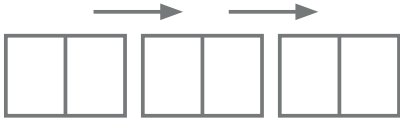


# Corporate Responsibility Report 2017

Liebherr-Hausgeräte GmbH

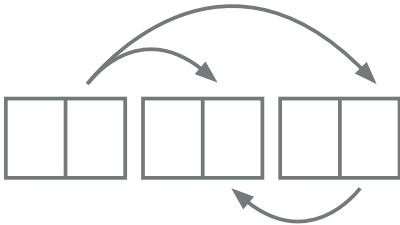


# LIEBHERR



Traditional navigation

You can read the Corporate Responsibility Report of Liebherr-Hausgeräte GmbH in the traditional way, from page 1 right through to the end.



Targeted navigation

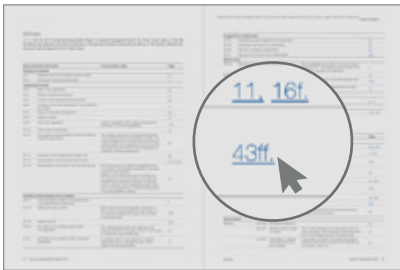
Use the links in the table of contents, the lower navigation bar or the GRI index to go directly to a specific page.



You can select each item directly in the table of contents at the beginning of this report.



Use the navigation items at the bottom of the page to go to the table of contents or to undo an action.



Clicking a page number in the GRI index will take you directly to the corresponding page.

# We are independent

*"To us, independence means being able to make decisions quickly and independently."*

# We are a reliable partner

*"Stability and reliability that endures for years is of vital importance to us."*

# We are innovative

*"We work systematically on always being one step ahead."*

# Our employees are the key to our success

*"We really value the fact that our employees identify with Liebherr."*

# The highest quality in everything we do

*"Only the best results are good enough, we pursue this with passion."*

# We are responsible

*"We want to meet our responsibility towards society and the environment at all times."*

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Reporting Framework

[G4-17, G4-28] This is the second Corporate Responsibility Report of Liebherr-Hausgeräte GmbH. It summarises the main economic, environmental and social developments of the financial years 2016 and 2017. For the sake of the completeness, important developments from previous years have also been covered. The Corporate Responsibility Report is supplemented by the publication of the Corporate Responsibility Factsheet.

Unless otherwise stated in the report, the information refers to the divisional controlling company, Liebherr-Hausgeräte GmbH, and the three European production companies, Liebherr-Hausgeräte Ochsenhausen GmbH in Ochsenhausen (Germany), Liebherr-Hausgeräte Lienz GmbH in Lienz (Austria) and Liebherr-Hausgeräte Marica EOOD in Radinovo (Bulgaria). Due to uniform data availability, only the three

European production companies are considered in this report. The production companies Liebherr Appliances Kluang SDN. BHD. in Kluang (Malaysia) and Liebherr Appliances India Pvt. Ltd. in Aurangabad (India) will be included in the next Corporate Responsibility Report.

The report is based on the currently applicable G4 guidelines of the Global Reporting Initiative (GRI). We report on all standard disclosures as well as all aspects identified as material. In our opinion, this Corporate Responsibility Report is in accordance with the “Core” option of the GRI Guidelines.

Note on the use of language: The equality of men and women is regarded as self-evident in our business. For the sake of simplicity, this Corporate Responsibility Report will refer to employees and members of staff – insofar as any such reference appears to be a reference to male or female employees, the reference must be understood to include the other gender equally.

Preface by the management

Dear readers,

[G4-1] [G4-2] Over the next few decades, society will be facing major challenges worldwide: The world population and economic output are growing steadily and, simultaneously, so are consumption and the demand for resources. In this context, important decisions have been taken in recent years: In 2015, the United Nations adopted the 2030 Agenda on Sustainable Development. In combination with the Paris Climate Agreement, it sets the course for a global transition towards sustainable and low-emission living and economic practices. Like many other companies, Liebherr-Hausgeräte GmbH has no doubt that commerce and industry must make a decisive contribution to the implementation of the sustainability agenda – this is the only way in which we can jointly create the basis of a society in which it is worth living.

Liebherr’s fridges and freezers have enjoyed the enormous confidence of their customers for over 60 years and stand for first-class quality. For us, the highest quality also means that the scope of our business decisions must always be taken in harmony with the economy, ecology and society. This is why the principle of sustainability is applied by us in all the areas of our business. Our most important contribution to the sustainable shaping of the future is through the continuous use of modern and resource-efficient technologies. Our appliances are already among the most energy efficient. At our facilities, we pay particular attention to the protection of the environment, energy consumption and the responsible use of resources. We offer our employees an attractive workplace and a healthy working environment. We promote

diversity and entrepreneurial action and, in working together, rely on decency, mutual respect, fairness and trust.

In 2015, we set out at a strategic level our commitment to acting responsibly in our “Guidelines for Sustainable Management”. Together with our stakeholders, we have also defined the key areas of sustainability that are essential to us – while observing the global environmental and social challenges. In addition, we have created an organisational structure that enables us to make our contribution to achieving the global sustainability objectives.

In the future, we will inform you about this process and all specific steps via regular corporate responsibility reports. Your opinions and expectations are very important to us. We therefore look forward to receiving your suggestions and feedback.

“Our business decisions are always made in harmony with the economy, environment and society.”

The management of Liebherr-Hausgeräte GmbH



Steffen Nagel



Dr Clemens Philippson



Detlef Walther

1949

The family business established  
by Hans Liebherr



9,845 billion

in 2017, the highest turnover  
in the history of the company

10%  
of the total turnover  
by the Domestic Appliances  
division

LIEBHERR

## Liebherr Group












*The Liebherr business was established in 1949 by Hans Liebherr and has since grown into a group of companies with 43,869 employees in 11 divisions and over 130 companies on all continents.*

[G4-7, G4-14, G4-34] The Liebherr family business was established in 1949 by Hans Liebherr and has since grown into a group of companies with 43,869 employees in over 130 companies on all continents. In the 2017 financial year, Liebherr achieved the highest turnover in the history of the company with € 9,845 billion. Almost 10 % (€ 930 million) of the total turnover was derived from the Domestic Appliances division.

The Group has a decentralised organisational structure and is divided into eleven independently operating product divisions. The holding company is Liebherr-International AG in Bulle (Switzerland). The highest decision-making and management body is an executive board of shareholders, which consists exclusively of members of the Liebherr family. It decides on all the fundamental questions in respect of the business, development and product policy as well as the financial and investment policy. The family shareholders are aware of their corporate responsibility and provide a clear and structured path for the sound development of the business. At the same time, providing job security and maintaining the business's integrity as a business partner constitute important corporate directives. Liebherr is an independent family business that is now run jointly by the second and third generations. This continuity characterises the Group and is the solid foundation of its success.

The value-oriented corporate culture ensures a strong cohesion between the employees and a relationship based on trust with partners and customers. The organisational structure of the Group ensures uniformity in central corporate issues and enables it to react quickly to market requirements at the division level. The divisional controlling companies are responsible for the overall operational management of the individual product segments. Due to a high equity ratio, Liebherr is able to grow predominantly organically, i.e. on the basis of its own efforts. In order to achieve ongoing and perspective-oriented prosperity, profits are reinvested and remain in the business.

### The Divisions of the Group

	Earthmoving
	Mining
	Mobile Cranes
	Tower Cranes
	Concrete Technology
	Maritime Cranes
	Aerospace & Transportation Systems
	Machine Tools & Automation Systems
	Domestic Appliances
	Components
	Hotels



66 million

investment in euros in 2017  
(+4.8 %)

930 million

turnover in euros in 2017 (+3.6 %)

6,072  
employees in 2017  
(+0.6 %)

2.24 million

sales in 2017 of  
fridges and freezers  
(+1.7 %)

5  
production sites  
worldwide



# Liebherr-Hausgeräte GmbH

*As part of the Liebherr Group, we have more than six decades of experience in refrigeration and freezing as well as being one of the leading European suppliers with more than 2.2 million units sold in 2017.*

## The Domestic Appliances division

[G4-4, G4-6, G4-34, G4-DMA] At our five production companies in Ochsenhausen (Germany), Lienz (Austria), Radinovo (Bulgaria), Kluang (Malaysia) and Aurangabad (India), we develop and produce energy-efficient fridges and freezers for the household and commercial sectors that meet the requirements of our customers through their outstanding quality, timeless design and innovative technologies. In the household sector, the range includes free-standing fridges, table-height fridges, fridge and freezer combinations, built-in appliances, upright and table-height freezers, chest freezers as well as wine cabinets and customised solutions. In respect of commercial refrigeration and freezing requirements, we offer a wide range of special solutions for the hotel and catering industries, bakeries, food retailers, research institutes and laboratories, the beverage industry, as well as the frozen food and ice cream industries.

Within the Sales department, the strategic business units assume control - with the support of their own sales and service companies in Switzerland, Germany, Austria, Bulgaria, United Kingdom, Singapore, Malaysia, United States, Canada, Russia, Brazil, India and South Africa - of the worldwide sales and marketing activities of our products and services and provide reliable customer service.

The divisional controlling company is Liebherr-Hausgeräte GmbH with its headquarters in Ochsenhausen. It manages the operation of the production and distribution companies in the countries. The management consists of three equally ranking directors in the departments of Sales, Technology as well as Finance and Administration. The end of the financial year is the 31<sup>st</sup> of December of each year.

## Our business model

In the areas of quality and refrigeration technology we are the market leader. We develop products characterised by the highest levels of energy efficiency, fresh quality and ease of use. We invest in research and development continuously. Our five production companies form a modern and flexible manufacturing network that enables us to cover all major market segments optimally. Our products and services are sold worldwide through our sales and service companies as well as through responsible partners, with whom we have established a long-standing and reliable cooperation and who are regularly trained by us. With a value-added-oriented marketing concept, we are able to ensure that our sales and trading partners are able to present our fridges and freezers in a sophisticated manner. A competent, customer-oriented service rounds off our business model.



## Our vision

The name Liebherr is the worldwide  
standard for excellence in refrigeration.

## Our mission

The satisfaction of our customers is our top priority. We want to fill our customers with enthusiasm for our brand. The core of this brand are outstanding quality, timeless design and technological innovation. This is why we continuously strive to ensure that our fridges and freezers meet the highest requirements for household and commercial use and provide real added value. In relation to service, we meet the requirements of our customers by providing fast, reliable services.

## Turnover and sales development

[G4-9, G4-10, G4-14, G4-EC1] In 2017, we sold 2,240 million fridges and freezers worldwide (in 2016: 2,202 million units, +1.7 %) and achieved a turnover of € 930 million at the end of the 2017 financial year (in 2016: € 898 million, +3.6 %).

*We plan for the long term and our growth is organic*

The market for fridges and freezers remains highly competitive. In Western Europe, turnover in 2017 remained at the level of the previous year. In the important German market, growth was recorded. This was in contrast to downturns in the Italian, Swiss, Danish and French markets. In Eastern Europe, the development of the market was positive once again. In particular, Russia and Bulgaria contributed to this growth. The division was also able to increase turnover in America, the Middle East and the Far East / Australia. In Europe, the market for domestic fridges and freezers stagnated, while the growth was moderate worldwide. Sales dropped especially in respect of freezers. By contrast, in respect of built-in appliances an increase was recorded. In the commercial sector, demand for fridges increased, especially for laboratories.

## Employees

In 2017, we employed a total of 6,072 employees (in 2016: 6,035, +0.6%). During the reporting period and in the preceding years, there were no compulsory redundancies at any of our locations. There has not been a shift of essential production units to other countries. Continuous investment is part of a future-oriented and responsible location policy. Our cooperation at Liebherr is characterised by a pragmatic working style as well as mutual respect, fairness and trust. Accordingly, all employees have significant scope in their areas of responsibility. It is particularly important that everyone understands what they are responsible for. It is the commitment of each individual that contributes to the success of the company. Recognising this and implementing it in our everyday work is of particular importance to us. Our employees identify with the company and they all share a passion for high quality technology. This strengthens international cohesion and promotes transnational teamwork within the Group. At every location and in each country, our employees receive the technical and personal support that they require. Anyone who shares our enthusiasm and makes an active contribution will find a home for themselves professionally here with an unexpected abundance of opportunities.

## Investments

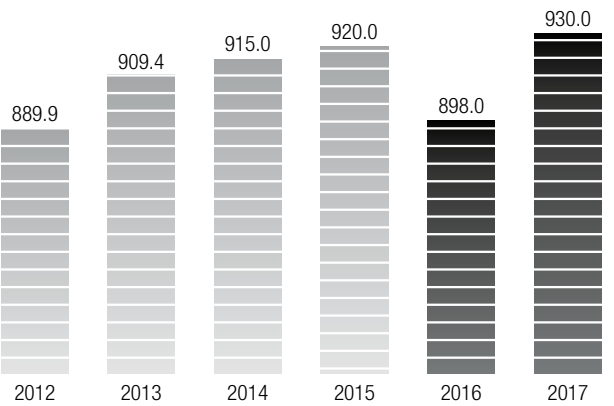
The total investment in 2017 was € 66 million (in 2016: € 63 million, +4.8 %). In research and development, the main focus was on energy-efficient innovations in refrigeration and freezing technology with user-oriented and digital functions as well as on new service and business models. The most important investment in the division was the construction of a new production facility in Aurangabad (India) on a site of 200,000 square metres. This was completed in 2017. The number of employees at the location will be about 1,000 in the medium term. In addition, Liebherr-Hausgeräte GmbH invested in a new customer centre for the divisional controlling company in Ochsenhausen (Germany).

## Strategic orientation

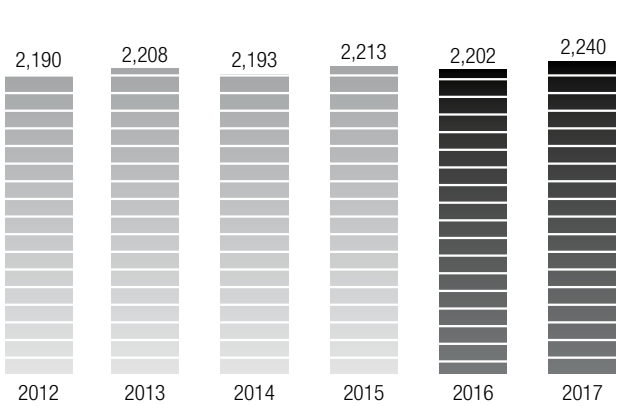
We aim to continue growing in a clearly structured manner and to secure our profitability through innovative strength, a market-oriented product range and cost orientation. Due to the increasing dynamism in global markets, customer centricity has, more than ever, become the key factor for success. Five strategic directions that are based on the vision "The name Liebherr is the worldwide standard for excellence in refrigeration" have been pointing to the future path of the Domestic Appliances division since 2015. The focus is on innovation, strengthening the core business, the development of new analogue and digital business models and customer groups as well as internationalisation.

The long-term goal is to be the market leader in the high-end price segment of the European market. Outside Europe, especially in the American and Asian economic areas, we want to continue growing with products and services tailored to the specific requirements of the individual markets. This includes, for example, the luxurious monolith series, which was first introduced in the American market. With its clear lines, innovative functions and exceptional design; the Monolith integrates seamlessly into any kitchen design. The fridges produced in Aurangabad (India) from 2018 were specifically designed for the Indian market requirements.

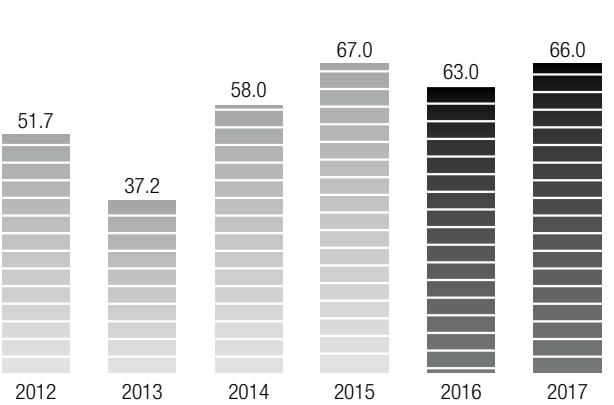
Turnover performance in millions of €



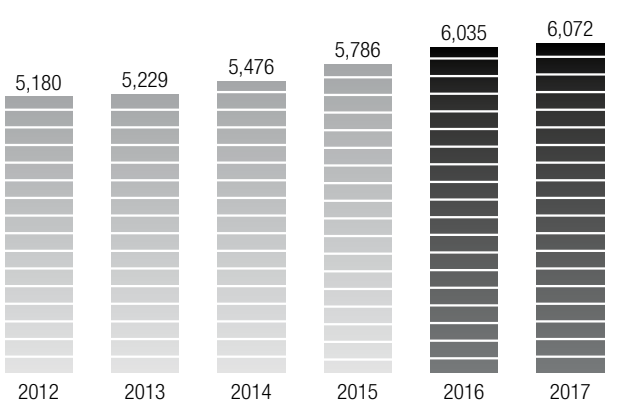
Worldwide sales performance (millions of units)



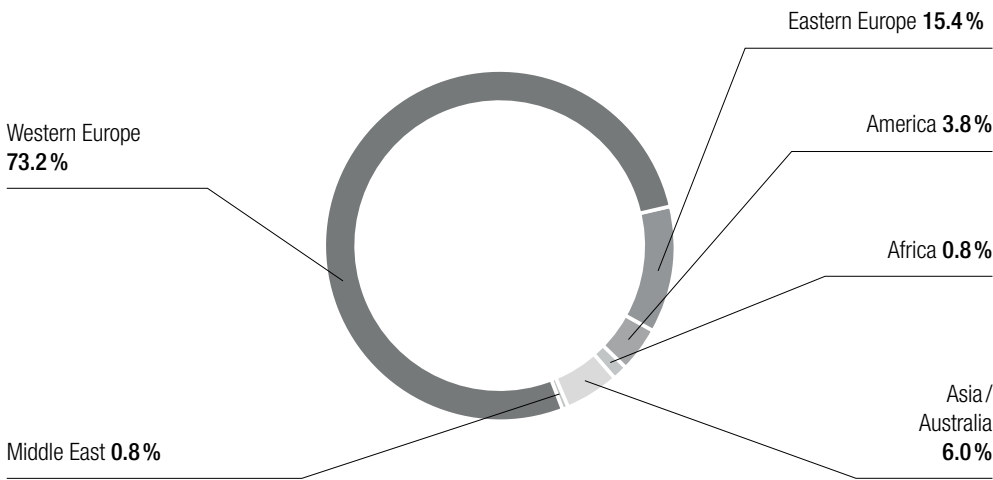
Investments (millions of €)



Development of the entire workforce worldwide



Turnover by sales region in 2017

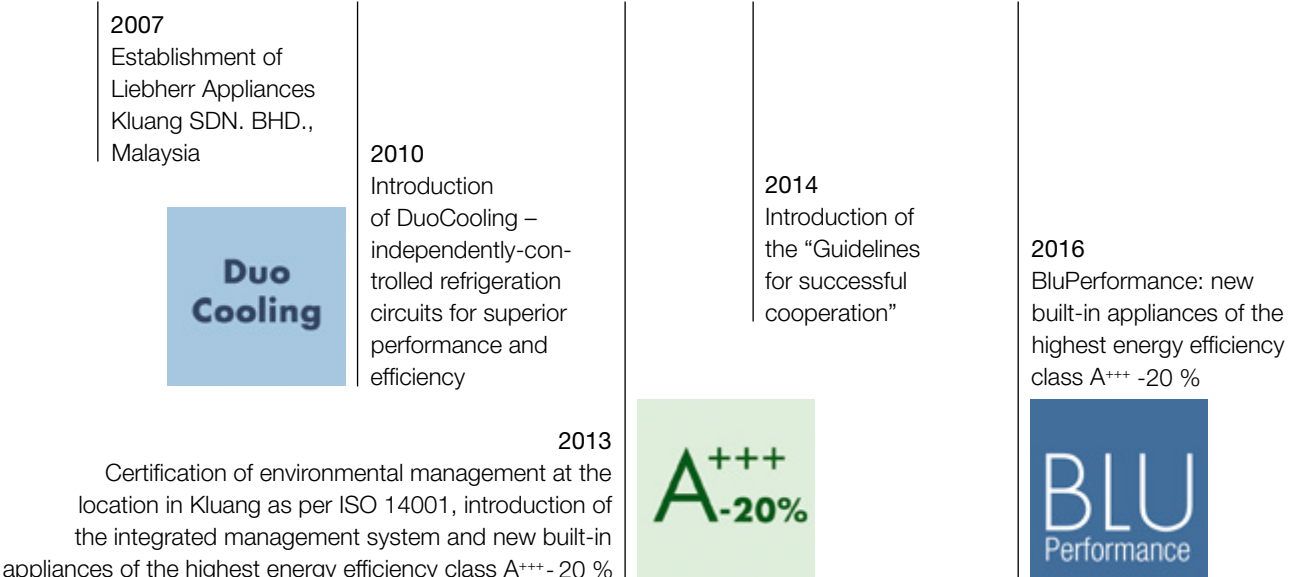
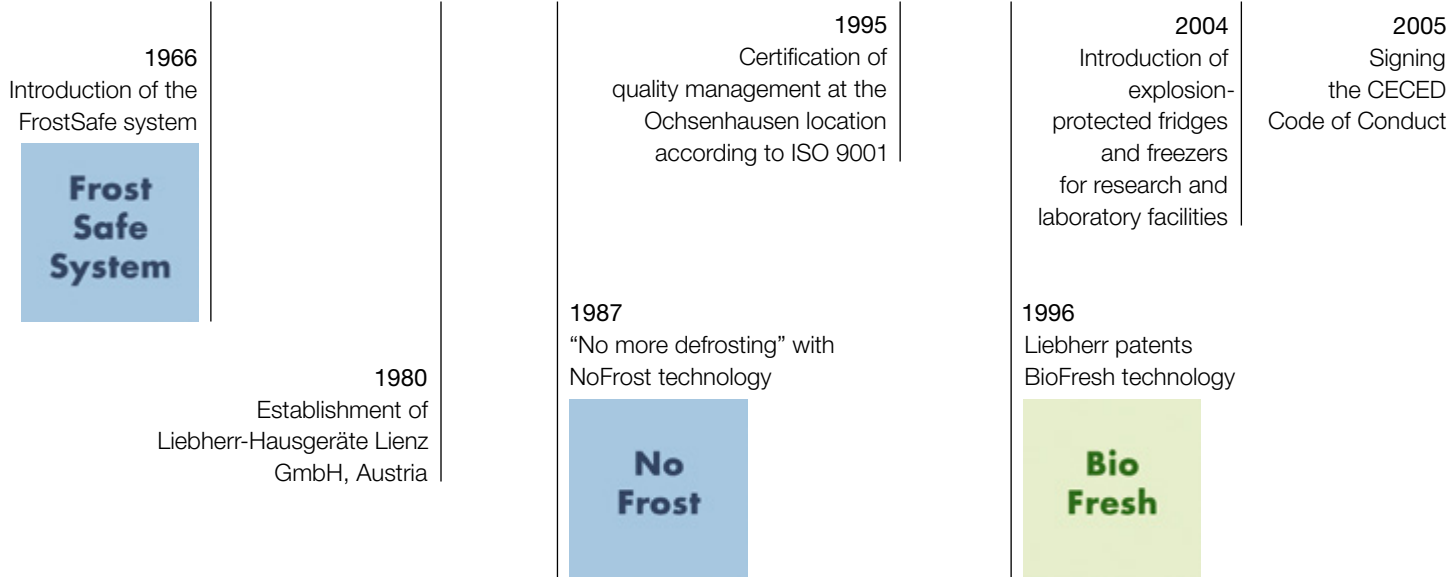
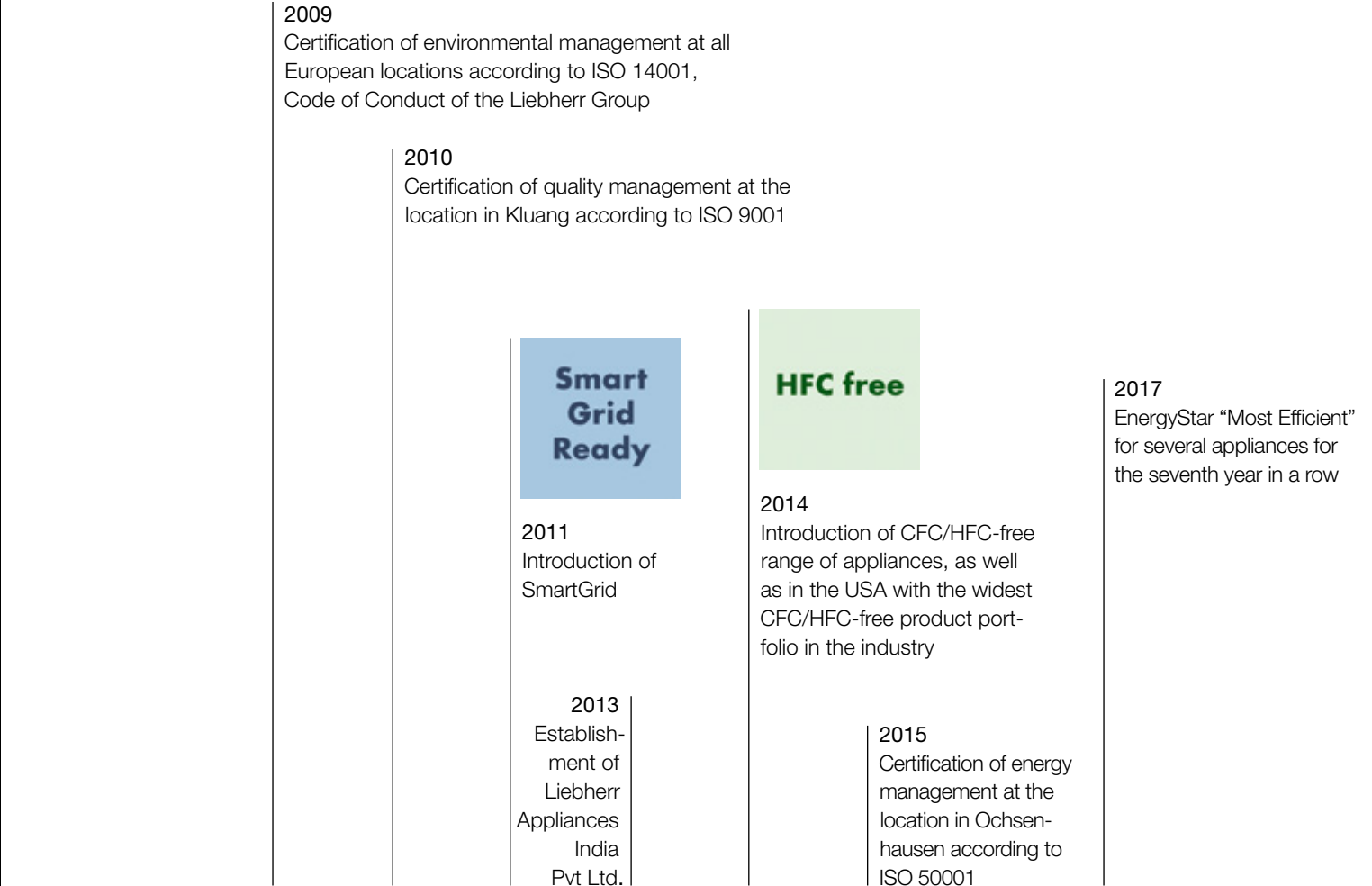
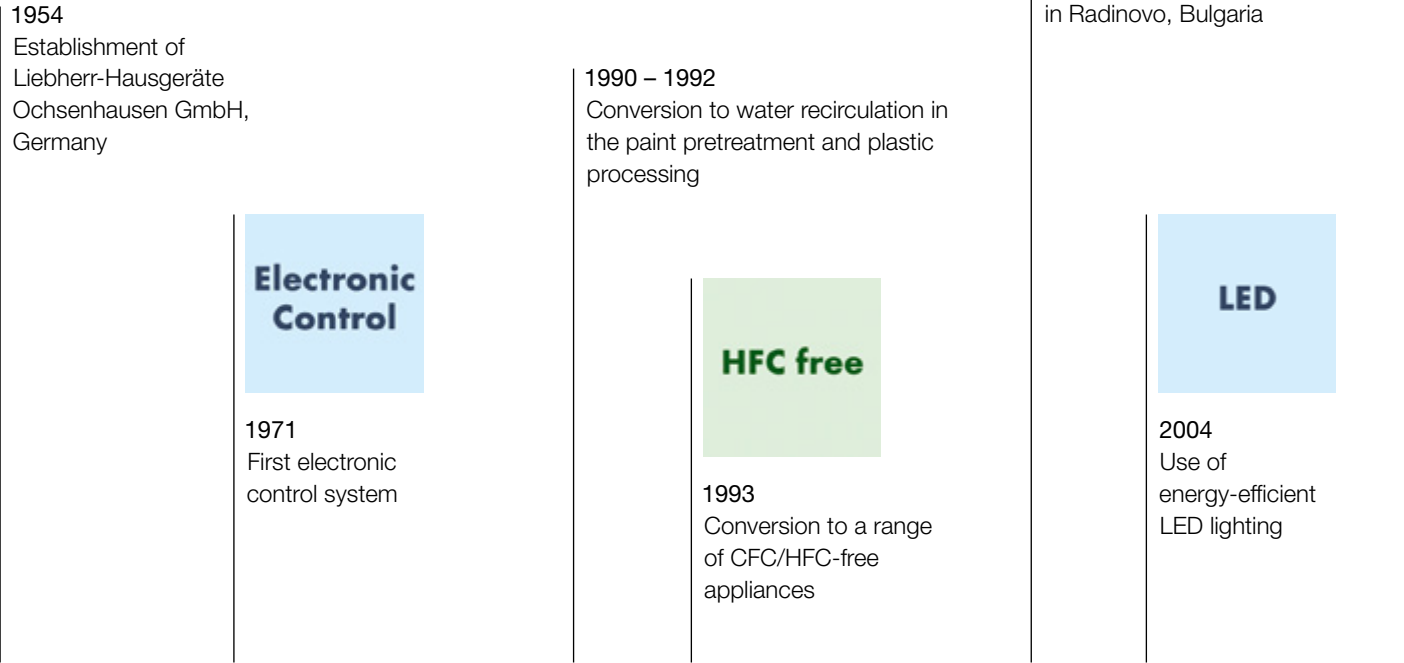




60 years of innovation for people and the environment

Developments from 1954 to 2017

The conversion to a range of CFC/HFC-free appliances, the zero degree compartment, the most energy-efficient fridges and freezers in the premium class – we have always been one of the pioneers of the industry.





Certifications

[G4-14, G4-DMA, G4-DMA, G4-DMA] The production locations as well as the divisional controlling company have a quality management system certified according to ISO 9001 and an environmental management system certified according to ISO 14001. Since 2015, the location at Ochsenhausen has also been certified according to ISO 50001 (energy management).

*Our integrated management system combines quality, environmental and energy aspects*

In order to use synergies, the requirements of the three standards are coordinated and systematically implemented in a uniformly integrated management system (IMS). The aspect of occupational health and safety is organised on the basis of OHSAS 18001. We have dispensed with obtaining external certification in this regard so far.



Our production companies in Ochsenhausen (left), Lienz (centre left), Radinovo (bottom left), Kluang (centre right) and the new plant at Aurangabad (bottom right)

Integrated management system

Location	Quality ISO 9001	Environment ISO 14001	Energy ISO 50001
Ochsenhausen (DE)	✓	✓	✓
Lienz (AT)	✓	✓	from 2018
Radinovo (BG)	✓	✓	from 2018
Kluang (MY)	✓	✓	–
Aurangabad (IND)	from 2018	–	–

Locations as at 2017 certified in accordance with quality, environmental and energy standards



Liebherr-Hausgeräte company policy

[G4-56] As a globally active **family business**, we have a great responsibility towards society, the environment, our customers, employees and suppliers. We are convinced that we can only be successful in the long term if we take this into account in all our actions and achieve the best possible balance between economy, ecology and social requirements.

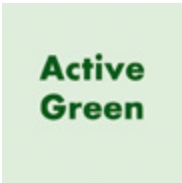
This policy substantiates the basic values of the Liebherr Group and implements what Liebherr-Hausgeräte GmbH means by quality, sustainability and responsibility. It applies in its entirety to all production locations.

Our primary goal is to be the first choice amongst our **customers**. Consequently, we want to react flexibly to customer requirements and establish ourselves permanently as a preferred partner. Our appliances are characterised by innovative and environmentally friendly technologies, elegant design and superior quality.

Our **quality standard** applies the zero-error principle and, accordingly, emphasizes error avoidance. Our processes are successively and continuously improved by control loops.

Our **employees** are the key to our joint success. We believe that our dedicated employees will be able to ensure the quality of our products and services on into the future. Our working relationship is based on the principles of decency, mutual respect, fairness and trust. We are committed to supporting our employees with training and further education programmes as well as providing secure jobs and a healthy working environment. These training and further education measures are intended to motivate our employees in the long term, so that they independently assume their responsibility for the company and the environment.

We seek to reduce the **environmental impact** of our products and production sites beyond the specifications of the regulations and statutory requirements. In order to do so, the **consumption of resources** must be continuously optimised and **energy-related performance** must be constantly improved. In our products, the environmental concerns are taken into account across the entire life-cycle (definition, development, production, use and subsequent disposal).



The burdens, adverse effects or dangers to our employees, residents and the environment are reduced to a minimum. This also applies in the event of an emergency or damage. In order to ensure maximum **safety**, precautionary measures have been established that are regularly reviewed, evaluated and developed further if necessary.

At an early stage, **suppliers** and service providers are integrated into our current quality and sustainability standards. Improvements to our production locations should not be achieved by transferring critical production processes to our suppliers.

We are committed to having an **open and objective dialogue** with our employees and the public.

Our **integrated management system** serves to fulfil these requirements and to achieve the objectives set. Its effectiveness is regularly checked by audits.

Audits

External and internal audits are carried out regularly to ensure conformity with the standards and the functionality of the integrated management system. The group audit for ISO 9001 and ISO 14001 takes place in the matrix process. Consequently, our divisional controlling company and selected locations are audited annually by an external auditor. In addition, each location undergoes annual internal system audits in the areas of quality, environment and hazard prevention.

Responsibilities

The primary responsibility for the organisation, monitoring and implementation of all measures is borne by the management of Liebherr-Hausgeräte GmbH. The management representative responsible for all quality issues of the management system is the executive board member Dr Clemens Philippson. Together with the person with overall responsibility for quality management and the persons responsible at the locations, he ensures that the processes required for the quality management system are introduced, implemented and maintained, and that the requirements of ISO 9001 are fully met



and constantly observed at the individual locations. The senior management member responsible for all aspects of the environmental management system is the executive board member Dr Clemens Philippson. In cooperation with the environmental management officers and the persons responsible for environmental management at the locations, he ensures that the requirements of ISO 14001 are fulfilled and that the employees protect the environment in accordance with the standard. In addition, specially trained environmental consultants are available as contact persons in the specialist departments.

## Management review

The effectiveness of the integrated management system is regularly assessed, at least once a year, as part of the management review conducted by management. In the review, the findings from audits and recommendations for improvements are taken into account, as is the status of preventive and corrective measures.

*As part of a family business, we value integrity highly*

For us and our employees, this means acting in compliance with the applicable legislation as well as strictly observing the internal standards and codes of conduct of the Group.

## Compliance

[G4-SO3, G4-SO4, G4-DMA, G4-DMA, G4-SO7] In our view, the term “compliance” not only means combating corruption, but also, in particular, complying with the provisions of competition law and foreign trade law. In order to enable our managers and employees to act with integrity and comply with the regulations, we have issued various internal standards and codes of conduct (<https://www.liebherr.com/en/gbr/about-liebherr/company-profile/compliance/compliance.html>). Furthermore, managers and employees are trained in compliance training courses.

## The Liebherr Group Code of Conduct

[G4-HR2, G4-PR6] In 2009, the Code of Conduct of the Liebherr Group and its companies was drawn up. It is a guideline for all employees and sets clear standards on integrity and the proper conduct of business. Our employees are required to use their judgement in a responsible and prudent manner and to be guided by honesty, reliability and probity. They may not abuse their position for personal benefit, nor encourage or tolerate behaviour which is inconsistent with this Code of Conduct. Our business partners are also en-

couraged to comply with our Code of Conduct. Our employees are always granted the opportunity of asking any questions and making comments to their superior or the HR Department as well as being entitled to request help. New employees are informed of the Code of Conduct when they join the company. During the reporting period, no significant breaches of the Code of Conduct occurred in Liebherr-Hausgeräte GmbH.

## Code of Conduct of the European domestic appliance industry

[G4-LA15] In 2015, the leading domestic appliance manufacturers in Europe, as members of the CECED (now APPLiA), agreed on a common code of conduct, the “CECED Code of Conduct”. Liebherr-Hausgeräte GmbH was directly involved in drawing up the content of the code and, as one of the first signatories, fully endorses it. We thereby commit ourselves to the promotion of fair working conditions and sustainable standards in respect of the environment and society, within the company as well as along the supply chain.

## Handling of personal data

[G4-DMA, G4-PR8] We believe that the customer and employee data entrusted to us must be handled in a reliable and trustworthy manner and manage this exclusively via servers in our own data centres. The collection, storage and processing of all personal data is carried out according to the general data protection regulations. External contracts with sales and service partners must include a provision for the confidential handling and storage of the data relating to the order. At the respective locations, data protection officers supervise compliance with national and international data protection regulations and internal guidelines. During the reporting period, there were no complaints of any breaches relating to data protection. There were also no cases of data theft or loss of personal data.

Today, what and how the employees of a company communicate on the internet is also relevant to the reputation of a company. In order to make it easier for employees to communicate on Facebook, Twitter, Xing and Co., the Liebherr Group formulated Social Media Guidelines in 2012. The guidelines provide tips and recommendations on how to avoid risks on the internet for employees and the company.



Inspiring our customers – everyday: customer centricity as the basis of our business



# Materiality analysis

identifying the issues with stakeholders

# Guidelines for sustainable management

bringing the economy, ecology and society into harmony

Development

# Sustainability programme

4 Spheres of activity

Product, production, employees, business partners

# Corporate responsibility management

*We have created the necessary structures in our company to harmonise the economic, ecological and social issues.*

## Guidelines for sustainable management

Within the scope of our company policy, we make our business decisions in harmony with the economy, ecology and society. The principle of sustainability applies to all areas of our business and is also required of our business partners. In addition, our Code of Conduct sets binding standards in respect of proper business practices and integrity.

*We are committed to conducting business in a responsible manner at all levels*

Our objective is to make a positive contribution to the community. We feel particularly close to the immediate environment of our plants. As an employer of numerous people, we have an important social role and are aware of our responsibilities in the regions around our locations. Independent surveys also confirm that we clearly implement the Group core value “We are responsible” at Liebherr-Hausgeräte GmbH. For example, in 2017 Liebherr-Hausgeräte GmbH was awarded the rating “very committed” for its commitment to sustainability by more than 440,000 consumers in a nationwide survey by ServiceValue in cooperation with “Deutschland Test und Focus-Money”.

## Organisation of corporate responsibility

As a part of a family business oriented towards the long term, our division is characterised by solid economic management. This is the foundation of our contribution to shaping the future in a sustainable manner. We pursue a holistic approach to environmental protection from an economic point of view that includes the entire product life cycle from the development, production and use to later disposal of the appliances. Key aspects are energy and resource management, waste management and climate protection.

The primary responsibility for corporate responsibility rests with the management of Liebherr-Hausgeräte GmbH. The position of corporate responsibility manager was established in 2013 to improve the harmonisation of the individual measures. Representatives from the departments of development, product management, product-related and operational environmental protection, human resources, occupational safety, purchasing, quality and logistics support the corporate responsibility manager at the locations.



Employees are the key to our success. By paying attention to detail, our employees ensure that every appliance meets the highest standards of quality



Our stakeholders are at the centre of our corporate responsibility strategy

[G4-24, G4-25, G4-27, G4-SO1] Stakeholders are all persons and organisations with whom we as a company maintain

relationships and who are in dialogue with us, who want to exchange ideas with us or who are interested in our company and its products. The specialist departments as well as the management are in contact with the respective stakeholders in a variety of ways. We regard the regular exchange of ideas with all the relevant stakeholder groups as extremely important.

Overview of the most important stakeholder groups with whom we are regularly in contact

Owners/Shareholders	Liebherr-Hausgeräte Companies	Employees
Customers	Suppliers / Service Providers	Environment
End customers, business customers, industrial customers, OEM customers, importers, trade/sales departments (channels), multinational corporate customers	Suppliers (production and non-production material), service providers (IT, logistics, marketing, disposal, product, operation/organisation), service partners	Liebherr companies, educational institutions/scientific institutions, official authorities/offices, local authorities, government organisations, NGOs, consumer organisations, associations/trade unions, banks/insurance companies, medical care facilities, external persons, public relations/media



The new customer centre at Ochsenhausen: We make Liebherr-Hausgeräte accessible to the public on the ground floor of the Experience Center which is open to the public and by means of the extraordinary facade design.

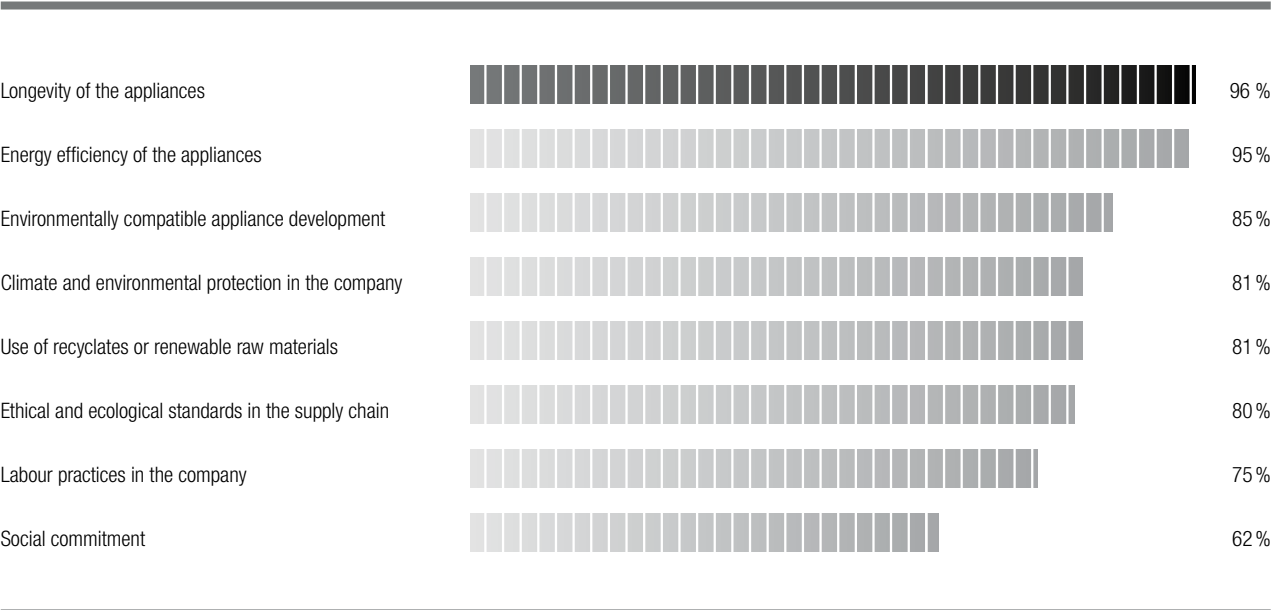


[G4-16, G4-18, G4-26, G4-EC2] Within the framework of product and company communication, we are in continuous dialogue with customers and business partners about the requirements of the customers, products and markets.

Through operational co-determination, employee surveys, ideas management and a continuous improvement process, employees can influence the company and develop the company as well as its products and processes.

At the European level, Liebherr-Hausgeräte GmbH is a member of the umbrella organisation of domestic equipment manufacturers CECED (now APPLiA). At the national level, we are members of the respective central associations of the electrical engineering and electronic industries. In Germany, Liebherr-Hausgeräte GmbH is a member of the industrial association Haus-, Heiz- und Küchentechnik e.V. (HKI) and active in the HAUSGERÄTE+ initiative.

The following diagram shows the topics analysed in the materiality analysis – thematically clustered and descending according to the priorities of the stakeholders.



This report is based on the current G4 guidelines of the Global Reporting Initiative (GRI) and therefore takes the principle

*The focus of our corporate responsibility management is based on the results of the materiality analysis*

A very close and personal relationship exists between the production companies and the municipalities and local residents at the locations, so that there is a constant exchange of information on topics specific to the location. Accordingly, Liebherr-Hausgeräte Ochsenhausen GmbH took part in the 2015 energy action day of the city of Ochsenhausen. Through our press and public relations work, we maintain an open and factual discussion with the relevant local editorial offices and inform them about the company- and product-related issues.

In the areas of product development, refrigeration technology and foodstuffs, we have long-term partnerships with various scientific institutes and university institutions. The company has so far rarely come into direct contact with interregional non-governmental organisations.

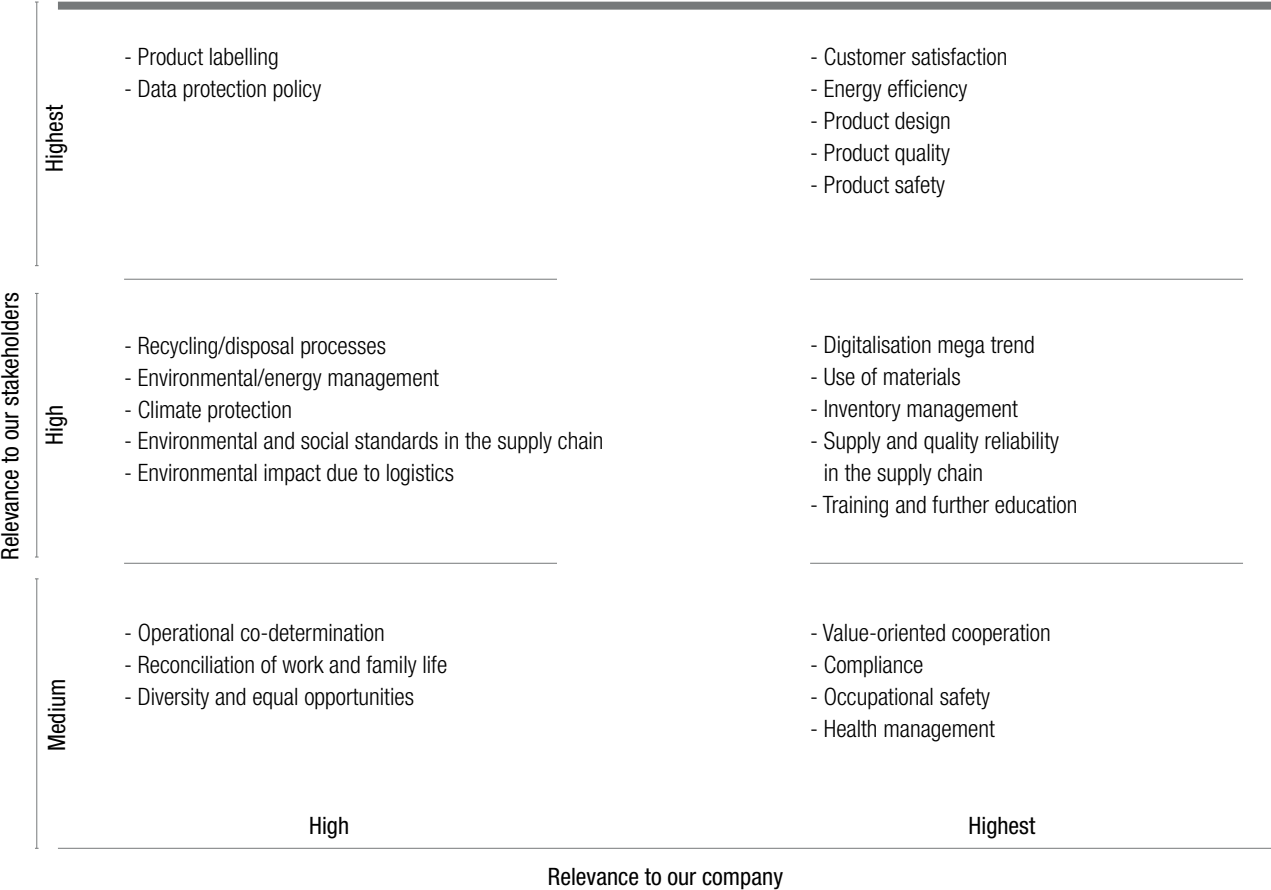
of materiality into account. We regard as “material” those issues that are important for our company as well as for our stakeholders.

In order to identify and prioritise the material corporate responsibility issues, we launched a systematic stakeholder survey in 2014 and 2015. In order to get as accurate a picture as possible of the concerns of our stakeholders, we conducted

telephone interviews and face-to-face meetings with a total of 18 representatives from multinationals, trade partners, suppliers, associations, the media, NGOs and communities. This was followed by an online survey with 2,590 participants. Over a period of four weeks, interested parties were able to rate material sustainability-related topics at [liebherr.com](http://liebherr.com). In parallel with this, various other sources such as previous customer and employee surveys, workshops in the specialist areas of the company and meetings with representatives of individual stakeholder groups, were evaluated.

More than 90 % of the interviewees generally regarded corporate responsibility as being of medium to high significance. In regard to our products, we received the attestation of having a very good sustainability performance. At the same time, however, many sustainable activities at the company level, such as operational environmental protection, observing the environmental and social aspects in the supply chain or the labour practices in the company, were unknown or only partially known to the interviewees at the time.

The findings obtained were then discussed in internal workshops and supplemented with additional specific aspects. On this basis, we have identified the topics that are of material relevance for our stakeholders as well as for our company and which our specialist departments can directly influence.



We have concentrated our activities on four spheres of activity. These include the topics of sustainable development that are material to our company.

Topics				
	Product	Production	Employees	Business partners
Spheres of activity	We develop innovative fridges and freezers that are characterized by excellent quality, a timeless design and low energy and resource consumption – to the utmost satisfaction of our customers.	Our sites are in harmony with the environment. The basis for this is our company's environmental management system.	We value our employees, provide support through targeted measures and offer attractive working conditions.	We also expect our business partners and suppliers to comply with the legal and ethical standards – and to do so to the best of their ability.
	<div><div>- Customer satisfaction</div><div>- Energy efficiency</div><div>- Timeless design</div><div>- Product quality and product safety</div><div>- Food management</div><div>- Efficient use of materials</div><div>- Smart devices</div><div>- Product labelling</div><div>- Recycling and disposal</div></div>	<div><div>- Environmental and energy management</div><div>- Climate protection</div><div>- Environmental impact due to logistics</div></div>	<div><div>- Training and further education</div><div>- High social standards</div><div>- Value-oriented cooperation</div><div>- Compliance</div><div>- Occupational safety and health management</div><div>- Suggestion system</div><div>- Operational co-determination</div><div>- Diversity and equal opportunities</div><div>- Reconciliation of work and family life</div></div>	<div><div>- Supply and quality reliability</div><div>- High environmental and social standards in the supply chain</div></div>

The materiality analysis shows what we need to pay particular attention to and what we must do to ensure that we retain the trust of our stakeholders and society in the long term. Now our objective is to continue systematically aligning our company with the currently applicable guidelines for

sustainable management. An important component of this will be the adoption of a cross-location sustainability programme based on clear and long-term objectives.

All material aspects inside and outside the company:

Material topics	GRI aspect	Material influence	
		Inside	Outside
Customer satisfaction	- Labelling of products and services	■	
Energy efficiency	- Products and services - Energy	■	
Product design	- Products and services	■	
Product quality	- Customer health and safety	■	
Product safety	- Customer health and safety	■	
Digitalisation / smart devices	- Products and services - Customer health and safety	■	
Inventory management	- Customer health and safety	■	
Use of materials	- Materials - Products and services	■	
Product labelling	- Labelling of products and services	■	
Data protection policy	- Protection of the privacy of customers	■	
Recycling and disposal processes	- Products and services	■	
Environmental and energy management	- Energy - Water - Emissions - Waste water and waste	■	
Climate protection	- Emissions	■	
Environmental impact due to logistics	- Transportation - Emissions		■
Supply and quality reliability in the supply chain	- Purchasing		■
Environmental and social standards in the supply chain	- Environmental assessment of suppliers - Assessment of suppliers with regard to labour practices - Assessment of suppliers with regard to human rights		■
Training and further education	- Training and further education	■	
Value-oriented cooperation	- Employment	■	
Compliance	- Anti-competitive behaviour - Compliance	■	
Occupational safety	- Occupational health and safety	■	
Health management	- Occupational health and safety	■	
Operational co-determination	- Employer and employee relationship - Freedom of association and right to collective bargaining	■	
Occupation and family	- Employment	■	
Diversity and equal opportunities	- Diversity and equal opportunities - Equal pay for women and men - Non-discrimination	■	

 **10 year**  
availability of spare parts

**84%**  
of the appliances  
in the domestic sector  
with the best energy efficiency  
A++ or A+++

Functional parts are tested  
for a service life of

**15 years**

High recyclability  
of the materials:  
Metals almost **100%**

**REACH** and  
**RoHS** compliance



## Products

*Our energy and resource-efficient, durable quality products make an important contribution to a sustainable business model and lifestyle.*

### Customer centricity

[G4-DMA, G4-PR5] In order for our developers to take the needs of our customers into account as early and as comprehensively as possible in the development processes, these needs are regularly determined and evaluated across our specialist departments. This is done through surveys and usability tests with representative end customer groups. During 2016 and 2017, more than 15,000 end customers and business partners worldwide were surveyed quantitatively and qualitatively.

*We integrate our customers and the environment  
into product development at an early stage*

At the same time, the feedback we receive through our telephone service and our sales partners is also incorporated into the development processes. We also measure the customer satisfaction after a repair as feedback and which provides valuable results in the continuous process of improvement. In the further development of our commercial appliances, close and long-term cooperation with our large customers is usual.

### Personalisation

Not being part of the broad masses, being different from others, not wanting products off the shelf – this desire for customisation is becoming ever more apparent in many areas of our society. Liebherr acknowledged this desire at an early stage with its fridges and freezers. In the “Design your Fridge” campaign in 2015, registered users were able to use a 3D configurator to design a Liebherr fridge according to their individual requirements on a dedicated website and contact other users. During the period of the campaign in May/June 2015 alone, the platform had 48,000 visitors. Almost 4,000 registered users took part worldwide. After a multi-stage selection process, the best of the more than 3,000 design proposals received were evaluated by the internet community in the final round. The three winning designs were awarded prizes at the 2015 IFA international

trade show for consumer electronics and home appliances in Berlin.

Now, Liebherr is setting new standards with MyStyle in terms of customisation. Not only can customers select the interior design or material of their fridge, but can also design its exterior to suit their own personal taste.

MyStyle is an online configurator that provides customers with a wide range of different customisation options. But, before you design your fridge to suit your personal taste, you need to decide whether you want to customise the exterior or prefer to leave it monochrome.

The configuration of fridges means that flexibility will continue being a factor in the future. The exterior panels of the fridge can simply be changed, so that each side of the fridge can be individually customised.

**MyStyle**





## Environmentally compatible product development

[G4-DMA, G4-EN27, G4-PR6] At an early stage of the product development, potential technologies and appliance improvements are examined for environmentally relevant aspects. Internal processes and procedural descriptions ensure that

- New products are developed as environmentally friendly as possible
- Environmentally relevant aspects are considered in the design, manufacture, use and disposal
- There is compliance with the prohibitions or restrictions in respect of certain substances
- The requirements for contact with food and drinking water are fulfilled
- The related, necessary documentation obligations are fulfilled
- Serial products are investigated to determine whether they can be reworked and developed to be more environmentally compatible.

In order to improve the recyclability of old appliances, we are in regular contact with our disposal service pro-

viders. At the same time, recycling studies are commissioned and evaluated. The resulting knowledge and experience are directly integrated into the development of the appliance. This is supported by making use of life cycle analyses, ecological assessments and product carbon footprint analyses.

In order to provide the greatest possible product safety for the user and the environment, we carry out comprehensive tests of the materials and components we use to manufacture our appliances as well as service life tests. The selection of suitable materials and their regular monitoring in the laboratory ensure conformity with the food processing regulations. Furthermore, supplier parts and materials are examined internally and externally for harmful substances. The prohibition of certain substances and other requirements are provided to the supplier by means of delivery specifications. In addition, the conformity with the regulations of all components that come into contact with food is confirmed by supplier declarations and our ongoing analyses. The EU REACH Regulation and RoHS Directive are critical in this regard.



The new 3D PU spray moulding process for the Liebherr supermarket chests contributes to the very high impact resistance of the highly elastic plastic housing and the chests therefore retain their visual appeal for much longer.



SmartDevice: More convenience through digital solutions

## Digitalisation

In regard to running the household, our customers want greater convenience in performing their daily tasks. For example, a fridge that detects which food is missing in the fridge and then sends a shopping list to the smartphone or that knows the culinary preferences of its users and has appropriate recipes available. In this regard, the focus is on the intelligent interaction of networked solutions that simplify everyday life. The issue is how e-commerce, home entertainment, the Internet of Things and our household appliances can interact.

*SmartDevice: Digital solutions  
that facilitate everyday life*

By introducing the SmartDeviceBox in 2015, we took the first step towards digital business models. This is the entry ticket to the digital world and enables the networking of selected Liebherr fridges and freezers with a smartphone or tablet and simply controlling them via the SmartDevice app. For example, users can receive status and alarm messages on their mobile devices and can adjust the cooling temperature while on the move. The required cooling capacity can be easily set at the supermarket to be able to subsequently store the purchased items at their optimal temperatures. The system is future-oriented: The modular solutions can be integrated into existing SmartDevice-enabled appliances and extended at any time. In addition, the open standards allow the adaptation of future offers and services.

SmartShopping describes how we shop today. What until recently had to be manually written on a shopping list can now be easily added to a shopping list online using the SmartDevice app. Integrated cameras (FridgeCams™) inform the customer while they are out and about of what food is currently in the fridge. This means that even while purchasing the missing items they can be easily and intuitively added to the stock list. This gives the user a better overview of the groceries already in stock and avoids double purchases. Thanks to artificial intelligence, the image recognition of food is steadily improving. The SmartDevice app in conjunction with the Liebherr FridgeCam™ will, in the near future, recognise much of the food stored itself. The new interaction options have already been enthusiastically received by trade show visitors. For example, in 2016 the company was awarded the AELVIS Award in the “Warehouse” product group for its concept spot at the AELVIS trade show (Salzburg).

Numerous recipes complete the offer within the app. In this way, the user receives valuable ideas for the perfect preparation of a meal and, if desired, this can be followed up with step-by-step instructions. If any ingredients for the meal are missing, anything that is out of stock can be added to the shopping list in future via the app. This will then be followed up by a food delivery service conveniently delivering the shopping.



## BioFresh technology

Most people enjoy eating. For this enjoyment, they are prepared to invest time and money in fresh, high-quality food. However, everyday large quantities of food are spoiled due to improper storage. In order for the investment in freshness and taste to be worthwhile, fruit, meat and other food

*Food that stays fresh longer  
does not end up in the rubbish*

needs to be properly stored, as fluctuations in temperature affect the quality. For many years, the patented BioFresh technology has contributed to the resource-saving storage of fruit,

vegetables, meat, fish and dairy products. At a temperature of just over 0 °C in combination with the ideal humidity, many foods retain their healthy ingredients, such as vitamins and minerals, for significantly longer than in a normal fridge compartment. BioFresh-Plus offers even more flexibility for the individual storage of food. The adjustable temperature range of 0 °C and -2 °C keeps various foods, such as fruit, vegetables, fish and seafood, as well as meat and dairy products, fresh for significantly longer than in a conventional fridge compartment. In addition, BioFresh is not only a technology for super-long freshness, but due to its highly efficient compressors and precise electronic control system it is also super-low in its energy consumption.



Using BioFresh technology, food retains its vitamins and minerals for significantly longer



The CBNef 5715 fridge freezer is characterised, amongst other things, by its excellent energy efficiency (A+++)

## Widest product range of energy-efficient appliances

[G4-EN7] Approximately 70 to 80 % of the environmental impact caused by domestic and commercial appliances is attributable to the use phase – primarily by the energy consumption of the appliances. Against a background of rising energy costs and the discussion on climate change, the energy efficiency of the appliances is therefore an important issue for our customers and for us. Consequently, we offer the widest product range of fridges and freezers worldwide in the best energy efficiency classes.

compressors have contributed to a constant improvement in the energy efficiency of our domestic and commercial appliances. In addition, reference must also be made to the new NoFrost and DuoCooling functions, the Vario energy-saving panel and the change to more efficient LED lighting designs. Overall, these improvements have resulted in a 13 to 25 %

*For decades, we have been the leading innovators  
in energy efficiency*

**70 to 80 %**  
*of the environmental impact caused by  
domestic and commercial appliances is  
attributable to the use phase*

The development of precise electronic control systems, the optimisation of the cooling components as well as the use of high-insulation materials and efficient speed-controlled

reduction in the total energy consumption. Across the entire range of products, the appliances are equipped with a series of additional Eco functions to reduce consumption. For example, the defrosting of the current generation of supermarket freezer chests starts fully automatically twice a week quickly and efficiently – or manually – with hot gas and entirely without electric heating.

## Innovations for low energy consumption

[G4-EC8, G4-PR3, G4-PR4] Over the last two years, we have been able to significantly reduce the energy consumption of our appliances further through consistent innovation. In the 2017 reporting year, nearly 84 % of the fridges and freezers for domestic use produced for EU countries corresponded to the two best energy efficiency classes A++ and A+++. This represents an increase of 6 % (compared to 2015: 78 %). Our excellent innovative skills in producing energy-saving and environmentally friendly fridges and freezers was recognised in 2016 by two ProCold awards. ProCold, which was initiated by the European Commission, is funded by the European Union's Horizon 2020 research and innovation programme and aims to increase both the production and demand for efficient fridges, thereby increasing the market share of efficient fridges for the commercial sector.

84 %

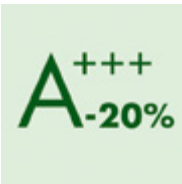
of the fridges and freezers for domestic use produced in 2017 for EU countries corresponded to the two best energy efficiency classes A++ and A+++

Liebherr was one of the first manufacturers of fridges and freezers of the highest energy efficiency class A+++. These appliances require about 60% less energy than energy efficiency class A appliances – and this with the additional technologies of BioFresh and NoFrost.

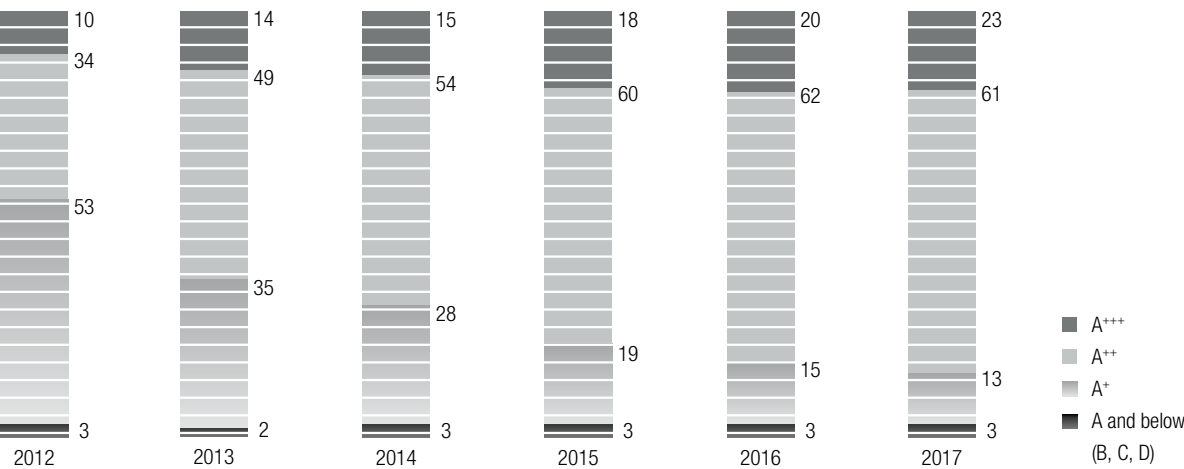
The BluPerformance generation of free-standing appliances introduced in 2015 also established that comfort and saving energy do not need to exclude each other. In 2017, all 52 appliance types are in the best efficiency class A+++ or are even 20 % more efficient. By moving the refrigeration technology into the base of the appliance and the associated new options for arranging the components, the series now also offers significantly more net capacity, reduced operating noise and improved ergonomics. In addition, the EnergySaver and HolidayMode programmes enable the user to save more energy and contribute to conserving resources.

In future, intelligent power grids, SmartGrids, will also contribute to reducing energy-related impacts on the environmental and lowering the consumption of electricity. In this regard, the fridge builds up refrigeration reserves that can be delivered subsequently. Simultaneously, the appliance also automatically selects and uses the most favourable electricity tariff. Savings of up to 10% of the electricity costs are possible. Selected Liebherr appliances can already be integrated into intelligent power grids with a retrofitted module.

Furthermore, we also assume social responsibility with our energy-efficient products. The goal of an ambitious solar project is to supply around 50,000 people in central Chad with clean and affordable electricity by 2020. To support this, Liebherr is supplying 700 units of the very economical TP 1434 table-height fridge from 2017.



## Distribution by percentage of the appliances according to the Energy Consumption Labelling Act (measured by number of units)



## Product labelling

[G4-DMA] All Liebherr fridges and freezers manufactured for the European market are marked with the EU energy label at the plant. Our 100% compliance with the labelling requirements was confirmed in 2014 by the ATLETE project initiated by the EU. All appliances also have an appliance-specific nameplate. The enclosed instructions cover all safety-relevant aspects regarding the use and proper disposal of old appliances and the packaging materials, as well as giving additional tips on saving energy and the correct storage of goods. There were no infringements of the labelling requirements in the reporting period.

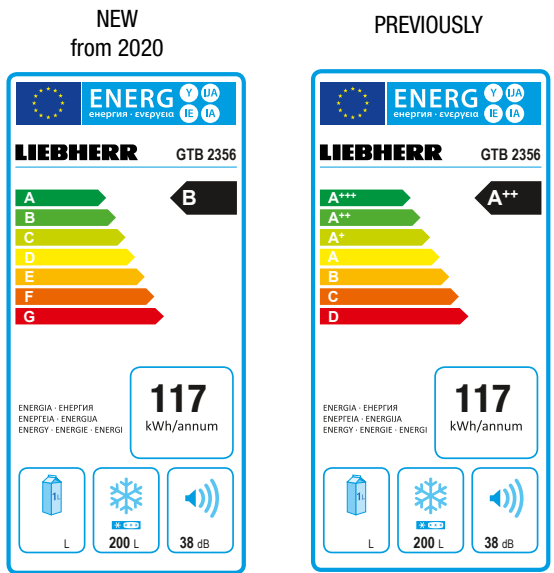
The new EU Energy Labelling Regulation, adopted at EU level in spring 2017, came into force on 1 August 2017. It created the legal framework for the gradual conversion of the EU label to an A to G scale, however, at a much higher level, e.g. A++ will in future become B. In order to prevent a toppling-up effect (A+ to A++) from recurring over the years, the A class is to permanently remain the highest energy efficiency class in the new labelling system. The class limits will therefore be adjusted on an ongoing basis. As soon as 30 % of the products sold on the EU market fall into the highest energy efficiency class A, or if 50 % of these products fall into the top two energy efficiency classes A and B, the classes will be adjusted and corrected. In order to avoid an immediate adjustment right after the introduction of the new energy label, it is unlikely that there will be any Class A equipment at the start of 2019/2020 with the regulatory objective that the market will always develop better, more energy-efficient products.

With the objective of continuing to be the manufacturer offering the widest range of fridges and freezers worldwide in the best energy efficiency classes, we will continue striving to reduce energy consumption in the development of new, innovative appliances. Our powerful models, which are practical, stylish and easy to use, prove that energy efficiency does not need to be at the expense of convenience. Receiving the Red Dot Award 2016 and 2017 as well as the German Design Award at the beginning of 2018 shows that we are very successful in combining these elements.

The framework requirements of the EU Energy Label Regulation will now be gradually implemented and specified for the individual products. By autumn 2018, the regulations in respect of fridges, amongst others, will be revised first. After a conversion period for manufacturers of generally one year, the new energy labels with the scale A to G will be displayed to consumers from the end of 2019 / the beginning of 2020. As part of our internationalisation strategy, we will also comply with international labelling requirements. Our products are, for example, labelled with the Energy Star, a US

## New EU energy label

The EU has reached a consensus on these labels for domestic appliances: the letters A to G instead of A+++ to D



environmental label for energy-efficient appliances. The Energy Star certifies that, for example, electrical equipment meets the energy efficiency criteria of the EPA and the US Department of Energy. In 2003, the Energy Star was officially recognised in Europe by an EU regulation.



The criteria for the Energy Star are, in particular, that a switched-on device/component switches back after a certain time as well as compliance with the applicable criteria for the maximum permissible energy consumption for each appliance over a certain period of time.

In addition, we comply with the labelling requirements of California Proposition 65. Although we have no knowledge that our products are harmful to health, provided they are used as intended, we issue this warning in consequence of a law passed in California in 1986 called Proposition 65. This warning must be issued in connection with any product that is sold in California and must refer to a list of more than 900 chemicals that the California regulators deem to be potentially harmful to health.

In respect of fridges and freezers for domestic use, the labelling obligation (energy label), which informs, among



other things, about the energy consumption, has already been a requirement for a long time. Since 1 July 2016, this source of information has also been available for commercial appliances.

In many areas of the hotel and catering industry, storage fridges and numerous freezers are used and often cause high energy consumption. More than 20 years after the introduction of the EU energy label for household fridges, the labelling is being extended for the first time to the commercial sector. Customers therefore receive important information about the efficiency and energy consumption of the fridges. This turns energy consumption into a fixed quantity that can be calculated. The information on the energy label provides a classification of the appliances with regard to their energy efficiency and the expected power consumption.

The EU Regulation 2015/1094 with regard to the energy labelling of professional refrigerated storage cabinets came into force on 1 July. The European Union adopted this regulation with the objective of reducing energy consumption in the EU and promoting the sale of efficient fridges and freezers in the commercial sector as well. Under this, appliances designed for the storage of food must in future be labelled with the energy label. However, the labelling requirement does not apply to all refrigerators but only to fridges and freezers with solid doors that are intended for storage. The appliances excluded from this labelling requirement are, for example, appliances with static cooling (i.e. without a fan), combined fridge-freezers, open cabinets whose main purpose is fulfilled by being open, freezer chests or appliances primarily intended for the display and sale of food.

Visually and in terms of the information it contains, the energy label is based on the already familiar label for domestic appliances. In addition to information on the manufacturer, product name, energy efficiency class and energy consumption in 365 days, the energy label must also contain information on the net capacity and the climate class. Regardless of the climate class indicated, the energy consumption is measured for all affected appliances in climate class 4 (+30 °C ambient temperature / 55 % relative humidity).

The range of energy efficiency classes has ranged from A to G since 1 July 2016. However, this has irritated many retailers and customers. After all, the energy efficiency classes A+++ to D are already known in the household sector. The reason for this is the widely differing test conditions in the commercial sector on the one hand and the household sector on the other. From 1 July 2019, the classes A+, A++ and A+++ will be introduced in addition.

The energy label displays the energy consumption and energy efficiency of a particular product. To determine these classifications for commercial products, the appliances are tested under the conditions of a professional kitchen. Due to the very different test conditions, the energy classes and the kWh/year value between commercial and household products are not comparable.



FreezerTop: It protects the environment by using HFC-free components and the powerful and natural refrigerant R290. When the door is opened, the interior fan switches off briefly to save energy

## Optimisation of the use of materials

[G4-DMA, G4-EN1, G4-EN33, G4-LA5] Various materials in different quantities are used in the individual appliance series. Steel and polystyrene account for the greatest proportion of the weight, comprising up to 70%. In order to increase our resource efficiency further, a research project was initiated at the end of the reporting period with the Helmholtz Institute Freiberg for Resource Technology and the Wuppertal Institute for Climate, Environment and Energy. The aim of

*Our material philosophy on high resource efficiency is: As few resources as necessary – as much recycling as possible*

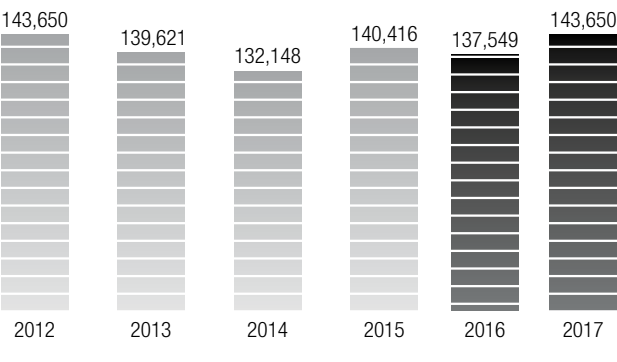
“Circular by Design” is to develop various design options for the recirculation of a fridge/freezer with the focus on the use phase (e.g. user experience design, repair/reuse) on the one hand and on closed recycling paths on the other. In addition to the economic stakeholders (such as producers and recyclers), consumers and municipal stakeholders are involved in the design development in a living lab process, because the implementation of the use and recycling phases must be carried out regionally. The developed design options will be analysed and compared in relation to their resource efficiency potential as well as other ecological and economic impacts.

We ensure that, where possible, only single-variety plastics are used. In order to support the subsequent recycling process, plastic parts weighing at least 50 g and the natural and synthetic rubber parts of 25 g or more are also marked according to international standards. The metals used are nearly 100 % recyclable. We also pay attention to the recyclability of the packaging materials from the outset. We only use styrofoam, PE film, plastic moulded parts, cardboard and wood. In the production of printed materials, such as brochures, flyers, price lists or magazines, mainly paper from sustainable forestry is used.

## Use of secondary raw materials

[G4-EN2] Today, the residue resulting from the processing of plastics is largely collected, processed and returned to the production process. As a pure secondary raw material, steel from the established material circuits is currently being used. Plastic recyclates from old appliances or other waste streams, or biobased plastics, are not yet suitable due to their composition and the fluctuating material availability and quality. However, we are monitoring the current developments in the market and technology intensively. For example, we are in close contact with the relevant institutes and suppliers, and aim to be able to report as soon as possible on a truly sustainable proportion of recyclates or biobased materials in our range of appliances.

### Appliances produced (in tonnes)



## Durability and product safety

[G4-DMA, G4-PR1, G4-PR2, G4-PR6] Fridges and freezers are constantly in use: 24 hours a day and 365 days a year, they must reliably provide the required refrigeration and keep the food fresh and safe. As a manufacturer of premium appliances, we consequently place the highest demands on our appliances and components, and constantly work to ensure that our appliances meet the highest requirements in household and in commercial use. For example, fridges and

*We test the functional parts for  
a service life of 15 years*

freezers in bakeries and confectioneries must meet particular requirements specific to the industry. These appliances are equipped with special cataphoresis-coated evaporators, which provide long-term reliable protection against particularly aggressive substances that cause corrosion, such as salts and fructose. In the development of the supermarket chests, we decided to proceed in an entirely new direction: The polyurethane-based two-component high-pressure

spraying process allows us to manufacture large-sized and geometrically complex components. This contributes to the plastic housing having very high impact resistance and is therefore substantially less sensitive than conventional steel sheet metal containers.

At the same time, a high product quality and long service life have a decisive influence on the life cycle assessment of the appliances. Regular surveys reflect that Liebherr appliances are used in households longer than other brands. The fridge door is opened several times a day by the user and is subjected to high loads. This means that, before a component is used in the series, the functional parts, right through to the rails and hinges, are comprehensively tested for a service life of 15 years. Liebherr provides a two-year manufacturer's warranty in respect of the operability and operational reliability of the fridges and freezers, and guarantees that the appliances are free of material and manufacturing defects. Since 2015, we have been offering our end customers in Germany, Austria and Bulgaria the opportunity of extending the manufacturer's warranty by a further three or eight years with the new "WarrantyPlus" certificate.



It doesn't matter whether it's under extreme temperatures or high humidity – in the climatic chambers, the appliances prove their versatility in long-term tests beyond the usual measuring periods



In professional sound measuring rooms, engineers use extremely sensitive microphones to precisely listen to and substantially reduce sound emissions as well as further optimise the sound quality of the moving components, such as doors and drawers

During the development and manufacturing phase, all appliances are thoroughly tested for any subsequent health and safety risks for the user. The development departments, product and quality management, the purchasing and manufacturing departments are involved in a cross-departmental process. Within the scope of the manufacturing process, we subject all appliances to extensive functional and safety tests. The determined test data are recorded and evaluated. We also carry out product audits and, in the process, randomly test appliances ready for shipping according to specified criteria. Measures for improvement are derived from the regularly evaluated process characteristics in order that a continuous improvement process is ensured.

In the reporting period, there were no violations of the health and safety regulations by the fridges and freezers manufactured by Liebherr. Should there nevertheless be a threat to product safety or customer health in the future, specific processes have been established internally to promptly initiate all the necessary measures for the protection of customers and, at the same time, to inform the authorities and the public.



## Customer service

We believe that a reliable service confirms the purchasing decision of our customers, increases their satisfaction and consequently, substantially contributes to long-term customer loyalty. Liebherr customers can access a worldwide service network with a comprehensive range of repairs and services after the purchase. Clearly structured guidelines and procedures as well as the fast flow of information support our external service partners in providing customer-oriented services. The targeted and regularly offered training courses for service technicians always include the latest environmental and disposal-related topics.

*We also meet our premium requirements  
in customer service*

A central documentation management system is available round the clock to the technicians. An international complaints management system promotes short communication paths and problem solving times. In order to fulfil the required service quality, a fast response as well as a high initial solution competence constitute the significant key targets.

*When accepting the return of old appliances, we  
work with certified waste disposal companies*

To order spare parts, service technicians have access to a spare parts ordering system round the clock. In cooperation with global logistics companies, Liebherr has a fast and environmentally friendly delivery service and offers the availability of spare parts for at least 10 years.

## Recycling and disposal of old appliances

[G4-EN28] The Waste Electrical and Electronic Equipment (WEEE) Directive legally regulates the collection and recycling of electrical appliances in the EU. Since 2006, the manufacturers of household appliances have been obliged to take back the old appliances after their use. In Europe, Liebherr cooperates with private waste disposal companies and makes use of some public return and recycling systems.

In Germany, the Electrical and Electronic Equipment Act (ElektroG) implemented the WEEE Directive into German law. The German “stiftung elektro-altgeräte register” (ear foundation) is the executive body. Among other things, it is responsible for registering manufacturers, coordinating the provision of collecting containers and the collection of old appliances. In October 2015, the amended ElektroG came into force. Its amendments were focused on during the reporting period: These include, among other things, the take-back obligation of the trade, the adjustments for own-recovery by municipalities, the increase in recovery rates and the further containment of illegal electronic waste exports.

In the field of municipal own-recovery, the current ElektroG has resulted in innovations: The municipalities have to report their recovery rates to the ear foundation and participate in the fee structure. In Germany, brick-and-mortar dealers and online distributors with a sales or a warehouse and shipping area of 400 square meters or more are now also obliged to take back old appliances.

From 15 August 2018, the Open Scope system will apply to the German ElektroG. This will not only adjust all the product categories and types of appliances but many new product types will also need to be registered for the first time. As each manufacturer and its existing registrations are affected, this is the largest change in the field of waste electrical and electronic equipment since the coming into force of the ElektroG as German implementation of the WEEE Directive in 2005.

Liebherr was the first manufacturer in 1993 to offer a CFC-free range of appliances. The fridges and freezers that were produced prior to this, and which are therefore older than 25 years, contain CFCs as a refrigerant and insulating agent in accordance with the standards at that time. In order to avoid harmful effects to the ozone layer, this must be recovered within the scope of the old appliance disposal system and disposed of properly. In addition to government approvals and controls, German waste disposal companies are also subject to controls by the manufacturers of domestic appliances. Since 2007, we have a quality assurance system that

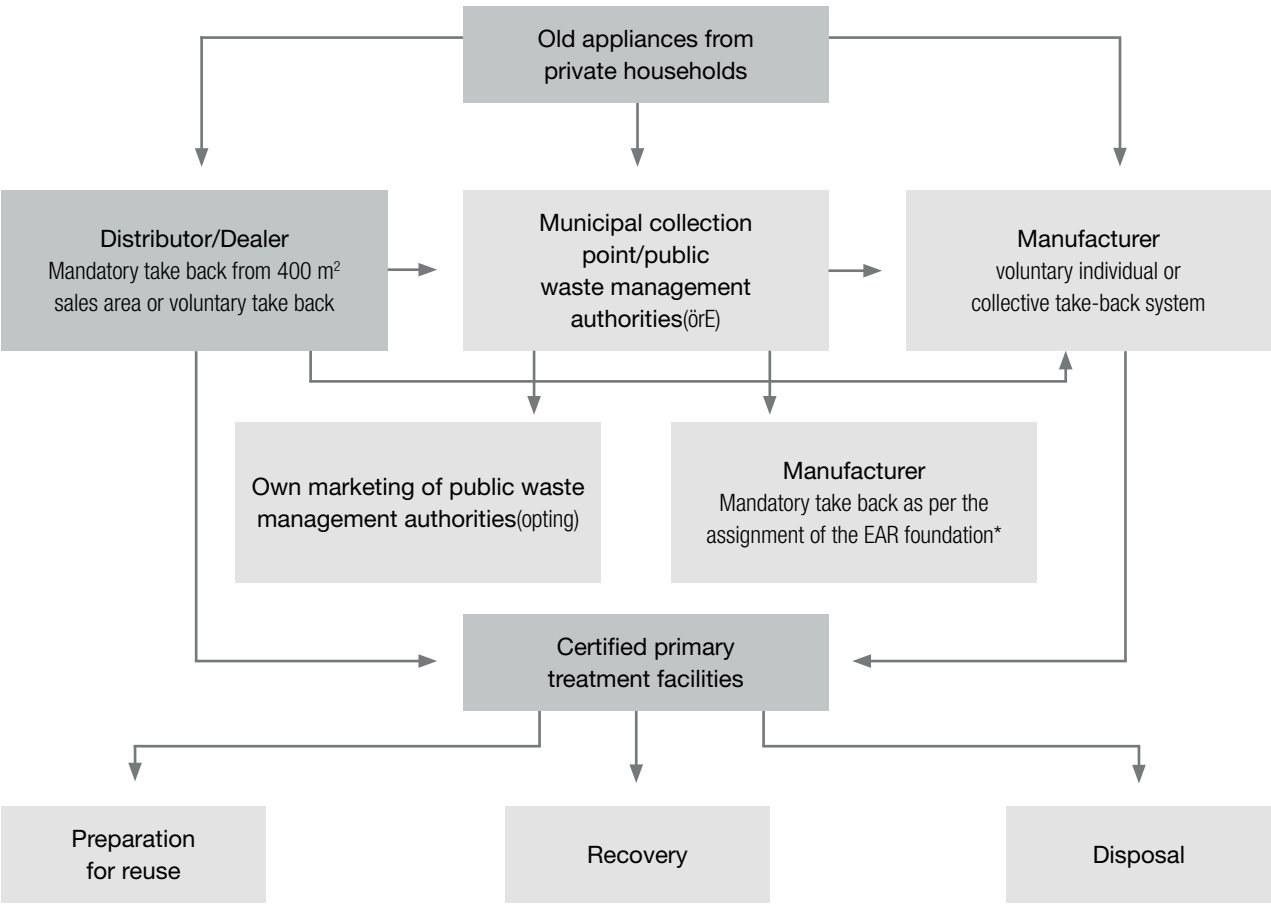
checks the entire recycling process at our waste disposal service providers. At the same time, they are obliged to conduct their own internal auditing measures. If the specified quality criteria are not met, the affected plant will not be supplied with old appliances.

In 2013, a multinational investigation on the disposal of energy-efficient fridges with vacuum panels was conducted by the umbrella organisation of the European domestic

equipment manufacturers (CECED now APPLiA). In addition, Liebherr, together with a competitor and an expert institution, carried out a further and more in-depth investigation. The focus was on the extent to which the respective plant technology is suitable for the future disposal of these appliances. The result showed that many plants can already handle the old appliances, but individual plants still need to be adapted technologically over the next few years, for example with exhaust air and filter systems.

## Process sequence

The collection and disposal of old appliances from private households  
Framework: ElektroG (2015) in Germany



\* The stiftung elektro-altgeräte register (ear foundation) is the “common clearing house of the manufacturers”, which also fulfils the primary tasks delegated to it by the Federal Environmental Agency.



35%  
less solvent emissions

>40%  
reduction in the total  
water consumption (since 2012)

31,000 m<sup>2</sup>  
of ecological green space  
created in Ochsenhausen

80%  
recovery and  
processing ratio of the waste

>30%  
reduction of the carbon footprint  
through green electricity in  
Ochsenhausen (from 2018)



## Locations

*We are continuously investing in our locations so that we can produce here  
as sustainably as possible.*

### Environmental management

[G4-DMA, G4-EC7, G4-EC8, G4-DMA] The central aspects of our environmental management are the consistent reduction of our environmental impacts, compliance with the legal requirements and the constant improvement of our environmental performance. This forms the basis of our company policy. It sets out our basic environmental positions and objectives. The operational environmental protection is managed and organised by the integrated management system. Our environmental management is certified according to ISO 14001 at all our locations.

*Our extensive in-house production depth allows us  
to ensure environmental protection largely using  
our own resources*

The essential actions are listed in catalogues of measures through which we seek to reach our environmental objectives. The management manual is the central document. In addition, the basic regulations relevant to the environment are defined and described in the AENEIS management system, in databases, in procedural instructions as well as in operating and work instructions. The environmental performance is controlled and monitored using the essential environmental indicators. On the basis of the

reviews carried out at the locations, a comprehensive management review is prepared annually for the management. Our in-house production depth, which is exceptional for the industry, is a great advantage. It enables us to ensure environmental protection in-house for a large part of our value chain and to implement measures quickly and effectively.

### Employee involvement

[G4-LA5, G4-SO1, G4-SO2, G4-DMA] Environmental management depends on the motivation, commitment and ideas of each individual. Accordingly, our employees also have to be committed to thinking and acting in an environmentally responsible manner. Open improvement processes and discussions with employees are therefore crucial to the success of environmental management. The involvement of all employees takes place, on the one hand, through the management of ideas and through the continuous improvement process and, on the other hand, through the annual environmental training which is often embedded in the instruction on occupational safety. In addition, our employees are kept up-to-date through the standard communication in the departments and regularly published environmental information.

### Annual “Active Green Day” in Radinovo

In 2017, as part of the annual “Active Green Day” held at our Bulgarian location in Radinovo, more than 250 participants (employees and their relatives) took part in helping the town improve living conditions. In consequence, 145 benches and 150 meters of fences for children’s playgrounds were renovated in three districts of Plovdiv and 57 trees as well as 400 shrubs were planted. Since 2012, the employees have also been called upon to bring empty PET bottles from home and to throw them into special collection containers at the plant. The revenues resulting from the regular supply of the collected bottles to a professional

recycling company go into a social fund, the use of which is determined by the employee representative committee.

**Active  
Green**



Energy consumption

[G4-DMA, G4-EN3, G4-EN6, G4-EN19] In 2017, the total energy consumption at the three locations Ochsenhausen, Lienz and Radinovo was 74,532 MWh (in 2016: 74,716 MWh). The main energy sources are electricity and gas from the public grids. The Lienz location also uses district heating to heat the administrative and social buildings. The ratio between electricity and gas has been almost constant in recent years. A substantial shift is not to be expected in the coming years.

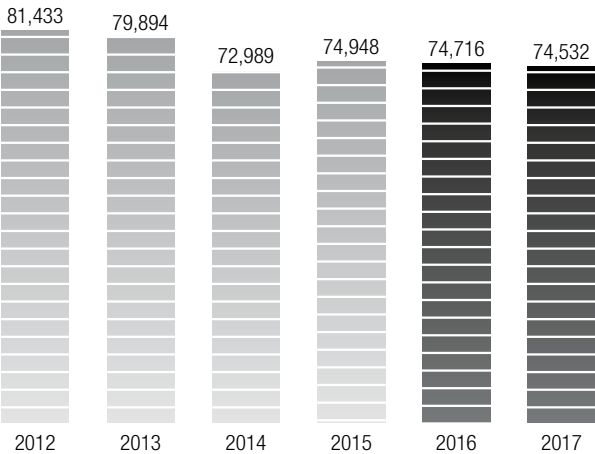
*Energy management enables us to reduce energy consumption at our locations and lower the emissions*

Due to the continuous investment in energy-efficient plant technology, the use of process waste heat for building air-conditioning, the conversion to LED lighting systems as well as the ongoing energy refurbishment of administrative buildings, production halls and warehouses, the total energy consumption has been reduced by 9 % since 2012.

In the period under review, the main energy-related aspects on which we focused were the introduction of a certified energy management system according to ISO 50001 at the Ochsenhausen location, the expansion of the use of process waste heat for building air-conditioning at the Lienz location and the construction of the new logistics centre for completed appliances with a floor space of almost 32,150 m² at the Radinovo location. The logistics centre has a solar energy system for heating service water, daylight control systems, inflatable seals at the loading stations and a building management system for intelligent building control, and thereby meets our sustainability requirements.

In private households as in industry, energy consumption must be reduced further and energy efficiency must be increased. The consistent improvement of energy efficiency in our production and buildings is also our declared objective for the future. The introduction of the energy management system in accordance with ISO 50001 at the Lienz and Radinovo locations is planned for 2018. This is to be combined with the introduction of a cross-location energy cockpit, which is intended to provide even greater control over the flow of energy and potential savings at the locations.

Development of the total energy consumption at the locations Ochsenhausen, Lienz and Radinovo (in MWh)



Direct and indirect energy consumption of important energy sources in MWh

	2012	2013	2014	2015	2016	2017
Gas	27,775	27,087	22,456	23,382	23,107	23,368
Electricity	53,192	52,324	50,075	51,100	51,192	50,821
District heating	467	484	458	466	417	343
Total	81,434	79,895	72,989	74,948	74,716	74,532

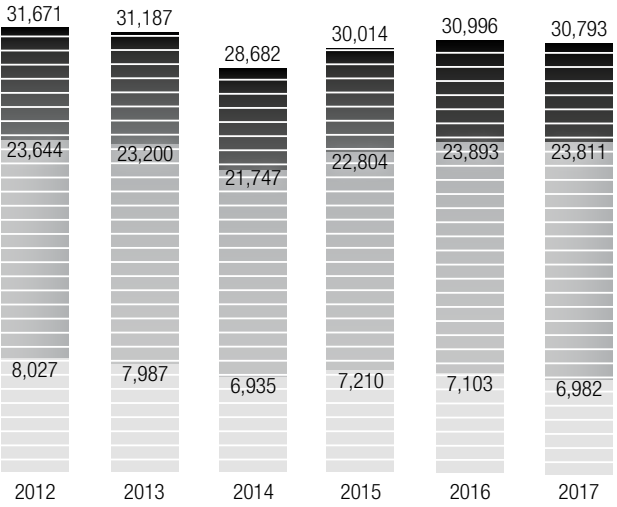


During the construction of the new logistics centre at the Radinovo location, energy measures were also specifically taken into account

CO<sub>2</sub> emissions

[G4-DMA, G4-EN19] Our direct CO<sub>2</sub> emissions are due to the consumption of gas and fuels at the locations. The indirect CO<sub>2</sub> emissions are generated by the consumption of electricity, the district heating drawn, business trips and logistics. The CO<sub>2</sub> emissions generated from sending packages and letters from the Lienz location are compensated for annually by Österreichische Post AG. In Germany, 125,000 spare parts and accessory packages have been dispatched annually since 2015 by Deutsche Post in a manner that is 100 % carbon neutral. In 2017 alone, 67.68 t of CO<sub>2</sub> emissions were compensated for by climate-neutral GoGreen products and services at the location in Ochsenhausen. A systematic evaluation of our total direct and indirect CO<sub>2</sub> emissions (carbon footprint: Scope 1 and Scope 2) will be carried out for the first time after this report, in order to improve the measurability of the impact of our business activities on the climate. The CO<sub>2</sub> emissions at our European locations have been relatively constant since 2012, but the conversion to green electricity at the location in Ochsenhausen will reduce this significantly from 2018.

Carbon footprint (in tonnes of CO<sub>2</sub>)



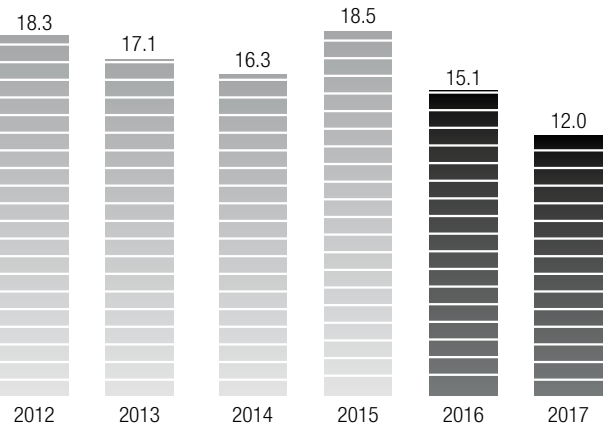
In terms of the Greenhouse Gas Protocol, Scope 1 are direct CO<sub>2</sub> emissions, e.g. from fossil fuels and Scope 2 are indirect CO<sub>2</sub> emissions, e.g. from the consumption of electricity.

- Total
- Scope 2
- Scope 1

## Solvent emissions

The doors and side walls of our appliances are for the most part painted with powder lacquers, but to a lesser degree also with water-based paints. In 2017, the solvents released by the painting and pretreatment processes amounted to 12.0 t in total at the three locations at Ochsenhausen, Lienz and Radinovo (2016: 15.1 t). This is equivalent to a reduction of almost 35 % since 2012. In 2017, this amounted to a specific solvent emission of 5.70 g per appliance produced (2016: 7.09 g).

Trend in total solvent emissions at the Ochsenhausen, Lienz and Radinovo locations (in t)



## Fresh water

[G4-EN8, G4-EN9, G4-EN22] We constantly strive to reduce our water requirements through targeted water management. Large water savings were already achieved in the nineties from the conversion of machine cooling in the plastic areas, the ongoing reduction of water requirements during the preparation for painting and the commissioning

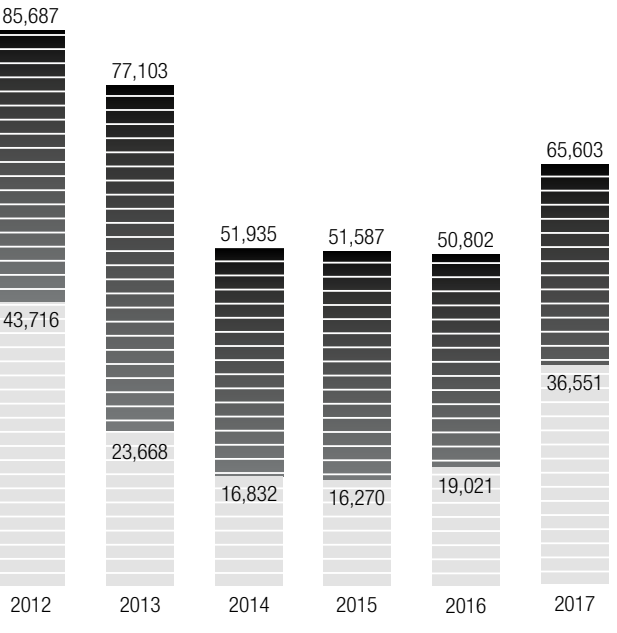
*We pay attention to the protection of natural resources at our locations*

of waste-water-free powder coating systems. The locations are predominantly supplied with water from the public water supply system. At the Bulgarian location in Radinovo, well water is also being used. At the Austrian location in Lienz, water has since 2012 been pumped up from a deep well to cool the plastic machines and then returned to the well. This withdrawal of the water is subject to approval and takes

place under state supervision. None of the locations is in an area that has a shortage of water.

Since 2012, the total water consumption at the Ochsenhausen, Lienz and Radinovo locations has fallen by more than 40 % from 85,687 m<sup>3</sup> to a total of 50,802 m<sup>3</sup> (2016). The increase in 2017 can almost exclusively be attributed to the additional consumption at the location in Radinovo. In addition to a technical problem in the sanitary facilities, there was very little rain in Bulgaria in the summer of 2017 so that green spaces and plants had to receive additional water. In 2017, the specific water consumption was 24.2 litres per appliance produced (in 2016: 25.1 litres).

Trend in total water consumption at the Ochsenhausen, Lienz and Radinovo locations (in m<sup>3</sup>)

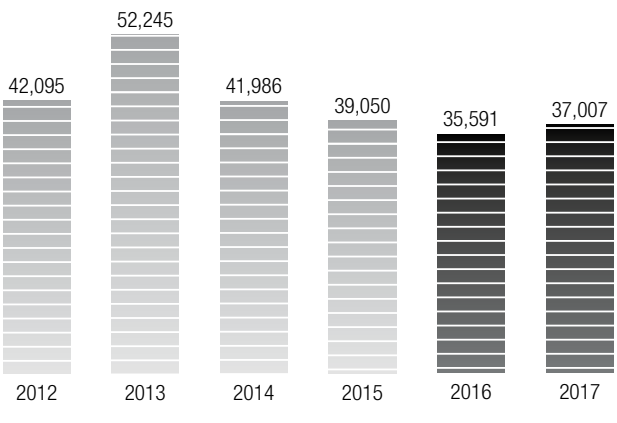


## Waste water

[G4-EN26] In the production areas, the process water required for cooling the machines and painting is generally conveyed in closed circuits. In respect of the pretreatment of the metal parts to be painted, aqueous-alkaline degreasing procedures are used. The volume of waste water generated here is collected and concentrated. The residues are handed over to certified waste disposal

companies. At the Radinovo location, the waste water is treated before it is discharged. No process-contaminated waste water is directly introduced into the public sewer system. Regular waste water measurements are conducted at all locations.

Waste water volume discharged at the Ochsenhausen, Lienz and Radinovo locations (in m<sup>3</sup>)



## Soil and biodiversity

[G4-DMA] The locations at Ochsenhausen, Lienz and Radinovo cover a total area of 772,800 m<sup>2</sup>. The proportion of the area under roof is 43 % in total. The locations are in industrial zones or commercial mixed-use areas. Insofar as possible, open areas are designed so that they also serve as habitats for indigenous plants and animals. There are currently no significant adverse effects in respect of endangered animal or plant species. In respect of the construction of the new logistics centre at the Ochsenhausen location in 2009, a ecological compensation area of 31,000 m<sup>2</sup> in total has been created over the past few years. This included planting 800 m of hedges, the sowing of about 17,000 m<sup>2</sup> of meadows, the preservation of 14,000 m<sup>2</sup> of wasteland, the reforestation of 12,000 m<sup>2</sup> of forest and the installation of nesting boxes.

## Waste

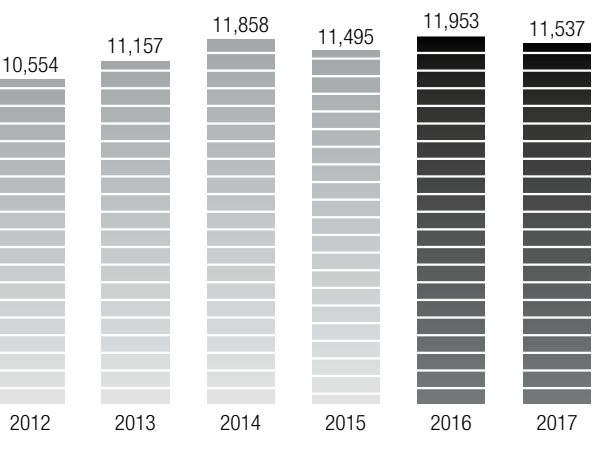
[G4-EN23, G4-EN25] The basic objective is to strictly separate the waste collection which begins where the respective waste is generated. In 2017, the total waste generated amounted to 11,537 t (in 2016: 11,953 t). Accordingly, the specific amount of waste generated was 5.38 kg per appliance produced. The recovery and processing ratio was almost 80 %. The types of waste include metals, plastics,

packaging waste, paper, paint waste and reject parts, flat glass, household waste and canteen waste as well as building rubble. Approximately 90% of the plastics used consist of the recyclable type of plastic polystyrene. The waste generated during the processing of plastics is collected, ground and, for the most part, returned into the production process.

In respect of the disposal of hazardous waste, which includes, for example, phosphate sludge from the paint pretreatment process, only certified waste disposal companies are commissioned.

Due to the expansion of the waste balance, the annual waste volume has increased slightly since 2013. We have also observed that many of the production parts are increasingly supplied with a stronger outer packaging and more packaging materials. In order to determine to what extent this could be reduced, we carried out preliminary analyses together with selected suppliers during the reporting period. Increasingly, however, reusable packaging is being used, which is returned to the suppliers. At our Bulgarian location in Radinovo, the polystyrene packaging of the delivered compressors is recycled externally and used to secure the appliances when dispatching the finished product.

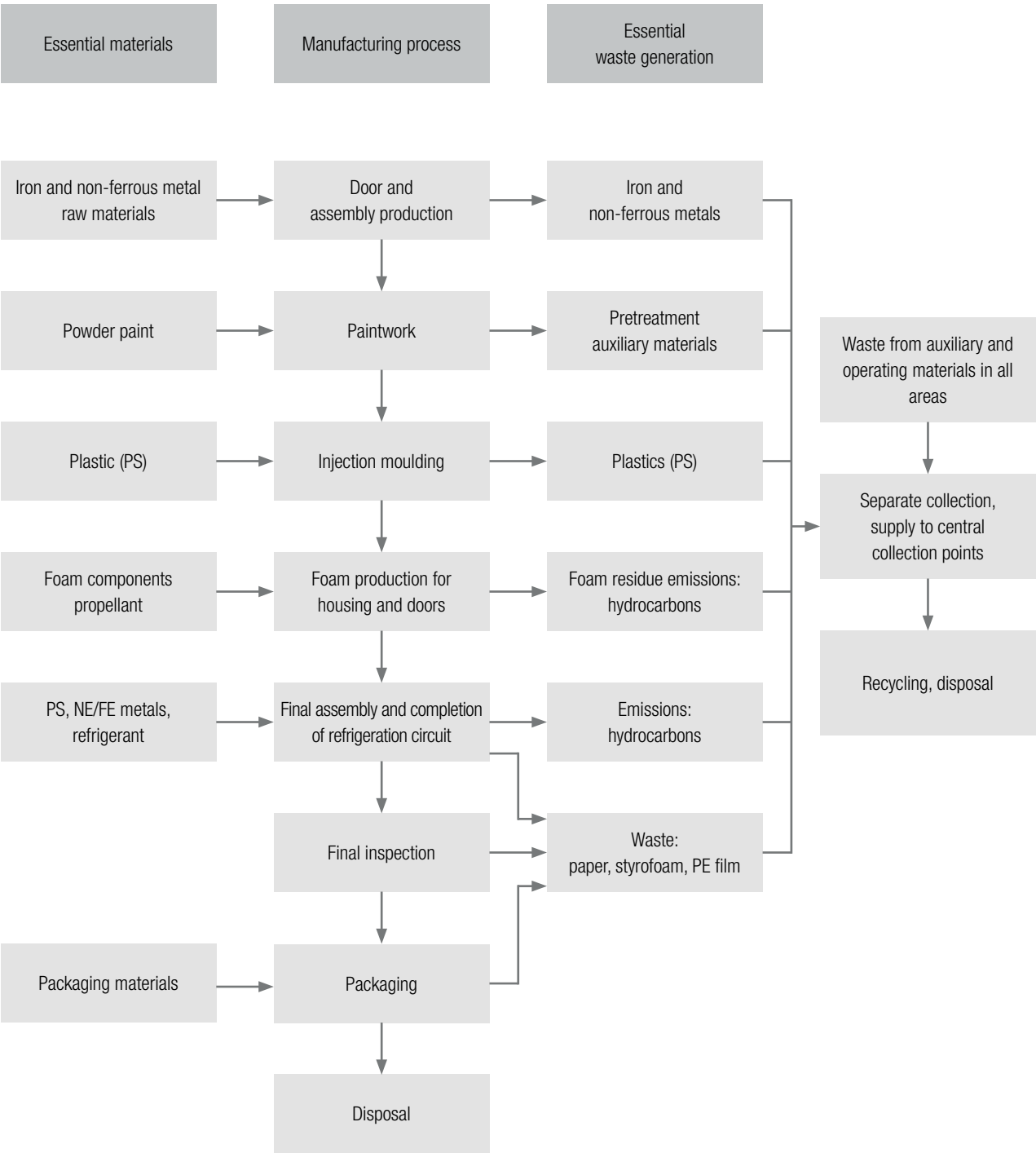
Development of the total waste generated at the Ochsenhausen<sup>1</sup>, Lienz and Radinovo locations (in t)



<sup>1</sup> This figure for 2017 does not take into account the 4,266 t excavated during the construction of the new customer centre in Ochsenhausen.



Rough representation of the production processes with the essential material and waste streams



New sheet metal production line at Ochsenhausen



>9,500

appliances are shipped daily from all locations to around 90 countries

Efficient use of cargo spaces:

95%  
of trucks travel  
with loads of 100 %

-8,000

Reduction of road transport between the plant and external warehouses due to the new logistics centre at Ochsenhausen

## Multi-modal logistics concepts

Reduction of road transport, expansion of rail transport

85%  
road

10%  
rail

5%  
water

# Logistics

*We value energy efficiency, not only in our products but also in their transportation.*

[G4-EN6, G4-DMA, G4-EN19, G4-DMA, G4-EN30, G4-SO2]

The geographically central location of our manufacturing facilities allows us to optimally and efficiently coordinate the distribution routes to our important sales regions in Western and Eastern Europe. All transportation by road is made via suppliers and freight forwarders. In Germany, the direct delivery to our trading partners takes place through contracted freight companies, in Europe and overseas through our sales companies or importers.

*Short distances and full loads  
reduce emissions*

The entire distribution logistics is coordinated centrally through the Ochsenhausen plant. More than 9,500 appliances from all locations are shipped daily to around 90 countries. We are continuously striving to improve the efficiency of the entire transportation process of the completed appliances. The most important measures are:

- Plant warehouses, as well as five regional and geographically well placed external warehouses in Germany, Austria, Russia and the United Kingdom for the fast and effective servicing of our core markets.
- Efficient use of the cargo space by precisely planned shipments with optimally loaded vehicles. Today around 95 % of the trucks are 100% loaded to avoid unnecessary emissions.
- Constant optimisation of the transport system and avoiding empty runs. The material flows between the plants are carried out via fixed factory traffic. For example, a truck from Bulgaria supplies completed appliances for the German market and is loaded with reusable packaging and pallets from the production areas for the return journey.
- Use of multi-modal logistics concepts, which optimally combine the various modes of transport: road, rail and water. Where possible, rail is used as the means of transport. The location at Lienz has a direct rail connection, and the locations at Ochsenhausen and Radinovo have

special loading stations for the direct loading of railway wagons. In terms of the tonnage, the total transport volume is 85 % by road, 10 % by rail and 5 % over water.

Since 2009, the new logistics centre at the Ochsenhausen location has replaced the two previously active external warehouses at Türkheim and Dettingen. Solely as a result of this, the required transport volume between the plant and the external warehouses to date has been reduced by almost 8,000 truck journeys (a total of around 196,000 km) per year.

Since 2016, a new logistics centre at Radinovo has also been in operation. It is conveniently located directly by the motorway that connects the capital Sofia with the coastal city of Burgas on the Black Sea. The logistics centre has twelve truck loading ramps and two railway wagon loading stations with hydraulic loading ramps. A special feature is that the appliances produced are transported via a conveyor tunnel from the production hall to the finished goods warehouse, where they are prepared for further transportation and dispatch. In addition, various aspects of sustainability were considered during construction:

- The building envelope was made of highly insulating building materials: K value = 0.225 W/(m²K)
- All 12 truck loading ramps were made with inflatable seals
- The railway wagon loading stations have hot air locks to minimize heat losses
- Daylight systems were installed in the roof instead of conventional skylights
- In the item handling area, all outdoor gates were designed as airlocks with double doors
- The building is heated with natural gas
- Service hot water is heated by a solar system
- The building is controlled and monitored by a building management system (heating, air conditioning, gas, water, electricity)

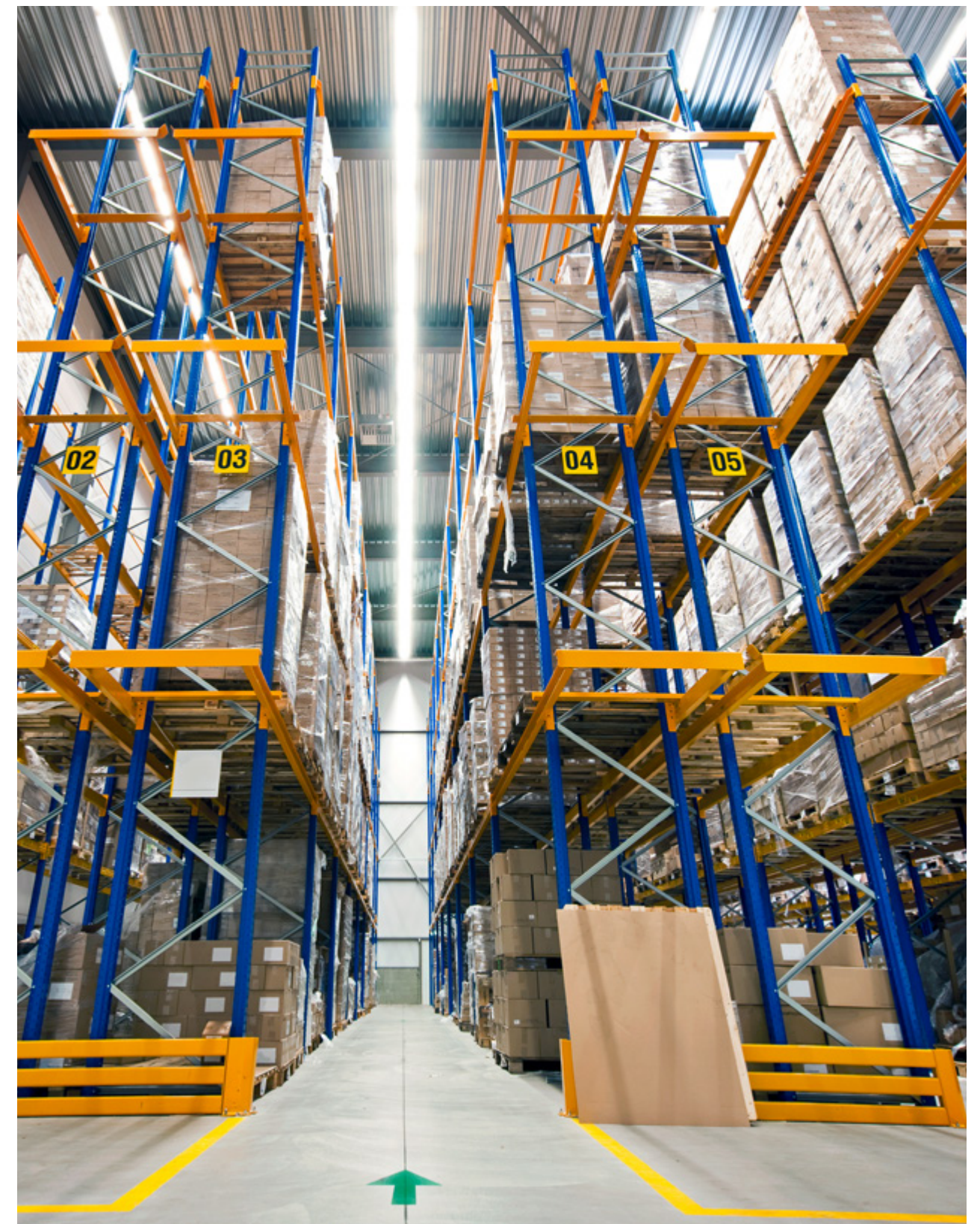


In addition, the new logistics centre for fridges and freezers at the Radinovo location in Bulgaria won the award “Building of the year” in the category “Production and logistics buildings” in 2016.

In the future, the challenge will mainly be in increasingly smaller consignment sizes that are combined with greater transport intervals. In respect of our overseas markets, such as Asia, we also have to ensure that the future transport volume is as efficient as possible and the environmental impacts of the transportation are kept as low as possible. Furthermore, the holistic view of the supply chain as well as the digitisation, processing and evaluation of logistics-related data will continue gaining importance. In this context, we are currently working on the development of a supply chain management system and an integrated logistics controlling and key figure system.

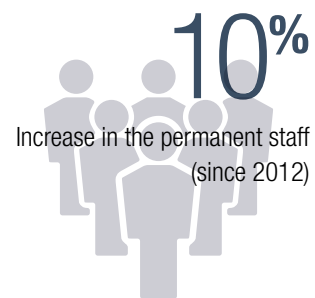


The new logistics centre at the location in Radinovo



Modern warehousing, logistic and transportation concepts ensure that our core markets are serviced effectively and quickly while simultaneously minimizing the environmental impact

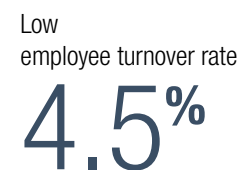




High  
quality training  
2 x “Germany’s best  
IT specialist”  
German Education Award 2017



Junior employee programme  
Talent workshop



## Employees

*Our employees are the key to our joint success. Our working relationship is based on the principles of decency, mutual respect, fairness and trust.*

### Common values and guidelines

[G4-56, G4-DMA] Many employees remain at Liebherr for their entire careers. In 2017 alone, out of more than 5,000 employees at the European locations, 578 had anniversaries celebrating 10, 25, 35, 40 or 45 years of service. This was also coupled with the low employee turnover rate of 4,5 %, which has remained low for years (in 2016: 4.1 %). In this regard, we create the appropriate underlying conditions: We provide secure jobs and a healthy working environment.

*We rely on highly motivated, competent  
employees, who remain  
loyal over many years*

In flat hierarchies, our employees take on responsible tasks and have a great deal of freedom to act. We support entrepreneurial behaviour and assist our employees with training and further education programmes.

Due to our innovative ability and decades of experience, we are acknowledged as specialists in refrigeration and freezing. This expertise must be maintained and further developed. In order to successfully master the challenges that lie ahead, our actions must be based on common values and guidelines.

The reason for the success of Liebherr today and in the future has been anchored in the Group’s core values by the Liebherr family. How we promote this success through our cooperation in the Domestic Appliances Division has been described in our “Guidelines for successful cooperation” since 2014. They set out what we regard as important. In order to anchor the guidelines within the entire division, introductory events and workshops were held at all our locations in 2014/2015. In the interim, the guidelines have now also become an integral part of management training and seminars in the context of personnel development, as well as in the context of the annual performance review.

### Our six guidelines for successful cooperation:

We set goals and achieve them

We give feedback and deal with conflicts

We transfer responsibility and  
accept it

We improve ourselves and accordingly  
the company

We use communication as a factor to  
achieve success

We treat each other with respect and  
look out for one another

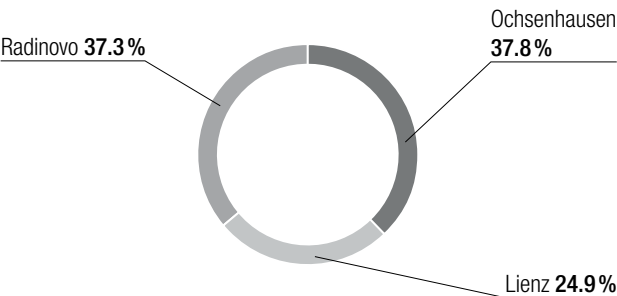


### Embracing diversity

[G4-LA1, G4-DMA, G4-LA12, G4-DMA] We are convinced that embracing diversity will have a positive effect on the entire organisation and on society. Our company conducts business in many countries. The close teamwork that extends beyond national borders enriches our company. The cross-location assignment of personnel within the context of developing professional and managerial skills supports our company in continuing to establish itself internationally and improving our understanding of different cultures and market conditions.

In 2017, the proportion of women in the total workforce at the three locations Ochsenhausen, Lienz and Radinovo amounted to 20.5 % (in 2016: 20.2 %). The proportion of women in managerial positions from the team leader level was 3.9 % (in 2016: 3.8 %). Our personnel policy is also to increase the proportion of women in management positions. However, we do not consider a fixed women's quota as being conducive to achieving this objective. Each managerial position should be filled by the most suitable candidate – regardless of gender or other criteria of diversity.

Permanent staff by location in 2017



The most important HR key figures for the Ochsenhausen, Lienz und Radinovo locations at a glance (as at 31 December respectively)

	2012	2013	2014	2015	2016	2017
Permanent staff <sup>1</sup>	4,658	4,800	4,833	5,031	5,216	5,184
Trainees	98	100	98	94	97	101
Proportion of female employees	21.6 %	21.4 %	21.3 %	20.8 %	20.2 %	20.5 %
Proportion of employees in management positions <sup>2</sup>	9.6 %	9.6 %	9.5 %	9.9 %	8.7 %	9.0 %
of this, proportion of female employees in management positions <sup>2</sup>	4.0 %	4.5 %	3.9 %	4.4 %	3.8 %	3.9 %
Employee turnover rate	2.3 %	2.6 %	3.0 %	3.3 %	4.1 %	4.5 %
Ø Further education hours	11.0	10.7	10.2	13.7	11.4	11.3
Reportable work/commuting accidents	104	110	106	73	91	90

<sup>1</sup> Excluding trainees, <sup>2</sup> From the level of team leader

The information contained in this report relates to the divisional controlling company and the European production companies in Ochsenhausen (Germany), Lienz (Austria) and Radinovo (Bulgaria). The 74 employees of the divisional controlling company have been included at the Ochsenhausen location in Germany.



Employees in production



## Co-determination and participation

[G4-DMA, G4-LA4, G4-HR5] Operational co-determination is extremely important to Liebherr. All employees have the right to organise themselves in trade unions. In Ochsenhausen and Lienz, elected works councils represent the interests of the employees. They are represented by the German IG Metall and the Austrian PRO-GE and GPA-djp unions. In Bulgarian Radinovo, elected employee representatives represent the interests of the employees. They meet with the management and the personnel department every two months to discuss proposals and solve potential conflict points.

*Our employees are able to introduce their knowledge and ideas into the company at any time*

The management and the works councils or employee representatives work in close cooperation with each other. The management promptly and comprehensively informs these representatives of all important operational changes. The main topics relate to the fundamental questions of the development of the company, investments, occupational safety and the concerns of the employees. In the event of decisive changes, all employees are comprehensively informed at an early stage. New employees are informed about the possibilities of operational co-determination directly on joining our company.

## Ideas management

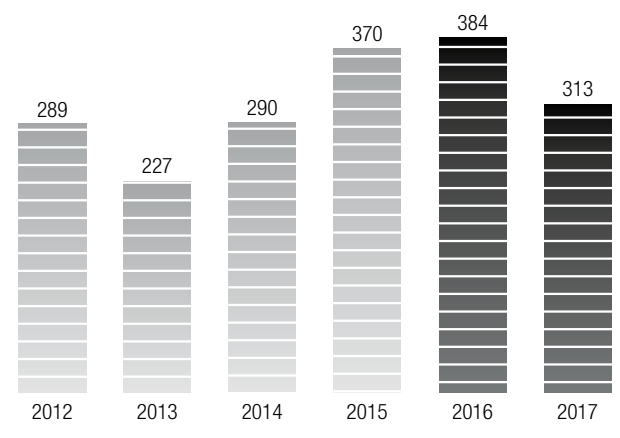
Employees are part of the family business. Based on this premise, the management of the company provides scope for independent action and expresses its confidence in this. Each individual feels responsible for the success of the company and acts on behalf of the entire entity with great commitment and passion. Based on this premise of continuous development, numerous ideas and suggestions for improvement arise.

At Lienz and Radinovo, a continuous improvement process (CIP) has been established. Here, employees develop proposals for improvements within their area of responsibility either individually or in a group. At the Ochsenhausen site, a traditional employee suggestion scheme (ESS) in the form of ideas management has been in place since 1995. The suggestions submitted mainly relate to the production and manufacturing processes. However, sustainability-related issues have also been addressed. With the addition of “Product ideas” in 2016, an additional area was created in which all employees can incorporate their specific ideas for new products or product features into the future development of appliances. Accordingly, the potential of the

employee ideas can be utilised to an even greater degree in order to receive new and unusual approaches to product ideas. The product ideas received are checked and evaluated by “Leitstrahl” teams (reviewers), consisting of at least a technical expert and a market-oriented expert. If the evaluation is positive, a committee then decides whether the idea has the potential for a possible development project. In 2017, 218 product ideas were submitted at all three European locations (2016: 90). Nearly 5 % of the proposals submitted were for energy efficiency and sustainability.

Our ideas and innovation management received the relevant recognition during the reporting period by being awarded the European Innovation Impact Award 2017 in the category “Best Innovation Management”. In particular, the jury was impressed by the structural embedding of the ideas and innovation management at the company and its general relevance in the company culture.

### Submitted suggestions within the framework of the traditional ideas management (ESS) at the Ochsenhausen location (as at 31 December)



## Attractive and performance-related pay

[G4-11, G4-EC3, G4-LA2, G4-LA13] The recognition of individual performance through an attractive remuneration package is based on collective agreements and voluntary company regulations. The amount of the pay depends on the respective task and the performance as well as on the qualifications and experience. The gender or origin of an employee does not play any role in our determination of the remuneration and we exclude all forms of discrimination.

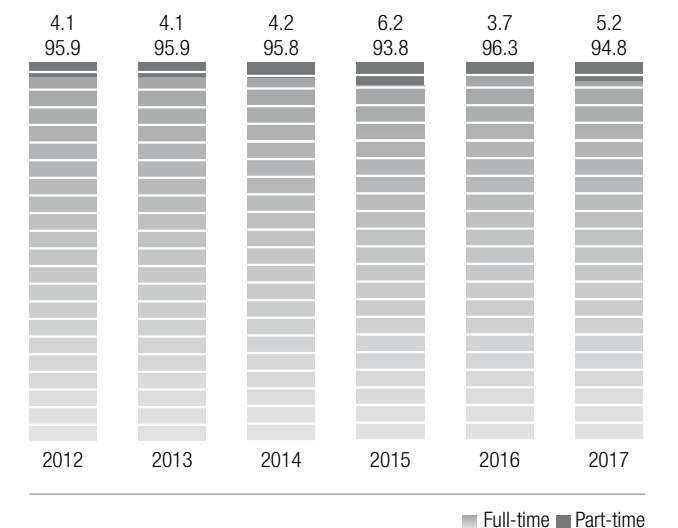
The daily working hours are governed by the applicable statutory, collective bargaining and company provisions. With the exception of the employees in management, the collective agreement of Südwestmetall applies to all employees at the Ochsenhausen location and the collective agreement of the electrical and electronics industry applies to all employees at the Lienz location. The Bulgarian location at Radinovo has a remuneration scheme that is based on the local cost of living but is above the national average.

*We offer flexible work time models and fair remuneration*

Using flexible work time models and time accounting systems, the working hours are designed to ensure that the salary remains stable even during seasonal fluctuations in the demand. Temporary workers are generally only hired from service providers who employ their employees according to the applicable collective agreement.

In order to comply with the Austrian Equal Treatment Act for the review of the payment for comparable and equal activities, the Lienz location has been providing a biennial income report to the works council since 2011, in which the average income of women and men according to job category and years of employment is set out.

### Full-time and part-time employees (in % as at 31 December)



The commitment of each individual contributes to the success of the company. Recognising this and implementing it in our daily work is of particular importance to us



In many areas, the social and insurance benefits provided by the company are higher than the statutory and collectively agreed levels. For example, we offer additional travel allowances, food subsidies, staggered anniversary bonuses and loyalty bonuses according to seniority, remuneration for inventions and improvements, additional Christmas bonuses, annual anniversary and senior celebrations or additional paid leave. The company pays the premiums for a group accident insurance in respect of each employee. In Germany, employees who, through no fault of their own, have fallen on hard times can rely on financial aid from the Hans Liebherr-Hilfe e.V. benevolent fund. In addition, there is an employer-financed company pension scheme, which comes into effect after 10 years of employment. Employees can also provide for their own retirement through deferred compensation. In general, no distinction is made between full-time and part-time employees or temporary employment contracts.

### Work and family

In order to enable our employees to have a proper work-life balance while at the same time meeting the production requirements, Liebherr offers flexible work time models. Full-time or part-time employment models, flexible shift models or part-time working for older workers are available in various forms. The solutions are tailored to the occupational and personal requirements of the individual. In 2017, 105 employees, of which 49 were male, took up the offer of taking parental leave (in 2016 it was 94 employees in total).

All employees on parental leave are expressly encouraged to return to their jobs afterwards. Worldwide and across the division, new mothers and fathers who work at Liebherr are given a “baby box” at the birth of their baby containing lovely gifts for the newborn. This small gift was introduced in 2015 and is received equally well by parents and babies. The “baby box” includes a towel, a bib and a pacifier chain with Liebherr lettering. So far about 220 “baby boxes” have found their way to happy recipients in the Domestic Appliances division. Since 2014, in co-operation with the municipal nursery, the Ochsenhausen location has been providing summer holiday care for children from three to six years of age. In addition, there are special parental parking bays for mothers and single parents.

### Training and study programmes

[G4-DMA, G4-DMA] One of the results of the demographic changes is the shortage of skilled workers which is already noticeable today. In some areas, we face the challenge of the business developing more dynamically than the number of experienced employees. Consequently, a major focus of our HR strategy is to attract talented and qualified employees and to develop them systematically.

*We are responding to the shortage of skilled workers with intensive training and further education measures*

Through vocational training and study programmes, we are able to secure a large proportion of the junior staff needed. In 2017 alone, we trained 101 young people in more than 20 technical and commercial apprenticeships and dual study programmes (in 2016: 97). The proportion of female trainees is currently 28 % (in 2016: 29 %). The career portfolio is constantly being expanded as required: In 2012, an apprenticeship as a plastic mould maker was added at the Lienz location and, in 2014/2015, the dual study courses “Mechanical Engineering Mechatronics” and “Business Management” were added for the first time at the location in Ochsenhausen. In our view, vocational training also means strengthening one’s personal skills and abilities from the outset. According to a special training schedule, all the trainees are able to attend various specialist departments through a rotation principle and, in addition to the vocational training they receive, also improve their personal skills.

In the reporting period, the training concept at the Ochsenhausen location received a special award. It was awarded the German Education Award 2017 in the category “Training”. The German Education Award is awarded annually by the TÜV SÜD Akademie for particularly good education and talent management. The award has been presented since 2013 under the auspices of the Federal Ministry of Education and Research in five categories. Out of 46 submissions, the pilot project, which was developed in collaboration with the consultancy and training company Develop-People, came first in the education category. In order to meet the increasing challenges in the search for qualified employees, and to bring applicants and apprentices with different previous knowledge and experience onto a common level of knowledge, the Ochsenhausen location pursues a very particular training philosophy:

By means of regular socio-educational supervised seminars, the commercial and industrial trainees as well as the students are supported in their development to the greatest degree possible. Based on this support, Liebherr-Hausgeräte GmbH in cooperation with Develop-People developed the ZIEL educational system, a holistic concept for responsible, independent and goal-oriented learning. Part of the concept is to transfer topics on the personal ability to act directly into the daily work routine and consolidate them there. Each trainee or student is individually supported and specifically tasked according to their field of activity. By means of individualised learning objectives, learners are able to develop to their personal level of performance. At the same time, weaker students receive targeted support and individual assistance.

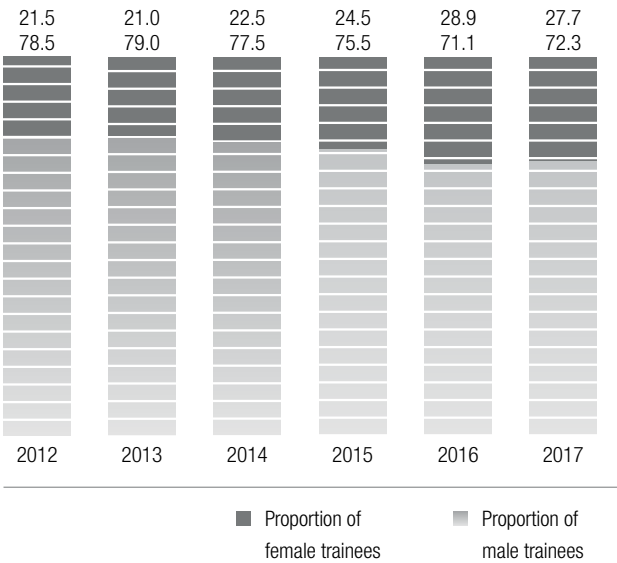
The high quality of the training is regularly reflected in the very good final results achieved and the annual honours awarded by the universities and chambers. Liebherr trainees have already received the award “Germany’s best IT specialist” twice. Furthermore, our trainees are regularly among the top places at the “Biberacher Wirtschaftspreis” awards and the “Best of ...” awards of the Ulm Chamber of Commerce and Industry, receive the “Best Performer Award” of the Faculty of Engineering at the University of Klagenfurt or are awarded scholarships for outstanding achievements by the Austrian federal state of Tyrol.

In order to maintain our ground in the changed market for applicants, we strive to position ourselves as an attractive employer among young people. The aim is to reach pupils at all types of school, to make contact with their parents and also to inform their teachers. In this regard, we are involved in various projects and partnerships with schools and universities. We also participate in the annual Girls’ Day in Germany and Austria in order to increase the number of girls interested in technical occupations. In addition, the locations organise annual career and information days and offer special internships for pupils and students.

In the past, a mobile sales kiosk for the breaks was established within the framework of the educational partnership between the Ochsenhausen location and the technical secondary school in Rot an der Rot. In 2015, the students together with the Liebherr trainees built a football table. Since 2015, the Development and Training Department in Ochsenhausen has been supporting two pupils in their senior classes at the grammar schools in Riedlingen and Biberach an der Riss, who in their free time are conducting research at the “Schülerforschungszentrum Südwürttemberg” (South Württemberg Student Research Centre) (SFZ) in Bad Saulgau. They developed the “iFresh – Smart-

Fridge” system, which records and manages the best before date data of the food stored and thereby avoids the products becoming spoilt. In 2016, the two pupils won the regional award in the federal “Jugend forscht” (Young people’s research) competition and thereby qualified for the state competition in Stuttgart. At the same time, they also received a special prize at the German Bundes Umwelt Wettbewerb (Federal environmental competition) (BUW).

### Women and men in technical and commercial training (in % as at 31 December)



Training concept in Bulgaria

Like many other companies in Bulgaria, we are increasingly dependent on well-trained specialists with foreign language skills at our plant in Radinovo. Consequently, a company-owned and state-certified training centre with two full-time instructors was set up in 2009 together with the Bulgarian authorities. The theoretical and practical training as a machine technician is carried out internally. At the same time, the trainees receive foreign language courses in German and English. Young people in the Plovdiv region are therefore given the opportunity to learn a commercial technical occupation in a company, which is why Liebherr now also provides training for other companies in the region.

Personnel development

[G4-LA9, G4-LA10, G4-LA11] Our managers and employees must develop their skills with an eye to current and future challenges and be able to use these in the right place and at the right time. The development of our personnel is ensured by our locations and guided by the objectives of our division. In particular, this means:

- The systematic further education and support of specialists and managers from within the company's own ranks.
- The continuous development and expansion of international talent management.
- Targeted qualification measures for specific target groups.
- Standardisation of company-wide learning.

The Personnel Development Control Board was formed in 2014 to coordinate concepts across locations and for targeted personnel development measures. This consists of the company management as well as the HR managers and the persons responsible for the development of the personnel in the European companies.

Every year, development and employee interviews are used by our employees to agree occupational and personal objectives as well as further qualification measures with managers, but also to talk about satisfaction at the workplace and to give each other personal feedback. After each qualification measure, a joint systematic evaluation takes place between employees and management.

In order to promote specialist, methodological, social and managerial skills, our employees in the year 2017 took part in an average of 11.3 hours of internal further education (in 2016: 11.4 hours). External vocational further education through recognised training courses and study programmes is another important pillar of our activities. In respect of office applications and language courses, the new internal e-learning platform "TELL" has supplemented the existing classroom training courses since 2017. Since 2017, employees in the Domestic Appliances division have been able to expand their skills in project management with the cross-plant qualification programme PROMA@HAU.

In 2013, the "Talent workshop" was established at the location in Ochsenhausen. The objective of the two-year development programme is to support ten young people with exceptional commitment and potential, and to develop their personal and methodological skills. In the interim, the "Talent workshop" has progressed into the second round. In July 2016, a further ten participants from various areas across the company, including executive management, managers and human resources, were included in the junior employee programme.

The ten interdisciplinary building blocks of the "Talent workshop":

Live teamwork	Typically human	Powerful presentation	Using plain language
Good meetings	Managing changes	Achieving goals	Resolving conflicts
Effective leadership	Intercultural knowledge		

Occupational safety

[G4-DMA, G4-LA6] The aspect of occupational safety is organised according to OHSAS 18001 and is controlled by the integrated management system, which ensures the process of continuous improvement and the regular analysis of how accidents develop.

*We provide a safe and healthy working environment for all employees*

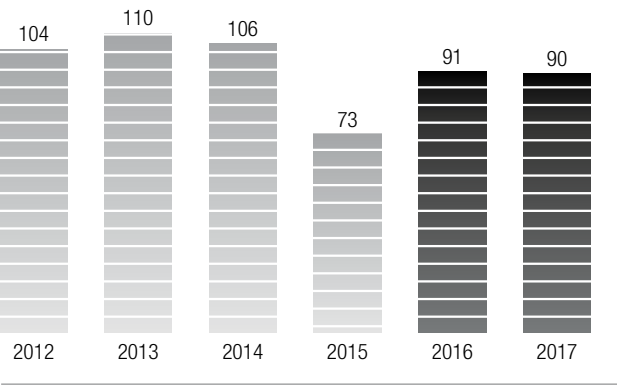
The Occupational Health and Safety Committee, consisting of representatives from management, occupational safety, occupational medicine, personnel and the works council, meet several times a year at the locations in Ochsenhausen and Lienz. At the location in Radinovo, occupational safety-related issues are discussed during the regular meetings between management and employee representatives. In 2017, ten specialists were employed at these locations for occupational safety. In addition, 73 employees were active as voluntary safety officers alongside their main occupation.

At the three European locations, there were 90 notifiable occupational accidents in 2017 (in 2016: 91). A key accident factor has recently been accidents due to snow and slipperiness on the factory premises (for example, on the way from the car park to the workplace). This was addressed by reorganising the snow clearing and gritting service, which will be coordinated in such a way that routes will in the future always be kept free of snow and slippery surfaces.

In addition, an accident dialogue has been established as an instrument to better analyse and focus on key accident factors. The number of days lost due to occupational accidents in 2017 was reduced to 1,666 calendar days (2016: 1,853).

In the course of holistic risk assessments, the individual workplaces are examined with regard to the potential hazards for the employees working there. Using the so-called risk assessment of experienced stress, potential psychological stress factors are identified around the daily work. The results are also directly integrated into the occupational health management system.

Total number of notifiable occupational and commuting accidents (as at 31 December)



Training to be ready for an emergency: members of the plant fire brigade at the Ochsenhausen location



In accordance with the legal regulations, all employees as well as external employees undergo an annual safety training course. At the same time, they are instructed on the basics of ergonomic work structuring and environmental issues.

In addition, our commitment to occupational safety received external recognition in 2016. The Radinovo location attained first place in the “National Occupational Safety Award” in the category for companies with more than 250 employees.

### Emergency management and emergency prevention

A “Hazard prevention” department has been set up at the location in Lienz to support the locations and to standardise the procedure. In particular, the tasks being coordinated are:

- Fire protection management
- General emergency management
- Emergency planning
- Plant safety
- First aid

The locations in Ochsenhausen and Lienz have officially recognised plant or company fire brigades. The Radinovo location has a fire-fighting team with 45 fire-trained employees and three water tender vehicles. All three units work closely together with the official fire-fighting associations of the countries. Every year, a fixed percentage of employees, for example 10% at Ochsenhausen, are trained in the operation of fire extinguishers.

At the locations, company doctors and paramedics ensure that the employees receive the appropriate medical care. They advise on all aspects of occupational health and safety as well as on the prevention of work-related illnesses. They also provide primary medical care in the case of accidents and acute illnesses. In addition, a total of 547 trained first aiders assist in the initial care of injured employees.

The emergency management system is subject to a continuous process of improvement. This includes making use of internal knowledge and the knowledge acquired during further training courses, as well as experience gained from accidents at the locations, from other companies and insurance companies. Compliance with the requirements is reviewed annually by internal audits and reported to the management.

### Promotion of health

The consequences of demographic changes and the changes in the working world are increasingly influencing the performance of many employees. Accordingly, forward-looking and sustainable solutions are required to maintain the health of our employees. Location-based working groups are constantly developing and improving measures and actions for occupational health management. Initiatives, health courses, seminars and information events for preventative examinations, muscle, skeleton, stress, movement, back health and nutrition are offered in-house and in co-operation with health insurance funds. In addition, various sports and leisure activities are promoted. At the Ochsenhausen location, social counselling is available to assist employees in difficult circumstances. In the treatment of addiction problems, several trained in-house addiction counsellors provide support and actively accompany the affected employees before, during and after the therapeutic withdrawal treatment.

The joint campaign by the plant medical service and Liebherr health management, which took place in October 2017 at the location in Ochsenhausen, demonstrates that within the scope of promoting health we not only regard ourselves as being responsible for our employees but also for society. As part of this, 55 donors had the insides of their mouths swabbed with cotton swabs. The aim was to find stem cell donors for the DKMS donor database with different tissue characteristics. In Germany alone, around 11,000 people develop leukaemia every year – many of whom are children and teenagers whose only chance of recovery is usually by finding a stem cell donor.

“Running for those who can’t” translates into German as: “Laufen für die, die es nicht können.” Under this motto, 100,000 runners started simultaneously from 34 locations worldwide in May 2016 for the charity run “Wings for Life World Run”. In Ljubljana, Slovenia, the sales team of the Lienz location also put on its running shoes. The team covered more than 200 kilometres. Around 6.6 million euros in donations for spinal cord research was collected worldwide as a result. The aim is to find a cure for spinal cord injuries.

The promotion of occupational health has been supported and embraced for many years at the Lienz location. At the beginning of the year, for these achievements the Lienz location was awarded the seal of quality for the promotion of occupational health at an event organised by the Tyrol Regional Health Insurance Fund in Innsbruck. The seal is awarded for 3 years and is valid until 2019.

The people in Europe are continuously getting older and many companies have to adjust to an increase of over 50-year-olds and a decrease of the under 30-year-old employees. In 2017, the average age of the permanent staff in Ochsenhausen was 46.3 years (in 2016: 47.1 years), in Lienz it was 43.8 years (in 2016: 43.6 years) and in Radinovo it was 38.7 years due to past plant extensions and associated staff recruitment (in 2016: 36.8 years).

Age distribution of the permanent staff (in % as at 31 December)

Age	2012	2013	2014	2015	2016	2017
≤ 29	14.7 %	14.9 %	15.1 %	18.9 %	16.5 %	18.2 %
30 – 50	59.3 %	58.3 %	58.1 %	57.0 %	54.6 %	51.2 %
≥ 51	26.0 %	26.8 %	26.8 %	24.1 %	28.9 %	30.6 %

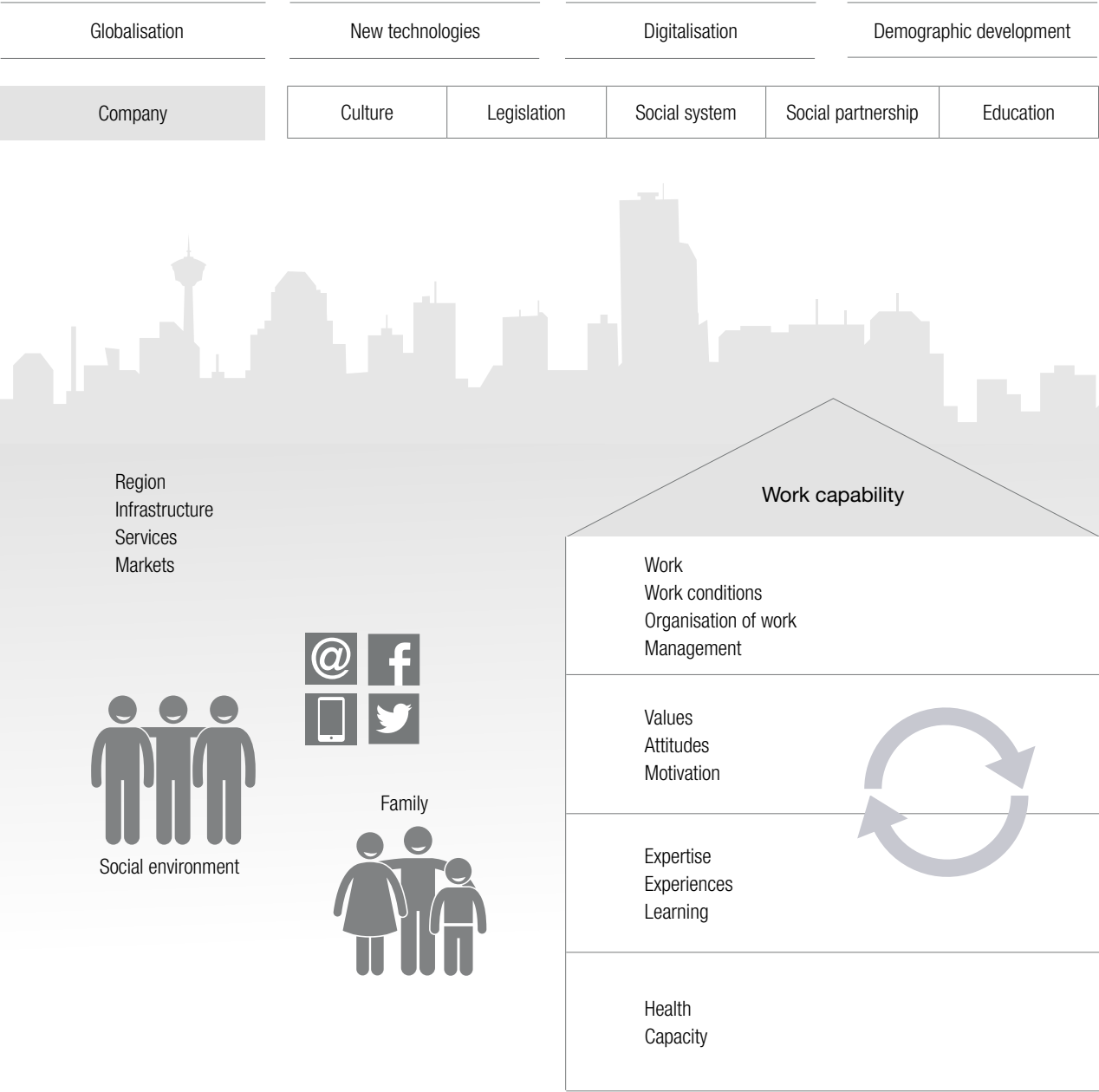
### House of work capability

[G4-LA10] In order to maintain the efficiency of all employees, the challenges will also lie in the creation of age-appropriate workplaces. In 2013, the pilot project “House of work capability” was launched at the location in Ochsenhausen with the objective of preserving and promoting the work capability and well-being of employees until they retire. As part of the inquiry into the actual situation at the workplace, the additional factors “personal environment” and “family” were included for the first time.

Based on the results, an interdisciplinary project team, consisting of management and production managers, the works council, personnel, the health management work group and the affected employees from the production area, is now determining the measures to be taken to improve the “House of work capability”. A substantial reduction of the workload has already been achieved within a short time by making relatively simple changes. In order to reconcile the different working methods of older and younger employees, a technical and monetary capping of the standard time was carried out and the breaks were adjusted. In addition, ergonomic aspects were taken into account to a greater degree in the further development and design of workplaces. In the reporting period 2016/2017, these activities were extended to other areas. For example, around 400 employees were interviewed about their ability to work in the largest production department at the Ochsenhausen location in 2017. The five floors of the “House of work capability” (health, expertise, values, work and family/friends) are rated on a scale of 0 (very bad) to 10 (very good).

The project team is currently initiating measures based on these findings to further improve the working conditions of the employees of the final assembly station. Substantial improvements have already been achieved in the foaming station and the container preparation station. These include height-adjustable workstations / assembly tables, ergonomic analyses or the reduction of extremely unhealthy performance peaks.

In a further step, the “House of work capability” is to be extended to the administrative and commercial departments. The occupational health management at the Lienz location is increasingly based on the “House of work capability”. The quality of the “House of work ability” has now also received external recognition. At the 2016 HR Excellence Awards in Berlin, the “House of work capability” was amongst the three best submissions from the 450 projects in the category “Occupational Health Management”. Since 2012, the HR Excellence Awards have honoured innovative lighthouse projects in human resources management in 23 categories and are awarded by the magazine Human Resources Manager and Quadriga Media.



House of work capability (Source: Ilmarinen 2016)



With attention to the smallest detail and with commitment and passion, each individual assumes responsibility, so that we are “the first choice” amongst our customers



1,040   
suppliers of manufacturing materials

>90%  
of the purchasing volume in Europe

Supplier audits  
to ensure quality  
and environmental standards

 84.8%  
of the highest-volume suppliers have  
an environmental management system



# Supply chain

*We maintain relationships with our business partners based on trust. These are characterised by long term partnership and integrity.*

## Supplier relationships

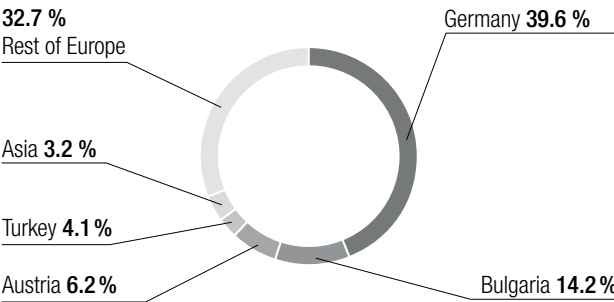
[G4-12, G4-EC1, G4-DMA, G4-EC9, G4-DMA, G4-LA15, G4-DMA, G4-DMA, G4-SO7] In 2017, we cooperated with about 1,040 suppliers of manufacturing materials. The supplier portfolio comprises both global corporations as well as medium-sized and small companies. If possible, we also include social workshops. For example, at the location in Ochsenhausen, the Heggbacher Werkstattverbund has been involved in the production of small assemblies and waste paper disposal for more than 20 years.

*A code of conduct and compliance guidelines form the basis for trusting cooperation with our business partners*

We maintain an atmosphere of mutual trust with our business partners, which is characterised by a partnership for the long term and integrity. We do not rely on short-term success, but orient ourselves for the long term. The Code of Conduct and the Compliance Guidelines of the Liebherr Group set standards for integrity and proper management. We expect the same from our business partners.

The environmental and food-relevant requirements for components and raw materials are defined by the applicable legislation and internal guidelines, such as the process instruction “Environmentally sound procurement”. The respective environmental issues are also taken into account in contracts with suppliers, such as prohibited substances, conformity with the food and drinking water requirements, compliance with REACH and RoHS provisions as well as regulations on wood and packaging. All suppliers must confirm having complied with the respectively applicable laws, guidelines and regulations in writing and provide the necessary supporting documents.

Proportion of the purchasing volume of manufacturing material in the main countries or regions in 2017



Proportion of the 75 % highest-volume suppliers with an environmental management system

2013	2014	2015	2016	2017
64.0	66.7	70.1	73.8	84.8

Compliance with environmental and social standards

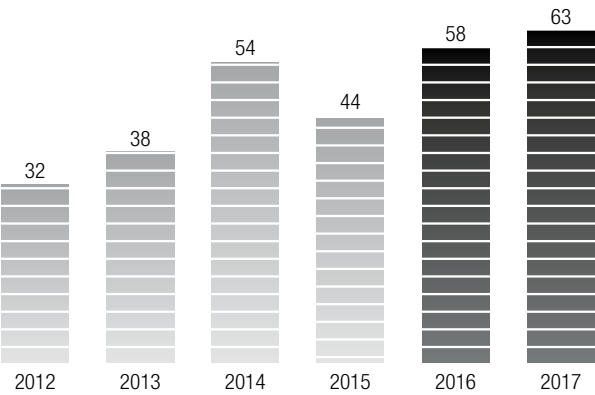
[G4-DMA, G4-EN32, G4-DMA, G4-LA14, G4-HR5, G4-SO9, G4-SO10] The purchasing departments of the plant locations place great emphasis on only selecting suppliers who fulfil the generally recognised environmental and social standards. New suppliers must provide a supplier self-assessment prior to being awarded an order. Specific questions about the company, product range, manufacturing technology, employees and certifications provide us with an initial assessment and form the basis of the further selection process. All the supplier information is centrally documented and can be used by the purchasing departments for operational decisions and preventive measures. Our objective, that more than 70 % of our 75 % highest-volume suppliers have an environmental management system in place by the year 2020, was achieved by us as early as 2015 with 70.1 % and has clearly been surpassed in 2017 with 84.8 %.

We ensure through supplier audits that the supplier's ability is continuously confirmed and that the defined quality standard is fulfilled. The scope and number of supplier audits are defined annually across departments, between purchasing and quality management, and are fixed in an audit program. While observing the risk potential of the countries, this shows how intensively and how often a supplier has to be checked during the cooperation.

If there is a well-founded suspicion that the supplier has breached its obligations in respect of integrity or the law, an escalation process begins and which can result in the elimination of the affected supplier from the list of suppliers. Gross breaches, for example, against the prohibition of child or forced labour, are sufficient grounds for us to terminate the agreement with immediate effect. In other cases, we check whether the supplier concerned is still acceptable to the company and can continue as a supplier. This depends on an assessment of the supplier's capacity to develop in the future. This means that the supplier concerned, in cooperation with our specialist departments, creates an action plan and is willing to tackle the identified problems actively and transparently. In the reporting period, no suppliers were removed from the list of suppliers due to breaches of integrity or the law. The increased number of supplier audits during the period of operation was partly due to the new development projects and, in particular, to the extent that new suppliers had to be qualified as a consequence of this.

The increasing globalisation of the procurement markets places new demands on our supplier management. In order to be able to secure the supply of materials at all times, we will continue internationalising our procurement activities as part of our purchasing strategy and will further intensify dual sourcing.

Number of supplier audits carried out (quality and environment)



Facts and figures

Performance indicators

Domestic Appliances division						
	2012	2013	2014	2015	2016	2017
Sales performance in millions of €						
Total	889.9	909.4	915.0	920.0	898.0	930.0
Worldwide sales performance in millions of units						
Total	2,190	2,208	2,193	2,213	2,202	2,240
Investments in millions of €						
Total	51.7	37.2	58.0	67.0	63.0	66.0
Development of the entire workforce worldwide						
Total	5,180	5,229	5,476	5,786	6,035	6,072
Products						
Distribution by percentage of the appliances according to the new Energy Consumption Labelling Act (measured by number of units)						
	2012	2013	2014	2015	2016	2017
A+++	10	14	15	18	20	23
A++	34	49	54	60	62	61
A+	53	35	28	19	15	13
A and below (B, C, D)	3	2	3	3	3	3
Appliances produced in tonnes						
Total	143,650	139,621	132,148	140,416	137,549	143,650



Locations						
Development of the total energy consumption at the Ochsenhausen, Lienz and Radinovo locations in MWh						
	2012	2013	2014	2015	2016	2017
Total	81,433	79,894	72,989	74,948	74,716	74,532
Direct and indirect energy consumption of important energy sources in MWh						
Gas	27,775	27,087	22,456	23,382	23,107	23,368
Electricity	53,192	52,324	50,075	51,100	51,192	50,821
District heating	467	484	458	466	417	343
Total	81,434	79,895	72,989	74,948	74,716	74,532
Carbon footprint in tonnes of CO <sub>2</sub>						
Total	31,671	31,187	28,682	30,014	30,996	30,793
Total	8,027	7,987	6,935	7,210	7,103	6,982
Scope 2	23,644	23,200	21,747	22,804	23,893	23,811
Development of the total solvent emissions at the locations Ochsenhausen, Lienz and Radinovo in tonnes						
Total	18.3	17.1	16.3	18.5	15.1	12.0
Development of the total water consumption at the Ochsenhausen, Lienz <sup>1</sup> and Radinovo locations in m <sup>3</sup>						
Total	85,687	77,103	51,935	51,587	50,802	65,603
of this, the volume obtained from the well at Radinovo	43,716	23,668	16,832	16,270	19,021	36,551
Waste water volume discharged at the Ochsenhausen, Lienz and Radinovo locations in m <sup>3</sup>						
Total	42,095	52,245	41,986	39,050	35,591	37,007
Development of the total waste generated at the Ochsenhausen, Lienz and Radinovo locations in tonnes						
Total	10,554	11,157	11,858	11,495	11,953	11,537

Employees						
The most important HR key figures for the Ochsenhausen, Lienz und Radinovo locations (as at 31 December respectively)						
	2012	2013	2014	2015	2016	2017
Permanent staff	4,658	4,800	4,833	5,031	5,216	5,184
Trainees	98	100	98	94	97	101
Proportion of female employees	21.6 %	21.4 %	21.3 %	20.8 %	20.2 %	20.5 %
Proportion of employees in management positions	9.6 %	9.6 %	9.5 %	9.9 %	8.7 %	9.0 %
of this, proportion of female employees in management positions	4.0 %	4.5 %	3.9 %	4.4 %	3.8 %	3.9 %
Employee turnover rate	2.3 %	2.6 %	3.0 %	3.3 %	4.1 %	4.5 %
Ø Further education hours	11.0	10.7	10.2	13.7	11.4	11.3
Reportable work/commuting accidents	104	110	106	73	91	90
Submitted suggestions within the framework of the traditional ideas management (ESS) at the Ochsenhausen location (as at 31 December)						
Total	289	227	290	370	384	313
Full-time and part-time employees in per cent (as at 31 December)						
Part-time	4.1	4.1	4.2	6.2	3.7	5.2
Full-time	95.9	95.9	95.8	93.8	96.3	94.8
Women and men in technical and commercial training in per cent (as at 31 December)						
Proportion of female trainees	21.5	21.0	22.5	24.5	28.9	27.7
Proportion of male trainees	78.5	79.0	77.5	75.5	71.1	72.3

Objectives

In the next two years, we will extend our sustainability programme by means of the following measures across the entire division:

Corporate responsibility management		
Focus	Measure	Period
Stakeholder dialogue	Intensifying the stakeholder dialogue taking the new requirements of ISO 9001 and ISO 14001 into account	2018
Sustainability communication	Integration of the locations Kluang (Malaysia) and Aurangabad (India) in the reporting	2018/2019
	Expansion of external and internal sustainability communication	2018/2019
Awareness of sustainability	Optimisation of the exchange of information on projects of the various current locations and the cross-location sustainability activities of the company	Current
Integrated management system	Re-certification of the individual management systems	Current
	Certification of the Lienz and Radinovo locations according to ISO 50001	2018
	Certification of the Aurangabad (India) location according to ISO 9001	2018
	Optimisation of monitoring and reporting	2017
Data protection policy	E-learning training “IT security” for the relevant category of persons	Current
	Implementation of the requirements of the European General Data Protection Regulation (GDPR)	2018
	E-learning training in respect of the European General Data Protection Regulation (GDPR) for relevant employees	Current

Locations		
Focus	Measure	Period
Energy	Continuous reduction of energy consumption at all locations and consid-eration of the results when planning new plants and processes	Current
	Intensive use of the deep well for additional building air conditioning at the Lienz location, extension to the IT server rooms	2018
Emissions	Reduction of CO <sub>2</sub> emissions in the Domestic Appliances division	Current
	Switching to climate-neutral power supply at the location in Ochsenhausen	2018
Water	Determining further potentials for saving water in the plants, processes and non-production-specific areas	Current

Age distribution of the permanent staff in per cent (as at 31 December)						
	2012	2013	2014	2015	2016	2017
Age						
≤ 29	14.7	14.9	15.1	18.9	16.5	18.2
30 – 50	59.3	58.3	58.1	57.0	54.6	51.2
≥ 51	26.0	26.8	26.8	24.1	28.9	30.6
Supply Chain						
Proportion of the 75 % highest-volume suppliers with an environmental management system in per cent						
	2012	2013	2014	2015	2016	2017
Total		64.0	66.7	70.1	73.8	84.8
Number of supplier audits carried out (quality and environment)						
Total	32	38	54	44	58	63



Waste	Standardisation of the collection of key indicators at the locations and transferring these to a key indicator cockpit	2018
	Reducing the proportion of waste for disposal and increasing the waste for recovery	Current
Employees		
Focus	Measure	Period
Value-based corporate culture	Intensification of the application “Guidelines for successful cooperation” at all locations	Current
Training and further education	Demand-oriented expansion of training places and dual study courses at the locations	Current
	Promotion of female trainees in technical professions	Current
	Relaunch of “Talent workshop” for the targeted support of junior employees at the Ochsenhausen location	2019/2020
Securing of junior staff and qualification levels	Intensification of employer branding under the motto “One Passion – Many Opportunities” externally and at all locations; managers are made aware of the specific effects of demographic change in strategic personnel planning	2018
Occupational health management	Expansion of the pilot project “House of work capability” to the commercial department at the Ochsenhausen location	2019

Product		
Focus	Measure	Period
Energy efficiency	Further reduction of the energy consumption of our fleet in the European market	2018
	Introduction of the new EU energy label on domestic appliances	2019/2020
	Introduction of the additional energy efficiency classes A+, A++ and A+++ for commercial appliances	2019
Resource efficiency	Check closing of material loops and initiate pilot projects	2018/2019
	The existing requirements will continue being taken into account, the products will continue being developed as far as possible and, accordingly, improved in terms of resource efficiency, durability, ease of repair and recyclability	Current
Pollutant-free products	Produce products free of critical substances in the future with cyclical adaptation to the state of the art	Current
Networking and digitalisation	Expansion of the interconnectivity of fridges and freezers	Current
	Implementation of the new requirements of the German Electrical and Electronic Equipment Act in compliance with the Open Scope system	2018

Supply Chain

Focus	Measure	Period
High environmental and social standards	Recognised environmental and social standards are adhered to in the supply chain (testing and, if necessary, expansion of the existing supplier selection and auditing processes)	2018



## GRI Index

[G4-33] For the 2017 Corporate Responsibility Report of Liebherr-Hausgeräte GmbH, the “Core” report option of the GRI Guidelines was selected. An external assurance of the general standard disclosures as well as of the specific standard disclosures (material aspects) has not taken place.

General standard disclosures		Communication skills	Page
Strategy and analysis			
G4-1	Statement from the most senior decision-maker		<a href="#">6</a> , <a href="#">7</a>
G4-2	Key impacts, risks and opportunities		<a href="#">7</a>
Organisational profile			
G4-3	Name of the organisation		<a href="#">83</a>
G4-4	Brands, products and services		<a href="#">11</a>
G4-5	Location of the organisation's headquarters		<a href="#">83</a>
G4-6	Countries in which the organisation's main operations are located		<a href="#">11</a>
G4-7	Nature of ownership and legal form		<a href="#">9 ff.</a>
G4-8	Markets supplied		<a href="#">13</a>
G4-9	Size of the organisation	Liebherr-Hausgeräte GmbH does not provide any information on the total capitalisation.	<a href="#">12 ff.</a>
G4-10	Total number of employees		<a href="#">12</a>
G4-11	Percentage of total employees covered by collective bargaining agreements	The collective agreement of Südwestmetall applies to all employees at the Ochsenhausen location. The collective agreement of the electrical and electronics industry applies to all employees at the Lienz location. This means that almost 63 % of the employees are covered by collective agreements.	<a href="#">59</a>
G4-12	Description of the organisation's supply chain		<a href="#">69</a>
G4-14	Implementation of the precautionary principle		<a href="#">9</a> , <a href="#">12</a> , <a href="#">16 ff.</a>
G4-16	Memberships of associations and advocacy groups	At the European level, Liebherr-Hausgeräte GmbH is a member in the umbrella organisation of domestic equipment manufacturers CECED. At the national level, we are members of the respective central associations of the electrical engineering and electronic industries. In Germany, we are a member of the industrial association Haus-, Heiz- und Küchentechnik e.V. (HKL) and represented in the HAUSGERÄTE+ initiative.	<a href="#">24</a>
Identified material aspects and boundaries			
G4-17	List of all entities included in the organisation's consolidated financial statements		<a href="#">6</a>
G4-18	Defining the report content	Within the scope of this publication, we report on the economic, environmental and social impacts of our business activities in the value chain for which we are responsible.	<a href="#">24 ff.</a>
G4-19	Material aspects		<a href="#">25 ff.</a>
G4-20	Boundaries of the material aspects within the organisation	The material aspects within the organisation are basically relevant for all locations. If this is not the case, it is noted at the appropriate place.	<a href="#">27</a>
G4-21	Boundaries of the material aspects outside the organisation	If a material aspect is only relevant for a specific stakeholder group or geographic region, this is noted at the appropriate place.	<a href="#">27</a>

Engagement of stakeholders			
G4-24	Stakeholder groups engaged by the organisation		<a href="#">22</a>
G4-25	Identification and selection of stakeholders		<a href="#">22</a>
G4-26	Approach to engaging stakeholders		<a href="#">24</a>
G4-27	Key topics and concerns of the stakeholders		<a href="#">22 ff.</a>
Report profile			
G4-28	Reporting period	This sustainability report refers to the financial years 2016 and 2017. The respective financial years cover the period 1 January to 31 December.	<a href="#">6</a>
G4-31	Contact for questions regarding the report		<a href="#">83</a>
G4-32	GRI Index	The “Core” report option of the GRI Guidelines was selected for this report.	<a href="#">78 ff.</a>
G4-33	External assurance	External verification by an independent third-party has not been obtained.	<a href="#">78</a>
Corporate governance			
G4-34	Governance structure of the organisation, including the highest governance body		<a href="#">9</a> , <a href="#">11</a>
Ethics and integrity			
G4-56	Values, principles, codes of conduct and ethics		<a href="#">17 ff.</a> , <a href="#">55</a>

## Specific standard disclosures

Material aspects	DMA and indicators		Communication skills	Page
Economic				
Economic performance	G4-DMA	Management approach		<a href="#">43ff.</a> , <a href="#">60f.</a>
	G4-EC1	Direct economic value generated and distributed		<a href="#">12</a> , <a href="#">69</a>
	G4-EC2	Financial implications, risks and opportunities due to climate change		<a href="#">24ff.</a>
	G4-EC3	Obligations arising from the performance-oriented pension plan		<a href="#">59</a>
Market presence	G4-DMA	Management approach		<a href="#">11</a> , <a href="#">16f.</a>
	G4-EC7	Infrastructure-related investments and supported services		<a href="#">43ff.</a>
	G4-EC8	Significant indirect economic impacts		<a href="#">34</a> , <a href="#">43ff.</a>
Procurement practices	G4-DMA	Management approach		<a href="#">69ff.</a>
	G4-EC9	Proportion of spending on local suppliers at significant locations of operation	In this report, we report on the purchasing volume by region and not by location.	<a href="#">69</a>
Environmental				
Materials	G4-DMA	Management approach		<a href="#">35</a>
	G4-EN1	Materials used by weight or volume	The current information is too heterogeneous for an exact calculation of all the appliance series produced and it is accordingly based on averaged values.	<a href="#">37</a>
	G4-EN2	Percentage of materials used that are recycled input materials	A quantitative calculation of the total percentage of materials used that are recycled input materials has not yet been carried out.	<a href="#">37</a>



Energy	G4-DMA	Management approach		<a href="#">44</a>
	G4-EN3	Energy consumption within the organisation		<a href="#">44</a>
	G4-EN6	Reduction of energy consumption		<a href="#">44, 51</a>
	G4-EN7	Reduction in the energy requirements of products and services		<a href="#">33 ff.</a>
	G4-EN8	Total water withdrawn by source		<a href="#">46</a>
	G4-EN9	Water sources significantly affected		<a href="#">46</a>
Biodiversity	G4-DMA	Management approach	Our locations are in industrial zones or commercial mixed-use areas. None of the locations are in protected areas.	<a href="#">47</a>
Emissions	G4-DMA	Management approach		<a href="#">45, 51</a>
	G4-EN19	Reduction of GHG emissions	Measures are taken within the packages of environmental measures at the locations that reduce greenhouse gas emissions. In this regard, see the management approaches to the material aspects of energy and transport.	<a href="#">44, 45, 51</a>
Effluents and waste	G4-DMA	Management approach		<a href="#">16, 29</a>
	G4-EN22	Waste water discharged by quality and destination		<a href="#">46</a>
	G4-EN23	Waste by type and disposal method		<a href="#">47 ff.</a>
	G4-EN25	Handling of waste deemed hazardous		<a href="#">47</a>
	G4-EN26	Water bodies significantly affected by discharged waste water	The discharged waste water significantly affects the public sewer system. The waste water discharged indirectly into the public sewer system is in compliance with the waste water regulations of the respective municipalities.	<a href="#">46</a>
Products and services	G4-DMA	Management approach		<a href="#">30 ff.</a>
	G4-EN27	Measures to mitigate the environmental impacts of products and services		<a href="#">30 ff.</a>
	G4-EN28	Reclaimed products and packaging		<a href="#">40</a>
Compliance	G4-DMA	Management approach		<a href="#">18 ff., 43 ff.</a>
Transportation	G4-DMA	Management approach		<a href="#">51</a>
	G4-EN30	Significant environmental impacts due to transportation		<a href="#">51</a>
Overall	G4-DMA	Management approach		<a href="#">43</a>
Environmental assessment of suppliers	G4-DMA	Management approach		<a href="#">69 ff.</a>
	G4-EN32	Percentage of new suppliers that were screened using environmental criteria	Within the context of a self-assessment, each new supplier is checked for compliance with environmental and social standards. Suppliers who have significant critical potential for infringements will be audited.	<a href="#">70</a>
	G4-EN33	Significant environmental impacts in the supply chain		<a href="#">37</a>

Labour practices and decent work				
Employment	G4-DMA	Management approach		<a href="#">55 ff.</a>
	G4-LA1	New employees hired and employee turnover	We will not be publishing the employee turnover rate according to age group, gender and region in this report. Should the employee turnover rate increase in future, we will reconsider recording this information.	<a href="#">56</a>
	G4-LA2	Occupational benefits only provided to full-time employees	In general, no distinction is made between full-time and part-time employees or temporary employment contracts.	<a href="#">59</a>
Labour and management relations	G4-DMA	Management approach		<a href="#">58</a>
	G4-LA4	Minimum notice periods regarding material operational changes	The minimum notice periods regarding material operational changes are based on the respective national legislation.	<a href="#">58</a>
Occupational health and safety	G4-DMA	Management approach		<a href="#">63 ff.</a>
	G4-LA5	Percentage of workforce represented on health and safety committees		<a href="#">37, 43</a>
	G4-LA6	Injuries, occupational diseases, lost days and fatalities	Key indicators on injuries, occupational diseases, days lost and absenteeism are not currently recorded by gender and region for central controlling and can accordingly not be broken down further.	<a href="#">63</a>
Training and further education	G4-DMA	Management approach		<a href="#">60 ff.</a>
	G4-LA9	Average hours of training and education per year per employee	The differentiation between hours of education by gender and employee category is not currently used for central controlling and can accordingly not be broken down further.	<a href="#">62</a>
	G4-LA10	Programmes to support continued employability		<a href="#">62, 65</a>
	G4-LA11	Percentage of employees receiving regular performance and career development reviews		<a href="#">62</a>
Diversity and equal opportunity	G4-DMA	Management approach		<a href="#">56</a>
	G4-LA12	Composition of governance bodies and break-down of employees per indicators of diversity	Only the reported compositions of the respective committees are used centrally for controlling.	<a href="#">56 ff.</a>
Equal pay for women and men	G4-DMA	Management approach		<a href="#">56</a>
	G4-LA13	Ratio of the basic salary and remuneration of women to men		<a href="#">59</a>
Assessment of suppliers with regard to labour practices	G4-DMA	Management approach		<a href="#">70</a>
	G4-LA14	Percentage of new suppliers that were screened using labour practices criteria	Within the context of a self-assessment, each new supplier is checked for compliance with environmental and social standards. Suppliers who have significant critical potential for infringements will be audited.	<a href="#">70</a>

	G4-LA15	Significant negative im- pacts for labour practices in the supply chain		<a href="#">18</a> , <a href="#">69f.</a>
<b>Human rights</b>				
	G4-HR2	Employee training courses on human rights	From the outset, new employees receive training on the Code of Conduct of the Liebherr Group when joining the company. Furthermore, managers and employees received training on the subject of "Compliance" via an E-learning platform during the reporting period.	<a href="#">18</a>
	G4-HR5	Child labour		<a href="#">58</a> , <a href="#">70</a>
	G4-SO1	Measures to engage local communities, impact assessments and devel- opment programmes		<a href="#">22f.</a> , <a href="#">43ff.</a>
	G4-SO2	Operations with significant negative impacts on local communities		<a href="#">43ff.</a> , <a href="#">51f.</a>
	G4-SO3	Percentage of operation locations assessed for risks related to corruption and risks identified		<a href="#">18</a>
	G4-SO4	Communication and training on anti-corruption		<a href="#">18</a>
Anti-competitive behaviour	G4-DMA	Management approach		<a href="#">18</a>
	G4-SO7	Legal actions for anti- competitive behaviour and anti-trust and monopoly practices	In the reporting period, there were no proceedings brought against Liebherr-Hausgeräte GmbH on the basis of anti-competitive behaviour, anti-trust or monopoly practices.	<a href="#">18</a> , <a href="#">69</a>
Compliance	G4-DMA	Management approach		<a href="#">69f.</a>
Supplier assessment for impacts on society	G4-DMA	Management approach		<a href="#">18</a> , <a href="#">69f.</a>
	G4-SO9	Percentage of new sup- pliers that were screened using criteria for impacts on society		<a href="#">70</a>
	G4-SO10	Significant negative impacts on society in the supply chain		<a href="#">70</a>
<b>Product responsibility</b>				
Customer health and safety	G4-DMA	Management approach		<a href="#">38 ff.</a>
	G4-PR1	Percentage of significant products and services that were assessed for health and safety	As part of the development and manufacturing process- es, all Liebherr fridges and freezers are checked for any health and safety risks to the user.	<a href="#">38 ff.</a>
	G4-PR2	Incidents of non-com- pliance with regulations and codes of conduct concerning the health and safety of products and services	In the reporting period, there were no breaches of the health and safety regulations by Liebherr fridges and freezers.	<a href="#">38 ff.</a>

Product and service labelling	G4-DMA	Management approach		<a href="#">35</a>
	G4-PR3	Type information that is required for product labelling as well as the percentage of significant products and services that are subject to such information requirements	All Liebherr fridges and freezers for private and commercial use are, insofar as required, marked with the EU energy label. The appliance-specific nameplates comply with the legal requirements. The operating instructions include all the relevant legal information about the appliance and its operation as well as the proper disposal of packaging and old appliances.	<a href="#">34</a>
	G4-PR4	Incidents of non-com- pliance with regulations and voluntary codes of conduct concerning the labelling of products and services	In the reporting period, there were no breaches of the labelling requirements by the fridges and freezers manufactured by Liebherr.	<a href="#">34</a>
	G4-PR5	Results of surveys measuring customer satisfaction		<a href="#">29</a>
	G4-PR6	Sales of banned or disputed products		<a href="#">18</a> , <a href="#">30</a> , <a href="#">38ff.</a>
Customer privacy	G4-DMA	Management approach		<a href="#">18</a>
	G4-PR8	Number of substantiated complaints regarding breaches of customer privacy and the loss of customer data	During the reporting period, there were no substantiated complaints regarding breaches of customer privacy and the loss of customer data.	<a href="#">18</a>
Compliance	G4-DMA	Management approach		<a href="#">18</a>



Contacts and other publications

[G4-3, G4-5, G4-31] We look forward to receiving your questions, suggestions or criticism in respect of our Corporate Responsibility Report and our sustainability activities. Further publications and information about our company and our products are also available on the internet at <https://home.liebherr.com/en/gbr/home/homepage.html>.

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