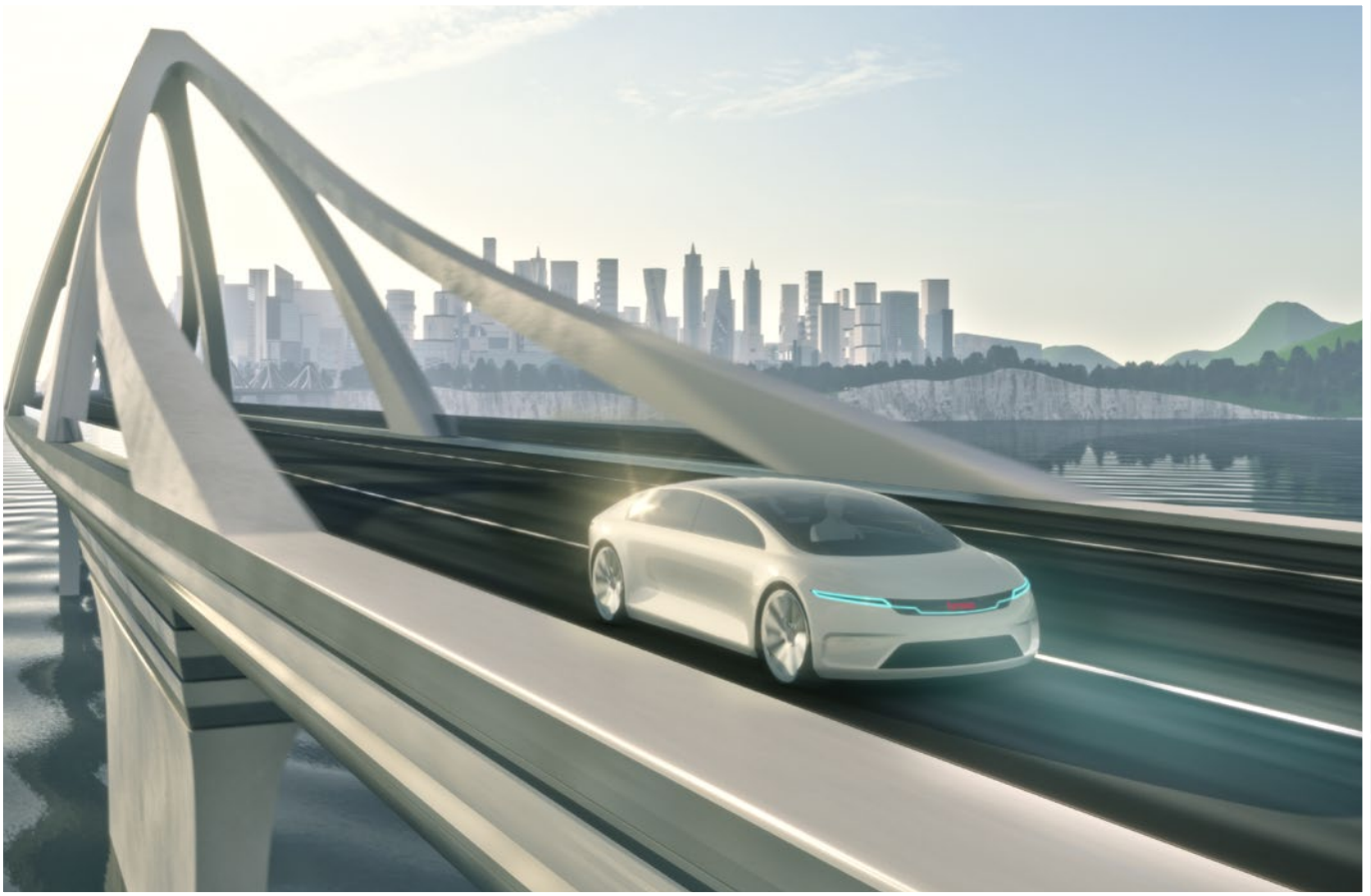
brose
Excellence in Mechatronics

# SUSTAINABILITY REPORT BROSE GROUP 2019



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# About this report

This Sustainability Report is the third Brose Group report following the 2017 and 2018 Sustainability Reports. It outlines the reporting period from 1 January to 21 December 2019. The objective is to continue adhere to an annual reporting schedule in the future.

A materiality analysis was performed in line with GRI standards at the start of the reporting process to determine the content of the report (see Materiality analysis, p. 9). Unless otherwise stipulated, all information contained in the report refers to the entire Brose Group. [GRI 102-45]

Responsible for content in the sense of German Press Law: Ulrich Schrickel, CEO Brose Group, Brose Fahrzeugteile GmbH & Co. Kommanditgesellschaft, Coburg, Max-Brose-Straße 1, 96450 Coburg, Germany.

To improve readability, our Sustainability Report generally uses the masculine form to denote both genders.

**Liability disclaimer**

We have prepared the data contained in this Sustainability Report with the utmost care. Nevertheless, we cannot rule out any errors. Consequently, the Brose Group accepts no liability and makes no guarantee with respect to the correctness or accuracy of the information contained in this Sustainability Report. In addition to retrospective analysis, forward-looking statements made in this report were prepared based on existing forecasts. Although these have been prepared with the utmost care, unforeseeable developments in the future may lead to different results. Therefore, any forward-looking statements made in this report should not be regarded as certain. The Brose Group reserves the right to update this Sustainability Report without additional notice.

# Foreword of the Executive Management Board

Dear Reader,

The effects of climate change, reports of inhumane working conditions at home and abroad and concerns regarding the stability of the global economy in light of worldwide crises have increased public awareness of the multifaceted nature of sustainability. At the same time, individual corporate responsibility is coming under closer scrutiny. This report offers an overview of everything Brose has already achieved with respect to the environment, people and sustainable business practices and what our goals are for the future.

For more than 110 years the long-term development of our family-owned company has been at the center of all we do here at Brose. For us, sustainable work means joining our economic vision with ecological responsibility and a keen awareness of our responsibility toward our employees on a daily basis. We are fortunate to be able to build on an ownership structure that guarantees continuity. Thanks to a solid self-financing concept, we will continue to drive future growth and technological advancements while preserving our independence.

Brose helps OEMs design entirely new mobility experiences with intelligent, connected systems. Our products pair this added value for consumers with a distinct environmental advantage: regardless of vehicle drive type, they ensure higher efficiency and fewer harmful emissions. We achieve these aims with consistent lightweight design in our Interior and Exterior portfolio while our power auxiliary systems – from air conditioning to steering – increase efficiency and range. Finally, our e-bike drives help people with varying levels of fitness travel even very long distances without having to rely on cars or public transportation.

A motivated workforce is a company's most important asset, especially in challenging times. Brose promotes and demands entrepreneurship in action at every level of the company by providing an attractive working environment, interesting development opportunities and fair, performance-based compensation. Our family-owned company's values are readily apparent in how we treat our employees and the involvement of our group locations in many different areas: we sponsor projects in education, culture, social affairs and sport around the world.

The Brose Group is aware of its responsibility to society and the impacts of its actions. This is why we have aligned our day-to-day work with the principles of the UN Global Compact and the Sustainable Development Goals outlined in the United Nation's Agenda 2030. Moreover, starting in 2020 we will actively participate in the industry dialog promoted by the German National Action Plan on Business and Human Rights.

Brose also wants to address the growing significance of sustainability via its organizational structure: this year we started a project to better connect and coordinate the myriad elements of our corporate responsibility management system. I look forward to presenting you the initial results of these actions in our next report.

Ulrich Schrickel
CEO of the Brose Group

# Company profile

Last updated:
31 December 2019

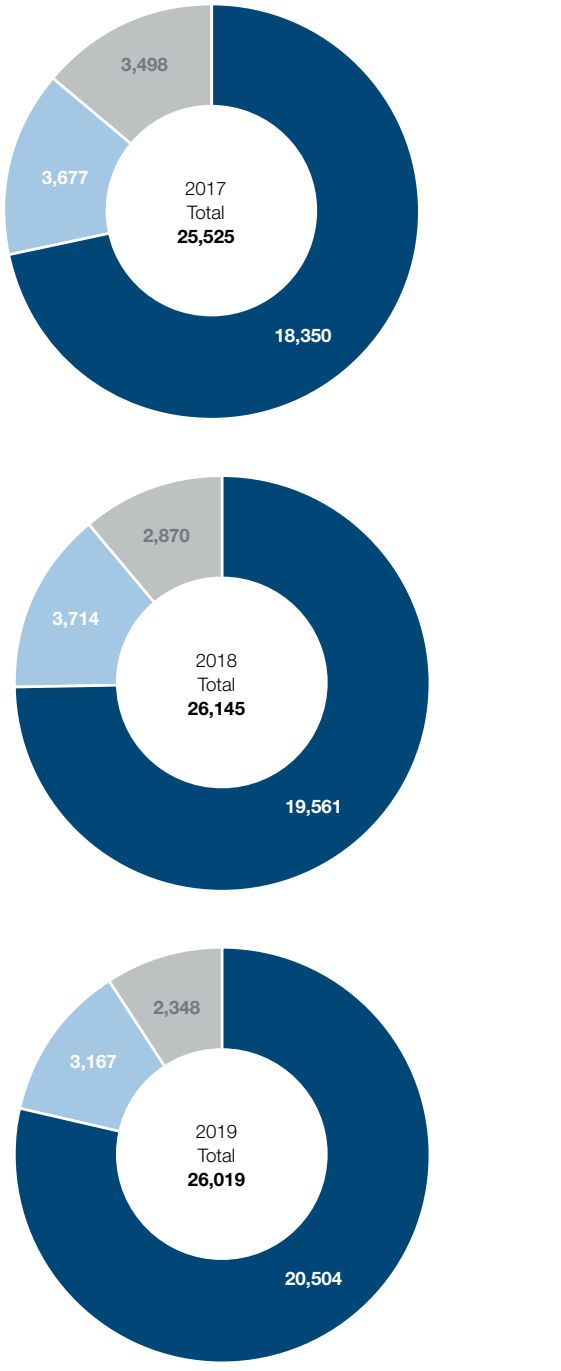
Brose is the world's fourth-largest family-owned automotive supplier. No matter where in the world a vehicle door or window is opened, a car seat adjusted or the air conditioning turned on – you will almost always find Brose Group technology in use. Although usually not visible to the driver, our products provide more comfort, safety and efficiency. Brose is the market leader in many areas, for example in door systems or electronically commutated cooling fan modules. The 100-percent subsidiary Brose Antriebstechnik has been manufacturing e-bike drives since 2014 and expanded its portfolio during the reporting year to include an e-bike battery pack and three e-bike displays along with a cloud-based service tool.

**Facts and figures**
Around 26,000 employees, 60 percent in Europe and Africa, 25 percent in America and 15 percent in Asia
Three headquarters in Coburg (CEO, Interior division), Hallstadt (Exterior division) and Würzburg (Drives division) along with two regional headquarters in Detroit/USA and Shanghai/China
Company name: Brose Fahrzeugteile SE & Co. KG, Coburg
Headquarters: Max-Brose-Str. 1, 96450 Coburg, Germany
Investments in research and development: 9.1 percent of turnover

**Executive management**
Shareholder family: Michael Stoschek (Chairman), Christine Volkmann and their respective children
Advisory Board: Franz-Josef Kortüm (Chairman), Prof. Dr.-Ing. Thomas Weber, Prof. Dr. Andreas Wiedemann
Executive Management Board: Ulrich Schrickel (CEO), Thomas Spangler (Executive Vice President Operations), Niklas Beyes (Executive Vice President Commercial Administration), Raymond Mutz (Vice President Drives), Periklis Nassios (Purchasing), Sandro Scharlibbe (Interior), Christoph Vollkommer (Exterior)
The shareholder meeting is the highest governing body in the Brose Group. Three of its members are women and two are men. All of the shareholders have been involved in the business and worked on social causes for years.

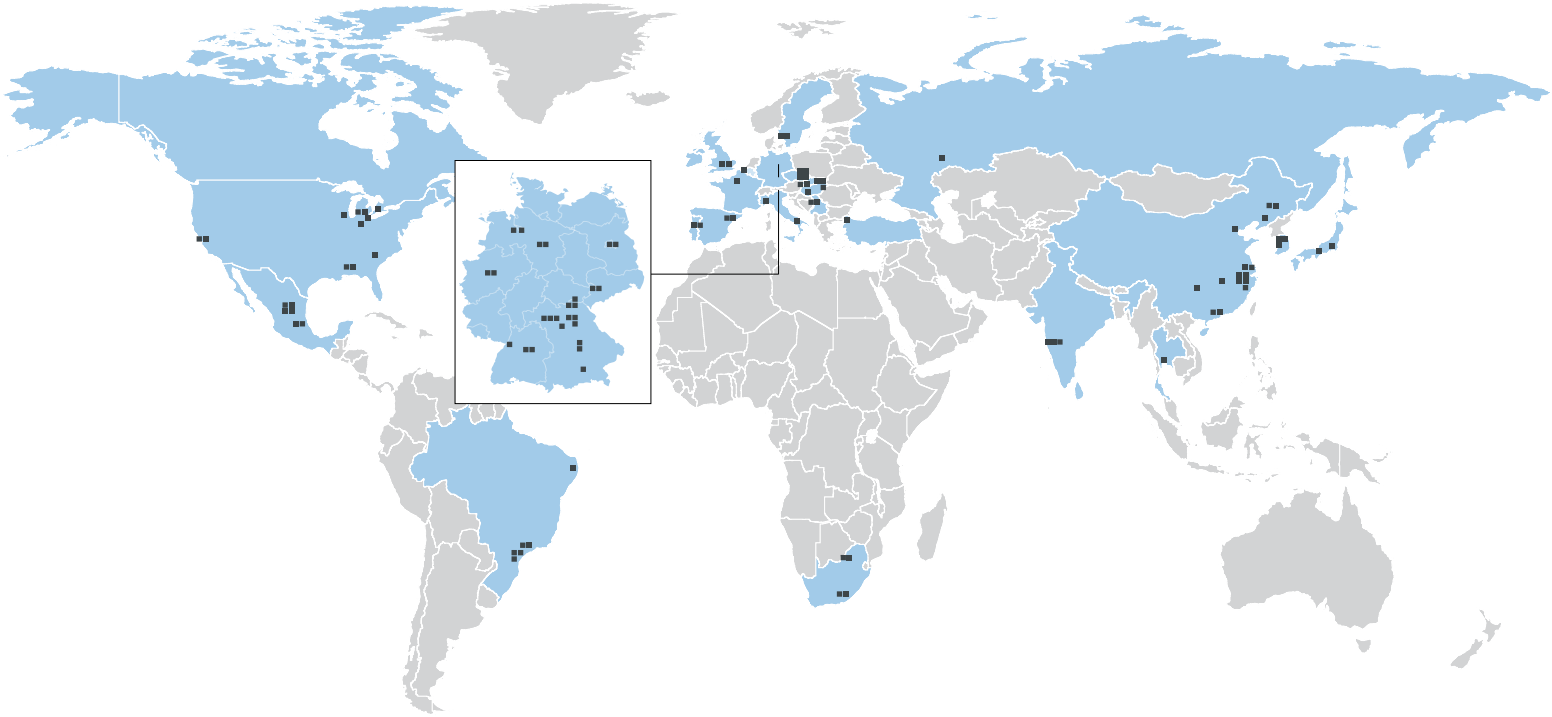
Employees 2017–2019

By employment contract



**Locations and internationalization**

Brose operates 64 locations in 24 countries, including 44 of our own plants and six production sites with local partners.



**Turnover in 2019**

**6.17 billion euros**

By region: Europe €3.0 billion, America €1.9 billion, Asia €1.2 billion

By division: Exterior €3.1 billion (50 %), Interior €2.0 billion (32 %), Drives €1.1 billion (17 %)

**Product portfolio**

**Exterior**

Door systems

Side door drives

Window regulator

Closure systems

Liftgate systems

Motors and drives and electronics

**Interior**

Front seat structures

Rear seat structures

Seat components

Adjustment systems for the vehicle interior

Motors

**Drives**

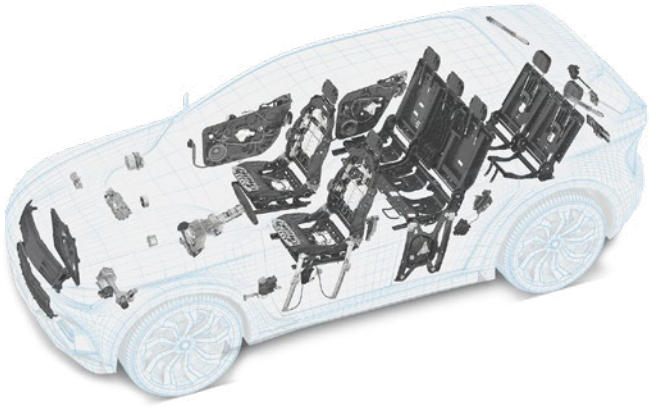
Systems for thermal management and the drive train

Motors for chassis and steering

Electronic controls

Sensor technology

E-bike drives



# Philosophy

In accordance with our goal to deliver FIRST-class performance in every respect, the shareholders, advisory board and executive management board of the Brose Group approved the “FIRST” company principles.

**F** **Family**

The family places the company’s interest ahead of their own. Thus, we will grow in a profitable and self-financed way, and maintain our family-owned company’s independence.

**I** **Innovation**

We set standards with innovative mechatronic systems and components, securing a leading market position with the best price-performance ratio.

**R** **Respect**

Every employee, especially every manager, is a role model. Aware of our social obligation, we act fairly towards employees on all levels and at all locations.

**S** **Success**

We deliver top performance to our customers. Therefore, we set the highest quality standards for ourselves and our partners.

**T** **Team**

Shareholders, board members and employees collaborate based on trust, take clear and fast decisions and assume responsibility for their actions.

We want to be a point of contact for suppliers, society and policy makers at our locations and promote socially and environmentally responsible development. Our responsibility takes into account the entire life cycle with regard to the impact of our products on the environment. We are committed to the continuous improvement of our processes in consideration of the economic aspects and necessities.

It is our goal to
– Sustainably reduce adverse environmental effects
– Improve the energy efficiency of our products and continuously improve production
– Prevent risks of injury and health hazards
– Provide a safe and ergonomic working environment for our employees
– Use suppliers that follow our sustainability and ethical principles
– Provide the necessary financial, structural and human resources
– Comply with legal and regulatory requirements without exception

We avoid risks, prevent mismanagement and fight waste. We eliminate or mitigate the causes whenever and wherever we identify these. If this does not achieve the intended objective, we take organizational and HR-related measures.

## Interest groups, public funds and taxes

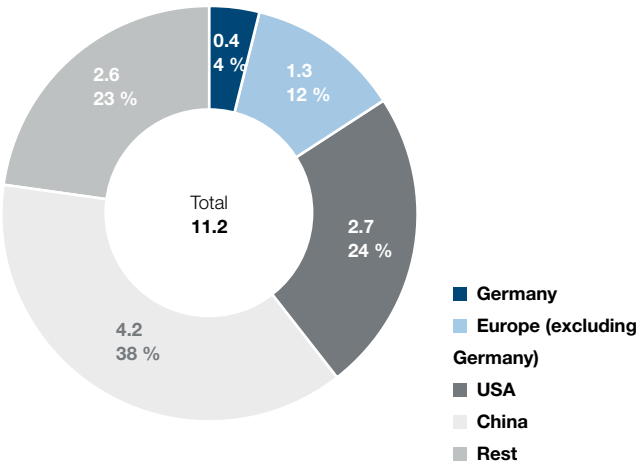
We are engaged in politics and society in the countries in which we manufacture our products. This is why we are a member of national and international interest groups. In Germany some of these groups include the Employers' Associations of the Metalworking and Electrical Industries in Bavaria (bayme), the German Electrical and Electronic Manufacturers' Association (ZVEI), the Association for Supply Chain Management, Procurement and Logistics (BME), the German E-Mobility Association (BEM) and the German Association of the Automotive Industry (VDA).

We are also members of the German chambers of commerce in the US, China, Slovakia, Spain, Japan, France, Great Britain, India, Italy, Mexico, the Netherlands, Sweden, Hungary, the Czech Republic and South Africa among other countries. No political contributions were made during the reporting year.

We are aware of our responsibility to society and act accordingly. This also applies to handling taxes. Media reports covering major corporations' attempts to avoid taxes and international tax competition paired with rising national debts have brought corporate finance policy to the public eye. Major media focus on what appear to be dubious business practices can result in existential damage to the reputation of affected companies. This is why observing laws, compliance, ethical, environmental and social standards are becoming more and more essential to the success of long-term customer and employee relationships and thus for sustained business success.

Public funds 2019

in millions of euros, in % of the total payments, by region




## Infrastructure investments

Our infrastructure investments at worldwide locations provide double the returns, as they not only foster work on new products, but also promote development in the respective regions. The following are just a few examples of long-term projects (investment amount only considers shares from 2019).

51 million euros was approved for investment in a new plant in Pančevo/Serbia during the reporting year. Economic development is a key issue for the Belgrade region that also receives public funding. An additional 23.5 million euros will be invested in the third phase of our location in Prievidza/Slovakia – a long-term infrastructure project we began in 2015. The entire area has grown dramatically over the past few years, with JaguarLandRover establishing a site in the neighboring region of Nitra. In Taicang/China, we spent around 5.9 million euros for a zero-emission paintshop during the location's second phase. This marks the first time we are working with a local supplier. An additional 5.9 million euros was invested in Würzburg in the pre-production of our electric air conditioning compressor – this product plays a key role in securing the Franconian location.

# Sustainability management

The Brose Group does not have an executive-level position with overarching responsibility for economic, environmental and social topics. Instead, there are topic-specific responsibilities in the individual areas and functions. The management systems for environment, work safety, energy, fire prevention and hazard management are consolidated under the term “technical sustainability” and assigned to the Chief Operating Officer Production. In addition, environmental and energy coordinators were appointed in every business division.

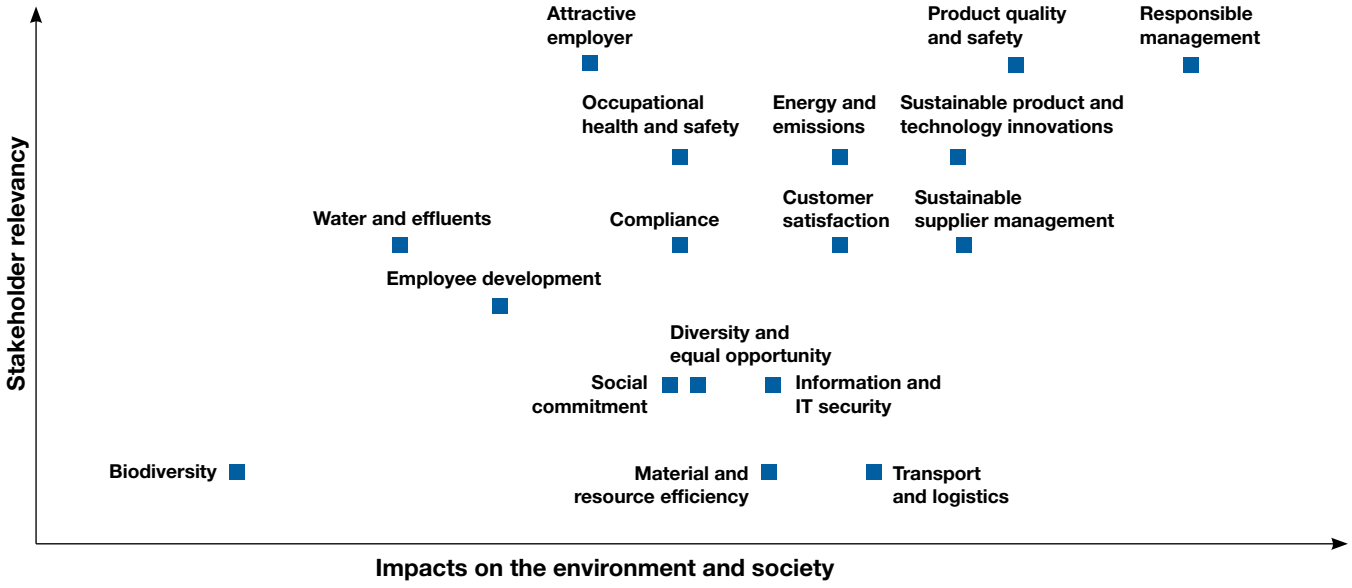
At least once a quarter members of the EHS Board meet under the leadership of the Chief Operating Officer Brose Europe – these include coordinators from the business divisions along with representatives from Purchasing, Human Resources and Corporate Communications as well as other group functions depending on the topic. The committee assists the executive management board with the implementation of guidelines for environment, energy and occupational safety and health discussing alternative action strategies and procedures.

## Materiality analysis

To determine the material content of this report we conducted a multi-step process with an external sustainability consultancy. In the first step a comprehensive, selective list of potentially relevant topics was prepared and then compressed into a shortlist. We used this as the basis for a workshop with those responsible from the relevant functional areas to carry out two assessments: first, the shortlist topics were prioritized from the perspective of our most important stakeholders (employees, customers, interested members of the public). Second, an analysis was performed to quantify Brose’s impact on the environment and society for each topic. The resulting material topics were then validated and released by executive management.

[GRI 102-40, 102-42, 102-43, 102-44, 102-46, 102-47]

**Topic matrix for materiality analysis**



# Compliance and risk management

We continued to enhance our Compliance Management System in 2019 in order to meet both national and international standards. The system ensures ethical and legally compliant conduct in the Brose Group. Moreover, it helps us control and minimize compliance risks. The principal focus of the program is antitrust law and avoiding corruption. Measures include prevention, overseeing compliance and responding to improper conduct.

Regular reviews performed by the auditing department in Brose Group companies and locations support the Compliance Management System in preventing and uncovering corruption. This measure is primarily aimed at minimizing risk.

We enhanced these efforts by implementing an internal control system for taxes (ICS) in 2019. The objective is to control and reduce domestic tax risks. Our ICS for taxes builds on our tax Code of Conduct and its C.A.R.E. principles. Brose created this Code of Conduct to demonstrate compliance with tax regulations, thereby reflecting the commitment and expectations of the executive management board.

**Code of Conduct fosters and demands ethical conduct**

The Brose Code of Conduct is given to every newly hired employee. Like our company principles, it is published on the intranet. Key contents of the Brose Code of Conduct include: humane conditions, collaboration with business partners, in particular fair business practices and preventing corruption as well as avoiding conflicts of interest, handling information and other assets, fairness and diversity, responsibility in the workplace and quality and environmental protection. The code applies at all of our locations worldwide and for all cultures and value systems. The rules and procedures are updated and adapted to current demands on a regular basis.

Supervisors are tasked with ensuring that the employees assigned to them understand and comply with the Brose Code of Conduct. The company will not tolerate any behavior that contradicts the Code of Conduct and such behavior may result in legal action. No serious breaches to the Code of Conduct were reported in 2019. Employees with PC access are required to participate in an e-learning course on the Brose Code of Conduct every 36 months. Course content is updated regularly. The courses last about an hour and raise awareness of the behavior norms outlined in the Brose Code of Conduct while making employees conscious of proper conduct in their day-to-day work. There is no breakdown of the exact amount of time required for this. In the period from 2017 to 2019 10,371 employees completed a corresponding e-learning session. The average fulfillment rate for the year 2019 is approximately 91 percent worldwide.

**Fair treatment of business partners**

Brose also offers on-site compliance training on the topic of “Fair treatment of business partners” in foreign and domestic companies of the Brose Group. During the reporting year over 500 employees received training in the European locations alone. These events were supplemented with additional training sessions on specific subjects in the field of antitrust and anti-corruption law to raise awareness among employees in high-risk areas or projects. Additional special training courses in Purchasing and IT were held in Asia in 2019. To ensure non-discriminatory HR recruiting processes, the regional compliance organization in North America assists the HR department with its selection and recruiting processes.

The Code of Conduct for Suppliers and Service Providers and the Brose Global Terms and Conditions of Purchase (GTCP) oblige our business partners to be socially responsible and comply with all applicable laws, in particular those governing the avoidance of corruption.

**Risks of corruption in line with industry average**

An analysis of the risks of corruption in the Brose Group showed that the level of risk did not exceed the industry average in any of the relevant areas. No cases of corruption were confirmed in 2019, so Brose did not receive any fines or penalties due to corruption offenses in 2019. Antitrust authorities performed an antitrust review in January 2016. As in the past, the company cooperated with the antitrust authorities and supported their investigative efforts. There is a risk of relatively minor fines being imposed. Risk management provisions were made in the annual financial statements for the antitrust review. A limited risk of claims for damages by third parties remains.

**Reporting potential compliance incidents**

If employees have questions about compliance topics or are aware of any compliance incidents, we expect them to actively seek a personal meeting with their supervisor to discuss the matter or directly contact the responsible Compliance Officer, HR support officer, the works council

or the head of Human Resources Brose Group. Every concern is treated as confidential. Moreover, internal HR audits are conducted to discuss the relevant topics by location and identify the need for action as required. Local and/or global employee surveys can further be used to consolidate inconsistencies into a relevant catalog of questions. The Brose Group is planning on introducing a web-based whistleblower system in 2020 to meet future legal requirements and more. Employees, customers, suppliers and other business partners can use the system to confidentially or anonymously report violations against legal regulations.

# Information and IT security

The European General Data Protection Regulation (GDPR) entered into effect in May 2018. To underscore its responsibility as a trusted employer, Brose implemented corresponding internal data protection provisions for employees and applicants as well as for customer and supplier relationships. These provisions outline how we handle employee and customer data.

Our data protection guideline covers the responsible contacts within the company along with basic principles for satisfying the requirements set forth by the GDPR. Moreover, it provides a framework for how Brose and its employees accept ownership of these responsibilities. The guidelines are binding for all employees in our European locations. They are always accessible to all employees via the Brose intranet.

To ensure adherence to data protection regulations, every employee with access to a PC is required to regularly complete e-learning courses on the topic of data privacy every two years. Additional e-learning modules covering IT and information security were added to supplement this material.

Topic and target-group specific awareness training will also be provided to employees to augment this program. These training courses include on-site events along with practical recommendations for action. Additional instruction is planned for employees in HR roles and in the development departments, because they frequently come into contact with sensitive data in their day-to-day work.

There were no complaints concerning breaches of customer privacy or losses of customer data during the reporting year.

# Sustainable procurement

We rely on premium quality suppliers and set high standards for purchased parts and capital goods to exceed our customers' expectations. Even before awarding a contract, Brose conducts a thorough review of the supplier's capabilities. Regular progress checks are carried out once a contract has been awarded. The supplier must deliver precise information regarding the project and the project development status. Upon series start we perform additional assessments and evaluate compliance with our high quality standards. Our guidelines are aligned with those of the automotive industry in accordance with IATF 16949 (International Automotive Task Force).

To satisfy the constantly rising automotive market demands for sustainable procurement Brose is also a member of the VDA project group (working title COSAX: Corporate Sustainability Assessment Exchange). We work with automakers and tier-1 suppliers in the group to create a standardized global sustainability assessment mechanism for companies in the automotive supply chain. This project delivers comparable audit results and thus leads to mutual acknowledgment of these outcomes in the supplier network. COSAX is scheduled to launch in 2021. It will prevent multiple audits and minimize auditing expenditure overall throughout the industry. At the same time, it also takes into consideration the sustainability requirements of a wide range of stakeholders in our industry. Furthermore, the COSAX project addresses some of the future legal requirements with regard to sustainable procurement: the German National Action Plan adopted in 2016 implements the UN Guiding Principles on Business and Human Rights (UNGP 2011), thus calling for mandatory due diligence for all market players with respect to sustainable procurement paths and products.

**Zero-defects target and supplier rating**

We demand zero-defect products from our suppliers based on the principle of avoiding errors throughout the entire supply life cycle. Suppliers must provide detailed documentation of their quality management measures. This includes initial sample documents or proof of qualification and requalification of the delivered parts or systems.

We strive for positive, collaborative partnerships with all of our suppliers, a consistent quality management system and continuous improvements to processes and products. We use audits to ensure the presence of effective management systems (IATF 16949). The validity of the certification is reviewed on a regular basis and considered in our supplier rating.

75 technology audits were conducted for new suppliers during the reporting year in accordance with the standard questions in the VDA 6.3 processes. Depending on the specific discipline, the audited companies were also required to answer additional technical questions. Moreover, suppliers are also regularly audited to determine the competitiveness of their logistics processes. We performed 93 process audits among existing suppliers in 2019. There were no complaints.

**Supplier assessment in consideration of ecological aspects**

At Brose our approach is to map the entire production and product life cycle in the most ecological way possible. Our environmental management system is based on the ISO 14001 standard.

We are also committed to ensuring the most environmentally friendly production and product life cycle possible when it comes to our suppliers and delivered parts. To classify our products as "green" we must ensure that the entire supply chain meets ecologically tenable and coherent criteria.

We perform a specific review of ecological criteria at all of our new suppliers using technology audits in line with the VDA 6.3 standard. Employees from the Brose Purchasing, Technology and Quality departments conduct the on-site inspections. Ecological criteria surveyed include: Do the products and processes consider environmental aspects? Do employees receive training on environmental aspects? Have environmental simulation tests already been implemented in product and process development? Beyond this, the audits also include existing certifications in accordance with ISO 14001 or OHSAS 18001/ISO45001. Specifically, we require certification in accordance with ISO 14001 from all of our galvanizers.

**Employment conditions along with ethical and moral principles**

In the spirit of our Code of Conduct and company principles we encourage employees to exercise their freedom of association and engage in collective bargaining. These principles apply in the same way to every vendor the Brose Group works with. We have high expectations of ourselves and our suppliers when it comes to employment conditions. To our knowledge, none of our vendors tolerates child labor or dangerous working conditions. Similarly, to our knowledge we work exclusively with suppliers that do not subject their employees to forced or compulsory labor. Moreover, we are unaware of any incidents in which our suppliers have not met our ethical and moral company principles.

We always review every new supplier's capability and performance. We use the supplier onboarding process, supplier self-assessments and additional evaluations of key issues such as innovative strength or environmental management systems for this purpose. As part of the process, Brose sends all potential suppliers a Self-Assessment Questionnaire (SAQ). This questionnaire requires suppliers to make explicit statements regarding their moral principles and internal compliance rules, among other topics. For instance, companies must be able to provide information on whether they can assure that no child or forced labor and no discrimination is tolerated on the basis of gender, race, skin color or similar. These question are based on the Code of Conduct that is binding for all Brose Group employees worldwide and is a fundamental part of our supplier management.

We anchored these principles in our Global Terms and Conditions of Purchase (concluded with 85 percent of all production material vendors in 2019) and in our supply contracts. Our suppliers are required to maintain socially adequate working conditions and to request that their vendors observe these principles as well. Our Global Terms and Conditions of Purchase are available on the Internet at https://www.brose.com/de-en/purchasing/general-terms-and-conditions-of-purchase/.

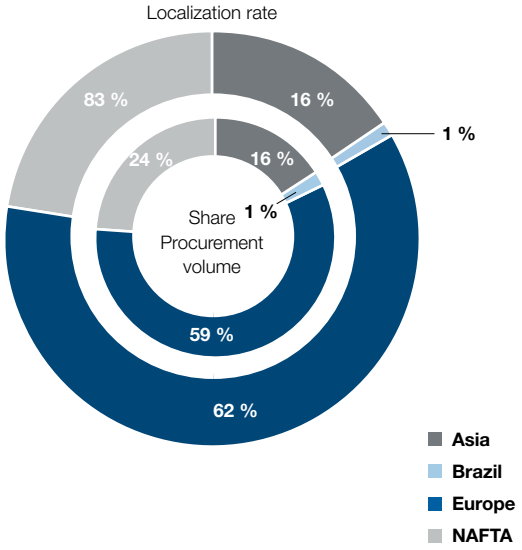
**Goods procurement in the regions and localization rate**

Around 14,000 suppliers from 44 countries throughout the world deliver products to the various locations of the Brose Group. During the 2019 fiscal year we procured 59 percent of goods and services from suppliers in Europe, 24 percent from the NAFTA region, 16 percent from Asia and 1 percent from Brazil. Our suppliers' share of value added is about 60 percent.

The overall localization rate of the Brose Group is 89.4 percent. This is just one of the ways we strengthen local economies and optimize transport routes, while simultaneously creating more local jobs.

Share of procurement volume and localization rate

by region




When procuring new systems we also ensure that they meet our high environmental and energy efficiency standards. Our internal Production Equipment Specifications "Work Safety and Environment – BN 589580" are always an integral part of our technical specifications, which ensures these environmental and energy efficiency standards are firmly anchored in the procurement process.

**Project managers and processes for CR management defined**

We are establishing the most efficient and resource-conserving groupwide methods of purchasing raw materials and products effectively implementing both internal and external supply chain sustainability requirements. As part of our corporate responsibility (CR) we therefore nominated a Sustainability Project Manager for our Purchasing organization and filled the position on 1 January 2019.

The project manager is responsible for every aspect of CR within the supply chain. This includes the requirements we define for our suppliers and processes and their continuous further development. Brose published a Code of Conduct for suppliers in September 2019 as part of this effort. Workshops with key automotive industry companies and training programs with our suppliers are planned to continue establishing and expanding our CR processes.

**Stakeholder engagement in purchasing**

The Brose Group values consistent communication with suppliers and customers and works hard to maintain the best possible business relationships, for example by conducting regular supplier surveys. We use these to determine whether our vendors continue to meet Brose's high standards. [GRI 102-40, 102-42, 102-43, 102-44]

We acknowledge our appreciation for outstanding suppliers on a regular basis with Supplier Awards and Key Supplier Recognitions. In 2019 the Purchasing organization created the BEST (Brose Exclusive Supplier Team) program and nominated the first strategically important suppliers. The aim of this initiative is to further intensify collaboration with these suppliers and the exchange of ideas and information on strategic topics at the executive level. We plan to expand discussions and the program as whole in the coming years.

# Products

No matter where in the world a car door or window is opened, a car seat adjusted or the air conditioning turned on – you will almost always find Brose Group technology in use. Although usually not visible to the driver, many of the features that enhance vehicle safety, comfort and efficiency are based on our products. Backed by decades of expertise in mechanical, electric and electronic systems and sensor technology, we develop comprehensive solutions for our customers.

**Systems for doors, liftgates and lids**

Brose is the world market leader in the development and manufacturing of mechatronic products for vehicle doors and liftgates. With over 90 years of experience we set trends that enhance safety and comfort. Our door systems integrate all of the mechanical, electrical and electronic functions of a vehicle door into a single door system. This eliminates a number of components, thereby reducing weight and costs. Brose supplies these systems to our customers' assembly lines pre-tested, ready-to-fit and synchronized with their vehicle production. The result: faster installation and lead times with increased quality overall. We address environmental requirements to reduce $CO_2$ with lightweight design that features an intelligent material mix and optimum functional integration. One example is our door system with organo sheet carriers, which saves over five kilograms per vehicle compared to conventional steel doors.

Our system for hands-free opening and closing of liftgates and trunk lids sets new standards. We have transferred this expertise to a power side door drive that makes a new dimension of comfortable vehicle access possible. The concept is flexible: it can be adapted to different space and door architecture requirements, depending on the vehicle manufacturer. Our contact-free sensor technology is the foundation for the safety of these systems: these sensors detect obstructions and stop liftgates and doors from closing before a collision occurs. Our expertise is based on decades of experience in anti-trap protection for window regulators.

**Adjustment systems for front and rear seats and the interior**

Virtually no other car feature must satisfy as many individual needs as the vehicle seat – from passengers' growing comfort expectations to the desire for maximum flexibility in the vehicle interior. Components and systems from Brose help manufacturers meet this challenge.

Brose seat electronics control up to 25 intelligent adjuster drives in cars today. They also regulate seat heaters and climate control and include comfort features. Passenger safety is guaranteed thanks to the electronically controlled pre-crash function, actuator systems designed to prevent fatigue and seats that feature tactile warnings in dangerous situations. Our portfolio ranges from manual seat adjusters to all-electric power seat structures with lumbar support and a massage function. Active positioning of the headrest and side bolsters along with adjustment of the rear seat entertainment complete the product range. Our goal is to increase passenger comfort and safety – from entering the vehicle and buckling up to adjusting the seat position Thanks to advanced material concepts and production methods, we produce one of the lightest seat structures worldwide without compromising vehicle safety.

**Electric drives**

Brose motors and drives are also used in thermal management, the drive train as well as in the chassis and steering. They also operate window regulators, seats, liftgates and side doors. Our drives are available in a power range of 20 to 11,000 watts and voltages of 12 to 810 volts. Brose has also transferred its expertise from the automotive industry to the e-bike: our engineers designed an innovative drive system for electric bikes that has been produced in Berlin since 2014 – and the portfolio was expanded during the reporting year to include an e-bike battery pack and three e-bike displays.

Advances in electrification are impacting further developments in our motors and drives. We are systematically aligning our portfolio so that we can flexibly adapt to this trend: the Brose modular motor system enables us to quickly react to changing requirements – across all vehicle types and electrical system architectures – thanks to standardized components.

Power auxiliary systems reduce energy consumption and at the same time make driving a more pleasurable experience. One example is the electric air conditioning compressor: it is more energy efficient than conventional variants powered by an internal combustion engine because it only works when it is needed. It also increases driving comfort, for instance when the air conditioning system ensures that the car is the desired temperature before passengers enter the vehicle. Electric vehicles already rely on this technology.

# Development and innovation

Vehicle access and interior functions: our mechatronic solutions expertise brings comfort, safety and efficiency to these areas. We are already working on solutions for tomorrow's customer requirements today. Challenges such as autonomous driving, e-mobility, connected vehicles and components and future usage concepts related to car sharing require fresh ways of thinking. This also applies to the interaction between the vehicle exterior and interior. Our capabilities in the electrification and digital connectivity of our systems enable a completely new customer vehicle access experience when entering and exiting cars and in the flexibilization of the vehicle interior. We will focus much more on the functional interaction between components and systems instead of individual parts in the future.

We spent about 9.1 percent of our turnover in research and development during the reporting year. 3,000 of our employees work in this area, a third of whom are located outside Europe. Over 200 patent applications each year are proof of our company's innovative strength. We also continuously invest in the further qualification of our employees and the expansion of regional development areas.

The use of modern technologies helps Brose reduce development times for new products. Additive manufacturing processes not only enable us to manufacture prototype components but also pre-series tools. This means that the time required from the completion of the virtual model to the use of the sample part made from the original material is only weeks instead of months. At the same time, efficient simulation methods ensure that far fewer physical tests are required. Comparing calculations with testing helps us deepen our understanding and further develop our analysis methods.

# Sustainable product and technology innovations

In terms of company policy we are always reducing damaging environmental effects across the entire life cycle of our door and seat systems as well as our drives. Our “Guidelines for environment, energy and occupational safety and health” form the basis for this. When reducing damaging environmental impacts the focus is on lightweight design along with the corresponding savings in energy and resource consumption during the service life of our products once they reach the consumer. But the selection of materials also has a major impact on the ecobalance of our products, which is why we try to use simple, recyclable materials whenever possible and determine a recyclability rate for each product family.

We reduce the carbon footprint of the products themselves and our production as a whole by incorporating manufacturing processes that avoid waste and energy-efficient technologies. Energy efficiency is a decisive factor in selecting the right supplier for new systems procurement.

To reduce $CO_2$ emissions in production and during the service life of our products, we constantly strive to improve them, with smaller form factors and lower weights being among our highest priorities. We made significant progress with multiple products in every business division during the reporting year. The basis used to calculate the following examples is the simplified Life Cycle Assessment according to Brose Norm BN 590020 with an assumed ratio of 50 percent each for gasoline and diesel vehicles. The defined service life is based on a useful life of 200,000 km.

For example, the carbon footprint – i.e. product-related $CO_2$ emissions – is scheduled to decrease by a total of 200,000 t of $CO_2$ by the end of 2021. We introduced various measures to ensure this plan’s success. These include lowering material and energy usage, achieving weight savings and reducing hazardous substances and emissions in general. These figures can be presented as $CO_2$ equivalents.

The Brose Group participates in official audits and certifications to meet these targets. Our certified management systems for energy and the environment assure compliance with the relevant, industry-specific environmental requirements in product design and manufacturing. This not only enhances the credibility of Brose products, it also makes them comparable by international standards in terms of their relevancy to the environment.

## Exterior division

The new structure model enabled Brose to unleash the full technical and economic potential of organo sheet door modules during the reporting year. The carrier features a load-specific design, meaning that it can now also perform tasks related to door structure – the material construction with glass fabric and local reinforcements significantly enhances structural rigidity and crash performance. The result: the already lightweight organo door system is now 1.2 kg lighter at the same or an even lower price point, making this technology the most affordable option for dramatic weight savings in doors.

Brose collaborated with its partner Plastic Omnium to develop a concept for a hybrid vehicle door construction made of plastic and strategically positioned metal reinforcements. This combination of materials enables new shapes and design freedoms, which will have an especially positive effect on aerodynamics alongside a range of customization options.

Possibilities include integrated rear mirrors and cameras, the elimination of the need for handles, seamless window transitions and air ducts to the wheel housing built directly in the door. These measures reduce the flow resistance of the vehicle by around 5 percent. They also cut energy and fuel consumption while extending vehicle range. This decreases $CO_2$ emissions during operation by 1.9 g/km. Since the hybrid door includes all of the desired com-

ponents from the closure system to the side door drive, the precision manufactured door can be delivered just-in-sequence directly to the customer's assembly line.

Furthermore, this reporting year marked the first ramp-up of door modules with a new thin-wall technology. Wall thickness was reduced to 1.4 mm, resulting in a weight savings of 590 g per vehicle without sacrificing quality. Calculating the savings potential based on these weight savings alone could cut $CO_2$ emissions by 34,000 t by the end of production in 2026. At just 1,760 g, the new generation of the push rod drive for liftgates, which was also first produced in 2019, offers weight savings of around 210 g compared to its predecessor. It is slated for use in 3.2 million vehicles by 2029, which should result in a $CO_2$ reduction of 15,360 t.

The hybrid door developed by Brose and Plastic Omnium offers new design freedoms to improve vehicle dynamics.


## Interior division

Brose leveraged significant savings potential for a power steering column adjuster. The new power steering unit is 35 percent lighter compared to a reference product manufactured by one of our competitors. After conducting a systematic analysis of the entire system, the business division was able achieve weight savings for virtually every component part of the adjuster. Based on the planned quantities of 250,000 million units per year starting in 2022, we anticipate a $CO_2$ reduction of 920 t.

The Smart Interior Actuator assumes several functions in the vehicle interior and is used to adjust vent flaps and air outlets, among other things. Thanks to design improvements and additional new features, Brose also achieved a 50 percent reduction in package space and weight compared to a reference product made by one of our competitors. Based on the planned quantities of 10 million units per year starting in 2023, we anticipate a $CO_2$ reduction of 2,800 t. We have been producing our light organo sheet load-through for rear seats since 2016 – the first high-volume automotive production of a structural component made of this lightweight material. The load-through weighs just 4 kg, making it around 38 percent lighter than conventional variants made of steel. The new generation introduced during the reporting year will save another 1.2 kg per unit and generate even less waste during production.

Brose is working on intelligent material combinations for future seat structures to save weight and optimize production. Brose is actively pursuing a variety of research projects for maximum synergy. One example of this is the "FuPro" project promoted by the Federal Ministry of Education and Research that Brose is implementing together with the Institute of Lightweight Engineering and Polymer Technology at Dresden University of Technology. The project made it possible to integrate fiber composited hollow profiles into organo sheet injection molded structures, creating extremely robust structural components. A practical example of this was the integrated seatbelt we developed, which slashes weight by 30 percent and eliminates ten punched and bended parts made of steel compared to conventional designs.

Exceptionally lightweight integrated seatbelts at the "Brose Concept" exhibit at the International Motor Show in 2019.

## Drives division

Brose engineered a new “FlexBlade” design for cooling fan wheels, thereby achieving performance-related energy savings of about 38 percent compared to the previous model. Intelligent wing geometry in the wave design provides a tremendous performance boost compared to traditional fan wheels. It is possible to generate the ideal wing geometry for each individual application scenario based on the simulation and parameter variation. The products are supplied as complete cooling fan modules. They comprise a shroud, fan wheel and motor. This technology will be deployed for the first time in 2020. Based on the planned quantities of 160,000 million units per year, we anticipate a $CO_2$ reduction of 5,270 t.

We offer the shrouds in our cooling fan modules in a range of sizes and performance levels. Instead of making them from polyamide (PA) as in the past, future shrouds will be manufactured from the lighter material polypropylene (PP). The material thicknesses of PPLGF30 is 17 percent lower than that of the older material PA6GF30, cutting the module’s weight by around 6 percent. In addition, less energy is consumed during processing. This translates into a 30,702 t reduction in $CO_2$ emissions on just a single order of 4.2 million units. The percentage of Brose cooling fan modules with PP shrouds is rising steadily. Our target is to increase this from 5 percent in 2017 to 65 percent in 2021.

We also rely on lightweight design for our window regulator motors. During the reporting year the share of our BM2010 window regulator motors increased to 19.9 million drives. Brose has supplied a total of 35.2 million window regulator drives to customers. In terms of weight and performance, the new generation of the product saves 86,764 t of $CO_2$ each year.

In the future, Brose cooling fan modules will feature more and more shrouds made of the extremely lightweight material polypropylene.

# Environment

Any type of industrial production poses myriad challenges to the respective business when it comes to environmental protection and responsible handling of resources. The Brose Group introduced environmental standards as early as twenty years ago and has continued to develop them ever since. And, as a family-owned company with an over 100-year history, we act with foresight and sustainability. Issues like environmental protection and the conservation of raw materials have a high priority here at Brose. Our environmental management system is based on international standards. When it comes to materials, Brose considers the carbon footprint from raw material extraction to recycling. We also test multimaterial systems, recyclate granulate, biopolymers and natural fiber-reinforced composite materials.

During the 2019 reporting year we implemented more than 83 individual measures designed to increase energy efficiency in our production locations. The measures were primarily related to cross-sector technologies deployed across various manufacturing processes, such as compressed air, lighting, cooling or ventilation. For example, successive modernization of our lighting equipment in the respective production and administrative areas saves up to 40 percent of the required energy – a total of up to 1.9 GWh each year. Moreover, we either replaced compressed air generating equipment with more efficient models or equipped them with intelligent controls or heat recovery systems. The entire central compressed air system at our Würzburg location was modernized and now provides us with a highly efficient supply of compressed air with an average ratio of under 0.089 kWh per $m^3$. We are increasingly replacing incremental controls in ventilation systems with frequency controlled drives, which enables us to operate them based on our actual needs.

**Brose Production System: lean management for a smaller ecological footprint.**

**Lean management** is a comprehensive management philosophy aimed at optimizing costs, quality and supply capability. The objective is to optimally coordinate all of the activities required to create value and avoid superfluous tasks, thereby increasing the company's competitive strength. The ecobalance improves continuously in the process, for example through the procurement of new machines and systems for the latest products. Consistent application of the four lean principles, flow, "takt", pull and zero defects, assures perfectly aligned and integrated systems that ensure a continuous flow of materials. Lean management methods make processes and interrelationships transparent.

Lean management principles and methods can be applied at every level of the Brose corporate group: in production, business divisions, development, sales and in all direct and indirect areas of our business such as administration. No matter what we do, our goal is to sustainably reduce or avoid all forms of waste in the flow of materials or information and in particular in the interaction between the different departments along entire process chain.

**Examples of the lean management method's contribution to our efforts to conserve resources and energy:**

**Reduction of paper in direct and indirect areas of the Group**
- Use of software to present standardized, company-wide and project-specific documentation
- Electronic handling of internal audits and assessments

**Reduction in transport routes, storage, overproduction**
- Associated optimization of Production Control (lot sizes, set-up times, etc.) in the Coburg press shop
- Elimination of transport routes and storage of materials with a logistics service provider
- Fewer resources expended for products without customer orders

**Prevention of errors and scrap**
- Saving transport costs and $CO_2$ by using Poka Yoke, root cause analysis, FMEA, non-destructive tests and TPM
- Less scrap thanks to a reduction in the use of materials

## Product life cycle, environmental management and energy management

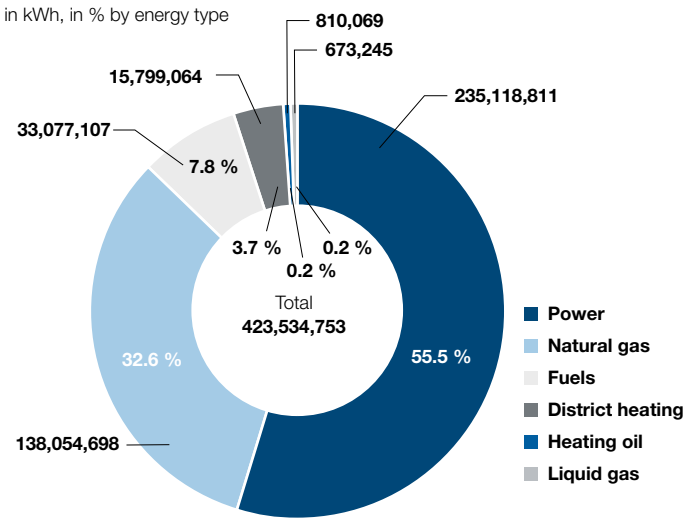
We developed our own method of determining the $CO_2$ emissions our products generate throughout their entire life cycle based on material and energy flows. We also determine the share of reusable components in our products and aim to minimize the use of resources. In addition, we make efforts to bundle material and product transports. Brose wants to continually contribute to the steady improvement of the ecological efficiency of our business. This is defined in the Brose Code of Conduct. The environmental management system we use performs a valuable service here. Firmly established product development targets include environmentally friendly design, technical safety and health. Our annual certification according to DIN EN ISO 14001 shows how efficient our environmental management system is in all of the production locations of the Brose Group. Our process management is also certified according to IATF 16949.

To improve the energy efficiency of our production and infrastructure, we have also introduced an energy management system in selected locations that is certified according to the requirements of the DIN EN ISO 50001 standard. In 2019 the system was expanded to include the Bamberg, Coventry (Great Britain), Prievidza (Slovakia) and the Shanghai (China) locations and now encompasses 17 plants. We publish the respective certificates on our website. Our “Guidelines for environment, energy and occupational safety and health” document our commitment as a globally operating company to utilizing environmentally friendly technologies. We monitor compliance with all rules and laws related to the environment and work to counteract violations. The Brose Group records all incident-related pollution. No significant pollution due to waste, chemicals or uncontrolled emissions released into the environment was reported during the reporting period. No fines or other non-monetary sanctions were issued in 2019.

# Energy use and emissions

In 2019 total energy consumption among all Brose locations was 1,524,725,112 MJ. This includes consumption of energy sources such as electricity, gas, district heating and heating oil that we need for our manufacturing processes and for our administration buildings. The main type of energy Brose uses is electricity (55.5 percent), followed by gas. The majority of gas consumed goes toward our own electricity production and our paint finishing systems. The share of renewable energy in power consumption is 40.2 percent; in total energy consumption is 22.3 percent. We operate a combined heat and power plant (CHP), where we generate part of our electricity ourselves and feed excess power and heat into the local public grid. In 2019 we fed 2,230,917 kWh of electricity and 16,335,480 kWh of heat into public supply networks in this way. The energy intensity of the Brose Group during the reporting year is 361 kWh/thousand euros. We believe this ratio of energy consumption to plant costs excluding material and tool costs is relatively low. We were able to achieve significant savings overall in 2019 thanks to efficiency measures (see table on the right).

Energy consumption in 2019




Energy savings thanks to efficiency measures in 2019

| | kWh | MJ | $CO_2$ in t | in % |
|---|---|---|---|---|
| Power | 5,494,379 | 19,779,764 | 3,297 | 2.3 |
| Diesel/Gasoline | 853,108 | 3,071,187 | 228 | 2.5 |
| District heating | - | - | - | - |
| Gas | - | - | - | - |
| **Total** | **6,347,487** | **22,850,952** | **3,524** | **1.5** |

**Measures for reducing greenhouse gases**

Our goal is to annually reduce our energy consumption by 3 percent, thereby simultaneously cutting greenhouse gas (GHG) emissions. Absolute values based on emissions in 2017 are defined as target figures. We also aim to reduce product-related $CO_2$ emissions in the three business divisions by 200,000 t during this period.

Many factors influence energy consumption and the resulting $CO_2$ emissions – including system utilization, product portfolio, production technology and weather conditions. This is why we use separate, successfully implemented process and system-related measures to assess the reductions in GHG emissions.

In light of the various environmental protection and efficiency measures outlined above, Brose is committed to sustainably and permanently reducing additional GHG emissions beyond $CO_2$. This applies in particular to volatile organic compounds (VOC) and chlorofluorocarbons (CFC).

For over two decades, Brose has exclusively used a low-emission cathodic dip painting (CDP) method for coating its seat structures with water varnishes that have solvent concentrations far below 2 percent, for example. The unavoidable VOC emissions that result in the process are recombusted in all of our European locations. We have also continuously improved the degree of efficiency of this painting process. The CDP system we set up at our plant in New Boston (USA) in 2019 features this technology. This is important to us as part of our corporate strategy, even though there are no associated regulatory requirements in the US. The entire process is neutral in terms of nitrogen oxide emissions. Therefore, what would normally be an obligatory disadvantage of recombustion technology no longer exists. During the reporting year we placed an order for two drive-in climatic chambers with $CO_2$ as a refrigerant instead of R23 (fluoroform) in the freezing stage. The climatic chamber will be used in the testing area for access & closure systems. We worked with our system manufacturer to implement the first project of this size using $CO_2$. This measure enables us to mitigate the risk of serious environmental damage due to refrigerants in the event of an incident. Each system reduces global warming potential by 114 $CO_2$ equivalents. At the same time we also expect a 6.5 percent increase in energy efficiency. The systems were delivered and installed in fall 2019.

We also installed a new, energy efficient servo press at the Coburg location during the reporting year. Based on manufacturer specifications, the unit uses about 40 percent less energy than conventional presses thanks to the servo-mechanical drive and the installed energy recovery system. We therefore anticipate an annual savings of up to 919 MWh of electricity compared to typically used hydraulic presses for the production of seat rails. We will review these energy requirement specifications in 2020 with the help of internal measurements.

The Brose $CO_2$ balance is based on the international Greenhouse Gas Protocol standard. Emissions comprise:

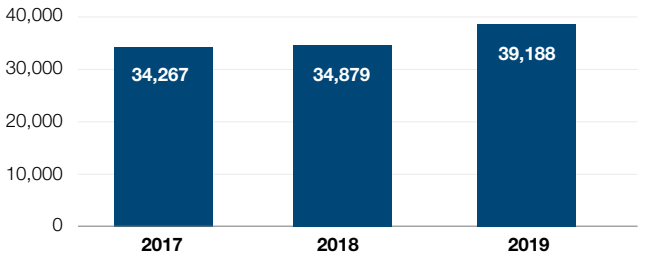
– Direct emissions from oil and gas consumption along with the Brose fleet and Brose Flugservice GmbH (Scope 1)
– Indirect emissions from generated power and district heating (Scope 2)
– All additional, indirect emissions from manufacturing and transport processes in the supply chain and other indirect emissions arising through the use of our products or waste disposal. This also includes emissions generated during business travel (Scope 3).

The $CO_2$ equivalent for Scope 1 and Scope 2 reporting is calculated by multiplying primarily local emissions factors with the computed fuel consumption. In certain locations we also use factors from the Intergovernmental Panel on Climate Change (IPCC) database.

The $CO_2$ equivalent for the Scope 1 emissions from all of the Brose Group locations in the 2019 fiscal year is 39,188 t. This increase over the previous years is the result of newly commissioned paint finishing systems. The $CO_2$ equivalent for the Scope 2 emissions in 2019 was 91,256 t.

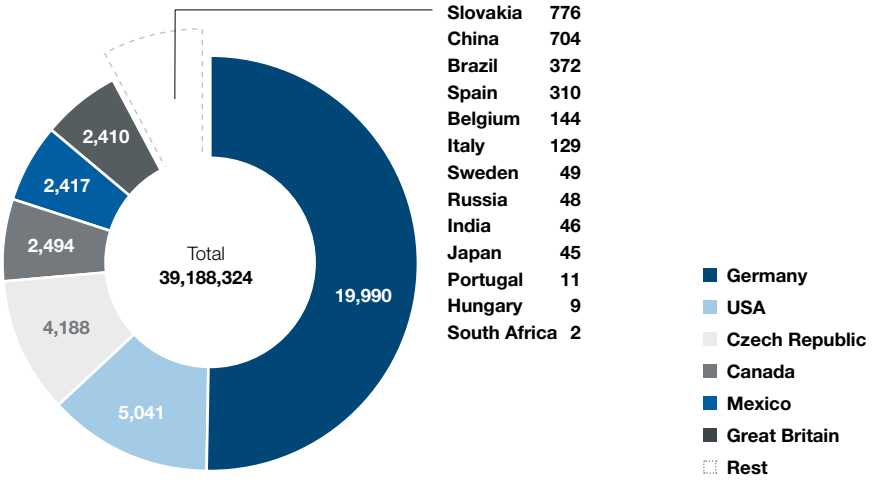
Scope 1 emissions

Tons of $CO_2$ equivalent by year



Scope 1 emissions 2019

Tons of $CO_2$ equivalent by country

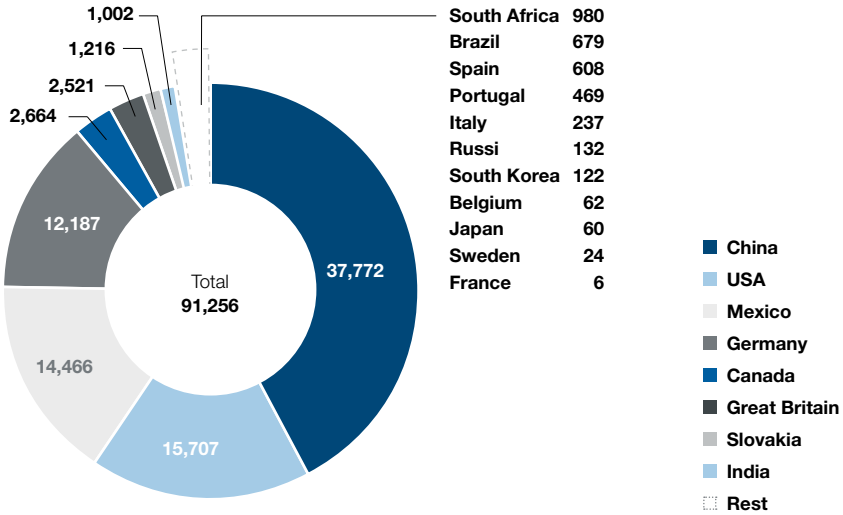



## Emissions from generating purchased energy

We include local emissions factors in our calculations of emissions from purchased energy. Total Scope 2 emissions in the Brose Group broken down by percentage is 36 percent in North and Central America, 43 percent in Asia and 21 percent in Europe – which also includes Brazil and South Africa for organizational reasons.

Scope 2 emissions 2019

Tons of $CO_2$ equivalent by country

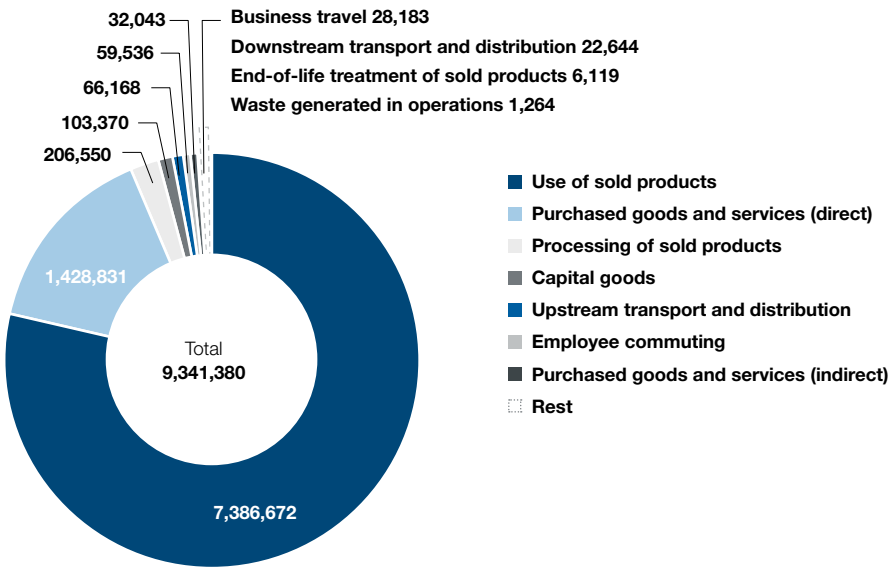


## Emissions from the downstream value chain

The $CO_2$ equivalent for all Scope 3 emissions from the Brose Group locations in the 2019 fiscal year is 9,341,380 t. Most of our Scope 3 emissions are associated with the use of our products in our customers' finished products. We consider the following factors when determining these Scope 3 emissions: useful life, drive type and part weight.

Scope 3 emissions 2019

Tons of $CO_2$ equivalent by category




## Determining the intensity of GHG emissions

The intensity of greenhouse gas emissions (GHG) in the Brose Group is reported annually in the Carbon Disclosure Project. Three different quotients are provided.

Intensity quotient of GHG emissions

| Quotient | Value | Change 2018 to 2019 | Reason |
|---|---|---|---|
| t $CO_2$/million € turnover | 21.1 | +10.8 % | Slightly lower turnover and higher Scope 1/2 emissions (due to new construction/expansion of production sites, particularly with paint finishing systems and in China) |
| t $CO_2$/employee | 4.9 | +8.8 % | Virtually constant number of employees with higher scope 1/2 emissions (due to new construction/expansion of production sites, particularly with paint finishing systems and in China) |
| t $CO_2$/MWh | 0.31 | +25 % | Higher Scope 1/2 emissions due to corrections in Scope 1 inspections and construction and expansion of locations with poor $CO_2$factors for electricity (especially in Mexico and China) |

# Material and resource efficiency

The Brose Group is aware of its responsibility when it comes to conserving our earth's limited resources. We are working on this topic in many different areas of the business in order to identify and achieve potential related to more efficient use of resources. Our goal is to manufacture products that are free from hazardous substances to protect our consumers' health. When selecting materials, we consider compliance with legal and customer-specific guidelines. We actively follow up on these efforts in working groups.

We held our Environment and Technology Day for the fourth time in 2019. Employees and external lecturers shared information and ideas about how to use product design, manufacturing methods and logistics processes to achieve higher resource efficiency in ongoing projects.

We are installing an additive manufacturing system, e.g. for our electric air conditioning compressor housing, for the tool-free, material-efficient production of metal components. The first components for initial equipment of production vehicles are slated for production in 2020. Additive manufacturing processes augment conventional processes in meaningful niche applications and special variants. Compared to conventional manufacturing methods, material expenditure decreases of up to 90 percent can be achieved provided the product is designed with additive manufacturing guidelines in mind. The elimination of tools saves materials, money and time. This enables the production of vehicle components that are more efficient both in terms of materials and costs than their traditional counterparts. Additive manufacturing saves us around 20 percent more $CO_2$ compared to conventional production for the assumed scenario with four OEM customers and 500 housings each per year. We use the cradle-to-gate method as the basis for the analysis.

Use of materials for products in 2019

in tons, by material

| Material | Use of materials in tons | Share in percent |
|---|---|---|
| Steel | 380,742 | 75.4 |
| Filled/reinforced plastics | 67,942 | 13.4 |
| Copper/copper alloys | 14,492 | 2.9 |
| Plastic | 14,688 | 2.9 |
| Aluminum/aluminum alloys | 15,648 | 3.1 |
| Other metals | 9,853 | 2.0 |
| Elastomers | 766 | 0.2 |
| Magnesium/magnesium alloys | 360 | 0.1 |
| Zinc/zinc alloys | 698 | 0.1 |
| Other | 81 | 0 |
| **Total** | **505,270** | **100.0** |

Use of secondary raw materials for products in 2019

in tons, by material

| Material | Use of materials in tons | Share of secondary raw materials in tons |
|---|---|---|
| Steel | 380,742 | 118,030 |
| Plastic | 83,396 | 2,919 |
| Aluminum | 15,648 | 9,389 |
| Copper | 14,492 | 6,231 |
| **Total** | **494,278** | **136,569** |

# Waste treatment and prevention

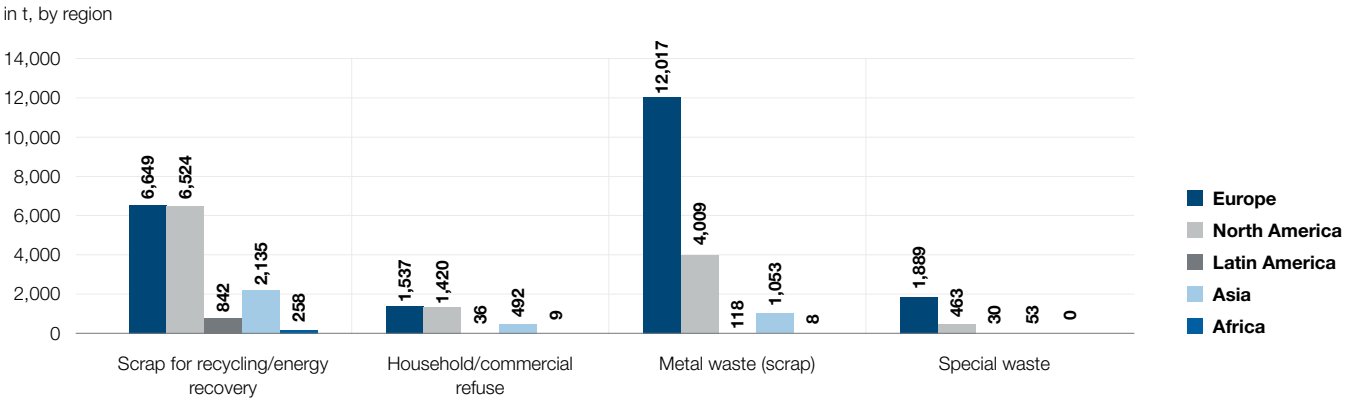
In general, we try to avoid generating waste whenever possible, which is why we use returnable packaging for shipments. However, since waste cannot be prevented entirely, we separate it by type in our locations to ensure effective disposal and recycling. The waste generated in our locations comprises: scrap for recycling, household or commercial refuse, metal waste and special waste.

We comply with reporting regulations. Moreover, documenting waste paths helps ensure that waste is transported away and recycled or disposed of in accordance with legal requirements. We have valid, written permits for waste disposal.

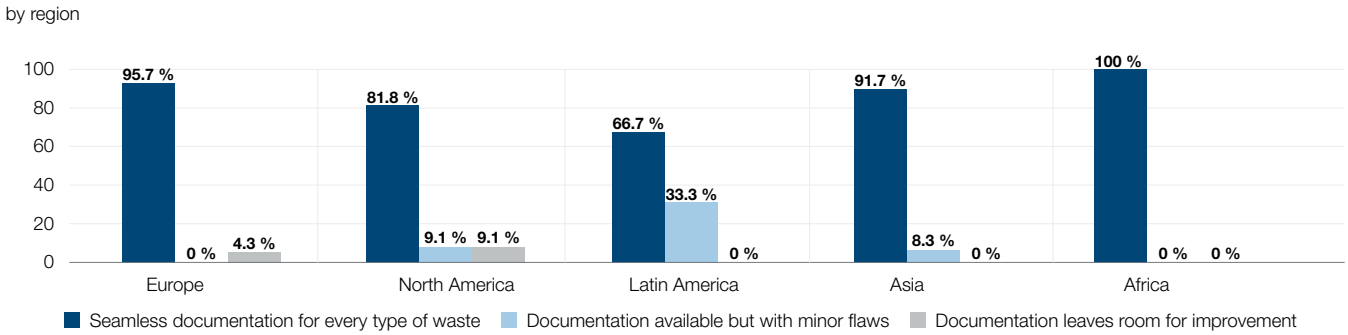
When selecting disposal companies we consider legal requirements, existing permits and completed service provider audits. Waste is almost exclusively sent to local disposal specialists. Waste is never transported across borders and residual materials are never exported. We select these disposal companies based on our company policies and only award the order when we have deemed the company to be suitable and reliable. Of the selected disposal companies, 92 percent are waste disposal specialists or companies that meet the necessary legal requirements for recycling waste and have the necessary permits. We expect 8 percent of the disposal companies to implement improvement measures, particularly with respect to documentation. We have not determined any violations against legal requirements among any of the disposal companies.

The Brose Group records all incident-related pollution. No significant pollution due to waste, chemicals or uncontrolled emissions released into the environment was reported during the reporting period. Consequently, no fines or other non-monetary sanctions were issued against the Brose Group.

Amount of waste types in 2019




Documented waste paths in 2019



# Transport and logistics

One of the most important approaches we take to reducing energy consumption and $CO_2$ emissions is the continuous improvement of our logistics processes. This is why we initiated Brose Transport Management (BTM) based on SAP TM in Europe in early 2018. It enables us to manage, structure and optimize our entire European road transport network ourselves. During the 2019 reporting year we bundled 73.5 percent of our freight volume into full loads. In addition, we launched a project to implement BTM in NAFTA.

Introducing transport management increased bundled transports by 2.4 percent from 2018 to 2019. We are currently conducting a survey on installing a crossdock in Eastern Europe to bundle even more volume. We expect the project to go live in late 2020.

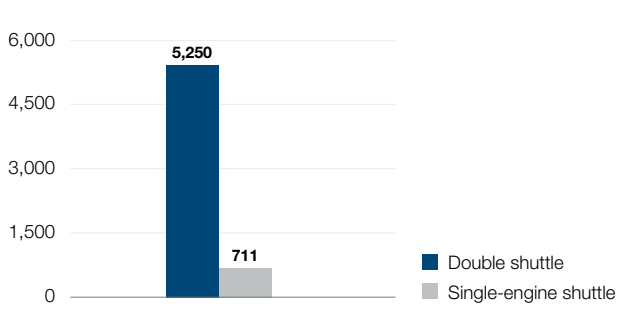
The Brose production facility in Ostrava, Czech Republic is one of our lead plants. Brose deployed a new logistics concept here in 2014 that still sets standards worldwide. The concept aims to optimize energy consumption with highly efficient processes. The plant receives parts and materials from 366 suppliers and during peak times employees unload up to 65 trucks via seven ramps daily. At the heart of the plant is the innovative tugger train solution, which almost completely eliminates forklifts in the plant – this solution is the only one of its kind worldwide. Employees do not handle the mini load containers until they reach the assembly line – this signals the end of the automated process. All in all, Brose has developed a forward-looking logistics solution for material and information flows in Ostrava. The modular solution components will also be rolled out at other production facilities in the future.

We were able to further improve the efficiency of the transport shuttles used in the door product assembly lines. During the reporting year we introduced a single-engine shuttle system that completed its series start during the first quarter of 2020. We anticipate a savings of around 85 percent per year compared to the double shuttle we have used until now. This translates into 4,500 kWh. Moreover, we expect to cut $CO_2$ emissions by around 2.7 t per system.

In international logistics we increased unit load by optimizing our packaging. We simultaneously increased our packing density by consolidating multiple component parts into a single assembly and packaging them together instead of separately. This enabled us to save over 730 shipping containers during the reporting year, which corresponds to a nearly 1,500 t reduction in $CO_2$ compared to the year prior. At the same time, packaging volume has decreased significantly.

Moreover, we worked with LKW Walter, one of our freight forwarding service providers, to save close to 95 t of $CO_2$ in 2019. We achieved this by transporting 160 full truckloads in Northern Europe and North Africa using a combination of trucks, trains and ferries.

Power consumption of shuttle systems in comparison



# Water and effluents

Total water consumption during the 2019 fiscal year fell from 837,520 $m^3$ in 2018 to 697,326 $m^3$ in 2019. Water consumption per employee and workday is approximately 122 liters. Water is obtained as well water (29.6 percent) and municipal water in potable quality (70.4 percent).

The drop in water consumption is paired with a 150,000 $m^2$ rise in green spaces. This reduction came about as a result of lower water consumption for watering green spaces due to weather conditions along with a number of smaller water-saving measures, specifically in cooling processes at our locations. Brose uses fresh water to cool production processes, as process water in surface technology, to apply cooling lubricants in washing systems, to water green spaces, in the canteen and in break rooms and for cleaning buildings.

We want to continue to reduce our demand for water with a consistent water management system. Our focus lies on water with high purity levels and processes that result in effluents with high levels of pollution. This is why we introduced a system in 2016 that enables us to measure and evaluate our water consumption along with steps for reducing it. This system is designed to uncover the reduction potential of our “water footprint” and visualize this information in the “Water Saving Actions” report.

The WWF “Water Risk Filter” was used to determine the locations in areas with “Water Stress” (reporting to CDP). We introduced an in-house weighting system for reducing fresh water and effluents. It considers the availability of fresh water in the region, the effluent contaminant load and the infrastructure required for wastewater treatment.

At the process level, surface technology is the largest water consumer in the Brose Group. It has a 98 percent share of our process water requirement, which corresponds to 18 percent of all fresh water needed. This is why we are concentrating on reducing the amount of water obtained as well as effluent levels in surface technology. One example of our efforts in this area is the dramatic reduction of the specific water consumption of our 9-zone CDP system, specifically due to recirculation, cascades, bath maintenance measures and process control. The latest-generation system consumes 5.6 $l/m^2$ of painted surface. The effluents we treat in our own plants are always emptied into the municipal sanitary sewers.

Beyond this, we planned an effluent-free surface coating system for our new plant in Taicang (China) that is scheduled to enter into operation in the third quarter of 2020. The project is designed to boost water efficiency and was the largest of its kind during the reporting year. It marks a major change in process control and to date no other reference systems exist with this scope. The CDP system’s water concept at the Taicang location has the overarching goal of avoiding liquid waste while maximizing water utilization efficiency. Implementing a vacuum evaporator and further optimizing mass flux has cut the amount of wastewater requiring disposal at the site by 90 to 95 percent. Certified companies are used to dispose of the comparatively low effluent loads (5 to 10 percent). Thus, 90 to 95 percent of the wastewater produced is recycled and fresh water requirements have been reduced dramatically.

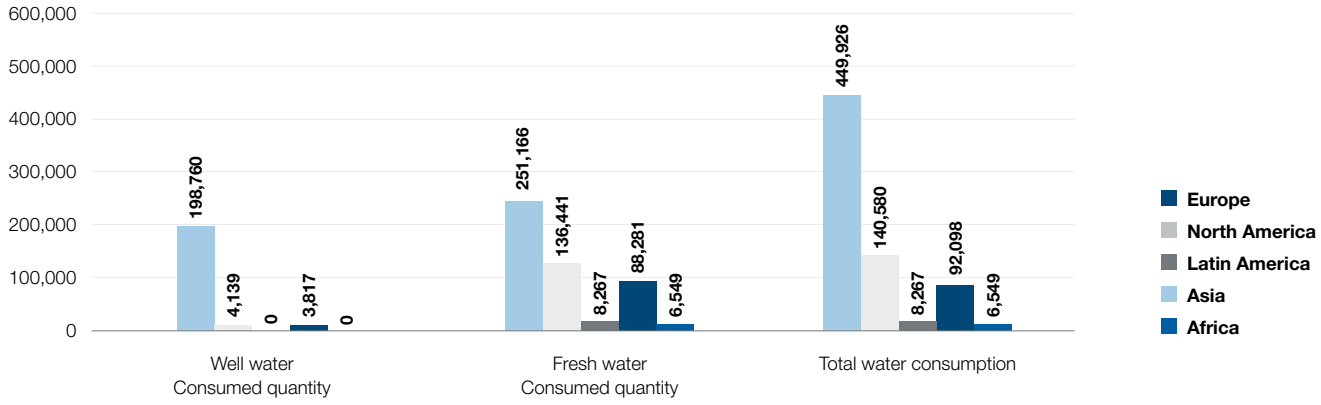
In general, when procuring new systems we focus on decreasing water demand and cutting the contaminant load while ensuring groundwater and soil remain protected. We do this by identifying systems that play a key role in water conservation early on in the procurement phase when specialists define all of the system relevant requirements for manufacturers to take into account. Regular inspection and maintenance work assures safe operation of systems that process substances that could contaminate water.

**Specific water removal - from fresh water to rainwater**
Brose uses a variety of sources for its daily water needs. Sanitary and social services use over 64 percent of fresh water; 18 percent is used as process water for surface technology. We use 16 percent of fresh water for irrigation and the remaining 2 percent for cleaning and washing processes. Well water is used almost exclusively for cooling purposes in our German locations; it is led back to the ground water via drainage shafts wherever possible.

**Treated and reused water**
Brose has effluent treatment systems, but it does not have its own water treatment systems. The reason for this is the position of our locations where a well-developed municipal infrastructure ensures the corresponding water treatment, thereby enabling water to be returned to surface water. Our Querétaro Aeropuerto location is one exception. Here effluents are treated in the industrial park’s own effluent treatment system and provided to the businesses located there again for reuse. We are aware of our responsibility when it comes to a resource as valuable as water

Total water consumption in 2019

in m³, by source and region




and we are working hard to conserve potable water as much as possible. For example, we intentionally designed the outside areas at our location in Querétaro Aeropuerto with as little lawn space as possible to reduce the amount of watering needed. At the same time, very few production processes require water.

**Effluent discharge systems and water quality**

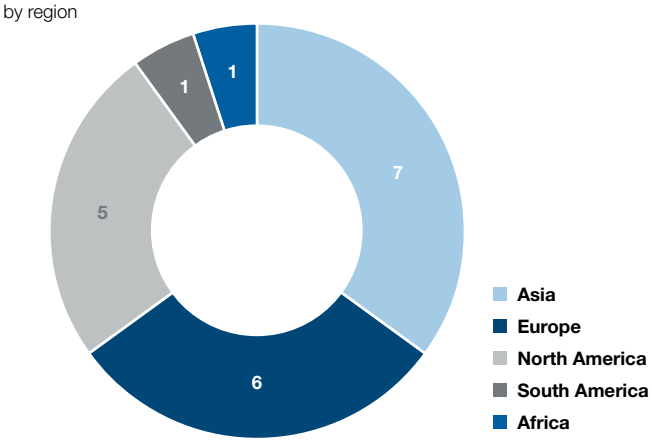
The Brose Group generated 626,669 m³ of effluents in 2019. Due to the high water quality we can lead part of this back into the storm water sewer either directly or following treatment. More than anywhere else, this is possible in our European locations. The ground water the Hallstadt location takes for cooling purposes is used in separate cycles and monitored systems and can be reintroduced via drainage shafts after use. Effluents from paint finishing systems are treated in a batch plant prior to being led into the sanitary sewer.

We are increasing our use of sand traps and gasoline traps to irrigate our parking areas. To ensure smooth operation of these systems, we inspect them according to the same criteria in all of our locations. The remaining water that is not led away via storm water sewers or ground water is disposed of via the public sanitary sewer system. These systems are subject to effluent regulations in the respective municipalities.

We strive to keep the level of effluents our locations produce to a minimum. Our objective is to either reduce the amount of water used by one of the main consumers by 20 percent or more in at least one location per region by the end of 2021, to replace fresh water with rain water/recycling water or to reuse wastewater that originally went into the sewage system in downstream processes or return it directly to surface water. And our plants have introduced a range of methods of avoiding waste water. We will report on, implement and assess these measures in group SharePoints.

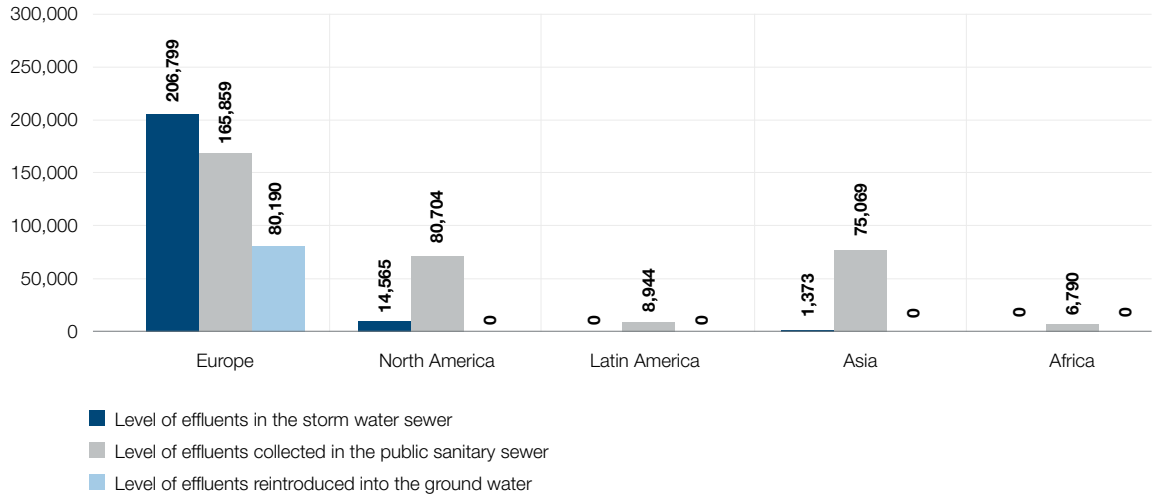
Water discipline measures implemented in 2019

by region



Effluent discharge rates in 2019

in $m^3$, by disposal type and region




# Biodiversity

Biodiversity – the science of varied lifeforms – governs the protection of ecosystems on land and in the water. The progressive fragmentation and destruction of natural habitats is considered to be the greatest danger for the biological diversity of our planet. Biodiversity is also viewed as one of the most valuable foundations of human welfare.

Scientists see negative influencing variables on biodiversity among other things in soil sealing, climate change, in increased concentrations of $CO_2$ in the atmosphere and in high levels of nitrogen in our waters. The latter is not only caused by over-fertilization, but also by vehicle emissions.

As a globally operating company, it is important to us to have a positive impact on these influencing variables. For Brose the primary course of action is not only to achieve lower $CO_2$ emissions in our locations, but also to reduce the weight of our products. After all, if vehicles weigh less, then $CO_2$ and other harmful emissions may also decline during the life cycle in which our products are integrated.

# Employees and society

We owe the market success and strong business growth of the Brose Group to the inventiveness, innovative capacity and technical expertise of our staff. As a self-reliant family-owned company with more than 100 years of history behind us, our actions are characterized by continuity and independence. The long-term, sustainable orientation of our shareholders is also reflected in our people and value-centric corporate culture and in our HR work. This is expressed in the shareholder family's willingness to put the welfare of the company and its employees ahead of their own personal interests.

Qualification and development, working environment and social benefits paired with forward-thinking HR concepts help us deploy employees where they are needed while giving them what they need to grow, enhance their loyalty to the company and establish Brose as an attractive employer worldwide.

## Workforce and working conditions

Brose is also an innovative employer. The progressive personnel concepts at our family-owned company have received many awards and regularly rank highly in external employer surveys. Brose has been named one of the top 100 employers in Germany by students and graduates for years.

During the 2019 reporting year our company won a total of ten national employer awards. Brose placed 69th among the top 100 employers in the 2019 Universum Survey of 2,600 engineers. The "MINT Minded Company 2019" award recognized our entrepreneurial spirit and commitment to fostering young academics with qualifications in mathematics, information technology, natural sciences and technology (MINT). What's more, we came in 9th among 2,600 automotive companies considered in the "Leading Employers" ranking. Brose is also a highly sought-after employer among international candidates: we received a total of four awards in the US, three employer awards in China and one each in Slovakia and the Czech Republic, where Brose Ostrava was recognized for the third time in a row by the Top Employers Institute as one of the best national employers in the industry.

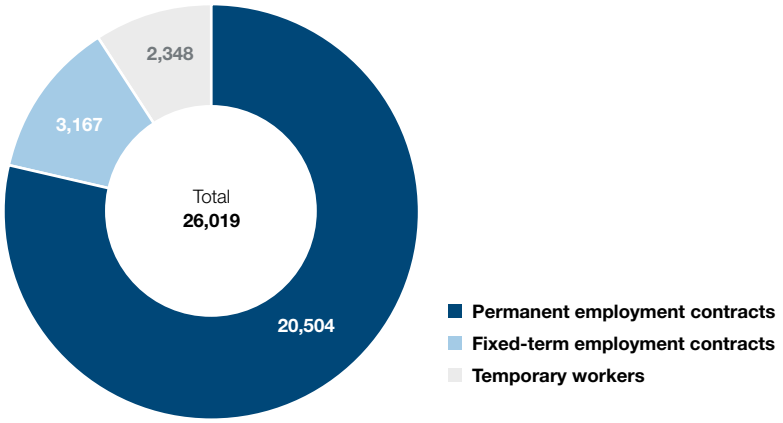
**New leadership culture guidelines**

Brose is committed to ensuring its managers set the best possible example. Brose defined seven guiding principles to underscore its focus on entrepreneurship in its leadership culture. These principles outline the common understanding of leadership in the Brose Group.

In concrete terms, they refer to team spirit and openness, the desire to improve, strengthening entrepreneurial activities, challenging and fostering employees, a sharper customer focus, simpler and thus faster decision-making paths and showing humility in success. The guidelines stand for personal attributes and are assigned to corresponding working methods. This enables supervisors to give performance appraisals. To emphasize the spirit of entrepreneurship, the leadership principles were added to the personal assessment for supervisors when the new assessment period on 1 April 2020.

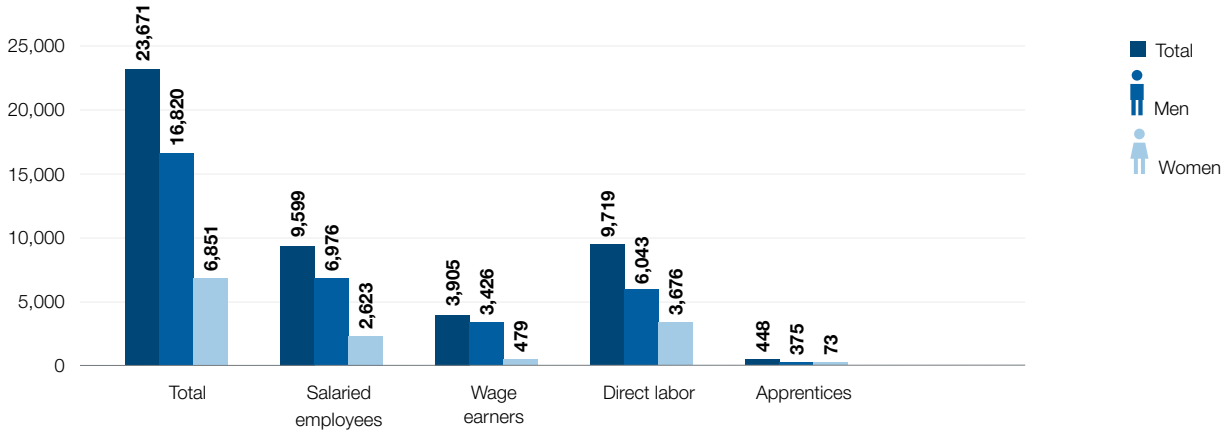
## Employees 2019

By employment contract



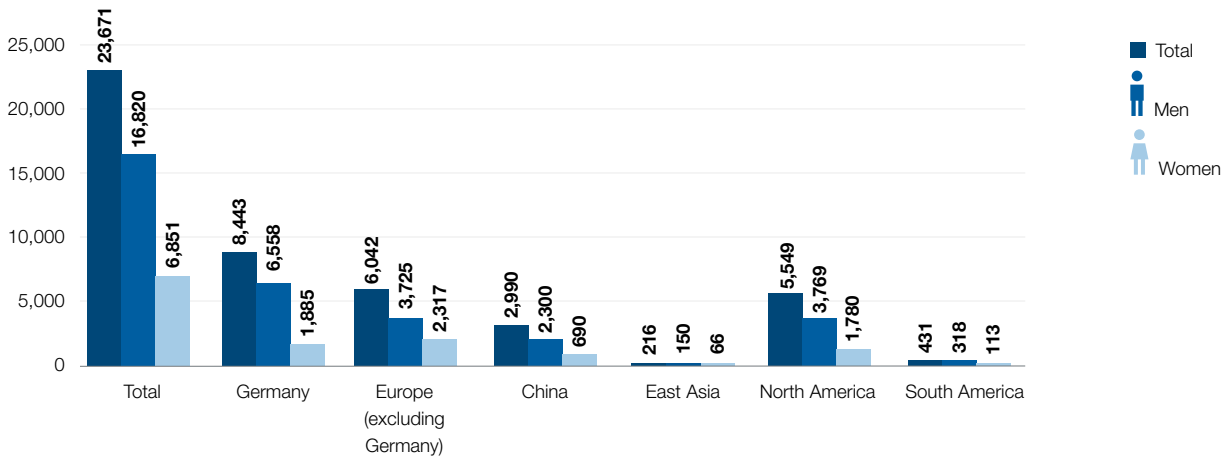

## Employees 2019

excluding temporary workers, by group




## Employees 2019

excluding temporary workers, by region



New entries by age group 2019*

| | Total | under 20 | 20–29 | 30–39 | 40–49 | 50–59 | From 60 |
|---|---|---|---|---|---|---|---|
| New entries | **2,674** | 250 | 1,214 | 769 | 312 | 118 | 11 |
| Share of workforce (%) | **11.5** | 59.4 | 23.0 | 9.6 | 6.2 | 3.1 | 1.4 |

New entries by gender 2019*

| | Total | Male | Female |
|---|---|---|---|
| New entries | **2,674** | 1,925 | 749 |
| Share of workforce (%) | **11.5** | 11.6 | 11.2 |

New entries by region 2019*

| | Total | Germany | Europe excluding Germany | China | East Asia | North America |
|---|---|---|---|---|---|---|
| New entries | **2,674** | 486 | 742 | 270 | 33 | 1,073 | 70 |
| Share of workforce (%) | **11.5** | 5.8 | 12.9 | 9.5 | 15.3 | 19.3 | 16.2 |

Exits by age group 2019*

| | Total | under 20 | 20–29 | 30–39 | 40–49 | 50–59 | From 60 |
|---|---|---|---|---|---|---|---|
| Exits | **3,003** | 67 | 1,069 | 962 | 480 | 255 | 200 |
| Share of workforce (%) | **12.9** | 15.9 | 20.3 | 12.1 | 9.5 | 6.0 | 25.5 |

Exits by gender 2019*

| | Total | Male | Female |
|---|---|---|---|
| Exits | **3,003** | 2,046 | 957 |
| Share of workforce (%) | **12.9** | 12.4 | 14.3 |

Exits by region 2019*

| | Total | Germany | Europe excluding Germany | China | East Asia | North America |
|---|---|---|---|---|---|---|
| Exits | **3,003** | 421 | 899 | 371 | 24 | 1,183 | 105 |
| Share of workforce (%) | **12.9** | 5.0 | 15.6 | 13.1 | 11.1 | 21.3 | 24.4 |

* All of the figures on this page are excluding joint ventures

# Performance, compensation and fair wages

All of the companies of the Brose Group offer our employees compensation and additional benefits regardless of employees' gender, religious denomination, heritage, age, disability, sexual orientation or country-specific characteristics. Our compensation policy is based on the market value of the respective job evaluation, which is determined based on the Hay system, and the individual performance of the person who holds the position.

Each year comparison studies are conducted with the help of an independent, external service provider to define a country's market level and to determine appropriate and fair basic wages and overall compensation packages. All employees receive compensation packages that are competitive in the relevant markets in which they work.

The company's financial situation and the employee's individual performance are used for changes in wages. At Brose we use the annual objective agreement and appraisal meetings for this purpose. Supervisors evaluate their employees based on their performance and share confidential feedback with them. Around 9,200 employees and managers primarily from development and commercial administration worldwide participate in the objective agreement and performance appraisal process. In 2019 about 73 percent of participants were male and 27 percent female. Supervisors arrange clear, unique, manageable and motivating assignments and achievable results with their employees.

As a family-owned company, we are keenly aware of our responsibility towards our employees. This is why we inform our employees of changes within the company as quickly as possible and proactively help them qualify for new assignments within the Brose Group or when changing jobs.

**Attractive benefits and rewards**

Brose is also always expanding its range of voluntary benefits tailored to the needs of its locations. Alongside our comprehensive health management system, our company also offers employees a company-private pension plan among other benefits.

Brose offers an e-bike leasing campaign for employees at its German locations featuring the slogan "Keep fit, protect the environment and save money". We work with a leasing partner to provide the bikes to our employees free of VAT. They also save taxes because the lease payment is deducted from their gross pay. This also applies to car leasing options offered to employees by the company.

Contractually agreed or voluntary profit-sharing bonuses paid out to our employees depend on the results of the corporate group and the respective business divisions or regions and whether employees achieve their personal objectives.

**Equal pay for equal work**

With respect to gross annual income, the pay gap between women and men is less than 10 percent. Differences can be found in personal paths through life and development, which all have an impact on wages earned. The three main locations in Coburg, Bamberg and Würzburg with a total of around 6,900 employees were used to calculate the income ratio. Only core staff members are counted here. At these locations, which account for around 27 percent of our employees, collective agreements are either directly applicable or continue to have an effect. [GRI 102-41]

**Social benefits in focus**

Brose is always reviewing its range of voluntary social benefits. We place special focus on aspects pertaining to family friendliness. An audit performed by "berufundfamilie" provides valuable insight on how we can further develop the programs we offer in this area. We have performed regular recertifications with this partner since 2010 with binding objective agreements.

We encourage a healthy work-life balance. One great example of this is the Brose Kids Club, around which our childcare program is built. It is established at the headquarters in Coburg and in Ostrava/Czech Republic, the largest production facility in the Brose Group. Around 6,500 people are employed in these two locations alone. Employee children from ages six to 14 can visit education and childcare facilities in Coburg and Ostrava. We also offer childcare for toddlers up to three years of age.

The portfolio now includes a project called "FamilyNet" introduced by social and health management at our Franconian locations with around 7,200 employees. In addition to targeted orientation for impats (foreign workers), people returning from locations abroad and new employees, FamilyNet also offers support for their family members. The aim is to give them the social support they need to

grow accustomed to their new environment. This boosts loyalty among skilled workers, because it enables their families to quickly assimilate even in foreign settings.

**Pension plan**
Obligations arising from the pension plan for the Brose Group worldwide were 677 million euros (according to IFRS) as at 31 December 2019. Employer-financed pension plans in Germany are carried out by means of direct commitments, the amount of which depends on the selected pension plan and employee group. Employee contributions to company pension plans are financed from wages depending on the maximum legally permissible conversion limits. The foreign pension plan model relies on a combination of employee and employer contributions as part of a deferred compensation plan featuring insurance-backed solutions.

# Systematic employee development

We value employees who are willing to learn. A comprehensive range of further education and training programs helps all of our employee groups develop and grow both personally and professionally. The range includes a variety of formats such as on-site training courses, webinars and e-learning modules for extending and building product, methodological, leadership and language skills. We also have a document library featuring around 600 training manuals and guides to encourage flexible, independent study. In 2019 the average number of hours spent on further education and training was 18.8 (indirect employees) and 10.0 hours (direct employees). Professional instruction in the workplace and participation in e-learning courses also help ensure professional qualification.

We prepare high-potential employees to accept major responsibilities in local, regional and global development programs as needed. These measures equip participants with the skills they need to successfully take on leadership roles at Brose. Moreover, our family-owned company offers committed employees further training opportunities throughout their careers regardless of their level of education. In fact, we offer more than 118 training and qualification measures. We also have local qualification programs, master tradesman courses and master's degree studies programs for full-time employees as supplements to these measures.

**Varied career paths**
Our company offers employees professional and customer project manager career paths alongside the management career path. The career path concept is permeable and can be flexibly adapted depending on how participants develop professionally: they can change paths at any time and achieve new career goals. Our own development programs for commercial employees and IT specialists complete the set of career building blocks.
All employees receive regular feedback on their performance to facilitate personal career growth. This feedback is provided to all salaried employees in the scope of the annual Performance and Talent Management (PTM) process. There is a simplified process for skilled trades. The PTM process provides transparency about key players and high-potential employees in important positions in administration and production in the Brose Group.

**Apprenticeship training: The foundation for the future**
We believe that a solid career orientation is indispensable in helping high school students transition effectively into their new careers. This is why Brose targets young people early on: job shadowing, events like "Girls Day", "Girls for Technology Camp" or "Brose Bamberg Meets Technology", information sessions at schools or career fairs – our instructors and apprentices are on hand with advice and practical assistance to help facilitate career orientation.

Brose has offered apprenticeships for over 90 years – during the reporting year more than 500 apprentices and dual-track students learned a vocation. Nearly a third of these people work in our international locations in the US,

Mexico, China, Brazil, Canada, France, Spain, the Czech Republic, Slovakia and Great Britain. The range of apprenticeship occupations encompasses twelve industrial/technical and commercial vocations.

To cover the high demand for qualified employees, Brose invested heavily in training at its Slovakian plant in Prievidza, opening a modern training workshop at the location during the reporting year. Over 80 aspiring mechatronics technicians and industrial mechanics are receive training and support from four instructors here. This enabled Brose to introduce the region's first dual vocational training program based on the German model. The offer gives the plant yet another advantage as an attractive employer in the region.

**Building expertise in production**

We are gradually implementing HR measures as part of the "Factory 2025" project in order to strengthen the competitiveness of our plants and our appeal as an employer in production. The program focuses on leadership and employee qualification, working environment and demographic development.

This is why we established the "PTM for Workers" qualification program. The Performance and Talent Management program makes it easier for supervisors in production facilities to discover and promote specialists and managers at every stage of career development. The program helps employees obtain professional, personal and methodological qualifications.

To ensure employees remain motivated and sustainably reduce the number of sick days and employee turnover, we will focus on new career paths for production employees along with an attractive and healthy working environment as we deploy our "Factory 2025" strategy.

# Corporate diversity

Our corporate group is present on virtually every continent. Around 66 percent of our employees work in foreign locations. Together we represent over 85 countries with all of their diverse cultures and value systems. We view this diversity as an opportunity to learn something new every day. It is accompanied by globally organized collaboration that also involves our international customers and business partners. This requires openness, connected thinking and action.

Diversity is also reflected in how we promote and develop all of our employees – regardless of their age or gender. To increase the percentage of women in technical areas in particular, Brose has spent years supporting measures to interest women in technical career profiles early on in life.

Both men and women can participate in our international "Talent Circle" development program or our three-step career path concept, both of which can help them develop and grow into responsible technical and management positions.

**Collaboration in a global team**

Every workday at Brose is international when you are communicating with so many project teams in different languages in our locations around the world. Many employees in development, production and administration already work in a global network on a daily basis – within our company and with customers, partners and suppliers. And more and more employees go to foreign locations to work on temporary assignments.

We are unaware of any cases of discrimination in Germany. We also have no information or knowledge of such incidents at our foreign locations. We believe an appreciation of "diversity" is one of the keys to global business success. We explicitly document this in our company principles, in particular under the principle "Respect". We value employees with a strong global orientation – an asset that enables them to collaborate well, understand their environment and act effectively. This includes an understanding of other cultures and the ability to handle ambiguity and diversity. We offer tailored intercultural training courses specifically for this purpose.

# Occupational health and safety

**Global health management**
Our company health management and our occupational health-promoting services are aimed at building and expanding our health resources. Company health management focuses on processes, culture and leadership at Brose. The objective is to minimize stress in the working environment and the employee workplace, for example by providing managers with further training or making employee consultations or other offers for resolving conflicts available.

Health-promoting services relate directly to employee behavior. They help our workforce structure their personal and professional routines with key aspects of health in mind. Measures range from lectures, training courses and exhibits to nutrition to health-promoting activities. Our award-winning, certified social and health management combines socially integrative employee and family programs with preventative and acute health management offers.

**Industrial medicine, physical therapy and company sports**
The legal requirements governing industrial medical support for our employees focus primarily on preventative health offers that meet employee needs. For example, our Closed-Loop Activity Program (CLAP) offers employees a cyclical program featuring prevention, acute care and rehabilitation services. From the initial diagnosis to treatment, we improve regeneration in a network comprising industrial medical care, post-care physical therapy treatment and psycho-social support, while shortening paths and preserving the work capacity of all of our employees.

We motivate our employees to take part in company sports activities on a regular basis. These offers increase levels of physical activity and encourage members of the workforce to take responsibility for their own health and well-being. The Brose company sports program lowers the risk of adverse health effects due to a lack of equal opportunities and welcomes both production workers and other employees. Our corporate group is always expanding and enhancing the long-standing company sports program.

**Preventing work-related accidents**
Our goal is to prevent work-related accidents in production and administration. Group-wide accident statistics consider accidents involving all Brose employees as well as agency workers and temporary employees. The figures do not include accidents involving employees from external companies.

Accidents resulting in more than three days of lost time must be reported. The provisions set forth by the German professional societies are valid group-wide. There were 166 such accidents in the group in 2019. In these figures 154 workers in plant functions, six employees in the business divisions and six employees in central functions were affected. Most accidents occurred in Europe (137), while 20 were reported from North America, two from Latin America, nine from Asia and none from Africa. There were no fatal accidents in the Brose Group in 2019.

**Key figures for managing incidents**
The number of incidents per thousand employees (TMQ) is a yardstick for measuring the frequency with which accidents occur while the accident severity is used to determine the average number of days lost due to incidents. The number of incidents per thousand employees is determined for a rolling 12-month period. Part-time and full-time workers are evaluated. Figures are not presented by gender, religion or ethnic group.

The number of incidents per thousand employees is 7 for the group as a whole. Europe exceeded the group average with values between 9 and 11 incidents, while the remaining regions had a maximum of 4 incidents per thousand employees. Accident severity in the group was 18.7. Asia experienced the highest severity level (19.8) and Africa the lowest (0.8). Working conditions and preventative measures are comparable in all of the Brose Group's locations. However, accident rates and lost time tend to be higher in Western countries. This has to do with different regional and social standards and cultural behavioral norms.

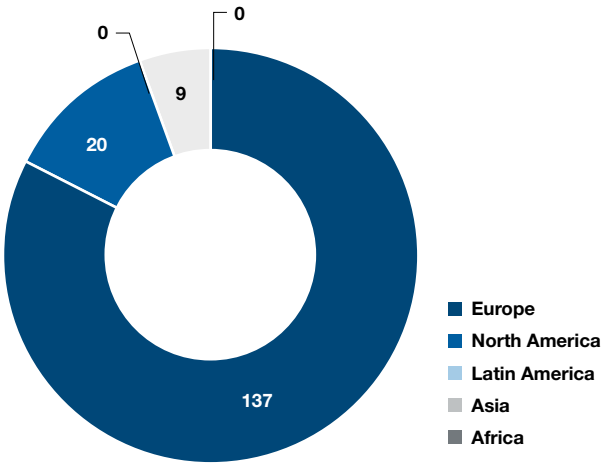
**Ergonomics in the workplace**
Brose takes safeguarding the health of its employees very seriously. This is why we further improved ergonomics in our production workplaces around the world during the reporting year. We achieved our plant target for ergonomics in almost every plant. Specifically, we are relieving the burden on our employees by increasing the use of robots and automation for strenuous work. Ideally, these measures will also shorten assembly times and increase efficiency. For instance, Manufacturing Engineering for the business division Interior worked with the Manufacturing Equipment

Center in Coburg in 2019 to develop a fully automated packaging concept that will be used in future customer projects.

We established the “ergonomic check-up” to clearly assess our global locations and the work systems in place there. We evaluate existing and planned work systems using the traffic light method. Now only older systems have “red” workplaces with very strenuous tasks. Targeted selection of employees and job rotation help us alleviate possible negative impacts of these workplaces.

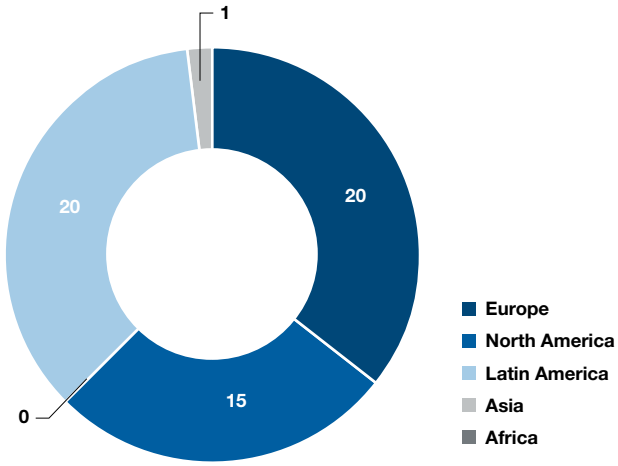
The 2019 reporting year saw a focus on monitoring the assessment and adapting it to international changes. To reduce the forces impacting our employees right from the start, the divisions interior and exterior performed measurements using a force measuring glove. This made it possible to account for and reduce excessively high forces in the technical designs.

Number of work-related accidents >3 days in 2019



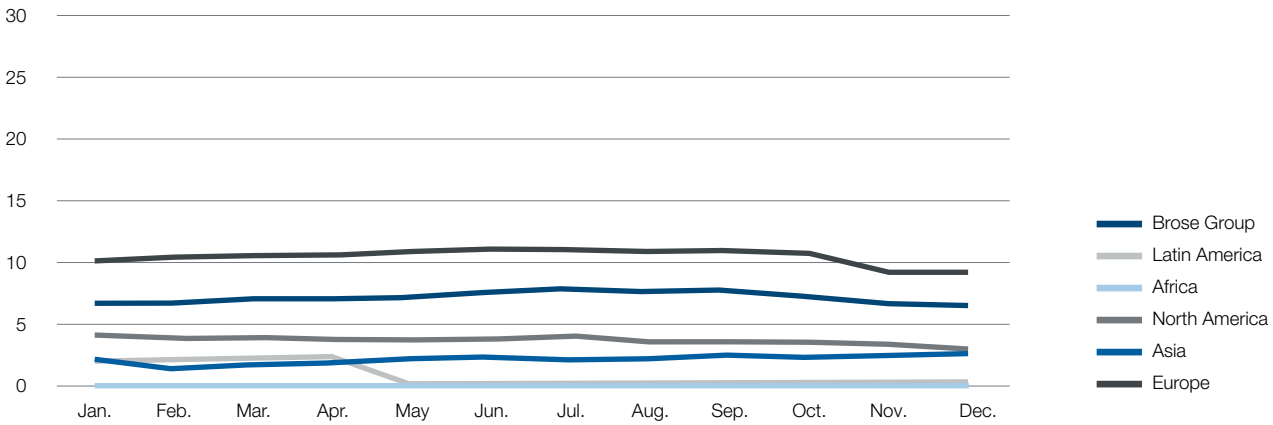

Accident severity in 2019

Number of days lost per number of accidents




Incidents per thousand employees >3 days in 2019

by region



# Social commitment

As a family-owned company, accepting social responsibility in the communities surrounding our global locations is a matter of course. This is why Brose is involved in the areas of sport, education, culture and society.

**Sport**

Sport requires talent, a willingness to do your best, ambition, discipline, passion and team spirit. These are all characteristics that are in high demand both in our company and in the automotive sector as a whole. Our sport sponsoring efforts are directed at attracting the attention of performance-driven and athletically minded people and recruiting them as Brose employees.

For example, we have sponsored tennis pro Keven Krawietz since he was 16. The junior Wimbledon winner has systematically worked his way up in the world rankings since 2009. In June 2019 he and his doubles partner Andreas Mies won the French Open thanks to their outstanding performance in the men's doubles. This was their biggest success to date and earned them the first German doubles triumph at a Grand Slam tournament in 82 years.

We have also sponsored basketball for many years now. This ball sport is highly dynamic and fascinates viewers with intelligent interaction between talented individual players. Our involvement in the clubs in Bamberg, Bayreuth, Würzburg and Coburg has helped make Franconia a bastion of professional basketball in Germany.

One example of talent development in motorsport is 23-year-old Patrik Dinkel, younger brother of Dominik Dinkel, who is also a rally driver and was the runner-up of the German Rally Championship in 2017 and 2018. Patrik Dinkel and Felix Kießling won the Rallye Masters the first year they participated. They won spots on the podium on all of their runs during their first season together and did not experience any malfunctions. Dominik, whom Brose has sponsored since 2012, will be starting in the European Rally Championship (ERC) in a Skoda Fabia Rally2 evo and Patrik will be driving his Mitsubishi Lancer in the Rally CUP of the German Motor Sport Federation.

**Education**

Education is an important prerequisite on the path to personal success, whether at work or in one's personal life. It drives all forms of societal and technological progress. As a globally operating, family-owned company, systematically fostering young peoples' careers is an integral part of the Brose identity. And as a major player in the local economy, we accept social responsibility by supporting projects in regions surrounding our group locations.

Every year the Scientific Alliance of Polymer Technology (WAK) presents its award for forward-thinking Master's or Doctor's theses in its field of expertise. With its involvement in WAK, Brose helps cement relationships with current and future specialists in the field. Due to our business interest in polymer research we have also sponsored two of the WAK awards since 2007. The thesis awards are presented every October. In 2019 a graduate of the University of Paderborn received a 3,500 euro cash prize for his thesis and a doctor of engineering at the Plastics Engineering Department of the Friedrich-Alexander University Erlangen-Nuremberg received a 5,000 euro cash prize for his dissertation.

Brose has partnered with the Chinese aid organization "Gesanghua Education's Aid" since 2016. The "Brose Class" was developed at Huangnan Senior High School as part of this collaboration to assist students affected by poverty and help them finish their schooling. In 2019, 17 of the first 30 graduates we sponsored were accepted to different colleges and universities. In addition to regularly awarded scholarships, Brose also donated around 200 books to the school and built a library there.

**Social responsibility**

As a family-owned company, it has always been important to Brose to help people who face difficult situations. We make a conscious effort to concentrate our social commitment on the regions surrounding our locations, where our proximity gives us keen insight into the unique local needs and challenges.

Brose China received the "Corporate Social Responsibility Award" in September 2019 for exceptional commitment to the inclusion of people with disabilities. The "Inclusion Factory" – a workshop for people with mental and physical disabilities – is the only project of its kind in China and receives support from around 80 cooperation partners from Europe. With the help of specially equipped machines the "talents with disabilities" are able to produce competitive products and thus take part in a regular, respected job in the workshop. Brose has supported the pilot project in Taicang since 2018.

During the reporting year countless families lost their livelihoods during an earthquake that measured 7.1 on the Richter scale in the Mexican state of Puebla. Our donations from Mexico and or North American locations Jefferson and New Boston helped “Habitat for Humanity” rebuild in the crisis zone.

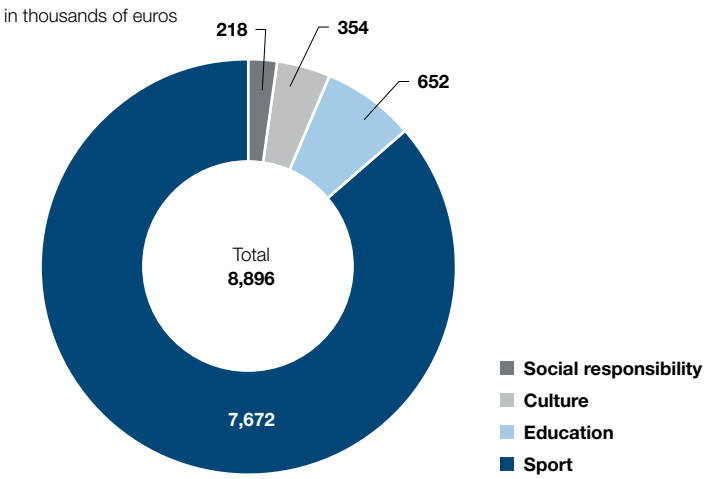
**Culture**

Whether music, painting, literature, architecture or other forms of creative expression: culture moves and connects people across all borders. It creates and strengthens core values such as tolerance and humanity. Alongside talent and skill, it demands from artists extraordinary passion, ambition and dedication. All of these traits and motivating factors can also be found in the Brose canon of values. This is why we have been involved in international cultural sponsoring for many years. At the same time, supporting local projects helps increase the appeal of the regions surrounding our locations.

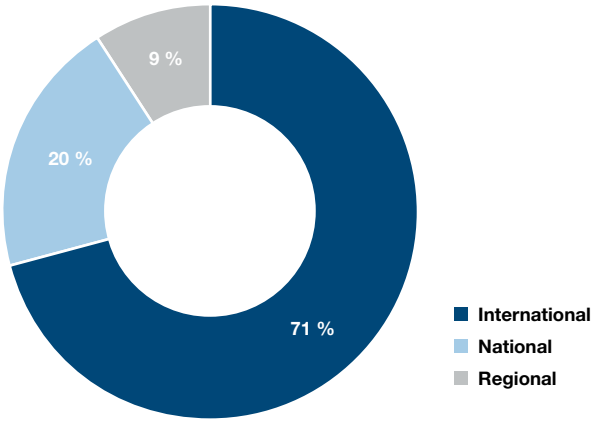
The Coburg State Theater is unusual for a city of this size and has been a cultural institution for three performing arts – opera, theater and dance – since 1827. Thanks to our support, the State Theater is able to engage leading artists and stage outstanding productions. During the 2019/2020 season the State Theater staged an ambitious production of Wagner’s opera “Rheingold”, whose premiere on 29 September 2019 was celebrated by the public and the press.

Efforts to restore the 12th century Castell de Penyafort located close to our Spanish location near Barcelona have been underway since 2002. We have been a part of efforts to restore this treasure for over ten years now. During the reporting year small wall paintings were discovered that apparently depict the legend of patron saint Raymond of Penyafort. We will also contribute to the preservation and reconstruction of this discovery in 2020.

Investments in the community in 2019




Coverage of investments in the community in 2019



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This report was prepared in line with the GRI Standards: 'Core' option. It was presented for the performance of the GRI Materiality Disclosures Service. The GRI Services Team confirmed the correct positioning of the 'Materiality Disclosures' [GRI 102-40 bis GRI 102-49] in the report.

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# Imprint

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