CONTENTS

6 FOREWORD
7 ABOUT KNORR-BREMSE
10 STRATEGY AND MANAGEMENT
11 Principles and processes for strategy and management
11 Corporate Responsibility strategy
12 Materiality analysis and stakeholder involvement
14 Knorr-Bremse and the Sustainable Development Goals
15 Compliance and risk management
16 Due diligence processes for human rights

20 PRODUCTS AND PARTNERS
20 Product and system safety
23 Ecological product design
26 Sustainability standards in the supply chain

30 EMPLOYEES AND LEADERSHIP
30 Employee satisfaction
33 Personnel development
35 Occupational health and safety

38 ENVIRONMENT AND CLIMATE
39 Environmental management
39 Energy and CO2 emissions
41 Conserving resources

44 COMMITMENT AND SOCIETY
44 Global Care: Worldwide commitment
47 Local Care: Site involvement

49 IMPLEMENTATION OF THE TEN UN GLOBAL COMPACT PRINCIPLES

51 INDEX FOR THE NON-FINANCIAL REPORT IN ACCORDANCE WITH GERMANY’S CSR DIRECTIVE IMPLEMENTATION ACT
52 ASSURANCE STATEMENT
Megatrends like urbanization, digitization and eco-efficiency are changing society and mobility at a rapid pace. In these exciting times, Knorr-Bremse’s 113 years of history and expertise are paying off, enabling us to be proactive in tackling current and future economic, social and environmental challenges around the world.

In this context, supporting the principles of the United Nations’ Global Compact and their Sustainable Development Goals (SDGs) is of fundamental strategic importance. Knorr-Bremse intends to make an effective contribution to the UN’s 2030 Agenda for Sustainable Development. Our employees have chosen the following key focus areas from the UN’s list of 17 goals: climate protection, sustainable production, good working conditions, gender equality and sustainable innovation. A large number of campaigns on these issues took place on global KB Day 2018.

Knorr-Bremse is continuously increasing its commitment to sustainable development. We accomplish this with our updated materiality analysis. It allocates our spheres of activity to key issues which also form the main topics of this report. In doing so, we are also complying with the legal requirements for non-financial reporting, which have applied to Knorr-Bremse since its successful IPO in October 2018. For the 2018 fiscal year, we have for the first time produced a separate non-financial report to comply with the German CSR Directive Implementation Act.

Our current package of sustainability measures covers all areas of the company. For instance, using renewable energy sources at our production sites reduces CO₂ emissions. We use life cycle analyses to evaluate the environmental impacts of our products. And our employee survey aims to create a better working environment. Many of our sustainability projects are presented in detail in this UN Global Compact Progress Report.

Our work in this area is also recognized by external stakeholders: The ISS-oekom corporate rating agency assessed Knorr-Bremse’s sustainability performance in 2018 for the first time and awarded it Prime status, putting us in the top 20% in our peer group. In addition, we managed to improve our EcoVadis rating for sustainability performance from Silver to Gold, which puts us in the top 5% of companies. These excellent results encourage us to continue integrating sustainability into all areas of our company.

When we produced this UN Global Compact Progress Report, we had a clear goal in mind, which was to make our sustainability performance transparent for you and highlight key measures, goals and performance indicators. This emphasizes our commitment to the United Nations Global Compact’s ten principles for responsible company management.

We hope you enjoy reading our report.

Dear Reader,

Klaus Deller
Chairman of the Executive Board of Knorr-Bremse AG
About Knorr-Bremse

Knorr-Bremse is the global market leader for braking systems and a leading supplier of other safety-critical rail and commercial vehicle sub-systems. Knorr-Bremse’s products make a decisive contribution to greater safety and energy efficiency on rail tracks and roads around the world.

Major global megatrends including urbanization, eco-efficiency, digitization and automated driving offer the promise of long-term, sustainable growth for both the rail and commercial vehicle markets. To its customers, Knorr-Bremse is a byword for quality and reliability. The Company is focused on meeting all local regulations and standards in both of these sectors, acting as a global partner for vehicle manufacturers and operators alike.

As the leading partner for braking, entry and HVAC systems, as well as a range of other sub-systems, the Rail Vehicle Systems division provides equipment for passenger and freight trains, light rail vehicles, metro trains and other vehicles. Knorr-Bremse is constantly driving connectivity both within and between the various sub-systems. This is also true of our Commercial Vehicle Systems division, which supplies braking systems and vehicle dynamics solutions, including driver assistance and automated driving systems, for trucks, buses, trailers and agricultural vehicles.

Local content is a key part of Knorr-Bremse’s strategy. Our diversified global presence with a high degree of local value creation ensures Knorr-Bremse remains an agile company with an ideal cost structure and automatic protection against currency fluctuations and trade barriers.

With a history dating back over 110 years, Knorr-Bremse is one of Germany’s most successful industrial companies. In 2018, Knorr-Bremse’s global sales totaled EUR 6.6 billion. Some 28,400 employees at over 100 sites in more than 30 countries use their competence and motivation to satisfy customers worldwide with products and services. In October 2018, Knorr-Bremse successfully listed on the Frankfurt Stock Exchange (Prime Standard). You can find more information about Knorr-Bremse in the Management Report included in our 2018 Annual Report, in the chapters entitled ‘Overview of the Group’ and ‘Business Model/Structure of the Group’.
Knorr-Bremse is committed to sustainable corporate governance. This commitment applies to our products and the way they are manufactured, as well as to our relationships with our employees, the environment and society as a whole. At the same time as examining and continuing to develop our approach to key CR issues, we place a particular emphasis on our contribution towards upholding human rights and the United Nations Sustainable Development Goals. We work closely with our employees and external stakeholders on these topics.

At Knorr-Bremse, sustainable and responsible corporate governance is part and parcel of our identity. Our vision creates a shared understanding of our objectives, while our values provide the basis for our behavior and describe who we are. Internal guidelines and strategies set out how these values should be put into practice in our day-to-day working lives.

Our vision: We are the global driving force behind innovative and sustainable systems that make mobility and transport more reliable, safer and more efficient. We are driven by our desire to create added value for our customers at the same time as making a positive contribution to society.

Our corporate values: Knorr-Bremse’s five core values are Entrepreneurship, Technological Excellence, Reliability, Passion and Responsibility. Together, they form the foundation for responsible behavior on the part of all our employees.
PRINCIPLES AND PROCESSES FOR STRATEGY AND MANAGEMENT

Our internal guidelines provide a basis for the behavior of all employees in all parts of the Company. They set out exactly how our values should be implemented in our everyday working lives.

Our CR guidelines set the principles and strategic objectives for responsible corporate governance within Knorr-Bremse.

Our Code of Conduct defines our understanding of responsible behavior for all our employees worldwide.

Our Supplier Code of Conduct demonstrates our commitment to fair and sustainable business practices within our supply chain.

Our Purchasing Quality Standards set out what we expect of our suppliers, including in terms of sustainability.

Our Occupational Health, Safety and Environmental Protection policy represents a commitment to the highest possible standards.

Our Leadership Guidelines serve as a guide for successful employee management and demonstrate what HR responsibility at Knorr-Bremse should look like in practice.

The Principles for Social Commitment provide the framework for our community initiatives at site level.

Our sustainable form of entrepreneurship is also oriented towards international guidelines and conventions. Key external documents for Knorr-Bremse include the United Nations (UN) Guiding Principles on Business and Human Rights, the International Association of Public Transport (UITP) Charter for Sustainable Development, the Code of Conduct of the German Rail Industry (VDB) and the UN Global Compact, which the Company signed in 2010. In 2018 we further underlined our commitment to safer transport by signing the European Railway Safety Culture Declaration.

CORPORATE RESPONSIBILITY STRATEGY

For Knorr-Bremse, commercial success goes hand in hand with consistently responsible behavior in relation to our staff, our partners, the environment and society. Our CR program, our espousal of the UN Sustainable Development Goals, and our respect for human rights worldwide serve to embed this commitment to responsible behavior at strategic level within the Company.

Corporate Responsibility activities and organization

We aim to make Knorr-Bremse’s structures and processes significantly more sustainable by 2020. Our CR strategy provides a stable framework for achieving this objective. It is sub-divided into the six areas of activity around which this report is structured. They are: Strategy and Management, Products and Partners, Employees and Leadership, Environment and Climate, Commitment and Society, and Communication and Cooperation. The strategic issues we address within these six areas are drawn from the results of our materiality analysis (see page 12) and the United Nations Sustainable Development Goals (SDGs) (see page 14). Our due diligence procedures for the key issue of human rights are based on the United Nations Universal Declaration of Human Rights (see page 16). All of these issues are specifically addressed within Knorr-Bremse’s CR Program. The program is approved by Knorr-Bremse’s Corporate Responsibility Council (CR Council) and its progress is regularly reviewed. Unless otherwise stated, all relevant issues are reported to the Executive Board via the CR Council.

The Corporate Responsibility department is responsible for sustainability, and reports directly to the Executive Board. The CR Council, which meets twice a year, discusses objectives related to the strategic issues identified and decides on implementation measures. The CR Council consists of one member of the Executive Board, Management Board representatives from each of the Company’s two divisions, the Chair of the charitable association Knorr-Bremse Global Care, and the head of the Corporate Responsibility department. Reports on CR projects within the Company’s various specialized departments are made directly to the CR Council. This organizational structure ensures that sustainability is firmly established at the highest levels of decision-making within the Group.

MATERIALITY ANALYSIS AND STAKEHOLDER INVOLVEMENT

A materiality analysis helps to identify the priority issues the Company should focus on in order to fulfil its responsibility to meet environmental and societal challenges. The results highlight the most important requirements within the individual Knorr-Bremse areas of activity, both for the long-term commercial success of Knorr-Bremse and for the Company’s stakeholders. Knorr-Bremse engages in an active dialogue with these stakeholders through its communications activities and membership of professional associations.

Updated materiality analysis in accordance with the German CSR Directive Implementation Act

Under the CSR Directive Implementation Act (CSR-RUG), all information relevant to the Company’s performance, results and financial position must be formally reported, along with any repercussions of the Company’s business activities that might affect non-financial issues. In July 2018, CR management and managers of specialized departments held a workshop to analyze these potential negative repercussions of Knorr-Bremse’s activities. The workshop also considered the severity of any potential effects and how likely they were to materialize in reality. In conjunction with Risk Management, a joint definition of risk was drawn up, taking into account the business environment. Any potential negative consequences of business activities for aspects of the individual issues identified were assessed, as well as any measures taken by the Company to avoid these negative consequences (overall risk assessment). No reportable net risks were identified beyond the scope of this analysis.

As part of preparations for the workshop, and within the framework of our six areas of activity, the issues identified in the existing Knorr-Bremse materiality analysis (conducted in 2014) were assessed against external sustainability standards and frameworks and compared with the issues identified as significant by our peer group. The list of issues identified was checked for completeness and consolidated into a final list of 13 non-financial issues relevant to Knorr-Bremse. The heads of specialized departments then worked together with CR Management to assess these non-financial issues. The assessment was based on business performance and results and the overall position of Knorr-Bremse, taking into account revenues, costs and reputational effects as well as the effects of our business activities on the environment and society. The precise wording used to capture these issues was also adjusted during the course of the workshop, and ‘Data Protection’ was adopted as a fourteenth issue.
Material issues

The matrix clearly shows that ‘Product and system safety’, ‘Ecological product design’, ‘Sustainability standards in the supply chain’, ‘Occupational health and safety’ and ‘Employment satisfaction’ were all identified as material issues in light of our core competencies and material. The issues ‘Anti-corruption and fair competition’ and ‘Personnel development’ were also assessed as material for the purposes of the CSR-RUG. This also applies to the issues of ‘Waste’, ‘Social commitment’ and ‘Health & safety’ which were less relevant to the business, but remain an important part of the CSR strategy. With the exception of ‘Data protection’ they have all therefore been considered in this report, and are covered as far as possible within the framework of the one-page description of our areas of activity and in the chapters of CSR-RUG reporting. This also applies to the issues of ‘Waste’, ‘Social commitment’ and ‘Data protection’. Although the last of these issues was added to the list during the workshop, primarily as a response to the General Data Protection Regulation (GDPR), its current impact on the business was assessed as minor. Nevertheless, the six secondary topics listed above remain an important part of the CR Strategy and the activities and areas of activity. With the exception of ‘Data protection’ they have all therefore been considered in this report, and are covered as far as possible within the framework of the eight issues identified as material for the purposes of the CSR-RUG. ‘Social commitment’ is addressed in a separate chapter.

Stakeholder involvement

Knorr-Bremse maintains and encourages dialogue with its internal and external stakeholders. Our most important stakeholder groups are our employees, new recruits, customers and suppliers, shareholders, commercial partners, official authorities, trade unions, professional associations, the media, policymakers, non-governmental organizations (NGOs), residents in the vicinity of our sites and representatives of local action groups. Knorr-Bremse has an established and systematic dialogue with stakeholders via its membership of a large number of regional, national and international associations. For example, Knorr-Bremse was represented at Scania Supplier Day in November 2017, and also took part in Deutsche Bahns Sustainability Day and the MAN Stakeholder Dialogue in 2018. In addition, since listing on the stock exchange in October 2018, we have held regular discussions with investors regarding our commitment to sustainability.

SELECTED KNORR-BREMSE MEMBERSHIPS:
- American Public Transportation Association (APTA), USA
- Association of American Railroads (AAR), USA
- Ausschuss Nachhaltigkeit in der Lieferkette im Verbund der Automobilindustrie e V (VDA), GER
- Automotive Industry Action Group (AIAG), USA
- Automotive Parts Remanufacturers Association (APRA), EUROPEAN BOARD, USA
- Energieeffizienznetzwerk Oberbayern, GER
- Fachgruppe Umwelt im Verband der Bahnindustrie in Deutschland e V (VDB), GER
- Motor & Equipment Manufacturers Association (MEMA), USA
- New York and New Jersey Minority Supplier Development Council, USA
- Stifterverband der Deutschen Wissenschaft e V, GER
- Sustainable Transport Committee of the Union des Industries Ferroviaires Européennes (UNIFE), BEL

Knorr-Bremse is very much aware of the contribution business can make to meeting the economic, social and environmental challenges of our time, which is why it supports the 17 global Sustainable Development Goals (SDGs) approved by the United Nations. We are already contributing to the SDGs through many of our products, services and other activities. To strengthen this contribution further, we began in 2017 to examine our current contributions to the development goals in more detail. In order to ensure our efforts remained focused and to set a clear direction for the Company, we decided to concentrate our activities on a limited number of specific SDGs, both now and in the future. With this in mind, the following SDGs were selected on the basis of an Intranet survey of employees and discussions at the annual Global Leadership Meeting, which was attended by around 160 senior managers:

SDG 1: No Poverty
SDG 2: Zero Hunger
SDG 3: Good Health and Wellbeing
SDG 4: Quality Education
SDG 5: Gender Equality
SDG 6: Clean Water and Sanitation
SDG 7: Affordable and Clean Energy
SDG 8: Decent Work and Economic Growth
SDG 9: Industry, Innovation and Infrastructure
SDG 10: Reduced Inequalities
SDG 11: Sustainable Cities and Communities
SDG 12: Responsible Consumption and Production
SDG 13: Climate Action
SDG 14: Life Below Water
SDG 15: Life on Land
SDG 16: Peace and Justice, Strong Institutions
SDG 17: Partnerships for the Goal

Through the activities of Knorr-Bremse Global Care, Knorr-Bremse is also making major contributions to SDG 4 (Quality Education) and SDG 6 (Clean Water and Sanitation).
Our employees are crucial to our commitment to the SDGs, in terms of the new ideas they bring for strengthening Knorr-Bremse’s contribution and their personal commitment to global sustainability objectives. It was with this in mind that we dedicated a global Knorr-Bremse Day to the SDGs for the first time this year (see text box). We now plan to build on this event at a global level by embarking on specific projects that will make an additional contribution to achieving the SDGs. Our plans include, for example, a new crisis protection strategy and an even greater focus on due diligence in relation to human rights. In addition, specific local objectives and the action required to achieve them have been identified at a number of our sites.

Our whistleblowing system, introduced in 2017, is a key part of our compliance management structure. It allows both employees and third parties to anonymously report criminal activity or serious breaches of the law wherever they occur. The whistleblowing portal is operated by an external service provider using an independent and secure server. It is accessible to all employees and third parties all over the world, and allows incidents to be reported in 31 different countries and in 20 languages. This approach serves to protect the Company and its employees, in particular against liability claims and damage to our image and assets. Effective risk management also helps us to identify risks at an early stage and to manage them effectively.

Risk management organization and processes

Knorr-Bremse’s position as a global company and the world-wide leader in braking systems brings both opportunities and risks. The goal of risk management is to minimize the risks and exploit the opportunities in order to increase the long-term value of the Company. Early identification of potential risks gives us more scope to manage them effectively.
human resources guidelines. These guidelines ensure that our duty to conduct due diligence on human rights is covered by our existing processes, particularly in HR, Purchasing and HSE Management. Our whistleblowing system for breaches of the Code of Conduct also allows us to monitor respect for human rights more closely (see page 16). Our independent central Internal Audit function also examines compliance on selected aspects of human rights at our sites worldwide as part of routine audits.

Risk and gap analyses for due diligence on human rights

In 2018 we initiated risk and gap analyses with the aim of cementing and building upon our existing processes for due diligence on human rights. The analysis was carried out on the basis of the UN Guiding Principles for Business and Human Rights and Germany’s NAP, and covers a number of risks that might arise as a result of Knorr-Bremse’s activities. The starting point for this exercise was a risk analysis at national and site level, in addition to potential human rights risks within the value creation chain. We then went on to examine relevant internal guidelines and processes to assess how well they reflected our due diligence requirements on human rights. Interviews conducted with relevant specialized departments and at selected sites provided an insight into the robustness of our current processes. As a result of this gap analysis we have identified a number of areas for improvement and drawn up specific recommendations for action, which are now being implemented step-by-step. The results of the analysis show that due diligence regarding employment law for potential risk groups is currently a major focus for Knorr-Bremse. Temporary staff, service providers at our sites and supply chain employees were identified as key risk groups.

In the course of the year under review we built on the processes described here by instigating the following measures to be implemented over the next few years:

- **Policy commitment:** An expanded commitment to human rights to be included in our Code of Conduct.
- **Risk identification:** Increased internal data collection to identify potential risks.
- **Integration:** An assessment of potential effects and an intensified procedural focus on risk groups, including avoidance of human rights risks when recruiting temporary staff.
- **Monitoring and reporting:** Building capacity in relevant specialized departments and expanding internal Audit monitoring processes to include additional human-rights-related aspects.
- **Grievance mechanisms and remedy:** Examining potential expansion of our complaints mechanisms with a view to improved reporting of infringement of legislation and internal guidelines.

<table>
<thead>
<tr>
<th>DUE DILIGENCE ON HUMAN RIGHTS AT KNORR-BREMSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Code of Conduct</td>
</tr>
<tr>
<td>• Supplier Code of Conduct</td>
</tr>
<tr>
<td>• Identification of potential risk groups and sites</td>
</tr>
<tr>
<td>• Analysis of existing processes for human rights impacts</td>
</tr>
<tr>
<td>• Assessment of management systems introduced</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**IMPACT AND RISK ASSESSMENT**

| • UK Modern Slavery Act                       |
| • UNGC Progress Report                        |
| • Website                                     |

**PROCESS INTEGRATION**

| • Code of Conduct training                    |
| • Human rights training                       |
| • Existing due diligence processes for Knorr-Bremse employees and direct suppliers (personnel, HSE, product safety and development, bribery and corruption, supplier management) |
| • Evaluation of other integration options     |

**DECLARATION OF PRINCIPLES**

| • Whistleblower system                        |
| • Local complaints mechanisms                 |

**CORRECTIVE ACTION AND COMPLAINTS MECHANISM**

| • Internal monitoring mechanisms (e.g. internal audit, employee survey, complaints management) |
| • Supplier evaluation and audits              |
Knorr-Bremse makes a significant contribution towards improving safety, efficiency and connectivity on rail and road. To help us play our part in shaping sustainable mobility, we focus on innovative technologies and incorporate sustainability into our product creation process – from the initial vision, via product development and manufacturing, right through to maintenance and remanufacturing. We aim to live up to our social and environmental responsibilities together with our suppliers. Building partnerships with our suppliers and assisting their development are both central to achieving this aim.

Along with traffic safety, the megatrends of urbanization, eco-efficiency, digitization and automated driving are set to shape the transport sector for years to come. As the technological leader in braking and sub-systems for rail and commercial vehicles, Knorr-Bremse helps its customers to incorporate these trends into their businesses and to shape the future of mobility. The safety of our products and systems is our top priority. As well as being our core area of expertise, safety is also the key requirement for all our customers, and indeed for all transport users. Knorr-Bremse also wants its products to contribute to environmentally sustainable, energy-efficient operations. By taking active control of these issues we can guard against any negative effects our products might have on road and rail transportation systems and any resultant risks to Knorr-Bremse’s revenues or reputation.

Our ability to innovate consistently over the long term is essential to achieving these aims. With more than 11,000 patents either granted or pending, Knorr-Bremse is a driving force behind innovation in mobility and transportation technology. That is why we again increased our investment in research and development in 2018, to 364 million euros. As of the end of the year under review, the Company employed 4,554 staff in Research and Development.

PRODUCT AND SYSTEM SAFETY

Knorr-Bremse’s groundbreaking technologies are making transport systems safer. Our range includes electronic collision-avoidance and vehicle stabilization systems and networking solutions for mechatronic systems. These include braking systems – such as our ABS and EBS systems – driver assistance systems, pneumatic suspension systems and pneumatic valves. Given that these are safety-critical products, they also present particular risks, and have to be inspected especially carefully. To this end, Knorr-Bremse makes routine use of comprehensive quality planning, quality control and testing procedures. At the same time we use international standards to ensure ongoing improvement of our business processes. Both of our divisions – Rail Vehicle Systems and Commercial Vehicle Systems – are constantly working to further improve levels of both safety and quality.

Vehicle safety is also a prerequisite for the development of automated driving. Vehicles cannot operate autonomously without a range of sensors mapping their surroundings. These systems, which can be radar, video or laser-based, are combined with active intervention in braking and steering systems to enable the vehicle to drive itself. Connectivity adds a third dimension, allowing wide-ranging interaction between individual road users as well as communication between vehicles and other elements of the transport infrastructure. Vehicle-to-vehicle communications, communication between vehicles and traffic infrastructure, and
Principles for product and system safety

The fundamental, overarching principles ensuring the quality and safety of our systems are laid down in our vision and in the Knorr-Bremse Code of Conduct. Together with Reliability and Technological Excellence, they are also reflected in our corporate values. Each of our two divisions also has its own safety and quality policies. Continuously improving the quality of products and systems is a major focus, as is the everyday responsibility of every employee to ensure production and working processes remain as safe as possible.

When developing our products and systems we focus on the following key priorities:

Safety. Our products make a crucial contribution to ongoing safety improvements on rail and road all over the world.

Quality and reliability. For a manufacturer of safety-critical systems, these two aspects are a top priority. Our products and services are subject to the strictest possible safety requirements, and both the products themselves and the processes behind them meet extremely high quality standards in all areas.

Customer benefits. We see our customers as our partners. Proximity to them, wherever they are in the world, allows us to offer tailor-made solutions that we develop continuously alongside our partners.

Technological expertise. Knorr-Bremse is a byword for technological competence. Our experience, technical know-how, market knowledge and investment in research and development allow us to offer a wide range of innovative solutions for future mobility.

Processes and responsibility for product and system safety

[Our comprehensive product and systems safety management structures help us to fulfil all product safety-related requirements throughout the product life cycle – from the development and testing phase to careful supplier selection and manufacturing, right through to the point at which the product is put to use by our customers. The responsibility for ensuring the safety of products and systems and for taking any necessary action to improve it, lies with senior management, the Divisional Quality Management departments, and the departments responsible for the individual products concerned. Regular monthly meetings ensure that the members of the Management Board and the Executive Board are involved in safety-related processes. In both the Rail Vehicle Systems and Commercial Vehicle Systems divisions, a Quality Council meets several times a year to set overarching global objectives and strategies for improving the quality of our products and systems. Individual sites also report on a monthly basis to the quality management organization within the relevant division.

Knorr-Bremse’s internal regulations and monitoring activities aim to ensure the quality and safety of all our products and systems. Our specific, process-oriented management systems, such as the Safety Quality and Compliance Management (SQC) system, and the system for process-oriented management of critical processes, such as FMEA (Failure Mode and Effects Analysis), simulations and a range of tests carried out at our in-house test facilities and laboratories as well as in actual vehicles. Responsibility for testing lies with the departments responsible for the products and systems concerned. In the event of a safety-critical incident, the so-called Safety Review Board for Rail Vehicle Systems assesses the risks and advises the Management Board and Executive Board on the appropriate response. The heads of quality control at individual sites are responsible for upholding quality standards in production processes, working alongside the relevant departments within the business. The quality management system is based on international standards. The system for the Rail Vehicles Systems division conforms to the ISO 9001 and ISO TS 22163 quality standards, while the system for Commercial Vehicle Systems complies with the IATF 16949 quality standard.

Compliance with company-wide regulations and procedures on product and system safety is ensured by audits and employee training. Regular reviews and audits are carried out at individual sites and in departments to check compliance and identify where quality and safety standards can be improved, helping us to reach our objective of implementing a ‘zero defect’ philosophy.

Objectives for product and system safety

The term ‘zero defect philosophy’ reflects Knorr-Bremse’s overall objective to maximize the safety and quality of our products and services and reduce errors and failures to zero.

This is achieved, for example, by increased efficiency, maximum flexibility and productivity from initial manufacture to actual vehicle operation, maximum delivery reliability, accident prevention and better use of infrastructure. In 2018, 81 Knorr-Bremse facilities worldwide were operating certified quality management systems (either ISO 9001, ISO TS 22163 or IATF 16949). This number is lower than in the previous year (2017: 84, 2016: 75) due to the sale of some sites.

With its new braking systems, Knorr-Bremse is taking the next step towards an accident-free future. At the 2018 IAA Commercial Vehicles, two new types of disc brake and a new digital platform for brake control were at the center of attention. Brake control units and wheel brakes provide a platform for a wide range of flexibly configurable safety features, setting new standards in accident prevention: Adaptive cruise control, emergency braking, lane departure warning and blind spot assistance systems all rely on the basic features of the braking system. Their modular software architecture means they can also be easily expanded and safely customized.

A new safety system from Bendix, Knorr-Bremse’s North American subsidiary, records dangerous events such as excessive cornering speed or collision warnings, contributing to better analysis of dangers on our roads. The SafetyDirect system analyzes a total of 14 different safety-related parameters during journeys, making it a valuable tool for drivers and fleet managers alike. It can also be used to record any serious incidents on video, with the footage being reviewed and analyzed before the truck involved has even completed its journey.

Growing traffic levels call for increased capacity on rail networks. By combining compact design with new materials and technologies, Knorr-Bremse is developing solutions to increase passenger and freight transport capacity while maintaining the same levels of functionality and consumption, for example, our Light Weight Caliper with lightweight functionality is a brake caliper designed for particularly lightweight-sensitive applications. In comparison with conventional calipers, its weight has been reduced by 33%, with the safe-park cylinder alone delivering a 43% weight reduction in comparison with standard spring-based brake cylinders. This reduction in weight creates additional lightweight capacity. Sanding systems used to improve traction between the wheels and the rails are also helping to increase capacity on rail networks. The LPS Sanding System varies the volume of sand according to the speed of the vehicle, allowing operators to use up to 30% less sand and shortening braking distances by up to 50%.

A PARTNERSHIP FOR HIGHLY AUTOMATED OPERATION OF COMMERCIAL VEHICLES

Knorr-Bremse and Continental have agreed a partnership aimed at developing a complete system for highly automated driving (HAD) of commercial vehicles. The collaboration covers all the features required for driver assistance and highly automated driving systems: The system consists of environment recognition, driving planning and decision-making, as well as control of the vehicle’s actuator systems (such as steering and brakes) and human-machine interaction. The collaborative venture is currently focused on automated convoys (platooning). From early 2018, a jointly-developed demonstration vehicle with built-in platooning functionality will be showing what it can do as a ‘highway pilot’, leading a convoy of three coupled trucks from different manufacturers.

The progress being made with HAD is directly contributing to safer, more efficient driving. Platooning allows fuel savings of up to 15% and a corresponding reduction in emissions, while automating individual actions behind the wheel, such as lane changing, driving around roadblocks or emergency braking, will lead to safer commercial vehicles in the future.
**ECOLOGICAL PRODUCT DESIGN**

[Energy efficiency and other sustainability-related characteristics such as operating noise can now determine a product’s competitiveness in the market – and are set to become even more important in years to come. This is one reason why meeting environmental and climate protection requirements is a research and development priority at Knorr-Bremse. Our aim is to make mobility on road and rail more energy-efficient while at the same time reducing emissions and conserving resources.

Principles and guidelines for ecological product design

Knorr-Bremse is subject to requirements from both regulators and customers stipulating that environmental sustainability must be taken into account during product development. Examples of such requirements include avoiding the use of hazardous substances, reducing emissions and energy consumption, and extending product service life. Knorr-Bremse groups these factors together under the heading ‘eco-design’. At Knorr-Bremse we are systematically refining our processes to ensure that eco-design considerations are proactively integrated into product development. This is done with the aim of identifying and subsequently reducing any potential impact that our products and systems could have on the environment.

To examine potential environmental impacts, such as product-related CO₂ emissions, we carry out life cycle assessments in accordance with international standards including the ISO 14040/14044 life cycle assessment standard and the Product Category Rules of European rail industry association UNIFE. In addition, specific requirements regarding issues such as materials use or easy product disassembly are set out in our in-house design guidelines, for example the Commercial Vehicle Systems division’s Remanufacturing Product Design Guideline. In order to optimize the design of our products, especially with regard to undesirable impacts such as noise emissions, we engage in dialogue and direct contact with stakeholders and experts such as local noise abatement campaigners or vehicle operators.

Whisper Brakes Gain in Popularity

Knorr-Bremse’s LL composite brake pads, or ‘whisper brakes’, are an innovative solution for reducing noise emissions. LL stands for Low Friction, Low Noise – unlike conventional pads, the LL pads do not roughen the surface of the wheel during braking. This reduces noise emissions from moving freight trains by some 10 dB(A), which is perceived as a halving of the noise level by the human ear. In Germany, DB Cargo is looking to convert its fleet of approximately 35,000 freight cars to LL composite brake pads by 2030. Our K pads achieve a similar effect in new-build vehicles. For some years now, it has been compulsory for new vehicles in the EU to be fitted with this type of pad.

Flexible Electric Bus Charging

Knorr-Bremse subsidiary Keape Electric is committed to advancing the electrification of bus fleets across the globe using its pioneering In Motion Charging concept. In Motion Charging allows trolleybuses to operate on parts of the route where there are no overhead lines. The buses’ batteries are then recharged when they return to an overhead section. This ensures they can operate round the clock, 24 hours a day. As well as being climate-friendly, the quiet, zero-emission electric buses are popular with both passengers and local residents.

In 2017, a cross-divisional eco-design working group was established in order to create synergies between the two divisions. Every month, personnel from the two divisions meet representatives from the Corporate Responsibility and Remanufacturing departments. The aim of these discussions is to develop standards and processes to enable the integration of harmonized eco-design concepts into product development operations within both divisions. In 2018, they focused on the development and piloting of our first training module on environmental and social product regulations (e.g. REACH, conflict minerals, etc.). A common standard for life cycle assessments in both divisions is also under development.

Quantifying environmental impact through life cycle assessments

In the year under review, Knorr-Bremse made increased use of life cycle assessments (LCAs) to evaluate the environmental impact of its products and systems. Fourteen products across our portfolio were selected for assessment. They represent significant innovations and are of particular importance to our customers. LCAs generate valuable data on the use of materials and resources during production, as well as the product’s impact throughout its service life up to and including its disposal. We focused on greenhouse gas potential as the main indicator of our products’ impact on climate change, and identified a number of weaknesses as a result of this assessment. Some of the LCAs have been independently validated by DEKRA experts in accordance with ISO 14040/14044. From now on, the 2018 standard for quantifying the carbon footprints of products will be used as the basis for carrying out all LCAs, creating a single standard for both divisions.

The Company also chose eco-design as one of its key themes for the 2018 IAA and InnoTrans trade fairs. As well as showcasing products and systems that help to prevent emissions in the transportation sector, we also actively communicated the results of the LCAs.

**Eco-design in the Value Chain**

- Compliance with rules and regulations
- Choice of materials
- Avoiding prohibited substances
- Life cycle assessment
- Production efficiency
- Employee training
- Design for manufacturing
- Integration in R&D
- Life cycle assessment
- Energy efficiency
- Noise
- Weight

**Structures and processes for ecological product design**

Like product safety, ecological product design is a cross-cutting issue. At an organizational level, it is established within the business units that support product development in both divisions, allowing development engineers to incorporate aspects of ecological product design into their everyday work. In the Rail Vehicle Systems division, specialists in eco-design work together with developers to assess product ideas on the basis of sustainability criteria: for example whether the product contains any hazardous substances, the emissions produced by the production process and during use, suitability for recycling and ease of maintenance. We are currently implementing a similar system for new developments in the Commercial Vehicle Systems division.
Saving resources through industrial remanufacturing

Extending a product’s life can make a key contribution towards greater sustainability. We therefore ensure that the design of our new products is optimized for subsequent remanufacturing. Remanufacturing means that products can be reused for exactly the same function. Because fewer new materials and less energy are required, remanufactured products have a lower overall environmental impact.

Industrial remanufacturing remains an important part of our Rail Vehicle Systems division’s business. For example, when Knorr-Bremse overhauls control, load-proportion-al and weighing valves for freight car brakes, we only re-place parts that are actually worn out. Measured by weight, around 90% of the parts can be reused. In 2018, the Knorr-Bremse Service Center in Berlin remanufactured approximately 55,500 products of various kinds. In China, Knorr-Bremse remanufactured and delivered brake equipment for over 3,100 high-speed train cars, 1,700 locomotives and almost 2,200 metro trains in 2018, together with some 1,600 entry systems for high-speed trains and 1,800 HVAC units.

In the Commercial Vehicle Systems division, Knorr-Bremse offers a remanufactured product portfolio of almost 500 product codes under the EconX® brand. Although returning used products can sometimes involve transporting them over longer distances, the CO₂ emissions of a remanufactured product are up to three quarters lower than for a new product. This allowed Knorr-Bremse to save approximately 1,400 tonnes of CO₂, 317 tonnes of materials and 5,460 MWh of energy through industrial remanufacturing in 2018.

Principles and guidelines for sustainable supplier management

Our Group-wide Supplier Code of Conduct sets out what we expect from our suppliers in terms of working conditions, respect for human rights, environmental protection, safety, business ethics and compliance. The Code is currently available in 14 languages, with more language versions to come in 2019. 81% of direct suppliers by purchasing volume have taken note of our Supplier Code of Conduct or refer to a comparable code of conduct of their own. We will continue to disseminate the Code and to other suppliers over the course of the coming reporting year. In particular we will complete roll-out to indirect suppliers (i.e. suppliers of non-production-related material).

Knorr-Bremse’s two divisions are each responsible for their own direct purchasing. However, a cross-divisional function is tasked with ensuring compliance with sustainability standards in the supply chain and making sure sustainability continues to improve. Suppliers of direct materials must also accept the relevant department’s Quality Management Guideline. We made a number of changes to our guidelines for the Commercial Vehicle Systems division in 2018, incorporating both our Supplier Code of Conduct and minimum sustainability requirements such as an obligation to use ISO 14001-certified environmental management systems wherever possible. New direct suppliers are under a contractual obligation to comply with these sustainability standards. The Quality Management Guideline for the Rail Vehicle Systems division is currently being updated and should be rolled out in 2019. Here, too, the updated Guideline will also include a contractual obligation to abide by our Supplier Code of Conduct.

Purchasing of indirect materials is controlled at cross-di visional level. The Procurement Guideline for Indirect Materials states that sustainability must be taken into account when selecting suppliers. This Guideline is complemented by specific guidelines to encourage purchases of renewable energy as well as energy-efficient products, equipment and services.

Supplier sustainability assessment

Knorr-Bremse monitors direct suppliers’ sustainability performance and has it assessed and approved by external service providers. Currently around 750 of our direct suppliers have been assessed. Despite our complex range of products, global operations and diversified supply chain, these assessed suppliers account for between them for 53% of our global purchasing volume, we aim to increase this figure to 60% in 2019. We will also begin assessing indirect suppliers using the same process over the coming year.

**Saving resources through industrial remanufacturing**

**Principles and guidelines for sustainable supplier management**

**Supplier sustainability assessment**
Our objective is for our suppliers’ sustainability ratings to play a greater role in our procedure for awarding contracts. To this end, the Commercial Vehicle Systems division has integrated suppliers’ sustainability ratings into the processes used by the Sourcing Board – the internal body that examines and decides on supply contracts. In practice this means that only suppliers that have recognized the Supplier Code of Conduct and have completed (or are in the process of completing) a sustainability assessment can be nominated for supply contracts. In addition, suppliers should ideally be able to submit evidence that they use a certified environmental management system. Around 55% of the total purchasing volume for the Commercial Vehicle Systems division comes from suppliers with a certified environmental management system. Suppliers to Knorr-Bremse’s Rail Vehicle Systems division are similarly assessed against sustainability criteria. All European suppliers must undergo a sustainability assessment before they can be granted preferred supplier status. Preferred suppliers are more likely to be awarded supply contracts.

Knorr-Bremse’s supplier questionnaire also asks suppliers whether any of their minerals are obtained from conflict zones or other high-risk areas. We then conduct a detailed analysis of suppliers in both areas of the business. As closely coordinated as possible, we are working together with the German Automotive Association (Verband der Automobilindustrie – VDA) to develop effective solutions for the sector as a whole.

In November 2018 Czech-based company Henkel CR won the Rail Vehicle Systems Division 2018 Supplier Contribution Award in the Sustainability category. Henkel CR was selected from 100 applicants according to corporate sustainability management criteria and on the basis of the innovative and sustainable products it submitted. The company’s environmentally friendly solution for adhesive bonds demonstrated a true commitment to sustainability, as did its wide range of sustainability-focused corporate initiatives.

In addition to these measures, we have also been carrying out sustainability audits at our suppliers’ premises since 2017 to check compliance with social and environmental standards. Six direct, high-risk suppliers were audited by independent third-party experts in the course of the year under review. The audits assess management approaches and how they are implemented in relation to compliance, the environment, health and safety at work, human rights and supplier management. If an audit or sustainability assessment uncovering infringements or room for improvement, we aim to work together with the supplier to deal with the issue and improve their sustainability performance. We are planning further sustainability audits for 2019, and will draw up development plans with the suppliers concerned on the basis of the results.

Environmental-friendly logistics along the value chain

Knorr-Bremse is working with external service providers to optimize its operational logistics management systems. These external companies assume responsibility for the planning, consolidation and operational execution of deliveries by external suppliers to Knorr-Bremse, between our sites and from us to our customers. The various means of transport incorporated into the value creation chain are as closely coordinated as possible, making our logistics services even more sustainable. Our logistics partners are expected to use modern vehicles that achieve the highest possible levels of fuel economy. This serves to encourage an efficient logistics network at the same time as reducing transport-related CO₂ emissions. We require all commercial vehicles to meet current European commercial vehicle emission standards.

Knorr-Bremse is also improving its internal logistics processes for shipments between its sites, partly in response to customer requests to actively consider sustainability issues in our logistics. Standardized procedures and working methods help us to optimize our internal processes and to collaborate more efficiently with other sites. This improves the service we offer in all our distribution channels, especially in terms of delivery reliability, quality and lead times. We minimize the impact of product transportation on the environment by making optimum use of rail, road and sea connections. We try to make as many of our inter-continen- tal shipments as possible by ship or rail, avoiding using air freight services wherever we can.
Knorr-Bremse employs around 28,400 people worldwide. We aim to offer them a secure, attractive and supportive working environment based on an open corporate culture characterized by diversity, transparency and respect. With our combination of secure employment, challenging work and opportunities for personal and professional development, we are positioning ourselves as an attractive employer in the global market.

Knorr-Bremse’s strong performance and continued growth is thanks primarily to the outstanding commitment shown by its employees. As of the end of the 2018 calendar year, the Company employed 28,452 people worldwide – growth of 2.7% compared to the previous year (27,705). Around 80% of our employees work at sites outside Germany – a strong indication of the Group’s international outlook.

Companies operating at a global level have to differentiate themselves from their competitors by delivering world-class technological performance – something they cannot do without a highly-qualified workforce. This means it is especially important for Knorr-Bremse to counter demographic changes and the shortage of skilled labor they are causing. Satisfied employees, a holistic approach to HR development and a corporate culture characterized by diversity and equality of opportunity are crucial to doing that.

Satisfied and committed employees are essential to Knorr-Bremse’s continued success, and an open and supportive corporate culture is crucial for the future of the Company. Knorr-Bremse respects and protects workers’ rights. We feel we have a clear duty to set high standards, ensuring that remuneration is fair and appropriate and supporting our employees as their circumstances change throughout their lives.

Principles and processes for employee satisfaction

The head of the global Human Resources (HR) function carries ultimate responsibility for our employees, and reports regularly to the Chairman of the Executive Board. Responsibility for implementing HR measures and ensuring compliance with our own Code of Conduct in our three regions – Asia/Australia, Europe/Africa and Americas – lies with regional HR Officers, while local HR staff hold similar responsibilities at site level.

In order to live up to our corporate responsibility to uphold human rights, we base our policies and systems on the principles of the UN Global Compact, the United Nations Universal Declaration of Human Rights and the International Labour Organization (ILO) human rights conventions (see page 16).

The Knorr-Bremse Code of Conduct provides the framework that ensures all our employees are treated with respect on a daily basis, and gives them a clear understanding of what we mean by responsible behavior. In this respect, the diversity of Knorr-Bremse’s workforce is a key reason for its success. As a global company, we want to make sure that
different cultures and life experiences are understood and valued, as well as actively supporting the integration of employees from other countries. This can only be done by applying the fundamental principle of equal treatment, in respective of gender, age, national or ethnic origin, sexual orientation, disability, religion or political views. All new employees, including at management level, are hired purely on merit, as set out in the Knorr-Bremse Code of Conduct. We have set up systems to help employees get advice when they need it. All employees are entitled to approach their managers, our compliance organization, Human Resources or – where they exist – Works Councils with any questions they may have. Our anonymous whistleblower system also gives employees worldwide the opportunity to report any behavior that runs counter to our fundamental principles.

Work-life balance

Promoting a healthy work-life balance is a key objective of our HR policies. Knorr-Bremse can help its employees to achieve this by offering them the following benefits to suit their individual circumstances:

- Flexible working hours and working time accounts
- Part-time working
- Sabbaticals lasting several months
- Teleworking
- Family support (e.g. helping employees to find childcare and care services for relatives, childcare schemes during school holidays)
- Family assistance programs, such as contributing to health care and health insurance plans, special financial assistance, granting leave if children or relatives fall ill, and maternity and parental leave (even in countries where there are no statutory provisions).
- A range of health-promotion schemes and access to health facilities

Since 2012, Knorr-Bremse’s Munich site has held beruf und Familie’s ‘Work and Family Audit’ Certificate. The certificate is considered a prestigious award in Germany and recognizes our commitment to supporting family life.

Remuneration and other benefits

Knorr-Bremse is a fair employer that takes care to ensure its employees are appropriately rewarded in line with global market rates. At many of our sites, our salaries are above the minimum rates set in collective bargaining agreements. Most posts within the Company require highly-qualified and skilled personnel, meaning that statutory minimum wage legislation is irrelevant to the vast majority of our employees. Salaries are set purely on the basis of qualifications and performance; we do not distinguish between our male and female employees on pay.

In order to guarantee equality of opportunity and fair remuneration, as well as to ensure posts can be compared internationally, we are working to assess all our posts according to a standardized international system and to compare them against external benchmarks. So far, 50% of all roles have been assessed. The higher the level of responsibility associated with a role, the greater the variable component of the overall remuneration package. Performance-related payments are made on the basis of the overall success of the Company and the extent to which the employee fulfils their individually agreed objectives. These objectives are agreed between the manager concerned and their line manager as part of our standardized worldwide Staff Dialogue process (see page 33). Sustainability-related issues are incorporated into employees’ objectives as appropriate to their individual roles.

Employees can also make use of a range of additional voluntary benefits provided by the Company. Available services vary from site to site but may include meal and transport allowances or access to sports facilities and health-related services. Where local circumstances allow, Knorr-Bremse also makes voluntary additional payments to company pension schemes, at the same time as complying with all statutory provisions and local tax and social security legislation.

Employee co-determination

At Knorr-Bremse, it is essential that relationships at all levels of the Company hierarchy are built on trust. Our commitment to working together with our employees includes our determination to engage constructively with employee representatives and with the European Group Works Council. Where possible, and to the extent permitted under local legislation, we support our employees’ right to freedom of assembly and association and to engage in collective bargaining. Members of employee representative bodies and/ or trades unions are neither discriminated against nor given any kind of special treatment.

Measuring employee satisfaction

[Our employee survey is an important tool for assessing employee satisfaction at Knorr-Bremse and how it can be improved. Hereewith, all Knorr-Bremse employees worldwide have the chance to give their views on their employer. An independent institute ensures that all responses remain confidential, and questionnaires are assessed anonymously to prevent the answers being traced back to specific individuals.

The aim of the survey is to measure employee satisfaction at the same time as gathering and implementing suggestions as to how working conditions might be improved. The results are communicated to employees using an agreed and clearly-defined process, and then discussed with them at length in a series of workshops. Specific recommendations are drawn up at the end of the process. The Knorr-Bremse Group conducted its sixth global employee survey in March 2018. The response rate worldwide was around 72%. Average satisfaction on a scale from one to seven (with one being the best possible score and seven the worst) was 2.80. Compared with the survey conducted four years ago, participation fell by around ten percentage points, while the overall satisfaction score remained at a good level.]

2018 STAFF SURVEY RESULTS COMPARED TO 2014

Satisfaction level: Finally, taking everything into consideration, how satisfied overall are you working for the Knorr-Bremse Group?

Average 2014: 2.81
Average 2018: 2.80

- Satisfaction: 76.8%
- Yes and no: 13.2%
- Not satisfied: 10.0%
PERSONNEL DEVELOPMENT

[Knorr-Bremse sees further training as a key factor for employees’ personal and professional development, as well as the foundation for the Company’s success. The Group aims to ensure its employees are qualified to meet specific business needs and to provide them with the skills they need for their roles. That is why Knorr-Bremse takes a systematic approach to identifying strengths and weaknesses within the Company and implementing any changes required to address them. Personnel development plays a key role in ensuring that our workforce is qualified to meet our needs.

Principles and processes for personnel development

Our HR process model provides the framework for our personnel development initiatives. The model focuses on two areas of performance:

- Source: Attracting new employees and talents, developing a strong long-term brand as an employer and working together with universities, colleges and other training institutions.
- Develop: Assessing and supporting our employees and managers, offering targeted training programs, and continuing to develop our leadership culture and principles.

We offer our employees training specifically tailored to Knorr-Bremse which helps them to increase their knowledge and expertise and prepare themselves for new challenges. As part of these training programs we deliver a varied range of seminars and workshops on topics including social and inter-cultural skills, languages, project management, (brake) technology, quality, law, IT and CAD.

At Knorr-Bremse, good leadership skills are essential to maximizing the performance, creativity and long-term success of the Company. The leadership team has a particular responsibility to create a working environment in which all employees can reach their full potential. The Knorr-Bremse Leadership Guidelines provide advice on how to do this. They cover five core themes (Reflect, Approach, Consult, Develop and Implement) and describe the leadership qualities Knorr-Bremse managers are expected to exhibit on a daily basis.

We use potential analysis procedures (Development Center) and management development programs (Management Potential Groups) for succession planning and to develop our managers’ skills right across the Group. The aim is to improve the overall standard of leadership and to fill as many vacant management positions as possible with internal candidates.

We carry out annual employee appraisals throughout the Group, as well as management assessments every three years to gather feedback on the staff development measures we have introduced and to ensure employee performance is assessed fairly. Employees and managers are involved in all discussions on the skills required and the training measures to be implemented. Managers are also empowered to order additional training for employees. Our Human Resources Department can also propose additional training, and is responsible for ensuring training quality.

Training and courses

Knorr-Bremse offers apprenticeships in the skills it needs within its workforce. This means that graduates from our apprenticeship scheme have a good chance of progressing to a permanent job with the Company. We offer a range of technical and commercial apprenticeships across our international sites. Demand is particularly high in specialist areas including industrial mechanical engineering, cutting machine operation, electronics, mechatronics and information technology. As of 31 December 2018, 207 young people were apprenticed at Knorr-Bremse (2017: 248).

Knorr-Bremse has also been a partner of the Duale Hochschule (DHBW) Ravensburg and its external campus at Friedrichshafen since 2008, offering three-year sandwich courses for students in industrial engineering, electrical engineering, mechanical engineering and industrial computing.

Professional development and qualifications

[We want to develop our ability to recognize employees’ potential and support them in their individual development, which is why managers hold an annual appraisal with their employees to discuss their performance and opportunities for development. Staff Dialogue is the name we give to this process, which has now been standardized right across the Group. We have also made significant improvements to our assessment criteria and the way we manage potential. Recent changes include ensuring individual targets are agreed in writing and the introduction of performance and potential assessments. These changes have resulted in greater clarity regarding employee performance and potential, as well as enabling our employees to take advantage of tailor-made personal development opportunities from Knorr-Bremse’s range of training. In 2018, 71.1% of our workforce participated in performance appraisals. 94.1% of these employees successfully completed the Staff Dialogue process.]

Global exchanges

As a global Group we promote understanding and appreciation of different cultures and life experiences, and actively support global exchanges among our employees. We strengthen this global dialogue through inter-cultural training, language courses, projects across multiple sites and opportunities for employees to live and work overseas. With a presence in over 30 countries, Knorr-Bremse offers a wealth of overseas posting options. Knorr-Bremse employees can be posted abroad for anything between six months and five years. All candidates for overseas jobs are supported by a specialist team within our central International Transfers department, responsible for guiding them through the whole process from initial preparations to their return home and reintegration into their former workplace. In 2018, a total of 81 employees worldwide were posted to other Knorr-Bremse sites (2017: 81).

Alongside long-term deployments overseas, facilitating short-term exchanges between our sites to address specific challenges remains a major priority for Knorr-Bremse. Working on a wide range of international projects allows staff to build their expertise in specific areas, exchange specialist knowledge and ensure knowledge transfer.

Management and young talent

Knorr-Bremse is determined to stay close to its markets and customers, making full use of country-specific linguistic and cultural expertise. That is why we try to employ local management staff at our international facilities wherever possible.

Our Leadership Feedback process, which takes place at least once every two years and can be initiated at any time as required, is another manifestation of our culture of open dialogue. The process allows managers to gather feedback on their leadership from their employees. We then work together with the manager to address the results and identify how their relationship with their employees can be improved.

Women in leadership positions

In 2018 the overall proportion of female employees in the workforce was 20.9% (2017: 20.2%). The proportion of women in leadership positions across all departments worldwide was 12.5% (2017: 11.2%).

Knorr-Bremse utilizes and supports a number of programs designed to increase the proportion of women in management positions. Knorr-Bremse’s MEP trainee program is just one example. In 2018, 43% of participants in the program were female (2017: 36%). Our North American subsidiary Bendix offers female managers the opportunity to take part in a special training program for women in leadership positions lasting six months and consisting of a regular series of

[Note: The table and graph information is not included in the text response.]

Knoe r-Bremse offers three in-house development programs designed to attract and retain up-and-coming talent:

- Management Evolution Program (MEP): On this program, which lasts 18 months, trainees are introduced to three different specialist areas, gain experience on international projects, and spend six months working at one of our international facilities. Participants are mentored during the program by experienced Knorr-Bremse managers.

- International Management Potential Group (IMPG): This development program gives employees starting their management careers worldwide the opportunity to develop their talents by participating in a range of training sessions and projects, as well developing their management expertise and expanding their own international networks.

- Engineering Development Program (EDP): This program offers US college graduates in technical subjects the opportunity to complete two years of additional training in mechatronics, for example, by transferring between divisions or departments, or by working at our Mexican site.

Women in leadership positions

In 2018 the overall proportion of female employees in the workforce was 20.9% (2017: 20.2%). The proportion of women in leadership positions across all departments worldwide was 12.5% (2017: 11.2%).

Knorr-Bremse utilizes and supports a number of programs designed to increase the proportion of women in management positions. Knorr-Bremse’s MEP trainee program is just one example. In 2018, 43% of participants in the program were female (2017: 36%). Our North American subsidiary Bendix offers female managers the opportunity to take part in a special training program for women in leadership positions lasting six months and consisting of a regular series of

[Note: The table and graph information is not included in the text response.]

Knoe r-Bremse offers three in-house development programs designed to attract and retain up-and-coming talent:

- Management Evolution Program (MEP): On this program, which lasts 18 months, trainees are introduced to three different specialist areas, gain experience on international projects, and spend six months working at one of our international facilities. Participants are mentored during the program by experienced Knorr-Bremse managers.

- International Management Potential Group (IMPG): This development program gives employees starting their management careers worldwide the opportunity to develop their talents by participating in a range of training sessions and projects, as well developing their management expertise and expanding their own international networks.

- Engineering Development Program (EDP): This program offers US college graduates in technical subjects the opportunity to complete two years of additional training in mechatronics, for example, by transferring between divisions or departments, or by working at our Mexican site.

Women in leadership positions

In 2018 the overall proportion of female employees in the workforce was 20.9% (2017: 20.2%). The proportion of women in leadership positions across all departments worldwide was 12.5% (2017: 11.2%).

Knorr-Bremse utilizes and supports a number of programs designed to increase the proportion of women in management positions. Knorr-Bremse’s MEP trainee program is just one example. In 2018, 43% of participants in the program were female (2017: 36%). Our North American subsidiary Bendix offers female managers the opportunity to take part in a special training program for women in leadership positions lasting six months and consisting of a regular series of
workshops. Exchanges with female managers at other companies within the industry play a key role.

We also support female students on STEM courses via our part-time apprenticeships. Exchanges with female managers at other companies within the industry play a key role.

**Occupational Health and Safety**

Occupational health and safety is a major priority for Knorr-Bremse, and is firmly embedded in our business processes. The relevant commitments and key principles are set out in our corporate policy on Occupational Health and Safety Management Systems (OHSAS). The principle of safety at work is embedded in our business processes and is systematically addressed in all phases of the value creation process. We fulfill our responsibility towards all our employees by systematically addressing any significant issues that might affect their health and safety at work.

We employ standardized processes to record and analyze the key occupational safety indicators, and use the results to develop measures aimed at improving our performance. In order to maintain and improve our high occupational health and safety standards, we provide regular in-house training and offer our HSE experts the opportunity to take part in international meetings, conferences and projects. We also raise awareness of occupational safety among the workforce through in-house campaigns. The ‘Bendix Stars’ program in the USA encourages all work teams to improve their awareness of occupational safety issues, with prizes awarded for the best teams every month.

Ultimately, effective prevention of workplace accidents and health hazards can only be achieved by raising awareness among both management and employees. Regular training and information on occupational safety help to improve risk identification and prevention. As well as safety in the workplace, Knorr-Bremse also attaches great importance to health in the workplace. A range of measures are in place to promote health and employee well-being, including health and safety principles and processes. The HSE officers at our sites bundle all the occupational health and safety measures and assist management with their implementation. Key aspects of their work include assessing the risk of injury and accidents for permanent and temporary staff associated with particular machinery, workplaces and work processes, promoting safety awareness among the workforce through training courses and communications campaigns, analyzing accidents in order to determine their causes, and introducing accident prevention measures based on the findings of these investigations.

Our occupational health and safety management system complies with the international standard OHSAS 18001 (Occupational Health and Safety Assessment Series) and finds concrete expression in our in-house HSE processes. Regular internal audits and training ensure that these processes are observed. In the Rail Vehicle Systems division, 37 production and service sites around the world have already achieved OHSAS 18001 certification. This number has fallen from 39 in 2017 due to the sale of some facilities. In 2019, we will be aligning our occupational health and safety management system with the ISO 45001 international occupational health and safety standard. All our current OHSAS 18001 certified sites will apply for ISO 45001 certification. We fulfill our responsibility to our employees by systematically addressing any significant issues that might affect their health and safety at work.

We also support female students on STEM courses via our part-time apprenticeships. Exchanges with female managers at other companies within the industry play a key role.

**Prevention of workplace accidents**

Knorr-Bremse is committed to doing everything possible to prevent workplace accidents and further reduce the number of accidents per 200,000 hours worked. The following key measures are geared towards delivering on this commitment:

- standardization of preventive occupational health and safety management systems
- information campaigns and regular meetings on occupational safety
- regular system and process audits, HSE safety audits, equipment acceptance audits and inspections at our sites
- regular internal reporting and follow-up

Thanks to these measures, in 2018 we were able to reduce our workplace accident rate to 1.0 accidents per 200,000 hours worked.

<table>
<thead>
<tr>
<th>NUMBER OF WORKPLACE ACCIDENTS PER 200,000 HOURS WORKED</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.2</td>
<td>1.1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NUMBER OF WORKPLACE ACCIDENTS RESULTING IN LOST DAYS PER 200,000 HOURS WORKED</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

**KNORR-BREMSE MELKSHAM WINS ROSPA AWARD**

This year, Knorr-Bremse Rail Systems in the UK has once again received a prestigious gold award from the Royal Society for the Prevention of Accidents (RoSPA). The RoSPA Awards assess health and safety management systems. Winning the award is a tribute to the site’s high occupational health and safety standards.

**Health in the workplace**

Knorr-Bremse’s occupational health management system provides a range of services, including analysis and advice on health risks and ergonomic issues associated with particular workplaces. We also provide water coolers and fruit for our staff, preferential rates for sporting activities, in-house sports facilities, financial assistance for employees who purchase bicycles and expert seminars on health issues.

We organize occupational health programs as required, ensuring that our employees’ individual needs are taken into account at all times. Staff are encouraged to contribute their own ideas and suggestions, either at regular meetings or through the employee suggestion system.

A range of in-house medical care services is available to employees at selected sites, including key preventive check-ups, vaccinations and pre-travel consultations. In the USA, our Bendix subsidiary offers its employees an extensive range of services and information on subjects such as breast cancer prevention, healthy nutrition and physical fitness as part of its ‘Bendix Be Healthy’ program.
Deliberate action is needed to make a success of environmental protection. This is the principle we follow in managing production processes that have an impact on the environment, in particular as a result of energy and materials consumption. Environmental management systems at our facilities enable us to work on using resources responsibly and reducing CO₂ emissions.

As an industrial manufacturer, Knorr-Bremse is conscious of its impact on the environment, especially when it comes to climate change and resource consumption. This is why we are constantly aligning our environmental management with national and international developments, legislation, frameworks and customer requirements. Our Group-wide risk management system also covers environmental issues. In order to minimize our impact on the environment, we have put in place standardized processes for environmental protection and set environmental targets at Group and site level. We are constantly raising awareness of environmental issues among our employees.

Knorr-Bremse concentrates most of its climate protection activities in the areas of products, logistics and energy (see chart). This is where we see our biggest impact – and where we can make the biggest difference.

Environment and climate

[As an industrial manufacturer, Knorr-Bremse is conscious of its impact on the environment, especially when it comes to climate change and resource consumption. This is why we are constantly aligning our environmental management with national and international developments, legislation, frameworks and customer requirements. Our Group-wide risk management system also covers environmental issues. In order to minimize our impact on the environment, we have put in place standardized processes for environmental protection and set environmental targets at Group and site level. We are constantly raising awareness of environmental issues among our employees.

Knorr-Bremse concentrates most of its climate protection activities in the areas of products, logistics and energy (see chart). This is where we see our biggest impact – and where we can make the biggest difference.]

Focus on products (Scope 3**):
- Carrying out life cycle analyses
- Integrating environmental protection into development processes
- Industrial remanufacturing
- Environmental impact analysis of materials
  ➞ See Products and Partners chapter

Focus on logistics (Scope 3**):
- Improving the transport network, storage structures and route planning
- Use of fuel-efficient vehicles by logistics providers
- Reducing transport-related CO₂ emissions
  ➞ See Products and Partners chapter

Focus on production (Scope 1, Scope 2*):
- Improving energy efficiency
- Increasing the proportion of electricity from renewable sources
- Introducing energy management systems acc. to ISO 50001
- 2020 target: Climate-neutral organic growth (base year 2015)

* Direct and indirect emissions from the use of natural gas, fuel oil (Scope 1) and electricity and district heating (Scope 2).
** Indirect emissions from fuel consumption and from the product manufacturing and use phases (Scope 3).
ENVIRONMENTAL MANAGEMENT

[Responsibility for implementing and coordinating environmental management lies with the central Health, Safety and Environment (HSE) departments in the Rail Vehicle Systems and Commercial Vehicle Systems divisions. They draw up strategic targets and pool all strategic management and coordination tasks at divisional level. Senior management is involved in the process through regular meetings and ad-hoc reporting, as well as via the CR-Council. At site level, HSE managers implement the strategic requirements, aims and programs in collaboration with local managers. The managers also receive support from local environmental and energy officers, regional coordinators and experts from the strategic specialized departments.

The divisions hold international HSE meetings at least once a year or organize regular conference calls to exchange information between sites on HSE-related aspects, best practice and legal requirements. Regular contact between the divisional HSE officers ensures that HSE work in the two divisions is aligned as closely as possible and that both divisions can benefit from synergies.

Environmental management principles and processes

The fundamental principles of Knorr-Bremse’s environmental protection policy are set out in our global HSE Policy. In this policy we commit ourselves to preventing or minimizing any negative impact that our processes, services and products may have on health, safety and the environment. We achieve this through standardized management systems based on statutory and customer requirements, internal guidelines and procedural instructions. Using these standardized systems as a basis, sites record their local environmental and energy data, which are then used to plan, analyze and manage environmental measures. In addition, our processes are aligned with the following standards: ISO 9001 or IATF 16949 (quality management), ISO 14001 (environmental management), OHSAS 18001 or ISO 45001 (occupational health and safety) and ISO 50001 (energy management). Regular internal and external audits check whether the company is complying with the specified standards and whether improvements are being implemented. The divisions also produce regular reports throughout the year containing data on health, safety and the environment.

Since 2001, we have been having relevant sites to obtain certification to ISO 14001, the international standard for environmental management. By the end of 2018, 59 production plants had achieved certification (2017: 59).]  

ENERGY AND CO2 EMISSIONS

[As an industrial manufacturer, Knorr-Bremse’s energy consumption and associated CO2 emissions are linked primarily to its use of buildings, the plant and machinery it operates and the energy used in production processes. As well as its direct impact on the environment, Knorr-Bremse is conscious of potential regulatory requirements in relation to climate change that could have a direct impact on the success of its business.

Energy management principles and processes

The role of the Group’s environmental and energy management system is to constantly evaluate and improve its processes in terms of energy requirements. It helps monitor consumption data, identify potential savings and track the effectiveness of implemented measures. The Group’s environmental and energy management system is also enshrined in its global HSE Policy.

As part of its HSE management system, Knorr-Bremse is implementing an energy management system based on ISO 50001, particularly at its energy-intensive production facilities. By the end of 2018, 33 legal business entities (2017: 34) held this certificate or were completing an external energy audit under EN 16247. As part of our energy management system we set annual objectives and draw up action plans to achieve them. At these sites, local energy officers analyze processes and monitor the implementation of measures.

Since 2015, we have been following our global guidelines on the purchase of renewable energy with a view to increasing the proportion of renewables in our externally sourced electricity. The Indirect Purchasing team has conducted a systematic analysis of the current energy contracts at our 25 most energy-intensive facilities. The aim is to make sure the option of switching to renewable energy is included in the decision-making process.]  

CHANGE OF PROVIDER FOR THE ENERGY TRANSITION

Knorr-Bremse’s sustainability targets play a high value on climate protection. Electricity supplies to our sites should therefore not only be as cheap as possible, but a high proportion should also come from renewable sources. For this reason, we switched electricity providers at the beginning of 2018, cutting our electricity-related CO2 emissions in Albersbach, Berlin (excluding our Powertech subsidiary), Dresden, Holzkirchen, Schwieberdingen and Munich by around 80 percent.

Energy efficiency and energy saving measures

We help to minimize the impact of our operations on the environment by ensuring our plant and machinery are serviced regularly, as well as by carrying out preventive maintenance and repairs. Each year, we identify specific measures to be taken, such as improvements to plant technology or processes, as well as modernization. At some of our facilities, for instance, we have installed energy-measuring devices and systems that record and itemize energy consumption. Knorr-Bremse also makes use of the waste heat from test rigs and maximizes potential energy savings through digitalization. The Group shares local best practice examples across sites and divisions with a view to creating synergies.

Climate protection targets for 2020

[In 2015, Knorr-Bremse set itself both absolute and relative climate protection targets. Firstly, we committed to achieving climate-neutral organic growth by 2020 at our 43 most energy-intensive sites. This specifically means that operational CO2 emissions must not exceed the 2015 base level by 2020, despite a steep rise in production capacity. We are well on the way to reaching this target. In the year under review, switching energy contracts for our German facilities and generating our own solar power in India (see text boxes on pages 40, 41) played a significant role in achieving this reduction.

Secondly, we set ourselves the target of improving CO2 efficiency by a further 10% by 2020 compared with 2015 levels – including at the new sites that Knorr-Bremse will acquire over this period. We upgraded our processes for recording key indicators in the year under review, so we will be using the improved data quality to define a new climate protection target. The improvement in data quality – achieved by aligning the key indicator definitions for the two divisions and extending data recording to other consolidated companies and facilities – may, however, limit the extent to which the HSE indicators can be compared with those of previous years. We will be taking a number of measures to tackle this issue, including improving monitoring procedures to safeguard data quality.]
### Waste management processes

At Knorr-Bremse, waste consists primarily of scrap metal, paper and residual waste. Surface treatment of metallic materials also results in electroplating sludge. Our product packaging consists primarily of reusable materials and containers.

In general, waste management at Knorr-Bremse is based on the principle of a sustainable circular economy. The top priority is reducing total waste and, in particular, avoiding hazardous waste. Where this is not possible, we are committed to environmentally friendly recycling. The Knorr-Bremse Production System (KPS) also helps minimize waste in production. Value stream analyses identify and eliminate various forms of waste, such as overproduction and preventable product scrapage. In addition, our quality management guidelines require our suppliers to avoid or minimize packaging wherever possible, and to use recyclable materials.

### Water consumption

The water Knorr-Bremse consumes is used primarily in the surface treatment and cleaning of its products, for test applications and for drinking water and sanitary purposes. In 2018, we used 645 cubic meters of water (2017: 486 cubic meters)\(^3\). We obtain our water from local authority suppliers. Some of our facilities save drinking water by using rainwater for cleaning, in their sanitary facilities and for watering green spaces. We dispose of our waste water via public sewage systems. It is our aim to use water as efficiently as possible and to reuse it as much as possible through recycling systems.

---

\(^3\) The year-on-year increase is attributable to the inclusion of additional sites. The 2018 figure covers more than 90% of Knorr-Bremse employees.
Together with its employees, Knorr-Bremse takes social responsibility seriously. Playing an active part in our communities, creating opportunities for those in need and looking after the environment around our sites is part and parcel of our identity. Knorr-Bremse demonstrates this through its commitment to community and social issues worldwide.

Our Global Care and Local Care initiatives are our way of addressing local and global challenges. Local Care covers all community activities carried out by our individual sites, while our charitable organization Knorr-Bremse Global Care promotes longer-term projects requiring significant funding all over the world.

The Knorr-Bremse Group and Knorr-Bremse Global Care see community activities as an opportunity to do something positive for those affected by societal problems, as well as for our employees and, by extension, the Company. We aim to increase our employees’ awareness of social issues and motivate them to take positive action. In addition to the work they actually carry out, our employees can act as multipliers by carrying social responsibility beyond individual projects. That is why making sure all Knorr-Bremse sites are fully involved in community work is a key priority for the Company. Across our regions, our community work improves local residents’ perception of Knorr-Bremse and makes them more accepting of our presence, as well as strengthening our employees’ identification with the Company.

With over 100 sites in 30 countries, Knorr-Bremse also has an indirect economic impact on the regions where we operate. The Company can influence local communities and economies in a variety of ways, whether as an employer, a purchaser of materials and services or as a taxpayer (see ‘About Knorr-Bremse’, page 7).

Knorr-Bremse Global Care is an independent charitable organization that aims to create better prospects for those in need at a local and global level. The potential to promote independence and individual responsibility is a key consideration when selecting projects, as is the effect they are likely to produce.

Most of the funding for the Munich-based organization comes from the Knorr-Bremse Group and donations from individual employees. The commitment of its members and Knorr-Bremse employees is the lifeblood of the organization. The members of Knorr-Bremse Global Care hold meetings every six weeks to discuss ongoing projects, consider requests for new projects and take care of administrative matters. Three permanent members of staff are responsible for dealing with the organization’s business.
Involving global Knorr-Bremse sites and their employees is one of Knorr-Bremse Global Care’s main aims – and a key factor behind its success. International cooperation enables the organization to plan, lead and implement projects in a sustainable and effective way. In 2018 Knorr-Bremse Global Care was more closely integrated into Knorr-Bremse’s regional operations in a bid to address social challenges on the ground in an even more targeted and effective way. With this in mind, two independent regional organizations, Knorr-Bremse Care North America and Knorr-Bremse Global Care Asia Pacific, are currently being established. In future, these two organizations will assume independent responsibility for selecting, funding and implementing aid projects in the countries of their respective regions where Knorr-Bremse sites are located. The majority of the organization’s budget will be spent on educational projects. In keeping with our emphasis on individual responsibility, the regions can also each choose a second area to focus on according to their local circumstances.

Creating opportunities, making a real difference

Knorr-Bremse Global Care sees itself as a professional partner for funding aid projects and relies on close cooperation with local partner organizations who are responsible for on-site project management and ensuring that project implementation and documentation focuses on results. Before launching a project, objectives are jointly set based on the effect it should achieve. Members of Global Care or Group employees act as ‘sponsors’ for all our projects. As well as personally monitoring progress, they can often contribute useful experience and skills from their existing roles. These structures ensure that the assistance we provide for our partner organizations and projects covers more than just financial support.

Since its foundation in 2005, Knorr-Bremse Global Care and its partner organizations have completed around 270 projects, investing a total of almost EUR 20 million in improving the prospects of over 700,000 people in 60 countries. In 2018, Global Care provided financial support for 54 projects in 22 countries, spending around EUR 1.7 million and reaching over 20,800 people worldwide.

The projects are focused primarily on the countries in which Knorr-Bremse sites are located. It also supports development projects in ten other countries – Cambodia, Colombia, Ethiopia, Ghana, Kenya, Myanmar, Peru, Sri Lanka, Tanzania and Ukraine. Global Care’s support is focused on two major issues: WASH (water, sanitation and hygiene) and education.

By concentrating on these two areas, Knorr-Bremse Global Care aims to contribute to the UN’s Sustainable Development Goals (SDGs), in particular SDG 4 (Quality Education) and SDG 6 (Clean Water and Sanitation) form the cornerstone of its commitment. The organization also supports emergency aid in the aftermath of natural disasters – including in areas outside our main focus countries.

FOCUS 1: WASH

The organization’s focus on WASH aims to achieve permanent improvements in the provision of clean water and sanitation, especially in developing countries and emerging economies.

In the year under review, for example, Knorr-Bremse Global Care worked together with the aid organization World Vision to support a drinking water and sanitation project in Tanzania. Knorr-Bremse Global Care has so far provided almost EUR 180,000 in funding for the initiative, which aims to ensure access to clean water and sanitation for 6,000 children at six schools in Ulaya district.

The WASH project will improve overall living conditions for these families and reduce the rate of child mortality in the region. Building collection tanks for rainwater and wells equipped with hand pumps is a key part of the project. The initiative also provides training and education for school pupils, staff and parents to raise awareness of good hygiene and sanitary practices.

Training in construction skills enables residents of the favela in São Paulo to build their own homes.

Water was also a major focus of Knorr-Bremse Day 2018. ‘Water Marches’ were organized in Munich and in Brazil. Employees volunteered to carry heavy water canisters round a circuit, with Knorr-Bremse Global Care promising to donate money to the Tanzania project for every lap they completed. The Munich event raised over EUR 7,300, with another EUR 400 coming from Brazil.

FOCUS 2: EDUCATION

In its Education category, Knorr-Bremse Global Care supports projects along the entire education pathway, from kindergarten and elementary school through to vocational training. In Brazil, for instance, Global Care has since 2018 been supporting an extensive assistance program for around 800 homeless families who have set up home on land belonging to the Instituto Anchieta Grajaú, a charitable organization in São Paulo. Global Care is working with the landlord to develop the favela into a settlement fit for habitation. The program provides training in construction skills for 32 suitably motivated residents in need of assistance. This enables families to build their own homes safely and also help develop the area. Ten model houses were completed in 2018. In addition, a fire protection program was developed in conjunction with the local fire service, and a business start-up course was launched in January 2019. In 2018, Knorr-Bremse Global Care provided a total of nearly EUR 180,000 to fund vocational training, house construction and the fire protection program.

Further project examples and information on the activities of Knorr-Bremse Global Care can be found at www.global-care.eu and in the Knorr-Bremse Global Care 2018 Annual Report.
Knorr-Bremse's Global Care's activities are supplemented by Local Care projects – social projects carried out at the company's sites. They range from financial support for charitable organizations to corporate volunteering projects, in which employees are personally involved.

Knorr-Bremse's Principles for Social Commitment serve as a guideline, defining objectives and standards and specifying support areas and criteria. In addition, the Local Care Donation Guideline describes the standard principles governing Local Care donations made by Knorr-Bremse sites.

Local Care projects cover donations and activities in four key categories: environment, health, education and social cohesion. The projects are independently selected, financed and monitored by the site in question. Local Care instruments include:

- Voluntary donations of time and money to charitable causes,
- Corporate volunteering – where the company grants employees time off to support charitable organizations,
- The ‘Get involved’ initiative, which provides donations to support the private voluntary work carried out by employees for charitable organizations and projects,
- Matched giving programs in which Knorr-Bremse tops up donations made by the workforce – matching or multiplying every donation made by employees.

In 2018, around 700 Local Care projects were carried out on all continents around the world. The focus was on education and social cohesion.

### SELECTED LOCAL CARE PROJECTS BY SUPPORT CATEGORY 2018

#### Environment

<table>
<thead>
<tr>
<th>Europe/Africa</th>
<th>Asia/Australia</th>
<th>Americas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial support for an organization promoting environmental education for young adults (Madrid/Spain)</td>
<td>Financial support for a bird protection and breeding association (Schwieberdingen/Germany)</td>
<td>Technical assistance at an animal protection facility (Watertown/USA)</td>
</tr>
<tr>
<td>Support for a garden project at a facility for children and young people with disabilities (Modřice/Czech Republic)</td>
<td>Financial support for local environmental projects (Lübben/Czech Republic)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
</tr>
<tr>
<td>Financial support for a nature education and meeting place (Aidenbach/Germany)</td>
<td>Beach clean-up operation (Florence/Italy)</td>
<td>Carrying out riverbank clean-ups (Acuña/Mexico, Elyria/USA)</td>
</tr>
<tr>
<td>Financial support for a nature education and meeting place (Aidenbach/Germany)</td>
<td>Financial support for various healthcare facilities (Melksham/UK)</td>
<td>Financial support for the medical care of flood victims (Sakado/Japan)</td>
</tr>
<tr>
<td>Financial support for a nature education and meeting place (Aidenbach/Germany)</td>
<td>Financial support for an organization that supports autistic children (Buccinasco/Italy)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
</tr>
<tr>
<td>Financial support for a nature education and meeting place (Aidenbach/Germany)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
</tr>
</tbody>
</table>

#### Health

<table>
<thead>
<tr>
<th>Europe/Africa</th>
<th>Asia/Australia</th>
<th>Americas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervising schoolchildren’s healthy breakfasts (Munchen/Germany)</td>
<td>Financial support for children’s healthcare (Schwabing/Germany)</td>
<td>Supervising schoolchildren’s healthy breakfasts (Munchen/Germany)</td>
</tr>
<tr>
<td>Running blood donation campaigns (Modřice/Czech Republic)</td>
<td>Financial support for a bird protection and breeding association (Schwieberdingen/Germany)</td>
<td>Running blood donation campaigns (Modřice/Czech Republic)</td>
</tr>
<tr>
<td>Financial support for an organization for deaf and dumb children (Wiesnchen/Italy)</td>
<td>Financial support for an organization that supports autistic children (Buccinasco/Italy)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
</tr>
<tr>
<td>Financial support for a nature education and meeting place (Aidenbach/Germany)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
</tr>
<tr>
<td>Financial support for a nature education and meeting place (Aidenbach/Germany)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
<td>Financial support for an organization promoting environmental education for young adults (Münchenspark/Spain)</td>
</tr>
</tbody>
</table>

#### Education

<table>
<thead>
<tr>
<th>Europe/Africa</th>
<th>Asia/Australia</th>
<th>Americas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing a robotics program for schoolchildren and donating hardware (Budapest/Hungary)</td>
<td>Developing and delivering a children’s training program on traffic safety (Shanghai/China)</td>
<td>Developing a robotics program for schoolchildren and donating hardware (Budapest/Hungary)</td>
</tr>
<tr>
<td>Financial support for schools with regard to IT equipment (Kecskemét/Hungary, Lübben/Czech Republic)</td>
<td>Financial support for the medical care of flood victims (Sakado/Japan)</td>
<td>Financial support for schools with regard to IT equipment (Kecskemét/Hungary, Lübben/Czech Republic)</td>
</tr>
<tr>
<td>Financial support for the youth fire brigade (Modřice/Czech Republic)</td>
<td>Financial support for a nature education and meeting place (Aidenbach/Germany)</td>
<td>Financial support for the youth fire brigade (Modřice/Czech Republic)</td>
</tr>
<tr>
<td>Financial support for a children’s circus with an emphasis on education (Berlin/Germany)</td>
<td>Financial support for educational projects for socially disadvantaged children and adolescents (Pune/India)</td>
<td>Financial support for educational projects for socially disadvantaged children and adolescents (Pune/India)</td>
</tr>
<tr>
<td>Introducing elementary school children to technical professions (Aidenbach/Germany)</td>
<td>Support for a facility providing vocational training for people with learning disabilities (Paliacca/India)</td>
<td>Introducing elementary school children to technical professions (Aidenbach/Germany)</td>
</tr>
<tr>
<td>Financial support for an educational organization for young refugees (Würzburg/Austria)</td>
<td>Financial support for an educational organization for young refugees (Würzburg/Austria)</td>
<td>Financial support for an educational organization for young refugees (Würzburg/Austria)</td>
</tr>
</tbody>
</table>

#### Social Cohesion

<table>
<thead>
<tr>
<th>Europe/Africa</th>
<th>Asia/Australia</th>
<th>Americas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
</tr>
<tr>
<td>Funding of leisure activities for socially disadvantaged children (Lund/Sweden)</td>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
</tr>
<tr>
<td>Funding of meals for children in an orphanage (Kamput Park/South Africa)</td>
<td>Financial support for a blind football team (Florence/Italy)</td>
<td>Funding of meals for children in an orphanage (Kamput Park/South Africa)</td>
</tr>
<tr>
<td>Financial support for a blind football team (Florence/Italy)</td>
<td>Financing of a safety program for kindergarten children (Budapest/Hungary)</td>
<td>Financial support for a blind football team (Florence/Italy)</td>
</tr>
<tr>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
<td>Financial support for a facility providing vocational training for people with learning disabilities (Paliacca/India)</td>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
</tr>
<tr>
<td>Central record-keeping for all projects facilitates the communication of transferable best practices. A dedicated communication platform promotes active sharing of information between sites.</td>
<td></td>
<td>Employee donations of Christmas presents for disadvantaged children (Budapest/Hungary, Münchenspark/Spain)</td>
</tr>
</tbody>
</table>
Implementation of the ten UN Global Compact Principles

Knorr-Bremse has been a signatory to the UN Global Compact since 2010. Each year, we report on how we implement the ten principles of the Global Compact in our company. The following table provides an overview of the voluntary commitments, guidelines, and management systems that help us integrate the principles of the Global Compact into our business processes. The index also provides references to the relevant content regarding the Global Compact and its implementation in 2018.

<table>
<thead>
<tr>
<th>PRINCIPLE</th>
<th>KNORR-BREMSE GUIDELINES, REGULATIONS AND MANAGEMENT SYSTEMS</th>
<th>PAGES/SECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRINCIPLE 1</td>
<td>Businesses should support and respect the protection of internationally proclaimed human rights.</td>
<td>Code of Conduct (p. 11), Corporate Responsibility Guidelines (p. 10), Health, Safety and Environmental Policy (p. 10), UITP Sustainability Charter (p. 11), UN Sustainable Development Goals (p. 141), UN Guiding Principles on Business and Human Rights and UK Modern Slavery Act (p. 11), Compliance management and organization (p. 15-16), Supplier Code of Conduct (p. 26),</td>
</tr>
<tr>
<td>HUMAN RIGHTS</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>PRINCIPLE 2</td>
<td>Businesses should make sure they are not complicit in human rights abuses.</td>
<td>Leadership Principles (p. 10-11), p. 33, UN Sustainable Development Goals (p. 14-15), 35-36, Occupational health and safety 33-34, Employee development</td>
</tr>
<tr>
<td>PRINCIPLE 3</td>
<td>Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining, and furthermore uphold the elimination of all forms of forced and compulsory labor, and the effective abolition of child labor and the elimination of discrimination in respect of employment and occupation.</td>
<td>Code of Conduct (p. 11), Corporate Responsibility Guidelines (p. 10), Compliance management and organization (p. 15-16), Leadership Principles (p. 10-11), p. 33, UN Sustainable Development Goals (p. 14-15),</td>
</tr>
<tr>
<td>LABOR STANDARDS</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>PRINCIPLE 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRINCIPLE 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRINCIPLE 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRINCIPLE 7</td>
<td>Businesses should support a precautionary approach to environmental challenges, undertake initiatives to promote greater environmental responsibility and encourage the development and diffusion of environmentally friendly technologies.</td>
<td>Code of Conduct (p. 11), Climate protection strategy with Group-wide targets (p. 40), UN Sustainable Development Goals (p. 14-15), Health, Safety and Environmental Policy (p. 10), p. 35, Occupational health and safety (p. 36), Supplier Code of Conduct (p. 26), Energy Management System (p. 39-41),</td>
</tr>
<tr>
<td>ENVIRONMENTAL PROTECTION</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>PRINCIPLE 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRINCIPLE 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CORRUPTION PREVENTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRINCIPLE 10</td>
<td>Businesses should work against corruption in all its forms, including extortion and bribery.</td>
<td>Code of Conduct (p. 11), Compliance management and organization (p. 15-16), Supplier Code of Conduct (p. 26),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Index for the non-financial report in accordance with Germany’s CSR Directive Implementation Act

<table>
<thead>
<tr>
<th>Material CR issues for Knorr-Bremse</th>
<th>Non-financial information subject to reporting requirements</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-corruption and fair competition</td>
<td>Anti-corruption and anti-bribery measures</td>
<td>Strategy and management</td>
<td>p. 15-16</td>
</tr>
<tr>
<td>Product and system safety</td>
<td>Social issues</td>
<td>Products and partners</td>
<td>p. 20-22</td>
</tr>
<tr>
<td>Ecological product design</td>
<td>Environmental issues</td>
<td>Products and partners</td>
<td>p. 23-26</td>
</tr>
<tr>
<td>Sustainability standards in the supply chain</td>
<td>Environmental and social issues, human rights, anti-corruption and anti-bribery measures</td>
<td>Strategy and management</td>
<td>5. 16-18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Products and partners</td>
<td>p. 26-28</td>
</tr>
<tr>
<td>Energy &amp; CO₂ emissions</td>
<td>Environmental issues</td>
<td>Environment and climate</td>
<td>p. 39-41</td>
</tr>
<tr>
<td>Employee satisfaction</td>
<td>Employee issues, human rights</td>
<td>Employees and leadership</td>
<td>p. 30-32</td>
</tr>
<tr>
<td>Personnel development</td>
<td>Employee issues</td>
<td>Employees and leadership</td>
<td>p. 33-35</td>
</tr>
<tr>
<td>Occupational health and safety</td>
<td>Employee issues</td>
<td>Employees and leadership</td>
<td>p. 35-36</td>
</tr>
</tbody>
</table>

Assurance Report


We have performed an independent limited assurance engagement on the Combined Separate Non-Financial Report of Knorr-Bremse AG, Munich and the Group (hereinafter ‘Knorr-Bremse’) as well as the by reference qualified parts ‘Overview of the Group’, ‘Business Model/Structure of the Group’ and ‘Report on Risks, Opportunities and Expected Developments’ of the Management Report (hereinafter ‘Report’) according to Sections 315b and 315c in conjunction with 289b to 289e German Commercial Code (HGB) for the business year from January 1 to December 31, 2018.

Management’s Responsibility

The legal representatives of Knorr-Bremse are responsible for the preparation of the Report in accordance with Sections 315b and 315c in conjunction with 289b to 289e HGB.

This responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the Report and the use of assumptions and estimates for individual sustainability disclosures which are reasonable under the given circumstances. Furthermore, this responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Report in a way that is free of – intended or unintended – material misstatements.

Independence and Quality Assurance on the Part of the Auditing Firm

We are independent from the entity in accordance with the requirements of independence and quality assurance set out in legal provisions and professional pronouncements and have fulfilled our additional professional obligations in accordance with these requirements.

Our audit firm applies the national statutory provisions and professional pronouncements for quality assurance, in particular the professional code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

Practitioner’s Responsibility

Our responsibility is to express a conclusion on the Report based on our work performed within our limited assurance engagement.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): ‘Assurance Engagements Other than Audits or Reviews of Historical Financial Information’ published by IIAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance of whether any matters have come to our attention that cause us to believe that the Report for the period from January 1 to December 31, 2018 has not been prepared, in all material respects in accordance with Sections 315b and 315c in conjunction with 289b to 289e HGB. We do not, however, provide a separate conclusion for each disclosure. In a limited assurance engagement the evidence gathering procedures are more limited than in a reasonable assurance engagement. The choice of audit procedures is subject to the auditor’s own judgement.

* Our engagement applied to the German version of the Report 2018. This text is a translation of the Independent Assurance Report issued in the German, whereas the German text is authoritative.
Within the scope of our engagement, we performed amongst others the following procedures:

- Inquiries of personnel on corporate level, who are responsible for the materiality analysis, in order to gain an understanding of the processes for determining material sustainability topics and respective reporting boundaries of Knorr-Bremse

- A risk analysis, including a media search, to identify relevant information on Knorr-Bremse sustainability performance in the reporting period

- Evaluation of the design and implementation of the systems and processes for determining, processing and monitoring disclosures relating to environmental, employee and social matters, respect for human rights, and combating corruption and bribery, including the consolidation of the data

- Inquiries of personnel on corporate level who are responsible for determining disclosures on concepts, due diligence processes, results and risks, for conducting internal controls and consolidation of the disclosures

- Evaluation of selected internal and external documents

- Analytical evaluation of data and trends of quantitative information which are reported by all sites for consolidation on corporate level

- Evaluation of local data collection, validation and reporting processes as well as the reliability of reported data based on a sample of the sites in Budapest (Hungary) and Aldersbach (Germany)

- Assessment of the overall presentation of the information

Conclusion

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Report of Knorr-Bremse for the business year from January 1 to December 31, 2018 is not prepared, in all material respects, in accordance with Sections 315b and 315c in conjunction with 289b to 289e HGB.

Recommendation

Without affecting the conclusions presented above, we recommend to further improve the documentation of the non-financial data collection and consolidation on group level as well as to further develop the Group-wide reporting guideline and ensure the consistent implementation through respective systems, processes and internal controls on site level in order to continuously increase data quality.

Restriction of Use / Clause on General Engagement Terms

This report is issued for the purposes of the Executive Board of Knorr-Bremse AG, Munich only. We assume no responsibility with regard to any third parties.

Our assignment for the Executive Board of Knorr-Bremse AG, Munich, and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf). By reading and using the information contained in this report, each recipient confirms having taken note of provisions of the General Engagement Terms (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the above mentioned General Engagement Terms with respect to us.

Munich, April 29, 2019
KPMG AG

Wirtschaftsprüfungsgesellschaft
Original German version signed by:

Hell
ppa. Auer