make decisions without a human arbiter and should rather serve people as a tool. All Bosch AI products should reflect the "Invented for life" ethos, which combines a quest for innovation with a sense of social responsibility. When developing AI products, we observe legal requirements and orient around ethical principles.



VIVALYTIC ANALYSIS DEVICES MAKE AN IMPORTANT CONTRI-**BUTION IN THE FIGHT AGAINST** THE COVID-19 PANDEMIC.

Against this backdrop, Bosch wants to develop AI products that are safe, robust, and explainable – and thus trustworthy. After all, trust has always been one of our company's fundamental values. It is also the key prerequisite for allowing AI to gain acceptance in society and thus improve people's lives and, in particular, serve in the interest of climate action.

# Supply chain

Our ambition: Based on a common understanding of ethical and sustainable action, we want to find solutions to global social and ecological challenges together with our business partners.



► To reduce carbon emissions from purchased goods and services, in 2020 we identified the supplier groups that we aim to document the emissions and mitigation progress made by relevant suppliers.

**Reducing scope 3** emissions

► In order to reduce CO<sub>2</sub> emissions in logistics, Bosch focuses on optimizing purchasing, pooling shipments, and in particular avoiding airfreight.

#### **Regular supplier** assessments

► As part of the regular assessment of suppliers' sustainability performance, two methods have been established for on-site verification: CSR quick scans and more comprehensive CSR drill-deep

► In 2020, we conducted 1,150 CSR quick scans.



#### Human rights risk analysis

► Bosch is currently working on a systematic analysis of social and environmental risks along the value chain.

► In 2020, the focus was on working conditions in raw materials extraction. Taking the risk analysis as a basis, a **risk** matrix will be created in 2021 that will allow concrete measures to be derived



# **3.1 Management approach**

In a globalized world, digital technologies are transforming markets, and business models are shifting, as are products and materials requirements. Sustainability is becoming the key factor for successfully shaping this change. For Bosch, that means responding with even greater agility, speed, and transparency to increasingly bespoke customer wishes – while satisfying the most exacting quality standards. It is critical in this respect to enable innovation, quality, and excellence throughout the supply chain end to end while achieving globally competitive pricing. To achieve supply chain excellence, Bosch believes in close, connected, and trust-based cooperation between everybody involved, across company and national borders.

## Pandemic-related challenges

In 2020, the Covid-19 pandemic presented Bosch's purchasing and logistics organization with unique challenges. Global supply chains had to be secured to keep production running at the company's sites to the greatest extent possible. Coordinated by the central crisis management group, the response to the outbreak of the pandemic was quick and consistent. Supply capabilities had to be critically scrutinized almost daily, and solutions had to be found immediately in the event of potential bottlenecks. The transparency of suppliers and inventories, the established processes, and the close relationships with customers and suppliers have proven particularly helpful in this regard. Together with the crisis teams of the divisions, all suppliers and 730 customer plants were coordinated in this way.

The strategic importance of sustainable supply chains is also reflected in our target vision for sustainability. In addition to occupational health and safety, environmental protection, and climate action, the focus is on respecting human rights. Against this backdrop, in 2020 we fleshed out the topic of globalization in the sustainability target vision and explicitly integrated the topic of human rights. Consistent with this stance, we also support the UN Guiding Principles on Business and Human Rights as well as the German Federal Government's National Action Plan (NAP) for Human Rights.

Bosch has supply relationships in some 50 countries. From its more than 23,000\* suppliers in total worldwide, the Bosch Group procured materials and services worth 35.1 billion euros in 2020 (previous year: 39.2 billion euros). The change compared with the previous year (11 percent) is due to the impact of the Covid-19 pandemic. A large share of the resources used in our supply chain are purchased components - mostly semifinished products or finished components. We purchase only a small share directly as raw material (in particular, steel, aluminum, and plastics), which made up around 1.0 billion euros of our purchasing volume in 2020.

\* Year-on-year change due to new calculation method that takes into account ownership structures, among other aspects

#### Purchasing and logistics organization

Worldwide, some 11,000 associates work in Bosch's purchasing and logistics organization. They are involved in the entire product evolution process - from the innovation phase to the start of production right through to the end of aftermarket supplies - and they work worldwide to secure Bosch's supply chain excellence.

The head of the Supply Chain Management corporate sector reports directly to the deputy chairman of Bosch's board of management. The corporate sector coordinates the internal and external requirements, establishes company-wide standards, and monitors their compliance. Manufacturing materials are purchased based on a decentralized organization with responsibility awarded to the divisions. In contrast, non-product-related materials and goods are procured centrally by indirect purchasing. Purchasing managers are responsible for ensuring compliance with sustainability requirements, which are clearly communicated at the supplier selection stage. Purchasing departments commission an internal service organization, among others, to conduct a compliance review. The latter carries out sustainabilityrelated assessments and also supports, if necessary, any escalation processes that might be required (also see the "Supplier assessments" section).

#### Strategic approach to responsible supply chain management

Based on company-wide guidelines, we ensure risk management and structured sustainability activities in relation to our supply chain. Supply chain risk and crisis management is framed in a globally binding central directive that is regularly updated. In 2020, the aspect of sustainability was included in the supply-chain-related risk portfolio, which is incorporated into the Bosch Group's central risk management system.

## 13 | Responsible supply chain management at Bosch

#### Requirements

- Basic Principles of Social Responsibility at Bosch
- Terms and Conditions of Purchase
- Code of Conduct for **Business Partners**
- Agreements on quality and corporate social responsibility
- Policy for Conflict Raw Materials

#### Assessment

- Sanctioned party list screening Supplier classification
- Supplier assessments
- CSR guick scans
  - Whistleblower system

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| Company | Products | Supply chain | Environment | Associates | Society | Management approach

| Further developing and strengthening cooperation

The respective purchasing and logistics departments regularly identify and assess the function-specific risks. Aside from financial risks, natural hazards, and critical dependencies, additional factors taken into account include the strategic orientation of suppliers or organizational changes. The focus is primarily on direct suppliers and selected, process-critical sub-suppliers as well as service providers – for example, for shipping and warehousing. Preventive risk management enables us to identify critical suppliers and initiate suitable risk mitigation measures at an early stage.

Sustainability aspects are taken into account in supply chain management using a three-stage process (see Fig. 13). A separate subsection of this report is devoted to each stage of this process:

We communicate our <u>requirements</u> to our suppliers via the Basic Principles of Social Responsibility at Bosch, the Code of Conduct for Business Partners, and appropriate contractual clauses.

▶ We use systematic methods to assess compliance with these requirements. Of central importance in this regard are the CSR quick scans and CSR drill-deep assessments.

By <u>further developing</u> our suppliers' sustainability performance, we aim to achieve effective and sustainable changes.

• CSR drill-deep assessments

#### Further development

- Individual measures
- Reassessments
- Training
- Supplier days

# **3.2 Social and environmental** requirements for suppliers

The Basic Principles of Social Responsibility at Bosch and the ten basic principles of the United Nations' Global Compact are the foundation for our understanding of sustainability. On this basis, we demand that our suppliers comply with generally applicable labor standards - for example, guaranteeing freedom of association, no forced or child labor, zero tolerance of discrimination, and ensuring occupational safety. We also require our suppliers to commit to environmental protection and resource conservation and to actively disseminate these requirements along their own supply chains.

#### **Guidelines and documents**

We describe the requirements that apply to our suppliers in our Terms and Conditions of Purchase and in our Code of Conduct for Business Partners. This is based on the fundamental principles of the International Labour Organization (ILO). In addition, the Code of Conduct for Business Partners stipulates that our suppliers pass these requirements on to their sub-suppliers. If there is any suspicion of breach, the supplier is required to resolve the matter - if necessary, by disclosing their supply chain.

Referenced in the Terms and Conditions of Purchase as an integral contractual element, the Code of Conduct is handed out to all suppliers at the beginning of the business relationship. It is publicly available on the Bosch website. With respect to the treatment of workers, we refer to local law. For instance, applicable statutory minimum wage requirements must be adhered to. In addition, suppliers are required to take appropriate measures to ensure health and safety in the workplace. While working on Bosch premises, they are additionally bound to Bosch's safety and accident prevention regulations.

Our business partners are also required to conserve resources and reduce the impact of their activities on the environment to a minimum. We expect our suppliers to set up and continuously refine, within reason, an environmental management system certified according to ISO 14001. The standard requires a systematic approach to environmental protection and continuous improvement and is a building block in Bosch's efforts to ensure the sustainability performance of suppliers. In 2020, some 5,300 of our suppliers were certified. Suppliers without manufacturing operations are not required to adopt an environmental management system, but they do have to implement corresponding measures. With regard to wastewater treatment and hazardous waste, our business partners must comply with legal requirements.

We have concluded agreements on quality and corporate social responsibility with some 8,400 suppliers. Supplementary to the Terms and Conditions of Purchase, these agreements set out requirements for the declaration of substances in accordance with Bosch standard N2580-1 "Prohibition and Declaration of Substances," which must also be passed on to sub-suppliers (for more information, also see the "Products" section). Our contractual agreements also take into account that substances can also be of critical relevance for sustainability. For example, lead recyclers in our upstream supply chain must consent to audits by our associates.

## Reducing CO<sub>2</sub> emissions

In the upstream and downstream stages of our value chain (scope 3), we aim to systematically lower CO. emissions by 15 percent by 2030 (see the "Environment | Energy and climate action" section). Close cooperation with our suppliers will be essential if we are to achieve this goal. That is why Bosch is setting clear targets in this area, too, and supporting its business partners in their climate action activities. To this end, the CO<sub>2</sub> target at group level was cascaded down to the divisions and materials groups. In addition, the main emitters among suppliers were identified. In the course of 2021, first initial figures previously determined using statistical models will be replaced by real data from the respective suppliers. In the future, CO<sub>2</sub> emissions are to be taken into account as a relevant criterion when awarding contracts.

We are aware of the importance of these steps for our suppliers and had already informed them of our activities in 2020. At the same time, our aim is to motivate suppliers to engage in their own climate action activities. A cross-divisional and cross-functional team was additionally established to coordinate these activities. The team includes members of the divisions' purchasing organizations as well as representatives from research units and the EHS and Sustainability corporate department.

In logistics, the focus is on optimizing procurement in the product evolution process and in series manufacturing, pooling shipments, and in particular avoiding air transport. The aim is to switch shipments destined for Bosch from air to sea or rail whenever possible. With this in mind, we conducted a pilot project in 2020 to analyze the degree to which CO, emissions can be lowered without risking reliability of supply or increasing warehousing volumes. In the first year, the project indicated a potential reduction in CO<sub>2</sub> of roughly 10 percent. The extent to which the measures can be rolled out to additional logistics segments is currently being examined.

| Social and environmental requirements for suppliers

As part of our total cost of ownership (TCO) approach, which takes into account significant cost components such as freight costs or customs duties, we optimize the number and capacity utilization of shipments, thereby keeping CO<sub>2</sub> emissions to a minimum. In a joint initiative with the divisions, work is also underway to increase packing density in a bid to use less packaging material, storage space, and transport capacity - in turn, avoiding CO<sub>2</sub> emissions. This measure is supported by the PackAssistant optimization tool, the use of which has been mandatory at all plants of the Powertrain Solutions division since April 2020.



TO REDUCE CO<sub>2</sub> EMISSIONS FROM PURCHASED GOODS AND SERVICES, BOSCH SEEKS TO COOPERATE CLOSELY WITH ITS SUPPLIERS.

GIVEN THE PARTICULARLY HIGH RISK ASSOCIATED WITH THE FIELD OF RAW MATERIALS EXTRACTION FROM AN ENVIRONMENTAL AND SOCIAL PERSPECTIVE, BOSCH HAS SET THIS AS ONE OF ITS INITIAL PRIORITIES.

## Risk analysis on human rights violations

In addition to climate action and protecting the environment, we also focus on social aspects in the sustainable design of our supply chains. In particular, we view respect for human rights as a major priority. Against this backdrop, since 2019 we have been working on a systematic process for regularly evaluating the impact of Bosch's business activities in terms of human rights compliance. As a first step, potential human rights risks were identified throughout Bosch's value chain. The following four areas ranked highest:

- Occupational safety (see the "Associates | Occupational health and safety" section)
- ► Work conditions in raw materials extraction
- ► Health and environmental impact of products (see the "Products | Management approach" section)
- Equal opportunities (see the "Associates | Employer of choice" section)

Given the particularly high risk associated with the field of raw materials extraction from an environmental and social perspective, we have set this as one of our initial priorities. In 2020, for example, a detailed risk analysis was carried out to systematically identify the raw materials of relevance for the Bosch Group. We have drawn on reports from nongovernmental organizations (NGOs) in order to include the views of those affected. In addition, we have taken into account violations known to us as well as media reports. The risk analysis was subsequently supplemented to include additional aspects, such as the future business orientation and the raw materials requirements of our divisions. On this basis, specific next steps and mitigation measures are now being defined with the divisions.

Initial measures have already been implemented (see Fig. 14). For example, strategic suppliers of lithium-ion batteries have been required to disclose their entire supply chains for the raw materials cobalt, graphite, lithium, manganese, and nickel. In parallel, Bosch has performed co-audits and CSR assessments at several sub-suppliers of rare earth elements and in the supply chains for battery cells and electric motor components. In 2020, on-site inspections were also performed along the supply chains for recycled lead for accessories and replacement parts. In addition, Bosch has been participating in Conflict Minerals Reporting since 2014. Last year, it prepared its first illustrative cobalt report in accordance with the Responsible Minerals Initiative (RMI). Bosch is also active in the "Automotive industry dialogue: Respect for human rights along supply and value chains" of the German Federal Ministry of Labor and Social Affairs, and two working groups are focusing on the use of copper and lithium, as well as on the

#### 14 | Measures to counter human rights risks in raw materials extraction

Lead	Q
Gold	Ħ
Graphite	Q
Cobalt	Q 🖸
Copper	뎠
Lithium	Q দ্ব
Manganese	Q
Nickel	Q
Rare earths	Q 🖸
Coltan (for tantalum)	E
Cassiterite (for tin)	E
Wolframite	

Measures taken: Verification 🛱 Project Industry dialogue Conflict minerals reporting

establishment of a cross-company complaints mechanism in the automotive industry. Taking the risk analysis as a basis, a risk matrix is to be created in 2021 that will allow concrete measures to be directly derived from it. Our intention is to re-evaluate the risk analysis at regular intervals. At a cross-company level, we are also involved in the econsense association (Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e. V. – Forum for Sustainable Development of German Business). Within the forum's "Human rights and supply chain" cluster, we work together with other partners on the responsible design of global supply chains.

### **Conflict minerals policy**

Although Bosch itself only purchases few resources from mineral-processing companies, in particular the electronics in Bosch products do contain what are known as conflict minerals, however. That is why we issued the Bosch Group Policy for Conflict Raw Materials in 2019 that describes our approach to the conflict minerals cassiterite (for tin), coltan (for tantalum), wolframite, and gold. For other raw materials entailing a risk of adverse effects on people and the environment, we regularly review the risk exposure and counteract identified risks, taking into account OECD guidelines and the legal parameters.

Bosch voluntarily takes part in the conflict minerals reporting system provided for by the Dodd-Frank Act in the United States. In this context, we ask our suppliers annually to declare the origin of minerals. In 2020. we surveyed 3,100 of our suppliers while taking into account the previous year's results and optimizing the supplier base. Despite the pandemic-related restrictions, the response rate with smelter declarations was 84 percent, only slightly below the previous year's figure (88 percent). With regard to the conflict minerals coltan and wolframite, more than 90 percent of smelters (more than 80 percent in the case of cassiterite) have already

| Social and environmental requirements for suppliers | Further developing and strengthening cooperation

> obtained certification under the cross-industry standard of the Responsible Minerals Initiative (RMI). For gold, the rate is 68 percent. Bosch provides the Conflict Minerals Reporting Template from RMI, which is recognized by the U.S. Securities and Exchange Commission, among other authorities, to its customers on request via established platforms such as iPoint and HP CDX or sends it directly to individual customers.

> In 2020, we also improved the internal reporting system on conflict minerals such that supplier surveys can be conducted even more efficiently and more systematically thanks to a dedicated IT tool. With this tool, we can now generate interim reports on the smelters registered in the supply chains. The results are evaluated on a guarterly basis together with the associates responsible for the purchasing areas concerned. In 2021, there are plans to anchor the Policy for Conflict Raw Materials in Bosch's Terms and Conditions of Purchase and in the agreements on quality and corporate social responsibility.

# 3,100

suppliers were surveyed in 2020 about the origin of the conflict minerals they process.

# **3.3 Supplier assessments**

Responsible supplier management hinges on transparency about compliance with social and environmental standards. This level of transparency is essential so that we can support suppliers in continuously raising their sustainability performance. On-site inspections are an essential component in the assessment of our suppliers.

#### Minimum standards in supplier selection

We take into account sustainability aspects at an early stage when selecting potential suppliers in accordance with our company-wide guidelines. The timing of the review and the methodology used are determined by the respective divisions. The aim is to assess all new suppliers this way. As part of the sanctioned party list screening, a check is carried out prior to the conclusion of a contract to determine whether potential business partners are included in sanction lists or affected by embargo regulations. Moreover, since 2017, an automated IT-based compliance check is run to verify whether all potential business partners are on external compliance lists and identify any potential violation of national or international legislation or stricter standards. If any doubt remains after the check is completed, the compliance officer initiates suitable measures together with the purchasing officer. These can range from talks with the business partners through to withdrawal from the business relationship (also see "Company | Corporate Governance and Compliance").

Current supplier relationships are likewise audited. New contracts are awarded on the basis of criteria such as quality, costs, and past reliability of supply. Current suppliers only receive new orders if they are appropriately ranked. Furthermore, they must not be in violation of sustainability requirements. Active suppliers found to be engaged in unlawful conduct or whose sustainability performance is deemed inadequate are not awarded any further contracts. The escalation process is identical for all criteria.

## Assessment and monitoring

As part of the regular assessment of our suppliers' sustainability performance, two methods have been established for on-site verification: CSR quick scans and more comprehensive CSR drill-deep assessments.

### CSR quick scans

CSR guick scans are based on a checklist of specific criteria relating to environmental protection, occupational health and safety, and human rights. In 2020, some additions were made for specific material groups, among which are visits to suppliers and sub-suppliers of lead-acid starter batteries or to logistics service providers. CSR quick scans are carried out by qualified Bosch associates from purchasing or quality functions as part of regular on-site visits to suppliers. If a supplier does not satisfy the minimum requirements of the CSR quick scan, it has the opportunity to make improvements by implementing appropriate measures. As a rule, however, the supplier will not receive any new business until the review is successfully completed. The further development of suppliers who do not meet the requirements is followed up by means of regular discussions between the experts from the service unit and the purchasing units. In 2020, we conducted 1,150 CSR quick scans. Around ten suppliers still have to implement measures and, for example, install occupational safety equipment or improve evacuation routes.

We have developed a dedicated app for the performance and documentation of the CSR guick scans that contains up-to-date checklists and background information. It facilitates the procedure and makes it possible to add images and comments directly. Other companies can also use the app. Available through the econsense association, the app can be download free of charge from the corresponding platforms for iOS and Android devices.

#### **CSR drill-deep assessments**

CSR drill-deep assessments are used mainly in potentially high-risk regions or industries, or when there are any specific indications of impropriety. To assess the regional risk propensity, we refer, among other things, to the United Nations Human Development Index and a corruption index. Assessments are not limited to suppliers who have had irregularities in the past or who have had a change of ownership. Any suppliers of strategic importance are also assessed. It is at the discretion of the competent purchasing management responsible for supporting the given suppliers to decide which supplier is assessed and when.

#### 15 | Selected in-scope content of CSR drill-deep assessments



| Further developing and strengthening cooperation

Irrespective of any other visits to suppliers, CSR drilldeep assessments are carried out by licensed assessors and take between one and two days. They are announced so as to ensure that the required staff - such as environmental or safety officers - are also on-site. Besides an indepth assessment of the three areas covered by the CSR quick scan - the environmental protection, occupational health and safety, and human rights – they also comprise an analysis of current working conditions and compliance management (see Fig. 15). The assessment covers the practical implementation as well as system-based requirements, such as in the form of guidelines. As a result, it is possible to assess an organization's maturity level.

The findings of the CSR drill-deep assessments are documented in our supplier database. Improvement potential is recorded in a specific action plan. The plan supports the supplier as well as the auditor, who subsequently also accompanies and follows up on the implementation of measures. Suppliers are expected to start implementing the measures immediately after the results are made available. Those suppliers who satisfy the requirements in general are still made aware of any noncritical gaps identified.

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# 1,100+

CSR deep-drill assessments have been conducted by Bosch at more than 1,000 suppliers.

> In order to enable assessments to still be conducted during the Covid-19 pandemic, additional video-based reassessments were trialed in 2020. This remote technology had already been used selectively previously – for example, to check the implementation status of measures. Now, the insights obtained will be used to refine the assessments accordingly. A major priority in this context is on consistently complying with the laws governing data protection and personal privacy, without having to compromise on the quality of the assessment.

Since their introduction in 2011, Bosch has carried out more than 1.100 CSR drill-deep assessments at some 1,000 suppliers. Despite the pandemic-related restrictions, about 50 percent of the originally planned assessments were carried out in 2020. In six cases, the

## Development of standards

Bosch is a founding member of the VDA working group "Sustainability in the supply chain" and participates in a project group dedicated to the development of the ASA (Automotive Sustainability Audits) standard, which is to be rolled out across the automotive industry at factory level as a future global CSR assessment standard. Certified auditors will perform the corresponding audits. With the approval of the audited organizations, the results can be shared among ASA members so that improvements can be quickly rolled out across the industry. deviations highlighted by the assessments were not remedied, and Bosch consequently terminated the supply arrangements with the respective suppliers.

## Complaints mechanism and incident response

If possible misconduct is suspected – such as a violation of our sustainability standards – associates as well as business partners and other third parties can submit a report through our whistleblower system. The compliance organization investigates all reports without delay and involves other experts in individual cases (also see the "Company | Corporate Governance and Compliance" section).

Tip-offs concerning our suppliers are systematically followed up on. In the event of deviations, the same procedures apply as for irregularities identified in the course of inspections. If a supplier is in breach of our sustainability requirements, we seek to remedy the issue together with the supplier and take appropriate precautions for the future. Measures are defined with the involvement of the purchasing function responsible, and we support and monitor their implementation - also by rigorously requesting documentation or performing reassessments on-site. If the development measures are unsuccessful and the supplier repeatedly breaches our requirements or legal provisions, Bosch reserves the right to terminate the business relationship.

# 3.4 Further developing and strengthening cooperation

Bosch pursues the goal of systematically developing its suppliers in order to ensure that sustainability and guality requirements are met. When, for example, irregularities were identified at suppliers in the lead recycling industry, all suppliers who had opted out of worker blood testing in the past or whose testing frequency was insufficient were required to introduce quarterly testing. All identified companies were also required to provide suitable washing facilities for work clothing if they didn't already have them.

The insights we have obtained from the various assessments show that suppliers meet our requirements for the most part. Improvements were required in a number of areas, and Bosch expects these to be implemented. Priority areas in 2020 concerned aspects of occupational health and safety, such as preventing hazards in transport and high-bay warehousing processes. Against the backdrop of the National Action Plan for Business and Human Rights, another focus of our activities is currently on the management of subcontractors, an area we intend to expand further in the course of 2021.

Bosch is committed to partnerships conducive to the company's long-term competitiveness. We continuously and holistically evaluate our suppliers' capabilities. Consistent with the total cost approach, it is not only purchasing prices that are decisive in this context but rather the sum of a variety of metrics, among them quality, costs, and reliability of supply. A supplier's sustainability performance is also taken into account in the decision whether to award a contract. We attach great importance to transparency and fairness in the assessment process. The suppliers that perform best are classified as preferred suppliers, a status that can be obtained by suppliers of both direct and indirect materials. Preferred suppliers are involved at an early stage in strategic initiatives and development projects and can adapt to the given requirements and grow in tandem with Bosch.

Once again in 2020, we addressed the topic of sustainability at central purchasing events, although most of the events were held virtually on account of the pandemic. For example, the topics of CSR and human rights were prominently featured at the Mobility Solutions business sector's supplier day. Bosch Rexroth Suppliers' Day focused on CO<sub>2</sub>. We regularly distinguish our best suppliers for their performance with awards. In the 2020 reporting year and for the first time at our regional supplier awards in China, we presented an award in the sustainability category. In 2021, the category will also be introduced at the Bosch Global Supplier Awards.

### Training for further development

At Bosch, it is not only the associates in the purchasing department who receive regular training on sustainability issues. We also offer our suppliers in all regions training opportunities and assist them in meeting our requirements with respect to environmental protection, occupational health, and safety. The same applies for social challenges within the supply chain, such as respecting rights at work and strict occupational health and safety. Some 300 in-house coaches regularly offer Web-based training sessions as well as classroom training for the respective purchasing associates. CSR training is mandatory for these associates and, in addition to providing a general overview of topics, covers in particular the requirements and the procedure for the CSR quick scans. Suppliers are offered Web-based training on the topic of sustainability that they can access at any time via the supplier platform. This is supplemented by specific offers for individual regions and suppliers. As a result of the Covid-19 pandemic, it was not possible to provide specific supplier training courses in 2020, although suppliers did continue to make use of the online training offers.

# Environment

**Our ambition:** We want to keep the environmental impact of our operations to a minimum.

**>>** 

► Bosch is reducing its absolute water withdrawal at company locations in regions with water scarcity **by 25 percent by 2025.** 

Conscientious

use of water

► Since 2019, about 50 projects have been launched and water withdrawal has been reduced by 23.1 percent at 59 company locations in regions with water scarcity. The significant decrease in withdrawal also partly reflects reduced manufacturing activity and the shift toward associates working from home on account of the Covid-19 pandemic.

#### **Bosch climate goals**

► Since 2020, Bosch and its over **400 company locations** worldwide have been **climate neutral** (scopes 1 and 2). The task now is to continuously refine the measures up to 2030 in order to make the greatest possible contribution to climate action and the energy transition.

► By 2030, Bosch aims to make **energy efficiency improvements** at its company locations that will lower the energy consumption by 1.7 terawatt-hours (TWh). Since 2019, a savings potential of 0.38 TWh has been captured.

► The term **new clean power** encapsulates Bosch's goal to raise the renewable power it generates in-house at its locations to 400 gigawatthours (GWh) and to substantially grow the green power brought in from new plants by 2030. In 2020, Bosch generated **69 GWh** at its locations and concluded long-term supply contracts with three energy suppliers in Germany. As a result, more than **100,000 megawatt-hours (MWh)** of power from new plants will flow to Bosch locations in Germany.

▶ By 2030, Bosch aims to lower emissions from the **upstream and downstream value chain** by 15 percent (scope 3). In 2020, we further increased the granularity of the calculation for the main scope 3 categories, identified **key drivers** in the three categories "purchased goods and services," "logistics," and "use phase of products," and **launched measures**.

► In 2021, specific performance indicators will be derived to track the contribution of the identified measures through 2030 and make any readjustments needed.

We want to keep the environmental impact of Bosch's operations to a minimum. To live up to this aspiration, we have been operating a global environmental management system for many years. With three clear strategies, backed by ambitious targets, we are driving climate action worldwide, saving water above all where it is scarce, and ingraining the idea of a circular economy throughout the company. Our activities are increasingly extending beyond our direct sphere of influence to include upstream supply chains as well as our products' use phase.

The EHS (environment, health, safety) and Sustainability corporate department develops the strategies, coordinates their implementation, and – if necessary – makes adjustments with systematic measures. These efforts are grounded in a sound database: in total, 90 percent of our manufacturing and development sites with more than 50 associates have an environmental management system in place. At most sites (96 percent), the system is certified according to ISO 14001 standard. Similarly, 90 percent of the energy management systems used are certified according to ISO 50001 (also see Fig. 16). We

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 Environmental management system certified according to ISO 14001
 Energy management system certified according to ISO 50001 intend to have all relevant sites operating with certified environmental management systems in the future – a goal we had already hoped to achieve in 2020. However, the Covid-19 pandemic meant that it was not possible to perform the required audits as intended. Nevertheless, we were able to significantly increase the degree of certification and now expect to reach our target in 2021.

There are clearly defined environmental criteria for the design, planning, and acquisition of buildings, plants, and manufacturing facilities – for example, with regard to energy efficiency, the use of renewable energy sources, and water consumption in regions with water scarcity. These criteria also serve as a decision-making basis when selecting new locations.

As a globally operating supplier of technology, Bosch has to comply with a large number of laws and standards relating to environmental protection, among them the Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) adopted by the European Union (EU) and the EU Directive on the Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS), as well as national legislation such as wastewater regulations. In addition, there are various regulations and directives governing energy efficiency, packaging, or the treatment of waste, as well as the customer requirements that need to be observed. Beyond that, we have numerous internal environmental and quality specifications in place that apply worldwide and are usually stricter than the rules formulated by legislators. The more we expand our scope of activities beyond the boundaries of the company, the more laws and requirements for product regulation come to the fore, such as vehicles emissions legislation.

The experts in the competent Bosch departments ensure that all specifications, standards, and requirements are observed and that our activities comply with applicable law. To this end, regular briefings, workshops, and audits

on EHS topics are carried out at the company locations. Sites are selected based on risks or specific events or by reference to their size measured by headcount or the site's share in consumption of resources. Audit findings are documented in the Bosch EHS database. As a result, it is also possible to track corrective actions in the event of deviations. Any deviations detected, their causes, and improvement opportunities identified are taken into account in the following year's audit program. The results of the analyses underpin the substantive development of the EHS campaigns. Corporate headquarters performs corporate audits at all manufacturing sites on all relevant EHS topics at least every five years. The auditors have in-depth knowledge of ISO 19011 audit methodologies as well as external and in-house EHS requirements. In 2020, the EHS audit team performed a total of 189 corporate audits. Due to the Covid-19 pandemic, the team mostly performed remote (desktop) audits rather than the usual on-site audits.

## Competence development and training

With Web-based training and classroom courses, we want to provide our associates the best possible gualifications in EHS and sustainability so that they are experts in their field of technical competence. As part of internal competence management, we promote their methodological and technical competence, thereby creating the conditions for safe and environmentally compatible work processes. For example, those responsible for EHS and sustainability receive systematic training on the respective regulations and standards. In 2020, we refined the training content in order to impress even more firmly on associates our sustainability vision as well as targets and measures. These globally standardized training programs are supplemented by training modules that address the specific requirements of individual operating units, sites, and regions. With this approach, we can take into account the cultural context or special quality requirements as well as local laws of relevance to EHS. In addition, workers of external companies and visitors to our locations are also trained and briefed on health, safety, and environmental protection at Bosch. Bosch executives worldwide should serve as multipliers in our efforts to achieve our EHS and sustainability goals and are prepared for this role with a mandatory Web-based training course. Since the training program's launch in 2014. 30.000 executives with and without team leaderEnvironment | Associates | Society
 Management approach
 Energy and climate action
 Water and wastewater

ship responsibilities have already completed the course, with around 2,000 executives taking part in 2020 alone. At the end of the training sessions, all participants are asked for feedback, which serves as a basis for developing the course further.

#### **Involving associates**

To sensitize and inform as many associates as possible about EHS and sustainability issues, we use internal print and digital media such as the in-house newspaper, newsletters, wikis, blogs, and online forums. There are numerous communities within the company that invite colleagues to exchange views on EHS and sustainability topics, such as the central EHS and Sustainability Hub or communities within the business units dedicated to topics such as energy efficiency or environment-centric product design (Design for Environment, DfE; also see the "Products" section). Year after year, the EHS and Sustainability Award additionally recognizes outstanding projects for the protection of people and the environment and brings them to the attention of colleagues throughout the Bosch Group. We know that involving associates is of crucial importance if Bosch is to continue successfully on its path to greater sustainability. In the coming years, we will therefore continue to aim to involve as many associates as possible and to activate the potential that lies in their commitment.

## Commitment beyond company boundaries

Effective environmental protection can only succeed through the cooperation of various actors. With this conviction, Bosch is intensifying its dialogue with key stakeholder groups – in particular, the scientific community, policymakers, and nongovernmental organizations. For example, we have participated in the United Nations Climate Change Conferences in recent years and are a member of the Alliance for Development and Climate, which was launched by the German Federal Ministry for Economic Cooperation and Development in the fall of 2018. We are active on the executive board and steering committee of econsense – Forum for Sustainable Development of German Business and contribute to the Industrial Resource Strategies think tank of the Baden-Württemberg state government. In addition, Bosch joined the Baden-Württemberg Climate Alliance in 2020 and was one of the first companies to sign a climate action agreement with the state. We are also intensifying dialogue with our suppliers and customers, particularly on the subject of climate action. Without their participation, we will not be able to achieve some of our goals, most notably the planned reduction in indirect emissions.

#### Awards for environmental protection and climate action

Bosch's commitment to environmental action is bearing fruit and is also recognized outside the company. In 2020, for example, Bosch was one of the finalists of the German Sustainability Award in the transformation field of climate change and received the Green Controlling Award from the Horváth Foundation for successfully

reaching carbon neutrality. In addition, the nongovernmental organization CDP has awarded the company an A rating for its climate action activities. In China, Bosch received the Outstanding Environmental and Climate Performance Award at the fourth edition of the Sustainable Business Awards ceremony held by the European Union Chamber of Commerce in China. The award was conferred in recognition of Bosch's sustainability strategy and the company's pioneering role in implementing the UN Sustainable Development Goals at its Chinese locations. The Charleston site was recognized by the South Carolina Department of Health and Environmental Control for its zero-waste-to-landfill initiative focused on waste reduction and recycling. Last but not least, the Nashik site in India received the Manufacturing Excellence Award from the German Engineering Industry Association (VDMA) India for its energy efficiency measures.

## Award-winning commitment - the EHS and Sustainability Award 2020

Each year, outstanding projects within the Bosch Group are recognized annually with the EHS and Sustainability Award. In 2020, 168 teams from Bosch locations around the world competed for the prize, which is awarded in the categories "CO<sub>2</sub> & energy efficiency," "Resource efficiency," "Occupational safety," and "Sustainable products." A jury of experts then chooses the three best projects in each category, and the board of management member responsible for sustainability presents the awards at an internal award ceremony.

Read more about the Campinas project in the sustainability report 2020 | spotlights, p. 19 'Enough with the one-way street'

The winner in the "CO<sub>2</sub> & energy efficiency" category was a team from Brazil for the development of a smart IoT solution for the management of the air conditioning systems at the Campinas site. Today, the system manages every air conditioning unit at the plant based on a programed schedule with integrated presence detectors. The outcome? Sixteen percent less energy consumption for air conditioning, which corresponds to 134 MWh of energy or 16 metric tons of CO<sub>2</sub>e annually – while also prolonging the service life of the air conditioning units.

The winning project in the "Resource efficiency" category came from the United Kingdom in 2020. The team from the Stowmarket site looked into options for packaging

gardening accessories with the aim of switching from plastic blister packaging to cardboard, which would also be more cost-effective. And their efforts proved successful, lowering plastic consumption by 52 metric tons annually. Both the outer and inner cardboard packaging is now sourced from FSC-certified suppliers. Customers will also benefit from more user-friendly cardboard boxes in the future.

In the "Sustainable products" category, projects from Bosch Power Tools in Campinas, Brazil, and Miskolc, Hungary, were recognized for their use of recycled plastic in device housings and tool cases. In Campinas, the proportion of recycled material in the material mix rose to 44 percent as a result, which corresponds to an increase in the amount of recycled material used from 94 to 351 metric tons. With CO<sub>2</sub> savings of around 1,396 metric tons and a profitable business case - both made possible by the use of recycled plastic – the project was a success ecologically as well as from a business perspective. In Miskolc, Hungary, where the project began back in 2018, 1,928 metric tons of plastic have since been replaced with recycled material and more than 1.8 million tool cases have been produced this way.

# 4.2 Energy and climate action

Bosch wants to be a pioneer in climate action, an aspiration it has anchored in its vision for sustainability, namely in the dimensions of climate and energy. The corresponding strategy prioritizes those aspects in which the company can make the greatest contribution. In the year under review, our efforts reached the first major milestone: since 2020, the Bosch Group has been climate neutral. None of the more than 400 locations worldwide leaves a CO<sub>2</sub> footprint any longer with its activities (scopes 1 and 2). In order to achieve the goals it has set itself, Bosch is moving four levers: increasing energy efficiency, using renewable energies, expanding the purchase of green electricity, and - as a last resort - offsetting unavoidable CO<sub>2</sub> emissions with carbon credits. We are now working on optimizing the mix of the four levers - that is, on refining the measures and thus further reducing the burden on the climate. At the

#### 17 | Bosch climate goals

2020-2030, audited and recognized by the Science Based Targets initiative (SBTi)



| Management approach | Energy and climate action | Water and wastewater

same time, we are broadening the focus of our activities and are now also aiming to reduce emissions produced outside Bosch's direct sphere of influence - for example, at suppliers, in logistics, on business trips, or when our products are used - known as scope 3. We want to reduce these upstream and downstream emissions by 15 percent by 2030.

In this way, we want to actively shape climate action consistent with an aspiration that has been ingrained in the company for over 50 years. We have always viewed energy efficiency and emissions mitigation as opportunities for innovation and differentiation vis-à-vis competitors. That's why we continue to push these issues, starting with the board of management. The central body in this regard is the CO<sub>2</sub> steering committee, which meets every six months and takes decisions with respect

to the implementation of the CO<sub>2</sub> strategy. In addition to one member of the group's board of management, the committee includes representatives from the corporate departments for Real Estate and Facilities, Manufacturing, EHS and Sustainability, and Corporate Communications and Governmental Affairs, as well as the divisions' executive management. Reports are also continually submitted to the group's board of management.

We regularly evaluate climate risks as part of our internal risk assessment process, which takes place annually and covers a forecast horizon of six years or more. The assessment is based on the scenarios of the International Energy Agency and the energy scenarios of the Bosch corporate sector for Research and Advance Engineering. A central role in this context is played by the internal climate change report: prepared by the corporate sector for Research and Advance Engineering every two years with a high level of scientific rigor, it highlights fundamental developments and their significance for our company

and for society. The report is presented to the board of management when it is issued and can be accessed by all interested associates on the intranet.

When assessing climate-related issues and suitable measures, we distinguish between measures to mitigate impact (mitigation) and activities that serve to adapt the company to the changed framework conditions (adaptation). We also include our products in these considerations. While Bosch heat pumps, for example, contribute directly to mitigating the extent of climate change, intelligent solutions for agriculture help adapt to its conseguences (also see the "Products | Sustainable products and services" section). Climate aspects also play a role in the choice of location, another aspect that demands Bosch's adaptability, for example, with respect to water and power supply. To manage the respective risks and opportunities, the individual divisions incorporate the results of the risk assessment in specific plans and market forecasts. Together with our business partners,

## Opportunities and challenges of climate change

For Bosch, climate action and energy efficiency are driving forces for innovation. We see climate change not only as one of the greatest challenges facing humanity but also recognize a multitude of opportunities for our company in the associated transformation – for example, in electromobility and in building technology, where electricity-based heating systems and solutions for energy management and room cooling are increasingly in demand. We are confident that we can make a decisive contribution toward a successful cross-sectoral approach spanning mobility, buildings, and industry as we offer attractive products that we connect and thereby increase their impact and benefit for customers. At the same time, we are spreading climate action beyond our own company by sharing our experience reaching carbon neutrality to other companies and organizations through the recently founded Bosch Climate Solutions.

Last but not least, Bosch's growing self-sufficiency and energy efficiency mean that we are reducing our dependence on energy markets and, in turn, our exposure to price fluctuation risks.

The challenges for Bosch posed by climate change include water scarcity and extreme weather events, which are occurring with increasing frequency and causing greater damage. They can endanger production at our locations and the stability of the supply chain. Other risks include the shortage of raw materials and changes in the regulatory framework, such as a ban on internalcombustion engines or the tightening of CO<sub>2</sub> emission standards for vehicles. Also important in this context are the increasingly exacting customer preferences, which can change rapidly - partly in response to political decisions. We address these challenges with systematic research and development. We are also actively involved in the relevant associations and committees because we need to work together if we are to solve the challenges posed by climate change. Based on this understanding, we also want to help ensure that nonfinancial aspects are increasingly factored into company valuations and, in turn, the decisions made by companies and policymakers. An example of our commitment in this context is our involvement in the Value Balancing Alliance (also see the "Company | Sustainability strategy and organization" section).

we work on strategically expanding the supply chain, adjusting its content-related orientation, and developing our suppliers further. With the expansion of our climate action activities beyond our own sphere of influence (scope 3), these activities are gaining additional importance (also see the "Supply chain | Social and environmental requirements for suppliers" section).

## First goal: climate neutrality - achieved

Bosch supports the United Nations 2015 Paris Agreement on climate action, and by making its operations carbon neutral, it is making a concrete contribution to the goal of limiting global warming to as close to 1.5 degrees Celsius as possible – but well below two degrees in any event. Bosch has thus demonstrated that improvements in climate action are also possible in the short term.

We are carbon neutral with respect to the energy we generate ourselves and the volume we purchase for manufacturing, development, and administration (scopes 1 and 2 of the Greenhouse Gas (GHG) Protocol). This is where we can directly influence the reduction of greenhouse gases and make a big impact quickly. In 2019, we additionally set ourselves a target for the upstream and downstream stages of the value chain (scope 3) (also see page 66).

The activities are supported by a broad base of associates and have strong backing from Bosch management - even in difficult economic times. The vast majority of managers (over 80 percent) see in carbon neutrality a competitive advantage for the company, 85 percent are already actively making a contribution to this end with their teams – and practically all of them (97 percent) are prepared to do so.

| Energy and climate action | Water and wastewater

### Four levers for climate neutrality

Our climate strategy defines four levers to enable climate neutrality.

#### Lever 1: energy efficiency

By 2030, we aim to save 1.7 terawatt-hours (TWh) of energy by making energy-efficiency improvements at our company locations. To finance the corresponding measures, the board of management has approved an annual budget of 100 million euros through to 2030. Since 2019, we have initiated more than 2,000 projects worldwide, with around 1,000 new projects added in 2020 alone. They have allowed us to capture savings potential of 0.38 TWh.



in total power savings captured by Bosch through improved energy efficiency since 2019.

#### Lever 2: new clean power

Under the banner of new clean power, Bosch aims to drive renewable energy generation – both through in-house generation at its company locations and through long-term supply contracts that will ultimately enable the construction of new photovoltaic plants and wind farms. In this way, we want to increase the share of renewable energy in the overall system and make an effective contribution to the energy transition. By 2030, the aim is to generate 0.4 TWh of the energy we need annually in-house at our company locations from renewable sources. With 69 GWh, we were already able to reach 17 percent of the target capacity by the end of 2020. Here, we are primarily concentrating on those regions where local conditions are particularly favorable for the use of photovoltaic systems or where we have a relatively large number of company locations. In 2020, for example. India accounted for around 43 percent of Bosch's renewable energy generation, followed by China (27 percent), and Germany (21 percent). In parallel, in 2020 we entered into long-term supply agreements with three energy suppliers in Germany, thus enabling the

construction of new renewable energy plants. RWE, Statkraft, and Vattenfall will each supply Bosch exclusively with electricity from subsidy-free photovoltaic parks: in total, more than 100,000 MWh of electricity will flow through the public grid to Bosch locations in Germany every year. Similar projects are currently under consideration in various regions.

83%

of the electricity the Bosch Group consumes worldwide is green.

#### ► Lever 3: green electricity ⊘

In order to reach carbon neutrality as guickly as possible, Bosch is concentrating on the purchase of green electricity from existing plants and has been greatly expanding its purchase volume from renewable sources with corresponding guarantees of origin since 2019. In 2020, for example, the Bosch Group was already able to cover roughly 83 percent of its electricity consumption worldwide with green electricity. We want to increase this share further in the coming years. Our policy for purchasing green electricity also observes the principle of initially concentrating our attention where we can make the fastest and most significant contribution to climate action. Accordingly, our efforts initially centered on countries where Bosch consumes a particularly large amount of energy. Going forward, we intend to gradually expand the scope of countries.

#### ► Lever 4: carbon offsets ⊘

We intend to reduce the use of carbon credits to a minimum in the coming years. However, they will be necessary on a transitional basis to offset unavoidable CO<sub>2</sub> emissions from combustion processes (heating, process heat) or to offset electricity sourced in countries with only limited availability of green electricity. In 2020, we offset a total of 0.9 million metric tons of CO<sub>2</sub> with carbon credits, significantly less than originally planned. When selecting carbon offset projects, we continue to use as guidance internationally recognized and independent certifications such as the Gold Standard as we want to take advantage of the projects to promote social

development in addition to environmental action. At the same time, we are working to reduce emissions that are currently still unavoidable. To this end, we are examining the possibilities of electrification and the use of biogas or hydrogen, for instance. In terms of carbon neutrality, for example, we want to reduce the share of carbon offsets even further to no more than 15 percent in 2030 (relative to the 2018 baseline)

#### The next goal: refining our measures

Having achieved carbon neutrality, the next step is to optimize the mix of levers by 2030 and thus continuously refine our measures through to 2030 in order to make a further significant contribution to climate action. A review of progress made in 2020 shows we are on the right track. For instance, a lower share of our energy consumption was made carbon neutral using carbon offsets than had been budgeted for 2020. At the same time. we were able to reach the target values for new clean power and - thanks to improved availability - actually significantly exceed them in the case of purchased green electricity. We plan to continuously improve the lever mix over the coming years. In this way, we want to reduce the share of carbon offsets and green electricity from existing plants while further increasing energy efficiency and new clean power. Combined with the extensive measures to improve energy efficiency, the goal is to maximize Bosch's contribution to climate action.

#### 18 | Relative contribution of levers to carbon neutrality

Bosch Group 2020, with reference to CO<sub>2</sub> emissions in baseline year 2018, in %



<sup>\*</sup> In-house generation from renewable sources at Bosch locations and long-term supply contracts

#### **Goal management and** implementation

To achieve the company-wide climate goal, all Bosch divisions are pursuing specific targets. To this end, the targets set centrally for 2030 have been spread over the coming years. The corresponding targets in the first few vears are more ambitious than those allocated to later years. The intention is to capture potentials that can be realized quickest and thus rapidly ease the burden on the climate. Annual targets are set with reference to energy requirements and the savings potential captured so far. Targets are cascaded down to individual company locations at the discretion of the respective business units.

Two annual surveys track centrally the degree to which business units hit their targets. Within this framework, those responsible at the divisions and company locations make decisions on the implementation of measures to improve energy efficiency or projects to generate their own energy. An internal energy map pinpoints the corresponding potential for photovoltaics worldwide. Submitted projects are reviewed for plausibility by the divisions' energy coordinators together with a committee consisting of representatives from the corporate departments for Real Estate and Facilities, Manufacturing, and EHS and Sustainability. After implementation, further random checks are carried out at the sites on the basis of audits performed by the regional EHS and Sustainability coordinators.

As the availability and quality of green electricity and the legal conditions for the expansion of renewable energy differ between countries, the regional organizations are responsible for green electricity and new clean power projects. Carbon offsets are regulated centrally to ensure the quality of projects. The sites themselves order and transact the measures.

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| Energy and climate action | Water and wastewater

## Energy consumption and emissions

Most of our company's CO<sub>2</sub> emissions stem from the consumption of energy. Bosch consumes energy primarily for the operation of manufacturing plants and machinery and in the form of thermal energy to heat and air-condition buildings and operate foundry furnaces. Electricity accounts for 68 percent of total energy consumption at 5,103 GWh (previous year: 70 percent; 5,431 GWh), natural gas for 19 percent (previous year: 19 percent), and other energy sources such as heating oil, district heat, or coal/coke for 13 percent (previous year: 11 percent).

Currently, more than 100 company locations are already achieving significant savings with the Bosch Energy Platform, a smart energy management system. In the past two years, the Homburg site has cut its carbon dioxide

#### 19 | Energy consumption

Bosch Group 2018-2020 in GWh

	2018	2019	<b>2020</b>
Bosch Group	7,844	7,762	7,497
Natural gas	1,512	1,511	1,445
Heating oil	86	89	53
LPG	40	34	39
Coke/coal	141	123	85
Renewable energies	54	69	76
Other*	258	313	452
Direct energy			
(own combustion)	2,091	2,139	2,150
Electricity	5,554	5,431	5,103
thereof green electricity			4,253
District heat, steam, cooling energy	199	193	245
Indirect energy (purchased)	5,753	5,623	5,348

\* Gasoline, diesel, biofuels (stationary and mobile)

#### **20 | Energy intensity**

in MWh/million euros of sales revenue

	2018	2019	<b>⊘ 2020</b>
Bosch Group	99.97	99.87	104.9

emissions by around 4,500 metric tons – and by more than 25,000 metric tons since 2007 - by using connected sensors and self-programmed algorithms as well as making conversions to machinery for greater efficiency.

We are already implementing a wide range of measures to increase energy efficiency and in-house renewable generation capacity today. In 2020 alone, Bosch successfully implemented some 1,000 new projects – including the following examples.

Read more about the Suzhou project in the sustainability report 2020 | spotlights, p. 5: "We can do it. Here and now!

Overview o

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**Suzhou** (China): A digital solution allowed energy consumption of Surface Mounted Technology soldering machines to be reduced to zero outside the factory's production times. This resulted in annual energy savings of around 1.1 GWh. In addition. Bosch will be able to spread this best practice throughout the company in the future.

**Bamberg (Germany):** Previously, piezo actuators were manufactured using 13 screw pumps, which are particularly energy-intensive, noisy, and often in need of repair. Replacing them with a frequency-controlled, high-pressure centrifugal pump enabled annual energy savings of 509 MWh.

#### 21 | Greenhouse gas emissions

Bosch Group 2018–2020, in 1,000 metric tons of CO<sub>2</sub>e

	2018	2019	<b>⊘ 2020</b>
Bosch Group with carbon offsets		1,943	0
Carbon offsets		255	938
Bosch Group	3,259	2,198	938
Production	394	384	350
Vehicle fleet	65	79	117
Volatile GHG	8	10	18
Scope 1	466	473	485
Electricity	2,689	1,636	367
District heat, steam,			
cooling energy	104	88	86
Scope 2	2,792	1,724	453

#### 22 | Emission intensity

in metric tons/million euros of sales revenue, without carbon offsets

	2018	2019	<b>⊘ 2020</b>
Bosch Group	41.53	28.28	13.13

Clayton (Australia): The new photovoltaic system that went into operation in May 2020 will generate 1,350 MWh of energy in the future.

**Eisenach (Germany):** In 2020, one of the largest photovoltaic carports in Germany was put into operation at the company location. The 13,000 solar modules installed produce over 1.6 megawatt-peak.

In 2020, the Bosch Group's member companies consumed a total of approximately 7,497 GWh of energy (previous year: 7,762 GWh). We offset the corresponding 0.9 million metric tons of CO<sub>2</sub> emissions (previous year: 2.2 million metric tons) as part of our carbonneutrality initiative. Emissions are calculated based on the standards of the International Energy Agency and the Intergovernmental Panel on Climate Change (IPCC). In 2020, we switched to a market-based presentation. Previously, we had used the location-based approach (up to and including 2019). In the calculation, we focus on the greenhouse gas CO<sub>2</sub> because an internal analysis has shown that Bosch does not produce and emit other greenhouse gases to any relevant extent.

## Upstream and downstream emissions

We want to shape climate action beyond our immediate sphere of influence (scopes 1 and 2) and also systematically reduce upstream and downstream emissions (scope 3), which we aim to reduce by 15 percent by 2030. This target was also confirmed by the Science Based Targets initiative (SBTi), as were the targets for scopes 1 and 2. Bosch has thus widened its coverage with science-based climate targets across the entire value chain - from purchasing to the product use phase. With its scope 3 target, Bosch has deliberately set itself a very ambitious goal as upstream and downstream emissions (448 million metric tons of CO<sub>2</sub>) exceed those in scopes 1 and 2 several times over. In addition, the target value was set independently of sales growth, which means the mitigation target will increase steadily as the company grows in the future. There are also a large number of external factors Bosch can only influence

indirectly, such as suppliers' success reducing CO<sub>2</sub> emissions. Against this backdrop, the 15 percent reduction in CO<sub>2</sub> emissions corresponds, from today's perspective, to a reduction in the burden on the climate of more than 60 million metric tons of CO<sub>a</sub>.

We are pursuing a three-stage approach to make sure we achieve our goals. In a first step, in 2019 we analyzed all scope 3 categories in accordance with the GHG Protocol using external databases and then focused on those from which the majority (99 percent) of CO<sub>2</sub> emissions originate. According to the findings, upstream emissions in the Bosch value chain primarily concern purchased goods and services as well as logistics. Downstream emissions are mainly caused by the use of our products. However, it is not possible to measure a company's specific progress based on database values. In 2020, we therefore went one step further and increased the calculation's granularity for the main categories, while also integrating specific parameters into the models. This finer-grained calculation makes it possible, among other things, to identify significant drivers within purchasing and in the use of our products, based on which we can derive measures that make an active and measurable contribution to climate action. In this process, we focus primarily on options that lie within our immediate sphere of influence.

► To reduce CO<sub>2</sub> emissions from purchased goods and services, we seek to cooperate closely with our suppliers. In 2020, we identified the largest CO<sub>2</sub>-emitting supplier groups. In 2021, the figures previously determined

#### 23 | Main scope 3 categories

Main drivers for upstream and downstream emissions



Scope 3 target: -15 percent by 2030

| Energy and climate action | Water and wastewater

using statistical models will be replaced by real data from selected suppliers to assess their performance. In the spirit of a partnership-based supplier relationship, we made suppliers aware of our activities in 2020 (also see the "Supply chain | Social and environmental requirements for suppliers" section).

▶ In the field of logistics, we will focus on transport. Our priority is to optimize purchasing in the product evolution process and in series manufacturing, while also avoiding airfreight. In addition, by increasingly combining freight, we want to reduce transport, optimize routes and capacity utilization, and thus avoid CO<sub>2</sub> emissions. In 2020, we analyzed in a pilot project the extent to which switching from air to sea freight can lower CO<sub>2</sub> emissions without risking reliability of supply or increasing warehousing volumes. In the first year, it indicated a potential reduction in CO<sub>2</sub> of roughly ten percent. The extent to which the measures can be rolled out to additional logistics segments is currently being examined.

Bosch products are already designed for energy efficiency and thus help mitigate climate change during their use. In 2020, we identified additional potential for further reducing CO<sub>2</sub> emissions in the use phase. The corresponding docking points can be clustered into three levers, which we can influence in different ways in the individual divisions: boosting energy efficiency, shaping the product portfolio, and using the transformation of the energy sector (also see the "Products | Sustainable products and services" section).



In 2021, we will now - in the third step - derive specific performance indicators to track the contribution of the measures identified in the second step through to 2030 that will, in turn, also allow us to introduce any followup measures that might be needed. By focusing on the key levers, we are ensuring the best possible use of our resources in the interest of sustainability as well as our ability to reach our scope 3 target by 2030. At the same time, we are continuously refining our calculation methodology in order to obtain as realistic a picture as possible of our scope 3 emissions and thus meet our standards with respect to transparency and completeness. In 2020, for example, we expanded the approach to our emissions in Mobility Solutions from a solely tank-towheel perspective to a well-to-wheel analysis in order to comprehensively reflect the CO<sub>2</sub> emissions of mobility. Although this refinement of the calculation raises our baseline, we nevertheless remain committed to the ambitious target of a 15 percent absolute reduction in scope 3 emissions.

#### **Climate-friendly solutions** for associates' mobility

As part of our company mobility management, we endeavor in particular to make our associates' commute to work more sustainable. For instance, in the greater Stuttgart area Bosch has more than 50,000 associates, many of whom drive to work every day. With the mobility campaign "Go for mobility," we are motivating them to switch to alternative modes of transport or are making it easier for them to avoid journeys altogether by providing co-working spaces close to their homes. The range of options available includes leasing offers for bicycles or e-bikes as well as shuttle buses. As one of the largest employers in the Stuttgart region, Bosch is helping to reduce traffic congestion and improve air quality. In 2020 we commissioned and conducted mobility studies at five locations in the greater Stuttgart area funded by the Baden-Württemberg Ministry of Transport. In addition,

we are working on the development of a standardized procedure for systematically managing company mobility, while enabling professional cooperation with other partners (e.g. municipalities, companies). We are also trying to do more for the climate when it comes to business travel. Since 2020, for instance, we use carbon offsets to make the air travel of all associates carbon neutral. To the extent possible, the cost of carbon offsets is included in the airfare based on the polluter-pays principle. Meanwhile, other companies can also adopt this solution through the commissioned travel agencies. In addition, we are sensitizing our associates to make greater use of digital communication formats or - whenever possible - to opt for alternative mobility offers.

#### 24 | Key levers for achieving the scope 3 target

Calculation base and main direct and indirect levers

Scope 3 categories	Calculation base	Key lev Direct —	→ Indirect	
Upstream emissions		Realign top-down	Refine status quo	Energy sector transformation
Purchased goods and services (including machin- ery and equipment) Transport and logistics (also downstream)	<ul> <li>Purchasing volume</li> <li>Goods categories</li> <li>Source region</li> <li>Mode of transport</li> </ul>	<ul> <li>Supplier selection</li> <li>Sourcing of secondary raw materials</li> <li>Mode of transport (sea, land, air)</li> </ul>	<ul><li>Supplier development</li><li>Route optimization</li></ul>	<ul><li>Green electricity</li><li>Hydrogen</li><li>Biogas</li></ul>
Downstream emissions		Improve energy efficiency	Shift product portfolio	
Product use	<ul> <li>Volume</li> <li>Revenue</li> <li>Efficiency</li> <li>Energy source</li> <li>Emissions factors</li> <li>Product life</li> </ul>	<ul> <li>Increased efficiency</li> <li>Digitization</li> <li>Optimized use</li> </ul>	<ul> <li>Investment in growth areas (e-mobility, heat pumps)</li> <li>Phase-out of products with lowest energy efficiency</li> </ul>	

## Climate action in the vehicle fleet

By revising our company car directive in 2021, we want to reach another milestone on our climate action journey. The aim is to reduce the emissions of Bosch's vehicle fleet and the corresponding costs while at the same time promoting alternative modes of mobility. To this end, the revised regulation addresses two user groups.

- ► For frequent drivers such as associates in the field or in sales – who drive more than 25,000 kilometers a year, the portfolio of vehicles on offer is to be made more environmentally friendly.
- ► In future, the executive leadership team will receive a mobility budget that they can use to lease a company car as well as to purchase a German rail ticket enabling

| Energy and climate action | Water and wastewater

## Air pollution

Air pollutants can affect people's health and should therefore be effectively reduced. In 2019, Bosch launched a project to analyze which air pollutants are produced and at what levels in the relevant business processes in manufacturing, such as surface treatment, foundry processes, and building heating. The results show that there are no significant effects on people and the environment from air pollutant emissions. In 2020, there were no grounds for reassessing air pollution's relevance.



SINCE 2020, BOSCH HAS BEEN MAKING ASSOCIATES' AIR TRAVEL CLIMATE NEUTRAL.

unlimited nationwide travel for a flat rate. In the future, associates who decide to completely opt out of using the lump sum budget will be able to have it paid out instead. In addition, there are plans to introduce a disincentive system that adjusts the lease payments charged for vehicles exceeding EU emissions standards. Last but not least, drivers of hybrid vehicles will also be able to charge their vehicles for free in the future – an option only available to drivers of fully electric vehicle so far.

The new regulation is scheduled to be implemented worldwide from mid-2021. A differentiated, countryspecific approach is to be taken in this regard. Implementation will begin in Germany, where Bosch operates the largest fleet of around 4,500 company cars.

# 4.3 Water and wastewater

Conscientious use of water is anchored in Bosch's vision for sustainability. Here, too, we have been pursuing a clear strategy for many years in order to counteract the scarcity of water, which will become even more acute in the future as a result of climate change. Back in 2018, we analyzed our company locations using the WWF's Water Risk Filter. Based on the findings, we know that 59 of our sites are located in areas of severest or severe water scarcity. As a result, we decided together with WWF to focus our activities on combating water scarcity in those regions. In that way, we can quickly achieve significant improvements in regions where water is a particularly valuable resource. Our goal is to reduce absolute water

withdrawal at the 59 sites in regions with water scarcity by 25 percent by 2025 compared with our 2017 baseline. An annual budget of ten million euros is available for this purpose until 2025. To ensure that the funds are used efficiently, water coordinators in the Bosch divisions identify local savings potential and implement suitable measures together with those responsible at the locations. All locations have access to best practice examples on a group-wide "Water Wiki."

In 2020, the 59 company sites in regions with water scarcity accounted for 2.40 million cubic meters (m<sup>3</sup>) of water or 13.3 percent of Bosch's total annual water with-

#### 25 Company sites with water scarcity



drawal. We thus achieved a reduction of 23.1 percent (previous year: 11.5 percent). The significant decrease in withdrawal also partly reflects reduced manufacturing activity and the shift toward associates working from home on account of the Covid-19 pandemic. Since 2019, we launched around 50 projects that will enable us to save up to 200,000 m<sup>3</sup> of water at our sites.

• Our Nashik manufacturing site in India achieved its ambitious goal to close the water cycle in 2020. This achievement qualified the site as a Zero Liquid Discharge factory. The Nashik plant uses a new technology for water purification based on membrane distillation, the first of its kind at any Bosch plant worldwide. As a result, its daily water requirement has decreased by 150 m<sup>3</sup>.

▶ The Bidadi site in India saves around 13,200 m<sup>3</sup> of fresh water per year by recycling process water and using it in the cooling tower.

At the Wuxi site in China, various individual measures were combined and integrated after an extensive data analysis of all water consumption. This integrated approach means that all data of relevance for water management can be monitored at any time. The outcome? Since the measures were introduced in 2017 and up to the end of 2020, around 155,000 m<sup>3</sup> of water have been conserved - despite a significant increase in production volumes over the same period.

## Water withdrawal

Fresh water is used in many processes at Bosch – in particular for cooling purposes. In regions with strained water supplies, recycled water or rainwater is already used wherever possible. Water withdrawal by the Bosch Group decreased to 18.08 million m<sup>3</sup> (previous year: 19.77 m<sup>3</sup>). In relation to sales revenue, this constitutes a relative decrease of around one percent (also see Fig. 26-28).

| Water and wastewater



Bosch Group 2020 by region, in millions of cubic meters



#### 27 | Water withdrawal

Bosch Group 2018–2020, in millions of cubic meters

	2018	2019	2020
osch Group	19.80	19.77	18.08
urface water	3.23	3.91	3.42
roundwater	2.55	2.21	1.95
ublic/private waterworks	14.01	13.59	12.67
resh water <sup>1</sup>	19.79	19.72	18.04
ublic/private waterworks	0.01	0.05	0.04
other sources <sup>2</sup>	0.01	0.05	0.04

<sup>1</sup> <1.000 mg/l total dissolved solids

<sup>2</sup> >1,000 mg/l total dissolved solids

#### 28 | Water intensity

in cubic meters/million euros of sales revenue

	2018	2019	2020
osch Group	252.3	254.4	252.9
### Wastewater

Wastewater at Bosch is mainly produced in sanitary facilities and canteens (44 percent) and also in connection with cooling water (31 percent). Manufacturing accounts for 25 percent of the wastewater produced. There, water is used in electroplating as well as in washing systems and machining centers, among other areas. In 2020, Bosch's wastewater volume decreased to 14.5 million m<sup>3</sup> (previous year: 16.2 million m<sup>3</sup>). Water, as one of core the strategic topics, is an area in which we are working on further reducing wastewater flows and continuously improving quality. In a first step, in 2019 we centrally recorded what quantities are involved where, how they are treated, and where they are discharged (also see Fig. 30). Negative impacts from the wastewater are mainly caused by foreign substances or excessive temperatures. We have defined wastewater quality standards that are binding worldwide and monitor their compliance. We also comply with the requirements imposed by local authorities.

At some sites, we carry out wastewater treatment in-house, using processes such as ultrafiltration to separate solids and liquids or physical-chemical treatment methods such as precipitation or distillation, depending on local conditions.





## 4.4 Materials and waste management

In all its divisions, Bosch seeks to reduce the use of resources and to recycle materials wherever possible. In doing so, we are guided by the idea of the circular economy, which we framed in 2020 in an integrated strategy for our company. Our goal is to systematically reduce the relative amount of raw materials used as product sales rise. Accordingly, we began defining our requirements for environmentally compatible design back in 2000. With the Design for Environment (DfE) process as a component of the environmental management system, our efforts begin early on in the product development stage. Our engineers in development use a checklist to ensure important environmental aspects are taken into account right from the start. In this way, we want to ensure the efficient use of materials or energy and avoid or minimize the impact on people and the environment in all phases of the product life cycle as much as possible (see the "Products | Management approach" section).

Emphasis is placed on avoiding substances of concern (SoC) that are harmful to people and the environment - irrespective of whether they are used during production or in products. In this context, we benefit from our detailed knowledge of the nature and scope of raw materials used in Bosch products. We make this knowledge – condensed in material data sheets – available along the supply chain. This way, we satisfy not only our own high environmental protection standards but also customer-specific requirements, such as in the automotive industry (also see the "Products | Product responsibility" section).



#### **30** | Wastewater flows and discharge routes

| Energy and climate action | Water and wastewater | Materials and waste management



### Use of materials

In 2020, Bosch purchased some 1.8 million metric tons of key materials (steel, aluminum, and plastics) from suppliers, around 20 percent less than in the previous vear (2.2 million metric tons). Steel made up the largest share of materials, weighing 1.3 million metric tons, followed by 0.3 million metric tons of plastics and 0.2 million metric tons of aluminum. These material fractions represent CO<sub>2</sub> emissions of 4.0 million metric tons.

Intensified recycling is a key aspect of our circular economy strategy. By using plastics based on recyclates, we are already making a contribution to the conservation of resources. These materials are obtained from carpet fibers, manufacturing rejects, start-up waste and waste fiber, or waste packaging, among other sources. However, it is not always possible to use recycled materials for a variety of reasons. For instance, recycled materials are often more difficult to process due to the variability of material quality. In addition, their availability is not always guaranteed, and their color spectrum is limited.

#### 31 | Key materials used

Bosch Group 2020, in 1,000 metric tons



Bosch uses polyamides such as PA6 or PA66 as well as PBT/PET as recyclates. In 2020, recyclates accounted for 4.6 percent of the total volume of plastics purchased. We aim to further increase this share in the coming years - including through projects such as those implemented in 2020 by Bosch Power Tools in Campinas, Brazil, and Miskolc, Hungary. At both sites, teams worked on the use of recycled plastic for device housings and tool cases and were thus able to significantly increase the share of recycled material (also see information box on the EHS and Sustainability Award on page 60). The logistics sector is also currently making an important contribution to increasing the proportion of recycled materials. Work is underway to reduce the use of disposable plastic packaging materials. In a first step in 2020, the disposable plastic packaging used was analyzed to determine the extent to which it can be recycled and to classify it accordingly. Based on the analysis, specifications are being elaborated as to which plastics should be used in the future. To sensitize associates with respect to the individual elements and drivers of relevance for avoiding plastic packaging, the activities are accompanied by an awareness campaign.

In cooperation with an external partner, a cross-divisional pilot project is also investigating the sustainability of packaging. As part of the project, discarded small load carriers are granulated and reused as 100 percent recyclate. The aim is to reduce CO<sub>2</sub> emissions and establish a closed materials cycle. The pilot project was completed at the end of 2020 and three metric tons of recyclate have already been processed. Last but not least, we also want to obtain results in the logistics sector as quickly as possible by implementing a large number of quickwin measures that will ease the burden on the climate. Corresponding leverage points include increasing packing density, reducing storage space, and improving the utilization of transport capacity (see the "Supply chain | Social and environmental requirements for suppliers" section).

#### Nanotechnology

Bosch is either not active in the areas of application in which nanotechnology is used in guantities of relevance or it uses alternative substances and technologies. The only exceptions are rare applications in our household appliances. In those case, however, nanoparticles are firmly bound in the product. Even though we do not need to take action in this respect at present, we permanently follow the related discussions and analyses, for example, of the European Chemicals Agency (ECHA).

### Waste

"Avoid, then reuse, then dispose" - that is the principle we apply at Bosch with respect to waste management. A guideline applicable company-wide ensures that the legal requirements for the transport and disposal of waste are complied with locally. All manufacturing sites have a clearly designated organizational unit responsible for sorting, classifying, and handing over

#### 32 | Waste volume and disposal

Bosch Group 2018–2020, in 1,000 metric tons

	2018	2019	2020
Bosch Group	711.4	701.2	606.4
Recyclable waste	594.1	562.3	521.9
Waste for disposal	117.3	138.9	84.5
of which hazardous waste	89.5	80.6	68.7

#### 33 | Waste intensity

in metric tons/million euros of sales revenue

	2018	2019	2020
Bosch Group	9.1	9.0	8.5

waste to disposal companies. In 2020, Bosch generated 606,415 metric tons of waste (previous year: 701,190 metric tons), a decrease of 14 percent. Of this amount, it was possible to recycle 86 percent. Furthermore, the relative amount of waste also decreased by six percent. Reduced manufacturing activity due to the Covid-19 pandemic also played a role in the lower volume of waste produced.

An analysis of waste at sites that together account for around 80 percent of our total waste volume has shown that around half our waste consists of metals. Packaging waste accounts for one quarter of the waste produced, while foundry sand and hazardous waste each account for around 13 percent. The analysis also showed that significant progress can still be made in the area of hazardous waste, which would allow us to make an important contribution to protecting people and the environment - in addition to reducing disposal costs. In response to these findings, we have been pursuing two priorities since 2019: reducing hazardous waste and minimizing the amount of waste going to landfills.

► At Bosch, hazardous waste mainly consists of cooling lubricants, washing water, oils, and fuels. In 2020, they decreased by almost 15 percent to 68,718 metric tons (previous year: 80,562 metric tons). This is an area in which we were able to make further progress through measures specifically developed for sites with comparatively large quantities of hazardous waste. Since 2019, the introduction of vacuum distillation and ultrafiltration were among the main factors that permitted a reduction in the quantity of cooling lubricants and washing water used by almost 50 percent in each case, while the guantity of oil that had to be disposed of through centrifugal treatment fell by almost ten percent.

▶ In order to further reduce the amount of waste going to landfills, we want to increase the recycling rate. With this in mind, we implemented the "Zero Waste to Landfill" campaign at 154 company locations in the reporting year. A total of 82 projects were completed in 2020, resulting in savings of almost two million euros.

| Water and wastewater | Materials and waste management

At our Nanjing site in China, hazardous waste in the form of excess powder coating is generated during the powder coating process. By optimizing the painting process and installing an automated recycling system for powder coating, the waste volume was reduced by roughly



saved by Bosch in 2020 through the Zero Waste to Landfill campaign.

At the Chinese site in Shanghai, 28 metric tons less waste is produced each year thanks to the collection and reuse of transport trays – which equates to a saving of around 200,000 euros.

As part of its circular economy strategy, Bosch continues to work systematically on reducing the volume of waste and, in particular, on recycling (also see the "Products | Management approach" section).

#### 77 | Company | Products | Supply chain | Environment | Associates | Society

# Associates

Our ambition: We want to create an environment that enables all associates to make outstanding contributions to the company's long-term success, to develop their full potential, and to feel at ease at Bosch.

> ciates' perspectives, experience, and lifestyles. We are convinced that mixed teams often produce better results, and that

**appreciation** of individuality is beneficial

► That's why we encourage mixed teams at all levels. In 2020, the proportion of women

in the total workforce was 27.7 percent; the proportion of women in executive posi-

tions was 17.8 percent.

**Diversity in action** 

tion of women executives across all management levels of the group. We currently have a target rate of **20 percent**.

#### Learning and development

• Bosch sees itself as a **learning company** in which learning is integrated into day-to-day work. This also entails building up competencies that will be relevant in the future and empowering associates to acquire knowledge faster and more flexibly.

► In 2020, more than **4,500 e-uni**versity licenses (e.g. Coursera and LinkedIn Learning) were issued to

#### **Occupational safety**

Preventing accidents and providing a safe working environment likewise falls By 2020, the accident rate is to be lowered to 1.7 accidents per million hours worked. With an accident rate of 1.5 in 2020, we have achieved this goal. Although pandemic-related restrictions in 2020 probably helped lower the accident rate, Bosch nevertheless expects a sustained improvement in occupational safety.

Building on what we have already achieved, we have now set ourselves a new objective: by 2025, we aim to lower the number of work accidents at Bosch to **1.45** accidents per million hours worked.

# **5.1 Management approach**

We are shaping the future - with a keen desire to innovate, with passion, and with the courage to embrace change. To this end, people are key to success, which is why they are at the heart of our strategy – so that we can continue to prosper in an extremely dynamic environment. As a leading solutions provider for the Internet of Things and the mobility of the future, Bosch is on its way to becoming a software company that can also draw on profound knowledge in the industrial sector. To actively shape change and adequately respond to volatility, complexity, and disruption, we are developing our corporate culture further and are enabling our associates to acquire new competencies. At the same time, we need to win new talent in highly competitive international labor markets for innovative growth areas.

### Our foundation

The Bosch values stem from our company founder and inform the actions of all associates. They are a cardinal point of reference in view of the challenges and opportunities of digitization and the focus on sustainable mobility. Our "<u>We are Bosch</u>" mission statement combines our strengths with our strategic alignment (also see the "Company | Bosch Group profile" section).

#### **Guidelines and standards**

In the **Basic Principles of Social Responsibility at Bosch**, which have been made publicly available, the board of management and the employee representatives commit, among other things, to complying with human rights, equal opportunities, fair working conditions, and global standards in occupational health and safety. The 11 principles are based on the core labor standards of the International Labour Organization (ILO) and they are likewise binding for our suppliers. Our executives receive training to help them comply with these principles.

Translated into more than 30 languages, the principles are available on the intranet and Internet. Responsibility for their implementation lies with the management of the divisions, regional subsidiaries, and company locations. Every associate is familiar with the basic principles and can report violations. The same applies to violations of the Code of Business Conduct, which is applicable to associates and business partners worldwide. It builds on the Basic Principles of Social Responsibility at Bosch, sets out the requirements of associates and business partners for fair and responsible business practices, and contains additional, internal company rules on the topic of compliance in particular (see the "Company | Corporate governance and compliance" section).

### Our people strategy

The transformation at Bosch is changing skills profiles and requires measures to adapt skills and capacities. To this end, we consistently align our HR management to associates' needs. It is no coincidence that the "People matter" ethos is at the heart of our People Strategy: we

#### 34 | People strategy



want to harmonize people's needs with the company's requirements. At the same time, we are getting our associates in shape for the transformation and inspiring their motivation. We support them through our work and employment conditions as well as through suitable HR instruments and formats.

#### Strategic core topics

Our strategy revolves around six core topics that shape our actions.

**Transformation:** We are contributing to the transformation in the way we shape working and employment conditions, along with appropriate HR processes, policies, and formats in the context of leadership and cooperation. At the same time, we are adapting our structures to the changed environment in the short and medium term in as socially acceptable a manner as possible.

**Employer of choice:** We want to attract talented young people and promote the development of our associates so we remain an employer of choice. For further details, see the "Employer of choice" section.

**Leadership and collaboration:** We encourage a high-performance culture of leadership and collaboration in which our associates are enthusiastic about their work and can realize their potential. For further details, see the "Leadership and collaboration" section.

**Learning:** We provide the learning content for a successful transformation, strengthen the learning culture, and make training more time- and cost-effective, flexible, and attractive. For further details, see the "Learning and development" section.

| Management approach

- | Employer of choice

- | Occupational health and safety

**Excellence:** Serving as a professional partner, HR supports associates at all levels in their work and encourages their development with personalized advice and efficient services.

**Digitization:** We develop and establish state-of-theart methodologies and IT tools to automate processes, use data efficiently, and design systems and services that are intuitive and readily accessible for all our associates.

#### **Organization and responsibilities**

The director of industrial relations of Robert Bosch GmbH is responsible for human resources management in the Bosch Group. She is responsible for human resources and social welfare, including senior executives. In this context, she is assisted by the HR corporate sector, whose areas of responsibility include diversity and equal opportunities. Likewise in the countries where Bosch operates, since 2020 the respective regional management has been reporting to central HR management, which has overall responsibility for HR management. In the future, regional management will be consulted more closely on global projects.

In 2020, a HR digitization program was launched with around 200 associates worldwide. Coordinated by the central program management, project managers in China, India, United States, Mexico, and in many EU countries are working on the implementation. The aim is to further digitize processes in HR management. In this way. HR associates should have more time to work with people on activities that create value and focus on supporting the company's transformation. By the end of 2020, more than 20 solutions for automating administrative processes had already been introduced worldwide.

### Employment at Bosch

As a global supplier of technology and services, Bosch has 395,034 associates worldwide – the majority of whom are directly involved in manufacturing products and services (directly employed: 97 percent). To enable flexible staffing, around 12 percent of the workforce have temporary contracts. They have the same training opportunities as associates with permanent contracts, which means they can improve their skills at Bosch and, in turn, their prospects in the labor market. Around three percent of our associates are subcontracted personnel. Whenever we do draw on subcontracted personnel, we give due regard to compliance with legal frameworks and respecting any collective bargaining agreements.

97%

of Bosch associates are directly employed.

#### Implications of the mobility transformation

The path toward sustainability involves a seismic shift in the automotive industry that brings with it considerable challenges, as well as for Bosch. Consider the following comparison: if it takes ten associates to manufacture a diesel injection system, only three are needed to manufacture a gasoline injection system, and only one for an electric drive. Added to this are economic trends that leave Bosch with no choice but to adjust its workforce.

Our objective is to make this transition in as socially acceptable a manner as possible and consistent with our people strategy. The commitment to making adjustments as socially acceptable as possible is also enshrined in various collective bargaining agreements with employee representatives on specific measures and, in general, in a combined works agreement governing how crisis

situations are dealt with. As a responsible employer, we want to cooperate with the works councils and trade unions in our associates' interest and find constructive solutions to preserve as many jobs as possible. Aiming to keep as many people - and their skills and expertise - on board as possible, we exercise options to reduce weekly working hours. As the various business units and locations are affected in different ways by current developments, differentiated solutions are needed. Above all, we prioritize adjustments based on natural attrition, early retirement, and voluntary redundancy on the basis of severance pay. We also make use of possibilities to reduce working hours, including as a means of offering associates partial retirement options.

Whenever company locations are closed, redundancies are always a last resort. Before it comes to this, we support the associates concerned with various countryspecific offers in a bid to create future professional opportunities for them either at Bosch or in adjacent organizations. The measures range from placement within the company, also in connection with internal qualification programs, and employment in interim employment companies through to cooperation arrangements with other companies. In cooperation with external service providers, we also offer career counseling to assist in the search for the next job. All associates at the company location in question can also take advantage of our in-house social services.

A broad package of diverse measures permitted Bosch to close its factory in Bremen in 2020 while avoiding redundancies. Instead, voluntary agreements were reached with all associates. Measures to reduce working hours were agreed with the works councils at the Feuerbach, Homburg, and Nuremberg sites. At the same time, redundancies have been ruled out for the duration of the agreement.

# **5.2 Employer of choice**

We want to continue to be an attractive employer – an employer of choice. In a highly competitive labor market, it is vital that we attract the best talent and make sure they remain enthusiastic about our company in the long term. Our primary goal is to position Bosch as the employer of choice for digital talent. Furthermore, we support our associates with suitable offers to advance their qualifications in order to accompany their development with regard to new tasks and business fields. To this end, we analyze changes in skills profiles. We accompany our associates in their development and help them strike a work-life balance. By offering personalized development paths, we can adequately address changing needs at different life stages. In this way, we create work conditions for all associates that allow them to reach their full potential and optimally contribute their creativity (also see the "Learning and development" section).

The fact that our associates rarely terminate their employment relationship speaks for itself, and the number of associates who hand in their notice is very low compared with industry benchmarks. However, there are regional differences. While it is more common for workers in India and China to switch employers frequently, workers in Germany tend to remain loyal to their



Europe (without Germany) 30.8

| Management approach

| Employer of choice

- | Learning and development
- | Occupational health and safety



employer for a very long time. Owing to the low number of associates handing in their notice, Bosch does not record this metric or the turnover rate in detail.

### Remuneration and social benefits

Bosch sees itself as a hands-on social partner that actively helps shape agreements, sets parameters, and offers its workforce pay that reflects performance and the market. Company pension benefits are generally paid worldwide, although there are regional differences in their terms and conditions. In addition, we offer our associates other social benefits, such as under the company healthcare scheme (also see the "Occupational health and safety" section).

#### **Basic principles of the** remuneration system

The principles underlying the remuneration system at Bosch are governed by a central directive that is applicable worldwide. It is intended to ensure an attractive remuneration level in line with market conditions for all associates and strengthen our competitive position, while enabling adjustments to the remuneration systems in response to the increasing volatility of markets. As a consequence, differences can arise in the remuneration systems of individual operating units, regions, countries, and locations. Worldwide standards also apply to management remuneration at Bosch. We focus on team performance, as we consider individual-centric bonus systems outdated. Accordingly, individual bonuses were already discontinued at Bosch back in 2016 and replaced with a collective profit participation model.

For many years, Bosch has had established remuneration principles applicable uniformly worldwide and governing fair pay in line with market conditions. If the requirements and tasks are comparable, Bosch makes no distinction in the remuneration of male and female associates. Individual remuneration arrangements comprise fixed and variable components and typically reflect the requirements of the given job. Performancerelated or market-specific aspects are additionally taken into account for some groups of associates. In the case of groups of associates subject to rules comparable with collective bargaining agreements, remuneration models are adapted to local and regional regulations. All statutory minimum wage regulations in individual countries are complied with in full.

# 100 +

different working time models are used in the Bosch Group, including part-time work, teleworking, and job sharing.

#### Yet another unit adopts the collectively bargained innovation agreement

A shift is taking place toward creative work in mixed teams with greater responsibility awarded to each individual. Associates need a corresponding degree of freedom. In response to these requirements, Bosch entered into a novel collective bargaining agreement with the German metalworkers' union (IG Metall). The agreement is applicable for the associates of the Connected Mobility Solutions division since 2019. Since September 2020, a similar collective bargaining agreement has also applied for the roughly 600 associates at the German locations of our subsidiary Bosch.IO. Referred to as the collectively bargained innovation agreement, this structure transfers to associates a high degree of responsibility and autonomy – for instance, by allowing them to choose when they work and giving them a personal training budget they can appropriate themselves, as well as numerous models for paid leave.

### Work-life balance

Bosch wants to support its associates in striking a balance between their individual career goals, personal lifestyle, and private objectives. To that end, we are working on the continuous flexibilization of when and where associates work in compliance with legal requirements. A determinant of success in this context is the continuous evolution of our work culture. With this in mind, we share best-practice examples via internal communication channels to provide executives and associates guidance on how to achieve a successful work-life balance. Our guidelines for a flexible and family-friendly working culture cover, among other aspects, a fast return to work after a period of leave or the topic of part-time leadership. In the interim, they have been adopted in many countries or adapted to country-specific requirements. Various working time models have also been introduced in this context (especially mobile working and part-time models) – for example, in China, India, Mexico, and the United States.

#### Working-time models

Bosch is a pioneer when it comes to regulating mobile and flexible working. We want to empower our associates to structure their working time individually while addressing business requirements in the best possible way. Accordingly, more than 100 different working time models are used in the Bosch Group across all hierarchy levels, including part-time work, telecommuting, and job sharing. Associates can arrange these models individually in consultation with their line managers. Back in early 2014, we already introduced in a combined works agreement the right of associates to mobile working to the extent that it is compatible with their tasks. In 2018, these rules were adopted in the collectively bargained regional agreement for the metal industry and are disseminated internationally as a fundamental principle today. This rising acceptance of mobile working solutions among our associates over the past few years. and the resulting increase in associates' and executives' application competence, has brought a further advantage: despite the constraints imposed by the Covid-19 pandemic, cooperation remained highly effective, even in digital formats.

#### Other agreements and benefits

By creating a work environment that is as flexible as possible, we help our associates to strike a work-life balance. Furthermore, we support them by offering childcare, parental leave, or leave of absence to care for family members. In addition, they can take sabbaticals, special leave, or paid leave in special circumstances. Especially with families in mind, Bosch offers a broad spectrum of measures in order to arrange care services in emergencies, for instance. Associates are also active, for example, in "Elder Care" – a working group that offers a platform on the "family@bosch" forum dedicated to the exchange of information on, and experience with, taking care of family members and that supports affected colleagues with advice and assistance. In principle, the aforementioned offers are also available to associates on limited-term contracts. The same applies to the use of our portal offering nursing care information service as well as direct contact with nursing care providers.

### Diversity

Bosch values the diversity of its associates' perspectives, experience, and lifestyles. We are convinced that mixed teams often produce better results, and that appreciation of individuality is beneficial for the work climate. That is why <u>diversity</u> is a fixed element of our corporate strategy and anchored in our mission statement "We are Bosch" as one of our values. Our Code of Business Conduct, too, underscores that Bosch respects and protects the personal dignity of each individual, tolerates neither discrimination nor harassment of associates, and promotes diversity. It is very important to us that

### International exchange - made simple

The Lunch Roulette community offers a simple and effective way to promote networking and dialogue across departmental boundaries. For several years now, Bosch associates have been able to arrange lunch dates and network with colleagues they have never met before. In 2020, the popular format was expanded. The virtual "World Roulette - Let's connect around the globe!" has been bringing associates from different countries

#### | Company | Products | Supply chain | Environment | Associates | Society

- | Employer of choice
- | Learning and development
- | Occupational health and safety

- irrespective of gender, age, background, or any other aspects – all associates around the globe feel valued and can devote their individual strengths, experience, and potential to the company.

Associates have various options for reporting possible violations of Bosch values. For example, each department has a liaison officer who serves as trusted contact person. Associates can also arrange an appointment with our social services or a diversity manager who are sworn to secrecy. More broadly, the Bosch whistleblower system provides associates a platform for reporting complaints – anonymously if they wish – to the compliance department, for example, on discriminatory statements.

### **Diversity initiative**

Launched as a project in 2011, the diversity initiative brings the topic to life by highlighting positive examples. Its message that "diversity is our advantage" is communicated worldwide through a variety of channels. It illustrates the benefits for Bosch and every individual and encourages participation. We want to include all associates and are also exploring unorthodox avenues. in this context. This approach was also evident in 2020 when the Covid-19 pandemic made it impossible to hold International Diversity Days as an in-person event. Instead, the virtual Diversity Week was initiated at short notice with around 200 online events on the topic of diversity and inclusion. Around 20,000 users worldwide took part in the Skype sessions, Bosch Tube live streams, and additional offerings, which were available in 11 languages and presented by associates around the world.

together for a virtual meeting every month since August. Colleagues who would have otherwise never met each other thus share their experiences, broaden their horizons, and learn new things from other countries. By the end of 2020, more than 1,000 participants from 43 countries had already registered on the platform, taking advantage of this simple and pragmatic opportunity for international exchange.

#### **Dimensions of diversity**

In order to do justice to the different dimensions of diversity, we have established a variety of measures. The following are some examples.

**Gender:** Mixed gender teams can capture the potential inherent in having different vantage points and solution strategies. That's why we encourage mixed teams at all levels. Driven by these convictions, we want to further increase the proportion of women in our total workforce, which is currently 27.7 percent (previous year: 27.4 percent). The primary aim is to further increase the share of women in leadership positions to 20 percent from currently 17.8 percent (previous year: 17.2 percent). Observing legal requirements in Germany, Bosch has also set targets for the proportion of women on the supervisory board (20 percent) and the board of management (ten percent). The current deadline for reaching the targets is December 31, 2021. Both targets were achieved ahead of schedule as of January 1, 2021.

We support women in leadership positions in their career through mentoring and seminar programs such as the Business Women's Program. In addition, there are numerous internal diversity networks, including the "Frauen in Technik" (women in technology) forum and the women's network women@bosch, which celebrated its 25th anniversary in 2020, making it the oldest network at Bosch. Last but not least, the Bosch internal event "SL Open – Explore your Opportunities," which had to take place virtually in the pandemic year 2020,

brought together some 250 women in an online format. In break-out sessions, the participants were able to get to know business units and subsidiaries, exchange ideas, network, and also receive valuable advice on job hunting and career planning.

**Generations:** We work together across generations, taking into account their various needs and adjusting our leadership tools accordingly. To this end, we use professional training and flexible working (time) models adapted to the associates' life stages. Through Bosch Management Support, a subsidiary founded in 1999, we also temporarily assign project and advisory tasks to former associates. Our former specialists and executives, who have up to 40 years of Bosch experience, are deployed above all where professional advice is needed at short notice. The pool currently comprises around 1,700 experts worldwide who are placed internationally.

▶ Internationality: People from around 150 nations work together for Bosch. This diversity allows us to successfully cooperate with our international customers, partners, and suppliers. Accordingly, we attach great importance to fostering our international diversity networks such as afric@bosch, chinese@bosch, "For Bosch abroad," and the Bosch Turkish Forum. With over 2,400 international assignments each year, we also encourage international exchange within our workforce. Added to this, there are numerous seminars on the subject of internationality, global collaboration, and various cultures

**People with disabilities:** We increase our innovation power by focusing on the unique abilities of our associates and not on their limitations. That is why we create an inclusive work environment that takes into consideration and appreciates everybody's special needs and skills. Dedicated representatives at the company sites give a voice to the interests of our associates with disabilities. In cooperation with workshops for people with disabilities, we offer additional work inclusion opportunities. With this in mind, we are also active in Germany in the association Bundesarbeitsgemeinschaft Werkstätten für behinderte Menschen e.V. (German Federal Association of Sheltered Workshops).

**LGBTIQ:** At Bosch, all associates are valued – irrespective of their sexual orientation or gender identity. We help associates network and encourage dialogue and mutual understanding between people of different sexual orientations and identities. We support the foundation PrOut@Work, which advocates equal opportunities in the workplace. Corresponding networks are also encouraged within the company, such as the global LGBT diversity network RBg (Robert Bosch gay), which contributes to our open corporate culture. The network is also active outside the company. In 2017, it launched the LGBT Ally initiative. Allies are associates from all business sectors who are called on to openly address possible incidents of bias or discrimination to help shape the transition to an open work culture.

### Awards

Various awards that we received in the reporting period are proof that our measures to attract and retain associates are effective - and that Bosch is the employer of choice for a wide range of target groups. For instance, Bosch made tenth place in Forbes' "World's Best Employer 2020" ranking, putting it in the top group of successful international companies, most of which were from the automotive and software sectors. Among the evaluated categories were the company's ecological footprint, image, talent development, gender equality, and social responsibility.

#### 36 | Proportion of women Bosch Group 2018-2020, in %





#### 37 | Total workforce by age group Bosch Group by region, in %, as of December 31, 2020



- | Employer of choice

- | Occupational health and safety

In Germany, too, Bosch frequently occupies leading positions in employer appeal rankings. For instance, we came third in the 2020 ranking of Germany's best employers, which is regularly compiled by the recruitment website Glassdoor, and we came second in the Young Professionals Barometer 2020 published by Trendence. The market research company also recognized Bosch's UX-based application process "#Candidates-First" as "Best Application Process."

# **Top 10**

Bosch ranks tenth in Forbes' "World's Best Employer 2020" ranking.

A special distinction, Robert Bosch GmbH won the Max Spohr Prize in 2020. The prize is awarded regularly by the Völklinger Kreis to organizations that stand out through exemplary diversity management. An aspect the jury valued in particular was the promotion of a prejudice-free and open work culture for the LGBTIQ community. Bosch was able to impress the jury above all with the international cooperation on the topic in our networks.

# **5.3 Leadership and collaboration**

We believe continuous reflection regarding our convictions and the actions derived from them is the basis for good leadership and collaboration. The ten principles of the "We LEAD Bosch" leadership model summarize these ideas. The principles are addressed to managers and associates equally and describe the management and collaboration culture desired in the company - both within and outside official and disciplinary management roles.

It is the job of our people in leadership roles to shape the conditions such that each individual associate can develop and unleash their potential (for further details on development, see the "Learning and development" section). The goal is for our people who hold leadership roles to serve as role models, build trust, and be reliable partners while promoting an open culture. Ideally, those in executive positions should promote the autonomy of the associates for whom they are responsible and play

a supportive role to help find solutions, for example, by removing obstacles and establishing conducive framework conditions.

### Feedback and survey

To measure employee satisfaction and identify specific improvement potential in the company, we have been regularly surveying our associates for many years. In addition, we conduct representative-sample surveys on specific topics in many business units. Due to the Covid-19 pandemic, we decided to postpone the next central surveys. In the meantime, work is underway on a new feedback landscape ("impact:") for Bosch to replace the current survey format. We want to use new, modern tools to give associates the opportunity to express their opinions and initiate changes. Digitally implemented,

surveys can be conducted with greater frequency and on a wider variety of themes.

Priority topics are teams, strategy, and leadership. For instance, our associates' experience when they join the company or at training courses is also taken into account. The idea behind "impact:" is to set the focus on the difference associates can make with their contribution. That is why the term was firmly set as the prefix for all instruments. After the colon comes the content focus of the respective elements.

- **impact:strategy** feedback on the company's management and strategy implementation
- ▶ **impact:team** feedback on the development and cooperation of the respective team
- impact:leadership feedback on a team's leadership
- impact:experience feedback on personal experiences at Bosch

Step by step, the methods and building blocks of the new feedback landscape are being developed and established in the company. In October 2020, impact:experience was already launched in four countries and in two operating units, with other units to follow in stages. This was followed by impact:leadership at the beginning of 2021. The toolbox includes various tools and methods for dealing with one's own leadership behavior. Our aim is for all our people in leadership roles to obtain feedback on their leadership behavior from 2021 onward. Likewise scheduled for launch later in 2021 are impact:strategy and impact:team.

Some elements of the new feedback landscape are already available and are being actively used. For example, Leadership Feedback 360°, which will be a central component of impact:leadership in the future, allows executives to receive comprehensive feedback on their leadership skills from a wide variety of perspectives.

### Keeping a good connection

In times of increased virtual collaboration, leadership has a special role to play. It quite literally comes down to "keeping a good connection with associates." That's why respectful interaction between equals is at the very core of the programs and offerings with which Bosch supports executives by providing practical advice on how to work in the digital space under the banner "Leadership in difficult and digital times." To this end, we brought together the various networks of personnel and organizational developers worldwide. By means of monthly virtual meetings, which we refer to as "people and transformation talks," as well as the virtual One Network Day, which is organized centrally, we network representatives of transformation activities the world over and facilitate the transfer of knowledge between the networks. In this way, we strengthen the ability of those involved to shape change at Bosch. These measures are flanked at team level by various training courses and programs, for example, as part of the SAFEteam project. Indeed, safety in teams and respectful interaction with each other in daily cooperation have traditionally been core elements of the work culture at Bosch. This has proven all the more relevant during the pandemic as cooperation has increasingly had to take place in virtual formats. Consequently, the project aims to create trust, respect, and openness in our dealings with each other and to encourage associates to take responsibility – and thus to increase the performance of the individual as well as the entire team.

| Employer of choice

| Leadership and collaboration

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The tool is available to all Bosch executives worldwide. The aim is the continuous improvement of leadership and collaboration as well as a feedback culture in the spirit of "We LEAD Bosch." In general, participation is voluntary, although some divisions have mandatory targets. In 2020 – despite the pandemic-related restrictions - more than 600 executives again took advantage of the offer to get feedback from their teams, their supervisors, and from colleagues, and to work on their leadership behavior.



With the new feedback landscape, it will be possible to conduct surveys with greater frequency and on a wider variety of themes.

#### Leadership survey

Once a year, in the Executive Pulse Check, Bosch asks executives around the world for their opinions and views on current strategic topics. This allows us to systematically determine sentiment in the company and identify where there is any need to change our strategic alignment. The survey results are put together with recommended actions for discussion on the board of management, and key insights are shared transparently with all participating executives and are additionally used to prepare internal dialogue events.

Some 60 percent of executives invited took part in the most recent Executive Pulse Check in October 2020. The content focus was placed on the current business situation, the strategic issues shaping the future, and Bosch's

technological and cultural transformation. 88 percent of executives feel well informed about the business situation. The vast majority of executives feel empowered to communicate the key elements of corporate strategy (87 percent). In addition, the executives believe that company-wide carbon neutrality will prove a competitive advantage (80 percent). Of the executives surveyed, 85 percent additionally make an active contribution with their team to reducing CO<sub>2</sub> emissions. Almost all executives (95 percent) believe Bosch is right in maintaining a technology-agnostic stance as regards the powertrain of the future. In addition, 97 percent of executives welcome the fact that Bosch encourages a flexible working culture

# 80%

of executives believe that carbon neutrality will prove a competitive advantage

### **Employee rights**

Bosch has always maintained open and constructive dialogue with employee representatives to make decisions in consensus to the greatest extent possible. We are convinced that we can implement the change processes needed to secure our competitiveness only in cooperation with employee representatives - in other words, if associates and the company equally share the responsibility for the future of Bosch. As part of a transparent and open information and communication policy, briefings are provided in a timely manner and with due regard to the relevant facts and national regulations.

The framework for cooperation with employee representatives as well as the corresponding agreements is defined by a central directive applicable worldwide. This is based on the Basic Principles of Social Responsibility at Bosch that have been in effect since 2004 and govern relations between entities of the Bosch Group and employee representatives. Among other matters, the central directive lays down regulations in accordance with ILO conventions 87 and 98, which guarantee workers' freedom of association and the right to collective bargaining. For instance, the directive sets out that workers can form independent trade unions and join them of their own free will or participate in the election or formation of employee representation. In addition, nobody in the company receives preferential treatment or is disadvantaged on account of their membership in a trade union or employee representation. Associates can report noncompliant conduct via the compliance hotline. In addition, any associate is entitled to complain to their respective line manager or senior management if they believe that they have been treated unfairly or discriminated against with regard to their working conditions. Associates may not suffer any disadvantage as a result of lodging such complaints.

Another established process is in place for the handling of complaints by the international network of employee representatives (trade unions and European works council). Individual cases are then handed over, for example, by the chairperson of the European works council to the competent corporate office, the board of management, or the supervisory board. The central directive on "Cooperation and agreements with employee representatives" provides for the appointment by the company of a negotiating partner for existing employee representatives. The person appointed must have wide-ranging powers of representation for the unit concerned, is appointed through a formal process, and is responsible for collaborating with the relevant employee representative body. This creates an important organizational factor in ensuring that the rights of employee representatives are upheld.

#### **Cooperation with works** councils and trade unions

Practically all Bosch locations in Germany have a works council and the associates are subject to works agreements. Only a few small units are the exception to the rule. Collective bargaining agreements are in effect for practically all units at Bosch in Germany, covering some 100,000 associates, or roughly 75 percent of the workforce. On account of the general validity of original national/group works agreements, even for locations without a works council, all associates of the Bosch Group in Germany are also covered by collective agreements. The only exception to this rule is senior executives.

Bosch has also concluded collective bargaining agreements in many countries outside Germany, both within the EU and in countries such as Turkey, Malaysia, Serbia, Japan, and India. Combined works agreements additionally govern cohesion and cooperation in the company. European works councils provide institutionalized crossborder employee representation in Europe. In accordance with the respective national regulations, there are local employee representatives in China and India, for example, but also in many other countries.

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#### Agreements with the International **Trade Union Confederation**

Based on the ILO core labor standards, Bosch already entered into agreements with the International Trade Union Confederation as early as 2004 on the Basic Principles of Social Responsibility at Bosch. We rigorously pursue their implementation in our regions. Particularly the colleagues responsible in the regions locally maintain dialogue channels with employee representatives and the relevant organizations. In this process, we relentlessly strive to improve conditions in the respective countries. Restrictions on the rights of employee representatives are identified in particular in cooperation with the combined works council, the European works council, and the international employee representatives. If any problems arise locally in the process of implementing our standards, the HR corporate sector deals with the issue and works toward finding a solution that achieves the greatest possible consensus and is consistent with our principles.

## **5.4 Learning and development**

Rapid technological progress as well as new working processes and methods make lifelong learning crucial for all associates. For Bosch, a gualified workforce is a strategic determinant of success. We see ourselves as a learning organization in which learning is an integral element of dav-to-dav work. This also entails building up competencies that will be relevant in the future and empowering associates to acquire knowledge faster and more flexibly. As a result, our associates benefit from increased employability and the company secures its competitive position.

### Associate development

In response to ever-changing framework conditions and requirements, we continuously adapt and optimize all associate development formats. We create a framework and promote a culture to help our associates to shape their individual careers in line with their abilities and interests. Our development formats aim to match the passion and skills of our associates with the needs of the company. A wide range of options are available to associates, executives, and HR business partners to discuss individual development goals together and agree on suitable measures to achieve these goals.

#### The competence model

Competence management at Bosch is a systematic process for identifying professional and methodological competencies and helping associates to develop. The aim is to ensure that the right abilities are available in the right place at the right time. By "competencies" we mean our attributes, skills, and behavior, which are key to successfully dealing with current and future tasks. Our competence model sets the framework for recruitment,

goal and performance dialogue, assessment of potential, and support programs. It comprises four competence areas, each of which has two competencies assigned.

- Entrepreneurial competence Result orientation. future orientation
- Leadership competence Leading myself, leading others
- Interpersonal competence Collaboration, communication
- Professional competence Breadth of experience, depth of knowledge

The competence model is applied in different formats that support our associates in their individual development.

Goal and performance dialogue: As part of the annual goal and performance dialogue, executives and associates look back over what was achieved in the past year, discuss targets for the year ahead, and give each other feedback. In 2020, around 165,000 dialogues were held (previous year: 172,000). The lower number is a consequence of restrictions imposed during the Covid-19 pandemic and the related reduction in working hours.

Career and development dialogue: The career and development dialogue takes place between associates and their line manager, the next higher executive, and their HR business partner. It deals with the associate's medium- and long-term development goals and sets out the course for their achievement. Again, due to the Covid-19 pandemic, the number of dialogues held decreased to around 2,500 in 2020, following an increase between 2018 (around 3,800 dialogues) and 2019 (around 4,200).

Talent and associate review: Once a year, supervisors and HR business partners discuss the potential of their staff so as to identify and advance talent at an early stage.

**Talent pool:** Associates in the talent pool take part in training programs to prepare for the requirements of the next-higher level. This membership gives them the opportunity to network across sectors. In 2020, the number of associates in the talent pool decreased slightly to 6,000 compared with 6,200 in 2019.

#### **Bosch Learning Company initiative**

Launched in 2016, the Bosch Learning Company (BLC) initiative aims to get our associates in shape for the digital transformation and to establish a learning, leadership, and collaboration culture that enables self-determined, lifelong learning. We are shaping our future as a learning organization on the basis of three core elements: besides providing qualification programs on subjects such as digital transformation, software development, and electrification, we offer a modern learning infrastructure and promote a learning culture that strengthens self-managed learning. The BLC program is available at all company sites worldwide and provides learning opportunities for associates across all organizational levels. Developed by international teams that combine various perspectives, the content offered is structured into three pillars.

**Certified training:** The first BLC pillar combines various certified training programs with which we aim to give associates practical support in meeting new challenges. To this end, we have developed learning opportunities tailored to their needs. Here, too, the focus is on digital transformation. In addition to numerous online training courses, the "Learning rocks transformation!" community has also been active since February 2020 imparting relevant knowledge. More than 1,700 associates are currently members of the community.

**Digital learning:** This pillar pools projects on the infrastructure of digital learning. An array of digital formats is available to individual associates or complete teams to guickly and flexibly take up training opportunities tailored to their needs. The combined works agreement on digital qualifications governs the use and areas of application of digital learning tools throughout the group. In the meantime, more than 70 locations in Germany have implemented the agreement (out of a total of 132 locations). A learning portal was established to provide an overview of the diverse program on offer. The portal serves as the entry point for associates looking for suitable learning opportunities. In the future, search results will be displayed in a more personalized format

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geared to the needs of associates, for example, by taking into account their current position or skills in learning recommendations.

#### Self-managed learning and a culture of learn-

ing: This pillar is where the BLC's "Learnagility Toolbox" shines. It pools a variety of learning formats, some of which are informal or self-managed by associates. In over 250 self-organized learning forums and more than 900 Working Out Loud circles, associates share their knowledge within the network. On the internal Bosch Tube platform, our associates can publish their own instructive videos. Over 1,200 learning videos are already available on the platform today.

### Investment in training

In 2020, we invested 112 million euros in training for our associates. Owing to the pandemic, the majority of classroom training courses had to be canceled starting in the second quarter in order to protect associates. Furthermore, in 2020, Bosch focused its training programs on topics that are particularly relevant to the transformation in order to address the difficult economic conditions. To put this in perspective: in the previous five years, Bosch spent an average of 260 million euros per year on training measures.

In an effort to enable associates to continue their training during the pandemic, numerous face-to-face events were converted into digital formats. In total, our associates attended roughly 279,000 training days in 2020, including seminars and webinars (previous year: 694,000). A total of 536,000 gualifications were obtained in the online learning programs. Here, too, the figure was significantly lower than a year earlier (previous vear: 803.000) as a result of the reduced working hours under wage subsidy programs. In contrast, e-university licenses (e.g. Coursera or LinkedIn Learning) are gaining momentum, with more than 4,500 granted to associates.

These training measures are based on target-group-specific curricula set for associates with standardized roles. At present, there are about 3,600 (previous year: 3,800) target-group-specific curricula, and roughly 146,000 (previous year: 149,000) associates have at least one such learning curriculum assigned to them.

Online assessments are used to directly test the success of individual training measures. In addition, the Learning Management System permits effectiveness audits in accordance with ISO for all formal further training measures. Target-group-specific curricula aligned to the competencies required by specific groups of associates are revised each year by what are known as "subject owners" and adapted accordingly as requirements change. All training measures carried out are systematically evaluated. The resulting associate feedback obtained is made available by the training providers and taken into account in future revisions.

### Vocational training and university studies

For over 100 years, Bosch has been using apprenticeships and traineeships as a means of covering its needs for qualified young talent while also assuming its corporate social responsibility. Back in 1913, Robert Bosch founded the first apprentices' workshop. Bosch's vocational training measures are offered at about 50 company locations in Germany and 100 branches in over 30 countries. Young, talented individuals have a choice of over 30 career profiles. At present, more than 6,200 Bosch apprentices and trainees around the world are preparing for their future careers, 4,100 of those in Germany.

For years, Bosch has been training more candidates than it needs, offering in Germany alone roughly 1,400 apprenticeships and traineeships every year, with about 300 of those as part of programs with universities of cooperative education. The over 16,000 applications on average for these training positions are testament to just how appealing training at Bosch is for career starters. As a rule, we offer to about 20 percent of a year's trainee intake the opportunity to enroll in our international trainee exchange and obtain international experience, improve their ability to work in a team, take on responsibility, and become independent early on. In 2020, however, we were only able to offer this opportunity to very few trainees. Once their training is completed, we usually offer suitable young talent permanent jobs. In recent years, the hiring rate was around 90 percent.

As a globally operating supplier of technology, Bosch is a role model in the concept of dual education and training in cooperation with universities, including in Asia and Latin America. In cooperation with the Chamber of Industry and Commerce (IHK) and the German chambers of commerce abroad, we are helping establish dual training programs based on the German system in a number of countries, among them China, India, Vietnam, Brazil, and Turkey. For instance, Bosch Vietnam Co., Ltd. in cooperation with the Delegate of German Industry and Commerce in Vietnam (AHK Vietnam) and the vocational education center LILAMA2 International Technology College (Dong Nai) has been offering a 3.5-year course to qualify as an industrial mechanic or as mechatronics engineer since 2013.

#### **Dual education and** PreMaster program

Back in 1972, Bosch together with other companies founded the model of the universities of cooperative education in the state of Baden-Württemberg (today "Baden-Württemberg Cooperative State University"), making it one of the pioneers of the dual university program in Germany. Today, it offers about 20 different programs in commercial, technical, and IT fields. With our PreMaster program, BA graduates can obtain practical experience while they pursue an MA course. This initiative allows us to establish contact with students at an early stage and at the same time help advance their professional and personal development. The program comprises a practical phase at the company (no longer than 12 months) and an MA course phase. Participants are assigned to a specialist department that individually structures the content of the phase served at the company and, together with a personal mentor, supports participants during the complete duration of the program. In 2020. some 850 graduates took part in the PreMaster program.

40 | Training and study at Bosch



#### 38 | Training activities Bosch Group 2018-2020



**39** | Average training days Bosch Group 2018-2020



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#### Supporting students

While still at university, students can already gain deep insights into various fields of work – for example, in an internship, on a student work placement, or while working on their final-year project thesis. *Diplom* and MA graduates can pursue a PhD within the framework of a three-year employment contract in close cooperation between a specialist department and their university. In addition, Bosch in Germany has been providing financial support for talented students for many years because we are convinced that education should not be dependent on an individual's financial means. We also have offers such as mentoring to make sure scholarship holders are ideally prepared for their future advancement.

In 2020, Bosch awarded a total of 73 scholarships in Germany, spending more than 120,000 euros on financial support for students. We cooperate with three scholarship platforms: Deutschlandstipendium, e-fellows.net, and IT-talents.de. There, students can apply directly for a scholarship. Aside from a field of study of relevance for Bosch, such as computer science, the criteria for awarding scholarships also include previous professional experience and extracurricular activities. Our associates, too, can apply for a training scholarship.

## **5.5 Occupational health** and safety

Promoting the health of associates and a safe working environment are core aspects of Bosch's understanding of its role as a company that acts sustainably. That is why both aspects are firmly anchored in the strategic vision for sustainability. Consistent with Bosch leadership culture, the health of associates is a major priority. This was underscored in 2020 in the context of the pandemic response measures and efforts to keep business operations running as best we could. In all decisions, health was always the first concern.

The EHS and Sustainability corporate department manages occupational safety and health protection at Bosch with the help of a central core process that is used throughout the Bosch Group. Management of the operating units and local company sites are responsible for compliance with the centrally set requirements and goals. Designated EHS officers support them in this context. Current progress reaching targets is reported regularly as part of management reviews across all levels up to the board of management and also ad hoc in the event of particularly serious incidents (also see the "Company | Sustainability strategy and organization" section).

A group guideline applicable company-wide defines the principles, organization, and responsibilities for occupational safety in the Bosch Group. Occupational safety and environmental protection policy is framed in the Guidelines of Work Safety and Environmental Protection. These were expanded in 2020 to encompass the involvement of associates. We actively promote and support consultations on work safety issues with Bosch associates and, if available, their employee representatives. The principles and requirements of the group guideline are specified for individual target groups in a central directive that is applicable worldwide. As early as 2007, Bosch introduced an occupational health and safety management system based on the globally recognized standard OHSAS 18001, which has since been developed further and today satisfies the new ISO 45001 standard. Our goal was for all manufacturing sites and all development sites with more than 50 associates to

introduce occupational health and safety management systems and have them certified externally by the end of 2020. Due to the Covid-19 pandemic, we were unable to achieve this goal by the target deadline, although we continue to work on it with rigor. As of the end of 2020, 231 of the 272 manufacturing and development sites had already implemented occupational health and safety management systems, of which 86 percent had been certified (also see Fig. 41).

### Occupational safety

Preventing accidents and providing a safe working environment likewise falls within our scope of responsibility. and we have set ourselves a clear target in this regard: by 2020, the accident rate at Bosch is to be lowered to 1.7 accidents per million hours worked. With an accident rate of 1.5 in 2020, we have achieved this goal. There were no fatal occupational accidents in the year under review. Although pandemic-related restrictions in 2020 probably helped lower the accident rate, we still expect a sustained improvement in occupational safety. With a new set of objectives, we now want to build on what we

#### 41 | Occupational health and safety management systems (OHSMS) Bosch Group 2020



### Award-winning safety

Every year, our EHS and Sustainability Award recognizes outstanding projects (also see the "Environment" section) with a separate category dedicated to occupational safety. First place in 2020 went to the development of a fully automated line for the production of face masks. By producing its own protective masks to medical standards, Bosch made an important contribution to containing the Covid-19 pandemic early on. Spurred by the central crisis management team, the corresponding machines were built, and the material needed was procured within just eight weeks. Only a few weeks later, five complete production lines were already up and running in Germany, India, and Mexico, supplying associates around the world with masks "made by Bosch." More

than 400 colleagues worldwide in total collaborated within a virtual network. Bosch is making the designs, technical drawings, and assembly instructions for the production lines available to other companies free of charge, as well as information about how the masks are packaged and distributed.

Second and third place went to awareness campaigns at the sites in Çerkezköy, Turkey, and Chennai, India, respectively. Both campaigns are aimed at prevention and behavior-based occupational safety, with the objective of proactively avoiding or eliminating potentially hazardous situations and helping to further improve accident statistics at Bosch.

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have achieved and successfully continue on our path to greater occupational safety: by 2025, we aim to lower the number of work accidents at Bosch to 1.45 accidents per million hours worked. The main lever for achieving this goal is minimizing the risk of accidents.



By 2025, we aim to lower the number of work accidents at Bosch to 1.45 accidents per million hours worked.

Every year, we identify and assess potential occupational safety risks and classify them by priority. For this purpose, we refer to accidents reported in the Incident Management System as well as findings from internal audits under ISO 45001 or the audits of the internal audit department. On this basis, we develop specific risk mitigation programs and define key audit matters for subsequent audits. In the event of any particularly serious accidents - irrespective of whether Bosch associates or third-party staff are involved – we perform an analysis and introduce appropriate measures. As in 2019, in 2020 we focused on the early detection of dangerous situations and hazards (hazard recognition), as this is an area in which we still see potential for improvement.

Based on an internal regulation applicable worldwide, workplace or activity-related hazard assessments are carried out regularly. These are used as a basis for determining any preventive and protective measures needed, and our associates are instructed accordingly. We have defined clear regulations governing responsibilities and processes in order to ensure occupational safety also when we use external companies. These apply right from the outset when we select a service provider. As of 2019, we have set forth in our Terms and Conditions of Purchase significant EHS requirements for suppliers, such

as sufficiently qualified personnel of external companies and safe equipment. In addition, our service providers agree to name a person charged with ensuring compliance with the supervision and control duty. In addition, our coordinators on-site must be consulted before work is carried out. We check on a sample basis whether the requirements and defined protective measures are being complied with. In the event of discrepancies, appropriate corrective action must be taken before proceeding with the work. Here, too, Bosch is committed to systematically developing its suppliers further (also see the "Supply chain | Supplier assessments" section).

#### **Training and awareness**raising measures

It is our conviction that occupational safety begins with individuals, their awareness of problems, and their behavior. This is where we see the greatest potential for improvement, which is why we are focusing on measures to raise the awareness of associates. With six memorable principles, our Safety Basics initiative calls on all executives and associates to always consider occupational safety in their daily work.

- ► Safety is the basis for everything we do.
- As leaders we care about your safety.
- ▶ We ensure a safe work environment for all.
- ▶ We take care for each other's safety.
- We speak openly about safety.
- ▶ We have zero tolerance for negligence.

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Communication measures such as newsletters, posters, and videos help to reinforce our safety culture and incorporate the principles in standard processes. Regular assessments show how safety basics are practiced and implemented at our company sites. To anchor the principles even more firmly, we also develop campaigns with a different focus each year. Having identified in 2019, based on audit findings, potential for improvement in recognizing hazards, the 2020 campaign will focus on this area. Company locations were provided with toolboxes containing various communication tools for the campaign priority areas "contractor safety" and "emergency response."

As a large share of accidents is due to human error, we want to raise awareness among our associates for occupational health and safety matters as part of our EHS competence management and through occupational safety instructions and training. We are also deploying new technologies for this purpose: for example, virtual safety training with augmented reality has been available at numerous locations since 2019. The digitization of training remains an important topic that has only gained further momentum in 2020 as a result of the pandemic. In the year under review, numerous training courses have already been held in an online format, such as our EHS auditor training.

#### **Award-winning commitment**

Bosch's commitment to occupational safety is recognized worldwide. In the United States, for example, the South Carolina Chamber of Commerce presented the Bosch locations in Charleston and Fountain Inn with the South Carolina Safety Award for their low accident rate. In China, the exemplary occupational safety culture at the Shanghai site was praised by the Shanghai Safe Production Association as a Safety Culture Role Model Enterprise. And the company site in Jaipur, India, was also commended by the local authority (Factories and Boilers Inspection, Government of Rajasthan) for its occupational safety initiatives.

### Occupational health

Health is of vital importance both for motivated and contented individual associates and for Bosch as a responsible, high-performing company. We have therefore integrated occupational health in our fundamental principles of work and made them a fixed element of our corporate culture. As a person's health depends on many factors, associates and the company work together for a holistic approach to occupational health. Given that good leadership culture and team spirit among colleagues are key in this respect, guidelines for healthy management are firmly anchored in the "We LEAD Bosch" leadership principles.

Our occupational health management system "befit" covers a wide range of topics from preventive medical care and physical and mental fitness to mental health and right through to tips on a healthy diet and workplace design. An important role is also played by our reintegration management – as well as leadership, training, and competence development in relation to individuals' health – and the integration of people with reduced capacity to work and severe disabilities. In Germany and other countries, medical care is provided in the work-

In order to reduce the number of absentees due to sickness, occupational health management at Bosch sets specific priorities based on the experience of the medical service and safety engineers as well as the health report issued by the Bosch company health insurance fund. Insights from occupational reintegration management and hazard assessments are also considered. As a result, medical conditions affecting the musculoskeletal and respiratory systems as well as mental illnesses were identified as focus areas.

## Coherent action during the Covid-19 pandemic

The "employee health first" principle also applies during the Covid-19 pandemic. Extensive hygiene measures were taken very quickly at the beginning of the pandemic to protect associates. For example, very early on, it became strictly mandatory for all associates to wear masks covering mouth and nose and to observe minimum distances. Such measures were flanked by additional possibilities for mobile working and virtual collaboration. The establishment of the company's own mask production line and the rapid introduction of the Vivalytic test also helped to contain the impact of the pandemic.

In order to provide associates with medical support, the medical service set up a Covid-19 hotline, offered a tele-

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place by a large internal network of occupational health services supported based on cooperation arrangements with external providers. In addition, many company locations have specialists on workplace design, in-house social services, and health management to answer health-related questions.

As part of our integrated approach to health management, strategic guidelines were published in 2019 to better meet the needs and tackle the challenges in the individual regions and at company sites. The aim is for all health experts to work together as a network and to establish a central point of contact for health issues at the company sites.

medicine service, and designed information material. In addition, all associates were able to consult at any time the latest travel recommendations and warnings.

Together with Tübingen University Hospital, Bosch is conducting a study on occupational health and safety to help deal with the Covid-19 pandemic. Among other things, the study is analyzing immunological changes at the company. The aim is to explore additional ways of improving occupational health and safety measures to limit the spread of the virus in daily work to the greatest extent possible. It also seeks to provide guidance on how companies can adapt to change in times of crisis. The first results are expected in 2021.

What are referred to as the "health working groups" are responsible for implementation at the individual company locations. They comprise representatives from different internal specialist departments – among them the representatives for people with disabilities, occupational health and safety, social services, works council, medical services, canteens and cafeterias, HR, and our cooperation partner, the Bosch health insurance fund and are available to answer all health-related issues of our associates. In addition, we cooperate closely with external specialists and institutions. These are consulted as required – for example, as part of the OncoCure program that in cooperation with Robert Bosch Hospital in Stuttgart enables associates with cancer to get a second opinion and a genetic diagnosis if appropriate. The offer is currently available to associates in Germany, Austria, and Spain. Extending the program to include other countries is currently being considered. In addition, we offer our associates in Germany free preventive examinations, such as skin or colon cancer screening. In 2020, numerous digital health offerings were designed and developed in the context of rapidly changing working conditions as a result of the Covid-19 pandemic.

#### **Occupational health measures**

We group all measures related to health and wellbeing under the "befit" program. Within this holistic, workforce-oriented health management program, health experts, executives, and associates work together as partners. Its main focus is preventive medical care, which includes measures such as medical screening. ergonomic workplace inspections, sports and nutrition offers, and seminars on mental stress management. Associates can obtain information about the entire range of services in an online portal. In order to continuously enhance health management at our company sites, we measure quality in Germany using a capability maturity model and agreed targets. If these are achieved, the Bosch health insurance fund pays out a bonus. In 2020, an amount of roughly 630,000 euros was thus channeled into occupational health at the company's locations in Germany. There are similar initiatives in other countries.

Occupational health measures and projects at the individual company sites are tailored to their size and respective needs. As the challenges differ from one country to the next, we manage the activities locally - in particular in countries such as Brazil, China, India, the United Kingdom, or Romania. Regular network meetings enable the

### befit health management in Brazil

In Brazil, Bosch has been running the integrated health program "Good with Life" since 2016, which is supported by experts from various disciplines and offers associates a wide range of benefits: from prevention, medical treatment, and physiotherapy to medical education, nutritional advice, and mental health support. Offers specifically for expecting mothers and vaccinations are also included in the range of services. The services are geared to local needs, which often differ widely. Some 8,000 associates and their families benefit from the program's health education and mental health services. In cooperation with an interdisciplinary team, the Emotional Health Project was additionally set up in Brazil. Against the backdrop of the Covid-19 pandemic and resulting uncertainty, the program has become a key

means of protecting the emotional health and stability of our associates. It provides the workforce a wide range of opportunities for dialogue and reflection. In the first phase, our executives took part in virtual meetings. Aside from exchanging experience on daily work within teams, the meetings also placed an emphasis on self-reflection and self-care. In addition, weekly self-reflection sessions were held on Skype and made available to the entire organization on the Bosch intranet. Special webinars were also held with external health specialists and other guests on topics such as depression, anxiety, and relationship issues. In addition, the health team participated in specific online events to support our associates in every conceivable crisis situation.

capture of synergies between locations and also across national borders in order to offer associates the broadest and most attractive range of services possible.

In countries without full medical coverage, associates at many Bosch locations have the option of visiting clinics located directly on site. We also offer a wide range of training courses on topics as diverse as work-life balance, metabolic disorders, and exercise and health. Last but not least, associates can work on their personal fitness by participating in sports groups.

#### In-house social services

Bosch knows just how important its associates' mental health is, and the company was one of the first employers in Germany to introduce in-house social services back in 1917. Since 2017, our associates can also take advantage of this offer online to get support for all personal and professional matters. Over 100,000 associates in Germany can contact our in-house social services department through a portal at any time - and anonymously if they wish. Based on a works agreement in Germany, we also hold training courses on mental health designed for executives. The Psyga portal provides associates and executives with additional information and tests on mental health and, when needed, indicates who the best person to talk to is.

In order to further expand our mental health measures, we regularly undertake research projects together with the University of Ulm. It was in the course of these projects that the aforementioned training courses for executives on mental health were designed and evaluated. In 2020, Bosch received the Occupational Medicine Award from the Baden-Württemberg metalworking and electrical engineering industry union (Südwestmetall). In response to the excellent resonance among executive and to ensure our associates' long-term support, the training courses are being rolled out to company locations in Germany beyond the scope of the research project.

In the 2020 reporting year, a study was successfully completed on mental stress in the start-up culture. The project found that the start-up work environment studied tended to be subject to low stress levels as workers draw on benefits such as a high degree of self-determination and pronounced enthusiasm in their work. In addition, a research project is currently underway at selected company locations in Germany to study the heart rate variability of associates. Its findings are providing insights into the performance and recovery capacity of individuals and identifying the participants' resources, stress factors, and health-promoting behaviors.

- | Learning and development
- | Occupational health and safety



NUMEROUS DIGITAL HEALTH OFFERINGS WERE DESIGNED AND **DEVELOPED IN THE CONTEXT OF RAPIDLY CHANGING WORKING** CONDITIONS IN RESPONSE TO THE **COVID-19 PANDEMIC.** 

# Society

Our ambition: Through our actions, we want to promote progress in society and help improve quality of life.

Open dialogue

series continued with three events in Berlin, which were attended by representatives of various stakeholders, including policymakers, nongovernmental organizations, and associations.

► In 2020, the stakeholder dialogue

 Among the topics discussed were keeping technology options open in the approach to decarbonization, carbon neutrality, the link between climate action and digitization, and – last but not least – technological sovereignty in the context of digitization.

**>>** 

### Better quality of life

► Bosch acknowledges its responsibility as a corporate citizen and plays an active role in society – even **beyond the scope** of its own business activities.

In 2020, the Bosch Group donated 21.2 million euros to charitable causes worldwide.
 Donation activities focus on education and equal opportunities.

► Bosch associates are working to **improve social conditions** in many countries together with the company and in their own initiatives. In 2020, efforts to combat the Covid-19 pandemic were a major priority.

#### Transparency

 Bosch is a sought-after partner and thought leader in the political process with its broad technical expertise in key technologies such as artificial intelligence, hydrogen, and connected, automated driving.

► The company engages in transparent **political lobbying** and publishes policy statements in the context of EU consultations.

# 6.1 Management approach

# 6.2 Donations

We see ourselves as a corporate citizen and take an active stance in society, as well as beyond the scope of our own business activities. In our activities, we distinguish between donations, corporate citizenship, and political lobbying and dialogue with stakeholders.

#### **Donations**

Our donation work focuses on the common good, and we do not expect anything from the recipients in return. The focus of our donation activities is on education and equal opportunities.

### Corporate citizenship

At the same time, Bosch is active locally at many of its locations around the world - not only financially, but also through the volunteer work of its associates. In some countries, dedicated nonprofit institutions engage in corporate social responsibility activities.



THE FOCUS OF OUR DONATION ACTIVITIES IS ON EDUCATION AND EQUAL OPPORTUNITIES.

#### Political lobbying and dialogue with stakeholders

Through political lobbying work, we want to actively help shape opinions at the level of government policy with our knowledge and our arguments. Our guiding principle is to provide fact-based and technology-oriented policy advice aimed at harnessing technological progress for society's benefit. To this end, we want to engage in dialogue with policymakers and other stakeholders in order to contribute toward developing society and stand up for our values.

Robert Bosch Stiftung demonstrates its commitment to society worldwide by supporting or implementing innovative and lighthouse projects (for more information on Robert Bosch Stiftung, see the "Company" section).

Our social commitment in the form of donations is carried out by the respective business units in the countries in question. In the reporting year, the Bosch Group donated a total of 21.2 million euros worldwide (previous year: 22.7 million euros) for charitable purposes, including donations in kind. A group guideline sets out corresponding principles, assessment criteria, and responsibilities. Depending on the amount involved, either the managers of the operating units or the members of the board of management of the Bosch Group decide how the funds raised should be spent. All donation transactions must be documented in writing. In addition, the persons responsible keep an annual ledger of donations that is accessible for audit purposes. At a minimum, this ledger must indicate the recipient of the donation, the amount of the donation, the reasons for the donation, and the date on which confirmation of receipt was received.

The purposes of the donations are clearly defined with the focus on education and supporting young professionals. Bosch is convinced that good education is the key element in providing for the future and therefore a central concern for any company. As a technology group, we support universities and research institutions in fields of relevance for our company. In the regions surrounding our company sites, we make donations to schools and childcare centers as well as social and cultural institutions. There, we support nature conservation and environmental protection as well as popular sport and other nonprofit organizations to which our associates volunteer their time. We also make donations to help survivors of natural disasters, especially in the regions where Bosch has operations. In 2020, the focus was on activities to combat the Covid-19 pandemic.

l Management approach

- | Donations
- | Political lobbying and dialogue with stakeholders

A recent example: from the end of March to mid-May, Bosch produced 1,000 medical-grade masks a day for internal use in Feuerbach using a manual production line designed and built in-house. This production line bridged the time needed to put a fully automated production line into operation. In October 2020, Bosch donated the production line to the charitable institution "Soziale Betriebe der Laufer Mühle" in Adelsdorf in Germany's Middle Franconia region. The nonprofit institution promotes the social inclusion of severely disabled people who will use Bosch's technology to produce masks for internal use.

### **Bosch Research** Foundation

The Bosch Research Foundation was established in 1986 to coincide with the company's centenary. It supports outstanding young scientists who are working to obtain their doctorates at leading research institutes in fields such as algorithms, big data and machine learning, materials science, and medical technology. The foundation funds its support program from the income it generates with its assets and from Bosch donations. In 2020, for example, the Bosch Research Foundation received 500,000 euros from the company.

# 6.3. Corporate citizenship

### Voluntary work

We support the social commitment of our associates because they embrace our values, demonstrate team spirit, and develop creative solutions – qualities that also strengthen the innovative power of our company. We encourage the extensive commitment of our associates, for example, by allowing them temporary leave and by setting up regular volunteer meetings. Such initiatives are always organized locally. Moreover, our program for prospective executives in Germany involves supporting a social project of a local organization.

As part of the initiative Wissensfabrik – Unternehmen für Deutschland e. V. (Knowledge Factory – Companies for Germany), over 100 Bosch associates are involved in some 300 educational cooperation arrangements with preschools, schools, and start-ups in their free time. Bosch is a founding member of the business network, which meanwhile comprises more than 130 companies and business-related foundations. The aim of the initiative is to spark the interest of young people in technology and business and thereby strengthen Germany's future prospects. Bosch is represented on the steering committee, on the executive board, and on various task groups of the initiative.

### **Together for society**

Together with the company and in their own initiatives, Bosch associates are working to improve social conditions in many countries. The oldest and most farreaching initiative is Primavera – Hilfe für Kinder in Not e.V., which has set itself the goal of helping children in need in poor areas of developing and emerging countries and offer them new prospects. Founded in 1990 by ten Bosch associates, Primavera today has more than 1,500 members. Most of them are active or former Bosch associates, but Primavera is also increasingly gaining supporters outside the company. At present, the association supports close to 50 projects and roughly 8,000 children in 16 countries. The projects are supervised by

associates of the Bosch locations or their relatives on a voluntary basis. Bosch supports Primavera both with donations and with administration so that every euro donated directly benefits the projects.

Aside from providing medical care, the initiative primarily aims to show the children supported ways to escape the poverty cycle. With this in mind, Primavera focuses its support on school education and vocational training activities that empower the children to take control of their lives in the long term. The initiative often acts in conjunction with local Bosch companies. In Thailand, for example, Primavera and Bosch Thailand have been supporting the Hand in Hand Foundation in Pattaya since 2015. The foundation supplies children from low-income families with books and school uniforms, as well as providing them school meals. Since many of the children live in remote areas, the organization also provides transport to school and helps families and single mothers from the slums. Bosch and Primavera have provided additional funding for 34 students attending local governmentfunded schools in Pattaya. They, too, come from lowincome families and are getting the chance to break free from the poverty cycle through access to education.

Many associates also get involved by making regular donations to the community - efforts supported by the company. In Germany, associates can voluntarily take part in the Cents for help initiative and donate the cent amounts from their monthly take-home pay; Bosch then doubles the total amount collected. A committee with equal representation from the combined works council and the combined executives' committee decides on the use of these funds. The company as an employer is represented by HR staff and staff from the donations department. All associates in Germany can apply for funds from the initiative to support a charitable project that is close to their hearts.

Associates in France can participate in a similar program called "solidarité@bosch." Here, too, our French regional company generously rounds up the contributions of associates.

### **Regional support**

Some Bosch regional companies have established their own charitable institutions to carry out their CSR activities in accordance with the respective national regulations. Take for instance, Fundatia Bosch Romania, a Romanian foundation founded in the fall of 2020 will make its first donations in 2021. Such institutions are usually active in the vicinity of company sites and concentrate on country-specific priorities. Despite regional and cultural differences, such charitable activities are required to be recognizable as concerted actions by Bosch. In addition, they must document their work to make their actions transparent and enable the evaluation of their activities.

### Instituto Robert Bosch

Brazil's Instituto Robert Bosch has set itself the goal of promoting the development of socially disadvantaged children and young people through education. In addition to knowledge transfer, since 2018 the institute has also paid attention to the development of social. emotional, and technical skills. In 2020, it spent around 0.57 million euros on its projects, reaching 3,620 young people. In addition, the institute motivates Bosch associates to contribute to the projects as volunteers. Indeed, over 500 volunteer hours were logged in 2020, in addition to monetary donations.

The partnerships built over more than four decades - the institute was founded in 1971 – have already improved the quality of life for thousands of people to date. The

#### 43 | Expenditure on social initiatives Regional activities, in millions of euros



<sup>1</sup> Fundación Robert Bosch México also accepts donations from third parties



- Corporate citizenship
- | Political lobbying and dialogue with stakeholders

"Technical learning in administration" project is just one example. Over a two-year period, 18 young men and women between the ages of 16 and 18 undergo theoretical and practical work training at Bosch. They work on topics such as time management, communication, personal marketing, goal setting, self-esteem, and self-confidence. Over the course of the program, Bosch thus invests around 30.000 euros in the future of the young people - most of whom are subsequently hired by the company.

### **Bosch China Charity Center**

Founded in 2011, the Bosch China Charity Center (BCCC) coordinates the social initiatives of our locations in China. True to its guiding principle "Charity for a better life," the center focuses primarily on educational programs to combat poverty and has thus supported around 185 projects to date, from which a total of more than 300,000 people have benefited. In 2020, the BCCC awarded grants totaling 2.21 million euros. In addition, the projects also benefited from around 6,590 volunteer hours worked by Bosch associates in China. In 2020, the BCCC began supporting the China Rural Education and Child Health (China REACH) program. Educational initiatives on infant nutrition and early childhood education address the needs of low-income families in rural regions. Around 1,000 young children have benefited so far.

Also in the fight against the Covid-19 pandemic, the BCCC responded by providing short-term cash and noncash benefits worth a total of eight million Chinese yuan (or over one million euros) at the beginning of 2020. Immediately after the massive outbreak of the pandemic, Bosch provided tools urgently needed for the construction of the makeshift hospital in Wuhan, which had to be built quickly. Some 700 air-purification units were sent to hospitals. In addition, about 500 washing machines, tumble dryers, and dishwashers for the sterilization of laundry and cutlery were also delivered to hospitals and immediately installed.

#### **Bosch India Foundation**

Since 2008, the Bosch India Foundation has been using its education offers to help people lead independent lives regardless of background. Its offering spans training courses for unemployed young people from rural

# 6.4 Political lobbying and dialogue with stakeholders

As a supplier of technology with global operations, we believe it is our responsibility to put our deep technical expertise to work for the benefit of society and to point out concrete opportunities as well as solutions to current challenges in society. With this in mind, we help shape opinions at a government policy level, in associations, and in various civil society forums. This work is driven by our "Invented for life" ambition and Bosch's general stance on environmental and social issues.

Bosch is a sought-after partner and thought leader in the political process, with broad technical expertise in key technologies such as artificial intelligence, hydrogen, and connected, automated driving. Likewise, our experience reaching carbon neutrality is also attracting interest. We are in favor of standards that are both ambitious and as consistent as possible. For instance, carefully considered EU legislation is preferable to having a large number of different requirements at national level, and it can frequently serve as a global benchmark. New business fields in the realm of connecting things and services also create new need for regulation. In their efforts to design the corresponding framework conditions, policymakers have always turned to Bosch and asked the company to share its knowledge.

Our aim is to advocate for technology and societal solutions in the fields of relevance to us with a focus on technical feasibility. We also want to do justice in this regard to the complete spectrum of requirements of our stakeholders. For instance, we take a differentiated view on the discussion regarding tomorrow's mobility and pursue a broad solution corridor. That includes a new – and, in particular, complete – view of  $CO_2$  emissions in road traffic that considers all sources of emissions from well to wheel and factors them into the assessment. In addition to analyzing studies, Bosch supplements its knowledge of how to determine total  $CO_2$  emissions based on its own calculations and modeling. These are shared and discussed with other experts, including with the EU Commission, for instance.

#### IN 2020, THE FOCUS WAS ON ACTIVITIES TO COMBAT THE COVID-19 PANDEMIC.

areas through to self-help groups for underprivileged rural women who can then start their own microenterprises and earn additional income. Furthermore, the foundation finances medical care for sick children and pregnant women in cooperation with local organizations. It also supports disadvantaged people in more than 180 villages and promotes education and health among young people. More than 5,000 families are currently benefiting from these measures. Specifically for young people with a low level of education and economically challenged backgrounds, the foundation launched the BRIDGE initiative. The initiative is active in private and public organizations with over 270 centers and has helped some 26,000 young people to train in the service sector since 2013. In the past financial year\*, the foundation's grants totaled 1.8 million euros. On top of that, associates from the foundation and from Bosch India contributed 4,000 volunteer hours to various projects in 2020.

\* From April 1, 2019, to March 31, 2020, in the Bosch India Foundation's case.

#### **Bosch Community Fund**

The Bosch Community Fund pools the charitable activities of 45 Bosch sites in the United States, Canada, and Costa Rica. The funded projects are in the fields of natural sciences, technology, engineering and mathematics, environmental protection, and disaster relief. In 2020, the institution funded 173 projects with a total of 3.7 million euros. In addition, Bosch associates contributed over 10,500 hours of volunteer work to the projects.

In 2020, the Bosch Community Fund worked closely with Bosch North America to support communities affected by the Covid-19 pandemic. To date, the fund has spent more than one million U.S. dollars (or 860,000 euros) to provide food assistance, childcare, and distance learning support, and help affected workers in five states. The fund provided the organization Feeding America alone a sum of 100,000 U.S. dollars to soften the blow of the Covid-19 pandemic. This contribution allowed food banks in the communities in which the Bosch locations in the United States are embedded to continue to provide free meals to those in need, despite a huge increase in demand.

In the summer of 2020, the Bosch Community Fund also made a commitment, together with more than 800 foundations in the Council on Foundations, to continue supporting nonprofit organizations in dealing with the repercussions of the pandemic.

### Fundación Robert Bosch México

Founded in 2016, Fundación Robert Bosch México supports the education of disadvantaged children and adolescents in the vicinity of our company sites in Mexico. In 2020, the institution implemented over 30 projects, reaching more than 15,000 children and young people. In addition to the 250,000 euros in funding, local Bosch associates contributed more than 700 hours of volunteer work to the projects. In addition to donations from the Mexican regional subsidiary, Fundación Robert Bosch México also receives financial support from third parties. One example of the Foundation's projects in 2020 was the award of scholarships to teachers so they could train to teach online, especially in STEM subjects. Thanks to the project, 74 teachers had a new learning experience - and more than 2,000 students have so far benefited from gualified distance learning during the Covid-19 pandemic.

- | Management approach
- | Donations
- | Corporate citizenship
- | Political lobbying and dialogue with stakeholders

### Transparency as a matter of principle

We want to make our lobbying activities transparent. To this end, we strictly adhere to the various requirements in the respective regions. Headquartered in Berlin, our Political and Governmental Affairs department has offices around the world. A total of 35 associates\* represent the political interests of the Bosch Group worldwide visà-vis institutions, ministries, governments, parliaments, and society in general.

\* Thirteen associates work for Bosch in Berlin, five in Brussels, six at various UN bodies, and a total of 11 at other locations around the world.



#### BOSCH ENGAGES IN TRANS-PARENT POLITICAL LOBBYING AND PUBLISHES POLICY STATEMENTS IN THE CONTEXT OF EU CONSULTATIONS.

Through the Brussels office, Bosch is entered in the Transparency Register of the European Commission and publishes its responses in connection with EU consultations. A total of 10.2 full-time equivalents (FTE) at Bosch are directly assigned to EU legislation activities; five of them directly in Brussels. In the reporting year, we spent just over one million euros on activities as defined by the European Transparency Register, primarily on personnel and lease expenses. In the United States, we are also subject to an obligation to publish and document political activities. There, only accredited lobbyists are permitted to engage in talks with political representatives. Here, too, Bosch complies with the transparency regulations. Bosch has a central directive that is binding worldwide and governs gratuities in dealings with third parties. It is only permitted to offer, grant, or accept gratuities in strict compliance with numerous prerequisites. Our rules relating to officials and elected representatives are especially restrictive. Here, it must be ensured that any appearance of influence being exercised is ruled out and that the internal regulations of public authorities are adhered to. Should local law in some regions prescribe stricter or more specific requirements, these must be adopted and complied with. With regard to political gratuities, Bosch's guidelines stipulate that only the shareholders, together with the board of management, are authorized to make such decisions.

At the beginning of 2021, Bosch revised its funding policy with respect to political parties in Germany: we no longer make donations, but instead participate in the economic dialogue forums of the parties CDU, CSU, SPD, FDP, and Bündnis 90/Die Grünen. Through these memberships, we strive to make a stable financial contribution and engage in a productive exchange of ideas from which all participants benefit.

Another central directive specifically dealing with government policy and affairs regulates interaction with political officials - for instance, in the run-up to elections. We are committed to remaining politically neutral and seek to engage in dialogue with all relevant political parties.

#### **Political lobbying activities**

Our political lobbying activities aim to identify at an early stage debates and developments concerning political regulation and initiatives that can affect our products, our company sites, and our business operations in general. After all, due to our highly diversified product portfolio, we are affected by a large number of legislative projects, including in climate, energy, and environmental conservation policy as well as transport, research, and trade policy; data protection laws; and labor and social policy. At the UN level, we advocate for the harmonization of technical standards, for example, for automated driving.

At present, our activities are primarily focused on counteracting the trend toward protectionism worldwide, while at the EU level our attention centers on climate policy and the European Union's data strategy.

Furthermore, we support the sustainable design of supply chains. Bosch views the current debate in Germany and the EU as an important and positive development. However, it must be ensured that companies are in fact capable of implementing the corresponding regulations and that a clear distinction is made between the responsibilities of governments and those of the business community.

As a matter of principle, Bosch only engages in business operations that are viable without support from subsidies. We consider temporary government support a suitable instrument only in efforts to assist breakthroughs in new technologies or for the purpose of implementing industrial policy strategies. In this spirit, we consider the funding commitment by the EU and the federal government within the framework of the first Important Project of Common European Interest (IPCEI) for our research and innovation activities, as well as for preparing the industrialization of semiconductors at the Dresden and Reutlingen locations, as a great achievement for the project but also with a view to securing Europe's viability as a business location. Bosch received a total of 200 million euros in funding for the project between 2017 and 2020.

At the EU level, we were actively involved in 2020 as a member of the European Commission's High-Level Expert Group on Artificial Intelligence in the design of safe and trustworthy AI technology. We are also a member of the European Commission's Advisory Group on Vehicle Emission Standards (AGVES), through which we contribute our technical expertise to the EU's emissions regulation (EURO7 / VII) as part of the EU Green Deal. The same applies to the Working Group Motor Vehicle (MVEG). Bosch is additionally involved in the GAIA-X European Data Infrastructure project, which aims to create an open, digital ecosystem to help companies share data and scale business models worldwide. Among other activities in Germany, Bosch is a member of various working groups of the federal government's National Platform Future of Mobility, the federal government's German Cyber Security Council, and the advisory committee of the Agora Verkehrswende sustainable mobility think tank.

Aside from direct dialogue with policymakers, Bosch engages in numerous associations and is actively involved in establishing positions on topics. In Germany, at the EU level, and in a number of other countries, we are members of the industry associations of relevance for our business activities. In Germany, for example, we

are members of the German Electrical and Electronic Manufacturers' Association (ZVEI); the German Association of the Automotive Industry (VDA); the German Federal Association for Information Technology, Telecommunications, and New Media (BITKOM); and the German Mechanical Engineering Industry Association (VDMA). In Brussels, we are members of the European Association of Automotive Suppliers (CLEPA) and Digital Europe, and at the international level we are members of the International Chamber of Commerce and the United Nations Global Compact. In the United States, too, we are also members of the National Association of Manufacturers (NAM) and the Alliance for Automotive Innovation, and we are members of various national automotive industry associations in other countries, including Brazil (Sindipecas), Mexico (INA), and India (ACMA),

In addition, we seek to engage in dialogue with political actors, NGOs, and the general public at events on topics of relevance for us. Back in 2019, we launched a new stakeholder dialogue series, which has since become an established format for exchange, transparency, and the joint search for solutions. In 2020, the series was continued as planned with three events in Berlin, which were attended by stakeholders from the political arena, nongovernmental organizations, and associations. Among the topics discussed were keeping technology options open in the approach to decarbonization, carbon neutrality, the link between climate action and digitization, and – last but not least – technological sovereignty in the context of digitization.

### **Priority topics**

Aside from the priority agenda of political activities set by the board of management, the regions can set additional specific topics and formulate corresponding objectives. The feedback obtained from the regions also gives Bosch an indication of the extent to which priority topics are of relevance worldwide. When selecting topics, we also consider regulation that might have a major influence on our business activities or future topics that concern our company.

The EU Green Deal, which aims to achieve EU climate neutrality by 2050, is of particular importance for Bosch in 2020 and 2021. In this context, we advocate for regulation that is open to different technological solutions while harmonizing environmental, social, and economic

considerations in the interest of sustainability. To reach the EU climate goals, all technologies that reduce CO. emissions have to be leveraged, including a crosssectoral deployment of hydrogen and the use of e-fuels, which enable the climate-neutral operation of combustion engines. Digital policy also remains an important component of an innovative and sustainable economy: applications, including the use of artificial intelligence, must serve humans as well as be safe, robust, and explainable – and thus trustworthy. Additional priorities concern research and innovation policy as well as trade policy. Aligned policy papers define the Bosch Group's position on relevant topics. They form the basis for political lobbying and, depending on their relevance, are released by the board of management. The position statements sum-

marize the facts and arguments, which are also publicly available in the context of EU consultations. Discussions are only held on topics for which policy documents are available. Activities are clustered by topic in order to assess their impact.

- | Political lobbying and dialogue with stakeholders

# 200 mn

euros in funding was awarded to Bosch between 2017 and 2020 as part of the first Important Project of Common European Interest (IPCEI) for investment in research and innovation activities as well as the preparatory groundwork for the industrialization of semiconductors.

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#### Economic performance

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GRI indicators	Comment	Reference*

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## Independent Auditor's Reasonable Assurance Report<sup>1</sup>

### on selected performance indicators and statements within the sustainability report

#### To the Robert Bosch Gesellschaft mit beschränkter Haftung, Stuttgart

We have performed a reasonable assurance engagement on selected performance indicators of 2020, as well as on the statements of the CO<sub>2</sub> neutrality program of the Bosch Group within the sustainability report of the Robert Bosch Gesellschaft mit beschränkter Haftung, Stuttgart, and its subsidiaries (hereafter: "Bosch Group") for the reporting period from January 1, 2020, to December 31, 2020 (hereafter: "sustainability report").

Our engagement refers exclusively to the performance indicator energy consumption in the year 2020 (part of table "19 | Energy consumption" of the sustainability report), the performance indicator energy intensity in the year 2020 (part of table "20 | energy intensity" of the sustainability report), the performance indicator greenhouse gas emissions (scope 1 and scope 2) in the year 2020 (part of table "21 | Greenhouse gas emissions" of the sustainability report), the performance emission intensity in the year 2020 (part of table "22 | Emission intensity" in the sustainability report), the performance indicators work accidents in the year 2020 and work accidents per one million working hours in the year 2020 (part of table "42 | Occupational accidents" of the sustainability report), and the statements on the CO<sub>2</sub> neutrality program within the Bosch Group in the section "Lever 2: New clean power," "Lever 3: Green electricity," and "Lever 4: Carbon offsets" in chapter "4.2 Energy and climate action" of the sustainability report (hereafter: "selected performance indicators and statements in the sustainability report"). The assured selected performance indicators and statements in the sustainability report are marked with the symbol "⊘" Our engagement did not include any disclosures for prior years.

#### A. Management's responsibility

The legal representatives of the Company are responsible for the preparation of the sustainability report in accordance with the "GRI Sustainability Reporting Standards", option "core" (hereafter: "reporting criteria").

<sup>1</sup> Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft has performed a reasonable assurance engagement on selected performance indicators and comments within the sustainability report of the German version of this report and issued an independent assurance report in German language, which is authoritative. The following text is a translation of the independent assurance report.

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> This responsibility includes the selection and application of appropriate methods to prepare the sustainability report as well as the use of assumptions and estimates to individual disclosures, which are reasonable in the circumstances. Furthermore, the legal representatives are responsible for such internal controls that they have considered necessary to enable the preparation of a sustainability report that is free from material misstatement, whether due to fraud or error.

#### B. Auditor's declaration relating to independence and quality control

We are independent from the Company in accordance with the provisions under German commercial law and professional requirements, and we have fulfilled our other professional responsibilities in accordance with these requirements.

Our audit firm applies the national statutory regulations and professional pronouncements for quality control, in particular the by-laws regulating the rights and duties of Wirtschaftsprüfer and vereidigte Buchprüfer in the exercise of their profession (Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer) as well as the IDW Standard on Quality Control 1: Requirements for Quality Control in audit firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis (IDW QS 1)).

#### C. Auditor's responsibility

Our responsibility is to express a reasonable conclusion based on the assurance engagement we have performed on the selected performance indicators and statements in the sustainability report.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board (IAASB). This Standard requires that we plan and perform

the assurance engagement to obtain reasonable assurance about whether the selected performance indicators and statements in the sustainability report of the Company have been prepared, in all material respects, in accordance with the reporting criteria.

The assurance of the selected performance indicators and statements in the sustainability report include performing audit procedures to obtain assurance evidence of the selected performance indicators and statements in the sustainability report that are sufficient and appropriate to provide a basis for our assurance conclusion.

We exercise professional judgement and maintain professional skepticism throughout the audit. In addition, our assurance procedures include:

Obtaining an understanding of CO<sub>2</sub> neutrality program of the Bosch Group;

► Identifying and assessing the risks of material misstatement, whether due to fraud or error, in the sustainability report, designing and performing assurance procedures responsive to those risks, and obtaining assurance evidence that is sufficient and appropriate to provide a basis for our opinion. 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;

Obtaining an understanding of internal control relevant to the assurance of the selected performance indicators and statements in the sustainability report in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of these systems;

Obtaining sufficient and appropriate assurance evidence - for example, in the context of site visits for the sustainability information of the group's business activities - in order to form our opinion;

• Evaluating the appropriateness of methods used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures; and

▶ Evaluating the overall presentation of the selected performance indicators and statements in the sustainability report.

We believe that the assurance evidence we have obtained are sufficient and appropriate to provide a basis for our assurance conclusion.

#### **D.** Assurance opinion

In our opinion, on the basis of the knowledge obtained in the assurance engagement the selected performance indicators and statements in the sustainability report for the period from January 1, 2020, to December 31, 2020, comply, in all material respects, with the reporting criteria.

#### E. Intended use of the assurance report

We issue this report on the basis of the engagement agreed with the Robert Bosch Gesellschaft mit beschränkter Haftung, Stuttgart. The assurance engagement has been performed for the purposes of the Company and the report is solely intended to inform the Company as to the results of the assurance engagement and must not be used for purposes other than those intended. The report is not intended to provide third parties with support in making (financial) decisions.

#### F. Engagement terms and liability

The "General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (German Public Auditors and Public Audit Firms)" dated January 1, 2017 are applicable to this engagement and also govern our relations with third parties in the context of this engagement (www.de.ey. com/general-engagement-terms). In addition, please refer to the liability provisions contained in no. 9 and to the exclusion of liability towards third parties. We assume no responsibility, liability, or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we do not update the assurance report to reflect events or circumstances arising after it was issued unless required to do so by law. It is the sole responsibility of anyone taking note of the result of our assurance engagement summarized in this assurance report to decide whether and in what way this result is useful or suitable for their purposes and to supplement, verify, or update it by means of their own review procedures.

Munich, March 11, 2021

Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft

(signed) Nicole Richter Wirtschaftsprüferin (German Public Auditor)

(signed) Yvonne Meyer Wirtschaftsprüferin (German Public Auditor)

### About this report

The Bosch Group's sustainability report has been published annually since 2011. The present report describes the progress made in terms of sustainable business practices in the 2020 fiscal year (from January 1, 2020, to December 31, 2020).

As in previous years, the report observes the internationally recognized guidelines of the Global Reporting Initiative (GRI). To the best of our knowledge, the report has been prepared in accordance with the GRI Standards: Core option. Selected key indicators and statements on climate action and occupational health and safety were audited by the external audit firm Ernst & Young Wirtschaftsprüfungsgesellschaft to obtain reasonable assurance. Audited content in this sustainability report is marked "⊘."

Unless otherwise stated, all information in this report refers to the full consolidated group. Besides Robert Bosch GmbH. the consolidated group comprises a further 442 (previous year: 438) fully consolidated companies. Details of the scope of consolidation and the developments in the fiscal year relating to it can be found in the annual report (see annual report 2020, page 73 et seg.). Key environmental and occupational health and safety indicators cover 442 (previous year: 428) reportable locations.

The information was requested electronically, and the data was mainly compiled using software specific to each division. A three-year trend is not yet feasible in individual cases, but it is our aim to render such a presentation in the future. In individual cases, facts relating to previous periods were corrected. Discrepancies in the totals are possible due to rounding differences.

All forward-looking statements in this report are based on the assumptions valid as of the copy deadline. Due to unknown risks, uncertainties, and other factors, the actual results, developments, or performance of the company may differ from our forecasts, assessments, and announcements.

German and English PDF versions of the sustainability report 2020 are available online. Further information can be found at sustainability. bosch.com and in the annual report 2020. The next sustainability report is scheduled to be published in spring 2022.

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