

Corporate Responsibility Report

2017

Leading.


THE LINDE GROUP

HOW WE CREATE ECONOMIC, ENVIRONMENTAL AND SOCIAL VALUE

FOUNDATIONS & INPUT

Employees



57,605 employees in over 100 countries
EUR 3,780 m personnel expenses
EUR 328 expenditure on training programmes per participant

Finance



EUR 15,059 m equity
EUR 18,454 m non-current and current liabilities
EUR 36,134 m market capitalisation

Innovation



EUR 112 m invested in research and development
350 employees working in research and development

Natural resources



Air is the most important resource
28.9 m MWh of electricity consumed
45.1 m MWh of natural gas consumed
56.4 m m³ of water consumed

Society



EUR 6.7 m funding for social projects and initiatives
1,000 Linde volunteers supported around the world
18,128 employees in Linde's healthcare business

OUTPUT & IMPACT

EUR 297,000 revenue per employee
EUR 3,489 m salaries paid
EUR 291 m pension costs
4.3 training days per participant



EUR 17,113 m revenue
EUR 4,231 m operating profit
EUR 2,153 m operating free cash flow
EUR 1,299 m dividend paid
10.2% return on capital employed (ROCE)
EUR 453 m income tax paid



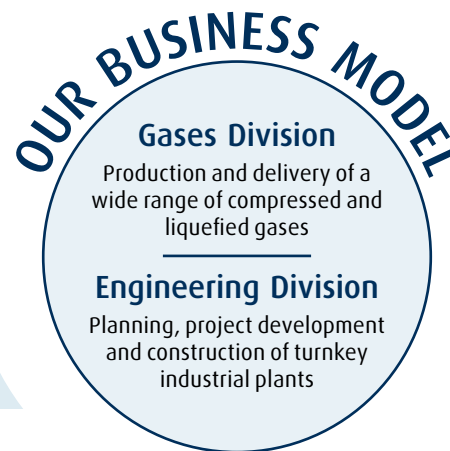
232 new patents filed
50% of research and development projects with environmental benefit



28.4 m tonnes direct and indirect greenhouse gas emissions
67,800 tonnes of waste, of which one third is recycled
18 m tonnes of CO₂ avoided by customers, just by applying one of Linde's key technologies
790 m m³ of water brought up to drinking-water quality at customers in just six countries



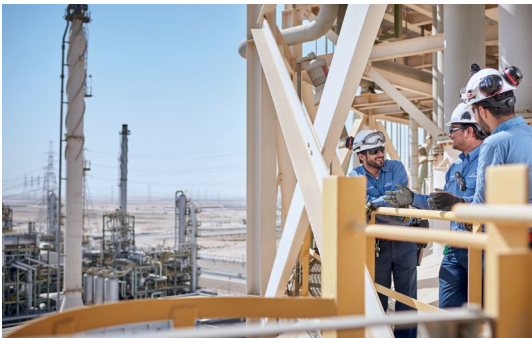
200 charitable projects supported
1 m children, school pupils and students reached
1.9 m patients relying on Linde's respiratory care offerings



AVOIDING CO₂ – AT CUSTOMERS' PLANTS AND IN OUR OWN PLANTS

The best way for us to protect the climate is to ensure CO₂ emissions are not generated in the first place. We will achieve significant reductions in emissions by the end of this decade as a result of efficiency measures in our own plants. We apply Linde technologies for more sustainable processes in industry along the entire value chain. Linde technology, for example, helps our customers separate CO₂ from the waste gases in their industrial plants, so it can be used as an industrial raw material or to recycle waste water. A win-win situation for our customers and the environment.

Here you can find out more about the measures we have taken.



1,500 tonnes
CO₂ waste gas recycled as an industrial
raw material – every day



300 cubic metres
contaminated water cleaned –
every hour



6 million tonnes
CO₂ emissions avoided – our goal
worldwide

1,500 tonnes

CO₂ waste gas recycled as an industrial raw material – every day



Al Jubail, one of the world's largest petrochemical complexes, unlocks promising carbon capture and utilization opportunities.

For a long time, carbon capture and utilisation technology has been one way of reducing carbon emissions. Our flagship project in Saudi Arabia is also proving economic benefits.

Making carbon capture and utilisation economically viable

Awareness of major ecological challenges is growing in every region of the world. With the official launch of its sustainability strategy, Saudi Arabia also set a course towards decarbonisation. In the Al Jubail industrial complex on the Persian Gulf, we constructed the largest CO₂ purification and liquefaction plant in the world for the petrochemical group Jubail United Petrochemical Company. Since February 2017, this plant has been operating at full capacity, demonstrating that the large-scale deployment of carbon capture and utilisation (CCU) not only makes ecological sense but is also attractive from an economic perspective. The CCU plant separates CO₂ before it can escape into the atmosphere and purifies it, so that it can be used as an industrial raw material in the production of methanol and urea.

The recycled CO₂ comes from two ethylene factories nearby, where it is a by-product of the oxidation of ethylene and oxygen. The plant can also produce 200 tonnes of liquefied food-quality CO₂ per day, which is transported to food and drink manufacturers. The use of this technology means that around 500,000 fewer tonnes of greenhouse gases are escaping into the air every year.



300 cubic metres contaminated water cleaned – every hour



With SOLVOCARB®, Linde has developed a reliable and safe concept for injecting gases into liquids to neutralize waste water.

Feeding in carbon dioxide is a fast and ecofriendly way for a textile manufacturer in Turkey to neutralise its industrial waste water and make it reusable.

Treating industrial waste water with CO₂

Clean water is a vital resource. Legal requirements around the world relating to water quality and environmental protection are becoming stricter. For the most part, industrial waste water can only be discharged into sewage systems if it falls within a narrow pH range.

Linde's SOLVOCARB® venturi is a very efficient process for treating such waste water. It is a fast and ecofriendly way to use carbon dioxide to neutralise alkaline water and is being applied successfully by textile manufacturer Bossa Denim in Adana in Turkey. Every hour, up to 300 cubic metres of waste water is brought here to the required pH level by feeding in around 275 kilograms of CO₂. The Linde process also increases operational safety at the plant and reduces its costs. This is because, in contrast to the substance used previously to treat the waste water (sulphuric acid), fewer corrosive substances are produced when CO₂ is used. This helps, for example, to avoid damage to pipes and reduces maintenance costs. The new system meets all the requirements of the local utility company, ensuring the pH level of the waste water moves into the green range.



6 million tonnes

CO₂ emissions avoided – our goal worldwide



By applying a range of efficiency measures, we want to reduce global CO₂ emissions arising from the operation of our HyCO and air separation plants by around 6 million tonnes by 2020.

Exploiting every opportunity to reduce greenhouse gas emissions

When it comes to global climate protection, every measure counts at every single location. In many large industrial plants, energy-saving potential is just waiting to be tapped. This could make a substantial contribution to the reduction of harmful emissions. We have therefore set ourselves the target of avoiding a total of 6 million tonnes of CO₂ emissions from hydrogen and synthesis gas plants (HyCO plants) and air separation plants around the world by 2020.

As a contribution to the success of this initiative, we overhauled an air separation plant in Ningbo, China, in 2017. The entire plant was reconditioned in order to achieve a more efficient use of energy. Filters and pipes in the sea water cooling system are being cleaned and serviced on a regular basis. Steam compressors and flow meters have also been better adapted to the specific needs of the plant, not only optimising its performance, but also reducing its energy requirement. Thanks to these efficiency measures, the whole plant now needs around 8,000 fewer megawatt hours of electricity per year. This has resulted in cost savings of EUR 600,000 for us as the operator of the plant and around 10,000 fewer tonnes of CO₂ emissions per year.



CONTENTS

The Report

- 8 CEO statement
- 10 About this report

About Linde

- 12 About Linde

Sustainability at Linde

- 16 Sustainability Management
- 19 Global Development Goals
- 20 Organisation
- 21 Material topics
- 23 Goals
- 29 Innovations & products
- 33 Compliance
- 36 Sustainable investment
- 37 Stakeholders
- 39 Customers
- 41 Supply chain

Safety

- 43 Safety
- 45 Occupational safety & health protection
- 47 Production
- 48 Transport
- 50 Product stewardship

Environment

- 51 Environment
- 53 Ecosystems
- 54 Raw materials
- 56 Energy & climate protection
- 60 Air
- 61 Water
- 64 Waste

Employees

- 66 Employees
- 68 Winning talent
- 69 Diversity
- 71 Work-life balance
- 72 Involving employees
- 73 Remuneration & social benefits
- 75 Human rights & labour standards

Society

- 77 Social commitment

Key figures

- 79 Overview
- 87 Global Compact
- 92 GRI & Global Compact index
- 124 Assurance

Further information

- 127 Glossary
- 132 Legal notice

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

This is the PDF version of the Corporate Responsibility Report 2017. The full report is available online.

<http://www.linde.com/cr-report2017>

THE REPORT

CHANGE REQUIRES SUSTAINABLE SOLUTIONS

Professor Belloni, the past year has been a challenging one for Linde. How is Linde dealing with change?

2017 was undoubtedly an exciting year. We experienced far-reaching changes and upheavals, such as those caused by digitalisation. There were some surprising election and referendum results. And our proposed merger with Praxair created some additional work. Change is permeating our business activities in many areas, whether as a result of regulatory requirements, changing circumstances or new customer needs. Global competition is increasing. Our employees are working continuously with our customers, as well as with suppliers, partners and researchers, to develop new solutions and more efficient processes. These efforts are key to ensuring that Linde can continue to succeed in the market in the future. Most importantly, change motivates us to continue to improve.

Does that also apply to sustainable management?

Of course. As a global company, we are aware of the role we play in society. Sustainability is one of Linde's foundational principles and the basis for long-term success. We are committed to the principles set out in the UN Global Compact and we support the United Nations Sustainable Development Goals, especially in areas such as clean energy, innovation and health. We are working, for instance, on numerous projects designed to increase energy efficiency. To give an example from our own processes, we were able to reduce local CO₂ emissions in 2017 by around 10,000 tonnes per year as a result of the overhaul of an air separation plant in China. Another example, this time from our product portfolio: In the healthcare sector, we continued to develop our Hospital IQ data platform, which improves hospital care processes for patients receiving oxygen therapy, while at the same time reducing the burden on healthcare staff.



Professor Dr Aldo Belloni,
Chief Executive Officer of Linde AG

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Where do you see room for improvement?

At Linde, we are constantly reviewing our performance and progress at every level. So we are also aware of the areas where we still have work to do. For example, when we transport our products, every accident is one too many. That's why we not only provide training for our own drivers, but also for the employees of our transport service providers, and we invest in vehicle safety. In a pilot project in Asia, for example, we tested technologies that can recognise when a driver is about to nod off at the wheel, identify possible distractions and intervene immediately. We want to use in-depth training to improve the safety culture and increase each individual's sense of personal responsibility for safety.

Which sustainable products and technologies is Linde pioneering to drive forward the necessary changes in today's society?

We are researching and investing in numerous promising technologies and products, such as extracting fuel and energy from waste and recycling and storing CO₂. In Saudi Arabia, we completed the largest CO₂ purification and liquefaction plant in the world in 2017. And we have assumed a pioneering role in eco-friendly hydrogen technology. Fuel-cell vehicles generate no emissions. They also have a long operating range and can be refuelled just as quickly as conventional vehicles. It's important to realise that hydrogen-powered vehicles are not some distant vision of the future. The technology for cars, buses, trucks and trains is well advanced and ready for use. In 2017, for example, we were awarded the contract to supply hydrogen for 14 fuel-cell trains in Germany. The trains are expected to carry passengers from 2021 and will replace existing diesel railcars. But hydrogen has huge potential beyond the mobility sector. "Green hydrogen" has been produced from wind energy in the Mainz Energy Park for two years now. There we are responsible for the processing and distribution of the hydrogen. Our experts are also looking into the role hydrogen can play as a storage medium for energy from renewable sources. A real challenge for a modern society and an incentive for us to continue to be active in shaping change.



G4-1, G4-48

MORE ABOUT

- Sustainability management
- Global Compact website
- Executive Board Linde AG

ABOUT THIS REPORT

Reporting period	Financial year: 1 January to 31 December 2017
Reporting cycle	Annual
Publication	8 March 2018
Format	The report is available as an online publication. The contents of the report (either the whole report or individual sections) can also be downloaded as PDF files.
Integrated reporting	<p>We publish material non-financial key performance indicators (KPIs) and qualitative information about sustainability in our Annual Report. The Corporate Responsibility Report supplements the disclosures in the Annual Report. More information about sustainable business practices can be found inter alia in the following publications and communication channels of the Group:</p> <ul style="list-style-type: none"> — The Linde Group's website contains information on the corporate responsibility focus areas. — The websites of our Gases and Engineering Divisions provide information about sustainability specific to their own business operations. — Some Linde subsidiaries produce regional publications which address sustainability issues. — Product brochures also contain information about the environmental benefits of our technologies. — Our investor relations presentations (which are open to the public) provide information about market opportunities for Linde arising from technologies relating to the energy and environmental sectors and from healthcare. — We use social media to provide corporate responsibility updates. <p>In this report, we include links to these sources where appropriate.</p>
Topics	<p>We analyse the opportunities and risks arising for our Group on a regular basis. In this context, we review the topics we address to ensure that we are meeting the needs of our stakeholders such as employees, customers and shareholders. Information about this materiality analysis is made publicly available.</p> <p>The content of our report is also based on the requirements set out in the Global Reporting Initiative (GRI, G4) and on external sustainability ratings in the capital market.</p>
Scope of the report	<p>The report relates to all companies in The Linde Group over which Linde AG is able to exercise control (the power to govern the financial and operating policies of the entity) or joint control together with other parties.</p> <p>In the case of companies over which Linde AG can exercise joint control, the KPIs are recorded pro rata, with the exception of figures for workplace accidents, which are shown in full even for jointly controlled entities. The KPIs presented in the report relate solely to continuing operations. As the business of our logistics service provider Gist is to be sold, it has been disclosed as a discontinued operation.</p> <p>The financial data of the Group has been extracted from the 2017 Annual Report and has not been modified.</p>
KPIs, data collection methods, bases of calculation	<p>Key performance indicators enable us to track our economic, ecological and social performance. We measure our progress and identify potential for improvement. We use our global reporting systems to collect most of the data needed to generate KPIs for safety, health and environmental protection and for employees. Our financial KPIs are calculated and published in accordance with International Financial Reporting Standards (IFRS). KPIs are generally disclosed over a five-year period.</p>

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

**Independent assurance
provided by a third party**

Material KPIs and selected non-material KPIs have been reviewed by KPMG AG Wirtschaftsprüfungsgesellschaft (KPMG). Those KPIs which were within the scope of KPMG's engagement are identified as such in the tables presented in this report. The scope of the engagement and the conclusion reached by KPMG are disclosed in the [independent assurance report](#). The engagement was conducted in accordance with the International Standard on Assurance Engagements (ISAE) 3000, which covers assurance reports on sustainability reports, and ISAE 3410 Assurance Engagements on Greenhouse Gas Statements.

**UN Global Compact, Global
Reporting Initiative and Non-
Financial Declaration**

In this report, we comply with the [GRI G4 Sustainability Reporting Guidelines](#) of the Global Reporting Initiative (GRI). We have chosen to comply with the more demanding of the two reporting options, the comprehensive option. The Corporate Responsibility Report also serves as a Communication on Progress (COP) report within the framework of our commitment to the United Nations Global Compact. We report on how we implement the ten [Global Compact principles](#) in our Group. Content relevant to the Global Compact is indicated as such in the report by the Global Compact logo. A [combined GRI and Global Compact Index](#) gives a summary and overview of all the focus areas. We are again reporting in accordance with the Advanced Level of the UN Global Compact. We also consider the [Blueprint for Corporate Sustainability Leadership](#), which is an action plan initiated by the Global Compact LEAD platform. Non-financial performance indicators required to be disclosed in accordance with the EU Non-Financial Reporting Directive 2014/95/EU are reported by us in a special section of the Annual Report entitled "Combined Non-Financial Report".

**UN Sustainable Development
Goals**

In this report, we present the contribution made by Linde to the implementation of the [United Nations Sustainable Development Goals \(SDG\)](#).

Terminology used

Specialist terminology and abbreviations are explained in the report's [glossary](#).

**Statements relating to the
future**

This report contains statements relating to the future which are based on the management's current estimates about future developments. These statements are not to be understood as guarantees that these expectations will prove to be true. The future development and the results actually achieved by The Linde Group and its affiliated companies are dependent on a number of risks and uncertainties and may therefore deviate significantly from the statements relating to the future. Linde has no plans to update its statements relating to the future, nor does it accept any obligation to do so.

Prior-year reports

Since 2005, the Group has published reports covering issues such as the environment, employees, sustainability and corporate responsibility. All these reports can be accessed from the [archive on the Group's website](#).

Contact

Your views are important to us. Please [e-mail](#) us any questions or suggestions you may have.



G4-17, G4-18, G4-19, G4-20, G4-21, G4-22, G4-23, G4-28, G4-29, G4-30

MORE ABOUT

- Assurance report
- Material topics
- GRI website
- Global Compact website

ABOUT LINDE

The Linde Group

In the 2017 financial year, The Linde Group generated revenue of EUR 17,113 bn, making it one of the leading gases and engineering companies in the world, with around 58,000 employees working in more than 100 countries worldwide. The strategy of The Linde Group is geared towards long-term profitable growth and focuses on the expansion of its international business with forward-looking products and services. Linde acts responsibly towards its shareholders, business partners, employees, society and the environment in every one of its business areas, regions and locations across the globe. The company is committed to technologies and products that unite the goals of customer value and sustainable development.

Organisation

The company comprises two divisions: Gases and Engineering. The Gases Division, which is the larger of the two, has three operating segments: EMEA (Europe, Middle East and Africa), Asia/Pacific and Americas. These segments are further subdivided into nine Regional Business Units (RBUs). In addition, Linde has established a Centre of Excellence (CoE) for the Gases Division which is centrally managed and operates across the regions. The company has also set up the Group-wide Opportunity & Project Development function in order to take better advantage of business opportunities.

Gases Division

Linde is a world leader in the international gases market. The company offers a wide range of compressed and liquefied gases as well as chemicals and is the partner of choice across a huge variety of industries. Linde gases are used, for example, in the energy sector, steel production, chemical processing, environmental protection and welding, as well as in food processing, glass production and electronics. We are also investing in the expansion of our Healthcare business (medical gases and services), and we are a leading global player in the development of environmentally friendly hydrogen technology.

Engineering Division

Linde's Engineering Division is successful throughout the world, with its focus on promising market segments such as olefin, natural gas, air separation, hydrogen and synthesis gas plants. In contrast to virtually all our competitors, we can rely on our own extensive process engineering know-how in the planning, project development and construction of turnkey industrial plants. Linde plants are used for projects in a wide variety of fields: in the petrochemical and chemical industries, in refineries and fertiliser factories, to recover air gases, to produce hydrogen and synthesis gases, to treat natural gas and to produce noble gases.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

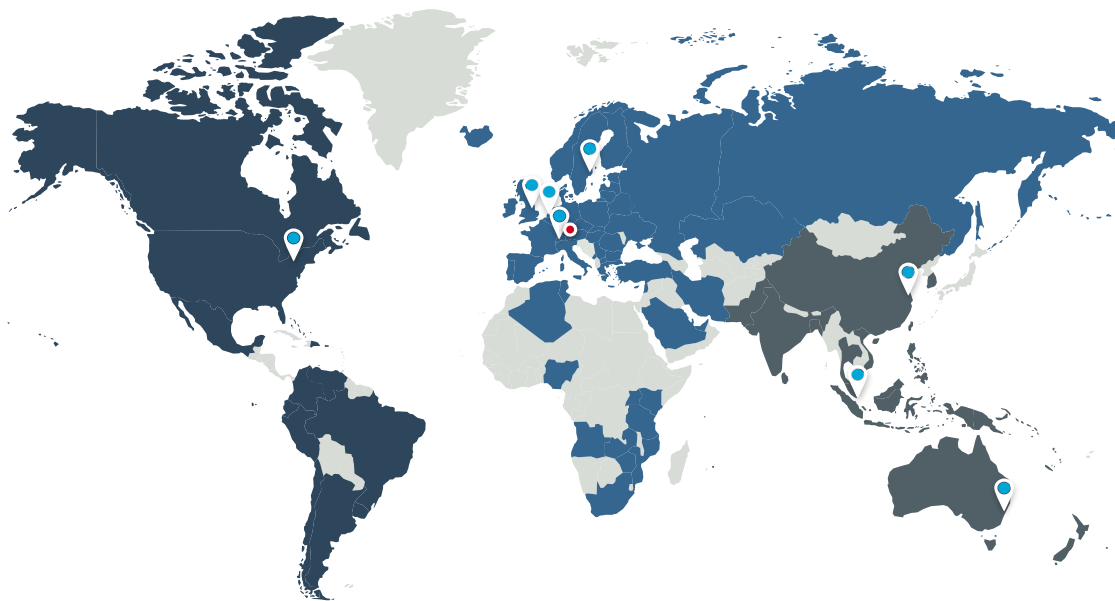
ENVIRONMENT










EMPLOYEES

SOCIETY

KEY FIGURES

The Linde World



Americas	EMEA	Asia/Pacific
 Employees: 20,911 of which female: 49.63% of which male: 50.37%	 Employees: 23,900 of which female: 24.47% of which male: 75.53%	 Employees: 12,794 of which female: 19.26% of which male: 80.74%
 Revenue¹: 5,203 m	 Revenue¹: 7,635 m	 Revenue¹: 4,801 m
 Headquarters: 1	 Headquarters: 5	 Headquarters: 3

¹ Consolidation: EUR -526 million

Business review

In the 2017 financial year, the revenue of The Linde Group from continuing operations was EUR 17.113 bn (2016: EUR 16.948 bn). The main factors contributing to this increase were ongoing positive trends in the EMEA and Asia/Pacific segments and the greater contribution made to revenue by the Engineering Division. Group operating profit from continuing operations rose by 2.8 percent to EUR 4.213 bn (2016: EUR 4.098 bn). After adjusting for exchange rate effects arising on the translation of local currencies into the euro, Group revenue was 2.1 percent higher than in 2016. Group operating profit increased by 4.1 percent after adjusting for exchange rate effects. At 24.6 percent, the Group operating margin was 40 basis points higher than the figure for 2016 of 24.2 percent. Contributing to this improvement were the measures adopted as part of the Group-wide efficiency programmes introduced by Linde (the Focus programme and LIFT). Taken together, these two programmes are expected to deliver cost savings of around EUR 550 m per annum from 2019.

The information provided above relates solely to continuing operations. As the business of the logistics service provider Gist is due to be sold, it has been treated as a discontinued operation.

Linde financial highlights¹

		2017	2016	2015	2014	2013
Share²						
Closing price	€	194.65	156.10	133.90	154.20	152.05
Year high	€	197.00	163.55	193.85	157.30	153.90
Year low	€	155.50	115.85	128.05	139.15	128.60
Market capitalisation (at year-end closing price)	€ million	36,134	28,978	24,857	28,625	28,219
No. of shares (at 31 December)	000s	185,638	185,638	185,638	185,638	185,588
Cash dividend per share	€	7.00	3.70	3.45	3.15	3.00
Group						
Revenue	€ million	17,113	16,948	17,345	17,047	16,655
In Germany	%	7.4	7.2	7.5	7.4	7.9
Outside Germany	%	92.6	92.8	92.5	92.6	92.1
Operating profit ³	€ million	4,213	4,098	4,087	3,920	3,966
Operating margin	%	24.6	24.2	23.6	23.0	23.8
EBIT	€ million	1,944	2,075	2,029	1,885	2,171
Profit for the year – attributable for Linde AG shareholders	€ million	1,404	1,206	1,133	1,162	1,430
Capital expenditure (excluding financial assets)	€ million	1,766	2,004	2,036	1,954	2,268
Equity ratio	%	44.9	44.0	43.7	41.4	41.5
Return on capital employed (ROCE)	%	10.2	9.4	9.5	9.5	9.7
Personnel expenses	€ billion	✓ 3,780	✓ 3,724	3,829	3,536	3,423
Personnel expenses (per employee)	€ 1,000	65.6	62.4	64.1	53.9	53.9
Pension costs	€ million	✓ 291	✓ 293	278	293	281
Donations	€ million	✓ 2.1	2.7	2.4	2.8	2.7
Gases Division						
Revenue	€ million	14,988	14,892	15,168	13,982	13,971
Operating profit ³	€ million	4,268	4,210	4,151	3,835	3,846
Operating margin	%	28.5	28.3	27.4	27.4	27.5

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² The share price-related information for the 2017 financial year is based on the shares in Linde that were submitted for exchange (ISIN DE000A2E4L75), which have been listed since 15 August 2017.

³ EBIT (before non-recurring items) adjusted for amortisation of intangible assets and depreciation of tangible assets.

✓ Included in the audited [Non-Financial Report](#)

✓ Audited by KPMG

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Linde financial highlights¹

		2017	2016	2015	2014	2013
Engineering Division						
Revenue	€ million	2,388	2,351	2,594	3,074	2,879
Operating profit ³	€ million	220	196	216	300	319
Operating margin	%	9.2	8.3	8.3	9.8	11.1

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² The share price-related information for the 2017 financial year is based on the shares in Linde that were submitted for exchange (ISIN DE000A2E4L75), which have been listed since 15 August 2017.

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✓ Audited by KPMG



G4-3, G4-4, G4-6, G4-8, G4-9, G4-10, G4-13, G4-17

MORE ABOUT

- Sustainable investment
- Customers
- Innovations and products
- Group homepage
- Corporate history
- Gases Division
- Engineering Division
- Linde Healthcare
- Business review 2017
(Financial Report p. 52 ff.)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

SUSTAINABILITY AT LINDE

SUSTAINABILITY MANAGEMENT

KEY FIGURES		
Suppliers >100 suppliers reviewed with respect to environmental, safety or other sustainability issues	Innovation >50% of research projects have an environmental benefit	Compliance 195,000 training sessions delivered on compliance topics since the programme started in 2009
PROGRESS		
Suppliers 2,500 contractors' employees reached through a programme designed to promote safe behaviour	Healthcare 673 patients surveyed about their satisfaction with the services provided by Linde's REMEO® programme and improvement projects developed as a result	Compliance Raised employees awareness for the topic of antitrust law
OUTLOOK		
Eco-portfolio Further invest in the development of efficient hydrogen refuelling technology and in setting up a supply infrastructure	Innovation Continue to test the technology for even more energy-efficient carbon capture and forge ahead with its commercialisation	Customer relationships Continue to record and analyse activities in the countries in which we generate the most revenue

We combine long-term business success with ecological and social responsibility. Sustainability is therefore an important part of our Group strategy. That is why we constantly analyse the impact of our business operations on people and on the environment and incorporate sustainability topics in our core business. Our innovations and products enable us to make a contribution towards sustainable development and support our customers' efforts, for example, to increase their energy efficiency or reduce their emissions. We underline our commitment to sustainable development by supporting the principles set out in the United Nations Global Compact. We have also reviewed our contribution to the UN's Sustainable Development Goals and have published a summary of this on our [website](#).

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

The sustainable development activities we pursue are based on established principles:

- **Materiality:** We concentrate on topics which are of great importance to our business success and to people and the environment.
- **Core business:** We incorporate sustainability topics in the key business processes of our Group. We consider the impact of our business activity throughout the life-cycle of our products.
- **Continuous improvement:** We continually analyse how sustainability enables us to exploit business opportunities and to minimise risks. We set ourselves quantitative and qualitative targets and use corporate responsibility indicators to measure our progress.
- **Transparency:** We report on a regular basis on our sustainability activities and engage with our stakeholders on this subject. We use the knowledge derived from this dialogue in our sustainability management.

Values

The values and principles of our Group are set out in the Linde Spirit and describe how we want to achieve our corporate goals.

Our values:

- Empowering people
- Innovating for customers
- Thriving through diversity
- Passion to excel

Our principles:

- Safety
- Integrity
- Sustainability
- Respect

Global standards

In our internal guidelines, we set out the way in which we assume our obligations in the Group. Our Code of Ethics defines clear standards which govern how our employees interact with each other and conduct themselves towards stakeholders, such as customers, suppliers, the authorities and business partners. The Code of Ethics is binding for all employees in The Linde Group. Our Code of Ethics is supplemented by other global guidelines and standards which concern our commitment in core areas such as safety, environmental and health protection, product stewardship, supplier management and compliance. We base our standards on internationally recognised guidelines and principles. These include:

- the [German Corporate Governance Code](#),
- the [Universal Declaration of Human Rights](#),
- the [OECD Guidelines for Multinational Enterprises](#),
- the [ILO International Labour Standards](#),
- the [UN Guiding Principles for Business and Human Rights](#),
- the [ten principles of the UN Global Compact](#) and
- the [Responsible Care Global Charter](#).

Key topics in the Code of Ethics of The Linde Group

Corporate responsibility	Protecting company assets and company secrets	Competition and antitrust law	Human rights and dealing with each other
Purchasing and conflicts of interest	International trade	Financial reporting and insider dealing	Data protection
Corruption	Government and political activities	Communication and advertising	Safety, Health, Environment and Quality



G4-2, G4-14, G4-15, G4-31, G4-34, G4-35, G4-36, G4-37, G4-38, G4-42, G4-43, G4-45, G4-46, G4-47, G4-48, G4-50, G4-56, G4-57, G4-EN7, G4-EN27



1, 2, 3, 4, 5, 6, 7, 8, 9, 10



MORE ABOUT

- CEO statement
- Cooperation for sustainability
- Material topics
- Innovations and products
- The Linde Spirit
- Opportunities and risks (Financial Report p. 75 ff.)

DOWNLOADS

- ↓ Code of Ethics
- ↓ Code of Conduct for Suppliers
- ↓ Health, Safety and Environment Policy

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

CONTRIBUTION TO GLOBAL DEVELOPMENT GOALS

In 2016, the United Nations adopted 17 global Sustainable Development Goals (SDGs). Linde supports these development goals and is contributing to their implementation. We have analysed the 17 development goals and their sub-goals to establish their importance for our business operations. We have focused here on the impact we can have on aspects of the goals and the opportunity presented to us to make a positive contribution towards achieving the goals. Linde can influence the development goals through its products and services, responsible production, cooperation with partners and engagement with society. The extent to which we can influence the UN development goals varies, however according to the goal. Against this background, four of the development goals are particularly relevant for Linde:

- **Good Health and Well-Being (SDG 3)**
Our therapies for the treatment of respiratory disease and the services we are able to provide in the care continuum from hospital to home contribute towards improving patients' lives. The health and safety of our employees, customers, suppliers and neighbours are the highest priority for us.
- **Affordable and Clean Energy (SDG 7)**
We team up with partners on solutions for the energy supply of tomorrow. In our own processes, energy efficiency is a crucial factor in our success.
- **Decent Work and Economic Growth (SDG 8)**
Our business model is geared towards sustainable and profitable growth. We ensure we offer our employees fair and attractive working conditions. Minimum standards for fair employment apply to our suppliers.
- **Industry, Innovation and Infrastructure (SDG 9)**
We invest in a sustainable future through our research and development activities. These include setting up an infrastructure for hydrogen-powered mobility.

In areas which might have a negative impact on aspects of the development goals, such as safety and climate protection, we are devising measures to reduce this impact.

MORE ABOUT

- [SDG website](#)
- [Linde's contribution to the SDGs](#)

ORGANISATION

The Executive Board of Linde AG makes decisions about key topics relating to sustainable development. A new code for the responsible representation of interests in the political sphere and a Group-wide framework for the handling of risks and dangerous situations were among matters agreed in 2017. Work was also carried out on a human rights guideline and on the implementation of corresponding control mechanisms and discussed by the Executive Board. Experts from within the Group advise on strategic measures and sustainability goals and prepare decision papers for the Executive Board.

The departments and business units responsible implement the guidelines and devise tailor-made measures for different sectors and regions. The Corporate Responsibility department coordinates the implementation of initiatives in consultation with the departments and those employees in the regions responsible for the topics. It is also the key point of contact for stakeholders on sustainability issues.

MORE ABOUT

- CEO statement
- Executive Board Linde AG
- Management organisation
(Financial Report p. 198 f.)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

MATERIAL TOPICS

We continually analyse risks and opportunities arising which might impact our business operations. We identify relevant sustainability topics using a materiality analysis. We conduct assessments to ascertain which topics are vital for our business success and to determine the areas in which we can make a particular contribution to sustainable development. Important aspects we consider include demands placed upon our Group by our stakeholders.

The topics we classify in this way enable us to decide on focus areas for our sustainability management and our reporting. This process also helps us identify important topics at an early stage. We review the results of this process on a regular basis to see if it is up to date and adjust accordingly if required. In addition, we seek to establish the stage of the value chain at which topics have particular relevance.

Relevance of sustainability topics for Linde

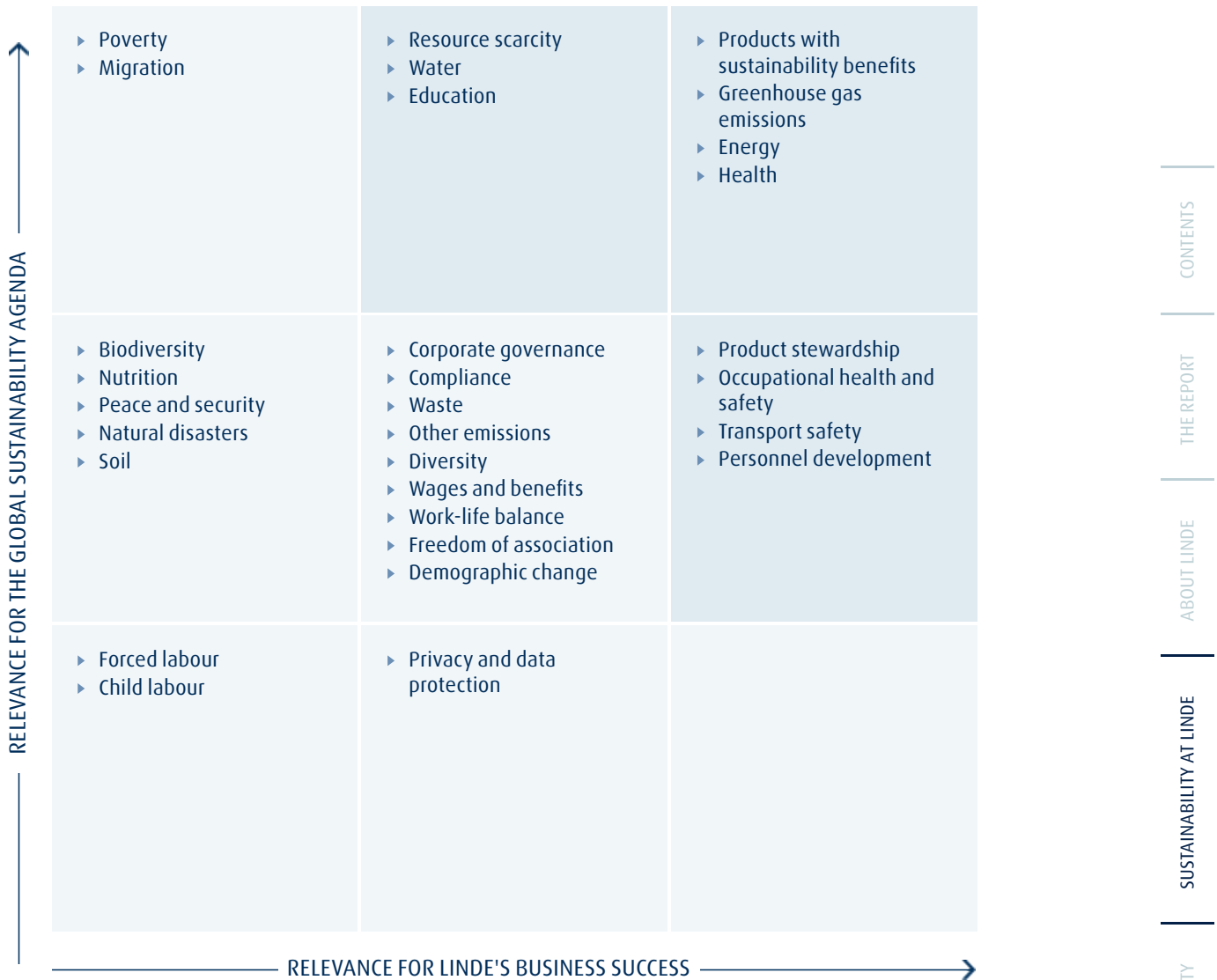
When we prioritise topics, we draw on a combination of impact analysis and evaluations by our stakeholders. Our focus is on the extent to which sustainability topics

- are relevant to the business success of Linde. Our sources here include assessments by our customers, investors and employees;
- are important for the sustainable development of the company. In this context, we evaluate the impact of our business activities on people and the environment. Also included here are assessments made by experts, such as political figures and non-governmental organisations.

We use numerous sources of information and dialogue formats to meet the diverse demands placed upon our company by external stakeholders. These include surveys and dialogue with shareholders, customers and other business partners. In addition, we analyse enquiries from our stakeholders. In 2017, the Group's Corporate Responsibility department replied to more than 1,300 questions about sustainability at Linde. Other sources are legislative initiatives and political decisions.

Within Linde, we evaluate information from employee questionnaires, workshops with subject specialists and strategy experts, and interdisciplinary working parties. At the end of 2017, we conducted another survey about sustainability topics in all regions. Among other things, this covered local activities and areas of focus, collaborations with stakeholders, and engagement with society at our locations. The results of this survey are included in our reporting. In addition, we consider findings derived from our Group risk management about environmental and social risks as well as procurement analyses and market analyses.

When we prioritise topics, we are also guided by internationally recognised standards. These include the principles set out in the UN Global Compact and sustainability ratings in the capital market. In 2017, we also conducted a materiality analysis as part of our reporting of non-financial performance indicators in accordance with the EU Non-Financial Reporting Directive 2014/95/EU (Non-Financial Declaration).



G4-18, G4-19, G4-20, G4-21, G4-24, G4-25, G4-26, G4-27

MORE ABOUT

- Energy and climate protection
- Safety
- Innovations and products
- Cooperation for sustainability
- Opportunities and risks
(Financial Report p. 75 ff.)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

GOALS

STATUS

-  In progress
 Target reached

Corporate governance

FINANCE

Target/goal: Generate Group revenue in 2017 after adjusting for exchange rate effects which is between 3 percent below and 3 percent above the revenue in 2016

Progress: Target reached

Status:



Timeframe: 2017

Target/goal: Achieve Group operating profit in 2017 after adjusting for exchange rate effects on a par with or up to 7 percent higher than that in 2016; based on the exchange rates ruling on 31 December 2016, this would mean Group operating profit in 2017 of between EUR 4.2 bn and EUR 4.5 bn

Progress: Target reached

Status:



Timeframe: 2017

Target/goal: ROCE of between 9 percent and 10 percent in the 2017 financial year

Progress: Target reached

Status:



Timeframe: 2017

Target/goal: Reduce costs by around EUR 180 m through the Focus restructuring programme

Progress: Target reached
More in the [Annual Report p. 53](#)

Status:



Timeframe: 2015
– 2017

Target/goal: After adjustments to reflect the effects of IFRS 15 and exchange rate effects, Group revenue is to be on a par with the previous year in 2018 and could increase by up to 4 percent

Progress: New target
More in the [Annual Report p. 90](#)

Status:



Timeframe: 2018

Target/goal: The Group operating profit, after adjustments to reflect exchange rate effects, is expected to range between the prior-year level and a figure that is 5 percent higher

Progress: New target
More in the [Annual Report p. 90](#)

Status:



Timeframe: 2018

Target/goal: ROCE of around 10 percent in the 2018 financial year

Progress: New target
More in the [Annual Report p. 90](#)

Status:



Timeframe: 2018

Target/goal: Reduce costs by around EUR 370 m per annum through the LIFT programme

Progress: Continuous implementation
More in the [Annual Report p. 53](#)

Status:



Timeframe: From 2019

PRODUCTS

Target/goal: Develop products and technologies that unite customer value and sustainable development

Progress:

- Focus on the five key areas of our innovation strategy: advanced materials, efficiency, environment & resources, quality of life, and digitalisation
- 500 patents in chemical and environmental sectors, clean energy and hydrogen technologies
- Around 50 percent of research projects aim to achieve an environmental benefit

More about [innovations](#)
More about [energy and climate protection](#)
More about [water](#)
More about [air emissions](#)
More about [waste](#)

Status:



Timeframe:
Ongoing

ENGAGEMENT WITH STAKEHOLDERS

Target/goal: Reflect the needs of our stakeholders in our sustainability management

Progress:

- More than 1,300 questions from stakeholders answered about sustainability at Linde
- Survey conducted of customers and employees on various topics
- Shareholders and potential investors offered the opportunity to meet us in person – at almost 40 conferences and roadshows worldwide and at several events for private investors

More about [stakeholders](#)

More about the [materiality analysis](#)

More about Investor Relations in the [Annual Report p. 38](#)

Status:



Timeframe:
Ongoing

Safety

OCCUPATIONAL SAFETY

Target/goal: Continuously reduce the number of workplace accidents per million hours worked (base year 2012)

Progress:

- 4 percent reduction in workplace accidents per million hours worked in 2017 achieved relative to base year 2012

More about [occupational safety](#)

Status:



Timeframe: 2020

Target/goal: Harmonise safety-related processes

Progress:

- Group-wide framework agreed for the handling of risks and dangerous situations

More about [Organisation](#)

Status:



Timeframe:
Ongoing

HEALTH PROTECTION

Target/goal: Expand and harmonise occupational health management programmes

Progress:

- Health insurance benefits for employees in the Engineering Division in Russia enhanced
- Number of days of paid sick leave for employees in the Healthcare segment in our subsidiary Lincare in the US increased

More about [work-life balance](#)

More about [health protection](#)

Status:



Timeframe:

Ongoing

Target/goal: Reduce health risks arising from manual work

Progress:

- Occupational health and safety audits conducted at just under 52 percent of operating sites
- Around 17 percent of operating sites are audited in accordance with OHSAS 18001

More about [production](#)

More about [health protection](#)

Status:



Timeframe:

Ongoing

PRODUCTION

Target/goal: Conduct a standardised risk review of sites and define control mechanisms to minimise these risks to the greatest possible extent (Major Hazards Review Programme, MHRP)

Progress:

- More than 95 percent of the sites concerned certified in line with the MHRP process by the end of 2017

More about [production](#)

Status:



Timeframe:

Long-term goal

TRANSPORT

Target/goal: Reduce the frequency of serious transport incidents per million kilometres travelled by 20 percent compared with the base year 2015

Progress:

- 5 percent reduction in serious transport incidents per million kilometres travelled in 2017 achieved relative to base year 2015

More about [transport](#)

Status:



Timeframe: 2020

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Environmental protection

CLIMATE PROTECTION AND ENERGY EFFICIENCY

Target/goal: Avoid a total of 6 million tonnes of CO₂ emissions as a result of technical improvements in plant design and more efficient production processes in air separation plants and hydrogen plants (base year 2009)

Progress:

- A total of 4.1 million tonnes of CO₂ emissions have been avoided since 2009, of which 0.9 million tonnes were direct emissions and 3.2 million tonnes were indirect emissions

More about [energy and climate protection](#)

Status:



Timeframe: 2020

Target/goal: Identify projects with the potential to reduce energy consumption

Progress:

- More than 170 projects identified around the world; reduction in energy consumption of more than EUR 18 m and reduction in CO₂ emissions of around 126,000 tonnes of CO₂

More about [environmental protection](#)

Status:



Timeframe:
Ongoing

Employees

MANAGEMENT

Target/goal: Increase the proportion of female employees worldwide in the first management tier below the Executive Board to 14 percent in 2017

Progress:

- Proportion of women in the first management tier below the Executive Board was 15 percent in 2017 (2016: 16 percent)

More about [diversity](#)

Status:**Timeframe:** 2017

Target/goal: Increase the proportion of female employees worldwide in the second management tier below the Executive Board to 17 percent in 2017

Progress:

- Proportion of women in the second management tier below the Executive Board was 14.5 percent in 2017 (2016: 18 percent)

More about [diversity](#)

Status:**Timeframe:** 2017

Target/goal: Increase the proportion of female employees worldwide in the first management tier below the Executive Board to 18 percent in 2022

Progress:

- Proportion of women in the first management tier below the Executive Board was 15 percent in 2017 (2016: 16 percent)

More about [diversity](#)

Status:**Timeframe:** 2022

Target/goal: Increase the proportion of female employees worldwide in the second management tier below the Executive Board to 22 percent in 2022

Progress:

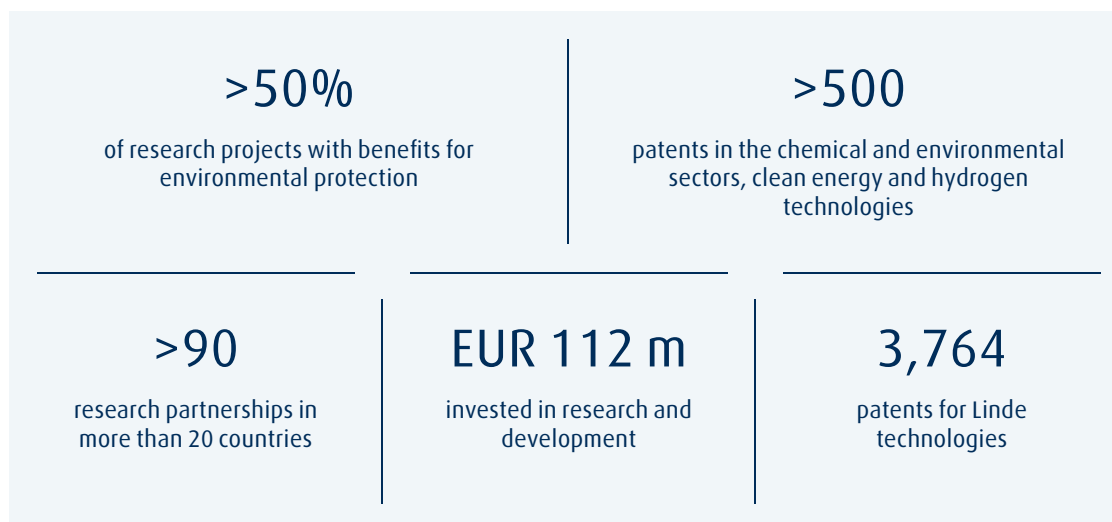
- Proportion of women in the second management tier below the Executive Board was 14.5 percent in 2017 (2016: 18 percent)

More about [diversity](#)

Status:**Timeframe:** 2022

INNOVATIONS AND PRODUCTS

Innovations



Innovations make a significant contribution to the success of our business and ensure we have a competitive advantage in the market. We therefore invest in research and development and are always trying to devise new and improved products, processes and services. In 2017, we invested a total of EUR 112 m in research and development (2016: EUR 121 m). At 31 December 2017, we employed 350 staff in this field (2016: 345), 241 of whom were working in the Gases Division and 109 in the Engineering Division. To protect our innovations from the competition, we filed 232 new patents across the Group during the reporting year. As at 31 December 2017, various Linde technologies were protected by a total of 3,764 patents. Many of them feature sustainability aspects, with over 500 patents relating to the chemical and environmental sectors, clean energy and hydrogen technologies. In addition, more than half of our 140 or so research and development projects in 2017 also aimed to achieve an environmental benefit.

Research and development¹

	2017	2016	2015	2014	2013
Expenditure for research and development	✓ 112	✓ 121	131	106	92
Employees in the research and development field	350	345	348	390	367
New patents filed	232	360	287	260	263

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Included in the audited [Non-Financial Report](#)

Cooperation for innovation

We are continuously tapping into new ways of using our gases and improving our existing processes, plant technologies and applications. Development is almost always set in the context of commissions and involves close liaison with our customers, taking their requirements into account. Moreover, when we embark on innovation activities, we bring leading external institutions and companies on board and enter into collaborative projects. In this area, we currently have access to a network of over 90 partners in more than 20 countries. When cooperating with partners, we focus our research and

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

development activities on improving the interplay between energy efficiency, cost-effectiveness and environmental compatibility. For this reason, we are, for example, a member of a partnership comprising 17 companies and industrial and scientific institutions, which came together in 2016 under the umbrella of the Carbon2Chem climate protection research project. The project, which is set to run for ten years, is to investigate ways of using smelting gases from steelworks to extract chemical raw materials. The coke oven gas produced by steelworks contains more than 60 percent hydrogen by volume and has until now been a virtually untapped resource. We are also focusing on the integration of renewable energy. In this context, we are, for instance, involved in SynErgie, a Kopernikus project subsidised by the German federal government. The aim of the project is to increase power grid stability in Germany through flexible use by major industrial consumers and to mitigate fluctuations which may arise as a result of the use of renewable energy. We are working together with the Technical University of Munich and RWTH Aachen to refine the technology for cryogenic air separation. In this way, we are making modifications to our core technology to meet the technical and operational requirements of the "Energiewende", Germany's energy transition.

Key topics in the innovation strategy

Advanced materials	Efficiency	Environment and resources	Quality of life
Research into impact of industrial gases on properties of materials and on production processes	Sustainable customer value through boosting efficiency of established processes	Optimal balance between energy consumption, cost-effectiveness and environmental compatibility	Ongoing development of products and services in the Healthcare business
Digitalisation			
Opening up new opportunities through networking and evaluation of data sources			

In the innovation strategy we introduced in 2016, we focus on five key topics: advanced materials, efficiency, environment & resources, quality of life, and the overarching topic of digitalisation. For several years now, we have, for example, been supporting the ongoing development of hydrogen mobility, which means that - among other things - we have been part of the joint venture H₂ Mobility, which is based in Berlin. The aim of the partnership between various industrial groups is the gradual expansion of a nationwide hydrogen filling station network in Germany. By 2023, around 400 of these filling stations should be in operation – at the end of 2017 there were 42.

In the area of healthcare, among other things we continued in 2017 to develop our Hospital IQ data platform, rolling it out, for example, in the United States and in Germany. The data platform, which builds on the benefits offered by the new generation of medical oxygen cylinders (LIV® IQ), has been enhanced to include additional functions. The LIV® IQ cylinders can be centrally monitored by a hospital employee using a PC or another device with access to the internet. In the area of digitalisation, we invested a lot of time in 2017, for example, looking at the integration and evaluation of volumes of data, such as that provided to us by the 500,000 or so sensors in our air separation plants. The aim of our research in this area is to develop new services or to improve maintenance and servicing processes.

Products with benefits for the environment and the society

<p>Food & beverages</p> <p>70% is our market share in technologies and applications used in salmon aquaculture farming in Norway →</p>	<p>Chemistry & energy</p> <p>Around 14,500 tonnes of NO_x emissions per annum can be avoided by our customers using our LoTOx™ technology in combustion processes →</p>	<p>Metallurgy & glass</p> <p>18 million tonnes of CO₂ can be avoided by our customers in one year just by using one of Linde's oxygen applications →</p>
<p>Manufacturing industry</p> <p>790 million cubic metres of water per annum is brought up to drinking water quality by customers in just six countries using our SOLVOCARB® process →</p>	<p>Electronics</p> <p>The equivalent of 275,000 tonnes of CO₂ per annum can be avoided by customers in the semiconductor industry by replacing environmentally harmful nitrogen trifluoride with fluorine →</p>	<p>Healthcare</p> <p>About 1.9 million patients with respiratory diseases worldwide are treated at home with our oxygen therapy and additional Homecare therapies →</p>

Our products support our customers in a variety of ways, so that they can develop more sustainable processes: for example, through greater energy efficiency or reduced emissions. We are continuing to expand our product range in the area of energy and environmental technologies. This range comprises processes and technologies required along the entire length of the value chain of renewable and fossil fuels: from production via conversion, transport and storage to their most efficient use.

Our gases and technologies contribute towards large-scale reductions in emissions. A particularly high proportion of this reduction in emissions stems from the use of oxygen in a special combustion process in oxyfuel plants and the use of hydrogen in the desulphurisation of fuel in the oil industry. The use of oxyfuel technology alone enables our customers to avoid more than 18 million tonnes of CO₂ per annum.

One of the main focuses of Linde's research is CO₂ recycling and storage. For example, since 2015 we have been testing new processes for the production of synthesis gas using CO₂ at our own pilot facility on the Pullach site in Germany. In the Netherlands, we are supplying plants in more than 620 greenhouses with 450,000 tonnes of CO₂ a year generated from an oil refinery and a bioethanol plant. We endeavour to exploit the full potential of our innovative technologies either to avoid or significantly reduce CO₂ emissions or to recycle them in industrial processes. More information about selected projects which provide groundbreaking solutions can be found [here](#).

With the aim of continuing to reduce environmental pollution, our products are also deployed in the mobility sector. The use of liquefied natural gas (LNG) or hydrogen significantly reduces emissions from cars, buses, trucks and ships. We are not only investing in the development of efficient hydrogen refuelling technology, but are also cooperating with partners to set up a supply infrastructure. In 2017, we were awarded the contract to supply hydrogen for a total of 14 fuel-cell trains in Germany. The trains are expected to carry passengers from December 2021. They will replace existing diesel railcars and reduce emissions of pollutants in everyday operations to zero.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Healthcare is also an important growth market for Linde. In 2017, our Healthcare business generated revenue of around EUR 3.4 bn. Our therapies for the treatment of respiratory disease and the services we are able to provide in the care continuum from hospital to home contribute towards improving the lives of around 1.9 million homecare patients and relieving the burden on healthcare systems.



G4-EN7, G4-EN27



7, 8, 9



MORE ABOUT

- Energy and climate protection
- Products for water protection
- Air emissions
- Waste and recycling
- Material topics
- Products for the environment
- Research and development
(Financial Report p. 70 ff.)
- Instant insights (Annual p. 30 ff.)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

CORPORATE GOVERNANCE AND COMPLIANCE

Compliance organisation

Prevent	Detect	Respond
<ul style="list-style-type: none"> — Global Code of Ethics — Compliance policies — Guidance from international standards — E-learning — Face-to-face training — Advice by Compliance Officers 	<ul style="list-style-type: none"> — Linde Integrity Line — Compliance investigations/audits 	<ul style="list-style-type: none"> — Follow up on reports of misconduct — Monitoring of actions taken (consequence management) — Cooperation with authorities

Good corporate governance is an essential prerequisite of our business success. Our corporate governance is based on the German Corporate Governance Code. We comply to a great extent with the requirements of the Code and explain any deviations from the Code in our Annual Report.

Corporate governance also means ensuring compliance with laws, regulations and voluntary commitments. The core guidelines governing the way we do business are set out in our Code of Ethics. This describes the principles we expect all Linde employees to adopt when dealing with business partners, officials, colleagues and other reference groups. Issues covered in the Code of Ethics include not only corruption, antitrust law and the protection of company secrets, but also human rights, safety standards, labour standards and social standards. Our global compliance organisation helps us fulfil our commitments in our day-to-day business.

Moreover, we are a signatory to the United Nations Call to Action: Anti-Corruption and the Global Development Agenda. This means that we have joined other companies in demonstrating a commitment to the ongoing development of efficient anti-corruption measures.

Compliance organisation

Our compliance organisation is led by the Head of Group Legal & Compliance. In the regions and business areas, the implementation of the compliance management system is supported by compliance officers. Their tasks include advising employees, providing training and conducting interviews with employees on compliance risks. The Head of Group Legal & Compliance provides regular reports to the Executive Board and the Audit Committee of the Supervisory Board on the activities of the compliance organisation.

Prevention is key

Our objective is to prevent violations of the law or of internal guidelines. In our global compliance programme, we therefore rely especially on providing information, training and personal advice.

We use various communication channels to keep our employees up to date. Our intranet is our basic form of communication. Here, our employees worldwide are able to access information about compliance and about our compliance guidelines in up to 29 languages.

Our range of training opportunities includes classroom-based training and e-learning courses. We provided classroom-based training to around 28,000 members of staff across the globe between 2009 and 2017. Of these, around 4,000 received this type of training during the reporting year. Between 2009 and 2017, employees completed some 195,000 e-learning training sessions. Around 38,000 of these were in 2017. Subjects covered by the training included the Code of Ethics and the guideline on business partners. We also conduct training updates at regular intervals. In the reporting year, for example, we provided our employees with specific information about dealing with antitrust law in order to raise awareness of the subject.

We operate compliance hotlines where our compliance officers provide support to all our employees, regardless of their role or seniority. In 2017, our compliance officers received around 8,500 requests for legal advice. Most of the queries related to the prevention of corruption (21 percent) and to antitrust law (23 percent). We also received queries about export control (33 percent) and data protection (15 percent).

Compliance¹

	2017	2016	2015	2014	2013
Contacts Integrity Line	✓ 351	✓ 348	300	734	393
Investigations as a result of reports to the Integrity Line	✓ 94	✓ 106	140	127	88
of which referring to personnel topics	% ✓ 32.1	✓ 30.1	25.7	26.8	36.4
of which referring to potential offences against property	% ✓ 24.1	✓ 30.7	26.4	32.3	33.0
of which referring to potential discrimination	% ✓ 1.2	✓ 1.3	2.8	1.6	2.3
of which referring to potential conflicts of interest	% ✓ 16.7	✓ 15.0	13.6	9.4	12.5

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Included in the audited [Non-Financial Report](#)

Dealing with misconduct

We want to identify and deal swiftly with any misconduct and we therefore have processes in place to do so. Moreover, we actively encourage our employees to ask for advice early if they have any concerns and to report any violations of our guidelines or of legal requirements via our global reporting system, the Linde Integrity Line. Employees and external third parties such as customers and suppliers can use the Integrity Line to report suspected violations, anonymously if they so wish. We ensure that each case is examined and generates a response. Our Integrity Line guideline governs the processes required.

In 2017, the Integrity Line was contacted 351 times in total (2016: 348). There were 94 cases (2016: 106) involving suspected misconduct. Most of these related to personnel issues (2017: 32 percent; 2016: 30 percent) or to offences against property (2017: 24 percent; 2016: 31 percent). We also investigated reports of conflicts of interest (2017: 17 percent; 2016: 15 percent) and of discrimination (2017: 1 percent; 2016: 1 percent).

Linde employees who violate our guidelines or legal regulations must be prepared to face sanctions. All the cases which have been reported via the Integrity Line and prove to be justified once they have been investigated entail consequences. In 2017, these consequences included training, warnings and dismissals.



G4-14, G4-15, G4-37, G4-49, G4-50, G4-56,
G4-57, G4-58, G4-EN29, G4-LA16, G4-HR2,
G4-HR3, G4-HR12, G4-S03, G4-S04, G4-S011,
G4-PR8



1, 2, 3, 4, 5, 6, 7,
10



MORE ABOUT

- Sustainability management
- Supply chain
- Linde Integrity Line
- Corporate governance
(Financial Report p. 15 ff.)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

SUSTAINABLE INVESTMENT

The capital market evaluates responsible corporate management by making financial investments which take account of the principles of sustainable management (Socially Responsible Investment, SRI). In 2017, at almost 40 conferences and roadshows around the world and several events for private investors, we offered our shareholders and potential investors the opportunity to speak personally to representatives of the Group, including members of our Executive Board. The proportion of investors among Linde shareholders who are oriented towards sustainability rose in 2017 to 12.4 percent (2016: 12 percent).

Linde is represented in a number of SRI funds, indices and rankings. Among these is the global Dow Jones Sustainability Index (DJSI World), one of the best-known sustainability indices. Linde has been included in this index for the sixth year in succession. We performed particularly well, for example, in the following categories: product stewardship, working conditions and reporting on social issues. Other indices in which Linde is represented include the FTSE4Good Index Series, the Ethibel Sustainability Index (ESI) and the STOXX Global ESG Leaders Index.



MORE ABOUT

- Energy and climate protection
- Investor Relations
- Ratings and rankings
- Linde shares (Financial Report p. 40 ff.)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

COOPERATION FOR SUSTAINABILITY

We regularly review the demands placed upon the Group by our major stakeholders. These include our employees, customers, shareholders, suppliers, and neighbours in the vicinity of our business locations. Other relevant interest groups with whom we are continually in contact are politicians, economists, scientists and non-governmental organisations.

Science

We work together with scientific institutions and other companies to promote, for example, the development of sustainable solutions in the energy supply and mobility sectors. Linde is one of the founding members of the Clean Energy Partnership (CEP), the largest demonstration project for hydrogen-based mobility in Europe. With the support of the German government, the CEP is testing fuel-cell vehicles and their refuelling systems.

Associations

Linde is an active member of a number of German, European and international industry associations and trade associations. These include the German Chemical Industry Association (VCI), the German Mechanical Engineering Association (VDMA), the European Industrial Gases Association (EIGA), the European Chemical Industry Council (CEFIC) and the Asian Industrial Gases Association (AIGA). Linde is also a member of selected corporate responsibility networks, one of which is econsense – Forum for Sustainable Development of German Business.

Politics

In 2017, our dialogue with politics and society focused in particular on the proposed merger with the company Praxair. Taking into account financial market regulations, we provided information to decision-makers in Germany about the industrial logic of the merger of equals and the necessary steps in the process. Moreover, we addressed the role of innovative Linde technologies in the implementation of the Paris climate agreement. Linde is also an active member of the Hydrogen Council, a global alliance of companies aiming to promote hydrogen technologies and place greater emphasis on their significance in the political arena.

In our contacts with political decision-makers in Germany and Europe, we made the case for ensuring competitive conditions in energy and climate policy. We also analysed political developments in Qatar, Russia and Iran and their impact on Linde's business areas, and coordinated the resulting dialogue with political decision-makers.

Our stakeholders



G4-16, G4-24, G4-25, G4-26, G4-27, G4-S01, G4-S06



7, 8, 9



MORE ABOUT

- Employees
- Customers
- Sustainable investment
- Supply chain
- Social commitment
- Material topics
- Political interests

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

CUSTOMER RELATIONSHIPS

With our gases and services, we are a partner to more than two million customers around the world in virtually all industry sectors. A third of the revenue of our Gases Division is derived from around 500 major customers, who are the focus of our efforts. We work constantly to enhance customer satisfaction and to create the greatest possible customer loyalty. To ensure that we meet our customer promises, we analyse success factors worldwide from which we can learn lessons and communicate them to other business units.

Customer segmentation within the Gases Division

Food & beverages	Chemistry & energy	Metallurgy & glass	Manu- facturing industry	Electronics	Healthcare	Others
Aquaculture & water treatment	Energy	Glass & fibre optics	Aerospace	Semi-conductor	Hospital care	Education & research
Beverages	Fine & petro-chemistry	Heat treatment	Automotive	Solar	Homecare	Retail
Food	Pharma	Non-ferrous	Heavy construction & machinery	Screen manu- facturing	Gas therapies	Distributors
	Other chemistry	Steel	Light metal fab. & prod.	LED manu- facturing	Care concepts	
		Other metallurgy & glass	Other manu- facturing			

Since 2016, we have implemented a variety of initiatives which aim to optimise our customer focus and our order processing. In 2017, we launched additional projects in various business units which seek to make long-term improvements in our customers' experience of Linde. The projects were based on a customer survey in 2015 in the twelve countries in which our Gases Division generates the most revenue. The improvement projects focused on areas such as responding efficiently to customer queries about delivery information and about the availability of products and services. Since 2016, we have also introduced a process whereby we can conduct annual customer surveys in the 29 countries in which our Gases Division generates the most revenue. These countries account for around 80 percent of our revenue in the liquefied gases and cylinder gas product area. Each year, the employees responsible in those countries are able to record and monitor the progress made as a result of their efforts in the various customer segments and to compare it with prior years.

During the reporting period, we also implemented our Customer Experience Management Programme in those countries. This programme enables customers to give us feedback on our performance (for example, while delivering gases) using a variety of channels. Since its launch in 2016, we have received more than 400,000 submissions, which we record and analyse. The feedback we receive has a direct influence on improvement processes for our products and services and in many cases it also leads to us making direct contact with the customer. Moreover, we organise events for our customers, so that we can gain an even better understanding of their needs. We are also expanding our offerings in the digital realm. In the 17 countries which are most important to us, our customers can contact us using an e-commerce platform and can use it, among other things, to order new products.

We also conduct surveys in our Healthcare segment. Since 2014, we have been conducting a twice-yearly global survey of patients in the Linde REMEO® programme who rely on long-term ventilation in special REMEO® centres or in their own homes on how satisfied they are with the services provided.

The patients are asked to rate such aspects as the care they receive from medical and nursing staff, the catering and the rooms at the centres. In 2017, 673 patients took part in the survey. Based on the results of the survey, strengths and potential improvements are identified, successful models communicated and improvement projects launched in various countries.

As far as security of customer data is concerned, we are working towards implementing the requirements of the EU General Data Protection Regulation by May 2018. We have therefore launched a variety of initiatives which aim to review our systems and to introduce the technical and organisational measures which will be required to ensure that we minimise any potential risks.



G4-PR5



MORE ABOUT

- Product stewardship
- Innovations and products
- Linde Healthcare

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

SUSTAINABLE PROCUREMENT

Supplier management



We work together with suppliers in more than 80 countries. When selecting suppliers, we consider not only commercial criteria such as quality, price and availability, but also aspects such as safety and environmental protection.

The most important items we purchase include energy, gas cylinders and valves, tanks and tank equipment, vehicles, IT products, services, components for production plants, as well as equipment and consumables for our Healthcare business. Around 72 percent of our expenditure on goods and services in the reporting year was incurred in OECD countries. Our total expenditure on goods and services in 2017 was EUR 10.6 bn (2016: EUR 10.4 bn). We purchase about 70 percent of the goods and services locally in the countries where they are needed. This cuts down distances travelled and reduces costs and emissions. Working with local companies also enables us to strengthen the economy of the region.

Again in 2017, we expanded the measures we employ to promote diversity in the supply chain, especially in the United States and South Africa. In South Africa, for example, we supported small and medium-sized suppliers in reaching and complying with our standards.

Global standards

Our global Code of Conduct for Suppliers sets out minimum requirements for safety, environmental protection, labour rights and human rights, and corporate integrity. The Code of Conduct for Suppliers forms part of the local terms and conditions which every supplier wanting to enter into a business relationship with us must accept. It is therefore a mandatory part of the contract for all new suppliers. At the same time, there has been a continual process of ensuring that those suppliers with whom contracts were signed prior to 2013 also agree to be bound by the Code. By the end of 2017, around 80 percent of our strategic suppliers had signed up to the Code of Conduct. We define strategic suppliers as those suppliers who, when taken together, represent 80 percent of all our expenditure on procurement.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Evaluating our suppliers

We conduct random checks to ensure that our suppliers comply with the provisions set out in our Code of Conduct. We focus in particular on suppliers in higher-risk areas with regard to sustainability. In 2017, we reviewed over 100 suppliers in total to ensure that they complied with our guidance on environmental and safety issues and other issues relating to sustainability. We investigate any breaches of our requirements by suppliers. We pay particular attention to the transportation of products and to Linde construction sites. When conducting reviews of construction sites during the reporting year, we identified around 200 deviations from the Code of Conduct, some of which related for example to risk assessments and work permit procedures, order and cleanliness, work involving a risk of falls or environmental protection. We then worked together with the contractors affected to devise measures to improve the situation and to monitor their implementation. In 2017, 34 cases were reported via our Integrity Line which also related to supplier relationships.

We also involve suppliers in our own safety and environmental management. In 2017, we continued to carry over the programme launched in 2015 to promote safety-conscious behaviour on construction sites to sites managed by the Linde Engineering Division. We were able to reach a total of around 2,500 contractors' employees in this way. Drivers who are contractors as well as our own Linde drivers regularly participate in our driver education programmes and training. Measures such as these help us to build reliable supply relationships and to ensure that suppliers comply with our requirements and improve their performance.



G4-12, G4-EC9, G4-EN32, G4-EN33, G4-LA14,
G4-LA15, G4-HR1, G4-HR2, G4-HR10, G4-HR11,
G4-SO9, G4-SO10



1, 2, 3, 4, 5, 6, 7,
8, 10



MORE ABOUT

- Raw materials
- Safety
- Human rights and labour standards
- Energy and climate protection
- Transport
- Linde Integrity Line
- Opportunities and risks
(Financial Report p. 75 ff.)

SAFETY

KEY FIGURES		
Occupational safety 51.5% of all operating sites audited	Environment 642 environmental audits conducted worldwide	Product stewardship 1,500 participants in Germany and Austria trained how to handle gases safely
PROGRESS		
IT infrastructure Multi-layer defence system developed to protect against cyber attacks	Transport 5% fewer serious transport incidents per million kilometres travelled compared with base year 2015	Increasing safety awareness 120 employees provided with training on better identifying and documenting risks and devising effective measures to counter them
OUTLOOK		
Occupational safety Continuously reduce number of workplace accidents with at least one day's absence per million hours worked by 2020	Transport Reduce serious transport incidents per million kilometres travelled by 20% by 2020 (base year 2015)	Increasing safety awareness Provide further training for managers on promoting safety-conscious behaviour

Our safety management system is based on standards and guidelines which apply worldwide. It aims to eliminate risks for our employees, business partners, neighbours and other third parties as far as possible.

Audits are conducted to verify compliance with the prescribed standards at our business locations. Incidents which have particular relevance for safety are recorded worldwide in order to identify areas of weakness. In addition, we use a centralised data system to document near misses from which we can learn lessons. We prepare for events which might occur, such as natural disasters, serious crime and pandemics, by drawing up risk management plans. The relevance of these risk management plans was illustrated once again in 2017 when we had to deal with the impact of the hurricanes in the southern United States. We were able to maintain our business operations in the region by successfully implementing measures included in our risk management plans.

We also cooperate with the communities in the areas surrounding our business locations. In the course of 2017, we engaged in around 120 joint activities, which included safety training in conjunction with fire brigades or other local organisations.

Security in the digital realm is also a key factor in our business success, as many of our processes depend on a functioning IT infrastructure. Therefore we constantly perform reviews of our existing IT security systems, making improvements where necessary. As a result, we have developed a multi-layer defence system in order to protect us against external cyber attacks. We also provide our employees with training in this area on an ongoing basis, drawing their attention to ways of handling digital risks. In 2017, we introduced compulsory e-learning sessions for all employees and conducted regular simulations of phishing activity to raise awareness of the issue of cyber attacks.

In 2016, the Executive Board of Linde AG adopted a new safety strategy, introducing measures for improvement covering the years 2017 to 2020. In 2017, for example, safety targets were again set for executives in the operating business units. These targets were linked to salaries, so as to increase the sense of personal responsibility of those executives for safety at work. Furthermore, we continued to hold workshops during the year for managers in all regions and divisions to teach them how to promote safety-conscious behaviour within the workforce.

Once again during the reporting year, we received several awards from customers and industry organisations in recognition of our commitment to occupational health and safety and to transport safety. These included awards presented to us in South America, Korea and several European countries for many years of work with no accidents with days of employee absence.



G4-2, G4-14, G4-EN2, G4-EN24, G4-EN29,
G4-EN31, G4-LA6, G4-LA7, G4-LA9, G4-S01,
G4-S02, G4-PR1



1, 2



MORE ABOUT

- Sustainability management
- Material topics

OCCUPATIONAL SAFETY AND HEALTH PROTECTION

Global target

Goal	Measures	Status
Continuously reduce the number of workplace accidents by 2020 (base year 2012)	<ul style="list-style-type: none"> — Global safety strategy 2017 – 2020 — Numerous activities to support the safety culture 	2.4 workplace accidents per 1 million hours worked

We have set ourselves the target of continuing to reduce the number of workplace accidents resulting in at least one lost working day per million hours worked by employees by 2020. The base year is 2012. In 2017, the rate of workplace accidents at our sites around the world per million hours worked was 2.4 (2016: 2.2). This slight increase is partly due to the greater number of working hours in the American homecare business which, when compared with the gases business, has a higher incident rate. In addition, the number of incidents in one of our business regions rose slightly compared with an excellent year 2016. The equivalent figure for contractors during 2017 was 2.3 (2016: 2.2). It is with the deepest regret that we must report that in 2017 one of our employees in the United States lost his life and two employees of contractors lost their lives in transport accidents in Australia and Singapore.

Occupational health and safety¹

	2017	2016	2015	2014	2013
Workplace accidents of employees with at least one day of absence✓	✓ 297	✓ 269	358	318	304
Workplace accidents of contractors with at least one day of absence✓	✓ 122	✓ 131	151	140	150
Workplace accidents with at least one day of absence (employees)✓ <i>per million hours worked</i>	✓ 2.4	✓ 2.2	2.9	2.4	2.3
Workplace accidents with at least one day of absence (contractors) <i>per million hours worked</i>	2.3	2.2	2.2	1.8	1.7
Fatal workplace accidents involving employees✓	✓ 1	✓ 1	2	2	4
Fatal workplace accidents involving contractors✓	✓ 2	✓ 1	1	3	6
Sick days <i>per employee</i>	5.9	5.4	5.6	5.3	4.7

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Included in the audited [Non-Financial Report](#)

✓ Audited by KPMG

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

We focus above all on prevention in order to avoid severe injuries and fatalities. So we identify core risks and take appropriate countermeasures. We have set out global guidelines governing occupational safety and health protection. To ascertain whether the right conditions are in place to ensure safety at work, we carry out risk assessments and audits. In 2017, audits were conducted at 51.5 percent of our operating sites (2016: 48.9 percent). A large number of our sites also have external certifications. In 2017, additional sites in Finland, Latvia, Colombia and India were externally certified for the first time according to OHSAS 18001, the standard for occupational health and safety management systems.

Audits and certifications for occupational health and safety¹

	2017	2016	2015	2014	2013
Production sites where occupational health and safety audits have been conducted	51.5	48.9	51.7	57.4	58.1
Number of conducted occupational health and safety audits	714	706	687	749	790
Production sites certified to OHSAS 18001 [✓]	16.8	17.1	16.5	15.7	17.8

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Audited by KPMG

As part of our global safety initiative, we implemented numerous measures in 2017. For example, we again organised a global Safety Day at Linde locations and at a large number of project construction sites. This involved employees and transport service providers taking part in safety workshops. Over the course of 2017, we provided training to more than 120 managers and employees worldwide on better identifying and documenting risks and devising effective measures to counter them. We also conducted information campaigns about occupational safety and delivered training on this subject, for example, in the United States and in Ecuador.



G4-14, G4-LA6, G4-LA7



1, 2



MORE ABOUT

- Supply chain
- Material topics

PRODUCTION

Risks that may arise from production are identified and evaluated by our experts at our business locations. We use our Major Hazards Review Programme (MHRP) to conduct a systematic assessment of process risks which might result in accidents or damage to property or to the environment. This programme is constantly being refined to ensure that we are in a position to react to new potential risks. We audited more plants during the reporting period, so that by the end of 2017, more than 95 percent of the relevant plants had been audited in accordance with the MHRP process. The aim is to prevent in particular accidents and subsequent business interruptions in one of our main plants or in our customers' on-site plants.

We pay attention to production safety and storage safety from the initial planning stage of new plants. An individual safety plan is drawn up for each new plant. This plan is based on our own standards, the rules which apply in the relevant country and our customers' guidelines. Environmental protection is also taken into consideration.

In the reporting year, around 1,360 environment, safety and health protection audits were carried out on our sites by us or by third parties. Our internal audits are conducted in accordance with the provisions of the international certification processes for quality and occupational health and safety, ISO 9001 and OHSAS 18001.

Our plants supplying CO₂ to the food industry for the production of carbonated drinks are also certified under the food safety system certification FSSC 22000.

Audits and certifications for environmental and quality management¹

		2017	2016	2015	2014	2013
Production sites certified to ISO 9001✓	%	66.6	63.0	67.1	72.1	77.9
Production sites certified to ISO 14001✓	%	33.7	31.7	31.7	30.5	31.8
Production sites where environmental audits have been conducted	%	48.2	46.0	42.6	50.0	51.8
Number of conducted environmental audits		642	629	586	639	657

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Audited by KPMG



G4-EN24



1, 2, 7, 8



MORE ABOUT

→ Supply chain

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

TRANSPORT

Our trucks and those of our transport service providers cover around 900 million kilometres on the roads every year. For this reason, safety during the transportation of our products is a key issue and an integral part of our global safety management. We have set ourselves the target of minimising the number of transport incidents. By the end of 2020, we want to reduce the number of serious transport incidents per million kilometres travelled by 20 percent in comparison with the year 2015. In 2017, we were able to reduce the frequency of serious transport incidents by around 5 percent compared with the base year 2015. This slower rate of reduction in 2017, when compared with a reduction of 10 percent in 2016, was due to a significant increase in transport incidents in one business region which had achieved particularly good results in this area in 2016.

To continue to reduce the number of preventable serious transport incidents, we conducted, for example, a pilot project in Asia in 2017, where we tested technologies which are able to recognise when a driver is about to nod off at the wheel or things which might distract the driver and help to initiate appropriate countermeasures, such as alarm signals during the journey or additional safety training.

Global target

Goal	Measures	Status
-20% serious transport incidents per 1 million kilometres travelled by 2020 (base year 2015)	<ul style="list-style-type: none"> — Training of in-house incident investigators and transport auditors — Training courses on defensive driving techniques — Investments in transport safety technology 	-5% serious transport incidents per 1 million kilometres travelled

In 2017, we trained another 37 employees as in-house incident investigators and transport auditors. The aim is to conduct incident investigations and transport audits consistently throughout the Group, in order to obtain information vital to the improvement of transport safety, learn from root causes and reduce similar risks in future. We will continue to deliver these training programmes in 2018.

In the course of 2017, we also continued to provide our drivers with training relating to safety and handling hazardous situations. Of the training courses, 15 are mandatory for all drivers, irrespective of whether they are Linde drivers or drivers working for our transport service providers, and must be repeated at varying intervals. The courses include information on defensive driving techniques and on how to recognise and avoid situations that could result in a commercial vehicle rollover.

Transport¹

		2017	2016	2015	2014	2013
Distance driven by Linde's transport fleet and its contractors [✓]	million km	874	878	857	975	963
Serious transport incidents involving trucks ² ✓	per 1 million km	0.109	0.105	0.115	0.104	0.139

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² Severe traffic incidents, e.g. with serious effects on the health of the employees involved or with reportable emissions to the environment, as well as transport incidents leading to material costs above a defined threshold. The performance indicator was redefined in 2015. The new definition includes not only preventable transport incidents but also incidents previously classified as non-preventable. The figure has been recalculated for previous years.

✓ Audited by KPMG



G4-EN30, G4-LA6



1, 2



MORE ABOUT

- Supply chain
- Energy and climate protection

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

PRODUCT STEWARDSHIP

We evaluate product safety along the entire product value chain, based on global standards which relate not only to the manufacture of products and their transportation but also to the use of those products. During the monitoring process, we conduct a systematic review of potential risks which might arise from our established products, or from products which are being used in new applications or have recently been launched onto the market. Crucial factors to consider when we conduct risk assessments are the applications of the products by the customer, the properties of the products (such as toxicity) and the quantities of the products. We hold more than 25,000 safety data sheets for our products in many languages, which provide information to our customers. In addition, we have brought together all existing provisions relating to the handling of our products in a global guideline on product stewardship.

Depending on the risk potential, we also assess whether conditions are in place for the proper handling of gases on customer sites. Moreover, we offer services such as inspection, maintenance and repairs relating to the supply of gases on site to our customers. We used an in-house training programme in 2017, for example, to deliver training on the safe handling of gases to around 1,500 participants in Germany and Austria. Our customers also take part in our training programme.

International standards

We constantly monitor compliance with legal regulations. In 2017, we continued to prepare for the third registration phase of REACH (the EU Regulation on chemicals) in 2018. However, only a small proportion of the substances we produce are required to be registered under REACH. We provide clear information on an internet platform about how we comply with the provisions of REACH and which substances are registered. At 31 December 2017, seven substances were registered, while around 20 were still in the final registration phase. In other countries, such as China, Australia and Korea, registration phases modelled on the European provisions also apply. Our experts are also working in those countries to ensure we meet the relevant requirements.

As the manufacturer of medical devices, we implement the requirements of the European RoHS Directive (Restriction of Hazardous Substances) in our Healthcare business around the world. When operating production plants for medical gases, we comply worldwide with the Good Manufacturing Practice for pharmaceutical products.

Through our product stewardship programme, we also support the Global Product Strategy (GPS) devised by the International Council of Chemical Associations for the safe handling of chemical substances and the United Nations' Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.



G4-14, G4-EN27, G4-PR1, G4-PR3, G4-PR5



1, 2, 7, 8



MORE ABOUT

- Supply chain
- ➔ Linde REACH website

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

ENVIRONMENTAL PROTECTION

KEY FIGURES		
Climate protection 4.1 million tonnes CO ₂ emissions avoided in production processes since 2009	Products 18 million tonnes CO ₂ emissions avoided due to customers using one Linde technology	Products 14,500 tonnes NO _x emissions avoided by our customers
PROGRESS		
Energy 170 projects identified, generating cost savings of more than EUR 18 million	Water Potential savings of around 70,000 cubic metres of water identified at two locations in China and Indonesia	Waste In a joint venture with a Californian waste service provider, 2.3 million tonnes of waste is recycled annually and turned into fuel and energy
OUTLOOK		
Climate protection Save 4.8 million tonnes of CO ₂ emissions from the operation of air separation plants by 2020 (base year 2009)	Climate protection Save 1.2 million tonnes of CO ₂ emissions from the operation of HyCO plants by 2020 (base year 2009)	Energy consumption Keep under constant review the use of renewable energy in gases production

With our products and services, we support our customers' efforts to make their business processes more efficient and more environmentally friendly. We also aim to reduce the environmental impact from our own activities and to use energy, resources and materials as efficiently as possible. Therefore we have established a global management system for environmental protection based on standards and guidelines which apply worldwide. We conduct audits to verify that the Group is complying with the standards laid down. Our internal audits are based on the environmental standard ISO 14001. Many of our locations are also certified externally in accordance with international standards. In 2017, nine of our locations in Asia and Eastern Europe, for example, were certified externally for the first time in accordance with the updated environmental standard ISO 14001 which had been revised in 2015.

A global process helps us record and evaluate incidents and near misses which have particular relevance for environmental protection. We have set ourselves global targets in those areas in which environmental protection is most relevant. Where necessary, we make provisions for obligations relating to environmental protection, such as the dismantling of plants. At 31 December 2017, environmental provisions totalled EUR 28 m (2016: EUR 48 m).

Environmental incidents¹

	2017	2016	2015	2014	2013
Environmental complaints	9	22	14	25	24
Reportable environmental incidents	6	19	13	21	25

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

We follow up suggestions about how we can make further improvements. In 2017, we received 9 complaints relating to the environment. Most of these complaints concerned the issue of noise. In addition, there were 6 reportable environmental incidents. No fines were payable as a result.



G4-2, G4-14, G4-EN2, G4-EN24, G4-EN29,
G4-EN31, G4-S01, G4-S02, G4-PR1



7, 8



MORE ABOUT

- Sustainability management
- Occupational safety and health protection
- Audits
- Innovations and products
- Products for the environment

ECOSYSTEMS

When planning new sites, we use standardised processes to examine the impact on the environment. Our evaluation considers ecologically sensitive areas, bodies of water, or the impact on plants and animals. Most of our sites are located in industrial zones or business parks. If these sites are directly adjacent to protected areas or other sensitive habitats, we seek to minimise any potential negative impact we might have on such areas. In our efforts to protect ecosystems, we also follow internationally recognised guidelines, such as the Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment issued by the United Nations.

In 2016, we conducted a review of more than 600 production sites. The aim of the review was to establish whether any of these sites were located in the vicinity of international protected areas. None of the sites investigated lay within, or in the immediate vicinity of a particularly sensitive protected area as defined by the International Union for Conservation of Nature.



G4-EN11, G4-EN12, G4-EN13, G4-EN14



7, 8



MORE ABOUT

→ [Products for water protection](#)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

RAW MATERIALS

We work continuously to ensure the efficient use of resources. This enables us to reduce our environmental impact and cut costs. The most important raw material used in the production of our gases is air. In terms of weight, more than 80 percent of the gases sold by us in 2017 was derived from this natural raw material. Carbon dioxide is also a key raw material for Linde. We recover around 80 percent of our carbon dioxide from recycling processes and around 10 percent from purely organic processes. Carbon dioxide is, for example, a by-product from the fermentation of renewable raw materials.

When we manufacture products, another principal input is energy. The main packaging material we use is gas cylinders. A typical Linde cylinder has a lifespan of many years and is refilled on average four times a year. At the end of 2017, there were more than 25 million Linde cylinders in circulation. In addition, key materials processed by us include steel and aluminium, which are used in particular for the manufacture of components in plant construction.

Technologies for renewable raw materials

Our technologies underpin the use of renewable energy and renewable raw materials. We are participating for example in a pilot project in Mainz, Germany. In what is currently the largest polymer electrolyte membrane electrolysis plant in the world, renewable energy has been used to produce hydrogen since 2015. In 2017, the plant was designated a "Landmark in the Land of Ideas" by a joint place-branding initiative supported by the German government and the German economy. Hydrogen production at the plant results in greenhouse gas emissions which are 75 percent lower than in hydrogen production based on fossil fuels. The plant is designed to produce 200 tonnes of hydrogen per annum.

Usage of resources and materials (in tonnes)¹

	2017	2016	2015	2014	2013
Raw materials and supplies✓	57,851	55,590	54,170	52,770	57,750
Packaging materials✓	4,835	3,510	3,160	5,580	3,990

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Audited by KPMG

Minerals

We have examined our supply chain for conflict minerals listed in the US Dodd-Frank Act. Against this background, all suppliers to our electronics segment are required to confirm that their products are free of conflict minerals. We use supplier screening and audits to test the accuracy of our suppliers' assurances.



G4-EN1, G4-EN2, G4-EN32, G4-EN33



7, 8



MORE ABOUT

- Supply chain
- Energy and climate protection
- Waste and recycling
- Technologies for renewable energy
- Opportunities and risks
(Financial Report p. 75 ff.)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

ENERGY AND CLIMATE PROTECTION

Linde is an energy-intensive company and therefore requires a reliable and competitively priced energy supply. We have established global energy management of plants and processes around the world. The aim is to use energy efficiently and to reduce emissions. We control our energy consumption and greenhouse gas emissions worldwide and report thereon, complying with the provisions of the Corporate Accounting and Reporting Standard (scope 1 and 2) of the Greenhouse Gas Protocol Initiative convened by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). We offer our customers gases and technologies which reduce the consumption of natural resources and promote the use of renewable energy.

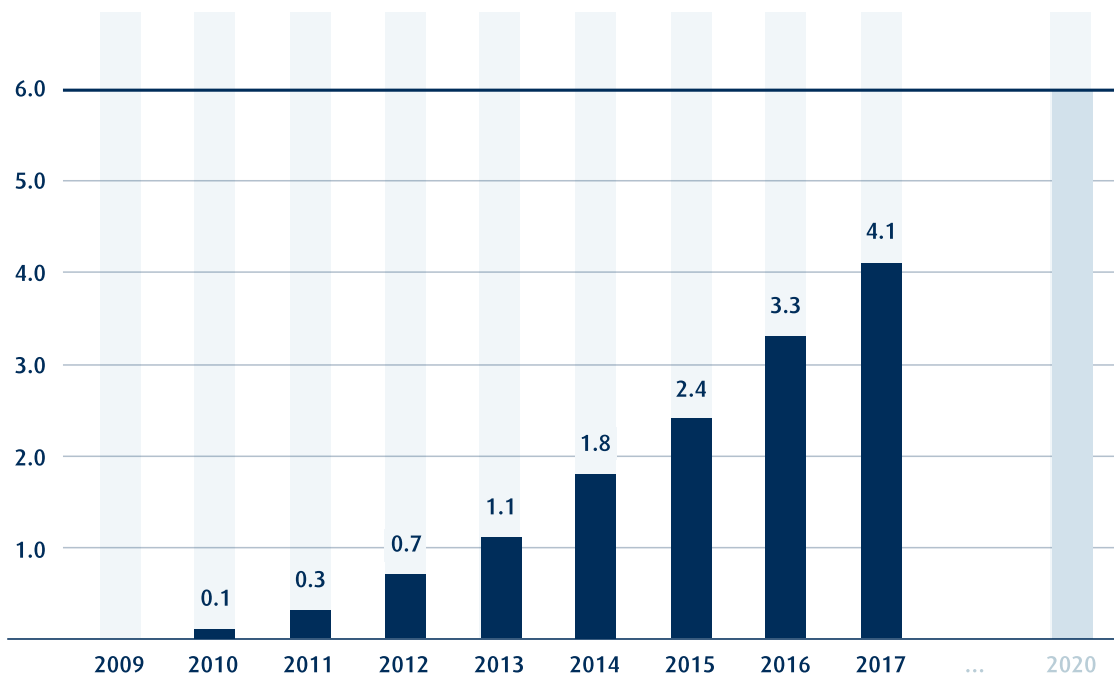
Global target

Goal	Measures	Status
-6 million tonnes of CO ₂ in the operation of HyCO plants and air separation plants by 2020 (base year 2009)	<ul style="list-style-type: none"> — Technical improvements in plant design — More efficient production processes 	-4.1 million tonnes of CO ₂

Global targets

Most of the electricity required by Linde is used in our air separation plants. Around 60 percent of our total CO₂ emissions are the by-product of the generation of this electricity by energy providers and are reported by us as indirect emissions. Our direct emissions, which are lower than our indirect emissions, stem mainly from the operation of hydrogen and synthesis gas plants (HyCO plants).

Climate protection target: avoidance of 6 m tonnes of CO₂ by 2020 (in m t, cumulated)



By 2020, we are seeking to avoid a total of 6 million tonnes of CO₂ emissions, of which 4.8 million tonnes in air separation plants (scope 2 emissions) and 1.2 million tonnes in HyCO plants (scope 1 emissions). The comparison will be made with the base year 2009. To meet this target, we are focusing on technical improvements in plant design and more efficient production processes in our HyCO and air separation plants. By the end of 2017, we had avoided a total of 4.1 million tonnes of CO₂ emissions, of which 0.9 million tonnes were direct emissions and 3.2 million tonnes were indirect emissions. In 2017, we identified more than 170 projects worldwide that helped reduce our energy consumption and CO₂ emissions – for example, by using more efficient compressors and by exchanging valves. Implementing these projects generated cost savings for the Group of more than EUR 18 m. We avoided around 126,000 tonnes of CO₂ emissions as a result. In 2017, for example, we modernised an air separation plant in Ningbo in China, thereby reducing energy consumption by around 4 percent. This saved around 10,000 tonnes of CO₂ in the reporting year. The modernisation also enabled us to reduce our costs by around EUR 1.5 m.

Our climate protection measures also focus on the transportation of our products. Optimised routes, better use of transport capacity and defensive driving training help us to reduce the number of kilometres travelled, cut the amount of fuel consumed and bring down the level of transport emissions.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Greenhouse gas emissions¹

		2017	2016	2015	2014	2013
Direct greenhouse gas emissions (Scope 1)[✓]						
CO ₂ emissions [✓]	million t	✓ 8.3	✓ 7.0	7.1	7.3	7.2
of which by HyCO plants [✓]	million t	✓ 5.7	✓ 4.7	4.0	4.0	4.2
Linde transport fleet ^{2✓}	million t CO ₂ e	✓ 0.76	✓ 0.80	0.78	0.88	0.49
Other greenhouse gases ^{3✓}	million t CO ₂ e	✓ 1.9	✓ 1.8	1.7	1.5	1.5
Total [✓]	million t CO ₂ e	✓ 11.0	✓ 9.6	9.6	9.7	9.2
Indirect greenhouse gas emissions (Scope 2)^{4✓}						
CO ₂ emissions [✓]	million t	✓ 17.4	✓ 16.2	15.4	15.0	13.0
of which by air separation plants [✓]	million t	✓ 15.9	✓ 14.7	13.7	13.5	11.8
Total Scope 1 and 2 emissions [✓]	million t CO ₂ e	✓ 28.4	✓ 25.8	25.0	24.7	22.2
Emissions per million EUR sales	t CO ₂ e	1,657	1,522	1,440	1,449	1,333
Emissions per Linde employee	t CO ₂ e	492	432	418	377	350
Other indirect greenhouse gas emissions (Scope 3)						
Business travel ^{5✓}	thousand t CO ₂ e	53.0	58.7	68.5	72.9	81.0

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² From 2015, this figure also includes greenhouse gas emissions generated by Linde's transport contractors. The 2014 figure has been recalculated.

³ This includes greenhouse gases specified in the Kyoto Protocol: methane (CH₄), nitrous oxide (laughing gas, N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). In 2014, Linde has refined the determination method of the indicator for these GHGs to include additional emitters and emission sources. The reported figure for 2013 was recalculated based on this new method.

⁴ In order to calculate our indirect CO₂ emissions we are using site specific factors from the energy provider if available. Wherever such factors are not available we use factors from the International Energy Agency from 2011.

⁵ Since 2014, we also include the Radiative Forcing Index (RFI) to calculate emissions from business travel. Thereby, we take into account the higher impact of air travel on the greenhouse effect. Emissions for the year 2013 have been recalculated accordingly.

✓ Included in the audited [Non-Financial Report](#)

✓ Audited by KPMG

Energy consumption

Our energy consumption increased by around 8 percent in 2017 compared with 2016. The increase in our energy consumption over the past few years is mainly due to the expansion of our business operations. Other factors which may have an impact on our energy consumption are fluctuations in product demand and capacity utilisation at individual plants. Most of the increase relates to the consumption of natural gas, which has risen mainly as a result of the coming on stream of new HyCO plants in Saudi Arabia and Finland.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

In 2017, we took part in the European Union's Emissions Trading System at ten of our hydrogen and synthesis gas production sites. There were around 1.2 million tonnes of CO₂ emissions from these plants during the year. Our Group was allocated emissions allowances for around 0.9 million tonnes of CO₂. The remaining certificates were additionally procured.

Energy consumption (in million MWh)¹

	2017	2016	2015	2014	2013
Electricity consumption [✓]	✓ 28.9	✓ 27.5	26.8	26.2	23.4
of which by air separation plants [✓]	✓ 26.3	✓ 24.8	23.9	23.5	20.7
Natural gas consumption [✓]	✓ 45.1	✓ 39.4	39.5	39.5	36.4
of which by HyCO plants [✓]	✓ 33.8	✓ 29.3	25.4	24.9	23.0
Consumption of other energy sources ^{2✓}	✓ 11.7	✓ 12.8	12.1	12.2	14.8
Total energy consumption [✓]	✓ 85.7	✓ 79.7	78.4	77.9	74.6

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² Examples of other energy sources are heating oil, biofuel energy, propane, butane, thermal energy and diesel fuel. From 2015, this figure also includes diesel consumption by Linde's transport contractors. The 2014 figure has been recalculated.

✓ Included in the audited [Non-Financial Report](#)

✓ Audited by KPMG

We are continuing to work on the implementation of the provisions of the European Union's Energy Efficiency Directive (EED). This includes regular energy audits for companies at production sites, distribution sites and offices, or alternatively energy certification in accordance with ISO 50001. In Germany, for example, all filling plants are certified in accordance with ISO 50001.

We keep the use of renewable energy in our production under constant review. The current level of use of renewable energy largely reflects the regional energy mix available in each country. In Germany, we extract our medical oxygen CONOXIA® using only electricity from renewable energy sources. In 2017, this covered 40,000 MWh of our electricity consumption.



G4-EC2, G4-EN1, G4-EN3, G4-EN4, G4-EN5,
G4-EN6, G4-EN7, G4-EN15, G4-EN16,
G4-EN17, G4-EN18, G4-EN19, G4-EN20,
G4-EN21, G4-EN24, G4-EN30



7, 8, 9



MORE ABOUT

- Innovations and products
- Material topics
- Collection of data
- Products for the environment
- Regulatory risks (Financial Report p. 85 ff.)
- Climate risks in the Group risk management (Financial Report p. 88)

AIR EMISSIONS

We also monitor emissions worldwide of air pollutants in accordance with relevant local legislation. The largest part of our production, the operation of air separation plants, is virtually free of direct emissions to air. Other production processes (for example, combustion processes in hydrogen plants or steam boilers) can result in emissions of inorganic gases such as carbon monoxide (CO), sulphur oxides (SO_x) and nitrogen oxides (NO_x). However, compared with CO₂ emissions, these comprise an extremely small proportion of our emissions. Volatile organic compounds (VOCs) are mainly released during the coating and cleaning of metals used for instance in gas cylinders, storage tanks and plant components.

We work together with our customers and with scientific and research partners to devise solutions which will minimise emissions to air. Our LoTOx™ technology is being used for example in the chemical industry to capture and store nitrogen oxides and other pollutants from waste gases arising from combustion processes. By the end of 2017, we had installed more than 30 such systems in customers' plants around the world, especially in the United States and China. With these systems, we enabled our customers to avoid more than 14,500 tonnes of NO_x emissions in 2017.

Emissions to air (in tonnes)^{1,2}

	2017	2016	2015	2014	2013
VOC (volatile organic compounds)✓	535	531	598	657	92
NH ₃ (ammonia) ³ ✓	37	45	73	165	12
CO (carbon monoxide)✓	2,679	2,634	3,213	3,325	2,177
NO _x (nitrogen oxides)✓	5,065	4,879	6,443	6,762	6,273
SO _x (sulphur oxides)✓	580	685	708	447	122

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² In 2014, Linde has refined the determination method for emissions to the air. Where available, measurements were used for the new methodology. For production sites for which no measurements were available, we estimated the figures. Where possible, the reported figures for 2013 were recalculated based on these new methods. The determination method for VOC emissions could not be applied retroactively. Therefore, the values for this indicator are not comparable for the years 2013 and 2014.

³ The determination method for ammonia was revised during 2015. Reported ammonia emissions include uncontrolled releases to the atmosphere and since 2015 have been extended to include controlled releases to abatement systems at certain sites. The figure for 2014 has been adjusted accordingly.

✓ Audited by KPMG



G4-EN19, G4-EN20, G4-EN21, G4-EN24



7, 8, 9



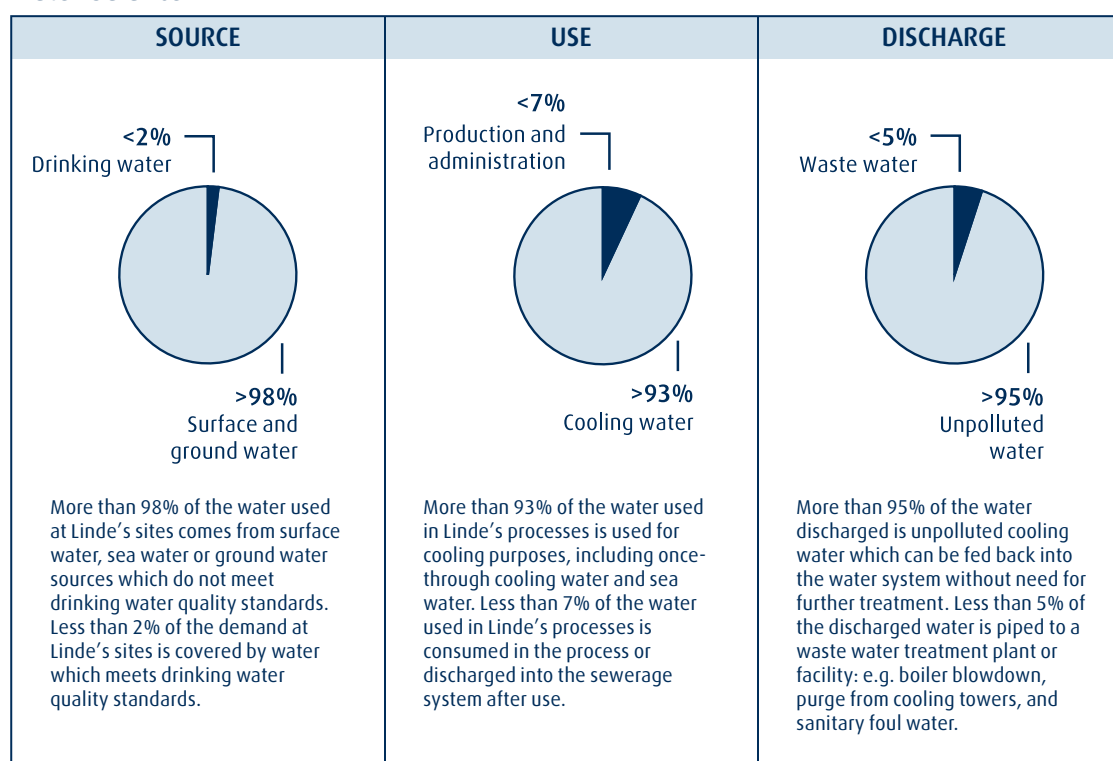
MORE ABOUT

→ Innovations and products

WATER

We work continuously to ensure that we use the natural resource water as efficiently as possible. More than 90 percent of our annual water requirement is used in cooling processes in our production plants. Mostly, this water is just heated and can be fed back into the water system without further treatment. The rest of the water we use is required, for example, in office buildings or as a source of steam for the compression of gases in separation processes. In this context, we employ closed-loop systems for steam turbines and compressors. This enables us to reduce consumption, because the water can be used several times.

Water balance



Total water use in 2017 was 811 million cubic metres (2016: 716 million cubic metres). Of this amount, water consumption excluding once-through water was 56.4 million cubic metres (2016: 54.8 million cubic metres). The amount of waste water at our locations worldwide in 2017 was 13.6 million cubic metres (2016: 13.1 million cubic metres). We measure emissions of phosphates, nitrates and organic compounds to water in accordance with local regulatory requirements.

Water¹

		2017	2016	2015	2014	2013
Water use [✓]	million m ³	✓ 811	✓ 716	681	682	681
of which ground and surface water [✓]	%	98.8	98.7	98.6	98.5	98.6
of which drinking water [✓]	%	1.2	1.3	1.4	1.5	1.4
Total water consumption ^{2✓}	million m ³	✓ 56.4	✓ 54.8	52.6	50.7	44.5
of which industrial and process water [✓]	million m ³	46.5	45.3	42.8	40.8	34.8
of which drinking water [✓]	million m ³	9.9	9.5	9.8	9.9	9.7
Waste water [✓]	million m ³	✓ 13.6	✓ 13.1	13.8	13.2	13.8

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² Water consumption relates to drinking water and industrial water used. Once-through water is drawn from a natural or other sources, solely warmed and ultimately piped back to the original source at a temperature not posing any risk to the surrounding ecosystem.

✓ Included in the audited [Non-Financial Report](#)

✓ Audited by KPMG

Initiatives for the efficient use of water

In 2016, we reviewed water supplies at our key production sites worldwide, on the basis of the criteria set out by the World Resources Institute. Based on these criteria, 9 percent of our sites are in regions which experience water scarcity. The measures we are taking to optimise the use of water and cooling water systems focus in particular on those regions. In 2017, potential savings were also identified for example at two locations in China and Indonesia of around 70,000 cubic metres of water, which would lead to annual cost savings of around EUR 70,000. For our Central Europe business unit, we have defined performance indicators relating to water treatment which must be complied with when a tender is made. From 2018 on, water treatment in this region will be carried out by a service provider. The aim is to manage waste water treatment in the most efficient and verifiable way possible. For that reason, we provided special training courses on water management in 2017 in which around 100 employees took part.

Products for water protection

Linde gases and technologies are used by our customers to eliminate harmful substances in drinking water and bodies of water and to treat waste water. We support customers in various industries in meeting demanding environmental regulations. With the help of Linde's SOLVOCARB® process, our customers were able to bring around 790 million cubic metres of water in just six countries up to drinking water standard in 2017. The process is also being used successfully in the desalination of seawater. In addition, our technologies are being employed in fish farms, helping with food supply without contributing to overfishing.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Emissions to water (in tonnes)^{1,2}

	2017	2016	2015	2014	2013
Chemical oxygen demand (COD)✓	1,541	1,561	1,425	1,585	2,157
Biochemical oxygen demand (BOD)✓	518	511	496	544	163
Nitrates✓	357	339	335	295	89
Phosphates✓	41	45	47	39	3

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² In 2015, we have further improved the determination method for emissions to water (COD, BOD, nitrates, phosphates) applying measurement and extrapolation models. Although there are inherent limitations by applying this methodology, full measurement of these emissions by all Linde sites is considered economically not viable. The reported figures of the water emission indicators of the Linde Group therefore serve as an approximation. The figures for 2014 have been re-calculated accordingly.

✓ Audited by KPMG



G4-EN8, G4-EN9, G4-EN10, G4-EN11,
G4-EN12, G4-EN13, G4-EN22, G4-EN24,
G4-EN26



7, 8, 9



MORE ABOUT

- Innovations and products
- Technologies for water
- The Linde Group Position on Water

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

WASTE

We are constantly considering how we can avoid or reduce waste. Oil and oleaginous materials, waste which contains metal and gas cylinders which have reached the end of their useful life are our most common waste products. By using closed-loop systems for products, we increase both material efficiency and resource efficiency and cut the volume of waste produced. One example is lime slurry, a by-product of acetylene production, which can be used in other industries without any treatment being required.

We dispose of any waste which cannot be recycled in an environmentally sound manner. We comply with local regulations and classify our waste as hazardous and non-hazardous in accordance with relevant legislation in the country in which we are operating. The amount of waste at different sites depends on the type of business operations being carried out there. Therefore, our waste management objectives are based on regional requirements. The measures we adopt focus in particular on hazardous waste.

Around 85 percent of the waste classified as hazardous is generated at a small number of locations around the world. Examples of plants producing such waste are a synthesis gas production plant and a number of acetylene plants where hazardous waste is generated as a result of the disposal of acetylene cylinders. In all the locations where hazardous waste is produced, there are programmes to deal with the waste in accordance with regional requirements and to continue to reduce this waste.

When making a multi-year comparison of the volume of waste produced, there can be significant fluctuations, as the volume of waste is dependent on the extent of our construction operations. The overall amount of waste fell in 2017 compared with 2016, as less hazardous waste was produced.

Waste and recycling¹

		2017	2016 ²	2015	2014	2013
Total waste✓	thousand t	✓ 67.8	✓ 70.5	66.1	94.1	124.9
Non-hazardous waste✓	%	✓ 69	✓ 67	66	76	76
Hazardous waste✓	%	✓ 31	✓ 33	34	24	24
Recycled waste✓	%	33	30	39	56	65
Incineration waste ³ ✓	%	24	24	21	15	14
Landfill waste✓	%	22	19	22	19	10
Other disposal methods✓	%	21	27	18	10	11

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² The amount of waste for single sites depends on the different type of business and is partly based on proven estimation methods. Due to the change of estimate for one specific business area the numbers for waste for 2016 have been adjusted for better comparability with 2017 figures.

³ Incineration waste is partly used for heat recovery.

✓ Included in the audited [Non-Financial Report](#)

✓ Audited by KPMG

We offer our customers numerous solutions to help them avoid or recycle waste. In the United States, we have also been involved since 2009 in a joint venture with a Californian waste service provider to extract fuel and energy from waste for around 8,500 households. Around 2.3 million tonnes of waste is recycled annually and used – about 36 times as much as the amount of waste generated by our entire gases production in 2017.



G4-EN23, G4-EN25



7, 8, 9



CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

EMPLOYEES

KEY FIGURES		
Training 4.3 training days per participant	Remuneration EUR 3,489 m paid in salaries	Diversity 68% of senior managers from countries other than Germany
PROGRESS		
Involving employees More than 400 suggestions received from employees on topics such as digitalisation and resource efficiency	Labour standards More than 60 audits covering social topics conducted at Linde business locations	Work-life balance Increase in number of days of paid sick leave for employees in our subsidiary Lincare
OUTLOOK		
Diversity Increase proportion of women in first management tier below Executive Board to 18% by 2022	Diversity Increase proportion of women in second management tier below Executive Board to 22% by 2022	Developing talent Continue to develop European Graduate Programme

Qualified and committed employees are a key factor in the success of our company. Recruiting and promoting excellent employees and providing attractive working conditions are therefore the focus of our personnel strategy.

At 31 December 2017, we employed 57,605 staff (2016: 59,715). Over the course of the year, we hired 7,925 new employees. In 2017, 12.3 percent of employees left Linde at their own request (2016: 12.1 percent). This turnover rate varied by region, from 0.6 percent in Southern Europe to 23.4 percent in the Americas region. The overall staff turnover rate, which includes employees retiring and being dismissed as well as employees reaching the end of temporary contracts, was 20.3 percent in 2017 (2016: 20.8 percent). By the end of 2017, around 2,900 employees around the world had left the Group as a result of the LIFT efficiency programme launched in 2016. In Germany, we worked closely with employee representatives during the year to offer employees in our German companies a voluntary redundancy scheme. Focused downsizing was the objective of this scheme within the LIFT programme. The scheme was aimed at employees who wanted to follow a new career path or take early retirement. By 31 December 2017, we had entered into voluntary redundancy agreements with around 600 employees.

Employees worldwide¹

		2017	2016	2015	2014	2013
Group	as of Dec. 31	✓ 57,605	✓ 59,715	59,774	65,591	63,487
Gases Division		✓ 51,138	✓ 52,907	52,395	53,436	51,536
EMEA		✓ 19,556	✓ 20,309	21,067	21,779	21,544
Asia/Pacific		✓ 11,147	✓ 11,343	11,533	12,175	12,122
Americas		✓ 20,435	✓ 21,255	19,795	19,482	17,870
Engineering Division		✓ 6,144	✓ 6,432	7,038	7,330	6,997
Other activities		✓ 323	✓ 376	341	4,825	4,954
Employees in production		20,408	20,466	21,194	21,684	20,200
Employees in sales, marketing and distribution		26,787	27,293	27,021	31,851	31,778
Employees in research and development		350	345	348	390	367
Employees in administration		10,060	11,611	11,211	11,666	11,141
Part-time employees ²	%	✓ 3.4	✓ 3.6	1.7	2.1	1.9
Employees in Germany		7,474	7,842	8,014	8,090	7,822
Temporary staff	%	5.6	8.4	8.8	8.6	6.2
Overall turnover rate	%	✓ 20.3	✓ 20.8	18.4	–	–
Staff turnover rate ³	%	✓ 12.3	✓ 12.1	10.7	10.0	9.4
Average length of service	years	9.2	9.1	9.1	8.4	8.9

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² Starting with 2017 the calculation of part-time ratio is based on the portion of actual employees working part-time compared to the total staff. Before that the calculation was based on full-time equivalents. The 2016 number has been revised as well for better comparability. Generally, all other employee ratios are based on full-time equivalents, if not stated differently.

³ Staff turnover rate relates to employees who left the Group voluntarily during the period under review.

✓ Included in the audited [Non-Financial Report](#)



G4-10, G4-13, G4-EC7, G4-EC8, G4-LA1



6



MORE ABOUT

- Sustainability management
- Material topics

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

WINNING TALENT

We cooperate worldwide with universities and research institutions to attract qualified students and graduates and to retain them long term. We also provide training programmes and university courses with a work experience element to young people as well as training opportunities in various technical and commercial areas. The number of apprentices and trainees as a proportion of the total number of Linde employees was 1 percent in 2017 (2016: 0.8 percent), of which 69.2 percent (2016: 54.7 percent) were in non-German companies. In Germany, we offer training in 23 (2016: 25) different professions. During the reporting year, 99 apprentices and trainees were recruited in Germany (2016: 103) and we took on 28 percent (2016: 36 percent) of one year's cohort of apprentices and trainees as permanent employees at the end of their vocational training and offered a further 63 percent (2016: 51 percent) a fixed-term contract. The training opportunities we offer are continually being tailored to meet the future requirements of the Group. Most of the apprentices and trainees who left us after completing their training are pursuing further studies at school, college or university.

The new cohort of our 20-month European Graduate Programme started in autumn 2017. This programme offers talented young people the opportunity to work in Linde subsidiaries in different countries to gain practical insights into various areas of the Group and prepares them for future management roles within Linde.

Employee training¹

		2017	2016	2015	2014	2013
Employees who attended training opportunities	%	✓ 40.6	✓ 38.2	61.0	66.2	60.3
Average training days per participant		✓ 4.3	✓ 3.7	2.9	3.1	3.0
Average expenditure on training programmes per participant	€	✓ 328	✓ 372	369	350	341
Apprentices and trainees in total workforce	%	1.0	0.8	0.9	0.9	0.9
Apprentices and trainees in Germany	%	3.7	3.4	3.0	3.2	3.1

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Included in the audited [Non-Financial Report](#)

In 2017, we continued to pursue activities aimed at winning talented employees. So, for example, we redesigned the Group's global careers website.

In 2017, we invested around EUR 7.7 m in the professional development of our staff (2016: EUR 8.5 m). Our professional development programmes cover subjects such as personnel management, intercultural communication and diversity. In the Engineering Division, for example, we provide special training programmes for project managers, engineers with managerial responsibilities and employees working in sales.



G4-EC7, G4-LA10, G4-LA11



MORE ABOUT

➔ [Linde Careers on Facebook](#)

DIVERSITY AND EQUAL OPPORTUNITIES

Linde is a global group with a business model organised on a decentralised basis. As a result, we rely on employees who understand local markets and customers, and who are able to bring diverse experience and a variety of perspectives to the work of the team. At 31 December 2017, our workforce comprised employees from 124 countries, while 65 nations were represented in the German companies alone. The proportion of senior managers from countries other than Germany was 68 percent in 2017. During the reporting year, around 206 of our employees were sent on secondment to subsidiaries abroad.

Diversity is one of the four values set out in the Linde Spirit, which applies to all employees around the world. The Linde Leadership Competency Model, which is based on it, is used by us in most countries in the evaluation and training of managers.

Global targets

Goal	Measures	Status
18% of women in the first management tier below the Executive Board by 2022	<ul style="list-style-type: none"> — Initiative for women with management responsibility and leadership potential — Networking events and workshops — Mentoring schemes 	15% of women in the first management tier below the Executive Board
22% of women in the second management tier below the Executive Board by 2022		14.5% of women in the second management tier below the Executive Board

An important priority in our actions to promote diversity is our aim to increase the proportion of women in management positions. We achieved the target we had set ourselves for mid-2017 of increasing the proportion of women in the first management tier below the Executive Board to 14 percent. At 31 December 2017, the proportion of female senior managers in this tier was around 15 percent (2016: 16 percent). We want this figure to rise to 18 percent by mid-2022. In the second management tier below the Executive Board, the proportion of women at 31 December 2017 was around 14.5 percent (2016: 18 percent), although the target we had set ourselves for mid-2017 was 17 percent. Contributing to the decrease compared with 2016 were downsizing measures which were part of the LIFT programme. By mid-2022, we want to increase the proportion of women at this level to 22 percent. In order to meet these targets, the Executive Board of Linde AG is supporting various measures, some of which come from employee initiatives. Against this background, we undertook activities in 2017, for example in China and South Asia, which seek amongst other things to encourage potential female executives. These activities include networking events, workshops and mentoring programmes. In accordance with statutory regulations in Germany, we have also set ourselves targets for the proportion of women on the Executive Board and Supervisory Board of Linde AG. A target of 20 percent has been set for the proportion of women on the Executive Board by mid-2022. This target was set by the Supervisory Board. To comply with German law, the Supervisory Board itself must comprise at least 30 percent women and at least 30 percent men. This quota system has been in force since 2016 and must be taken into account when new appointments are made to the Supervisory Board. At 31 December 2017, the proportion of men on the Supervisory Board of Linde AG was 75 percent, while the proportion of women was 25 percent.

Diversity¹

		2017	2016	2015	2014	2013
Staff up to 30 years old	%	16.1	17.1	17.5	18.4	18.2
Staff between 31 and 50 years old	%	58.1	57.9	58.3	57.5	58.0
Staff over 50 years old	%	25.8	25.0	24.2	24.1	23.8
Nationalities of employees in Germany		65	67	64	65	65
Non-German nationalities among senior managers in Germany	%	67.8	67.5	67.3	71.0	72.9
Proportion of female employees						
in total workforce	%	✓ 32.5	✓ 32.5	30.7	28.7	27.3
in Germany	%	23.5	23.8	25.4	25.4	25.9
in senior management positions	%	15.2	16.2	14.5	13.9	13.2
in the Executive Board	%	0	0	0	0	0
in the Supervisory Board	%	✓ 25.0	✓ 25.0	25.0	16.6	16.6
Severely disabled employees (Germany)	%	3.6	3.4	3.6	3.4	3.5

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Included in the audited Non-Financial Report



G4-10, G4-34, G4-38, G4-EC6, G4-LA12, G4-LA13, G4-HR3



6


MORE ABOUT

- Sustainability management
- ➔ Supervisory Board Linde AG

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

WORK-LIFE BALANCE

We provide a variety of opportunities to help our employees achieve a good work-life balance. In particular, these include flexible working models, such as flexitime, part-time work and teleworking. The proportion of the total workforce working part-time in 2017 was 3.4 percent (2016: 3.6 percent)². In Germany, 478 employees took parental leave during the reporting year (2016: 454), 42 percent of whom were men (2016: 42 percent).

Work-life balance¹

	2017	2016	2015	2014	2013
Part-time employees ² %	✓ 3.4	✓ 3.6	1.7	2.1	1.9
Employees on parental leave (Germany, as at Dec 31)	478	454	434	369	344

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² Starting with 2017 the calculation of part-time ratio is based on the portion of actual employees working part-time compared to the total staff. Before that the calculation was based on full-time equivalents. The 2016 number has been revised as well for better comparability. Generally, all other employee ratios are based on full-time equivalents, if not stated differently.

✓ Included in the audited [Non-Financial Report](#)

We also want to support employees who are reliant on childcare or have a family member requiring care and to provide assistance to employees during periods of poor health or social hardship. When designing appropriate options for our employees, we take account of the specific local situation and demands.

Moreover, we promote the physical and mental health of our employees in many countries: for example, by providing advice on how to cope with family crises or addiction problems and by supporting disease prevention initiatives. In 2017, for instance, we enhanced health insurance benefits for employees in the Engineering Division in Russia. In the United States, we increased the number of days of paid sick leave for employees in the Healthcare segment in our subsidiary Lincare.



G4-LA2, G4-LA3



6



INVOLVING EMPLOYEES

We want to encourage our employees to use their own initiative and to apply their knowledge and ideas for the benefit of the Group. For that reason, we have already conducted a number of global employee surveys, most recently in 2014. The aim is to analyse employees' understanding of our corporate objectives and the factors affecting employee commitment as a basis for shared success, and to devise measures for improvement. Again in 2017, we made awards at both regional and global level to employees and teams in many regions who had demonstrated particular commitment to our corporate objectives and values.

In 2017, the second Linde Global Innovation Challenge took place. This involved us calling upon all our employees worldwide to submit their ideas for innovations. The requirements for the challenge were based on our global innovation strategy, and we were looking for applicants to focus on themes such as digitalisation and resource efficiency. In all, we received more than 400 suggestions.

Dialogue with employee representatives

Linde strives to work together with employee representatives and trade unions based on partnership and trust, aiming to reconcile the interests of the Group and the workforce. Linde's system of employee representation in Germany is two-tiered, consisting of a central works council for the Group as a whole and works councils in the decentralised units. Cross-border issues are dealt with by the European Works Council, which currently has 28 members and protects the rights of employees in Europe to information, consultation and advice. In many other countries, there are regional-level works councils or employee interest groups, with which we work constructively. Linde's cooperation with the central works council in 2017 focused on the proposed merger with Praxair and on the rounds of negotiations on the reconciliation of interests and the redundancy scheme which forms part of the LIFT efficiency programme. As a result, the works councils also conducted several hundred discussions with employees at both German and international business locations.



G4-37, G4-49, G4-LA4, G4-LA5, G4-LA8,
G4-LA9, G4-HR4



3



MORE ABOUT

→ Cooperation for sustainability

REMUNERATION AND SOCIAL BENEFITS

The remuneration package of our employees comprises a salary in line with the market as well as variable remuneration components depending on the position of the employee within the Group. We also offer our staff various additional benefits such as occupational pensions and contributions towards health insurance or medical screening. These benefits reflect regional conditions and local competition. Fair remuneration for female and male employees in comparable positions is also important to us. When we have conducted analyses of remuneration and salary increases in a number of different regions, we have not identified any significant differences between female and male employees.

Personnel expenses in 2017 totalled EUR 3.780 bn (2016: EUR 3.724 bn), with EUR 3.489 bn (2016: EUR 3.431 bn) attributable to salaries (including social security contributions) and EUR 291 m to pensions (2016: EUR 293 m). Employees in more than 50 countries had access to occupational pensions and healthcare benefits in 2017. Around 80 percent of our employees were members of an occupational pension scheme. In total, 25,566 pensioners drew an occupational pension from the Group (2016: 28,722).

Remuneration and social benefits¹

		2017	2016	2015	2014	2013
Personnel expenses	€ billion	✓ 3,780	✓ 3,724	3,829	3,536	3,423
Pension costs	€ million	✓ 291	✓ 293	278	293	281
Staff covered by collective wage agreements	%	43.2	42.3	41.2	46.5	45.6
Retired employees receiving pensions from Linde		25,566	28,722	29,116	30,941	31,006

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

✓ Included in the audited [Non-Financial Report](#)

Employee participation in the Group's success

We want to conduct fair appraisals of our employees and have therefore set up a Group-wide performance evaluation system. This system includes, for example, performance evaluations which are binding for managers. We provide our managers with training to enable them to deliver fair and transparent appraisals. Managers' pay is based in part on the extent to which Group targets and the employees' individual targets have been achieved. Depending on the business area, sustainability targets such as safety and diversity may also be relevant to the calculation. Key parameters used to measure the Group's success are ROCE and operating profit. The aim is to increase employee commitment and entrepreneurship in the workforce. Senior managers also participate directly in Linde's growth in value through share option schemes. In 2017, around 68 percent of managers below Executive Board level entitled to participate in share option schemes invested in 18,910 Linde shares via these schemes (2016: 25,371 shares). For each of these shares, the participants are entitled to an additional Linde share on the expiry of a four-year qualifying period.



G4-11, G4-52, G4-EC5, G4-EC7, G4-EC8,
G4-LA2, G4-LA13



6



MORE ABOUT

- [➤ Remuneration of the Executive Board
\(Financial Report p. 24 ff.\)](#)
- [➤ Remuneration of the Supervisory Board
\(Financial Report p. 38 f.\)](#)
- [➤ Pensions \(Financial Report p. 140 ff.\)](#)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

HUMAN RIGHTS AND LABOUR STANDARDS

We support compliance with human rights and have set ourselves the goal of preventing violations of human rights in the course of our business operations. In a number of different areas where we can exercise influence, we have implemented measures which support the commitments we have made. These areas include human resources, safety and supply chain management.

Global standards

The measures we take are also based on the United Nations Guiding Principles on Business and Human Rights. In addition, we commit to the principles of the UN Human Rights Charter, the core labour standards of the International Labour Organisation (ILO), and other international obligations and industry standards.

Respect for human rights is taken into account in our Group guidelines. These guidelines include our Code of Ethics, purchasing guidelines and purchasing agreements, our Integrity Line policy, and Group risk management. In these standards, which apply right across the Group, we set out mandatory practices for our employees.

In 2014, the Executive Board of Linde AG adopted The Linde Group Position on Human Rights, which describes the processes which confirm our commitment, covering the following topics:

- safety and health protection
- the prevention of discrimination and harassment of employees
- equal opportunities and equal treatment
- fair pay
- compliance with regulations on working hours
- the right to privacy
- freedom of association and freedom of assembly
- the exclusion of any form of child labour or forced labour, including human trafficking

In 2017, work was carried out on a human rights guideline and on the implementation of corresponding control mechanisms and these were discussed by the Executive Board.

Implementation and monitoring

To ensure human rights are being respected, we conduct regular in-house surveys of staff responsible in all the regions, asking them to tell us about the status of the processes which have been introduced. We train our employees in the correct application of the Code of Ethics. Compliance with the standards set out in the Code of Conduct for Suppliers is a requirement included in our purchase contracts. It also forms part of the risk-based review of suppliers and of training for service providers. We involve our major stakeholders in the topic of human rights.

To detect potential weaknesses, we also evaluate the information provided to our Integrity Line. Our employees and external stakeholders can use this service to report any breaches of the Group's commitment. In 2017, around 32 percent of the reports received by the Integrity Line related to human resources issues (2016: 30 percent). We investigate any deviations or breaches. If necessary, we take corrective action with employees. The measures taken might include training, coaching, the issuing of verbal and written warnings or dismissals, or we might terminate business relationships with suppliers. We also evaluate the findings of audits for customers at our business locations which consider human rights aspects and enter into a dialogue on the subject with our customers. In 2017, more than 60 audits were conducted at our business locations which covered social topics.

To support our work on respect for human rights, the areas we are focusing on include the protection of employees and third parties as well as the issue of equal opportunities and promoting women in the Group. As far as safety is concerned, we pay particular attention to the protection of employees working in production, as well as to employees and contractors who work for Linde on construction sites or who transport our products.



G4-15, G4-56, G4-EC5, G4-LA16, G4-HR5,
G4-HR6, G4-HR9, G4-HR12



1, 2, 3, 4, 5, 6



CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

MORE ABOUT

- Sustainability management
- Compliance
- Supply chain
- ➔ Linde Integrity Line

SOCIAL COMMITMENT

KEY FIGURES		
Donations EUR 2.1 m donated to charitable causes	Social commitment 1,000 employees engaged in voluntary work	Result 1 million children, pupils and students reached by a variety of initiatives
PROGRESS		
Education Since 2004, around 25,000 students have taken part in courses provided by the Carl von Linde Academy in Munich	Local measures EUR 6.7 million of funding made available for some 200 projects and initiatives worldwide	Social issues First global fundraising campaign conducted by the Group – to support the setting up of a drinking water network and training programs in Somalia

Around the world, we engage with a large number of projects in the vicinity of our business locations. Our main focus here is on education and research. In addition, we support a variety of initiatives relating to safety, environmental protection, health and social affairs, as well as a variety of cultural projects. Cross-regional involvement is managed by our Corporate Centre in Munich, while local measures are coordinated on site by our employees. In 2017, we made funding available around the world of about EUR 6.7 m for some 200 projects and initiatives, donating approximately EUR 2.1 m. As a result of our social engagement in the year under review, we were able to reach around 960,000 children, school pupils and students. Our employees also demonstrate their engagement with society by carrying out voluntary work. In 2017, we supported around 1,000 of our staff around the world in their endeavours: for example, by granting them time off work.

Funding priorities

At our Corporate Centre in Munich, we support two flagship projects. Since the foundation in 2004 of the Carl von Linde Academy at the Technical University of Munich, which we made possible with foundation capital of EUR 8 m, around 25,000 students have taken part in the courses it provides. The Academy offers prospective engineers, scientists and doctors the opportunity to acquire additional qualifications which complement their core subjects, covering areas such as business ethics and risks associated with innovation. As a founding member of the Deutsches Museum Future Initiative, by 2018 Linde had provided funding totalling EUR 5 m to support the modernisation of the largest technology museum in the world. In 2017, a special exhibition entitled "energy.transitions" opened at the Deutsches Museum in Munich. Linde is the main sponsor of this exhibition.

In the various countries in which our subsidiaries operate, we have also been involved during the reporting year in numerous other projects. We select these projects on the basis of how closely they correlate with our core business and with key topics for our Group, such as safety and health.

We provided funds for disaster relief in 2017 in several regions of the world: for example, for hurricane victims in the United States. During the reporting year, we also launched our first global fundraising campaign. With around EUR 95,000, the Group and its employees supported the setting up of a drinking water network and health and education programmes to improve the living conditions of people in Somalia.



G4-16, G4-EC1, G4-EC7, G4-EC8, G4-S01,
G4-S06



1, 2, 8



CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

KEY FIGURES

OVERVIEW

Financials, Compliance and Innovation¹

Financial indicators

✓ Included in the audited
Non-Financial Report*

✓ Audited by KPMG

* Starting with the fiscal year 2017, Linde will publish key non-financial indicators and qualitative information on sustainability in a separate "non-financial report" (part of the annual report). Until 2016, the majority of the key figures contained in the non-financial report, as well as additional key figures from this overview table, were included in the management report of Linde's annual report. For details, please see the key figure overview from the CR Report 2016.

		2017	2016	2015	2014	2013
Share²						
Closing price	€	194.65	156.10	133.90	154.20	152.05
Year high	€	197.00	163.55	193.85	157.30	153.90
Year low	€	155.50	115.85	128.05	139.15	128.60
Market capitalisation (at year-end closing price)	€ million	36,134	28,978	24,857	28,625	28,219
No. of shares (at 31 December)	000s	185,638	185,638	185,638	185,638	185,588
Cash dividend per share	€	7.00	3.70	3.45	3.15	3.00
Group						
Revenue	€ million	17,113	16,948	17,345	17,047	16,655
In Germany	%	7.4	7.2	7.5	7.4	7.9
Outside Germany	%	92.6	92.8	92.5	92.6	92.1
Operating profit ³	€ million	4,213	4,098	4,087	3,920	3,966
Operating margin	%	24.6	24.2	23.6	23.0	23.8
EBIT	€ million	1,944	2,075	2,029	1,885	2,171
Profit for the year – attributable for Linde AG shareholders	€ million	1,404	1,206	1,133	1,162	1,430
Capital expenditure (excluding financial assets)	€ million	1,766	2,004	2,036	1,954	2,268
Equity ratio	%	44.9	44.0	43.7	41.4	41.5
Return on capital employed (ROCE)	%	10.2	9.4	9.5	9.5	9.7
Personnel expenses	€ billion	✓ 3,780	✓ 3,724	3,829	3,536	3,423
Personnel expenses (per employee)	€ 1,000	65.6	62.4	64.1	53.9	53.9
Pension costs	€ million	✓ 291	✓ 293	278	293	281
Donations	€ million	✓ 2.1	2.7	2.4	2.8	2.7

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

		2017	2016	2015	2014	2013
Gases Division						
Revenue	€ million	14,988	14,892	15,168	13,982	13,971
Operating profit ³	€ million	4,268	4,210	4,151	3,835	3,846
Operating margin	%	28.5	28.3	27.4	27.4	27.5
Engineering Division						
Revenue	€ million	2,388	2,351	2,594	3,074	2,879
Operating profit ³	€ million	220	196	216	300	319
Operating margin	%	9.2	8.3	8.3	9.8	11.1

Compliance

		2017	2016	2015	2014	2013
Contacts Integrity Line		✓ 351	✓ 348	300	734	393
Investigations as a result of reports to the Integrity Line		✓ 94	✓ 106	140	127	88
of which referring to personnel topics	%	✓ 32.1	✓ 30.1	25.7	26.8	36.4
of which referring to potential offences against property	%	✓ 24.1	✓ 30.7	26.4	32.3	33.0
of which referring to potential discrimination	%	✓ 1.2	✓ 1.3	2.8	1.6	2.3
of which referring to potential conflicts of interest	%	✓ 16.7	✓ 15.0	13.6	9.4	12.5

Innovation

		2017	2016	2015	2014	2013
Expenditure for research and development	€ million	✓ 112	✓ 121	131	106	92
Employees in the research and development field		350	345	348	390	367
New patents filed		232	360	287	260	263

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Safety¹

Audits and certifications for occupational health and safety

	2017	2016	2015	2014	2013
Production sites where occupational health and safety audits have been conducted	51.5	48.9	51.7	57.4	58.1
Number of conducted occupational health and safety audits	714	706	687	749	790
Production sites certified to OHSAS 18001 [✓]	16.8	17.1	16.5	15.7	17.8

Occupational health and safety

	2017	2016	2015	2014	2013
Workplace accidents of employees with at least one day of absence [✓]	✓ 297	✓ 269	358	318	304
Workplace accidents of contractors with at least one day of absence [✓]	✓ 122	✓ 131	151	140	150
Workplace accidents with at least one day of absence (employees) [✓]	2.4	2.2	2.9	2.4	2.3
Workplace accidents with at least one day of absence (contractors)	2.3	2.2	2.2	1.8	1.7
Fatal workplace accidents involving employees [✓]	✓ 1	✓ 1	2	2	4
Fatal workplace accidents involving contractors [✓]	✓ 2	✓ 1	1	3	6
Sick days	5.9	5.4	5.6	5.3	4.7

Transport

	2017	2016	2015	2014	2013
Distance driven by Linde's transport fleet and its contractors [✓]	874	878	857	975	963
Serious transport incidents involving trucks ^{4✓}	0.109	0.105	0.115	0.104	0.139

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Environment¹**Audits and certifications for environmental and quality management**

		2017	2016	2015	2014	2013
Production sites certified to ISO 9001✓	%	66.6	63.0	67.1	72.1	77.9
Production sites certified to ISO 14001✓	%	33.7	31.7	31.7	30.5	31.8
Production sites where environmental audits have been conducted	%	48.2	46.0	42.6	50.0	51.8
Number of conducted environmental audits		642	629	586	639	657

Resources consumed

		2017	2016	2015	2014	2013
Energy						
Electricity consumption✓	million MWh	✓ 28.9	✓ 27.5	26.8	26.2	23.4
of which by air separation plants✓	million MWh	✓ 26.3	✓ 24.8	23.9	23.5	20.7
Natural gas consumption✓	million MWh	✓ 45.1	✓ 39.4	39.5	39.5	36.4
of which by HyCO plants✓	million MWh	✓ 33.8	✓ 29.3	25.4	24.9	23.0
Consumption of other energy sources ⁵ ✓	million MWh	✓ 11.7	✓ 12.8	12.1	12.2	14.8
Total energy consumption✓	million MWh	✓ 85.7	✓ 79.7	78.4	77.9	74.6
Water						
Water use✓	million m ³	✓ 811	✓ 716	681	682	681
of which ground and surface water✓	%	98.8	98.7	98.6	98.5	98.6
of which drinking water✓	%	1.2	1.3	1.4	1.5	1.4
Total water consumption ⁶ ✓	million m ³	✓ 56.4	✓ 54.8	52.6	50.7	44.5
of which industrial and process water✓	million m ³	46.5	45.3	42.8	40.8	34.8
of which drinking water✓	million m ³	9.9	9.5	9.8	9.9	9.7
Waste water✓	million m ³	✓ 13.6	✓ 13.1	13.8	13.2	13.8
Resources and materials						
Raw materials and supplies✓	t	57,851	55,590	54,170	52,770	57,750
Packaging materials✓	t	4,835	3,510	3,160	5,580	3,990

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Emissions

		2017	2016	2015	2014	2013
Direct greenhouse gas emissions (Scope 1)						
CO ₂ emissions✓	million t	✓ 8.3	✓ 7.0	7.1	7.3	7.2
of which by HyCO plants✓	million t	✓ 5.7	✓ 4.7	4.0	4.0	4.2
Linde transport fleet ⁷ ✓	million t CO ₂ e	✓ 0.76	✓ 0.80	0.78	0.88	0.49
Other greenhouse gases ⁸ ✓	million t CO ₂ e	✓ 1.9	✓ 1.8	1.7	1.5	1.5
Total✓	million t CO ₂ e	✓ 11.0	✓ 9.6	9.6	9.7	9.2
Indirect greenhouse gas emissions (Scope 2)⁹						
CO ₂ emissions✓	million t	✓ 17.4	✓ 16.2	15.4	15.0	13.0
of which by air separation plants✓	million t	✓ 15.9	✓ 14.7	13.7	13.5	11.8
Total Scope 1 and 2 emissions✓	million t CO ₂ e	✓ 28.4	✓ 25.8	25.0	24.7	22.2
Emissions per million EUR sales	t CO ₂ e	1,657	1,522	1,440	1,449	1,333
Emissions per Linde employee	t CO ₂ e	492	432	418	377	350
Other indirect greenhouse gas emissions (Scope 3)						
Business travel ¹⁰ ✓	thousand t CO ₂ e	53.0	58.7	68.5	72.9	81.0
Emissions to air¹¹						
VOC (volatile organic compounds)✓	t	535	531	598	657	92
NH ₃ (ammonia) ¹² ✓	t	37	45	73	165	12
CO (carbon monoxide)✓	t	2,679	2,634	3,213	3,325	2,177
NO _x (nitrogen oxides)✓	t	5,065	4,879	6,443	6,762	6,273
SO _x (sulphur oxides)✓	t	580	685	708	447	122
Emissions to water¹³						
Chemical oxygen demand (COD)✓	t	1,541	1,561	1,425	1,585	2,157
Biochemical oxygen demand (BOD)✓	t	518	511	496	544	163
Nitrates✓	t	357	339	335	295	89
Phosphates✓	t	41	45	47	39	3

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Waste and recycling

		2017	2016 ¹⁴	2015	2014	2013
Total waste✓	thousand t	✓ 67.8	✓ 70.5	66.1	94.1	124.9
Non-hazardous waste✓	%	✓ 69	✓ 67	66	76	76
Hazardous waste✓	%	✓ 31	✓ 33	34	24	24
Recycled waste✓	%	33	30	39	56	65
Incineration waste ¹⁵ ✓	%	24	24	21	15	14
Landfill waste✓	%	22	19	22	19	10
Other disposal methods✓	%	21	27	18	10	11

Environmental incidents

	2017	2016	2015	2014	2013
Environmental complaints	9	22	14	25	24
Reportable environmental incidents	6	19	13	21	25

Employees¹

Employment structure

		2017	2016	2015	2014	2013
Group	as of Dec. 31	✓ 57,605	✓ 59,715	59,774	65,591	63,487
Gases Division		✓ 51,138	✓ 52,907	52,395	53,436	51,536
EMEA		✓ 19,556	✓ 20,309	21,067	21,779	21,544
Asia/Pacific		✓ 11,147	✓ 11,343	11,533	12,175	12,122
Americas		✓ 20,435	✓ 21,255	19,795	19,482	17,870
Engineering Division		✓ 6,144	✓ 6,432	7,038	7,330	6,997
Other activities		✓ 323	✓ 376	341	4,825	4,954
Employees in production		20,408	20,466	21,194	21,684	20,200
Employees in sales, marketing and distribution		26,787	27,293	27,021	31,851	31,778
Employees in research and development		350	345	348	390	367
Employees in administration		10,060	11,611	11,211	11,666	11,141
Part-time employees ¹⁶	%	✓ 3.4	✓ 3.6	1.7	2.1	1.9
Employees in Germany		7,474	7,842	8,014	8,090	7,822
Temporary staff	%	5.6	8.4	8.8	8.6	6.2
Employees on parental leave (Germany, as at Dec 31)		478	454	434	369	344
Staff covered by collective wage agreements	%	43.2	42.3	41.2	46.5	45.6

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

	2017	2016	2015	2014	2013
Employee retention and benefits					
Number of new hires	✓ 7,925	✓ 9,513	10,290	12,049	8,955
thereof women	% ✓ 46.0	✓ 50.5	49.2	46.2	41.6
Overall turnover rate	% ✓ 20.3	✓ 20.8	18.4	–	–
Staff turnover rate ¹⁷	% ✓ 12.3	✓ 12.1	10.7	10.0	9.4
Average length of service	years 9.2	9.1	9.1	8.4	8.9
Retired employees receiving pensions from Linde	25,566	28,722	29,116	30,941	31,006

Diversity

	2017	2016	2015	2014	2013
Staff up to 30 years old	% 16.1	17.1	17.5	18.4	18.2
Staff between 31 and 50 years old	% 58.1	57.9	58.3	57.5	58.0
Staff over 50 years old	% 25.8	25.0	24.2	24.1	23.8
Nationalities of employees in Germany	65	67	64	65	65
Non-German nationalities among senior managers in Germany	% 67.8	67.5	67.3	71.0	72.9
Proportion of female employees					
in total workforce	% ✓ 32.5	✓ 32.5	30.7	28.7	27.3
in Germany	% 23.5	23.8	25.4	25.4	25.9
in senior management positions	% 15.2	16.2	14.5	13.9	13.2
in the Executive Board	% 0	0	0	0	0
in the Supervisory Board	% ✓ 25.0	✓ 25.0	25.0	16.6	16.6
Severely disabled employees (Germany)	% 3.6	3.4	3.6	3.4	3.5

Employee training

	2017	2016	2015	2014	2013
Employees who attended training opportunities	% ✓ 40.6	✓ 38.2	61.0	66.2	60.3
Average training days per participant	✓ 4.3	✓ 3.7	2.9	3.1	3.0
Average expenditure on training programmes per participant	€ ✓ 328	✓ 372	369	350	341
Apprentices and trainees in total workforce	% 1.0	0.8	0.9	0.9	0.9
Apprentices and trainees in Germany	% 3.7	3.4	3.0	3.2	3.1

¹ In line with the information in the Financial Report 2017, the figures provided for the years 2015, 2016 and 2017 exclude the business of the logistics service provider Gist, as it has been reported as a discontinued operation.

² The share price-related information for the 2017 financial year is based on the shares in Linde that were submitted for exchange (ISIN DE000A2E4L75), which have been listed since 15 August 2017.

³ EBIT (before non-recurring items) adjusted for amortisation of intangible assets and depreciation of tangible assets.

- ⁴ Severe traffic incidents, e.g. with serious effects on the health of the employees involved or with reportable emissions to the environment, as well as transport incidents leading to material costs above a defined threshold. The performance indicator was redefined in 2015. The new definition includes not only preventable transport incidents but also incidents previously classified as non-preventable. The figure has been recalculated for previous years.
- ⁵ Examples of other energy sources are heating oil, biofuel energy, propane, butane, thermal energy and diesel fuel. From 2015, this figure also includes diesel consumption by Linde's transport contractors. The 2014 figure has been recalculated.
- ⁶ Water consumption relates to drinking water and industrial water used. Once-through water is drawn from a natural or other sources, solely warmed and ultimately piped back to the original source at a temperature not posing any risk to the surrounding ecosystem.
- ⁷ From 2015, this figure also includes greenhouse gas emissions generated by Linde's transport contractors. The 2014 figure has been recalculated.
- ⁸ This includes greenhouse gases specified in the Kyoto Protocol: methane (CH₄), nitrous oxide (laughing gas, N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). In 2014, Linde has refined the determination method of the indicator for these GHGs to include additional emitters and emission sources. The reported figure for 2013 was recalculated based on this new method.
- ⁹ In order to calculate our indirect CO₂ emissions we are using site specific factors from the energy provider if available. Wherever such factors are not available we use factors from the International Energy Agency from 2011.
- ¹⁰ Since 2014, we also include the Radiative Forcing Index (RFI) to calculate emissions from business travel. Thereby, we take into account the higher impact of air travel on the greenhouse effect. Emissions for the year 2013 have been re-calculated accordingly.
- ¹¹ In 2014, Linde has refined the determination method for emissions to the air. Where available, measurements were used for the new methodology. For production sites for which no measurements were available, we estimated the figures. Where possible, the reported figures for 2013 were recalculated based on these new methods. The determination method for VOC emissions could not be applied retroactively. Therefore, the values for this indicator are not comparable for the years 2013 and 2014.
- ¹² The determination method for ammonia was revised during 2015. Reported ammonia emissions include uncontrolled releases to the atmosphere and since 2015 have been extended to include controlled releases to abatement systems at certain sites. The figure for 2014 has been adjusted accordingly.
- ¹³ In 2015, we have further improved the determination method for emissions to water (COD, BOD, nitrates, phosphates) applying measurement and extrapolation models. Although there are inherent limitations by applying this methodology, full measurement of these emissions by all Linde sites is considered economically not viable. The reported figures of the water emission indicators of the Linde Group therefore serve as an approximation. The figures for 2014 have been re-calculated accordingly.
- ¹⁴ The amount of waste for single sites depends on the different type of business and is partly based on proven estimation methods. Due to the change of estimate for one specific business area the numbers for waste for 2016 have been adjusted for better comparability with 2017 figures.
- ¹⁵ Incineration waste is partly used for heat recovery.
- ¹⁶ Starting with 2017 the calculation of part-time ratio is based on the portion of actual employees working part-time compared to the total staff. Before that the calculation was based on full-time equivalents. The 2016 number has been revised as well for better comparability. Generally, all other employee ratios are based on full-time equivalents, if not stated differently.
- ¹⁷ Staff turnover rate relates to employees who left the Group voluntarily during the period under review.



G4-9, G4-10, G4-11, G4-20, G4-21, G4-22, G4-EN1, G4-EN3, G4-EN4, G4-EN5, G4-EN6, G4-EN8, G4-EN9, G4-EN10, G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN20, G4-EN21, G4-EN22, G4-EN23, G4-EN24, G4-EN25, G4-EN30, G4-LA1, G4-LA2, G4-LA3, G4-LA6, G4-LA8, G4-LA9, G4-LA12, G4-HR3

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

GLOBAL COMPACT

We support the United Nations Global Compact. In our Corporate Responsibility Report, we explain how we implement the ten principles of the Global Compact. Content relevant to the Global Compact is identified as such at the end of each section of the page. Links to this content are also given in the GRI and Global Compact Index in the online report.

We report in accordance with the Advanced Level of the UN Global Compact, the highest reporting level of the Communication on Progress (COP). To meet the requirements of this reporting level, we provide [voluntary information about 21 criteria on the UN Global Compact website](#) alongside the Corporate Responsibility Report. We also consider the [Blueprint for Corporate Sustainability Leadership](#), an action plan initiated by the Global Compact LEAD platform.



The following table provides an overview of the commitments, standards and management systems which help us incorporate the principles of the UN Global Compact into our business processes. We also report on how we measure and monitor our performance and on the progress we have made, the measures we propose to implement and the goals we have set ourselves.

Human rights

Principle 1: Support and respect the protection of internationally proclaimed human rights

Principle 2: Make sure that the company is not complicit in human rights abuses

Strategy	<p>Linde undertakes to respect and protect human rights. We comply with international principles and guidelines such as</p> <ul style="list-style-type: none"> — the UN Universal Declaration of Human Rights, — the UN Guiding Principles on Business and Human Rights und — the OECD Guidelines for Multinational Enterprises. <p>Our aim is to make a contribution towards supporting human rights within the sphere of influence of our company: in our business activities, in the protection of our employees and in relationships with our stakeholders.</p>	<p>Labour standards</p> <p>Occupational health & safety</p> <p>Suppliers</p>
Implementation and monitoring	<p>Our commitments to protect human rights are set out in our Group guidelines which are binding on all our employees. These include our Code of Ethics and a position paper on human rights. Our Code of Ethics is supplemented by other global guidelines and standards, including the global policy on health, safety and environmental protection. In our Code of Conduct for Suppliers, we also require our suppliers to protect human rights and comply with minimum social standards.</p> <p>We review our commitments to protect human rights by applying a multistage implementation and monitoring process:</p> <ul style="list-style-type: none"> — We provide our employees with training on the contents of our Code of Ethics. — Training and audits are an integral part of our safety management system. We include contractors and other business partners in our training. — We use global surveys in all regions to verify the implementation of fair working conditions. — Our dialogue with employee representatives also includes discussion and consultation about labour standards. — We address the impact of our procurement practices and have set out minimum standards for suppliers. We test compliance on a sample basis. — Employees and external stakeholders can use the confidential Linde Integrity Line to report grievances, anonymously if they so wish. 	<p>Code of Ethics</p> <p>Position paper on human rights</p> <p>Policy on health, safety and environmental protection</p> <p>Code of Conduct for Suppliers</p> <p>Labour standards</p> <p>Occupational health & safety</p> <p>Suppliers</p> <p>Compliance</p> <p>Integrity Line</p>

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Human rights

Progress in the reporting year

- Global survey conducted within the Group on processes which ensure respect for human rights [Safety](#)
- More than 60 audits covering social topics were conducted [Labour standards](#)
- Occupational health and safety audits were conducted at just under 52 percent of operating sites; around 17 percent of operating sites certified in accordance with OHSAS 18001 [Occupational health & safety](#)
- Global Safety Day took place; in addition, health and safety awareness-raising activities and training carried out in many countries for managers, employees and contractors [Suppliers](#)
- More than 120 managers and employees worldwide were provided with training on how to handle risks
- Reduction of around 5 percent in workplace accidents per million hours worked compared with 2016
- Work carried out on a human rights guideline and on the implementation of corresponding control mechanisms and discussed by the Executive Board
- Over 80 suppliers reviewed to ensure they comply with guidance on environmental and safety issues and other issues relating to sustainability

Outlook

- Implement measures to achieve our global targets: [Targets](#)
 - Continuously reduce workplace accidents by 2020 (base year 2012)
 - Increase proportion of female managers
 - Reduce frequency of serious transport incidents per million kilometres travelled by 20 percent compared with base year 2015

Labour standards

Principle 3: Uphold the freedom of association and recognise the right to collective bargaining

Principle 4: Uphold the elimination of all forms of forced labour

Principle 5: Uphold the abolition of child labour

Principle 6: Uphold the elimination of discrimination in respect of employment and occupation

Strategy

Linde is committed to upholding international labour rights and standards and to dealing fairly with its employees. We are guided here by the principles set out in the core labour standards of the International Labour Organisation (ILO). [Labour standards](#)

These include: [Diversity](#)

- recognising the right of employees to freedom of association and collective bargaining to the extent that this is permitted by local legislation and promoting open dialogue between employees and management where there are no designated employee representatives; [Involving employees](#)
- rejecting any form of forced labour or human trafficking; [Suppliers](#)
- complying with requirements about the minimum age for employees, as set out in local legislation and international agreements;
- observing guidelines on equal opportunities and fair treatment and adopting a policy of zero tolerance for any form of illegal discrimination or employee harassment.

We also expect our suppliers to comply with these labour standards.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Labour standards

Implementation and monitoring

Our commitments to the protection of human rights and of social standards are set out in guidelines which are mandatory for all employees. These include our Code of Ethics and a position paper on human rights. Our Code of Ethics is supplemented by other global guidelines and standards. These include the global policy on health, safety and environmental protection. In our Code of Conduct for Suppliers, we also require our suppliers to protect human rights and comply with minimum social standards.

We have implemented various measures to ensure compliance with labour rights:

- Linde has a central works council for the Group as a whole as well as a European Works Council which currently has 28 members and is responsible for cross-regional topics. In other countries, employee representation is at regional level. Our dialogue with employee representatives also includes discussions and consultation about labour standards.
- Employees are provided with training on the content of our Code of Ethics.
- Our diversity management programme aims to exclude any form of discrimination and actively promote equal opportunities.
- We use a global survey to conduct a regular review of the extent to which systems are implemented to exclude any form of forced labour or child labour.
- We set out minimum requirements in the area of social standards with which our suppliers must comply. We test compliance on a sample basis.
- Any grievances can be reported via the Linde Integrity Line, anonymously if so desired.

Code of Ethics

[Position paper on human rights](#)

Policy on health, safety and environmental protection

Code of Conduct for Suppliers

[Labour standards](#)

[Diversity](#)

[Involving employees](#)

[Suppliers](#)

[Compliance](#)

[Integrity Line](#)

Progress in the reporting year

- Global survey conducted within the Group on processes which ensure that human rights are being respected
- More than 60 audits covering social topics were conducted
- Support provided for networking events, workshops, training programmes for women with management responsibility and leadership potential, and mentoring schemes
- Various activities undertaken which seek among other things to encourage potential female executives: for example, in China and South Asia
- Proportion of women in the first management tier below the Executive Board is 15 percent (2016: 16 percent)
- Proportion of women in the second management tier below the Executive Board is 14.5 percent (2016: 18 percent)
- Linde worked together with employee representatives and trade unions based on partnership and trust, aiming to reconcile the interests of the Group and the workforce
- Over 100 suppliers reviewed to ensure they comply with guidance on environmental and safety issues and other issues relating to sustainability
- Around 80 percent of our strategic suppliers have signed up to our Code of Conduct for Suppliers

[Labour standards](#)

[Suppliers](#)

[Diversity](#)

Outlook

- Implement measures to achieve our global target: to increase the proportion of female managers
- Increase the proportion of women in the first management tier below the Executive Board to 18 percent in 2022
- Increase the proportion of women in the second management tier below the Executive Board to 22 percent in 2022

[Targets](#)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Environmental protection

Principle 7: Support a precautionary approach to environmental challenges

Principle 8: Undertake initiatives to promote greater environmental responsibility

Principle 9: Encourage the development and diffusion of environmentally friendly technologies

Strategy	<p>Linde is committed to making a contribution towards protecting the environment. We focus in particular on the Group's sites, the transportation of products and their use by customers. We concentrate on minimising safety risks and our environmental impact, as well as on the efficient use of energy, resources and materials.</p> <p>Our products and services support our customers' efforts to make their business processes safer and more environmentally friendly.</p> <p>Within the context of our social commitment, we also support environmental protection.</p>	Safety	CONTENTS
		Environment	
Implementation and monitoring	<p>Our commitment to protecting the environment is outlined in our mandatory Code of Ethics for employees and our Code of Conduct for Suppliers. Our global guidelines on health, safety and environmental protection and on product stewardship define the framework for implementation in this area.</p> <p>Our environmental management system and our risk management system are geared towards minimising the environmental risks that might arise from our processes and products. Measures include risk analyses and certification of our sites in accordance with international standards as well as control mechanisms such as audits.</p> <p>Training is one of the ways in which we raise awareness of environmental and safety issues among our employees.</p> <p>We have a wide-ranging portfolio of technologies which help reduce the environmental impact of fossil fuels and cut CO₂ emissions. We are also driving forward the development of alternative fuels and renewable energy sources. Furthermore, our gases are used to improve the quality of untreated water and drinking water as well as to clean waste water.</p>	Innovations & products	THE REPORT
		Clean Technology by Linde	
		Social commitment	ABOUT LINDE
		Code of Ethics	
		Code of Conduct for Suppliers	SUSTAINABILITY AT LINDE
		Policy on health, safety and environmental protection	
Progress in the reporting year	<ul style="list-style-type: none"> — We have conducted around 1,360 health, safety and environmental audits — Since 2009, we have avoided a total of 4.1 million tonnes of CO₂ emissions, of which 0.9 million tonnes were direct emissions and 3.2 million tonnes were indirect emissions — Around 170 projects have been identified which increase energy efficiency; their implementation has generated cost savings of more than EUR 18 m and has reduced CO₂ emissions by around 126,000 tonnes. — Nine locations in Asia and Eastern Europe for example certified externally for the first time in accordance with the updated environmental standard ISO 14001 (revised in 2015) — Potential savings of around 70,000 cubic metres of water and cost savings of around EUR 70,000 per annum identified in China and Indonesia — More than 50 percent of our research and development projects aimed to achieve an environmental benefit — 500 patents in the chemical and environmental sectors, clean energy and hydrogen technologies — More than 18 million tonnes of CO₂ emissions avoided just as a result of customers using one key Linde technology 	Product stewardship policy	SAFETY
		Environment	
		Innovations & products	ENVIRONMENT
		Clean Technology by Linde	
		Position paper on water	EMPLOYEES
		Safety	
		Environment	SOCIETY
		Innovations & products	
		Production	KEY FIGURES
		Energy & climate protection	
		Water	

Environmental protection

- Around 14,500 tonnes of NO_x emissions avoided at customers' plants by using LoTOx™ systems
- Around 790 million cubic metres of water brought up to drinking water quality in six countries using Linde's SOLVOCARB® process installed by our customers
- Around 100 employees took part in special training courses on water management
- Over 100 suppliers reviewed to ensure they comply with guidance on environmental and safety issues and other issues relating to sustainability

Outlook	<ul style="list-style-type: none"> — Avoid a total of 6 million tonnes of CO₂ emissions by 2020 compared with 2009 — Certify other sites in accordance with the updated environmental standard ISO 14001 (revised in 2015) 	Targets
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Anti-corruption

Principle 10: Work against corruption in all its forms, including extortion and bribery

Strategy	<p>Good corporate governance is an essential prerequisite of our business success. It involves complying with laws, regulations and voluntary commitments.</p> <p>The aim of our global compliance programme is to prevent misconduct and to investigate and follow up any violations.</p>	<p>Code of Ethics</p> <p>Code of Conduct for Suppliers</p> <p>Compliance</p>
Implementation and monitoring	<p>Our key compliance guidelines have been set out in our Code of Ethics for employees and our Code of Conduct for Suppliers and in other supplementary guidelines. To prevent misconduct, our global compliance programme is based on three pillars: communication, training and personal advice.</p> <p>At the same time, we encourage our employees to report any violations of our Code of Ethics, other Group guidelines or legal regulations, and we offer them advice on doing so. Employees and third parties can use the Linde Integrity Line to report any doubts or suspicions they may have. Each report to the Integrity Line is examined. Our Integrity Line guideline defines the exact process to be followed and ensures that reports remain confidential and that data is protected. If the suspicion proves justified, this entails consequences.</p> <p>We apply the knowledge we gain from dealing with these cases to make further improvements in our compliance programme.</p>	<p>Compliance</p> <p>Integrity Line</p>
Progress in the reporting year	<ul style="list-style-type: none"> — Around 38,000 e-learning sessions on our Code of Ethics completed — Around 4,000 employees provided with on-site training by qualified instructors — Employees provided with new e-learning programmes about dealing with healthcare compliance and data protection to raise awareness of these subjects — Around 8,500 queries handled by compliance officers 	Compliance
Outlook	Further measures to expand the compliance programme	Targets



G4-15

MORE ABOUT

[➔ Global Compact website](#)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

GRI AND GLOBAL COMPACT INDEX

General Standard Disclosure: Strategy and analysis

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
	G4-1	Statement from the most senior decision-maker of the organisation	CR Report 2017: CEO statement		CONTENTS
	G4-2	Key impacts, risks and opportunities	Financial Report 2017: Opportunity areas (p. 75) Financial Report 2017: Risk areas (p. 80) CR Report 2017: Sustainability management CR Report 2017: Safety CR Report 2017: Environmental protection Linde website: Clean Technology by Linde		THE REPORT

General Standard Disclosure: Organisational profile

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
	G4-3	Name	CR Report 2017: Corporate profile		ABOUT LINDE
	G4-4	Primary brands, products and services	CR Report 2017: Corporate profile Linde website: About Linde Linde website: Clean Technology by Linde		
	G4-5	Location of headquarters	CR Report 2017: Legal Notice		
	G4-6	Countries of operations	CR Report 2017: Corporate profile Linde website: Linde worldwide		SUSTAINABILITY AT LINDE
	G4-7	Nature of ownership and legal form	Financial Report 2017: Linde in the capital market (p. 40 ff.) Linde website: Governance		
	G4-8	Markets served	Financial Report 2017: Corporate profile (p. b) Financial Report 2017: Business review / Gases Division (p. 54 ff.) CR Report 2017: Corporate profile		
	G4-9	Scale of the organisation	Financial Report 2017: Linde financial highlights (p. a) CR Report 2017: Corporate profile CR Report 2017: Key figures		SAFETY
	G4-10	Total number of employees	CR Report 2017: Corporate profile CR Report 2017: Employees across the world CR Report 2017: Diversity CR Report 2017: Key figures	We include gender-specific data where relevant for The Linde Group: for example, the percentage of female staff and the percentage of women in senior management positions. Contractors are working for Linde mainly on construction sites and as transport service providers. We involve these contractors in our safety and environmental protection management systems.	ENVIRONMENT
1; 3	G4-11	Employees covered by collective bargaining agreements	CR Report 2017: Remuneration and social benefits CR Report 2017: Key figures		EMPLOYEES
	G4-12	Supply chain	CR Report 2017: Supply chain		SOCIETY
	G4-13	Significant changes during the reporting period	Financial Report 2017: Acquisitions (p. 110 f.) CR Report 2017: Corporate profile CR Report 2017: Employees across the world Linde website: Shareholder structure		KEY FIGURES

General Standard Disclosure: Organisational profile

UNGC	GRI	GRI indicator	Links and downloads	Explanations
	G4-14	Precautionary approach or principle	Financial Report 2017: Risk management (p. 77 ff.) CR Report 2017: Sustainability management CR Report 2017: Compliance CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Product stewardship CR Report 2017: Occupational safety and health protection	
	G4-15	Externally developed sustainability charters, principles or other initiatives	CR Report 2017: Global Compact CR Report 2017: Values and standards CR Report 2017: Compliance CR Report 2017: Human rights and labour standards	
	G4-16	Memberships of associations	CR Report 2017: Stakeholders CR Report 2017: Social commitment	We publish information about our most important memberships of associations.

General Standard Disclosure: Identified material aspects and boundaries

UNGC	GRI	GRI indicator	Links and downloads	Explanations
	G4-17	Entities included in the organisation's consolidated financial statements	CR Report 2017: About this report CR Report 2017: Corporate profile	We do not publish any indicators on the CR performance of other companies (e.g. joint ventures, suppliers), if we have no operational control over these companies.
	G4-18	Process for defining the report content	CR Report 2017: About this report CR Report 2017: Material topics	
	G4-19	Material Aspects	CR Report 2017: About this report CR Report 2017: Material topics	We have covered the material aspects in our Corporate Responsibility Report. They are also included in this table. We set out the main issues under the heading "Key topics".
	G4-20	Aspect Boundary within the organisation	Financial Report 2017: List of shareholdings (p. 173 ff.) CR Report 2017: About this report CR Report 2017: Material topics CR Report 2017: Key figures	On the Group's corporate responsibility website, we have identified which stage of the value chain is relevant for each topic. In each case, this information is given at the end of the pages on that particular topic: e.g. on the climate protection page.
	G4-21	Aspect Boundary outside the organisation	CR Report 2017: About this report CR Report 2017: Material topics CR Report 2017: Key figures	On the Group's corporate responsibility website, we have identified which stage of the value chain is relevant for each topic. In each case, this information is given at the end of the pages on that particular topic: e.g. on the climate protection page.
	G4-22	Restatements of information provided in previous reports	CR Report 2017: About this report CR Report 2017: Key figures	
	G4-23	Changes from previous reporting periods	Financial Report 2017: List of shareholdings (p. 173 ff.) CR Report 2017: About this report	

General Standard Disclosure: Stakeholder engagement

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
	G4-24	Stakeholder groups engaged by the organisation	CR Report 2017: Stakeholders CR Report 2017: Material topics Linde website: Stakeholders		CONTENTS
	G4-25	Criteria for the selection of stakeholders	CR Report 2017: Stakeholders CR Report 2017: Material topics Linde website: Stakeholders		
	G4-26	Approach to stakeholder engagement	CR Report 2017: Stakeholders CR Report 2017: Material topics Linde website: Stakeholders		
	G4-27	Key topics and concerns raised through stakeholder engagement	CR Report 2017: Stakeholders CR Report 2017: Material topics Linde website: Stakeholders		

General Standard Disclosure: Report profile

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
	G4-28	Reporting period	CR Report 2017: About this report		ABOUT LINDE
	G4-29	Date of most recent previous report	CR Report 2017: About this report		
	G4-30	Reporting cycle	CR Report 2017: About this report		
	G4-31	Contact point for questions	CR Report 2017: Sustainability management Linde website: Corporate Responsibility Contact		SUSTAINABILITY AT LINDE
	G4-32	GRI content index	CR Report 2017: GRI and Global Compact index	With this CR Report, we comply with the ‘comprehensive’ level of the G4 guidelines of the Global Reporting Initiative.	
	G4-33	External assurance	CR Report 2017: Assurance		

General Standard Disclosure: Governance

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
	G4-34	Governance structure of the organisation	Financial Report 2017: Executive Board (p. 4 f.) Financial Report 2017: Supervisory Board (p. 6 f.) Financial Report 2017: Diversity on the Supervisory Board (p. 18 f.) CR Report 2017: Sustainability management CR Report 2017: Promotion of women Linde website: Executive Board		SAFETY ENVIRONMENT EMPLOYEES SOCIETY
	G4-35	Process for delegating authority for sustainability topics from the highest governance body to senior executives and other employees	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management		
	G4-36	Executive-level positions with responsibility for economic, environmental and social topics	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management		
	G4-37	Processes for consultation between stakeholders and the highest governance body	Financial Report 2017: Supervisory Board and Executive Board procedures (p. 16 ff.) CR Report 2017: Sustainability management CR Report 2017: Compliance CR Report 2017: Involving employees		

General Standard Disclosure: Governance

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
	G4-38	Composition of the highest governance body and its committees	Financial Report 2017: Executive Board (p. 4 f.) Financial Report 2017: Members and committees of the Supervisory Board (p. 6 f.) CR Report 2017: Sustainability management CR Report 2017: Promotion of women		CONTENTS
	G4-39	Chair of the highest governance body	Financial Report 2017: Members and committees of the Supervisory Board (p. 6 f.)		
	G4-40	Nomination and selection processes for the highest governance body and its committees	Financial Report 2017: Supervisory Board and Executive Board procedures (p. 16 ff.)		THE REPORT
	G4-41	Process to avoid and manage conflicts of interest for the highest governance body	Financial Report 2017: Corporate governance practices (p. 15 ff.)		
	G4-42	Highest governance body's and senior executives' roles in goals related to sustainability impacts	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Identification of opportunities (p. 75 ff.) Financial Report 2017: Role of the Executive Board and the Supervisory Board regarding risk management (p. 77 ff.) CR Report 2017: Sustainability management		ABOUT LINDE
	G4-43	Highest governance body's collective knowledge of sustainability topics	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management		SUSTAINABILITY AT LINDE
	G4-44	Evaluation of the highest governance body's performance with respect to sustainability topics	Financial Report 2017: Supervisory Board and Executive Board procedures (p. 16 ff.)		
	G4-45	Highest governance body's role in the identification and management of impacts, risks, and opportunities related to sustainability	Financial Report 2017: Identification of Opportunities (p. 75 ff.) Financial Report 2017: Role of the Executive Board and the Supervisory Board in the management of risk (p. 77ff.) Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management		SAFETY
	G4-46	Highest governance body's role in reviewing the effectiveness of the organisation's risk management processes for sustainability topics	Financial Report 2017: Role of the Executive Board and the Supervisory Board in the management of risk (p. 77 ff.) Financial Report 2017: Committees and meetings of the Supervisory Board (p. 7) CR Report 2017: Sustainability management		ENVIRONMENT
	G4-47	Frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities	Financial Report 2017: Identification of opportunities (p. 75 ff.) Financial Report 2017: Role of the Executive Board and the Supervisory Board in the management of risk (p. 77 ff.) CR Report 2017: Sustainability management	The Linde AG Executive Board regularly makes decisions on sustainability topics at its meetings.	EMPLOYEES
	G4-48	Highest committee or position that reviews and approves the sustainability report	CR Report 2017: CEO statement CR Report 2017: Sustainability management		SOCIETY
	G4-49	Process for communicating critical concerns to the highest governance body	Financial Report 2017: Supervisory Board and Executive Board procedures (p. 16 ff.) CR Report 2017: Compliance CR Report 2017: Involving employees		
	G4-50	Critical concerns that were communicated to the highest governance body	CR Report 2017: Sustainability management CR Report 2017: Compliance		KEY FIGURES

General Standard Disclosure: Governance

UNGC	GRI	GRI indicator	Links and downloads	Explanations
	G4-51	Remuneration policies for the highest governance body and senior executives	Financial Report 2017: Corporate governance practices (p. 15 ff.) Financial Report 2017: Remuneration of the Executive Board and the Supervisory Board (p. 21 ff.) CR Report 2017: Remuneration and social benefits	
	G4-52	Process for determining remuneration	Financial Report 2017: Remuneration of the Executive Board and the Supervisory Board (p. 21 ff.) CR Report 2017: Remuneration and social benefits	
	G4-53	Expression and consideration of stakeholders' views	Financial Report 2017: Remuneration of the Executive Board and the Supervisory Board (p. 21 ff.)	
	G4-54	Ratio of the annual total compensation for the organisation's highest-paid individual to the median annual total compensation for all employees		In our Code of Ethics, we set out our commitment to fair remuneration. To ensure that we provide this, we regularly review remuneration in the regions where we operate to ensure that it is appropriate and in line with the market. We do not consider that the information required for this GRI G4 performance indicator is appropriate in evaluating the fairness of the remuneration system at Linde.
	G4-55	Ratio of percentage increase in annual total compensation for the organisation's highest-paid individual to the median percentage increase in annual total compensation for all employees		In our Code of Ethics, we set out our commitment to fair remuneration. To ensure that we provide this, we regularly review remuneration in the regions where we operate to ensure that it is appropriate and in line with the market. We do not consider that the information required for this GRI G4 performance indicator is appropriate in evaluating the fairness of the remuneration system at Linde.

General Standard Disclosure: Ethics and integrity

UNGC	GRI	GRI indicator	Links and downloads	Explanations
	G4-56	Values, principles, standards and norms of behaviour	CR Report 2017: Values and standards CR Report 2017: Compliance CR Report 2017: Human rights and labour standards Linde website: Company guidelines and position papers	
	G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behaviour, and matters related to organisational integrity	CR Report 2017: Values and standards CR Report 2017: Compliance Linde website: Integrity Line Linde Integrity Line guideline	
	G4-58	Internal and external mechanisms for reporting concerns about unethical or unlawful behaviour, and matters related to organisational integrity	CR Report 2017: Compliance Linde website: Integrity Line Linde Integrity Line guideline	

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Economic indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Economic performance

7	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Business model (p. 44) Financial Report 2017: Targets and strategy (p. 46) Financial Report 2017: Business review (p. 52 f.) Financial Report 2017: Corporate governance practices (p. 15 ff.)		CONTENTS
	G4-EC1	Direct economic value generated and distributed	Financial Report 2017: Linde shares (p. 40 ff.) Financial Report 2017: Employee-related matters (p. 209 ff.) Financial Report 2017: Group Financial Statements (p. 99 ff.) CR Report 2017: Social commitment	We do not publish information about tax payments at country level, as we classify this as confidential.	THE REPORT
7	G4-EC2	Financial implications and other risks and opportunities due to climate change	Financial Report 2017: Opportunities arising from increased climate protection efforts (p. 75 f.) Financial Report 2017: Regulatory and legal risks (p. 85 f.) CR Report 2017: Energy and climate protection CDP website		ABOUT LINDE
7	G4-EC3	Coverage of the organisation's defined benefit plan obligations	Financial Report 2017: Provisions for pensions and similar obligations (p. 140 f.) Financial Report 2017: Employee-related matters (p. 209 ff.)		SUSTAINABILITY AT LINDE
	G4-EC4	Financial assistance received from government		We do not publish a total figure for financial assistance received from governments, as we classify this information as confidential. Subsidies for large projects (mainly research or pilot projects that are of public interest) are reported on an ad-hoc basis: for example, through press releases.	SAFETY

Market presence

	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Business model (p. 44) Financial Report 2017: Targets and strategy (p. 46) CR Report 2017: Supply chain CR Report 2017: Diversity	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most material sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.	ENVIRONMENT
1	G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage	CR Report 2017: Remuneration and social benefits CR Report 2017: Human rights and labour standards PDF: Code of Ethics (p. 38)	In our Code of Ethics, we set out our commitment to fair remuneration. To ensure that we provide this, we regularly review remuneration in the regions where we operate to ensure that it is appropriate and in line with the market. We do not publish figures on entry level wages, as we classify this information as confidential.	EMPLOYEES
					SOCIETY
					KEY FIGURES

Economic indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
6	G4-EC6	Proportion of senior management hired from the local community	CR Report 2017: Diversity	In 2012, we looked at our senior managers in the key emerging markets and ascertained that about 70 percent of them had been hired from the local community. We are not aware of any significant subsequent change to this figure.	CONTENTS

Indirect economic impacts

1; 6	G4-DMA	Management approach	CR Report 2017: Employees CR Report 2017: Social commitment	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.	THE REPORT
2	G4-EC7	Development and impact of infrastructure investments and services supported	Financial Report 2017: Targets and strategy (p. 46) CR Report 2017: Social commitment CR Report 2017: Employees across the world CR Report 2017: Winning talent CR Report 2017: Remuneration and social benefits		ABOUT LINDE
2	G4-EC8	Significant indirect economic impacts	CR Report 2017: Social commitment CR Report 2017: Employees across the world CR Report 2017: Remuneration and social benefits Linde website: Linde worldwide		SUSTAINABILITY AT LINDE

Procurement practices

1;2;3; 4;5;6	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Supply chain CR Report 2017: Raw materials Linde website: Supply chain Code of Conduct for Suppliers Ethical-Legal Principles of Procurement		SAFETY
	G4-EC9	Proportion of spending on local suppliers	CR Report 2017: Supply chain		ENVIRONMENT

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Materials					
8;9	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Product stewardship CR Report 2017: Raw materials CR Report 2017: Supply chain Linde website: Supply chain Linde website: Product stewardship Linde website: Raw materials Policy on health, safety and environmental protection		CONTENTS
8	G4-EN1	Materials used by weight or volume	CR Report 2017: Raw materials CR Report 2017: Key figures CR Report 2017: Energy and climate protection	<p>The most important renewable resource for Linde is air from the atmosphere. The Group derives its products from the components of air. We report air gases sold in the financial year as a proportion of total gases sold, measured by weight. The consumption of other key resources and materials we publish as a total figure for raw materials and supplies used. We do not distinguish here between renewable and non-renewable materials, as this information is not strategically meaningful for our Group. The key packaging material for Linde is gas cylinders, which are reused and have therefore not been included in the performance indicator for packaging materials.</p>	THE REPORT
8;9	G4-EN2	Materials used that are recycled input materials	CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Raw materials	<p>This performance indicator is only relevant for certain areas of our business operations and the information is therefore not strategically meaningful for the Group.</p> <p>The most important renewable resource for Linde is air from the atmosphere. The Group derives many of its products from the components of air. We report air gases sold in the financial year as a proportion of total gases sold, measured by weight as well as the proportion of CO₂ products derived from recycling processes.</p>	ABOUT LINDE
					SUSTAINABILITY AT LINDE
					SAFETY
					ENVIRONMENT
					EMPLOYEES
					SOCIETY
					KEY FIGURES

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Energy					
8;9	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Opportunities arising from increased climate protection efforts (p. 75 f.) Financial Report 2017: Regulatory and legal risks (p. 85 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Innovation and products CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Energy and climate protection Linde website: Clean Technology by Linde Linde website: Energy Policy on health, safety and environmental protection		CONTENTS
8	G4-EN3	Energy consumption within the organisation	CR Report 2017: Energy and climate protection CR Report 2017: Key figures	<p>We report our direct consumption of natural gas and other fuels, including heating oil, thermal energy, refinery gases and synthesis gases, diesel fuel, butane and propane. Standard conversion factors are used. Our total energy consumption including electricity consumption in 2017 was around 86 million MWh (2016: 80 million MWh). We do not break direct energy consumption down further into renewable and non-renewable primary energy sources, as the cost of collecting the data is not strategically meaningful for the Group. We do not publish information on the sale of energy, as we classify this as confidential.</p>	THE REPORT
8	G4-EN4	Energy consumption outside of the organisation	CR Report 2017: Energy and climate protection CR Report 2017: Key figures	<p>We report Scope 3 emissions from business travel. The underlying energy consumption is thereby presented indirectly.</p>	ABOUT LINDE
8	G4-EN5	Energy intensity	CR Report 2017: Energy and climate protection CR Report 2017: Key figures	<p>Total energy consumption (in MWh) within the Group per million euro of revenue rose in the 2017 reporting year to 5,010 MWh per million euro (2016: 4,703 MWh per million euro).</p>	SUSTAINABILITY AT LINDE
2	G4-EN6	Reduction of energy consumption	CR Report 2017: Energy and climate protection CR Report 2017: Key figures		SAFETY
					ENVIRONMENT
					EMPLOYEES
					SOCIETY
					KEY FIGURES

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations
2	G4-EN7	Reduction in energy requirements of products and services	CR Report 2017: Sustainability management CR Report 2017: Innovation and products CR Report 2017: Energy and climate protection	Our products and technologies support our customers' efforts to increase energy efficiency in their processes. In our reports, we provide examples of selected Linde products which have generated energy savings and resulted in reduced CO ₂ emissions for our customers.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Water

8;9	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Water Linde website: Water Policy on health, safety and environmental protection	
8	G4-EN8	Total water withdrawal by source	CR Report 2017: Water CR Report 2017: Key figures	<p>Most of the water used by Linde is taken from surface water and used as cooling water. In most cases, it can be fed back into the water system without the need for further treatment. The performance indicator for water use is based, where available, on measurements taken. If measurements are not available, we use estimates.</p> <p>The data requested for this GRI indicator on total water withdrawal is only of limited relevance to Linde and therefore does not constitute a strategically meaningful control parameter for our Group.</p>
8;9	G4-EN9	Water sources affected by withdrawal of water	CR Report 2017: Water CR Report 2017: Key figures	We report the proportion of Linde sites in regions with water stress or water scarcity as defined by the World Resource Institute (WRI).
8	G4-EN10	Water recycled and reused	CR Report 2017: Water CR Report 2017: Key figures	Most of the water used by Linde is taken from surface water and used as cooling water. In most cases, it can be fed back into the water system without the need for further treatment.

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations
Biodiversity				
8	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Ecosystems Linde website: Biodiversity Policy on health, safety and environmental protection	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.
8	G4-EN11	Operational sites in or adjacent to protected areas	CR Report 2017: Ecosystems CR Report 2017: Water Linde website: Biodiversity	
8	G4-EN12	Impacts on biodiversity in protected areas	CR Report 2017: Ecosystems CR Report 2017: Water Linde website: Biodiversity	
8	G4-EN13	Habitats protected or restored	CR Report 2017: Ecosystems CR Report 2017: Water Linde website: Biodiversity	
8	G4-EN14	Endangered species	CR Report 2017: Ecosystems Linde website: Biodiversity	

Emissions

7;8;9	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Opportunities arising from increased climate protection efforts (p. 75 f.) Financial Report 2017: Regulatory and legal risks (p.85 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Innovation and products CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Energy and climate protection CR Report 2017: Emissions to air Linde website: Emissions to air Linde website: Clean Technology by Linde Policy on health, safety and environmental protection	
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CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
8	G4-EN15	Direct greenhouse gas emissions (Scope 1)	CR Report 2017: Energy and climate protection CR Report 2017: Key figures	We report direct (Scope 1) and indirect (Scope 2) emissions in accordance with the standards set out in the Greenhouse Gas Protocol. As a source for global warming potential, we use publications by the IPCC (Intergovernmental Panel on Climate Change). Calculations of emissions from direct and indirect energy consumption (electricity) are based on local conversion factors, where these are available. If this is not the case, we use average country factors. The source for these is data from the IEA (International Energy Agency) and DEFRA (the Department for Environmental and Rural Affairs). Our reports include all Linde production sites over which Linde has operational control.	CONTENTS
8	G4-EN16	Energy indirect greenhouse gas emissions (Scope 2)	CR Report 2017: Energy and climate protection CR Report 2017: Key figures	We report direct (Scope 1) and indirect (Scope 2) emissions in accordance with the standards set out in the Greenhouse Gas Protocol. As a source for global warming potential, we use publications by the IPCC (Intergovernmental Panel on Climate Change). Calculations of emissions from direct and indirect energy consumption (electricity) are based on local conversion factors, where these are available. If this is not the case, we use average country factors. The source for these is data from the IEA (International Energy Agency) and DEFRA (the Department for Environmental and Rural Affairs). Our reports include all Linde production sites over which Linde has operational control. Linde does not emit significant quantities of biogenic CO ₂ .	THE REPORT
8	G4-EN17	Other indirect greenhouse gas emissions (Scope 3)	CR Report 2017: Energy and climate protection CR Report 2017: Key figures	We report Scope 3 emissions from business travel. The effect of radiative forcing in aviation is taken into consideration. The data used is based on statistics provided by the travel service provider which organises all the Group's business trips. Emission factors are provided by DEFRA (the Department for Environmental and Rural Affairs). Linde does not emit significant quantities of biogenic CO ₂ .	ABOUT LINDE
					SUSTAINABILITY AT LINDE
					SAFETY
					ENVIRONMENT
					EMPLOYEES
					SOCIETY
					KEY FIGURES

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
8	G4-EN18	Greenhouse gas emissions intensity	CR Report 2017: Energy and climate protection CR Report 2017: Key figures	We report the following ratios: <ul style="list-style-type: none"> — The ratio of scope 1 + scope 2 emissions (in t CO₂e) to revenue (in EUR million) — The ratio of scope 1 + scope 2 emissions (in t CO₂e) to the number of employees at the year-end. 	CONTENTS
7;8;9	G4-EN19	Reduction of greenhouse gas emissions	CR Report 2017: Energy and climate protection CR Report 2017: Emissions to air	We report on current climate protection targets in the section entitled accordingly. In 2015, the Group set itself a new climate target (Scope 1 and 2). By 2020, Linde wants to avoid a total of 6 million tonnes of CO ₂ e in direct and indirect greenhouse gas emissions compared with the year 2009.	THE REPORT
8	G4-EN20	Emissions of ozone-depleting substances	CR Report 2017: Energy and climate protection CR Report 2017: Emissions to air CR Report 2017: Key figures	For Linde, the most relevant emissions in terms of climate protection are CO ₂ emissions from its own business operations. We present detailed information about these emissions. We are currently assessing how useful it would be for us to include this GRI indicator in our reporting by 2020.	ABOUT LINDE
8	G4-EN21	NO _x , SO _x , and other air emissions	CR Report 2017: Energy and climate protection CR Report 2017: Emissions to air CR Report 2017: Key figures	Global emissions of air pollutants (NO _x , SO _x , CO, VOC and NH ₃) are calculated when available on the basis of measured data. For sites where no measurements have been taken, estimates are made.	SUSTAINABILITY AT LINDE
					SAFETY
					ENVIRONMENT
7;8;9	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Water CR Report 2017: Waste Linde website: Water Linde website: Waste Linde website: Clean Technology by Linde Policy on health, safety and environmental protection		EMPLOYEES
					SOCIETY
					KEY FIGURES

Effluents and waste

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations
8	G4-EN22	Total water discharge	CR Report 2017: Water CR Report 2017: Key figures	<p>Most of the water used by Linde is taken from surface water and used as cooling water. In most cases, it can be fed back into the water system without the need for further treatment.</p> <p>The data requested for this GRI indicator on total water discharge is only of limited relevance to Linde and therefore does not constitute a strategically meaningful control parameter for our Group.</p>
8	G4-EN23	Total weight of waste by type and disposal method	CR Report 2017: Waste CR Report 2017: Key figures	<p>Not only do we disclose the total amount of hazardous and non-hazardous waste we produce, we also give details about the proportions of waste we dispose of in different ways. Some of the relevant information is provided by waste disposal contractors. Other data required for this GRI indicator on waste and waste disposal methods is not relevant to Linde and therefore does not constitute a strategically meaningful control parameter for our Group.</p>
8	G4-EN24	Significant spills	CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Energy and climate protection CR Report 2017: Water CR Report 2017: Production CR Report 2017: Emissions to air CR Report 2017: Key figures	<p>Serious emissions from process losses are included in our key figures on emissions to air and emissions to water. We disclose the number of reportable environmental incidents together with information on the background to those incidents. Spills are included in these figures.</p>
8	G4-EN25	Hazardous waste	CR Report 2017: Waste CR Report 2017: Key figures	<p>Not only do we disclose the total amount of hazardous and non-hazardous waste we produce, we also give details about the proportions of waste we dispose of in different ways. All the information relevant to the topic of waste in The Linde Group has therefore been covered. In most cases, hazardous waste is handled by specialist waste disposal companies. Linde does not import any significant quantities of waste.</p>
8	G4-EN26	Water bodies and related habitats affected	CR Report 2017: Water	<p>Where necessary, waste water from our production processes and sanitary facilities is either dealt with directly in our own waste water treatment plants or fed into municipal or industrial treatment systems. We comply here with permitted emission levels.</p>

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Products and services					
7;8;9	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Product stewardship CR Report 2017: Energy and climate protection Linde website: Environment and safety Linde website: Clean Technology by Linde Policy on health, safety and environmental protection	Linde has global guidelines in place for potential cases of recalls.	CONTENTS
7;8;9	G4-EN27	Impact mitigation of environmental impacts of products and services	CR Report 2017: Sustainability management CR Report 2017: Innovations and products CR Report 2017: Product stewardship Linde website: Clean Technology by Linde		THE REPORT
8;9	G4-EN28	Products sold and packaging materials reclaimed		Data on the total volume of products sold is classified as confidential. In our report, we disclose the total volume of packaging material, as well as major initiatives for taking back packaging material. Gas cylinders for deliveries to our customers are reused on average four times a year and refilled. The gas cylinders have a lifespan of many years. In individual cases, Linde assumes responsibility for disposing of other packaging materials for its customers. Sometimes we also offer customers waste collection and disposal services.	ABOUT LINDE
Compliance					
8	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p.198 f.) Financial Report 2017: Risk management (p. 77 ff.) CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Compliance		SUSTAINABILITY AT LINDE
8	G4-EN29	Fines and sanctions for non-compliance with environmental laws and regulations	CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Compliance	We report the number of reportable environmental incidents, the number of environmental complaints received and payments arising as a result.	SAFETY
KEY FIGURES					
					ENVIRONMENT
					EMPLOYEES
					SOCIETY

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Transport					
8	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Transport CR Report 2017: Energy and climate protection Linde website: Transport Policy on health, safety and environmental protection		CONTENTS
8	G4-EN30	Environmental impacts	CR Report 2017: Transport CR Report 2017: Energy and climate protection CR Report 2017: Key figures	We report an estimated number for fuel consumption of the Linde transport fleet and related direct greenhouse gas emissions.	THE REPORT
Overall					ABOUT LINDE
8	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Product stewardship Policy on health, safety and environmental protection		SUSTAINABILITY AT LINDE
7;8;9	G4-EN31	Environmental protection expenditures and investments	CR Report 2017: Safety CR Report 2017: Environmental protection	Key figures are collected at local level in accordance with local legislation. We do not publish these figures, as we classify this information as confidential.	SAFETY
Supplier environmental assessment					ENVIRONMENT
	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Supply chain CR Report 2017: Transport CR Report 2017: Raw materials Linde website: Supply chain Code of Conduct for Suppliers	In 2013, we commissioned an external analysis of sustainability risks in our supply chain. This enables us to classify every individual supplier according to its risk potential in the area of sustainability.	EMPLOYEES
7;8;9	G4-EN32	Suppliers screened using environmental criteria	CR Report 2017: Supply chain CR Report 2017: Raw materials	In 2015, all new suppliers automatically signed up to the Code of Conduct for Suppliers. There is also a continual process in place to ensure that those suppliers with whom contracts were signed prior to 2013, the year the Code of Conduct for Suppliers was introduced, agree to be bound by the Code.	SOCIETY
					KEY FIGURES

Environmental indicators

UNGC	GRI	GRI indicator	Links and downloads	Explanations
7;8;9	G4-EN33	Environmental impacts in the supply chain	CR Report 2017: Supply chain CR Report 2017: Raw materials	By way of example, we report key figures on impacts in the supply chain and measures taken for contractors on construction sites.

Environmental grievance mechanisms

7;8;9	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Compliance Linde website: Compliance Policy on health, safety and environmental protection	
7;8;9	G4-EN34	Grievances		We report the number of reportable environmental incidents, the number of environmental complaints received and payments arising as a result.

Social indicators: Labour practices and decent work

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Employment

	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Employee-related matters (p. 209 ff.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Employees across the world Code of Ethics (p. 4 ff.)	
	G4-LA1	New employee hires and employee turnover	CR Report 2017: Employees across the world CR Report 2017: Key figures	We report the number of new employee hires by gender and the employee turnover rate. We do not publish any other data on hiring employees as we classify this information as confidential. Where it is relevant for The Linde Group, we also provide gender-specific data, such as the percentage of female staff and the percentage of women in senior management positions.
	G4-LA2	Benefits provided to full-time employees	CR Report 2017: Remuneration and social benefits CR Report 2017: Work-life balance CR Report 2017: Key figures	
	G4-LA3	Return to work and retention rates after parental leave	CR Report 2017: Work-life balance CR Report 2017: Key figures	Where it is relevant for The Linde Group, we provide gender-specific data, such as the percentage of female staff and the percentage of women in senior management positions.

Social indicators: Labour practices and decent work

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Labour/management relations

1;3	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Involving employees Linde website: Involving employees Position Paper on Human Rights		CONTENTS
3	G4-LA4	Minimum notice periods regarding operational changes	CR Report 2017: Involving employees	<p>We notify our employees and/or employee representative bodies promptly of any significant company agreements. In 2015, the Executive Board of Linde AG and the European Works Council entered into an agreement on minimum standards for efficiency improvement measures which have an impact on staff numbers. These measures should be implemented in a socially responsible manner. Provisions set out in the agreement include an open and transparent information and consultation process to be conducted with employee representatives and ways in which compulsory redundancies can be avoided.</p>	THE REPORT
					ABOUT LINDE
					SUSTAINABILITY AT LINDE

Occupational health and safety

1	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Safety risks (p. 82) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Supply chain CR Report 2017: Safety CR Report 2017: Occupational safety and health protection Linde website: Labour standards Linde website: Occupational health and safety Policy on health, safety and environmental protection		SAFETY
1	G4-LA5	Workforce represented in formal joint management-worker health and safety committees	CR Report 2017: Involving employees	<p>We do not record any key figures for this GRI indicator, as it does not constitute a strategically meaningful control parameter for our Group.</p>	ENVIRONMENT
					EMPLOYEES
					SOCIETY

Social indicators: Labour practices and decent work

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
1	G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities	CR Report 2017: Safety CR Report 2017: Transport CR Report 2017: Occupational safety and health protection CR Report 2017: Key figures	<p>We record and publish those key figures which are relevant to the evaluation and improvement of our health and safety performance. These include the number of workplace accidents per million hours worked by employees and contractors (LTIR), the number of workplace accidents resulting in fatalities of employees and contractors, the number of accidents with at least one day of absence, etc.</p> <p>We do not break down these figures by region, as we classify this information as confidential. Where it is relevant for The Linde Group, we provide gender-specific data, such as the percentage of female staff and the percentage of women in senior management positions.</p>	CONTENTS
1	G4-LA7	Workers with a high incidence or high risk of diseases	CR Report 2017: Safety CR Report 2017: Occupational safety and health protection		THE REPORT
1	G4-LA8	Health and safety topics covered in formal agreements with trade unions	CR Report 2017: Involving employees CR Report 2017: Key figures	<p>We report the proportion of employees covered by collective wage agreements. We do not record other data included as part of this GRI indicator, as this information does not constitute a strategically meaningful control parameter for our Group.</p>	ABOUT LINDE
					SUSTAINABILITY AT LINDE

Training and education

	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) Financial Report 2017: Personnel opportunities (p. 209 ff.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Employees across the world CR Report 2017: Winning talent CR Report 2017: Human rights and labour standards Linde website: Competing for talent		SAFETY
	G4-LA9	Hours of training and education per employee	CR Report 2017: Involving employees CR Report 2017: Safety CR Report 2017: Key figures	<p>Where it is relevant for The Linde Group, we provide gender-specific data, such as the percentage of female staff and the percentage of women in senior management positions.</p>	ENVIRONMENT
	G4-LA10	Lifelong learning	CR Report 2017: Winning talent		EMPLOYEES
	G4-LA11	Performance and career development reviews	CR Report 2017: Winning talent	<p>We conduct regular staff appraisals to ensure that our employees are presented with targeted professional development opportunities. To date, we have not reported any data relating to these appraisals.</p>	SOCIETY
					KEY FIGURES

Social indicators: Labour practices and decent work

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Diversity and equal opportunity

1;6	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Diversity CR Report 2017: Human rights and labour standards Linde website: Values and standards Linde website: Diversity Linde website: Labour standards Code of Ethics (p. 38 f.) Position Paper on Human Rights		CONTENTS
1;6	G4-LA12	Composition of governance bodies	Financial Report 2017: Diversity on the Supervisory Board (p. 19 f.) CR Report 2017: Diversity CR Report 2017: Key figures Linde website: Executive Board and Supervisory Board	We report on all aspects which are key to our diversity management. We classify information on our employees' membership of minority groups as confidential. The composition of the Executive Board and the Supervisory Board by gender, age and origin is published on our website.	THE REPORT

Equal remuneration for women and men

1;6	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Remuneration and social benefits CR Report 2017: Diversity Linde website: Diversity Code of Ethics (p. 38 f.) Position Paper on Human Rights		ABOUT LINDE
1;6	G4-LA13	Ratio of the basic salary and remuneration of women to men	CR Report 2017: Remuneration and social benefits CR Report 2017: Diversity	The remuneration of individual Linde Group employees is dependent on their function and their qualifications and is not determined by gender-specific aspects. We regularly review remuneration in the regions where we operate to ensure that it is appropriate and in line with market conditions. We do not publish data relating to this issue, as we classify this information as confidential.	SUSTAINABILITY AT LINDE

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Social indicators: Labour practices and decent work

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Supplier assessment for labour practices

1;6	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Supply chain CR Report 2017: Transport CR Report 2017: Raw materials Linde website: Supply chain Code of Conduct for Suppliers	In 2013, we commissioned an external analysis of sustainability risks in our supply chain. This enables us to classify every individual supplier according to its risk potential in the area of sustainability.
1;6	G4-LA14	New suppliers screened	CR Report 2017: Supply chain Code of Conduct for Suppliers	In 2016, all new suppliers automatically signed up to the Code of Conduct for Suppliers. There is also a continual process in place to ensure that those suppliers with whom contracts were signed prior to 2013, the year the Code of Conduct for Suppliers was introduced, agree to be bound by the Code.
1;6	G4-LA15	Impacts for labour practices in the supply chain	CR Report 2017: Supply chain	By way of example, we report key figures on impacts in the supply chain and measures taken for contractors on construction sites.

Labour practices grievance mechanisms

1;6	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Compliance CR Report 2017: Human rights and labour standards Linde website: Integrity Line Linde Integrity Line guideline (p. 3)	
1;6	G4-LA16	Grievances about labour practices	CR Report 2017: Compliance CR Report 2017: Human rights and labour standards Linde website: Integrity Line Linde Integrity Line guideline (p. 6 f.)	

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Social indicators: Human rights

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Investment

1;2;3; 4;5;6	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Compliance CR Report 2017: Supply chain CR Report 2017: Diversity CR Report 2017: Human rights and labour standards Linde website: Values and standards Linde website: UN Global Compact Linde website: Integrity Line Position Paper on Human Rights Code of Ethics (p. 38) Code of Conduct for Suppliers	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.
1;2;3; 4;5;6	G4-HR1	Investment agreements and contracts that include human rights clauses	CR Report 2017: Supply chain	
1;2;3; 4;5;6	G4-HR2	Employee training on human rights policies	CR Report 2017: Compliance CR Report 2017: Supply chain Code of Ethics (p. 8)	In this report, we provide information on the number of training sessions completed on our Code of Ethics, which also covers the issue of human rights. In addition, Linde is training security personnel on this subject (see GRI indicator G4-HR7).

Non-discrimination

1;2;6	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Diversity CR Report 2017: Human rights and labour standards CR Report 2017: Compliance CR Report 2017: Supply chain Linde website: Diversity Linde website: Labour standards Linde website: Integrity Line Position Paper on Human Rights Code of Ethics (p. 39) Code of Conduct for Suppliers	
1;2;6	G4-HR3	Incidents of discrimination	CR Report 2017: Compliance CR Report 2017: Diversity CR Report 2017: Key figures	

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

UNGC	GRI	GRI indicator	Links and downloads	Explanations
------	-----	---------------	---------------------	--------------

1;2;6	G4-DMA	Management approach	<p>Financial Report 2017: Management Organisation (p. 198 f.)</p> <p>CR Report 2017: Sustainability management</p> <p>CR Report 2017: Sustainability organisation</p> <p>CR Report 2017: Involving employees</p> <p>CR Report 2017: Human rights and labour standards</p> <p>CR Report 2017: Compliance</p> <p>CR Report 2017: Supply chain</p> <p>Linde website: Involving employees</p> <p>Linde website: Labour standards</p> <p>Linde website: Integrity Line</p> <p>Position Paper on Human Rights</p> <p>Code of Ethics (p. 38)</p> <p>Code of Conduct for Suppliers</p>	<p>This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.</p>
	G4-HR4	Risk to the right to exercise freedom of association and collective bargaining	<p>CR Report 2017: Involving employees</p> <p>Linde website: Labour standards</p>	<p>In our Code of Ethics, which is binding on all employees, and our Code of Conduct for Suppliers, we set out our commitment to safeguarding freedom of assembly and association. In 2015 again, we investigated risks relating to the right to freedom of assembly and association as part of a global labour and social standards survey. In 2013, Linde commissioned an external analysis of sustainability risks in the supply chain which focused on country and product risks and also covered the right to freedom of assembly and association.</p>

1;2;5	G4-DMA	Management approach	<p>Financial Report 2017: Management Organisation (p. 198 f.)</p> <p>CR Report 2017: Sustainability management</p> <p>CR Report 2017: Sustainability organisation</p> <p>CR Report 2017: Human rights and labour standards</p> <p>CR Report 2017: Compliance</p> <p>CR Report 2017: Supply chain</p> <p>Linde website: Labour standards</p> <p>Linde website: Integrity Line</p> <p>Position Paper on Human Rights</p> <p>Code of Ethics (p. 38)</p> <p>Code of Conduct for Suppliers</p>	<p>This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.</p>
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Social indicators: Human rights

UNGC	GRI	GRI indicator	Links and downloads	Explanations
1;2;5	G4-HR5	Risks for incidents of child labour	CR Report 2017: Human rights and labour standards Linde website: Labour standards	In our Position Paper on Human Rights, in our Code of Ethics, which is binding on all employees, and in our Code of Conduct for Suppliers, we set out our commitment to respecting human rights worldwide. In 2016 again, we investigated child labour risks as part of a global labour and social standards survey. In 2013, Linde commissioned an external analysis of sustainability risks in the supply chain which focused on country and product risks and also covered the subject of child labour.

Forced or compulsory labour

1;2;4	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Human rights and labour standards CR Report 2017: Compliance CR Report 2017: Supply chain Linde website: Labour standards Linde website: Integrity Line Position Paper on Human Rights Code of Ethics (p. 38) Code of Conduct for Suppliers	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.
1;2;4	G4-HR6	Risks for incidents of forced or compulsory labour	CR Report 2017: Human rights and labour standards Linde website: Labour standards	In our Position Paper on Human Rights, in our Code of Ethics, which is binding for all employees, and in our Code of Conduct for Suppliers, we set out our commitment to respecting human rights worldwide. In 2016 again, we investigated forced labour risks as part of a global labour and social standards survey. In 2013, Linde commissioned an external analysis of sustainability risks in the supply chain which focused on country and product risks and also covered the subject of forced labour.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Social indicators: Human rights

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Security practices					
1;2	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Compliance CR Report 2017: Human rights and labour standards Linde website: Labour standards Linde website: Integrity Line Position Paper on Human Rights Code of Ethics (p. 37) Code of Conduct for Suppliers	<p>This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.</p> <p>Security personnel at our sites have to undergo a rigorous vetting process. Our security officers must respect human dignity and human rights and act in accordance with local laws and regulations. In safeguarding the security of our sites, we comply with international standards such as the UN Basic Principles on the Use of Force. Linde security personnel all receive training on these issues.</p>	CONTENTS
1;2	G4-HR7	Security personnel trained		<p>Security personnel at our sites have to undergo a rigorous vetting process. Our security officers must respect human dignity and human rights and act in accordance with local laws and regulations. In safeguarding the security of our sites, we comply with international standards such as the UN Basic Principles on the Use of Force. Linde security personnel all receive training on these issues.</p>	THE REPORT
Indigenous rights					ABOUT LINDE
1;2	G4-DMA	Management approach		<p>This aspect is not one of the key sustainability topics for The Linde Group, as our business activities are not associated with any violations of indigenous rights. For this reason, we do not provide any further information on this topic.</p>	SUSTAINABILITY AT LINDE
1;2	G4-HR8	Incidents of violations involving the rights of indigenous peoples		<p>We are not aware of any instances where the rights of indigenous peoples were violated in 2017.</p>	SAFETY
					ENVIRONMENT
					EMPLOYEES
					SOCIETY
					KEY FIGURES

Social indicators: Human rights

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Assessment					
1;2	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Compliance CR Report 2017: Human rights and labour standards Linde website: Labour standards		CONTENTS
1;2	G4-HR9	Review of operations	CR Report 2017: Human rights and labour standards		THE REPORT
Supplier human rights assessment					
1;2	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Goals CR Report 2017: Supply chain Linde website: Supply chain Linde website: Code of Conduct for Suppliers Code of Conduct for Suppliers	In 2013, we commissioned an external analysis of sustainability risks in our supply chain. This enables us to classify every individual supplier according to its risk potential in the area of sustainability.	ABOUT LINDE
1;2;3;4;5;6	G4-HR10	Suppliers screened	CR Report 2017: Supply chain	In 2016, all new suppliers automatically signed up to the Code of Conduct for Suppliers. There is also a continual process in place to ensure that those suppliers with whom contracts were signed prior to 2013, the year the Code of Conduct for Suppliers was introduced, agree to be bound by the Code.	SUSTAINABILITY AT LINDE
1;2;3;4;5;6	G4-HR11	Human rights impacts in the supply chain	CR Report 2017: Supply chain	By way of example, we report key figures on impacts in the supply chain and measures taken for contractors on construction sites.	SAFETY
Human rights grievance mechanisms					
1;2	G4-DMA	Management approach	CR Report 2017: Compliance CR Report 2017: Human rights and labour standards Linde website: Code of Conduct for Suppliers Linde website: Compliance Linde website: Integrity Line Linde Integrity Line guideline		ENVIRONMENT
1;2	G4-HR12	Grievances	CR Report 2017: Compliance CR Report 2017: Human rights and labour standards		EMPLOYEES
					SOCIETY
					KEY FIGURES

Social indicators: Society

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Local communities

	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Stakeholders CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Production CR Report 2017: Product stewardship CR Report 2017: Social commitment Linde website: Social commitment	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.
	G4-S01	Operations with local community engagement programmes	CR Report 2017: Stakeholders CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Social commitment	Around the world, we review the local and global impact of our business activities on people and the environment. Our community investment programmes are coordinated at a regional level. These involve voluntary work with communities in the vicinity of our business locations. The needs of those local communities are identified in consultation with our stakeholders.
	G4-S02	Impacts on local communities	CR Report 2017: Safety CR Report 2017: Environmental protection	Our business operations have no significant negative impacts on local communities beyond the risks outlined in the environment and safety section. We monitor and minimise potential risks through our corporate responsibility management.

Anti-corruption

10	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Compliance Linde website: Compliance Code of Ethics (p. 34)	
10	G4-S03	Assessment of operations for risks related to corruption	CR Report 2017: Compliance Financial Report 2017: Compliance (p. 16)	A binding risk analysis process (compliance risk assessment) was introduced in 2014, covering the issues of general compliance, antitrust law and corruption.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Social indicators: Society

UNGC	GRI	GRI indicator	Links and downloads	Explanations
10	G4-S04	Communication and training	CR Report 2017: Compliance Code of Ethics (p. 8)	Our aim is to train 100 percent of our employees on our Code of Ethics. All employees receive a copy of the Code of Ethics when they start working at the company and must confirm in writing that they have read and understood it. Furthermore, we organise a Group-wide e-learning programme and classroom-based courses to familiarise our employees with the Code of Ethics. We report total figures for both. We do not evaluate the annual percentage as the effort involved in doing so would be disproportionate to the benefit.
10	G4-S05	Confirmed incidents of corruption	Financial Report 2017: Legal risks (p. 86) Financial Report 2017: Litigation (p. 170)	In our Financial Report, we disclose the most important current or foreseeable legal or arbitration proceedings in which The Linde Group or one of its Group companies is involved.

Public policy

1;2;3; 4;5;6; 7;8;9; 10	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Stakeholders CR Report 2017: Social commitment CR Report 2017: UN Global Compact Linde website: Stakeholders Code of Ethics (p. 42)	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.
10	G4-S06	Political contributions	CR Report 2017: Stakeholders CR Report 2017: Social commitment	

Anti-competitive behaviour

10	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation Linde website: Compliance Code of Ethics (p. 16)	
10	G4-S07	Legal actions	Financial Report 2017: Legal risks (p. 86) Financial Report 2017: Litigation (p. 170)	In our Financial Report, we disclose the most important current or foreseeable legal or arbitration proceedings in which The Linde Group or one of its Group companies is involved.

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Social indicators: Society

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Compliance					
	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Compliance Linde website: Values and standards Linde website: Compliance Code of Ethics (p. 7 ff.)		CONTENTS
	G4-S08	Monetary value of fines and non-monetary sanctions	Financial Report 2017: Legal risks (p. 86) Financial Report 2017: Litigation (p. 170)	In our Financial Report, we disclose the most important current or foreseeable legal or arbitration proceedings in which The Linde Group or one of its Group companies is involved.	THE REPORT
Supplier assessment for impacts on society					ABOUT LINDE
	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Goals CR Report 2017: Supply chain CR Report 2017: Transport Linde website: Supply chain Code of Conduct for Suppliers	In 2013, we commissioned an external analysis of sustainability risks in our supply chain. This enables us to classify every individual supplier according to its risk potential in the area of sustainability.	SUSTAINABILITY AT LINDE
	G4-S09	Suppliers screened	CR Report 2017: Supply chain	In 2016, all new suppliers automatically signed up to the Code of Conduct for Suppliers. There is also a continual process in place to ensure that those suppliers with whom contracts were signed prior to 2013, the year the Code of Conduct for Suppliers was introduced, agree to be bound by the Code.	SAFETY
	G4-S010	Impacts on society in the supply chain	CR Report 2017: Supply chain	By way of example, we report key figures on impacts in the supply chain and measures taken for contractors on construction sites.	ENVIRONMENT
Grievance mechanisms for impacts on society					EMPLOYEES
	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Compliance Linde website: Integrity Line Linde Integrity Line guideline (p. 1 ff.)		SOCIETY
	G4-S011	Grievances	CR Report 2017: Compliance		KEY FIGURES

Social indicators: Product responsibility

UNGC	GRI	GRI indicator	Links and downloads	Explanations
Customer health and safety				
1	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Product stewardship Linde website: Compliance Linde website: Product stewardship Code of Ethics (p. 21) Policy on health, safety and environmental protection	
1	G4-PR1	Assessment of the health and safety impacts of products and services	CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Product stewardship Linde website: REACH	
1	G4-PR2	Compliance with regulations	Financial Report 2017: Legal risks (p. 86) Financial Report 2017: Litigation (p. 170)	In our Financial Report, we disclose the most important current or foreseeable legal or arbitration proceedings in which The Linde Group or one of its Group companies is involved.

Product and service labelling

8	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Sustainability management CR Report 2017: Sustainability organisation CR Report 2017: Safety CR Report 2017: Environmental protection CR Report 2017: Product stewardship Linde website: REACH Linde website: Product stewardship Policy on health, safety and environmental protection	
8	G4-PR3	Labelling of products	CR Report 2017: Product stewardship Linde website: REACH	
8	G4-PR4	Compliance with regulations	Financial Report 2017: Legal risks (p. 86) Financial Report 2017: Litigation (p. 170)	In our Financial Report, we disclose the most important current or foreseeable legal or arbitration proceedings in which The Linde Group or one of its Group companies is involved.
	G4-PR5	Results of surveys measuring customer satisfaction	CR Report 2017: Customers CR Report 2017: Product stewardship Linde website: Stakeholders	We systematically measure customer satisfaction levels worldwide as part of our customer experience management programme. We use the results of surveys, our customer complaint management service and other information channels to help us improve our products and offerings.

Social indicators: Product responsibility

UNGC	GRI	GRI indicator	Links and downloads	Explanations	
Marketing communications					
	G4-DMA	Management approach	CR Report 2017: Compliance Code of Ethics (p. 23)	This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.	CONTENTS
	G4-PR6	Sale of banned or disputed products	Code of Ethics (p. 26)		THE REPORT
	G4-PR7	Compliance with regulations	Financial Report 2017: Legal risks (p. 86) Financial Report 2017: Litigation (p. 170)	In our Financial Report, we disclose the most important current or foreseeable legal or arbitration proceedings in which The Linde Group or one of its Group companies is involved.	ABOUT LINDE
Customer privacy					
1	G4-DMA	Management approach	CR Report 2017: Compliance Linde website: Compliance Code of Ethics (p. 36)	<p>This topic is relevant to Linde in the context of sustainability and is covered by our management systems. As it is not one of the most relevant sustainability topics for our Group, we only report on individual aspects in this area which are relevant to us.</p> <p>In our Code of Ethics, we set out our commitment to the protection of personal data. We have therefore appointed a senior data protection officer. We keep our employees informed about data protection requirements and provide training for those who come into contact with personal data in their professional capacity.</p>	SUSTAINABILITY AT LINDE
1	G4-PR8	Complaints	CR Report 2017: Compliance	In this report, we disclose the total number of complaints made to the Linde Integrity Line and analyse them by sub-category. We are not aware of any reports regarding breaches of customer privacy and losses of customer data.	SAFETY
					ENVIRONMENT
					EMPLOYEES
					SOCIETY
					KEY FIGURES

Social indicators: Product responsibility

UNGC	GRI	GRI indicator	Links and downloads	Explanations
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Compliance

	G4-DMA	Management approach	Financial Report 2017: Management Organisation (p. 198 f.) CR Report 2017: Compliance CR Report 2017: Product stewardship Linde website: Compliance Linde website: Product stewardship Code of Ethics (p. 7 ff.)	
	G4-PR9	Fines	Financial Report 2017: Legal risks (p. 86) Financial Report 2017: Litigation (p. 170)	In our Financial Report, we disclose the most important current or foreseeable legal or arbitration proceedings in which The Linde Group or one of its Group companies is involved.



G4-32

MORE ABOUT

- [GRI website](#)
- [Global Compact website](#)

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

LIMITED ASSURANCE REPORT OF THE INDEPENDENT AUDITOR REGARDING SELECTED SUSTAINABILITY PERFORMANCE DISCLOSURES

To the Executive Board of Linde Aktiengesellschaft, Munich

We have performed an independent limited assurance engagement on selected sustainability performance disclosures, including explanatory notes, published in the online Linde Corporate Responsibility Report 2017 (hereinafter "Report"), for the business year from January 1 to December 31, of Linde Aktiengesellschaft, Munich (hereinafter "Linde").

The following selected sustainability performance disclosures are included in the scope of our assurance engagement and marked with the symbol ✓ in the Report, available at <http://corporateresponsibility.linde.com/cr-report/2017/>:

- Material topics
- Use of resources:
 - Energy
 - Water
 - Resources and materials
- Emissions:
 - Direct greenhouse gas emissions (Scope 1)
 - Indirect greenhouse gas emissions (Scope 2)
 - Other indirect greenhouse gas emissions (Scope 3)
 - Emissions to air
 - Emissions to water
- Waste and recycling
- Transport safety:
 - Number of serious traffic incidents involving trucks per 1 million km
- Occupational health and safety:
 - Workplace accidents by employees (per million working hours)
 - Number of workplace accidents by contractors with at least one day of absence
 - Number of fatalities involving employees
 - Number of fatalities involving contractors
- Certified sites:
 - Production sites certified to ISO 9001
 - Production sites certified to ISO 14001
 - Production sites certified to OHSAS 18001
- Social commitment:
 - Donations

Management's Responsibility

The legal representatives of Linde are responsible for the preparation of the selected sustainability performance disclosures in accordance with the Reporting Criteria. Linde applies the principles and standard disclosures of the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) and the Corporate Accounting and Reporting Standard (Scope 1 and 2) of the Greenhouse Gas Protocol Initiative by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), in combination with internal guidelines (hereinafter: the "Reporting Criteria").

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

Independence and Quality Assurance on the Part of the Auditing Firm

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

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

Practitioner's Responsibility

Our responsibility is to express a conclusion on the selected sustainability performance disclosures based on our work performed within our limited assurance engagement.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" published by IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance of whether any matters have come to our attention that cause us to believe that the selected sustainability performance disclosures of the entity, for the business year from January 1 to December 31, 2017, mentioned above, have not been prepared, in all material respects, in accordance with the Reporting Criteria. In a limited assurance engagement, the evidence gathering procedures are more limited than in a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. The choice of audit procedures is subject to the auditor's own judgement.

Within the scope of our engagement, we performed the following procedures:

- Inquiries of personnel on corporate level, who are responsible for the materiality analysis, in order to gain an understanding of the processes for determining material sustainability topics and respective reporting boundaries of Linde
- A risk analysis, including a media search, to identify relevant information on Linde's sustainability performance in the reporting period
- Evaluation of the design and implementation of the systems and processes for determining, processing and monitoring the selected sustainability performance disclosures included in the scope of the limited assurance engagement, including the consolidation of the data
- Inquiries of personnel on the corporate level responsible for determining and consolidating data as well as carrying out internal control procedures in relation to the data, including explanatory notes
- Evaluation of selected internal and external documentation
- Analytical evaluation of data and trends of quantitative disclosures, which are submitted by all sites for consolidation on group level
- Evaluation of local data collection, validation and reporting processes as well as the reliability of reported data based on a sample at Leuna, as well as the regional business units for North America, Central Europe, South East Asia, East Asia and Middle East
- Assessment of the overall presentation of the selected sustainability performance disclosures

Conclusion

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the selected sustainability performance disclosures, including explanatory notes, for the business year from January 1 to December 31, 2017, are not prepared, in all material respects, in accordance with the Reporting Criteria.

Restriction of Use / Clause on General Engagement Terms

This assurance report is issued for the purposes of the Executive Board of Linde Aktiengesellschaft, Munich, only. We assume no responsibility with regard to any third parties.

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

Munich, March 8, 2018

KPMG AG
Wirtschaftsprüfungsgesellschaft

Laue
Wirtschaftsprüfer
[German Public Auditor]

ppa.
Hell



G4-33

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

GLOSSARY

A

Air separation plants

Air separation plants use Linde processes to produce oxygen, nitrogen and argon.

B

Blueprint for Corporate Sustainability Leadership within the UN Global Compact

Comprehensive action plan designed to promote sustainability.

C

CO₂ equivalent (CO₂e)

Unit of measurement used to express the effect different greenhouse gases have on the climate compared with a carbon dioxide (CO₂) baseline.

Conflict minerals

The US Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) defines conflict minerals as raw materials exploited and traded in the Democratic Republic of Congo or neighbouring countries which finance conflict. The Dodd-Frank Act applies to the following raw materials and ores from which they are extracted: tantalum (coltane), tin (cassiterite), tungsten (wolframite) and gold.

Contractors

Employees from third party firms who provide services on Linde's behalf, especially transport services.

Core labour standards of the International Labour Organisation (ILO)

The core principles of freedom of association, the elimination of forced labour, the abolition of child labour and the elimination of discrimination in respect of employment and occupation are identified in eight conventions. These set out the fundamental rights of employees which member states of the organisation are required to implement following ratification.

Cryogenic air separation

Process to separate gas mixtures using extremely low temperatures. An example is the separation of air into oxygen, nitrogen and inert gases.

D

Diversity

At Linde, diversity is understood to be the diverse composition of its staff – which comprises men and women of all ages, of different nationalities and, with different ethnic backgrounds, and with different religions and world views.

Dodd-Frank Act

The Dodd-Frank Wall Street Reform and Consumer Protection Act is a federal law which came into force in the United States in 2010, which sets out reporting and disclosure requirements for companies quoted on the US stock exchange with regard to the use of conflict minerals tin, tantalum, gold and tungsten.

E

Emissions Trading System

The European Union's Emissions Trading System is a climate protection tool aimed at reducing greenhouse gas emissions at the lowest possible economic cost.

Energy Efficiency Directive (EDD)

The European Union has set itself the target of saving 20 percent of its primary energy consumption by 2020 and made this measure into one of its five headline targets in its Europe 2020 strategy for smart, sustainable and inclusive growth. This Directive 2012/27/EU establishes a set of binding measures with regard to certain aspects of the EU's energy efficiency plan, in order to make a significant contribution to the achievement of the EU's energy efficiency target.

EU Directive 2014/95/EU

EU Directive 2014/95/EU is designed to extend the scope of financial reporting to include non-financial information. Companies that must comply include capital market oriented companies above a certain size.

F

FSSC 22000

FSSC 22000 Food Safety System Certification demonstrates that companies comply with a number of food safety requirements. The certification is based on existing international food safety standards (such as ISO 22000 and PAS 220) and is recognised by the GFSI (Global Food Safety Initiative).

Fuel cell

A device which produces water from hydrogen and from oxygen in the air and in the course of this process releases usable electrical energy.

Full-time equivalent

Full-time equivalent (FTE) is a way to measure how many full-time employees would be required to do the work of part-time employees.

G

Global Product Strategy (GPS)

The Global Product Strategy of the International Council of Chemical Associations is designed to establish uniform global standards and procedures for companies in order to promote the safe handling of chemicals.

Global Reporting Initiative (GRI)

International initiative founded in 1997 by a number of stakeholders with the aim of developing recognised and comparable reporting guidelines for organisations on economic, social and environmental activities.

Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

The United Nations' GHS is a globally harmonised system for the classification of chemicals and for their labelling on packaging and in safety data sheets. A global method of classification with standard hazard pictograms and text should minimise the risk to human health and the environment during the production, transport and use of chemicals and hazardous substances worldwide.

Good Manufacturing Practice

Good manufacturing practice refers to quality assurance guidelines which apply to the manufacture of pharmaceutical products and active ingredients.

Greenhouse Gas Protocol

Globally recognised standard designed to manage and quantify greenhouse gas emissions. The Greenhouse Gas Protocol originated from an initiative led by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI).

CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES

Guiding Principles on Business and Human Rights

The UN Guiding Principles on Business and Human Rights provide a consensual framework designed to promote human rights regulation in major business enterprises in various contexts. They require states to protect human rights (even against threats from economic players) and they require business enterprises to respect human rights and award the parties concerned access to remedy when business-related human rights abuses occur.

H

Hospital IQ

Data platform that collects all cylinder data in the hospital, providing an instant overview of each cylinder's location and content.

HyCO plants

A collective term for plants which produce hydrogen, carbon monoxide and synthesis gas. HyCO plants include in particular steam reformers, partial oxidation plants and methanol crackers.

I

Integrity Line

A Linde system which employees and external stakeholders can use to report any doubts or suspicions. If an internal investigation reveals that the doubts or suspicions raised were justified, a prescribed process within a set timeframe is used to determine what measures should be taken and monitors their implementation.

ISO 14001

The ISO 14001 standard is the basis for the design, introduction, monitoring and ongoing development of environmental management systems. It sets out requirements which are applicable to any organisation, regardless of its type or size or the specific geographical, cultural or social conditions under which it operates. The overall objective of the standard is to promote environmental protection and to reduce the environmental impact of companies – in accordance with economic, social and political requirements. At the same time, the ISO 14001 standard is the basis for the certification of environmental management systems.

ISO 50001

The aim of an energy management system which complies with ISO 50001 is continual improvement in the energy performance of a company. The standard provides a set of requirements that enables companies to introduce, operate and continually optimise their energy management systems. If the implementation of this systematic approach is successful, a company is able to improve its energy performance, increase its energy efficiency and at the same time optimise its energy use.

ISO 9001

The ISO 9001 standard sets out the minimum requirements to be implemented by companies for a quality management system which meets customer requirements and other requirements relating to the quality of the goods and services.

K

Kopernikus projects

The "Kopernikus Projects for the Energy Transition" are the framework for technological and economic solutions for the conversion of the energy system in Germany developed jointly by science, economy and civil society. The research initiative includes projects in four key areas: the development of power supply systems, the storage of surplus renewable energy through conversion to other energy carriers, the adjustment of industrial processes to a fluctuating energy supply and the improved interplay of all sectors of the energy system.

L

LNG

Liquefied Natural Gas. LNG is regarded as a promising fuel of the future because of its high energy density, constant calorific value and high level of purity.

M

Major Hazards Review Programme

Linde set up this programme to ensure the safety of its production processes. The MHRP allows the Group to identify promptly potential risks that might result in accidents or damage to property or to the environment, and to introduce appropriate safety and control measures.

N

Near miss

An undesired event which, under slightly different circumstances, could have resulted in harm to people, harm to the environment, damage to property or loss to production.

O

OHSAS 18001

The OHSAS 18001 standard is an international occupational health and safety management system specification for companies. OHSAS 18001 focuses on the protection of workers and on occupational health and safety.

Olefin plants

Petrochemical plants for the production of olefins such as ethylene and propylene from hydrocarbons.

Oxyfuel plants

In contrast to conventional combustion with air, the fuel in oxyfuel plants is combusted with virtually pure oxygen. This results in a cleaner and more efficient combustion process.

P

Polymer electrolyte membrane electrolysis

In polymer electrolyte membrane electrolysis, distilled water is split using electricity from electrodes into oxygen, free electrons and positively charged hydrogen ions (protons). The ions pass through a membrane and combine with the electrons to form hydrogen.

R

RBU

Linde's Gases Division has three reportable segments: EMEA, Asia/Pacific and Americas. These are divided into nine Regional Business Units (RBUs): Africa & UK, Central Europe, Northern Europe, Southern Europe, Middle East & Eastern Europe, South Asia & ASEAN, South Pacific, East Asia and Americas.

REACH

EU Regulation on the Registration, Evaluation and Authorisation of Chemicals which came into force on 1 June 2007, replacing the former legislative framework for chemicals. According to this regulation, companies which manufacture or import chemical substances into the EU in quantities of more than one tonne per annum have to test those chemicals for their impact on health and on the environment and to register them.

REMEO®

Linde Healthcare's innovative programme in long-term mechanically ventilated patient care, offering an integrated care path that bridges the gap between a hospital's intensive care unit and a patient's home.

Restriction of Hazardous Substances (RoHS)

The revised RoHS EU Directive (2011/65/EU) is designed to restrict the use of certain hazardous substances in electrical and electronic equipment.

ROCE

Return on capital employed.

S

Serious transport incidents

Transport-related incidents, such as traffic accidents, which have a considerable impact on the health of the parties concerned, result in environmental emissions which must be reported or give rise to a certain level of costs.

SOLVOCARB® process

Process to neutralise alkaline water using carbon dioxide (CO₂).

Synthesis gas

Gas mixture of carbon monoxide and hydrogen or nitrogen and hydrogen used to produce methanol, ammonia and other basic chemicals.

U

UN Global Compact

The United Nations (UN) Global Compact is a global alliance of organisations and businesses which aims to protect human rights, ensure compliance with labour and social standards, encourage environmental responsibility and fight against corruption.

UN Human Rights Charter

The Universal Declaration of Human Rights, also known as the Declaration of Human Rights or UN Human Rights Charter or UDHR, comprises recommendations made by the United Nations (which are not legally binding) about general principles relating to human rights. It comprises 30 articles and sets out basic positions about the rights to which every human being is entitled, irrespective of "race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status," and irrespective of the legal relationship they have with the country in which they reside.

V

VOCs

Abbreviation for a variety of volatile organic compounds, many of which are used as solvents or thinners in paints and varnishes. They are precursors of ground level ozone, also known as summer smog.

W

WRI

The World Resources Institute is an organisation which focuses among other things on global warming, ecosystems, renewable energy and the use of resources and seeks to motivate and support companies to achieve more sustainable management.

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CONTENTS

THE REPORT

ABOUT LINDE

SUSTAINABILITY AT LINDE

SAFETY

ENVIRONMENT

EMPLOYEES

SOCIETY

KEY FIGURES