

UNITED NATIONS GLOBAL COMPACT COMMUNICATION ON PROGRESS REPORT 2014











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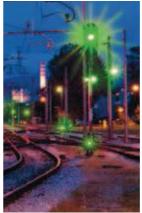
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# 1/ Statement of continued support



# Ladies and gentlemen,

As a family-owned business with a tradition going back many years, we regard sustainability as an important part of our business model. We retain our competitive edge by taking a long-term view and operating responsibility in the interests of our customers, employees, suppliers, the environment and society as a whole. That is why we have drawn up clear guidelines in the form of a sustainability strategy. We are determined to help develop resource-efficient forms of mobility, protect the global climate and make road and rail transportation safer and more reliable.

For our customers and suppliers we aim to be a reliable partner in all respects, and for our staff we aim to be an attractive employer. That is why we believe in developing an ongoing dialogue and relationship of trust with our business partners and employees alike. The results of our global employee survey in 2014 indicate that we are well on the way to achieving this: Our employees are proud of their company, its achievements and its social commitment – all of which are crucial to our combined success. It is their motivation and their ideas that help us to constantly improve our products and processes.

We regard environmental protection, economic efficiency and innovation with a view to creating more effective and environmentally compatible products as important aspects of our corporate responsibility. In 2014 we succeeded in cutting our specific energy consumption by a further ten per cent, reducing our delivery distances and incorporating aspects of responsibility into our innovation processes. We also want to generate added value in the social context in which we operate: Employees at our sites around the world have been involved in a total of 170 projects funded by the charitable organization Knorr-Bremse Global Care – ranging from support for the training of disadvantaged young people to emergency aid in the aftermath of natural disasters.

Knorr-Bremse has been a signatory to the UN Global Compact since 2010. As such, we subscribe to the ten principles laid down in the Global Compact in the fields of human rights, labor standards, environment and anti-corruption. In this fourth Communication on Progress Report we show the guiding principles, systems and measures we have implemented and what we have achieved since our last Report.

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Klaus Deller

Chairman of the Executive Board of Knorr-Bremse AG





# 2/ The Knorr-Bremse Group – an overview

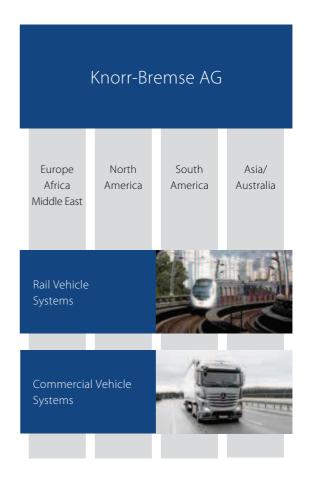
The Knorr-Bremse Group, with its headquarters in Munich, is the world's leading manufacturer of braking and on-board systems for rail and commercial vehicles. Since 1905 the company has pioneered the development, production, marketing and servicing of state-of-the-art braking and on-board systems. Knorr-Bremse maintains a global presence, with more than 100 sites in 29 different countries.

### Structure and organization

Within the Group, Knorr-Bremse AG is the umbrella company for the two corporate divisions Rail Vehicle Systems (more than 14,000 employees) and Commercial Vehicle Systems (more than 9,000 employees) as well as various regional companies. Management of the business is divided into three regions – Europe, North America/South America and Asia/Australia. This structure enables the company to offer customers of both divisions uniform, globally tested technical platforms and at the same time take into account local market and customer requirements.

### Divisions and products

With all its products Knorr-Bremse contributes significantly to safety on roads and railways the world over. More than a billion people worldwide rely daily on Knorr-Bremse systems.



REGIONAL UND DIVISIONAL STRUCTURE
OF KNORR-BREMSE

Knorr-Bremse Rail Vehicle Systems is the world's leading manufacturer of braking and on-board systems for urban and mainline trains. Systems manufactured by our company are installed in streetcars and metros, locomotives, multiple units, freight cars and high-speed trains. Other product areas and brands are train entrance systems from IFE, platform screen doors from Westinghouse Platform Screen Doors, HVAC units from our subsidiary Merak, HVAC systems from Sigma Coachair Group, rail vehicle automation components and solutions from Selectron and drive simulators from Sydac. Driver assistance systems, sanding units and additional devices such as derailment detectors complete the product portfolio. Since 2014 Knorr-Bremse has also developed and produced power supply systems for rail vehicles under the new PowerTech brand.

Knorr-Bremse Commercial Vehicle Systems manufactures braking systems for trucks, buses, trailers and agricultural vehicles. In the field of chassis systems we are world leaders in electronic control and driver assistance systems (for example ABS and EPS) as well as air treatment systems – and as such make an important contribution towards road safety. Further product fields include torsional vibration dampers for diesel engines and powertrain-related solutions as well as transmission control systems for enhanced energy efficiency and fuel economy. Examples of brand names in this area are Hasse & Wrede, Bendix and Bendix Spicer Foundation Brake LLC.

With our products and components we offer pioneering and sustainable solutions for ensuring the overall efficiency of systems in rail and commercial vehicles. We also provide aftermarket services: for the maintenance, overhaul and repair of braking and onboard systems in the rail sector these are provided through Knorr-Bremse RailServices; and our range of services for distributors, repair shops, fleet managers and drivers in the commercial vehicle sector is provided through Knorr-Bremse Active Service.

# Corporate Responsibility Management

Our approach to Corporate Responsibility (CR) is based on the idea of sustainable development and covers products and production processes, employ-

ees, environmental and climate protection and social commitment.

In 2008 Knorr-Bremse incorporated the principle of Corporate Responsibility into its Group strategy and developed an appropriate structure for its implementation.

For us, sustainability is a strategic issue that has to be established in all our operational processes. That is why we are determined to integrate environmental and social aspects into both our long-term business strategy and our day-to-day activities. By doing so we can make an important contribution towards ensuring the future of our company – and towards an economy and society based on the principle of sustainability.

Knorr-Bremse's assumption of corporate responsibility is based on its group-wide Code of Conduct and CR guidelines, which are in turn based on the company's internal values as well as the guidelines of the UN Global Compact. This was the basis on which Knorr-Bremse further developed its sustainability measures

### **Supplier Award**



Customers are increasingly scrutinizing our sustainability management systems – and with highly gratifying results: In June 2014 Knorr-Bremse received a "Supplier Sustainability Award" from Bombardier Transportation in the category "Companies with more than 500 employees" in recognition of its consistent mainstreaming of sustainability in all parts of the company.

during the period under review. One particular focus was the drawing up of a materiality analysis. This involved systematically evaluating which sustainability issues are of crucial relevance for the future viability of Knorr-Bremse. On the basis of these results and in ongoing dialogue with the specialist departments and the Group Executive Board, Knorr-Bremse revised and extended its CR strategy during 2014. Operational implementation takes place in six central areas: strategy and management, products and partners, employees and leadership, environment and climate, commitment and society, and communication and cooperation.

In organizational terms, the issue of Corporate Responsibility is embedded at top management level: The CR Council consists of the CFO, representatives of management from both corporate divisions, the chair of the charitable organization Knorr-Bremse Global Care and the head of the Corporate Responsibility staff unit. It is here that the central issues are discussed and specific targets set for the specialist departments

- with the corporate divisions responsible for their successful implementation. Specific behavioral guidelines ensure that in their day-to-day work all employees are able to contribute towards the company's performance in this respect.

Further information on our CR strategy and management can be found in the 2014 Annual Report or on our website:

### www.knorr-bremse.de/cr

### Main focus of CR strategy

		Development and organization 2008 – 2010	Structuring and implementation 2011 – 2014	Excellence <b>2015 – 2020</b>	
Strategy & Management	9	CR organization set up	CR strategy and guidelines introduced	CR incorporated into strategic planning and operational processes	
Products & Partners	2	First life cycle analyses carried out	Product portfolio evaluated for sustainability	Establishing sustainability in supply chain	
Employees & Leadership	M	Dialogue initiated	Corporate and leadership culture strengthened	Increasing attractiveness as an employer	
Environment & Climate	<b>(P)</b>	ECCO <sub>2</sub> energy efficiency initiative launched	ECCO <sub>2</sub> target achieved and new targets set	Implementing climate protection strategy	
		Knorr-Bremse Global Care: implementation of worldwide aid projects			
Commitment & Society		Local Care projects initiated	Worldwide Local Care projects systematized	Strengthening employee involvement	
Communication & Cooperation	3	Sustainability Group-wide communicated	External CR communication expanded	Implementing systematic stakeholder dialogue	



# 3/ Human rights

### **Principle 1:**

Businesses should support and respect the protection of internationally proclaimed human rights within their sphere of influence and

### **Principle 2:**

make sure they are not complicit in human rights abuses.

Knorr-Bremse respects the protection of human rights and makes sure that it is not complicit in human rights abuses. We are committed to respecting the principles of the internationally recognized standards contained in the UN Global Compact, the International Labor Organization (ILO) Conventions and the UN Universal Declaration of Human Rights. These voluntary commitments underpin our activities in conjunction with the relevant national legislation.

Code of Conduct

As a technology leader, it goes without saying that the Knorr-Bremse Group always conducts itself in a correct, responsible and exemplary manner. In this context we have developed a Group-wide Code of Conduct based on existing local guidelines.

Since 2012 this has laid down the basic principles for approaching our day-to-day activities – on the basis of our corporate values and the principles of the UN Global Compact. It enables us to ensure that there is a consistent understanding of what constitutes responsible corporate behavior that transcends frontiers.

The Knorr-Bremse Code of Conduct includes human rights aspects such as freedom of opinion, freedom

from discrimination and a ban on child and forced labor, and defines our basic principles and rules of conduct. These rules are mandatory for all Group employees and apply to all investment agreements and supplier contracts.

The independent Internal Audit function of Knorr-Bremse AG carries out audits to check people's awareness of the Code of Conduct and to see whether it is actively communicated by managers.



# Managing sustainability in purchasing

The conduct of our suppliers affects our success and our reputation as a responsible company. For this reason we have made sustainability criteria an integral part of our purchasing policy. Amongst other things the Knorr-Bremse purchasing guidelines for indirect materials requires sustainability to be taken into account when choosing suppliers. Suppliers to the Rail Vehicle Systems division must accept the "Quality Management Guidelines for Purchasing", while suppliers to the Commercial Vehicle Systems division must subscribe to the "Quality Management Program for Purchasing". Both documents cover aspects of responsible behavior.

Both divisions also expect suppliers to have environmental management systems according to ISO 14001 – if possible with the required certification. If a supplier does not adhere to these standards, we reserve the right to cease working with that supplier.

The Commercial Vehicle Systems division's Quality Management Program for Procurement contains an entire chapter devoted to Corporate Responsibility, which includes the following statement: "The ten principles defined in the UN Global Compact reflect the minimum standards and basic requirements of CR that we set ourselves and expect from our suppliers and business partners around the world." The Program also contains practical examples designed to assist suppliers in implementing the ten principles. In 2014 we produced a revised version of the purchasing guidelines, which more than 670 suppliers to the Commercial Vehicle Systems division (not including suppliers to joint ventures) – i.e. over 55 per cent – have signed. We conduct individual pre-audits of all new suppliers.

The Rail Vehicle Systems division checks suppliers' compliance with, and implementation of, the ten principles of the UN Global Compact by assessing them both at the start of the business relationship and in the course of three-yearly audits. Suppliers receive a rating in the form of one of four possible "maturity levels." In 2014 the division evaluated 240 suppliers by self-assessment. Even the largest logistics providers to the Rail Vehicle Systems division must show that they conform to the principles of the Glob-

al Compact; in transportation and warehouse logistics, the companies that have done so account for 80 per cent of the total volume of goods shipped by the division.

At the start of 2015 the division launched the "Railsponsible" initiative together with Alstom Transport, Bombardier Transportation, Deutsche Bahn, Nederlandse Spoorwegen, and SNCF. The initiative is guided by the principles of the UN Global Compact and aims to encourage railway industry customers and suppliers around the world to commit to ethical and social behavior as well as responsible environmental and business practices. It does this primarily by promoting a common understanding of sustainable purchasing processes, sharing knowledge and experience, and pooling information systems for use by member companies.

### www.railsponsible.org

During its 2014 annual suppliers' conference, Knorr-Bremse's subsidiary Bendix presented our sustainability strategy to its top 100 suppliers and discussed relevant topics relating to the supply chain.

### Health & safety

Our health, work and environmental protection policy, which applies to the entire Group, states: "We ensure a safe and healthy working environment by promoting the prevention of injuries and impairment to health". Important components in our preventive safety management system include analysis of near-accidents and Group-wide safety reporting in both divisions. Other key aspects are risk assessments of machinery, workplaces and working processes, the promotion of safety consciousness in the workforce through training courses and information campaigns, the analysis of accidents and accident-prevention measures derived from this.

Our occupational health and safety management system meets the requirements of the international standard OHSAS 18001 (Occupational Health and Safety Assessment Series) and we conduct internal audits at regular intervals. The main production and service sites in our Rail Vehicle Systems division are certified according to OHSAS 18001. Using standardized processes, we record and analyze the key indicators on occupational safety on which we base appro-

### **Gold Award for accident prevention**

In 2014 Knorr-Bremse Rail Systems (UK) was once again presented with a Gold Award by the Royal Society for the Prevention of Accidents (RoSPA). **www.rospa.com** 



priate measures. In order to maintain and further improve our high standards of health and safety at work, we provide internal training courses at regular intervals and offer those responsible the opportunity to take part in international congresses, conferences and projects.

The success of our occupational safety management system is also reflected in our key performance indicators. The rate of injuries resulting in days lost per 200,000 hours worked has remained low in recent years, although in 2014 the accident rate rose slightly by 6% to 1 accident per 200,000 hours worked.

In 2014, our Chinese subsidiary IFE Victall in Qingdao installed an integrated dust extraction system for its grinding workplaces. The system prevents the grinding dust from entering the air breathed by the employees and significantly reduces the risk of dust explosions. In 2015, the system received the Knorr-Bremse Global Value Award, which recognizes excellent ideas within the Group for realizing our corporate values.

In order to preserve and promote our employees' long-term health, an extensive range of offerings is available throughout the Group. These are tailored to the local needs of our individual sites and include measures such as ergonomic workplace design, stress management seminars, fitness programs and medical examinations. In-house medical care is available to employees at all our sites. In addition to important preventive check-ups, vaccinations and pre-travel consultations are also offered. The offering to employees at our Munich site includes massages, gyms, nutritional advice and sporting events. In the USA, our Bendix subsidiary offers its employees an extensive range of activities and information on subjects such as breast cancer awareness, healthy nutrition and physical fitness as part of its "Bendix Be Healthy" program.

# Sustainable support from Knorr-Bremse Global Care

A regular income, a roof over your head, access to medical treatment and education - these are all things that cannot be taken for granted in many countries of the world. Since 2005 the charitable organization Knorr-Bremse Global Care has been supporting people who, through no fault of their own, find themselves in need as a result of environmental disasters, accidents, armed conflict, poverty or illness. The central aim of the organization is to improve their lives and help them to achieve greater independence by enabling them to support themselves and determine their own lives. The principle of helping people to help themselves applies throughout. We see our role as being partners who can also contribute time, skills and experience to projects as well as financial resources

At the same time we want to raise awareness of social responsibility amongst employees of the Knorr-Bremse Group and encourage them to become actively involved themselves. This way they can operate as multipliers and spread the idea of making a personal contribution to the outside world.

Further information and examples of projects can be found on the Internet at

www.global-care.knorr-bremse.com/en/



## 4/

# Labor standards

### **Principle 3:**

Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining and furthermore uphold

### **Principle 4:**

the elimination of all forms of forced and compulsory labor

### **Principle 5:**

the effective abolition of child labor and

### Principle 6:

the elimination of discrimination in respect of employment and occupation.

Knorr-Bremse respects and protects the rights of its employees and in this regard has made its own clear commitments in the Knorr-Bremse Code of Conduct: Compliance with high standards for a safe and healthy working environment, fair working conditions, the right to freedom of association and active promotion of equal opportunities, and equal treatment for our employees throughout the world all form a key part of our Corporate Responsibilities. We are categorically opposed to all forms of forced and child labor.

### General working conditions

In keeping with our stance on fair working conditions, certain minimum standards are stipulated in our employees' contracts. The basis of each contract is voluntary agreement with the employees, who may exercise their right to terminate the contract unilaterally after the relevant period of time has elapsed. When we recruit a new employee we always verify their age to ensure that they are above the statutory minimum employment age.

As a family company, Knorr-Bremse attaches particular importance to establishing an atmosphere of trust and cooperation across all levels of the hierarchy. This includes a constructive exchange with established em-

ployee representation bodies such as the Group Works Council.

We respect employees' freedom of association and assembly and their right to collective bargaining, in-asmuch as this is permitted and feasible in the country concerned. Members of employee organizations or trade unions are neither disadvantaged nor given preferential treatment.

### Attractive employer

As a family-run business we attach great importance to our tradition of treating our employees in a responsible manner. Knorr-Bremse is keen to position itself worldwide as an attractive employer capable of recruiting and retaining top quality staff. Amongst other things this involves recognizing good performance and helping employees achieve a balance between their personal and professional goals.



Good work calls for fair, performance-based remuneration. In order to improve internal transparency and comparability, we launched a project entitled "Job Evaluation" in 2013, which involved drawing up standardized descriptions of all posts within the Group. The idea was to ensure fair, performance-based remuneration at all sites.

In addition to fair and performance-based remuneration, employees at the various sites are also offered a range of voluntary extra benefits such as meal allowances, mobility allowances and sports and health provisions aimed at responding to local needs and

boosting employee satisfaction. Within the framework of what is locally feasible, Knorr-Bremse also offers voluntary contributions to a company pension in line with statutory requirements and tax and social security legislation.

We support our employees by offering them more flexible working times, part-time working, teleworking, and time off to care for children or other family members. Extensive scope for improving personal and specialist skills enables employees to add to their qualification levels – even beyond what is required by their particular job profile (see page 18).

### **Top Employer**



Our HR policy aims to publicize the Knorr-Bremse Group's reputation as an attractive employer – not just to the general public but also in particular to the highly qualified young people who are the key to the company's future. Several awards have confirmed the success of this approach: In the "Universum Student Survey" carried out by WirtschaftsWoche magazine in 2013, Knorr-Bremse significantly improved its position and for the first time was rated as one of the top 100 employers for engineers in Germany.

In China Knorr-Bremse won first prize in 2014 in the "Best Organization Development Program" organized by 51JOB, China's leading HR services company to honor exceptional HR management in the rapidly developing Chinese market.

In 2015, for the second year in succession, Knorr-Bremse was named "Top Employer for Engineers in Germany" by the International Top Employers Institute in Amsterdam. In its verdict the Institute mentioned Knorr-Bremse's "outstanding employment environment" and the fact that it "offers a wide range of creative incentives, from secondary benefits and flexible working conditions to performance-management programs that are well thought out and truly aligned with the culture of the company."

Knorr-Bremse's Hong Kong headquarters is at the center of the company's market activities in the Asia-Pacific region. In 2014 the site's attractive and fair working conditions won it recognition as one of the "Best companies to work for in Asia" following internal surveys and external audits and assessments carried out by HR Asia Magazine. Knorr-Bremse's ratings exceeded all the market benchmarks.

In order to increase motivation and loyalty to the company, we organize family days for employees and their families at many sites.

A reliable indicator for levels of satisfaction within the workforce is provided by the employee survey that we carry out every three years. The latest survey took place in 2014 and elicited responses from more than 80% of Knorr-Bremse's total workforce. The results paint a similar picture to the previous survey in 2011: Many employees appreciate the good relations that they have with their managers and are proud to be part of the company. On the other hand they see scope for improvement regarding the high level of work intensity caused by Knorr-Bremse's strong growth and also the internal exchange of knowledge. We are using these results as a basis for working with employees to introduce improvements.

### Diversity and equal opportunities

We consider the cultural diversity of our workforce to be one of our key economic success factors. As a group that operates around the world, we promote understanding and appreciation of other cultures and lifestyles and actively promote the integration of employees from other countries. To promote cultural diversity and anchor it more firmly in our company, we are increasing cross-regional exchange through intercultural training courses, language courses and periods spent working abroad, for example. In order to ensure the necessary closeness to our markets and customers and to make use of country-specific language skills and cultural competence, we attach particular importance to employing local executives at our international sites. With regard to pay scales, no difference is made between men and women. In Germany, Knorr-Bremse's policy of equal pay has been acknowledged with the award of the Logib-D certificate by the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. New employees and executives are hired solely on the basis of their qualifications. We endeavor to consider women appropriately for positions at all levels of the company hierarchy.

As in many technical and engineering-driven companies, the proportion of female employees is still relatively low (2014: 20 per cent). One of the central challenges for the immediate future is to change this – both in the workforce as a whole and at executive level.

In a joint initiative with the Technical University of Munich, we provide support for female students of scientific and technical subjects preparing to enter professional life. In a program called mentorING, the female students are provided with mentors who help them to build up networks relevant to their studies and future professions. Seminars and training courses tailored to specific target groups round off the program.

### **Encouraging girls to explore technology**

In order to encourage more girls to consider training in a technological profession, Knorr-Bremse's Munich head-quarters is involved in the "Girls for Technology" camp organized by the Bavarian Industrial Training Institute (bbw).

www.tezba.de

In North America, our Bendix subsidiary offers female managers the opportunity to attend a training program focusing on women in management positions. Over a period of six months there are regular workshops, an important aspect of which is the chance to exchange ideas with women in management positions in other companies in the industry.

Severely disabled employees and those with serious health conditions receive special protection and assistance at Knorr-Bremse. The disabled employees' representative helps to find the right workplace for them within the company. The proportion of disabled employees at our German locations in 2014 was 4.9 per cent (2013: 4.6 per cent).

### Work/life balance

One of the aims of our HR policy, particularly as a family-owned company, is to promote work-life balance – especially in countries which, like Germany, face major challenges as a result of demographic change. So that employees can manage to reconcile the demands of their work and their families – from highly qualified women wishing to stay at work despite having children, or fathers wanting to play a bigger part in bringing up the children, to those with dependents requiring care – Knorr-Bremse offers the following assistance, as required:

- >> Flexible working hours and working time accounts for employees on regular salary scales
- >> Part-time working
- >> Sabbaticals enabling employees to take time out for several months and then return to their job.
- >> Teleworking
- >> Care provisions for the family for example childcare or care for relatives

In 2013 for the first time, Knorr-Bremse was awarded the prestigious "Audit Beruf und Familie" certificate in acknowledgement of the company's family-friendly personnel policy. The award followed detailed assessments by the auditing company berufundfamilie gGmbH. Within the framework of the audit further areas of activity were identified and an action plan was drawn up for the years 2013 to 2016. This includes the fields of work organization, job location, working time, services for families, personnel development, information and communication, and leadership. Implementation progress is measured and documented on an annual basis. Reauditing is planned for 2016.

### www.beruf-und-familie.de

# Sustainable supply chain management

In order to ensure that our suppliers also act in accordance with our principles and obligations, we have incorporated the UN Global Compact principles into our Rail and Commercial Vehicle Systems divisions' Quality Management Guidelines for Procurement as an integral part of our contracts with suppliers (see page 12). If suppliers fail to comply, Knorr-Bremse retains the right to terminate the

supply agreement. A combination of voluntary disclosure and supplier audits enables us to assess the extent to which our suppliers meet the requirements of the guidelines and implement the principles of the Global Compact

### Commitment of Knorr-Bremse Global Care

Good quality education in a secure learning environment is essential for people to be able to lead independent lives and determine their own future. In a bid to prevent child labor and promote the development of children, Knorr-Bremse – via its charitable organization Knorr-Bremse Global Care – actively supports education campaigns and projects in countries in which children and young people, for varying reasons, often have no opportunity to undergo training and obtain vocational qualifications. The organization actively supports measures to permanently improve living conditions for children.

One example is the project we have been running with our partner organization Save the Children in Erbil, northern Iraq. Since January 2014 almost 3,000,000 people have sought shelter here after fleeing from attacks by ISIL in the region around Baghdad and in Syria. The aim of the project is to create "child-friendly spaces" for young people and children, who make up around half of the total number of refugees and displaced persons, to play and learn in safety. The children are also offered psychosocial support to help them recover from their traumatic experiences. One element of the project aims to increase awareness in families of the fact that even in such difficult circumstances – children have a right to go to school and do not have to contribute to the family income by working.

Further information and examples of projects can be found on the Internet at

www.global-care.knorr-bremse.com





ONE OBJECTIVE OF KNORR-BREMSE'S HR POLICY IS TO INCREASE THE COMPANY'S ATTRACTION AS AN EMPLOYER.



# 5/ Environment

### **Principle 7:**

Businesses should support a precautionary approach to environmental challenges,

### **Principle 8:**

undertake initiatives to promote greater environmental responsibility and

### **Principle 9:**

encourage the development and diffusion of environmentally friendly technologies.

Knorr-Bremse is committed to integrated, precautionary environmental protection and consistently promotes the development and dissemination of environmentally friendly technologies. Our aim is to minimize the impact on the environment through responsible, sustainable use of natural resources, to continuously improve environmental protection and to develop a greater sense of responsibility amongst employees and suppliers.

### Environmental management

Knorr-Bremse's environmental principles are set out in the Health, Safety and Environmental Policy that was adopted in 2010. The policy states: "We will prevent or minimize the impact of our processes, services and products on the environment, safety and health." In order to achieve this aim, the Group has introduced an environmental management system at all its production sites. This is coordinated by central HSE departments for the Rail Vehicle Systems and Commercial Vehicle Systems divisions.

We are constantly improving environmental protection within the company. To do so we gather and evaluate environmental data and establish environmental targets at Group and site level. Regularly checking and servicing of machines and plant, com-

bined with proactive maintenance of our entire infrastructure ensures that we operate with as little negative impact on the environment as possible.

Since 2001 we have been driving a process of Group-wide certification of all sites under the international environmental management standard ISO 14001. By the end of 2014 virtually all our main production sites had achieved certification: 28 in the Rail Vehicle Systems division and 12 in the Commercial Vehicle Systems division.

We use internal training and communication to increase our employees' awareness of environmental issues. Individual sites carry out annual assessments of training needs and put together the relevant in-service training programs.

We also run a variety of awareness-raising campaigns and initiatives. Information brochures, calendars, lecture series, competitions, family events and exhibitions offer tips and tricks for environmentally responsible behavior at work and in the home. The subjects of these campaigns are selected according to the main activities of each site and can range from energy-saving to waste reduction and separation at production facilities or driver training aimed at improving safety and efficiency.

### Climate protection targets 2020

In order to reduce our  $\mathrm{CO_2}$  emissions, we have developed a climate protection strategy that lays down targets for the entire Group for the year 2020. The main focus is on three areas: energy (optimizing building design and processes), logistics and products.

Our measures to reduce carbon dioxide emissions (Scope 1 and Scope 2 as defined in the Greenhouse Gas Protocol) are grouped together in Efficient Cut of CO<sub>2</sub> (ECCO<sub>2</sub>), an initiative that was launched in 2009. Our original aim was to achieve a 20 per cent reduction in our specific CO<sub>2</sub> emissions by 2020 and to increase our specific energy efficiency by the same amount. We had already achieved this target by the end of 2014, so we have two new targets for the second phase of ECCO<sub>2</sub>: we intend to achieve a further 10 per cent reduction in relative CO<sub>2</sub> emissions by 2020 and increase our energy efficiency (in relation to sales revenue) by 10 per cent. We are gradually in-

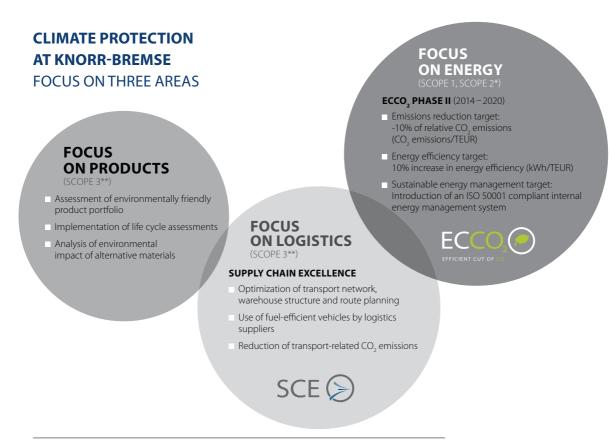
troducing an energy management system in compliance with ISO 50001 at our sites, with certification at our German sites due to be completed by the end of 2015

We also aim to achieve further reductions in transport-related CO<sub>2</sub> emissions in logistics, including through optimized warehouse structures and route planning and by logistics service providers using more efficient vehicles.

We use life cycle assessments (LCAs) and impact analyses of substitute materials to assess the environmental and climate impact of our products and systems. Our aim is to expand our portfolio of environmentally friendly products.

### Energy efficiency

Through our ECCO<sub>2</sub> initiative, we identify potential energy savings in all areas of the company and share



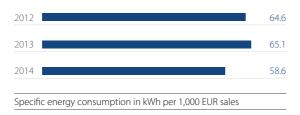
<sup>\*</sup> direct and indirect emissions resulting from the use of natural gas, heating oil (Scope 1) as well as electricity and district heating (Scope 2).

<sup>\*\*</sup> indirect emissions from fuel consumption and phases of product manufacturing and use

local examples of best practice. In 2013/2014 our focus was on buildings, plants and production processes. We installed more energy-efficient lighting and waste heat recovery systems at a number of sites, improved assembly lines and motivated staff to save energy. We are installing sub-meters at our sites that will give us a detailed breakdown of our energy consumption. This will help us identify areas where savings can be made and develop measures to reduce energy consumption. In order to encourage an exchange of best practice examples we publicize successful projects and apply them at other sites.



Our subsidiary Bendix is reducing energy consumption for heating and air conditioning at many of its sites through flexible systems for distributing waste heat from the compressor rooms. During the winter months, the waste heat is used to help heat the buildings and in the summer months it is diverted so as to reduce the amount of energy required for air conditioning.



The Group reduced its energy consumption per EUR 1,000 of revenues from 64.6 kWh in 2012 to 58.6 kWh in 2014. We are working to reduce specific energy consumption further by optimization of equipment, more efficient processes, and extensive upgrades at our sites.

### Green IT

The energy requirements of our IT systems are having a growing impact on our ecological balance sheet. As part of its Green IT project, Knorr-Bremse has modernized its data processing center and the PC workstations at its headquarters in Munich. We have intro-

duced an optimized cooling concept in the server rooms that has halved the cooling requirement, leading to a reduction in cooling energy of around 30 per cent. In addition, central standards for hardware and software and measures relating to employee conduct are reducing the environmental impact associated with the procurement, use and disposal of our IT equipment.

### Resource efficiency

Knorr-Bremse endeavors to make sparing and efficient use of materials in its production processes. In particular this applies to steel and iron materials, light metals, polymers, fuels and lubricants and packaging materials. We are working on increasing the proportion of non-hazardous materials and on using more environmentally friendly alternatives wherever possible.

Our waste consists primarily of scrap metal, paper and packaging and residual waste. In addition, surface treatment of our products results in electro-plating sludge. Measures taken to reduce waste and improve material cycles in recent years have already led to a significant reduction in the amount of waste we have to dispose of. The Group-wide recycling rate is currently around 78 per cent. In 2013, our subsidiary Bendix introduced a recycling program that increased the proportion of recyclable waste at its sites to 96 per cent.

The water we consume is used primarily in the surface treatment and cleaning of our products, for test applications and for drinking water and sanitary purposes. We obtain our water from local authority suppliers and 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. In 2014, we lowered our specific fresh water consumption (in relation to turnover) by 27.6 per cent compared with 2013.



Some of our sites use rainwater for cleaning, in their sanitary facilities and for watering green spaces, so as to save drinking water. At our headquarters in Munich, the administrative buildings and data processing center are cooled by a circulation system that uses well water

### **Efficient logistics**

To bring about improvements across the entire supply chain – from receipt of materials from the supplier to delivery of the finished product to our customers – in 2007 the Group launched its "Supply Chain Excellence" (SCE) initiative, which now applies at all sites worldwide. The aim of the initiative is to standardize procedures and methods in order to optimize processes within our sites, and co-operation between them. The result is better service quality in all distribution channels – particularly in relation to delivery reliability, quality, and lead time.

Knorr-Bremse uses "cross-company sales" (CC sales) to sell products directly to customers from its production sites; this eliminates unnecessary journeys to intermediate Knorr-Bremse warehouses. CC sales also have the advantage that the sales units remain in direct contact with the customer at all times. They enable us to cut overall distances travelled, streamline our supply chain, reduce lead times and improve delivery performance. Since 2012 we have avoided around 160,000 unnecessary shipments in this way. In Europe, almost all of our sales organizations use CC sales, while elsewhere we continue to develop corresponding processes. In 2014 some 94,000 items were handled via CC sales – 37 per cent more than in 2012.

To keep the environmental impact of our product shipping activities to a minimum, we are working to coordinate the various modes of transportation – road, rail, ship and air – optimally with one another, and drive forward our use of intermodal transportation. The SCE project has considerably streamlined route planning.

In order to enhance the efficiency of our logistics network and reduce CO<sub>2</sub> emissions, we require our logistics partners to use modern vehicles that consume as little fuel as possible. Since July 2014 the Rail Vehicle Systems division has benefited from a new logistics

center that handles all shipping for four production sites, enabling us to reduce average shipping distances in this market segment by 10 per cent per ton. For the Commercial Vehicle Systems division we have set up a logistics hub in Southern Germany where we combine and redistribute consignments for seven production sites. These new premises have enabled us to reduce the total number of shipments made, and increase average capacity utilization per journey by 25 per cent.

# Environmental design of sites and buildings

We want our new sites and buildings to be as environmentally friendly as possible. In 2014, Knorr-Bremse produced a construction manual for plants and buildings that includes comprehensive environmental criteria related to the energy concept, CO<sub>2</sub>-neutral energy production, life cycle cost calculations and energy monitoring. In addition, we take local conditions into account, e.g. by ensuring we select the best construction materials for the local climate conditions.

Smart planning of new buildings aims to keep environmental impact and use of resources at a low level from the very outset and ensure that employees have a pleasant and healthy atmosphere in which to work.

### Planning ecological buildings worldwide



The new production facilities opened in spring 2013 in Itupeva (Brazil) and Westminster, Maryland (U.S.A.) are good examples of successful ecological building projects.

The production plant in Itupeva uses skylights, which means no artificial lighting is needed during the day, while air outlet shafts provide natural air conditioning. Despite the tropical climate no air conditioning is needed in the recreational building because a roof garden lowers the indoor temperature by as much as five degrees Celsius. It was also important to use local water resources sparingly, so the plant has two deep wells. The green spaces are irrigated with waste water from the sanitary

facilities, and production waste water is treated and reused for production.

The new plant in Westminster has a photovoltaic system with a nominal output of around one megawatt, which covers about a third of the plant's electricity requirements and avoids around 900 tonnes of  $\mathrm{CO}_2$  each year. Waste water is treated in a closed circuit and fed back into the production process. The plant received the LEED certificate from the US Green Building Council (USGBC) in recognition of its sustainable construction methods and building technology

www.usgbc.org/leed

# Environmentally friendly product portfolio

Knorr-Bremse puts great emphasis on environmental compatibility and resource efficiency when new, innovative technologies are under development. For example we do our utmost to reduce noise emissions and use ecologically acceptable materials wherever possible.

We are convinced that climate change will mean that energy efficient products are going to become increasingly important over the next years – which is why we also give this issue high priority during the development process.

You can find further important examples for how Knorr-Bremse products are designed to save electricity and fuel in our "Environmentally friendly product portfolio", which is downloadable from our website:

www.knorr-bremse.de/environmentalportfolio



### **Product examples**

**Rail Vehicle Systems:** The new LL composite brake block is used for so-called 'whisper brakes'. LL stands for 'Low Friction, Low Noise' – the blocks actually smooth the wheel during braking, reducing the track-related noise generated by freight trains by some 10 dB(A) – equivalent to a 50 per cent reduction in subjective noise.

The new, Generation 4 modular access system from IFE is 20 per cent lighter than its predecessor and requires 25 per cent less energy. The use of new insulating materials also means that the door leaves have improved sound and heat insulation properties.

**Commercial Vehicle Systems:** Our SL7, SM7, and ST7 pneumatic disc brakes increase energy efficiency because they weigh considerably less than their predecessors. The environmentally-compatible chrome VI-free surface coatings avoid the use of toxic materials.

Our compressor with clutch switches off the compressor when full power is required, for example when the vehicle is driving uphill or overtaking. During overrun, for example when the vehicle is going downhill, the system switches the compressor on again. This enables compressed air to be generated using the excess energy and also helps to slow the vehicle without any wear and tear. Savings of up 1,300 liters of fuel per year are possible.

### **Product examples**

**Rail Vehicle Systems:** LEADER helps locomotive engineers develop a style of driving that saves energy, reduces wear and at the same time brings the train safely and punctually to its destination. The system, which has been demonstrated to reduce energy consumption by up to 12 per cent, received a 2014 innovation award from 'Privatbahn' magazine in the "Energy and Environment" category.

**Commercial Vehicle Systems:** Tire pressure and temperature monitoring systems alert the driver if the pressure drops below a certain level or the temperature in the tire becomes excessively high. This increases safety and prevents unnecessary fuel consumption as a result of underinflated tires.

### Expansion of remanufacturing

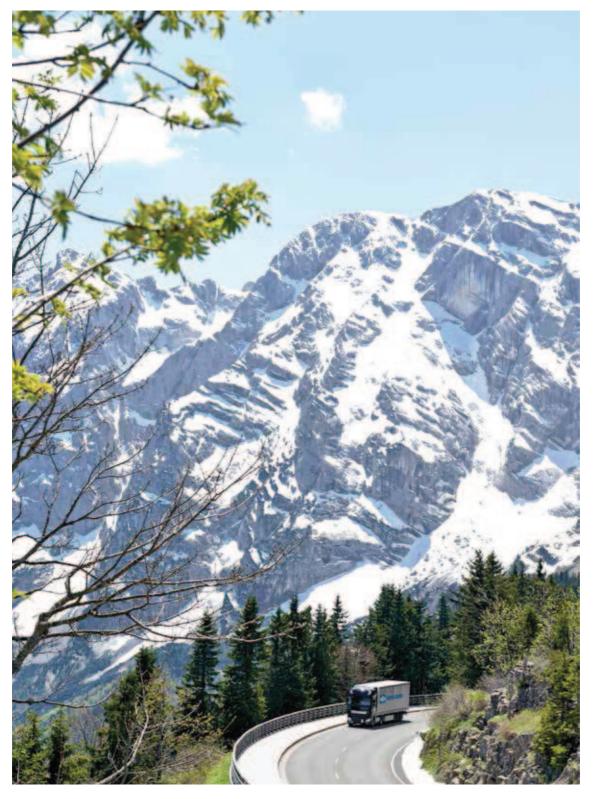
Over the next few years Knorr-Bremse aims to massively expand its product remanufacturing activities. Unlike repair and maintenance, remanufacturing is not designed to prolong the operating life of a product but rather to enable it to be reinstalled in another vehicle like an equivalent OE product. Remanufacturing is the best form of recycling, as it involves the reuse of complete products rather than just raw materials.

Aluminum components are a case in point: Remanufacturing does not involve the energy-intensive process of melting down and pressure-molding a new aluminum casing. Compared with a newly-created product, remanufacturing can save up to 98 per cent of the materials required. Reassembly and testing of remanufactured components involves the same processes as for OE products, so customers receive the same statutory warranty as for a brand-new product.

We carry out ongoing life cycle analyses to assess the environmental advantages of remanufacturing. An analysis of emissions from remanufacturing our EAC 1 electronic air treatment system revealed that 13.7 kilograms of  $\mathrm{CO}_2$  were saved compared with the production process for a new unit. In 2013 we created a separate remanufacturing department within the Knorr-Bremse Commercial Vehicle Systems division. With over 2,000 return deliveries being processed by our Core Management Program every year, we can ensure the availability of legacy parts. More than 54,000 remanufactured units are sold every year.

During the year under review Knorr-Bremse further expanded its remanufacturing portfolio: The remanufactured version of our oil separation cartridge offers customers an energy-saving and resource-efficient alternative to the equivalent new product and one that is appropriate to an older vehicle's current market value. Used for drying and cleaning compressed air, the remanufactured OSC functions exactly like a new

In 2014 our subsidiary Bendix in Huntington, USA invested US\$ 3.2 million in expanding its remanufacturing capabilities. In the Bendix Brake Shoe Remanufacturing Center the entire remanufacturing process can be carried out on several million brake shoes for commercial vehicles.



KNORR-BREMSE DEVELOPS PDODUCTS THAT OFFER MAXIMUM CUSTOMER BENEFITS AND AT THE SAME TIME PROMOTE SUSTAINABILITY.

### Sustainable product life cycle

Our aim is to continuously improve our products and reduce their environmental footprint to a minimum. To do this we carry out life cycle assessments to examine the environmental impact of selected products during their entire life from production to final disposal. By analyzing the entire value chain we can gather valuable data on the use of materials and resources during production and also environmental compatibility during a product's service life.

We are currently piloting LCA analyses on five products, including the pneumatic disc brake and a control valve. Analysis includes "Product Carbon Footprints" (PCFs), which examine CO<sub>2</sub> emissions across a product's entire life cycle. The results are being used to develop an internal standard for future LCA analysis of our products.

In the Rail Vehicle System division we have incorporated further measures into our ECO Design project. This involves examining our products to identify banned or restricted materials and carrying out recycling analyses. As a basis we use our expanded ECO Design database, which includes information on REACH (EU system for Registration, Evaluation, Authorization and Restriction of Chemicals), materials use and recyclability. This ensures that banned or restricted materials do not find their way into our products at any stage. With the help of the database we also aim to incorporate a new design standard for sustainability into the management system of the Rail Vehicle Systems division.

### Social contribution of Knorr-Bremse Global Care

The charitable organization Knorr-Bremse Global Care funds projects that have a far-reaching impact in the fields of education and social infrastructure. The organization takes a holistic and sustainable approach to its aid projects that includes educating people and raising awareness of environmental issues.

One example is the project being run in collaboration with CARE in Peru to support small-scale farmers in adapting to climate change. The Huayatapallana Glacier is the main source of water for Huancayo

Province high up in the Peruvian Andes. For many years now the glacier has been retreating and as a result the livelihoods of small farmers in the region are under threat. In order to tackle this problem, irrigation systems were installed with the help of CARE and Global Care. Unlike traditional irrigation systems using earth channels, the new systems do not involve water loss through seepage and are therefore able to irrigate larger areas. This supports agricultural production and enables more nutritious crops to be raised. The risk of harvest failure during periods of drought is thereby considerably reduced. The local population is also given training in sparing use of the irrigation systems, adaptation to climate change and its impact on land use.

Afforestation of 2,700 hectares of land is helping to mitigate the impact of climate change on the region. By planting trees, soil erosion can be reduced and the groundwater protected. Awareness-raising campaigns are also being implemented in surrounding villages in order to train local government representatives and village leaders in climate change and its consequences.

Further information and examples of projects can be found on the Internet at

www.global-care.knorr-bremse.com.



# 6/ Anti-corruption

### **Principle 10:**

Businesses should work against corruption in all its forms, including extortion and bribery.

Integrity and responsible behavior in our dealings with business partners and our own employees are fundamental values that underpin everything we do as a company. Knorr-Bremse complies with the relevant legislation and regulations as a matter of course, and is categorically opposed to all forms of corruption, including extortion, bribery and any illegal or immoral behavior

### Anti-corruption and compliance

The Knorr-Bremse Code of Conduct expressly forbids corruption, including bribery and extortion, and also stipulates other ethical policies. It serves as a standard for our employees and is intended to promote integrity and responsible conduct.

If corruption is to be prevented from the outset, it is crucial for the principles laid down in the Code of Conduct to be communicated transparently and effectively to the workforce and appropriate training provided. Every employee needs to be clear about what we mean by responsible conduct and about the rules we have set ourselves. To achieve this, we provide continuous staff training on the Code of Conduct – at regional company events, training sessions and information events. New employees are given a copy of the Code of Conduct when they join the company. We are currently working on additional communication and training measures, including an online training tool for compliance issues. And we are also in the process of developing a systematic, Group-wide monitoring and reporting system for compliance infringements.

During the period under review no financial or non-financial penalties were imposed because of non-compliance with current statutory requirements and directives

### Further guidelines

Other Group-wide and regional guidelines further develop the basic principles laid down in the Code of Conduct. These include quality management guidelines for purchasing and internal guidelines on acceptance of gifts.

### Internal audits

The internal audit department supports the Executive Board in its monitoring function by carrying out independent, objective audits aimed at improving business processes and identifying possible cases of corruption.

### Risk management

The Group has a global planning, reporting and controlling system. In addition there is a standardized system of risk management reporting at the highest level. Risk reports are regularly discussed by the management of the two divisions and the Group Executive Board. Our controlling system for the early identification and correction of potential irregularities has proved to be extremely reliable.



# 7/ Summary of implementation of the ten Global Compact principles

Principle	Knorr-Bremse guidelines and systems	Measures	Achievements
Principle 1: Supporting human rights  Principle 2: Preventing abuses of human rights  Principle 3: Upholding freedom of association  Principle 4: Eliminating all forms of forced and compulsory labor  Principle 5: Abolishing child labor	Knorr-Bremse Code of Conduct (page 11)  Safety, health and environmental policy (page 12f., 21)  Corporate Responsibility guidelines (page 8f.)  UITP-Charta for sustainable development	Incorporation of the principles of the UN Global Compact into company purchasing guidelines (page 12)  Implementation and evaluation of self-assessments by suppliers to the Rail Vehicle Systems division (page 12)  Co-founder of the Railsponsible initiative aimed at promoting sustainability in the global rail industry (page 12)  Standards for working conditions	Internal audits monitor know-ledge and communication of Code of Conduct (page 11)  More than 55% of suppliers to the Commercial Vehicle Systems division have signed the revised purchasing guideline (page 12)  240 self-declarations by suppliers in the Rail Vehicle Systems division (page 12)
Principle 6: Eliminating discrimination	Knorr-Bremse Code of Conduct (page 11)  Equality of opportunity and equal treatment of employees irrespective of the color of their skin, their national or social origin, disability, sexual orientation, political or religious beliefs, gender or age	"Job assessment" project for standard definition of jobs and job descriptions throughout the Group (page 16)  Promoting supra-regional exchange, implementation of intercultural training courses, language courses and periods of residence abroad (page 17)  Use of regional employees and managers (page 17)  "mentorING" program for promoting women on science/technical university courses (page 17)  Training programs on the subject of women in management positions (Bendix) (page 17)	Equal pay at German sites confirmed by award of Logib-D certificate (page 17) Proportion of severely disabled employees in Germany reaches 4.9% (page 17)

Principle	Knorr-Bremse guidelines and systems	Measures	Achievements
Principle 7: Precautionary approach to environmental protection  Principle 8: Initiatives to promote greater environmental responsibility	Knorr-Bremse Code of Conduct (page 11)  Climate protection strategy with Group-wide targets for 2020 (page 22)  Safety and health and envi- ronmental policy (page 12f., page 21)  Group-wide environmental management system at production and service sites (page 21)	Certification of sites according to ISO 14001 environmental management standard (page 21)  ECCO <sub>2</sub> project (page 23)  Introduction of an energy management system in compliance with ISO 50001 at the Group's most energy-intensive sites (page 22)  "Green IT" for reducing energy requirements of IT systems (page 23)  Expansion of remanufacturing (page 27f.)  Guideline for design and planning of sites and buildings, incorporating extensive environmental criteria (S. 24f.)	Specific CO <sub>2</sub> emissions reduced by 20% since 2009 (page 22)  Energy efficiency increased by 20% since 2009 (page 22)  40 production sites achieved ISO 14001 certification (page 21)  German sites in Munich, Aldersbach, Berlin and Schwieberdingen prepared for ISO 50001 certification (page 22)
Principle 9: Encouraging the development and diffusion of environmentally friendly technologies	Knorr-Bremse Code of Conduct (page 11)  Knorr-Bremse offers products and systems tailored to market requirements that contribute towards making mobility viable, safer and more environmentally friendly in the future.	Implementation of life cycle assessments and materiality analyses to evaluate environmental and climate impact of products and systems (page 22, page 29)  CR as part of the approval process for product innovations (page 25ff.)  "ECO-Design" in the Rail Vehicle Systems division for examining products and developing a design standards for sustainability (page 29)	Life cycle assessments carried out for products (page 29) Further development of environmentally friendly product portfolio (page 25ff.)
Principle 10: Working against corruption	Knorr-Bremse Code of Conduct (page 11)	Employee training in Code of Conduct (page 31) Development of an online training tool on the subject of corruption (page 31)	No compliance infringements reported during period under review (page 31)



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