

# **CORPORATE RESPONSIBILITY**

## Good for business, good for society

*Sustainability and responsibility are success factors for our business activities. Continuously evolving organizational structures and management tools enable us to take account of general social outcomes when making decisions and to make the best possible use of human, natural, and financial resources in the interests of sustainable development of our Group.*

Thinking and acting sustainably and in an integrated manner supports our business goals in a variety of different ways – from higher resource efficiency to good relationships with our stakeholders, increased risk awareness, and permanently advantageous cost structures. We now view sustainability in a broader context than we used to just a few years ago. In addition to the outputs of our business activities, we also take account of our impacts, i.e. the general social effects of our actions. Our explicit goal is to continuously improve our understanding of these impacts – both positive and negative – and create added value for our company and for society. In particular, we aim to achieve further significant progress in our material sustainability topics in line with the UN Sustainable Development Goals (SDGs) and thereby support the “2030 Agenda.” Our products and solutions therefore make relevant contributions to tackling challenges such as more environmentally friendly mobility, access to clean water, and feeding a constantly growing global population. At the same time, we are working to continuously improve our resource efficiency and avoid or at least minimize emissions in the air, soil, and water.

We therefore pressed ahead with the development of corresponding processes and tools intensively again in the reporting year. For example, we performed a systematic analysis for the first time to determine in which areas and to what extent our priorities for sustainable development – formulated in the material topics (see page 10) – support or conflict with the SDGs. The analysis showed that our activities are particularly closely correlated with SDGs 12 (Responsible Production and Consumption) and 13 (Climate Action). Detailed information can be found in the Corporate Responsibility/Sustainable Development Goals section of the LANXESS website. In another major project, we established the methodological basis for an extensive risk analysis of our suppliers from a sustainability perspective that we will perform in the coming year (see page 31).

What all our initiatives have in common is that they originate in an active dialog involving both internal and external stakeholders. We are firmly convinced that a dialog-oriented approach encourages integrated thinking, improves the quality of our business decisions, and thus makes a significant contribution to fulfilling our guiding principle “Good for business, good for society.”



Audited disclosures of the LANXESS Group that are included in the 2018 non-financial Group report.



In the corporate responsibility section of this Annual Report, we fulfill our obligation to issue a non-financial Group report. The non-financial disclosures required in accordance with Sections 315b and 315c in conjunction with Sections 289c to 289e HGB and shown separately in the layout were prepared by the Board of Management and reviewed by the Supervisory Board of LANXESS AG. The non-financial report and the associated data collection processes have undergone a review with limited assurance in line with the auditing standard ISAE 3000 (revised) by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft on behalf of the Supervisory Board. The audit report can be found on page 193 of this report. The reporting year is 2018. The report covers the Group companies that are also included in the Consolidated Financial Statements. Unless indicated otherwise, the disclosures apply to continuing operations. References to disclosures not included in the Combined Management Report of the LANXESS Group and LANXESS AG or in the consolidated/single-entity financial statements of LANXESS AG represent further information and do not form part of the non-financial Group report. Within the non-financial report, we generally use the international standards of the Global Reporting Initiative (GRI) as the framework for the materiality analysis and reporting on management approaches and on general and topic-specific disclosures. Information on our business model can be found in the Combined Management Report of the LANXESS Group and LANXESS AG on page 60 of this Annual Report. Information on environmental protection provisions can be found in Note [15] to the Consolidated Financial Statements for fiscal year 2018.

## ACTIVE STAKEHOLDER DIALOG

Relevant stakeholders for LANXESS are groups, institutions, or individuals with whom we maintain a direct or indirect relationship through our business activities and who therefore have an interest in our actions. Our main stakeholder groups are customers, capital market representatives, suppliers, the media, and representatives from politics, public authorities, and non-government organizations (NGOs). We engage in intensive dialog with all of these groups. Firstly, to promote mutual understanding and build trust with an open and constructive exchange of views. And secondly, to continuously identify topics that are important in view of our environment and our corporate responsibility.

One particular highlight of our dialog activities was the round-table discussion on the Sustainable Development Goals that we organized in December 2018. The focus was on the analysis we performed in the reporting year to determine in which areas and to what extent our priorities for sustainable development support the SDGs. We discussed both the evaluation methods themselves and the results obtained with them with expert external stakeholders. The dialog also served as an opportunity to outline possible development paths for the chemicals industry together – particularly with regard to SDG 12.

An overview of the main topics and dialog forums for each relevant stakeholder group and other specific activities in the reporting year is provided in the Corporate Responsibility/Stakeholder Dialog section of the LANXESS website.

## SYSTEMATIC PRIORITIZATION OF SUSTAINABILITY TOPICS

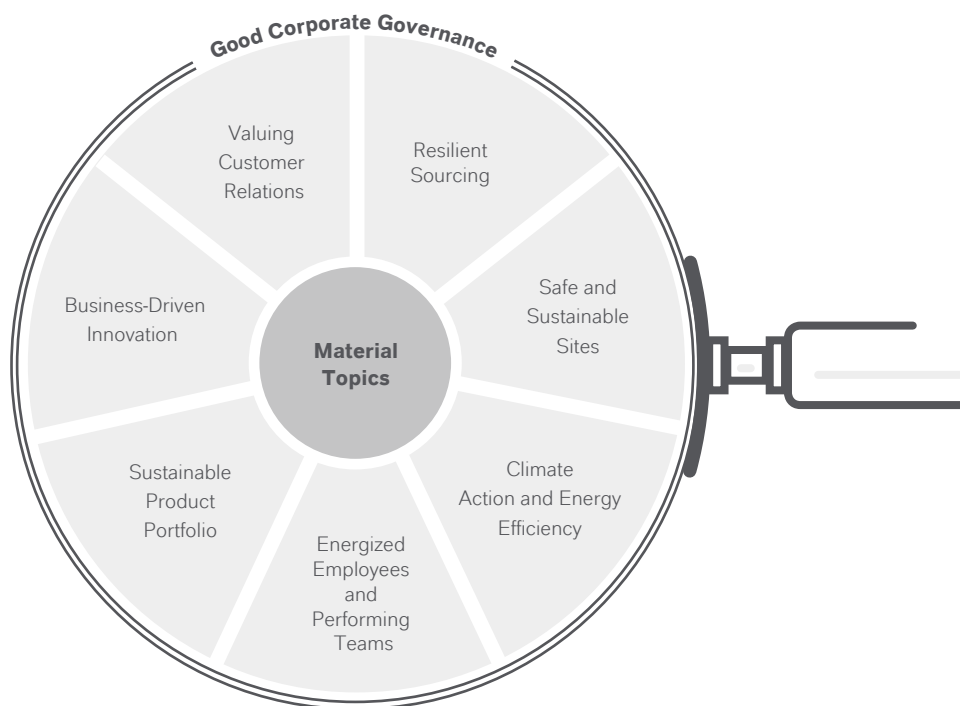
Identifying the main effects of our actions and incorporating our stakeholders' concerns into our strategy forms the basis of our sustainability management. Our materiality analysis in line with the requirements of the Global Reporting Initiative (GRI) is a key tool for systematically prioritizing the wide range of action areas and using resources as effectively as possible. The results also influence the structure of our external reporting on the topic of corporate responsibility.

We performed our last materiality analysis in fiscal year 2017. This was based on the four principles of sustainability context, materiality, completeness, and inclusion of stakeholders. As a result, we defined seven material sustainability topics that were confirmed by the Board of Management and the Corporate Responsibility Committee and also formed the relevant management framework in fiscal year 2018. The topic of good corporate governance forms the basis for all of our business activities. A detailed description of our process for determining material topics can be found in the Corporate Responsibility/Material Topics section of the LANXESS website.

In addition to our materiality analysis, we came up with a definition of materiality for the non-financial Group report – the contents of which are integrated into this section of the Annual Report – in accordance with Section 289c, Paragraph 3, Sentence 1 of the German Commercial Code (HGB). The relevant disclosures in this context are those that are necessary in order to understand the business performance, the business results, the position of the Group, and the effects of our activities on non-financial aspects. For us, this means environmental issues, employee issues, human rights, and anti-corruption. We identified social issues as not being material for the purposes of understanding Group's business performance, business results, and position.

As part of our management of opportunities and risks, we have implemented a wide range of risk-mitigating measures. With regard to the non-financial aspects of the CSR Directive Implementation Act defined as relevant for the non-financial Group report, as well as the aspect of social issues, a net risk analysis shows no material risks in connection with our own business activities or with business relationships, products, and services that are very likely to have serious negative effects. Detailed information on our opportunity and risk management system can be found in the Combined Management Report of the LANXESS Group and LANXESS AG, starting on page 98 of this Annual Report.

## Material Topics



We have formulated specific goals for all key topics. These are based on the goal of using our operating activities to achieve an increase in value for our company, our stakeholders, and society. Some of the variable compensation of the first and second management level below the Board of Management therefore depends on the

extent to which certain targets are achieved. In an internal working group, sustainability experts critically examined the existing goals and indicators, fleshed these out where necessary, and also defined a number of new goals in the reporting year.

## LANXESS Corporate Responsibility Goals



| Topic | Goal | Indicator | Deadline | Status Quo 2018 | Page |
|-------|------|-----------|----------|-----------------|------|
|-------|------|-----------|----------|-----------------|------|

**Resilient Sourcing**

Our value chains start from a diverse, sustainable raw material portfolio. We engage with our suppliers and relevant stakeholders to improve the working and environmental conditions in the global supply chains.





|   |  |                              |                   |  |    |
|---|--|------------------------------|-------------------|--|----|
| Sustainability standards in procurement | Establishment of a systematic sustainability risk analysis to evaluate all suppliers | Share of suppliers evaluated | 2019              | The methodology behind the analysis was developed and agreed upon in the reporting year and will be implemented in 2019. | 31 |
|   | Identification and reduction of sustainability risks in the supply chain             | Sustainability risk score    | Ongoing from 2020 |  | 31 |

**LANXESS Corporate Responsibility Goals**

| Topic   | Goal   | Indicator  | Deadline                      | Status Quo 2018  | Page |
|---|--|--|-------------------------------|--|------|
|  <b>Safe and Sustainable Sites</b><br>We manufacture sustainable products at competitive and sustainable chemical sites. Continuous process improvements and investments are fundamental for our sustained success. We care about the community. |  |  |                               |  |      |
| Uniform standards and processes worldwide   | Integration of all sites (except Rustenburg) into the global matrix certificate (ISO 9001 and ISO 14001) | Degree of coverage in relation to sites                                | Ongoing until the end of 2025 | As of December 31, 2018, our matrix certificate covered 50 certifiable companies with 92 sites in 23 countries. A total of 23 of these sites belong to ARLANXEO. In relation to the number of employees, this equates to 83% coverage of our matrix certificate. Due to the acquisition of Chemtura, we still have some site certificates and a region certificate; these will also be transferred to our matrix certificate. As of the reporting date, a total of 96% of our sites had ISO 14001 certification. | 14   |
| Global process safety   | Continuous reduction in incidents relating to facility and process safety                                | Number of reportable incidents relating to facility and process safety | Ongoing                       | No incidents at LANXESS relating to facility and process safety (ARLANXEO: 1 facility safety incident).  | 32   |
|   | Continuous reduction in environmental incidents  | Number of reportable environmental incidents                           | Ongoing                       | 15 environmental incidents at LANXESS, of which 11 occurred at acquired Chemtura sites (ARLANXEO: 0 environmental incidents).  | 32   |
|   | Continuous reduction in transportation incidents   | Number of reportable transportation incidents                          | Ongoing                       | 3 transportation incidents at LANXESS (ARLANXEO: 1 transportation incident).   | 32   |
|  <b>Climate Action and Energy Efficiency</b><br>Climate action based on efficient energy use is the right thing to do for society and also a key to delivering financial performance in the long-term.   |  |  |                               |  |      |
| Emissions <sup>1)</sup>   | 25% decrease in CO <sub>2</sub> e Scope 1 emissions in relation to volume sold                           | Specific CO <sub>2</sub> e Scope 1 emissions                           | End of 2025                   | The specific Scope 1 emissions in continuing operations have increased by 8% compared with the base year 2015. Adjusted for ARLANXEO, emissions have decreased by 4% compared with 2015.   | 39   |
|   | 25% decrease in CO <sub>2</sub> e Scope 2 emissions in relation to volume sold                           | Specific CO <sub>2</sub> e Scope 2 emissions                           | End of 2025                   | The specific Scope 2 emissions in continuing operations have decreased by 34.8% compared with the base year 2015. Adjusted for ARLANXEO, emissions are at the same level as in 2015.   | 39   |
|   | 25% decrease in emissions of non-methane volatile organic compounds (NMVOC)                              | Emissions of non-methane volatile organic compounds (NMVOC)            | End of 2025                   | The absolute VOC emissions in continuing operations have decreased by 81.5% compared with the base year 2015. Adjusted for ARLANXEO, emissions have decreased by 9.3% compared with 2015.  | 40   |
| Energy efficiency <sup>1)</sup>   | 25% increase in energy efficiency in relation to volume sold   | Specific energy consumption  | End of 2025                   | The specific energy consumption in continuing operations have decreased by 32.1% compared with the base year 2015. Adjusted for ARLANXEO, emissions have decreased by 1.2% compared with 2015.   | 40   |

1) Basis: December 31, 2015

**LANXESS Corporate Responsibility Goals**

| Topic   | Goal   | Indicator   | Deadline   | Status Quo 2018  | Page   |                |
|---|--|---|--|--|--|----------------|
|  <b>Energized Employees and Performing Teams</b><br>We create a motivating, energetic and health-preserving working environment for all employees, striving for high engagement and impact. We nurture and promote a value-based, performance-orientated culture. We aim to be an attractive employer and to develop peoples' full potential throughout their professional life. | Employee retention   | High employee retention: Voluntary turnover rate below 3.5%   | Turnover rate on the basis of resignations                                 | Ongoing until the end of 2023  | The turnover rate on the basis of resignations was 3.1% in continuing operations. Adjusted for ARLANXEO, the rate was 3.3%.                          | 23             |
|   | Employee development   | At least 80% of apprentices hired after completing their training   | Proportion of apprentices hired in Germany                                 | Ongoing until the end of 2023  | 84% (previous year: 80%) of apprentices were hired.  | 21             |
|   | Occupational safety  | Continuous decrease in the frequency rate per million hours worked by > 50 % (reference frequency rate of 2.0 in 2016)                                | Lost time injury frequency rate (LTIFR)                                    | End of 2025  | The LTIFR was 1.5 in continuing operations. Adjusted for ARLANXEO, the LTIFR was 1.4.  | 29             |
|   | Diversity  | Increase proportion of women in middle and upper management to 20%  | Proportion of women in middle and upper management                         | End of 2020  | Proportion of women: 19.2% (previous year: 18.3%)  | 25             |
|   |  | At least one female Board of Management member  | Proportion of women on the Board of Management                             | Mid-2022   | Not yet achieved   | 25             |
| Proportion of women in the first level below the Board of Management to 15%.  |  | Proportion of women in the first level below the Board of Management  | Mid-2022   | The proportion of women was 13.8% in continuing operations. Adjusted for ARLANXEO, the proportion was 11.8%. | 25   |                |
| Increase the proportion of women in the second level below the Board of Management to 25%   |  | Increase the proportion of women in the second level below the Board of Management  | Mid-2022   | The proportion of women was 19.2% in continuing operations. Adjusted for ARLANXEO, the proportion was 18.5%. | 25   |                |
|  <b>Sustainable Product Portfolio</b><br>Our products are manufactured and marketed so that they do not pose a risk to human or the environment. We systematically evaluate the sustainability of our entire portfolio. Sustainability criteria are applied in the development of products and applications.   | Analysis of the product portfolio from a sustainability perspective        | 100% of the portfolio analyzed from a sustainability perspective  | Share of sales of the products analyzed in relation to the total portfolio | Ongoing  | The entire product portfolio was systematically analyzed in terms of sustainability.   | 43             |
|   |  |   |  |  |  |                |
|  <b>Business-Driven Innovation</b><br>We drive process, product, application and business model oriented innovation for and together with our customers and suppliers. We help our customers to make their business sustainable.   | Long-term, continuous development of products, applications, and processes | Developing innovative products based on the needs and expectations of our customers   | Number of product-related projects   | Ongoing until 2025   | 159 projects in continuing operations were aimed at developing new/improving existing products and applications.                                     | 43 et seq., 66 |
|   |  | Continuous further development of our production processes in order to maintain competitiveness and achieve our climate and energy efficiency targets | Number of process-related projects   | Ongoing until 2025   | 80 projects in continuing operations concerned process technology issues with a view to reducing costs, improving efficiency or increasing capacity. | 43 et seq., 66 |
|   |  |   |  |  |  |                |
|  <b>Valuing Customer Relations</b><br>We value long-term customer relations, build on trust and knowing, understanding and solving the customers challenges.   | Long-term customer relationship  | Improvement in customer satisfaction and maintenance of customer loyalty: customer loyalty index > 75   | Customer loyalty index score   | 2019   | In the 2017/2018 survey, the customer loyalty index score in continuing operations was 75.1.   | 44             |
|   |  |   |  |  |  |                |

## GOOD CORPORATE GOVERNANCE

Only appropriate values, operational guidelines and organizational structures – summed up as good corporate governance – enable our employees to act responsibly in their day-to-day work and thus turn a relatively abstract concept into a specific corporate success factor. At LANXESS, good corporate governance is embodied by a values-based and safety-conscious corporate culture, effective management systems and a commitment to internationally recognized principles of responsible management, such as the principles of the U.N. Global Compact.

### Committees and functions

To ensure that our values as well as our rules and standards are observed and continuously developed, we have established several specialized committees below the level of the Board of Management and the Supervisory Board.

#### Compliance organization

The global compliance organization is the central point of contact for all employees on compliance-related issues. It also works with the organizational units to develop measures intended to counter illegal or unethical conduct by LANXESS employees at an early stage and to prevent improprieties. Our compliance management system is described in the opportunity and risk report on page 99 of this Annual Report.

### Corporate Risk Committee

The Corporate Risk Committee examines and monitors the Group's risk profile and in this context also regularly analyzes the key opportunities, risks, and corresponding preventive measures in relation to sustainability. Our opportunity and risk management system is described in detail in the Combined Management Report starting on page 98 of this Annual Report.

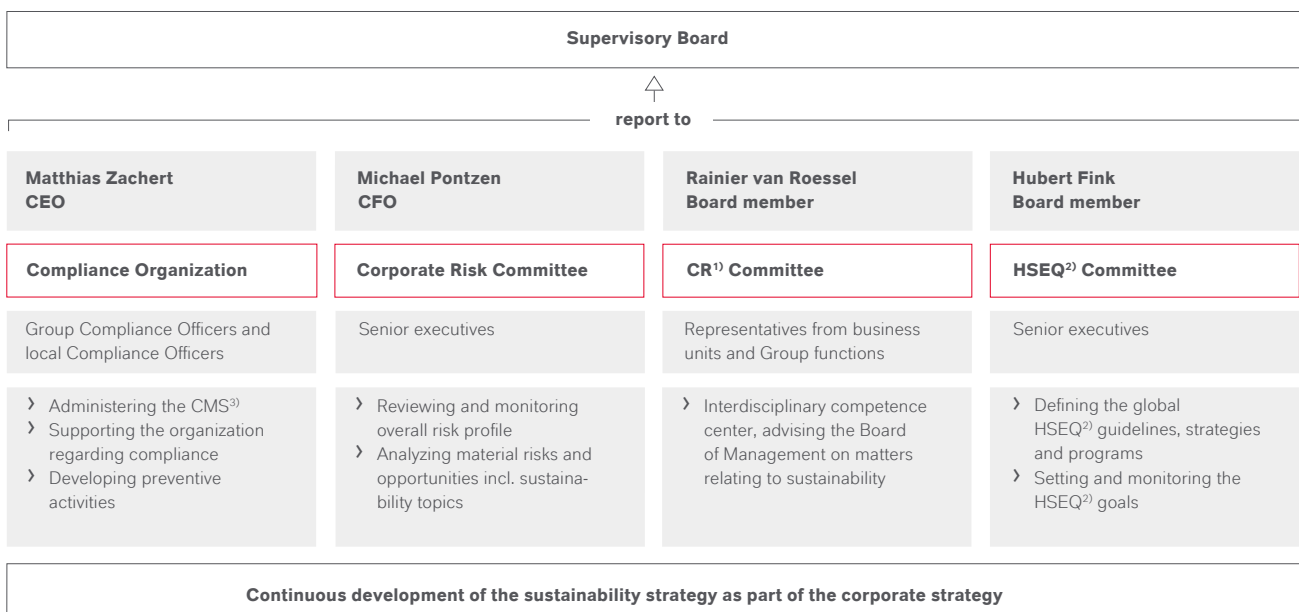
### Corporate Responsibility (CR) Committee

The members of this committee represent all LANXESS business units and ensure that all LANXESS's CR activities within the Group are in line with our strategy. As an interdisciplinary competence center, the committee advises both the Board of Management and the business units on all matters relating to sustainability. It is also responsible for collecting and maintaining reliable data that comply with current market standards for use in our external CR communications.

### HSEQ Committee

The HSEQ Committee ensures worldwide compliance with uniformly high quality management, safety, environmental, energy and climate protection standards. It has responsibility for initiating and monitoring the global implementation of all necessary HSEQ guidelines, strategies and programs as well as for defining our HSEQ objectives and monitoring their achievement. It also defines the global strategy for our integrated quality and environmental management system and our energy management system.

### Responsibilities at Board Level



1) Corporate Responsibility  
2) Health, Safety, Environment and Quality  
3) Compliance Management System





### Integrated management system

A centrally organized management system at LANXESS provides for the necessary global management structures in all business processes in order to ensure responsible business activities. Globally, we base our actions on the international standards ISO 9001 and ISO 14001 for quality and environmental management and ISO 50001 for energy management.

Confirmation of compliance with the standards ISO 9001 and ISO 14001 is provided in a global matrix certificate. This brings a whole range of benefits:

- › a high degree of standardization of processes
- › uniform in-house guidelines and instructions
- › transparent, efficient, and effective processes and controls
- › considerably reduced external expense for the maintenance and optimization of the management system, for the integration of additional management systems (e.g. ISO 50001, sustainability standards), and for the integration of new sites or business units.

We ensure that progress in integrating new sites into our management system and its performance are regularly reviewed worldwide by independent external experts. In 2018, we successfully passed the certification audit in accordance with the updated standards ISO 9001:2015 and 14001:2015 and the surveillance audit in accordance with ISO 50001. No new sites were integrated into the matrix certificate in the reporting year. The Memphis and Sudbury sites acquired in 2016 and our production site in Joo Koon, Singapore, were integrated into the LANXESS management system in 2018 and this process will be completed when they are added to our matrix certificate in 2019. With just a few exceptions, the sites taken on with the acquisition of Chemtura have already been certified in accordance with ISO 9001 and most of them have also been certified in accordance with ISO 14001. These sites will initially continue their certifications independently. As a chrome ore mine, our site in Rustenburg, South Africa, cannot be allocated to LANXESS's other industry-typical business areas in the matrix certificate. We are therefore aiming for separate certification in accordance with ISO 9001 and 14001 for this site.

As of December 31, 2018, our matrix certificate covered 50 certifiable companies (companies with staff and in which LANXESS has a stake of over 50%, as well as ARLANXEO companies) with a total of 92 sites in 23 countries. A total of 23 of these sites belong to ARLANXEO. Not including Chemtura, this equates to 98% coverage in relation to the number of employees (not including ARLANXEO: 97%). Taking account of the changes in the Group portfolio, the level of coverage has fallen to 83%. We are planning to gradually integrate the new sites into the matrix certificate.

In addition, we have gradually had LANXESS AG and all Group companies certified in accordance with ISO 50001 for energy management in Germany and Belgium. As of December 31, 2018, the energy management system had reached 100% coverage in these two countries in relation to the number of employees. The acquired former Chemtura site in Bergkamen has its own certificate and will be integrated into the matrix certificate in 2019. IAB Ionenaustauscher GmbH also has its own certificate. Our subsidiary LANXESS N.V. in Antwerp, Belgium, was certified and integrated into the matrix certificate in the reporting year. In Great Britain, energy audits in accordance with ESOS (Energy Savings Opportunity Scheme) are required for all sites. After the audit requirement was determined in 2018, these audits must be conducted by the end of 2019.

In addition, LANXESS has other specific management systems and certifications such as EMAS, RC14001 (RC = Responsible Care®), OHSAS 18001, and KTA 1401. The status of our certifications can be viewed at any time in the Corporate Responsibility section of the LANXESS website.





## Guidelines for action

### Commitment to international standards and frameworks




With the “2030 Agenda for Sustainable Development,” the United Nations has established the basis for global economic progress in harmony with social justice and within the earth's ecological limits. The specific goals of the Agenda are set out in the *Sustainable Development Goals* (SDGs). We, too, want to achieve significant progress in our key issues in line with the SDGs (see page 10).

The *U.N. Global Compact* is the world's biggest and most important initiative for responsible corporate governance. Based on ten universal principles, it pursues the vision of an inclusive and sustainable global economy for the benefit of all people, communities, and markets. As a signatory, we recognize these principles as inalienable rights. We renewed our commitment to the U.N. Global Compact again for 2018.

The term *Responsible Care*<sup>®</sup> stands for the chemical industry's goal of achieving progress with safety and environmental protection, regardless of the legal specifications. We have documented our commitment to the visions and ethical concerns of this initiative from the International Council of Chemical Associations (ICCA) by signing the Responsible Care<sup>®</sup> Global Charter. With our internal guidelines, we integrate the principles of the Charter into our guiding principles and corporate strategy.

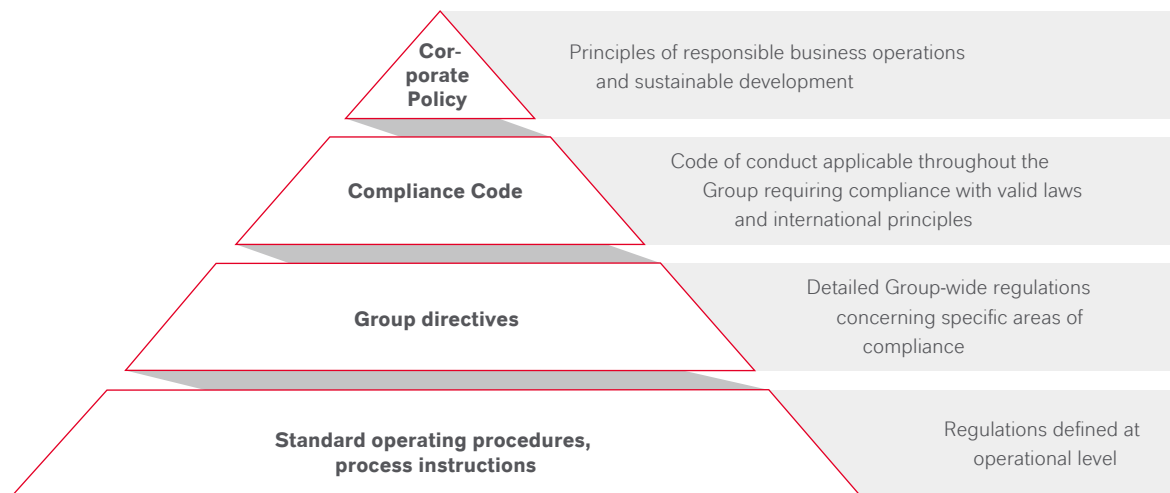
Among the internationally recognized principles of business activity to which we are committed are the *employment standards of the International Labor Organization*, an agency of the United Nations. These are aimed at upholding globally recognized social standards and thereby improving working and living conditions for all people.

### The Ten Principles of the U.N. Global Compact

| Area      |   |  |   |  |
|-----------|---|--|---|--|
|           | <br><b>Human rights</b> | <br><b>Labor</b>  | <br><b>Environment</b>   | <br><b>Anti-corruption</b> |
| Principle | 1 Businesses should support and respect the protection of internationally proclaimed human rights.        | 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.   | 7 Businesses should support a precautionary approach to environmental challenges.   | 10 Businesses should work against corruption in all its forms, including extortion and bribery.                |
|           | 2 Businesses should make sure they are not complicit in human rights abuses.                              | 4 Businesses should uphold the elimination of all forms of forced and compulsory labor.<br>5 Businesses should uphold the effective abolition of child labor.<br>6 Businesses should uphold the elimination of discrimination in respect of employment and occupation. | 8 Businesses should undertake initiatives to promote greater environmental responsibility.<br>9 Businesses should encourage the development and diffusion of environmentally friendly technologies. |  |

## Internal guidelines and regulations

### Clear Rules Provide Guidance



The principles of responsible business operations and sustainable development are expressed in our Corporate Policy, which defines our general corporate philosophy and the conduct expected of every single employee in relation to our stakeholders in a total of eleven guidelines.

The LANXESS Code of Conduct, which is applicable throughout the Group, requires all our employees – across all organizational units, regions and hierarchy levels – to behave lawfully and with integrity. Through correct and proper conduct, each employee is required to contribute to preventing harm to LANXESS and increasing the company's value over the long term. The code covers issues such as human rights, anticompetitive behavior, anti-corruption, data protection, occupational, product and plant safety, and environmental protection.

Other Group directives, such as the HSE directives and the guideline on incentives, define the specific application of regulations in the individual areas of compliance covered by the code and are binding on all employees throughout the Group. On the basis of these LANXESS directives, more detailed regulations that also take account of local requirements are defined at the operational level in standard operating procedures and process instructions, etc. The applicable directives, standard operating procedures and guidelines are accessible to all employees. Employees are also regularly informed of new and updated regulations relevant to them.

We also expect our suppliers to commit to our values and rules, especially the U.N. Global Compact, the ILO Labor Standards and the upholding and promotion of fundamental rights of employees, and to establish adequate systems for ensuring legally compliant and responsible behavior. The LANXESS Supplier Code of Conduct is part of our communication with suppliers. When we select new suppliers, it is essential for us that they acknowledge the principles contained in this code or have established their own comparable regulations and management systems in line with the U.N. Global Compact. In addition, we promote responsible action in the supply chain with our involvement in the Together for Sustainability initiative, which we operate jointly with 21 other international chemical companies (see page 31).

## Values and culture

LANXESS's identity is based on five central values: respect, ownership, trust, professionalism and integrity. These values apply always and everywhere – and to all employees. We seek to foster a corporate culture in which responsible and morally irreproachable actions and striving for performance do not contradict but complement each other.

### Human rights

In line with our values and operational guidelines, we are committed in all our markets and supply chains to promoting respect for human rights at all times and systematically preventing child and forced labor, for example. At LANXESS, human rights and ethical principles apply without restriction, even if they are not stipulated in the legislation of individual countries. Our target is formulated with corresponding clarity: in all areas over which LANXESS has control, there should be no breaches of human rights. We have included all relevant information on our commitment and on the measures established in the Group to protect human rights in the "LANXESS Position on Human Rights." This document can be viewed at any time in the Corporate Responsibility/Good Corporate Governance section of the LANXESS website.

Direct responsibility for ensuring that human rights are respected at all times lies with the respective management at our sites, supported by our global compliance organization and local Compliance Officers. At Group level, human rights are subject to regular evaluation as part of our risk management system. Since 2016 we have performed a risk assessment that specifically addressed human rights at a total of seven national companies (Brazil, China, Germany, India, Mexico, South Africa, and the U.S.). The assessments confirm that there is a high level of awareness of the subject and that functioning mechanisms have been established to prevent violations of human rights. Furthermore, all organizational units at LANXESS and their business activities are subject to regular internal and external audits. It goes without saying that these activities also include monitoring respect for human rights and – if necessary – the introduction of suitable measures to guarantee this.

Our Code of Conduct includes unambiguous instructions regarding the respect of human rights. The code, which every new employee receives with their employment contract, is also an aspect of general training measures. In addition, we hold training sessions geared towards specific selected human rights issues such as occupational safety. If there are suspected human rights violations, the Integrity Line and Compliance Helpdesk offer our employees and external third parties various ways to notify the compliance organization – also anonymously if they wish. For the time being, the Resource Line is also still available to the former Chemtura companies.

We have no reports or knowledge of any systematic discrimination against LANXESS employees. This includes discrimination on the basis of race, skin color, age, gender, sexual orientation, origin, religion, disability, trade union membership or political opinion. In individual cases, misconduct by employees in respect of colleagues or third parties was reported. We will not tolerate verified misconduct and it will result in appropriate disciplinary measures up to and including dismissal.

All acquisitions of companies or interests in companies are subject to a careful due diligence process to ensure that human rights are also respected by the target company. Significant suppliers of goods and services are regularly the subject of supplier assessments in the context of TFS audits that include aspects such as compliance with our Supplier Code of Conduct. The audits also cover compliance with human rights, including with regard to child labor and forced labor. In fiscal 2018, we received no reports or other indications of human rights violations by our suppliers. The same applies to child labor and forced labor.

We have also established the necessary sales-related processes to fulfill our responsibilities. This particularly includes our processes for central product monitoring and for trade compliance, especially with regard to regulations for preventing dual use. We also systematically evaluate the impact of our products on people as part of our portfolio analysis.



### Anti-corruption

By signing the U.N. Global Compact, we have undertaken to actively counter all forms of corruption. Here too, our target is no incidents. Prevention of corruption is part of our general compliance management system. Organizational measures and regulations for setting up the compliance management system as well as responsibilities for implementation, support and continuous monitoring of the system are defined in a guideline applicable throughout the Group. The respective site management, supported here too by our global compliance organization and local country compliance officers, is responsible for preventing instances of corruption at all times.

A Group-wide directive provides our employees with clear guidance regarding incentives. Our employees are prohibited, either directly or in connection with their professional duties, from offering personal advantages to the employees of other companies – in particular when initiating, awarding or handling an order or assignment. Our employees are likewise prohibited from accepting such advantages or requesting them for themselves. Exceptions may be made for customary occasional or promotional gifts that are symbolic in nature and of low value. If an employee is offered such gifts, they must immediately notify their supervisor or the compliance organization.

LANXESS may not grant advantages of any kind to public servants or other officials in Germany or abroad. When commissioning service providers who have contact with officials on behalf of LANXESS, employees must likewise ensure compliance with the prohibition on corruption. As a basic principle, we do not provide financial support to political groupings or parties. LANXESS is involved in large industrial associations, which we regard as fundamental to representing our interests. We disclose contributions and spending on political activities transparently; details can be found on the LANXESS Website, Corporate Responsibility/Stakeholder Dialog at any time.

All donations require approval from a member of the Board of Management after prior consultation with the compliance organization.

To enhance our employees' awareness of these rules of conduct, the issue of corruption is regularly covered by compliance training. In addition, we hold specific corruption training aimed at exposed professional groups and countries. In total, over 3,000 employees took part in the compliance training sessions in the reporting year. If there are indications of compliance violations, our employees and external third parties can contact the compliance organization via the established reporting channels – also anonymously if they wish.

The Corporate Audit function examines and monitors implementation of our measures to prevent corruption. It applies various analytical approaches and scopes here:

- › Assessment of the risk of exposure to corruption as part of annual audit planning, and general monitoring of the internal control system: all business units
- › Transaction monitoring to ensure compliance with company regulations with an influence on the prevention of corruption in the standard SAP system: at least 90% of all transactions

In fiscal year 2018, we received no reports or other indications of cases of active corruption by LANXESS employees. Verified cases of LANXESS employees being bribed lead to appropriate disciplinary actions up to and including dismissal as well as consideration of further legal steps. In fiscal year 2018, we recorded a single-digit number of such cases, but these did not have any further significant effects for LANXESS.





## EMPLOYEES

We firmly believe that energized employees and performing teams are crucial to a company's long-term success. To put this belief into practice, we launched an extensive HR transformation project in 2017 and stepped it up successfully in the reporting year. Taking our corporate strategy, global HR trends and the requirements of our business units and Group functions into account, we developed a new HR strategy, our "People Strategy," and then worked intensively on the strategic realignment of the HR department. This is aimed at strengthening our regions as well as our specialists and encouraging effective global collaboration. In addition, we successfully started to develop modern HR products and solutions for current and future needs of internal stakeholders. These chiefly include streamlined, harmonized and digital processes and systems that improve the efficiency and quality of our HR work.

Our new HR strategy is striving to energize people and to facilitate business growth. It is based on four pillars and eight strategic action fields that clearly guide our HR work:

### › Enabling growth

With increasingly long-term and strategic workforce planning as well as a globally managed recruiting strategy, we are supporting the sustainable growth of our business in line with our corporate strategy.

### › Developing people

We pursue continuous talent management and a comprehensive training and learning concept with the aim of promoting cross-functional and cross-divisional career development, developing young talent from within our own ranks and strengthening expertise for the LANXESS organization of the future.

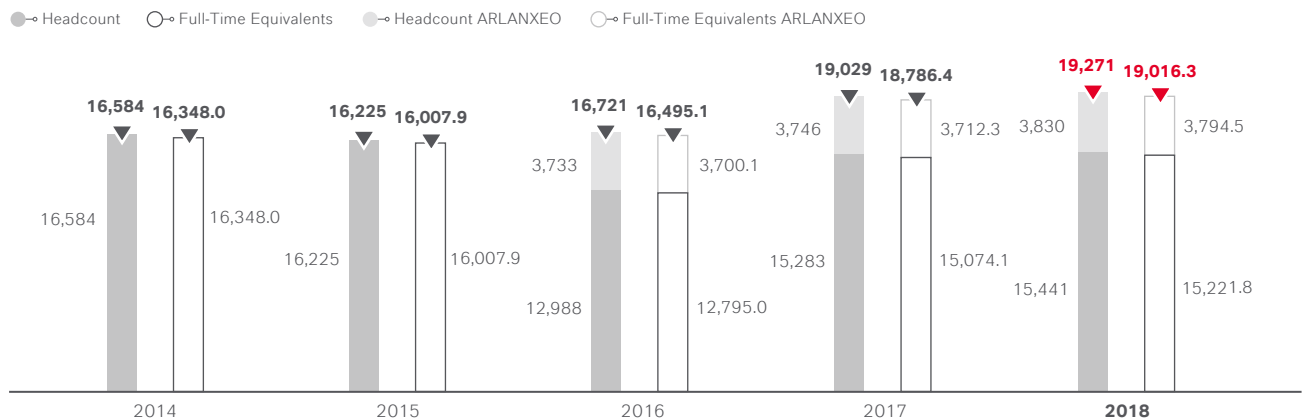
### › Enhancing and strengthening the HR function

We promote efficient and standardized HR processes, act as a global team with transparent structures and establish modern, digital HR systems and tools. We operate as a strategic partner for the businesses.

### › Intensifying dialog

We strengthen exchange within and outside the HR department in order to create greater transparency regarding HR products and services, to enhance the role of HR as a strategic partner and to address the needs of the various group functions and business units in an even more targeted way.

### Number of Employees



### Targeted recruitment of talents

With regard to the successful growth of LANXESS, strategic recruiting will continue to be a linchpin of the HR strategy. Against a backdrop of strong competition for talent in our core markets and the ongoing pronounced demographic challenges (see also page 25), we are investing in a distinctive employer brand in order to highlight the advantages of LANXESS as an employer and spark enthusiasm for our company among talented people from a wide range of functions. In the reporting year, we worked intensively

to set up globally uniform recruiting with a clear target-group approach and to use new recruiting channels. We are particularly interested in approaching talented people actively and personally when doing so. Therefore, we are increasingly using social media to attract new employees.

A total of 1,051 new employees joined the Group in the reporting year. A particular focus was placed on experienced engineers, IT experts and digitalization specialists.

## New Employees by Age Group, Gender and Region

|                     | EMEA<br>(excluding Germany) |           | Germany    |            | North America |            | Latin America |           | Asia-Pacific |            | Total        |
|---------------------|-----------------------------|-----------|------------|------------|---------------|------------|---------------|-----------|--------------|------------|--------------|
| Age Group           | f                           | m         | f          | m          | f             | m          | f             | m         | f            | m          |              |
| < 30                | 16                          | 45        | 33         | 97         | 26            | 73         | 4             | 9         | 31           | 63         | 397          |
| 30–49               | 30                          | 46        | 36         | 143        | 26            | 105        | 5             | 9         | 30           | 76         | 506          |
| ≥ 50                | 2                           | 8         | 8          | 20         | 26            | 83         |               |           |              | 1          | 148          |
| <b>Total</b>        | <b>48</b>                   | <b>99</b> | <b>77</b>  | <b>260</b> | <b>78</b>     | <b>261</b> | <b>9</b>      | <b>18</b> | <b>61</b>    | <b>140</b> | <b>1,051</b> |
| <b>Total Region</b> | <b>147</b>                  |           | <b>337</b> |            | <b>339</b>    |            | <b>27</b>     |           | <b>201</b>   |            |              |

| Age Group           | f          | m          | f          | m          | f           | m           | f          | m          | f           | m          |            |
|---------------------|------------|------------|------------|------------|-------------|-------------|------------|------------|-------------|------------|------------|
| < 30                | 27.5       | 27.7       | 18.4       | 15.0       | 50.2        | 45.5        | 13.7       | 12.9       | 33.7        | 25.6       | 23.4       |
| 30–49               | 8.7        | 4.3        | 5.7        | 5.5        | 16.7        | 16.4        | 3.5        | 2.3        | 7.5         | 5.1        | 6.4        |
| ≥ 50                | 1.6        | 1.0        | 1.6        | 0.7        | 10.9        | 10.5        | 0.0        | 0.0        | 0.0         | 0.3        | 2.5        |
| <b>Total</b>        | <b>9.2</b> | <b>4.8</b> | <b>5.9</b> | <b>4.2</b> | <b>17.5</b> | <b>16.4</b> | <b>4.8</b> | <b>3.0</b> | <b>11.4</b> | <b>6.9</b> | <b>6.8</b> |
| <b>Total Region</b> | <b>5.7</b> |            | <b>4.5</b> |            | <b>16.7</b> |             | <b>3.4</b> |            | <b>7.8</b>  |            |            |

Our international graduate trainee program is a fundamental tool for securing talent in Germany. Exceptionally well-qualified Master's graduates are prepared for challenging specialist and managerial tasks and gather experience abroad during the trainee program. The program is focused on marketing/supply-chain management, engineering, controlling & finance and human resources. In 2018, 16 new graduate trainees (six women, ten men) started their career at LANXESS.

# 7.6%

## apprentice ratio

This figure is the ratio of apprentices at LANXESS in Germany.



NGR

### Developing specialist staff from within our own ranks

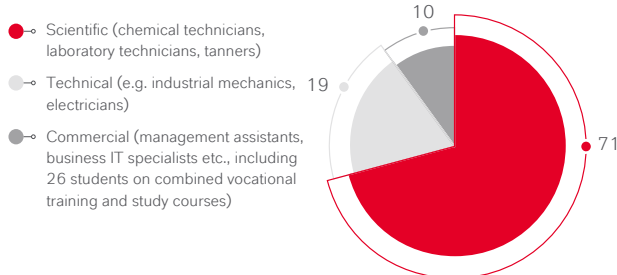
Training young people has always been hugely important to us, both in order to safeguard the company's future and as part of our social responsibility. Vocational training is the basis of our strategy of developing specialist staff for the German sites from within our own ranks. To manage the apprenticeship program centrally, we established a department in Leverkusen that is based in the People Management unit and reports to the head of the HR region Germany. It supports our scientific, technical and commercial apprentices as well as our students on dual-study programs.

188 trainees on eight technical, scientific and commercial career paths started their apprenticeships at LANXESS Deutschland GmbH on September 1, 2018. The proportion of female career starters was around 8% in the reporting year (previous year: 14%).

Taking the new intake into account, there are currently 620 apprentices at LANXESS in Germany (as of December 31, 2018). The proportion of female apprentices across all years is around 12%. As in the previous year, we invested a total of around €20 million in the vocational training of young talent in 2018.

### Apprentices by career path<sup>1)</sup>

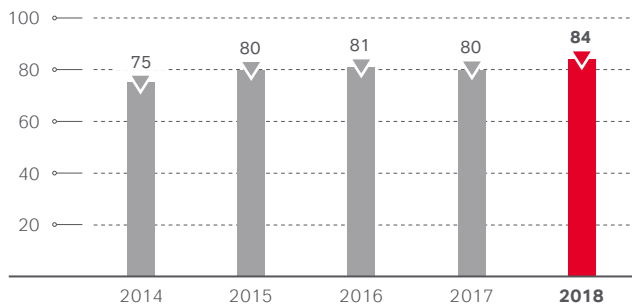
%



1) LANXESS in Germany

Training will remain a key pillar of our HR policy in the years ahead. Against a backdrop of demographic change and our constant need for qualified young people, we plan to recruit approx. 200 apprentices a year in Germany in the next few years. In addition, it is our stated aim to retain (at least) 80% of our apprentices after successful completion of their training. We again reached this target in the reporting year with a retention ratio of 84% (previous year: 80%). Outside of Germany, we have also started to offer apprenticeship programs on a smaller scale in countries such as Belgium, Spain, the UK, India and South Africa.

**Hire rate of apprentices and students on combined work and bachelor's degree courses at LANXESS<sup>1)</sup>**  
%



1) LANXESS in Germany

Each year, with our XOnce program, we give school-leavers who still do not meet academic or personal requirements for starting an apprenticeship program immediately the opportunity to qualify for a technical or scientific apprenticeship program – regardless of whether this is then done externally or at LANXESS itself. Eleven young people took part in the XOnce program in 2018. On average, approximately 50% of participants become apprentices at LANXESS after participating in the XOnce program.

### Promoting development worldwide

Only by constantly investing in training our employees and imparting clear, globally binding values and standards can we as a company keep on using the opportunities of changing markets successfully. Wide-ranging management and HR-development tools enable and motivate our employees to act on the basis of values, rethink issues, implement them quickly and devise solutions in a team.

We have been offering global leadership training programs since 2016 in order to embed our leadership principles more deeply worldwide. Depending on the level of experience of participants, basic management techniques are conveyed, refreshed and implemented by the participants in individual measures. Since management practice differs depending on the country and cultural environment, our training programs also take cultural differences into account. A total of 1,004 managers have been trained, including 300 managers in 2018.

To increase the long-term dimension of leadership training even more, we offered a “Leadership Practice Day” for alumni, i.e. for managers who have already completed one or more leadership training courses, for the first time in the reporting year. After a successful pilot run in Germany, the Leadership Practice Day is to be rolled out worldwide in 2019.

In addition to our global leadership training programs, we also offer international training for high-performance employees with high development and leadership potential (LILI – LANXESS International Leadership Introduction) as well as leadership training for shift supervisors at our German plants. Above and beyond global leadership training, we offer regional HR development programs for managers, for example in the Asia-Pacific region. We have set up a regional development center here for managers with high potential. In addition, in China, we offer a highly interactive training format including business games to middle and top-tier management with the INCEPTION program. In some countries, we also use leadership training courses specifically tailored to the country and its culture, for instance in Japan.

The performance dialog is a key tool for developing our employees. We use it to help our managers and their employees to compare mutual expectations regarding tasks, targets and responsibilities more effectively and to continuously give each other feedback, thus ensuring a lasting improvement in collaboration. The performance dialog was available to all managers in the reporting year and was very well received.

We also launched the first editions of our new training program “Mindful High Performance” in 2017 and 2018. The aim of the program is to provide mindfulness training, resulting in positive effects on performance and well-being. Clarity, focus, authenticity and emotional intelligence are particular focal points of the sessions. We firmly believe that mindfulness training can encourage behavior compatible with our value-based corporate culture. The program runs for ten to twelve weeks – the time it takes for new modes of behavior to become permanently embedded in the brain. On account of the hugely positive feedback from the first group of participants in Germany as well as the significantly positive effects on various aspects of mindfulness – measured via an app and a questionnaire – we decided to include the program in our regular training options for employees and managers in Germany in the future. A pilot was also launched in Asia in the reporting year, and a test run in the U.S. is planned for early 2019.



In the context of our HR transformation project, we also sharpened the focus of talent development at LANXESS in the reporting year and set up a new global, cross-divisional and cross-hierarchical talent program. The program is particularly geared towards high-performing employees who have the potential to develop towards major leadership roles at LANXESS in the next few years. Employees from 15 different business units and Group functions took part in the first cycle. The aim is to encourage cross-departmental career development and strengthen expertise for the LANXESS organization of the future. Key topics include dealing with complexity, new forms of collaboration, and digital and agile management principles.

Promoting life-long learning of our employees was also a high priority for our HR development in 2018. In the EMEA region (excluding Germany), for example, 89% of our employees received training to further their career or skills in the reporting year. On average, each employee received 45 hours of training. This targeted HR development enabled us to fill almost one third of all vacancies in this region with qualified internal applicants.

To keep on expanding the learning options for our employees and make them flexible, digital learning formats are already a core part of our training portfolio. For instance, in 2018, we provided our employees with 8,223 digital learning formats (2,857 in English, 2,683 in German and 2,683 in other languages) to improve their IT skills. We will also take more account of the need for digital, virtual management in our leadership training programs in the future. For instance, in the reporting year, we revised the leadership training course "Leading Leaders," geared towards employees with managerial responsibility for at least two reporting levels, and integrated exercise units that provide training in virtual leadership skills.

Leadership at the LANXESS production plants is equally important to us. Following the successful piloting of our newly established basic training for new plant managers, we incorporated this into our training portfolio in the reporting year, further emphasizing the importance of safety and quality to LANXESS. A second training module specifically for the target group of plant managers is in the planning stage.

International deployments are another key component of our systematic HR development. At the end of 2018, 51 employees – i.e. around 1.6% of our specialist and managerial staff – were working outside their contractual country as expatriates. Along with targeted global exchange of expertise through deployment of experts and managers, it is our ongoing aim to build up local management with specialist knowledge and expertise and assign challenging tasks to suitable employees at our international sites. At sites outside Germany, 87% of our leadership positions are currently held by local employees.

### Employee commitment as a key success factor

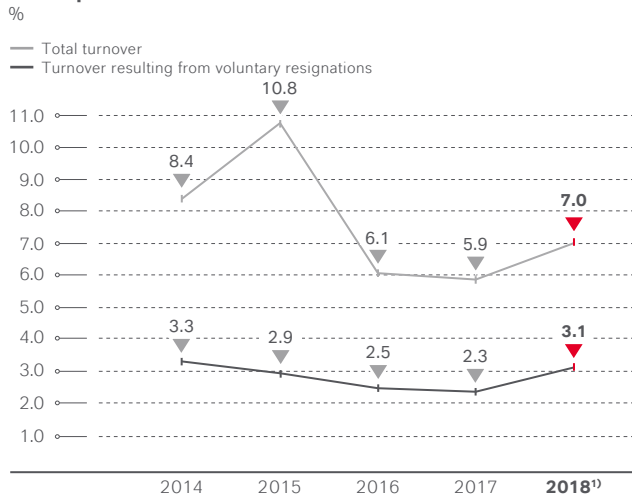
Committed employees are the key to strong company performance, successful change and ultimately long-term corporate success. Accordingly, we intend to pay even more attention to encouraging the commitment of our employees in the future through leadership ability, performance management and our desired corporate culture. Organizational responsibility for the topics of leadership and performance management lies with the People Management department, which directly reports to the management team of the Human Resources department. People Management works closely together with the Corporate Culture office, also based in the HR department.

As part of our corporate culture, we regularly ask our employees for feedback. To this end, we use a wide range of surveys to allow feedback relating to the satisfaction and commitment of the various employee groups.

For instance, in 2018, we surveyed our managers worldwide about their satisfaction with what LANXESS offers as an employer. Of the more than 3,000 people contacted, around 2,000 took part in the survey – a response rate of around 65%, which is above average for the market. The results were evaluated in detail on the basis of various criteria: for instance, diversity aspects such as gender-specific perceptions of issues were also assessed. Our offerings relating to pensions, healthcare, the LANXESS bonus and work content were rated particularly positively. By contrast, respondents saw room for improvement in flexibility and development, specifically on issues such as workplace rotation and mentoring. Therefore, we aim to offer more options in these areas in the future. We are already taking big steps in this direction with our new, global talent program, which is also intended to include aspects such as mentoring and encourage international career development, as well as our new guiding principles on flexible working hours and mobile working (see page 27).

In Brazil, we took part in a cross-company survey on commitment in 2018. 313 employees replied, a response rate of 64%. With a score of 92.2, LANXESS did very well compared with the other participating companies. The results were assessed in detail, broken down by gender and incorporated into action plans. In other countries – including Singapore, Thailand and Turkey – we additionally initiated "pulse checks" on perception of the working atmosphere and our corporate culture.

## Development of turnover over time



We regard the turnover rate based on voluntary resignations as a key indicator for the commitment of our employees. Our goal is to continuously keep this ratio below 3.5% over the next five years. In the reporting year, the global voluntary turnover rate in continuing operations was 3.1%, meaning that we reached our target for this year. In Germany, the rate was 1.2%. Adjusted for ARLANXEO, the rates were 3.3%/1.2%.

The percentage of employees who left our company of their own accord within three years of being hired stood at an average of 1.2% worldwide in ongoing operations in the reporting year.

## Turnover Resulting from Voluntary Resignations by Age Group, Gender and Region

|                            | EMEA<br>(excluding Germany) |            | Germany    |            | North America |            | Latin America |            | Asia-Pacific |            | Total      |            |
|----------------------------|-----------------------------|------------|------------|------------|---------------|------------|---------------|------------|--------------|------------|------------|------------|
|                            | f                           | m          | f          | m          | f             | m          | f             | m          | f            | m          | %          | abs.       |
| Age Group                  |                             |            |            |            |               |            |               |            |              |            |            |            |
| <30                        | 6.9                         | 3.1        | 6.1        | 3.1        | 3.9           | 8.1        | 3.4           | 2.9        | 12.0         | 19.9       | 7.0        | 118        |
| 30-49                      | 2.9                         | 2.5        | 1.8        | 1.4        | 14.8          | 8.1        | 4.9           | 1.3        | 6.2          | 5.2        | 3.5        | 274        |
| ≥50                        | 1.6                         | 1.2        | 0.6        | 0.3        | 7.9           | 5.1        | 0.0           | 1.4        | 2.4          | 2.6        | 1.6        | 94         |
| <b>Total</b>               | <b>3.1</b>                  | <b>2.1</b> | <b>1.9</b> | <b>1.1</b> | <b>9.9</b>    | <b>6.6</b> | <b>4.3</b>    | <b>1.5</b> | <b>6.9</b>   | <b>6.6</b> | <b>3.1</b> | <b>486</b> |
| <b>Total Region</b>        | <b>2.3</b>                  |            | <b>1.2</b> |            | <b>7.3</b>    |            | <b>2.1</b>    |            | <b>6.7</b>   |            |            |            |
| <b>Total Region (abs.)</b> | <b>58</b>                   |            | <b>91</b>  |            | <b>149</b>    |            | <b>17</b>     |            | <b>171</b>   |            |            |            |

## Early Turnover Resulting from Voluntary Resignations by Age Group, Gender and Region

|                            | EMEA<br>(excluding Germany) |            | Germany    |            | North America |            | Latin America |            | Asia-Pacific |            | Total      |            |
|----------------------------|-----------------------------|------------|------------|------------|---------------|------------|---------------|------------|--------------|------------|------------|------------|
|                            | f                           | m          | f          | m          | f             | m          | f             | m          | f            | m          | %          | abs.       |
| Age Group                  |                             |            |            |            |               |            |               |            |              |            |            |            |
| <30                        | 0.6                         | 1.8        | 1.7        | 0.9        | 3.9           | 6.2        | 0.0           | 0.0        | 8.7          | 13.0       | 3.9        | 66         |
| 30-49                      | 4.1                         | 1.2        | 0.5        | 0.5        | 7.7           | 5.1        | 0.7           | 0.3        | 1.0          | 1.8        | 1.4        | 111        |
| ≥50                        | 0.2                         | 0.4        | 0.0        | 0.0        | 0.4           | 1.0        | 0.0           | 0.0        | 0.0          | 0.3        | 0.3        | 15         |
| <b>Total</b>               | <b>1.5</b>                  | <b>0.9</b> | <b>0.5</b> | <b>0.3</b> | <b>3.4</b>    | <b>3.2</b> | <b>0.5</b>    | <b>0.2</b> | <b>2.2</b>   | <b>2.9</b> | <b>1.2</b> | <b>192</b> |
| <b>Total Region</b>        | <b>1.1</b>                  |            | <b>0.3</b> |            | <b>3.2</b>    |            | <b>0.3</b>    |            | <b>2.8</b>   |            |            |            |
| <b>Total Region (abs.)</b> | <b>27</b>                   |            | <b>26</b>  |            | <b>66</b>     |            | <b>2</b>      |            | <b>71</b>    |            |            |            |

## Total Turnover (including Reduction Programs) by Age Group, Gender and Region

|              | EMEA<br>(excluding Germany) |            | Germany   |            | North America |            | Latin America |           | Asia-Pacific |            | Total |              |
|--------------|-----------------------------|------------|-----------|------------|---------------|------------|---------------|-----------|--------------|------------|-------|--------------|
|              | f                           | m          | f         | m          | f             | m          | f             | m         | f            | m          |       |              |
| Age Group    |                             |            |           |            |               |            |               |           |              |            |       |              |
| <30          | 5                           | 13         | 15        | 33         | 4             | 20         | 3             | 8         | 13           | 52         |       | 166          |
| 30-49        | 23                          | 77         | 12        | 54         | 27            | 68         | 23            | 51        | 30           | 107        |       | 472          |
| ≥50          | 11                          | 79         | 28        | 141        | 40            | 62         | 8             | 35        | 2            | 44         |       | 450          |
| <b>Total</b> | <b>39</b>                   | <b>169</b> | <b>55</b> | <b>228</b> | <b>71</b>     | <b>150</b> | <b>34</b>     | <b>94</b> | <b>45</b>    | <b>203</b> |       | <b>1,088</b> |

| %                   |            |            |            |            |             |            |             |             |            |             |  |            |
|---------------------|------------|------------|------------|------------|-------------|------------|-------------|-------------|------------|-------------|--|------------|
| Age Group           | f          | m          | f          | m          | f           | m          | f           | m           | f          | m           |  |            |
| <30                 | 8.6        | 8.0        | 8.4        | 5.1        | 7.7         | 12.5       | 10.3        | 11.5        | 14.1       | 21.2        |  | 9.8        |
| 30-49               | 6.7        | 7.1        | 1.9        | 2.1        | 17.4        | 10.6       | 16.2        | 13.1        | 7.5        | 7.2         |  | 6.0        |
| ≥50                 | 9.0        | 9.9        | 5.6        | 4.8        | 16.7        | 7.9        | 52.5        | 24.0        | 4.8        | 14.3        |  | 7.7        |
| <b>Total</b>        | <b>7.5</b> | <b>8.3</b> | <b>4.2</b> | <b>3.7</b> | <b>15.9</b> | <b>9.4</b> | <b>18.2</b> | <b>15.5</b> | <b>8.4</b> | <b>10.0</b> |  | <b>7.0</b> |
| <b>Total Region</b> | <b>8.1</b> |            | <b>3.8</b> |            | <b>10.9</b> |            | <b>16.2</b> |             | <b>9.6</b> |             |  |            |

We rate our performance in relevant rankings and competition as a further sign of our employees' satisfaction and the attraction of LANXESS as an employer. LANXESS was named as a top employer or as an employer of choice in various countries, e.g. Belgium and China, in the reporting year.

### Diversity as a success factor

We regard diversity as a strategic advantage. Therefore, we aim to enhance diversity at LANXESS and use its positive effects for our company and employees. An appreciative organizational culture that is open to all people – regardless of age, gender, nationality, disability or ideology – helps us to become more innovative and efficient and to attract and retain promising talents. Recognizing and appreciating diversity is therefore ingrained in our values, our guiding principles as well as our leadership principles. Our diversity dashboard reflects detailed key-data analyses of three dimensions: age, gender and nationality. This enables us to view the respective development at the regional, national and global levels and derive corresponding strategic measures.

### Ratio of Disabled Employees at German Companies

|            | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------|------|------|------|------|------|
| Ratio in % | 5.4  | 5.5  | 5.6  | 5.9  | 5.7  |

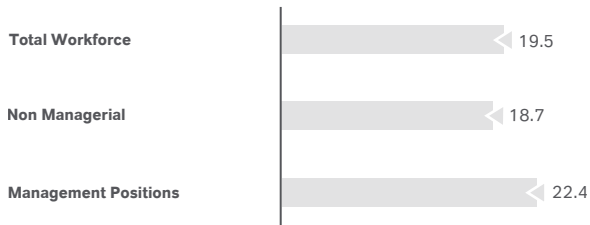
One of our global focal points is gender diversity. We are taking various measures to increase the proportion of women in the company. We are gearing our employer branding and sourcing more heavily toward women, making appointment processes more objective via a multiple-assessor principle, defining criteria for identifying talent, and improving opportunities for a better work/life balance (see page 27). We will also use the findings from the survey of our managers conducted in the reporting year (see page 22) to optimize these opportunities, for instance. Regional and local diversity activities accompany our global measures. For example, our Indian national company, which set up the "Breaking the Stereotypes" initiative for career advancement of women in 2017, won the "Working Mothers & AVTAR Best Companies for Women in India Award" in the reporting year.



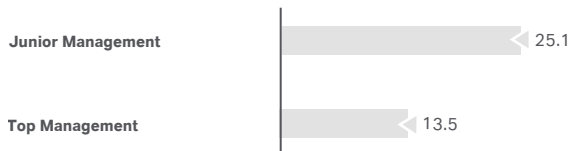
### Employees by Age Group, Gender and Region

|                     | EMEA<br>(excluding Germany) |              | Germany      |              | North America |              | Latin America |            | Asia-Pacific |              | Total         |
|---------------------|-----------------------------|--------------|--------------|--------------|---------------|--------------|---------------|------------|--------------|--------------|---------------|
| Age Group           | f                           | m            | f            | m            | f             | m            | f             | m          | f            | m            |               |
| < 30                | 58                          | 167          | 179          | 656          | 58            | 170          | 26            | 65         | 88           | 223          | 1,690         |
| 30–49               | 338                         | 1,049        | 628          | 2,584        | 153           | 649          | 140           | 373        | 407          | 1,490        | 7,811         |
| ≥ 50                | 124                         | 785          | 514          | 2,972        | 233           | 787          | 16            | 146        | 45           | 319          | 5,941         |
| <b>Total</b>        | <b>520</b>                  | <b>2,001</b> | <b>1,321</b> | <b>6,212</b> | <b>444</b>    | <b>1,606</b> | <b>182</b>    | <b>584</b> | <b>540</b>   | <b>2,032</b> | <b>15,441</b> |
| <b>Total Region</b> | <b>2,521</b>                |              | <b>7,532</b> |              | <b>2,050</b>  |              | <b>766</b>    |            | <b>2,572</b> |              |               |

### Proportion of women %



### Proportion of women in management positions %



Among other things, our diversity measures are instrumental in achieving our target, set in 2012 as part of the DAX 30 self-commitment, of increasing the proportion of women in middle and top management worldwide to 20% by 2020. At present, the figure is 19.2%.

In addition, the German Act on Equal Participation of Women and Men in Executive Positions in the Private and the Public Sector commits us to set targets in Germany for aspects such as the proportion of women at the two management levels below the Board of Management and to determine the target date for attainment of the proportion of women. In 2017, the Board of Management and the Supervisory Board approved the targets with an implementation deadline of June 30, 2022: The proportion of women is to be 15% for the first level below the Board of Management and 25% for the second level. Furthermore, at least one woman is to be appointed to the LANXESS Board of Management in the above-mentioned period. At the end of 2018, the proportion of women at the first management level below the Board of Management was 13.8%. At the second management level, it was 19.2%.

### Proportion of Women on the Board of Management and at the Top Management Levels

| Proportion of women                        | 2015  | 2016  | 2017 <sup>1)</sup> | 2018 <sup>2)</sup> | Target  | Target date   |
|--|-------|-------|--------------------|--------------------|---------|---------------|
| First level below the Board of Management  | 9.8%  | 9.8%  | 11.6%              | 13.8%              | 15%     | June 30, 2022 |
| Second level below the Board of Management | 20.5% | 25.1% | 23.9%              | 19.2%              | 25%     | June 30, 2022 |
| Board of Management (number of women)      | 0     | 0     | 0                  | 0                  | 1 woman | June 30, 2022 |

1) Year when target was set

2) Continuing operations

The proportion of women at the second management level below the Board of Management has been fluctuating since 2015 due to M&A activities. In 2018, the proportion of women also fell due to a change in the reporting structure below the Board of Management associated with the introduction of an additional reporting level at the regional level.

The proportion of women in top management (see the chart above) differs from the proportion of women at the first two management levels below the Board of Management (see the table above) because the definition of top management in the chart is geared towards our LANXESS-internal management grades, whereas the legal definition of the first two management levels was applied in the table.

### Overcoming demographic challenges

Two regions of commercial significance for LANXESS – Europe, especially Germany and Belgium, and the U.S. – are hit particularly hard by the problem of an aging society. Accordingly, competition for qualified young talent is intensifying. This particularly applies to scientific and technical careers. We are countering this challenge with an extensive demographic program called XCare. The program, originally designed and implemented for our German companies, is currently being rolled out globally. It is aimed at providing solutions to the challenges of a rise in the average age of our employees, combined with an increasing shortage of young talent. The measures we are bundling under the umbrella of XCare extend to five action areas:

- › People and Health
- › Work and Training
- › Time and Organization
- › Career and Family Life
- › Saving and Pensions

All services relating to career and family, health and pensions apply to our core workforce. Even so, some individual services in the regions may have differing structures and be locally adapted to the needs of our employees. Our core workforce includes all employees with a permanent full-time or part-time employment contract. As of December 31, 2018, this was 93.5% of our total workforce worldwide.

**LANXESS Employee Structure by Employment Type, Gender and Region** (also including employees on fixed-term contracts)<sup>1)</sup>

|                    | EMEA<br>(excluding Germany) |              | Germany      |              | North America |              | Latin America |            | Asia-Pacific |              | Total         |
|--------------------|-----------------------------|--------------|--------------|--------------|---------------|--------------|---------------|------------|--------------|--------------|---------------|
| Contract           | f                           | m            | f            | m            | f             | m            | f             | m          | f            | m            |               |
| Permanent contract | 520                         | 2,001        | 1,321        | 6,212        | 444           | 1,606        | 182           | 584        | 540          | 2,032        | 15,441        |
| Full-time          | 459                         | 1,835        | 960          | 6,028        | 435           | 1,604        | 181           | 584        | 532          | 2,032        | 14,649        |
| Part-time          | 61                          | 166          | 361          | 184          | 9             | 2            | 1             |            | 8            |              | 792           |
| Temporary contract | 24                          | 35           | 153          | 704          | 5             | 6            | 27            | 47         | 20           | 59           | 1,080         |
| Full-time          | 21                          | 34           | 133          | 682          | 2             | 6            | 27            | 47         | 18           | 58           | 1,028         |
| Part-time          | 3                           | 1            | 20           | 22           | 3             |              |               |            | 2            | 1            | 52            |
| <b>Total</b>       | <b>544</b>                  | <b>2,036</b> | <b>1,473</b> | <b>6,916</b> | <b>449</b>    | <b>1,612</b> | <b>209</b>    | <b>631</b> | <b>560</b>   | <b>2,091</b> | <b>16,521</b> |

1) In fiscal year 2018, we employed a total of 90 temporary staff members (11 women and 79 men) at our German companies.

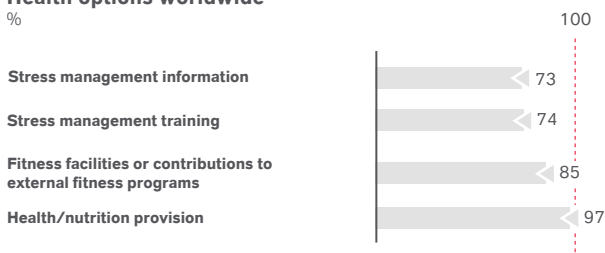
**People and health**

Our occupational health management is based on raising all employees' awareness of their own health and motivating them to act on their own initiative and adopt healthy behaviors in their professional and private lives.

In the context of our occupational health management, in the reporting year, we offered our employees at all German sites a medical check-up in order to prevent cardiovascular diseases. More than 1,300 people took up this offer. As it proved so successful we will be offering a medical check-up again in 2019. In addition, our employees in Germany received €200 credit for booking a wide range of health-related options on the digital platform "Machtfiit" in 2018. LANXESS pays 80% of the costs for each course booking until the budget is used up. Around 43% of our German LANXESS employees have already registered, and as of the reporting date, 8,982 health units had been booked, with massage, yoga and fitness options proving most popular.

Where preventive measures are no longer taken in the context of health management, we ensure with our company integration management scheme (BEM) that employees with long-term illnesses in particular can resume work after their recovery. BEM has proven a great success at all German sites for several years now. In 2018, 40% of invited employees again took up the offer of a personal consultation with the site-specific BEM teams.

We also offer our employees wide-ranging measures to promote health and wellbeing at our international sites, e.g. medical check-ups, training on stress management and fitness or dietary options. With the global implementation of XCare, we have also started to give our health concept Xhealth a stronger global focus.

**Health options worldwide**

Coverage is shown in percent for each initiative with regard to the countries and the total number of employees (LANXESS including ARLANXEO).

We address the topic of occupational safety with our global program Xact (see page 28).

**Work and training**

In the medium term, illness and retirement – both regular and early – will mean that many vacancies require filling, especially in career paths such as chemical production technician, mechanic/fitter and engineer. For instance, 42 additional "demographic jobs" were approved in the reporting year, all of which were utilized. This means that we have so far created around 80 demography positions. We will again be creating extra jobs in key positions in 2019 to counter demographic change.

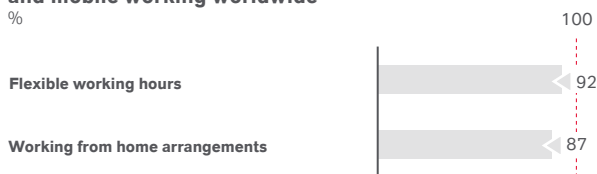
In the context of the HR transformation project, we have also started to revise our existing workforce planning process and set up a global strategic workforce planning process. The aim is to simulate the long-term staffing supply – taking into account retirements, natural turnover, etc. – and compare it against our long-term staffing requirements, taking into account the corporate strategy and technological changes. This enables us to identify staff shortages at an early stage and instigate appropriate HR measures.

### Time and organization

Via flexible working-time models, we intend to ease the workload of employees in all phases of life, e.g. employees with family or older employees, keep their expertise in the company and enhance our appeal on the labor market. For instance, with the “Flexi 95” project for managers launched in 2017, we are working towards an intelligent way of extending part-time employment to senior management. In the Flexi-95 model, the level of employment is reduced to 95% with a corresponding adjustment to remuneration, meaning that a full-time worker is entitled to 13 extra days off per year. Given the positive response to the pilot project (71 participants since 2017), a decision was made in the reporting year to fully incorporate “flexitime” into our offering to senior management and also launch a pilot project for junior and middle management.

In view of the results of the survey of our managers (see page 22) and the desire it reflected for more flexible working and working-time models as well as greater transparency regarding existing options, we approved global flexibility principles in the reporting year under the heading “Xwork – Flexible Work”. We will develop country-specific guidelines on flexible working conditions from these principles in 2019 and introduce corresponding models. Guidelines concerning this for Germany were approved in the reporting year. These have been communicated and implemented since the start of 2019.

#### Options for flexible working hours and mobile working worldwide



Coverage is shown in percent for each initiative with regard to the countries and the total number of employees.

### Career and family life

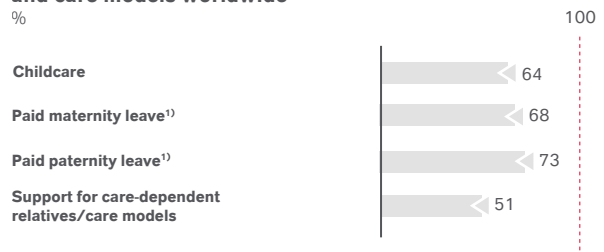
Work/life balance matters to an ever-growing number of employees. A total of 7% of our employees in Germany aged between 20 and 40 made use of the option to take parental leave. Of this figure, 56% were fathers. 89% of the employees who ended a parental leave period in 2018 returned to a job at LANXESS.

Our fully occupied Xkids daycare center in Leverkusen has places for around 50 children aged from six months to six years in two preschool groups and one nursery group. In addition, we provide our employees with staff places at Cologne daycare centers, emergency childcare places and a Germany-wide agency service for childcare staff and facilities.

The statutory maternity rights in Germany and similar models in the European Union are by no means standard worldwide. Therefore, at our sites outside Europe, we are assessing whether we can introduce or expand country-specific models for our employees.

Against a backdrop of demographic change, care is a major issue in Germany. The centerpiece of the LANXESS care model is caregiver leave, which allows our employees to reduce their working hours by more than their pay during the care period and to work off the hours commensurate with the pay they received after their return. Caregiver leave and time off have been used by 95 employees in Germany since the LANXESS care model was introduced.

#### Options for childcare, maternity/paternity leave and care models worldwide



1) Beyond legal requirements

Coverage is shown in percent for each initiative with regard to the countries and the total number of employees (LANXESS including ARLANXEO).

### ***Saving and pensions***

We continued the long-term account for pay-scale employees in 2018 as agreed and as per collective bargaining agreement. The outstanding participation rate remained at a high level of around 96%. A total of 53% of our employees worldwide and 97% of employees in Germany benefit from a reserve-funded pension plan.

### **Xact: Global initiative for greater safety**

Our global safety initiative Xact pursues the goal of gradually lifting the safety culture of LANXESS to a higher level. Starting with top management, all employees are expected to work together to improve safety in the Group. We are doing this because we firmly believe that all industrial accidents are avoidable. As a specific target for occupational safety, we aim to reduce the lost time injury frequency rate (LTIFR, known as MAQ in Germany) by more than half by the end of 2025 compared to the reference year of 2016 (LTIFR of 2.0).

Six Xact safety rules, the core principles of safe working at LANXESS, address the key points with which all employees – from the factory to the office, regardless of hierarchy and position – can make an active contribution to their own safety and that of their colleagues. They are derived from the Xact “guidelines and principles,” the worldwide framework for the orientation of our safety culture. We revised these guidelines and principles in 2017, and unveiled them throughout the Group in April 2018 as part of the newly inaugurated global LANXESS Safety Week.

As ever, the work of the Xact team is focused on fostering a positive culture of safety and greater alignment towards behavior-based safety. To this end, we developed and piloted a systematic process in the reporting year. It is to be gradually rolled out in 2019 – starting with Germany and the USMCA region. The fact that personal dialog is key to improving occupational safety is clear from recent experience at our site in Liyang, China. In 2017, we set up a project there to stabilize working processes, strengthen managerial responsibility and raise employee awareness of safety issues. In the reporting year, a significant improvement in safety awareness and more stable processes, such as the permit procedure, were noted in the context of an audit.

Another major project in 2018 dealt with lock-out tag-out processes. These are aimed at fixing important actuators of technical equipment – such as switches or valves – in a specific position and thus preventing the equipment from being unintentionally restarted during maintenance work, for instance.

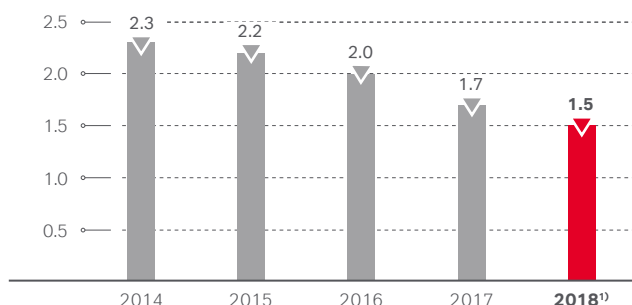
Active, ongoing communication is a top priority for us when it comes to matters relating to safety. The pulse-check survey that we conduct every year among all LANXESS employees is an important tool here. It gives them the opportunity to express their personal experience of key aspects of safety at LANXESS. One aim of the anonymous survey is to determine whether the individual employee is involved in safety work – as intended – or receives positive feedback for safe work. More than 60% of our employees took part in the survey in 2018. For the first time, they were also asked whether their supervisors practice safety. Over 90% of respondents answered the question with “always” or at least “mostly.” However, the results differed substantially in terms of individual regions, organizational units and hierarchy levels. For instance, responses to the question on positive feedback from supervisors in the event of safe work were far less affirmative than the global average in countries such as Germany. The pulse-check survey again helped us to identify approaches to optimizing measures in a highly targeted way.

We also want to reach an improved shared understanding of occupational safety with service providers who perform technical services for us, as well as including them in our safety culture. For instance, our partners must demonstrate that they maintain their own safety-management system and have carried out all safety training that is required of all employees who work for us. Regardless of this, we provide personal safety briefings for employees of our partner companies.

Indicators for the assessment of occupational safety at LANXESS are the recordable incident rate (RIR: number of incidents per 200,000 working hours that have to be reported according to the Occupational Safety and Health Administration) and the lost time injury frequency rate (LTIFR: accidents per million hours worked) for accidents with days lost. The LTIFR in 2018 was 1.5. Adjusted for ARLANXEO, the LTIFR in the reporting year was 1.4. As in previous years, no fatal accidents occurred in 2018. The RIR, which also includes accidents with no days lost in accordance with OSHA rules, was 0.6 in 2018 and in continuing operations as well as after adjustment for ARLANXEO. Companies have been taking occupational safety increasingly seriously in recent years. This increased focus at all hierarchy levels has helped to continuously reduce serious accidents on a lasting basis.

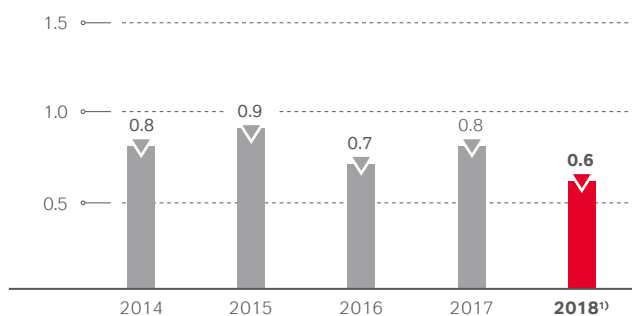


### Work-Related Injuries to LANXESS Employees Resulting in Absence from Work (LTIFR)



1) Continuing operations

### Work-Related Injuries to LANXESS Employees That are Reportable in Accordance with OSHA Regulations (RIR)



1) Continuing operations

All accidents as well as significant near-misses are systematically analyzed with regard to their cause and possible preventive measures. The results of these investigations are, for instance, incorporated into safety updates that are made available to the entire organization. We regard the sharp fall in the LTIFR in recent years as evidence that this structured transfer of knowledge and the many measures to improve occupational safety at LANXESS are having a positive effect.

### Rewarding performance transparently and fairly

LANXESS pays its employees worldwide transparent remuneration in line with market conditions that also includes a bonus system geared towards the company's long-term success. In total, 89% of our employees worldwide receive variable remuneration. As a result of the advancing remuneration integration of employees who joined our company in 2017 following the acquisition of Chemtura, the figure is rising.

Above the pay scale, and, in most countries, within the pay scale, we also provide a performance-related remuneration component on top of fixed pay. This is the annual performance payment (APP), which goes to employees in countries that participate in this program. This bonus payment is linked to the Group's attainment of a defined EBITDA target. Further individual targets in areas such as safety and sustainability additionally apply to top management. In 2018, we shared around €130 million of our profits for 2017 with our employees worldwide.

Furthermore, through the individual performance payment (IPP), managers can also reward outstanding performance of an employee during the year promptly and with no red tape. Around €10.9 million was assigned for outstanding individual performance alone in fiscal year 2018 (including around €7.6 million in Germany). At present, around 80% of our employees worldwide are entitled to receive the IPP. In relation to this, they also receive a prompt assessment of their performance and their career prospects. This further substantial year-on-year increase is attributable to the remuneration integration of the employees taken on in fiscal year 2017.

Under the LANXESS stock program that we set up again in 2018, all LANXESS Group employees working in Germany can purchase shares at a 30% discount. The shares were purchased at an average price of €69.99 on the Frankfurt Stock Exchange. The participation rate was 60%. As of the reporting date, our employees and directors held around 1% of the LANXESS shares in total in the context of participation programs.

In addition, we offer a long-term incentive program for our managers in Germany. There are similar programs in the U.S., India and China. The Long-Term Stock Performance Plan (LTSP) 2018–2021 consists of four tranches commenced each year, and tracks the performance of the LANXESS share compared with the MSCI World Chemicals Index, over a period of four years in each case. The four-year term and the potential growth in value makes this program an attractive long-term incentive and retention tool. In addition, we have implemented a new Share Ownership Guideline (SOG) for the Board of Management and our top-level managers. This new guideline emphasizes trust in the strategy and long-term success of LANXESS. 97% of those eligible participated in the current program in 2018.

## Recognizing, promoting and using good ideas

With our ideas management system, we systematically promote the development and implementation of suggestions for improvement in order to keep on generating impetus for improving economic efficiency, occupational safety and environmental protection. Many good ideas were again implemented in 2018.

### Idea Management

|                                   | 2014  | 2015  | 2016  | 2017  | 2018 <sup>2)</sup> |
|-----------------------------------|-------|-------|-------|-------|--------------------|
| No. of new ideas                  | 2,807 | 2,027 | 2,442 | 2,262 | 1,633              |
| Employees entitled to participate | 7,532 | 7,390 | 7,908 | 7,655 | 7,206              |
| TMQ <sup>1)</sup>                 | 373   | 274   | 318   | 295   | 267                |
| Savings (€ million)               | 2.52  | 2.56  | 2.26  | 1.58  | 0.92               |
| Bonuses (€ million)               | 1.0   | 0.95  | 0.8   | 0.65  | 0.34               |

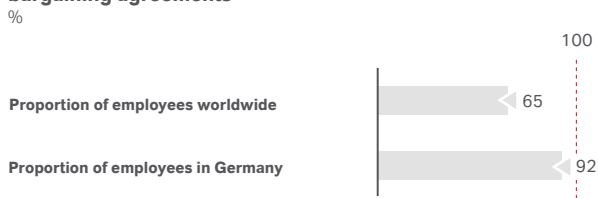
1) TMQ: rate per thousand employees

2) Continuing operations

## Partnership-based discussion

Dialog with chemicals social partners – trade unions and employer associations alike – as a principle of consultation in action is the global practice at LANXESS. As part of this, we also respect the freedom of association of our employees in accordance with the International Labour Organization (ILO) and the Global Compact, and comply with collective bargaining agreements.

### Proportion of employees covered by collective bargaining agreements



We regularly seek dialog with employee representative committees in Germany, Europe and worldwide, provide information on our corporate objectives, and involve employee representatives in organizational changes at an early stage. In view of the complete separation of ARLANXEO, company management and employee representatives jointly devised solutions for a successful spin-off in the reporting period and worked closely together to implement them.

Fair dealings with employee representatives and trade unions are also a top priority for us outside Europe. In South Africa, for instance, we comply with International Labour Organization (ILO) standards with respect to our employees' freedom of association. This includes regular exchange between local management and trade-union representatives as well as binding, collectively agreed-upon regulations on remuneration and working conditions.



## RESILIENT SOURCING

At LANXESS, raw materials, other materials, equipment and services are subject to globally standardized requirements with regard to safety and environmental protection. Their procurement is the responsibility of the Global Procurement & Logistics (GPL) group function, the head of which reports directly to the Board of Management member Dr. Hubert Fink. In close coordination with our internal stakeholders, GPL organizes group-wide procurement, establishes corresponding guidelines, and initiates measures to promote purchasing synergies and sustainable behavior by our suppliers.

In the year under review, procurement transactions with around 20,000 suppliers were processed. A global procurement guideline for the entire Group defines our employees' conduct when dealing with suppliers and their employees. We have specified standardized workflows in the context of procurement in more detail in a process description. In our training program for strategic purchasers revised in 2018 (ProTrain), we also give much more attention to the topic of sustainability. Based on the principles of the U.N. Global Compact, the International Labour Organization (ILO), Responsible Care® and other CSR codes, we expect our suppliers to comply with national and other applicable laws and regulations for environmental protection, health and safety at work and with regard to labor and recruitment practices. Acceptance of the requirements of our "Supplier Code of Conduct" is an essential prerequisite for any supplier wishing to work with us.

In the interests of safe processing at our production facilities, there is a particular focus on the procurement of raw materials. It is thus essential for suppliers to present an up-to-date safety data sheet for the procurement of each raw material. In the case of raw material deliveries from non-European suppliers, our purchasing department clarifies which obligations have to be fulfilled under the REACH Regulation. Since the acquisition of Chemtura, we have also been using the raw material tin, which is classified as a conflict mineral. We purchase tin only from certified dealers who can prove that their goods come from a conflict-free source.

As a founding member of the "Together for Sustainability" (TfS) initiative, our goal is to promote sustainability, increase transparency throughout our supply chain, and thereby further minimize procurement risks. The initiative, which is currently supported by 22 international chemicals companies with an accumulated purchasing volume of more than €300 billion, is aimed at assessing and continuously improving sustainability activities in the chemicals industry supply chain. The focus here is on human rights, prevention of child labor, labor standards, occupational safety, environmental protection, and business ethics. Seven years after it was launched, TfS has established itself in the chemicals industry as the clear standard for a sustainable supply chain.

Because the assessment results and audit reports are shared within the initiative, we once again had a significantly increased number of sustainability assessments (more than 9,000) and audit reports (around 1,200) available to us as of the end of 2018. As in the previous year, suppliers whose sustainability activities have been assessed in the context of TfS represent 70% of our relevant procurement volume. The relevant procurement volume comprises all suppliers from which we procure more than €20,000 of goods or services per year. In addition, the TfS sustainability assessment is incorporated into our newly established strategy process, which must be applied to every contract negotiation or renewal with a purchasing volume of more than €5 million.

It is also encouraging to see that our suppliers' average Ecovadis sustainability assessment of 45 points is above the Ecovadis benchmark of 42 points. With regard to our suppliers' weak points, no relevant trend could be discerned in 2018 again. There were two cases in the year under review in which we ended our collaboration with suppliers due to sustainability aspects.

Data from Ecovadis also form the basis for a systematic sustainability risk analysis that we will implement in 2019. Taking account of risks in relation to specific goods groups and countries, we want to use this tool to identify suppliers with an increased sustainability risk. Our goal is to cover all suppliers by the end of 2019 and thus calculate a sustainability risk score for LANXESS for the first time. Starting from 2020, we then intend to initiate targeted measures to improve our suppliers' sustainability and thereby gradually lower our sustainability risk score. These measures could include, for example, TFS audits at suppliers with an increased risk.



## SAFE AND SUSTAINABLE SITES

More than ever, acting sustainably in the chemicals industry means taking responsibility for products and manufacturing processes. All over the world, we are seeing a high level of convergence of environmental and production standards. What used to be positive distinguishing features in the area of sustainability are now increasingly essential worldwide to the mere ability to produce and sell chemical products. Yet we would be failing in our commitment to quality if we simply restricted ourselves to meeting standards – even if they are more exacting than in the past. Instead, our commitment is to make our production safe and sustainable in every respect, thus ensuring our long-term competitiveness.

Our PTSE Group function, the head of which reports directly to the Board of Management member Dr. Hubert Fink, is responsible for this. PTSE develops and maintains company-wide standards that ensure responsible use of chemicals at LANXESS. They define requirements and govern responsibilities for health protection, environmental protection, handling of chemicals, plant safety and safety precautions in the workplace. Continuous training of our employees and regular audit-based reviews of our health, safety and environmental management systems are aimed to ensure that the requirements are incorporated into our processes systematically and sustainably.



### Uniform standards in production

LANXESS operates a total of 74 production sites and has a presence in 25 countries (investments  $\geq 50\%$  and 12 wholly-owned ARLANXEO sites, as of December 31, 2018). Our wide range of products requires the use of many different chemical and technical processes. Uniform standards for planning, building and operating plants ensure a high level of process, plant and occupational safety.

Handling chemical substances and working with technical equipment involves health and safety risks. We identify these risks and potential threats systematically worldwide – for new and existing plants – and minimize them by implementing defined preventive and protective measures. Experts examine implementation of LANXESS guidelines and local regulations for safe operation of our plants on-site via targeted spot checks in audits whose frequency is geared towards the respective risk profile. Compliance with safety standards must be regularly verified worldwide for every plant via audit opinions. In 2018, a total of 34 production facilities (previous year: 37) were examined in the context of HSE compliance checks (health, safety and environment), including 15 (previous year: 17) in Germany. In the reporting year, the results of the inspections again showed improvements compared with previous years. Furthermore, we completed our gap analyses for the plants acquired from Chemtura. The gap analyses mainly highlighted the differences in the management-system approaches and are now helping to roll out LANXESS management rules and standards at the sites.

We use an electronic reporting system (Incident Reporting System – IRS) to record accidents and events worldwide in line with uniform regulations. Injuries, transportation accidents, near-accidents, environmental incidents, instances of damage and security-relevant incidents such as theft are documented. Each event is carefully analyzed in order to draw conclusions as to how we can avoid similar incidents in the future.

All measures count towards our goal of continuously reducing the number events relating to inadequate system and process safety.

A few minor incidents occurred in the 2018 reporting year. No people were injured in any incident. Further information can be found in the GRI Content Index on page 199.

### Global hazardous-goods and transport-safety management system

With a global hazardous-goods and transport-safety management system, we ensure that we minimize or entirely avoid hazards. We coordinate, monitor and review implementation of relevant hazardous-goods and transport-safety regulations as well as in-house regulations centrally in a department that is specifically responsible for this.

Central classification of our products in line with international, regional and local hazardous-goods regulations ensures that the respective requirements are interpreted uniformly while taking regional and local aspects into account. Classification determines such things as the type of containment (packaging and tanks), marking and labeling, the permitted modes of transport and transportation routes as well as measures that operational staff must take if a transportation event occurs. The corresponding classification data is stored in the safety-data system for chemicals at LANXESS. In recent years, we have gradually connected an increasing number of countries and Group companies to the system, and we continued this process in 2018 by rigorously integrating the Australian, Japanese and Korean sites. We will integrate the as yet unconnected sites in Argentina, Uruguay and Russia into the system in 2019. We have already commenced integration of the former Chemtura sites; this will be carried out regionally as part of the global introduction of the SAP template FIT.

To counter the deficiencies in load securing of general cargo observed in the previous year, the Production, Technology, Safety & Environment Group function and the business units have worked closely together to establish a load-securing standard for LANXESS. This standard was tested in numerous field tests and has already been used successfully at our locations in Brunsbüttel and Leverkusen, Germany. For 2019, we are planning to arrange further load-securing training sessions and introduce our new securing standard at further sites in Germany and abroad.

### Storage management

Following the acquisition of Chemtura, we have around 480 warehouses worldwide, operation of which is split roughly 50:50 between us and external service providers. We select warehouses – both our own and those operated by external service providers – according to logistics, safety and security, environmental protection and cost-effectiveness aspects. We apply a globally standardized warehouse concept that takes into account the substances stored and meets fire protection and occupational health and safety requirements.



## Environmental responsibility

We regard preservation of natural resources – for example by using raw materials and energy as efficiently as possible – and identification of further potential for reducing emissions and waste as an ongoing task in the context of our environmental responsibility and expertise. We equip all new production sites in line with the state of the art, including in terms of environmental standards, taking local requirements into account.

### Sparing use of water

As a chemicals company, we rely on water for our production. We use it mainly for cooling, as an input material in chemical processes or in the form of steam. In addition, rivers are an important transportation tool, particularly for our networked sites in Germany. Through access to drinking water at our sites, we are also meeting our responsibility to our employees. We are aware that our responsibility regarding the most precious of resources does not end at our factory gates. Water availability and quality are global challenges that we can face up to locally as a company. In addition to the efficient use of water, wastewater management is especially important here. SDG 6 sets out specific action areas that we gear our operations towards: Access to water, water quality and quantity, water management and governance as well as protection of ecosystems.

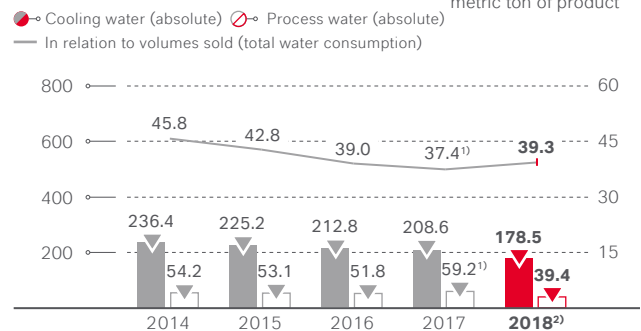
To enable us to derive context-based measures for LANXESS, we have performed a water-stress analysis for all our sites. First, we used the Water Risk Map of the World Wide Fund for Nature (WWF). This assessment, which initially takes only the geographical location of the sites into account, showed that 14 of our sites are in water-stress areas. In a second step, we added a production-related risk assessment for 87% of our sites in 2018. Our assessment was based on 27 criteria – including dependency on water quality and quantity as well as regulatory challenges – and was set in relation to water consumption at the site. The combination of geographically-related water stress and the production-specific risk forms the basis on which we now derive targets and measures. For example, in the reporting year, we included the Chinese government's new program for protecting the Yangtze River (Eco-Environmental Protection Plan Covering the Yangtze River Economic Belt) in our risk assessment and evaluated it within our risk-management system.

We are also making major contributions to the water-related SDGs with the products of our Liquid Purification Technologies business unit. In addition, we are committed to our sites at the local level. For instance, in El Dorado (U.S.), we are a long-standing member of the South Arkansas Sparta Aquifer Recovery Initiative.

### Water Consumption

in million cubic meters

in cubic meters per metric ton of product



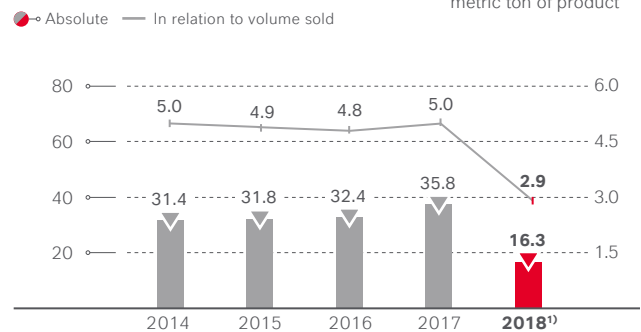
1) Figure restated

2) Continuing operations

### Production Wastewater

in million cubic meters

in cubic meters per metric ton of product



1) Continuing operations

Compared with the previous year, total water consumption decreased in 2018. The amount of cooling water was further reduced, as was the case in previous years. In the reporting year, overall water consumption increased disproportionately to the production volumes, which means that specific water consumption increased and the positive trend observed over the past few years was not continued. This effect can be largely attributed to the higher water intensity of the processes in the new LANXESS portfolio and the sale of our remaining interest in ARLANXEO. Another influencing factor was the exceptionally hot summer in Central Europe, which meant that much more cooling water was required in our facilities in Germany and Belgium.

We reduced the volume of wastewater in 2018 in both absolute and specific terms. This development can also be largely attributed to the change in portfolio in connection with ARLANXEO.

### Sustainable waste management

Rigorous material-flow management from use of raw materials to product finishing is aimed at ensuring that we use resources as efficiently as possible and minimize our waste volumes. Where waste is unavoidable, we try to use or sell it as secondary raw materials or energy sources. To keep the amount of waste that has to be disposed of to an absolute minimum, we take a wide range of measures to continuously improve recovery in our production processes.

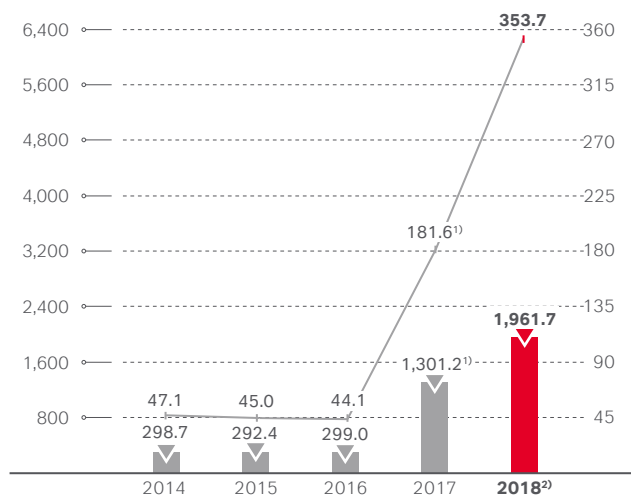
To ensure continuous optimization of our material-flow management, we have committed ourselves to achieving the targets defined in the international program Operation Clean Sweep (OCS) of the "Society of the Plastics Industry." OCS aims to prevent plastic particles and pellets from entering the maritime environment and having an undesired impact. By joining in 2016, we made a commitment to train relevant employees, to implement measures to prevent the release of pellets at our facilities and to require our business partners to also take active steps to prevent pellet emissions. Our goal is to systematically integrate the OCS program's requirements into LANXESS's management system and to implement them across the company.

### Total Waste

in thousand metric tons

in kilograms of waste per metric ton of product

● Absolute — In relation to volumes sold



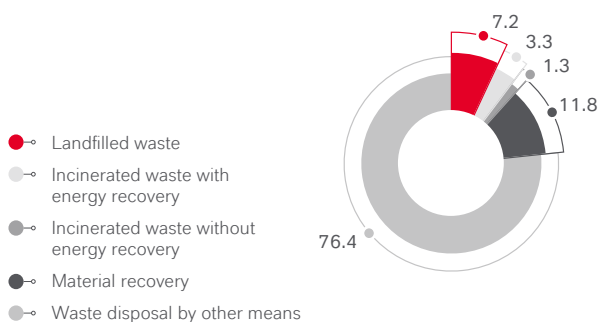
1) Figure restated

2) Continuing operations

Compared with the previous year, the total amount of waste generated once again increased considerably. This is primarily attributable to the first-time, all-year inclusion of the Chemtura production sites, which we acquired in 2017. In the previous year, Chemtura was included only as of April due to the integration activities taking place during the year. The biggest share of our waste volumes comprises slightly polluted wastewater at our El Dorado site in the U.S., which is declared as waste. We more than doubled the level of material recovery in 2018.

### Waste for Disposal

%



### Systematic recording of key data

To record key data on safety and environmental protection systematically worldwide, we use an electronic data-entry system. This enables us to calculate a wide range of HSE performance data for each business unit and site worldwide, which is used as a valid data pool for strategic decisions as well as internal and external reporting. In addition, it maps the progress that we make with our global sustainability targets (see the table on page 10). Data is gathered only at production sites where we have investment of over 50%. For 2018, ARLANXEO will no longer be included in our reporting on environmental and safety issues. Data for both our continuing operations and for ARLANXEO will be included only in relation to our key performance indicators and target figures.

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft has been auditing our HSE key data and the requisite data-gathering processes with limited assurance since 2012. The current independent assurance report can be viewed on page 195 of this report.



## Environmental and Safety Performance Data\*

|  | 2016                      | 2017                        | 2018                  |              |
|--|---------------------------|-----------------------------|-----------------------|--------------|
|  |                           |                             | Continuing operations | ARLANXEO     |
| <b>Safety</b>  |                           |                             |                       |              |
| Occupational injuries to LANXESS employees resulting in at least one day's absence (per million hours worked) (LTIFR <sup>1)</sup> ) | 2.0                       | 1.7                         | 1.5                   | 0.6          |
| <b>Volume sold<sup>2)</sup></b> in thousand metric tons/year   | <b>6,781</b>              | <b>7,167<sup>a)</sup></b>   | <b>5,547</b>          | <b>1,651</b> |
| <b>Energy</b> in petajoules (1015 joules) <sup>3)</sup> (GRI 302-1)  | <b>48.4</b>               | <b>51.9<sup>a)</sup></b>    | <b>28.0</b>           | <b>24.9</b>  |
| <b>Direct energy sources</b>   |                           |                             |                       |              |
| Non-renewable  | 12.6                      | 14.6 <sup>a)</sup>          | 11.8                  | 3.0          |
| Renewable  | 0                         | 0                           | 0                     | 0            |
| <b>Indirect energy sources</b> (GRI 302-2) <sup>4)</sup>   |                           |                             |                       |              |
| Non-renewable  | 33.8                      | 35.3                        | 14.0                  | 21.9         |
| <b>Other direct energy sources</b>   |                           |                             |                       |              |
| From biomass   | 2.0                       | 2.0                         | 2.2                   | 0            |
| <b>Water</b> in million cubic meters   |                           |                             |                       |              |
| <b>Total water consumption</b> (GRI 303-1)   | <b>264.6</b>              | <b>267.8<sup>a)</sup></b>   | <b>217.9</b>          | <b>62.6</b>  |
| Surface water  | 92.1                      | 82.9                        | 49.1                  | 38.3         |
| Groundwater  | 6.8                       | 8.8                         | 5.3                   | 3.0          |
| Rainwater  | 0.4                       | 0.4                         | 0.4                   | 0            |
| Wastewater   | 1.0                       | 1.1 <sup>a)</sup>           | 1.2                   | 0.1          |
| Other water sources  | 164.3                     | 174.6 <sup>a)</sup>         | 161.9                 | 21.2         |
| <b>Cooling water in total water consumption<sup>5)</sup></b>   | <b>212.8</b>              | <b>208.6</b>                | <b>178.5</b>          | <b>38.8</b>  |
| <b>Process water in total water consumption</b>  | <b>51.8</b>               | <b>59.2<sup>a)</sup></b>    | <b>39.4</b>           | <b>23.8</b>  |
| <b>Atmospheric emissions</b> in thousand metric tons   |                           |                             |                       |              |
| <b>Total greenhouse gas emissions CO<sub>2</sub>e</b> (GRI 305-1, GRI 305-2)   | <b>4,814<sup>a)</sup></b> | <b>5,099<sup>a)</sup></b>   | <b>3,209</b>          | <b>1,840</b> |
| Direct (Scope 1) <sup>6)</sup>   | 1,737 <sup>a)</sup>       | 1,799 <sup>a)</sup>         | 1,524                 | 229          |
| Indirect (Scope 2) <sup>7)</sup>   | 3,077                     | 3,300 <sup>a)</sup>         | 1,685                 | 1,611        |
| <b>Ozone-depleting substances</b> (GRI 305-6)  | <b>0.00182</b>            | <b>0.00989</b>              | <b>0.00785</b>        | <b>0</b>     |
| <b>NO<sub>x</sub>, SO<sub>x</sub> and other emissions</b> (GRI 305-7)  |                           |                             |                       |              |
| NO <sub>x</sub> <sup>8)</sup>  | 2.6                       | 2.7                         | 2.9                   | 0.2          |
| SO <sub>2</sub> <sup>9)</sup>  | 1.1                       | 1.0                         | 1.0                   | 0            |
| CO   | 2.0                       | 2.2                         | 2.1                   | 0.2          |
| NH <sub>3</sub>  | 0.1                       | 0.1                         | 0.2                   | 0            |
| NM VOC <sup>10)</sup>  | 4.7                       | 5.0 <sup>a)</sup>           | 1.0                   | 3.9          |
| <b>Wastewater</b> in million cubic meters  |                           |                             |                       |              |
| Total wastewater discharge (GRI 306-1)   | <b>245.2</b>              | <b>244.4</b>                | <b>194.8</b>          | <b>58.8</b>  |
| Cooling water (uncontaminated, without treatment) <sup>5)</sup>  | 212.8                     | 208.6                       | 178.5                 | 38.8         |
| Production wastewater (with treatment)   | 32.4                      | 35.8                        | 16.3                  | 20.0         |
| <b>Emissions in wastewater (after treatment)</b> in thousand metric tons   |                           |                             |                       |              |
| Total nitrogen   | 0.54                      | 0.55                        | 0.5                   | 0            |
| Total organic carbon (TOC) <sup>12)</sup>  | 1.7                       | 1.8                         | 1.5                   | 0.5          |
| Heavy metals <sup>11)</sup>  | 0.0049                    | 0.0054                      | 0.0027                | 0.0026       |
| <b>Waste</b> in thousand metric tons   |                           |                             |                       |              |
| <b>Total weight of waste</b> (GRI 306-2)   | <b>299.0</b>              | <b>1,301.2<sup>a)</sup></b> | <b>1,961.7</b>        | <b>42.8</b>  |
| Incineration with energy recovery  | 81.2                      | 78.3 <sup>a)</sup>          | 64.9                  | 15.5         |
| Incineration without energy recovery   | 31.1                      | 28.3 <sup>a)</sup>          | 25.0                  | 3.8          |
| Landfilling  | 112.1                     | 130.4 <sup>a)</sup>         | 140.9                 | 6.9          |
| Material recovery  | 53.1                      | 60.7 <sup>a)</sup>          | 231.6                 | 8.7          |
| Other forms of disposal  | 21.5                      | 1,003.5 <sup>a)</sup>       | 1,499.3               | 7.9          |
| <b>Type of waste</b>   |                           |                             |                       |              |
| Hazardous  | 196.7                     | 578.6 <sup>a)</sup>         | 718.4                 | 21.4         |
| Non-hazardous  | 102.3                     | 722.6 <sup>a)</sup>         | 1,243.3               | 21.4         |



#### Explanations concerning our environmental and safety performance data

- 2016/2017: The aggregate data refer to all LANXESS production sites in which the company holds an interest of more than 50%. As LANXESS had an interest of exactly 50% in ARLANXEO, the latter continued to be reflected in the LANXESS Consolidated Financial Statements and was fully consolidated in fiscal years 2016/2017, the environmental data pertaining to the ARLANXEO sites also continue to be included in our key data for this period.
  - 2018: As discontinued operations, ARLANXEO is shown separately from continuing operations in reporting year 2018. The two columns add up to the annual key figures for 2018. All charts on environmental and safety performance data present the figures for continuing operations for the reporting year. We included the site in Charleston, U.S., acquired in 2018 in the environmental and safety performance data for continuing operations from February 7, 2018.
- 2016/2017/2018: Some of the data are based on estimates and projections.
- 1) LTIFR: accident rate per million hours worked resulting in one workday or more lost following the day of the accident, calculated for all employees (including temporary workers) at all sites
  - 2) Volume sold of goods manufactured by LANXESS and sold internally to another LANXESS company or externally (excluding commercial products)
  - 3) The energy volumes given were calculated on the basis of simplified assumptions and typical substance values. They do not include other forms of imported energy (e.g. the energy contained in raw materials).
  - 4) Indirect energy sources are shown in the form of a balance sheet. The volume of energy sold is subtracted from the volume of energy purchased.
  - 5) Equivalent to circulating cooling water
  - 6) The emission factors used for fossil fuels are based on calculations by the U.S. EPA (AP-42 from 1998) and on the IPCC Guidelines for National Greenhouse Gas Inventories (2006). In accordance with the GHG Protocol (2004), the factors for calculating CO<sub>2</sub>e are based on the global warming potential (time horizon: 100 years) defined in the IPCC Second Assessment Report (SAR 1995).  
All Scope 1 greenhouse gases are calculated as CO<sub>2</sub>e. In accordance with the GHG Protocol, the CO<sub>2</sub> emissions from the combustion of biomass are shown separately and are not included in the Scope 1 emissions. The following emissions were produced during the reporting period: 2014: 217 kt CO<sub>2</sub>, 2015: 236 kt CO<sub>2</sub>, 2016: 212 kt CO<sub>2</sub>, 2017: 215 kt CO<sub>2</sub>, 2018: 230 kt CO<sub>2</sub>
  - 7) All Scope 2 greenhouse gases are calculated as CO<sub>2</sub>e. The conversion factors used were provided by the energy producers for 2008 or 2009. Where these were not available, factors from the IEA (International Energy Agency) for 2014 were used for fiscal year 2016, factors from 2015 were used for fiscal year 2017 and factors from 2016 were used for fiscal year 2018.  
The Scope 2 CO<sub>2</sub>e emissions are calculated using the market-based method in accordance with the GHG Protocol. Using the location-based method, Scope 2 CO<sub>2</sub>e emissions for 2018 amounted to 2,081 kt for continuing operations and 1,962 kt for ARLANXEO.
  - 8) Nitrogen oxide (NO<sub>x</sub>) calculated as NO<sub>2</sub> (excluding N<sub>2</sub>O – nitrous oxide)
  - 9) Sulfur dioxide (SO<sub>2</sub>) + SO<sub>3</sub> calculated as SO<sub>2</sub>
  - 10) Total VOC (volatile organic compounds) excluding methane and acetone
  - 11) Heavy metals (arsenic, cadmium, chromium, copper, mercury, nickel, lead, tin, zinc)
  - 12) Chemical oxygen demand (COD) is calculated as follows: [COD] = [TOC] \* 3. For 2018, the COD for continuing operations is 4.5 kt.
- a) Values restated due to supplementary notifications or change in calculation method

## Corporate Citizenship

Our understanding of sustainable sites also includes being a strong and reliable partner for the people locally and in the respective region and taking responsibility for development of the social environment. Our social commitment is based on our corporate expertise and objectives and focused on education, climate protection, water and culture.

Our goals in all these areas are identical:

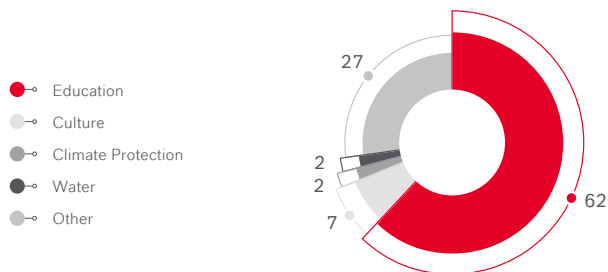
- › Mobilizing resources and people for social commitment
- › Achieving positive impacts on the company, the environment and society

As a company, we aim to play a positive part in improving living conditions, education, training and equal opportunities as well as health and safety. In addition, we are working to attract talented persons, engage in extensive dialog with our stakeholders, have a positive influence on employee motivation and constantly improve our reputation.

As in the previous year, we provided around €1.3 million globally for our projects in 2018. The regional focal points of our activities in the reporting year were the EMEA and USMCA regions.

### Social Activities by Topic<sup>1)</sup>

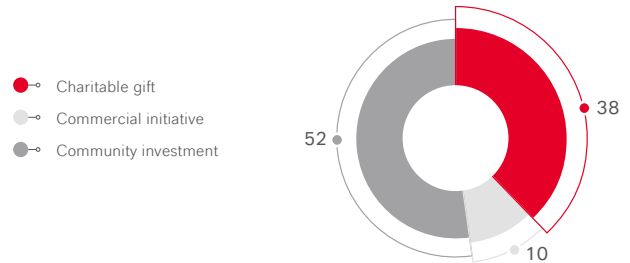
%



1) Number of projects: 175

### Social Activities by Type of Investment<sup>1)</sup>

%



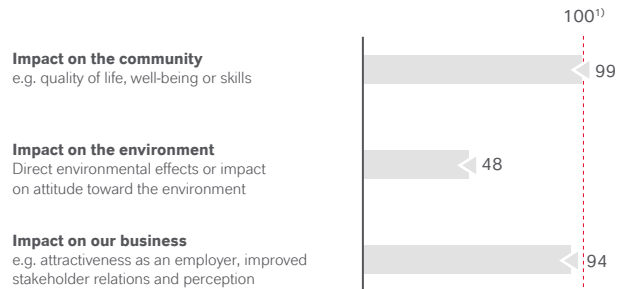
1) Number of projects: 175

We initially assess our projects according to whether they pursue purely charitable ends ("charitable gift"), whether we are investing in the social environment of our sites ("community investment") or whether we are investing in corporate objectives such as image, sales and income while also generating social value ("commercial initiative").

In total, more than 100,000 (previous year: more than 233,000) people benefited from our projects. We use a system of performance indicators to measure the social impact of our activities above and beyond the number of people who benefit. For around half of our projects in 2018, we performed an impact assessment, taking into account positive effects in the area around the site and positive environmental effects and impacts on our business. Specific feedback from people who benefit from our projects is a key factor in this context. We regard these indicators as important benchmarks for impact-oriented management of our measures.

### Impact dimensions of Evaluated Activities and Projects

%



1) Number of projects: 86



### **Commitment to education, climate protection, water and culture**

2018 again yielded numerous examples of how we put our social commitment into practice: We have been working under the umbrella of the LANXESS education initiative for ten years now and have initiated more than 500 education projects at our sites worldwide in order to get young people interested in the natural sciences at an early age. In the anniversary year, the projects in Germany were devoted to topics including research on water quality and water pollution, and the digital transformation of society. Two-week school vacation courses with natural-science learning content were on the agenda in Korea, while in Japan, children explored the chemical composition and wide-ranging uses of concrete in play-based workshops.

For the fourth consecutive year, we held a research competition in China, entitled "Clean Water for a Better Life". In addition to fostering young academic talent, we also aim to raise public awareness of water problems. Cooperation was a key feature of the competition in the reporting year. For instance, the participating universities were explicitly asked to seek dialog with other faculties, companies or the media in the context of their research projects.

As part of our cultural commitment, we have been sponsoring lit.Cologne as a lead partner since 2010 and the Kölner Philharmonie for several years. The Ozawa International Chamber Music Academy in Japan, which we also support, gives talented young musicians from all over Asia the opportunity of first-class musical training.

Further information on our corporate citizenship activities can be found in the Corporate Responsibility/Corporate Citizenship section of the LANXESS website.



### **CLIMATE ACTION AND ENERGY EFFICIENCY**



With the Paris Climate Agreement, which came into force in November 2016, the international community committed to limiting global warming to less than two degrees Celsius above the pre-industrial level. Accordingly, all signatory nations have set ambitious reduction targets. For instance, in Germany, the "Climate Protection Plan 2050" sets out the interim goal of cutting greenhouse-gas emissions by at least 55% compared with the base year of 1990 by 2030. Industry is expected to contribute towards this with a reduction of between 49% and 51%.

However, a progress report at the U.N. Climate Change Conference in 2018 drew sobering conclusions. Consequently, even more drastic measures to reduce global greenhouse-gas emissions will be required in the decades ahead in order to reach the desired target. The summit also resolved that uniform transparency regulations and standards for recording CO<sub>2</sub> levels are to apply to all states in the future. In view of this, companies must also expect much stricter regulatory requirements for measures and reporting on climate protection in the years ahead.

Along with numerous other European chemicals companies, LANXESS expressly committed to climate protection and the associated obligations ahead of the Paris Climate Change Conference. We have been working continuously to decrease emissions of environmentally harmful greenhouse gases ever since our company was founded – with considerable success: Since 2007, we have roughly halved our global scope 1 emissions. With our sites in Germany, we are already meeting the national cutback requirement set for 2030.

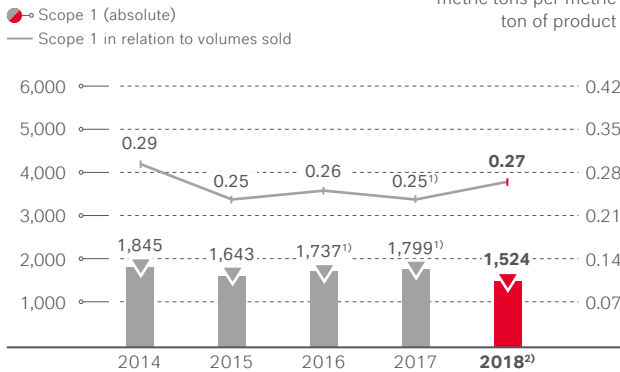
Even so, we are continuing to work intensively throughout the Group to reduce our CO<sub>2</sub> emissions. Back in 2016, we set new long-term targets for CO<sub>2</sub> and VOC emissions and for energy consumption: We aim to cut our specific CO<sub>2</sub> and VOC emissions by 25% by 2025 (base year 2015). At the same time, our energy efficiency is expected to improve by 25% by 2025.

One of the measures at the moment is the new steam co-generation plant at Antwerp harbor (Belgium) that we are using in conjunction with other chemicals companies based there. Hot commissioning of the steam pipeline started in November 2018. The final tests at LANXESS took place in December. Steam is to be finally introduced to the system in January 2019. The pipeline, more than five kilometers long, helps us to reduce our energy costs and reduce CO<sub>2</sub> emissions by around 10,000 metric tons each year. Across all participating companies, CO<sub>2</sub> emissions are likely to be down by around 100,000 metric tons per year.

In Europe, 18 plants and sites (including five belonging to ARLANXEO) are subject to European emissions trading. Trading with CO<sub>2</sub> emissions rights, known as certificates, is intended to reduce emissions of the environmentally harmful gas CO<sub>2</sub> cost-effectively. Because all of our plants covered by emissions trading are state-of-the-art and compete at the international level, we expect to receive enough certificates from free allocation to cover the expected CO<sub>2</sub> emissions by the end of the third trading period in 2020.

#### Greenhouse Gas Emissions (Scope 1)

in thousand metric tons of CO<sub>2</sub> equivalents in CO<sub>2</sub> equivalents, metric tons per metric ton of product

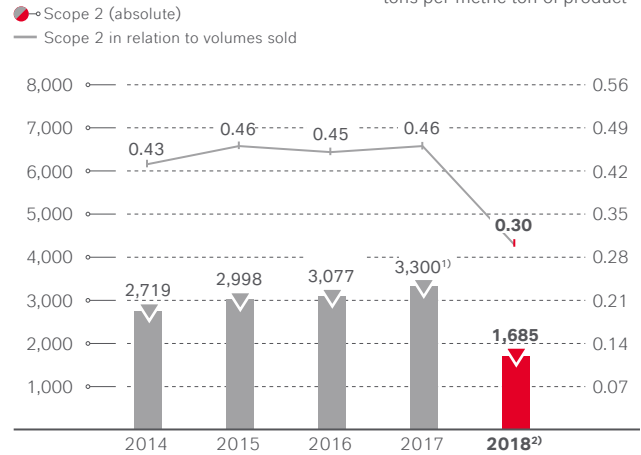


1) Figure restated  
2) Continuing operations

In 2018, we reduced our absolute Scope 1 emissions. This is largely attributable to the sale of our remaining interest in ARLANXEO and the associated changes to our portfolio. This positive trend was also thanks to the reduced use of coal in China and increased use of biomass in India and Brazil. At the same time, the ARLANXEO transaction led to higher specific Scope 1 emissions because we generate and use in ongoing operations comparatively more energy from primary energy sources.

#### Greenhouse Gas Emissions (Scope 2)

in thousand metric tons of CO<sub>2</sub> equivalents in CO<sub>2</sub> equivalents, metric tons per metric ton of product

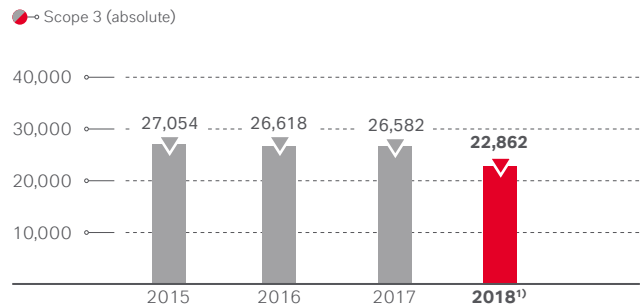


1) Figure restated  
2) Continuing operations

Absolute Scope 2 emissions decreased by around a half compared with the previous year. This effect is primarily attributable to the sale of ARLANXEO. A similar trend can also be observed with specific Scope 2 emissions. Compared with the Scope 1 analysis, a reverse effect can be seen here because ARLANXEO uses a higher number of indirect energy sources.

#### Greenhouse Gas Emissions (Scope 3)

in thousand metric tons of CO<sub>2</sub> equivalents



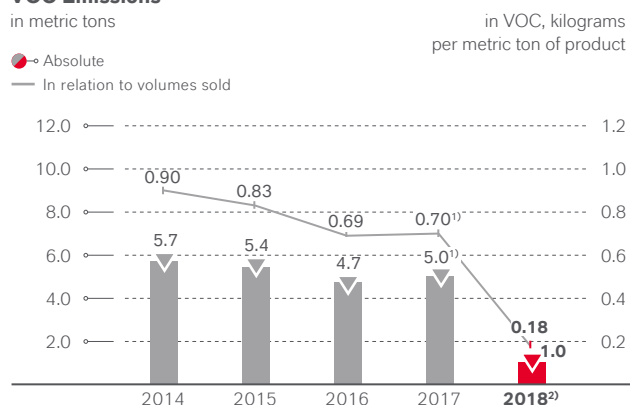
1) Continuing operations

The sale of ARLANXEO has also had a positive impact on our Scope 3 emissions.

For more than a decade, we have been participating in the international climate protection initiative CDP (formerly the Carbon Disclosure Project), each year sharing data and information on climate protection and the reduction of emissions. We received an “A–” rating in the assessment for 2018, which puts LANXESS among the top 6% of almost 7,000 companies examined by the initiative in 2018. These gratifying results gave us encouragement to continue systematically pursuing our climate protection strategy.

### Other atmospheric emissions

#### VOC Emissions



1) Figure restated

2) Continuing operations

In fiscal year 2018, both absolute and specific VOC emissions fell by almost 80%. Here, too, the ARLANXEO transaction contributed significantly to this improvement.

### Systematic energy management

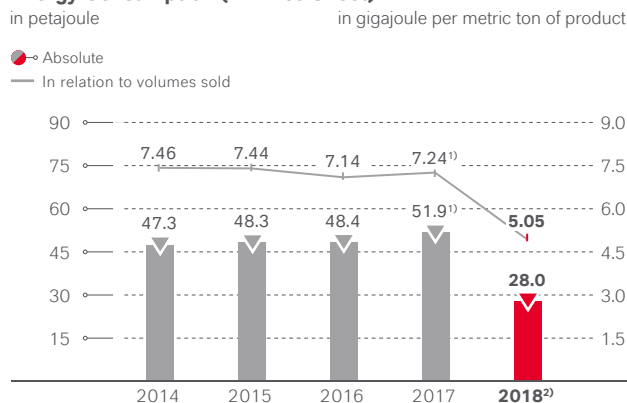
A high level of energy efficiency improves not just our emissions footprint, but also our cost position, thus ultimately making LANXESS more competitive. In Germany, we have established an energy management system in line with the ISO 50001 standard. The validity of the certificate was reconfirmed in 2018. In addition to the Zwiindrecht site, our other Belgium sites were also included in the matrix certificate under ISO 50001 in the reporting year. The Bitterfeld and Bergkamen sites in Germany each hold a local certificate. Outside Germany and Belgium, we are continuing to pursue our strategy of regional and local certifications.

With our Leverkusen, Krefeld-Uerdingen and Dormagen sites in Germany, since the end of 2017, we have been part of the Energy Efficiency Networks Initiative, established by the German federal government and leading industry associations. An Energy Efficiency Network consists of 8 to 15 companies. Once a network is up and running, an experienced energy consultant identifies opportunities to increase energy efficiency at each company. Based on this analysis, each company formulates an individual reduction target and underpins it with measures. In addition, the network as a whole sets an efficiency target for

the duration of its work. At the national level, the networks are expected to help save 75 petajoules of primary energy and reduce greenhouse-gas emissions by 5 million metric tons. With its partners, the network@CHEMPARK, in which our sites are involved, has set a target of making a contribution of 100 gigawatt hours. In the reporting year, we successfully implemented the first two projects, each of which was geared towards more efficient use of hot steam condensate. For instance, the existing steam heating of the supply air of a production building of our Saltigo business unit at the Leverkusen (Germany) site was supplemented by a heat exchanger to use the residual heat from condensed steam. Through this structural measure, we can save approx. 3,000 metric tons of steam per year in the future. In a further project at our Leverkusen site, we are using hot condensate of a network partner in order to pre-heat boiler feed water for our own steam generation. Consequently, we are saving approx. 4,000 metric tons of steam per year.

Furthermore, as an active partner, we have been involved since 2018 in the IN4climate.NRW initiative, a new working platform for industry, science and regional government, the only one of its kind in Germany to date. The aim of the initiative is to devise strategies for how industry in North Rhine-Westphalia can become highly competitive, generate additional growth and play its part in attaining the Paris climate-change targets. Specifically, the partners will work together in innovation teams to address how production processes and value chains can be made climate-neutral on a long-term basis, or what role industry might play in the development of climate-friendly products. Scientific partners will perform the requisite studies, while regional government experts work on creating innovation- and climate-friendly frameworks. Set up for an initial four years, the project is receiving €16 million in funding from the regional government.

#### Energy Consumption (Balance Sheet)



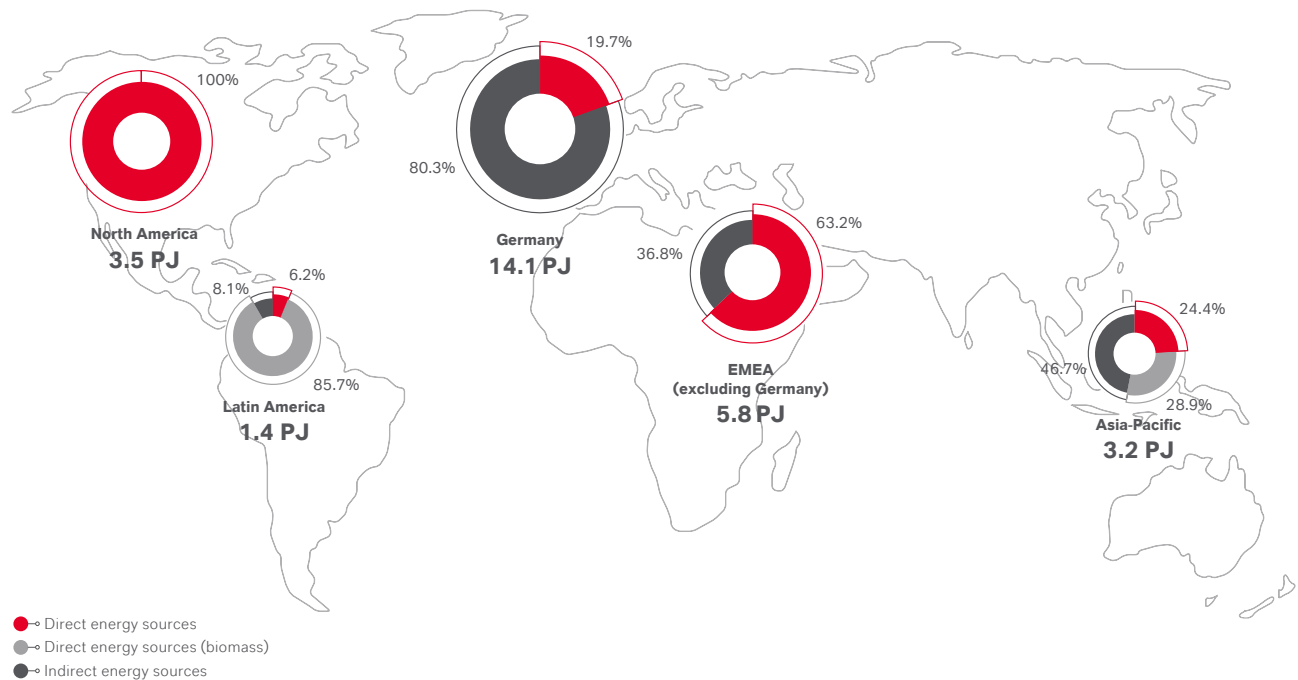
1) Figure restated

2) Continuing operations

Following the sale of our remaining interest in ARLANXEO, our absolute energy consumption in fiscal year 2018 fell significantly. In continuing operations, specific energy consumption improved significantly in the reporting year.

### Direct and Indirect Energy Consumption by Region

in petajoule/%



### Sustainable logistics

We select our transportation solutions individually worldwide in line with the principles of safety, punctuality and cost-efficiency. In doing so, we also take into account the CO<sub>2</sub> emissions resulting from transportation. In particular, we are eager to step up our use of ships. Furthermore, we are increasingly using comparatively low-emission combined-transport options, where most of the distance involved is covered by train, barge or sea vessel, thus keeping initial and final journeys by road to an absolute minimum. Europe in particular has a strong infrastructure for these types of transportation. However, increased use of rail means that combined transport is even an option for long-distance connections to China.

To transport our rail freight in Germany, we continue to use the TÜV SÜD-tested Eco-Plus service of the logistics company DB Cargo. The power required for transportation is obtained from regenerative energy sources. As a result, we can reduce our CO<sub>2</sub> emissions in national rail transportation by almost 75% compared with conventional options.



## SUSTAINABLE PRODUCT PORTFOLIO

In signing the Responsible Care® Global Charter, LANXESS committed itself to comprehensive product responsibility. This initiative launched by the International Council of Chemical Associations (ICCA) made a significant contribution to the development of the “Global Product Strategy” (GPS). It aims to provide basic information and risk assessments of materials in order to minimize harmful effects of chemicals on human health and the environment and to manufacture and distribute products in a way avoids harm to people and the environment. In line with the above obligations, our product responsibility covers the safe handling of chemical materials and products throughout their lifecycle – from research and development, procurement and production, storage and transportation through to marketing, further processing and disposal.

The “Guideline on Product Safety Management at LANXESS” stipulates how product responsibility is to be exercised throughout the Group and ensures collaboration between all of the parties involved. This particularly applies to substances in our product portfolio that are classified as hazardous. With the “Central Product Monitoring” guideline, we systematically manage the global monitoring of our products and their application with regard to possible health and environmental effects. Our product developers and product safety experts incorporate the experience gathered into their assessments. Our guideline “Development of New or Changed Products, Processes and Applications” stipulates that development ideas already have to be examined systematically with regard to their potential economic, environmental and social impact. In this way, we ensure that unsustainable products, processes or applications no longer occur in our development process.

Particularly in the case of consumer applications – for example, use as an additive in food or animal feed, in contact with drinking water or food, or in cosmetic, pharmaceutical, or medical products – it is extremely important to us that our products meet high national and international standards, certificates, and quality seals. We thereby actively support our customers with the authorization of materials to be used in contact with drinking water, for example, or with further processing of our products into certified goods for end consumers. By intensively exchanging information with our customers and suppliers, we achieve greater transparency and safety throughout the whole product lifecycle.

### **Management of chemicals control regulations**

Complying with global chemicals control regulations is an essential prerequisite for the saleability and safe handling of our chemicals and products across the whole value chain.

LANXESS ensures the implementation of binding and voluntary requirements using an electronic safety data system. Safety data sheets in more than 40 languages provide our customers worldwide with data on the materials and inform them of the protective measures required when handling the respective chemicals. We regularly adapt our electronic safety data system to take account of new features in the GHS (Globally Harmonized System of Classification and Labeling of Chemicals) in the different countries. The GHS is a system under the auspices of the United Nations that aims to globally harmonize existing classification and labeling systems from different sectors such as transportation, consumer protection, employee protection, and environmental protection. We take account of regional aspects in the implementation of the GHS, such as the CLP Regulation (Regulation on Classification, Labeling and Packaging of Substances and Mixtures) in Europe.

We explicitly support the goal of the EU chemicals regulation REACH: to ensure a high level of protection for human health and the environment. We have so far pre-registered or registered all relevant materials for LANXESS with the central European Chemicals Agency (ECHA) on schedule. As of the end of the third registration phase on May 31, 2018, around 1,000 materials that we produce in or import to Europe in quantities of more than one metric ton per year had been registered in line with the REACH process. We systematically evaluate all necessary information on our materials and their uses for the registration. In doing so, we consider the whole product lifecycle and determine safe conditions for use. In the context of the German chemical industry's voluntary commitment to recording and assessing materials (voluntary commitment of the German chemical industry association VCI, 1997), we always determine an informative basic data set based on the REACH Regulation that goes beyond the legal requirements, including for our intermediate products.

Similar chemicals control regulations to those in the EU now also exist in many other countries, and the number of them is still increasing. Before manufacturing or exporting our products, we therefore check their saleability under the applicable chemicals laws in the countries concerned. We register our materials and products in accordance with local requirements. We support the responsible authorities' material assessment programs by supplying all available information and determining new data where necessary. Here we benefit from our experience from the REACH process. We are currently dealing with increasing requirements particularly in the Republic of Korea, Taiwan, Turkey and the U.S.



### ***Comprehensive analysis of our product portfolio from a sustainability perspective***

In order to take effective sustainable action, we need to know the effects of our business activities – both positive and negative – as precisely as possible. With a specially developed assessment system, we have established a strategic management tool that enables us to systematically assess and improve the sustainability performance of our product portfolio with regard to economic, environmental and social aspects. The system analyzes the effects and benefits of our products based on criteria that we consider relevant for our company and for society as a whole.

#### **Criteria for Our Product Portfolio Analysis**

|                          |  |
|--------------------------|--|
| <b>Impact on society</b> | Support for development goals<br>Societal acceptance<br>Safety in end use  |
| <b>Ecological impact</b> | Raw material efficiency in production<br>Energy efficiency in production<br>Emissions and waste balance sheet in production<br>Water risks<br>Impact on the environment during use |
| <b>Economic impact</b>   | Registration, evaluation and approval<br>Profitability<br>Demand trend   |

Based on this list of criteria, we carry out an annual assessment of our entire product portfolio – followed by a review by an internal panel of experts – as part of our strategy process. This process has revealed which of our products satisfy the sustainability requirements we have defined and can help us to deliver solutions for key sustainability challenges.

#### **Evaluation Processes**



Throughout the LANXESS Group, we work intensively with the results of this assessment in order to further improve the sustainability performance of our product portfolio. The increased understanding of our products' capabilities can also provide important impetus for innovation. In addition, it also makes it clear which areas still show a need for action – which can lead to specific improvement processes, but can also be aimed at creating acceptance for a certain topic in stakeholder dialog. The following example shows how we derive specific measures from our analysis:

- › With a product line of high-purity polyurethane prepolymers, known as low-free products, our Urethane Systems business unit has once again demonstrated its global technology leadership. Using the new products with very low residual monomer content reduces workers' exposure to potentially carcinogenic materials.



### **BUSINESS-DRIVEN INNOVATION**

By developing innovative processes and products, LANXESS makes a significant contribution to increasing the company's competitiveness. At the same time, we help our customers make their business more sustainable. We often advance product- and application-oriented innovations in cooperation with our customers and suppliers.

In the year under review, our Leather business unit reached an important milestone with regard to its innovative technology for recycling waste products in leather production: The pilot facility in use at the tannery Heller-Leder GmbH & Co. KG in Lower Saxony successfully completed its test operation. It uses chromium-free shavings, trimming waste, and vegetable biomass to produce retanning agents with the brand name "X-Biomer." In the next step, the technology – which won the German Innovation Award for Climate and Environment in 2018 – is to start series production. The Leather business unit is currently planning the construction of the first three production facilities.

We also continuously develop our products in the field of high-tech plastics with regard to the requirements of a sustainable world. For example, this is the case for the continuous fiber-reinforced thermoplastic composites with the brand name Tepex. These are becoming increasingly important in lightweight construction of vehicles and can thus be found in a growing number of series applications – for example, in front-end and bumper supports, brake pedals, load-through systems, and tank reinforcements. The High Performance Materials business unit is currently developing electromagnetically shielding versions of the composite specifically for components in electrified vehicle drive systems. In this way, we can contribute to further increasing the performance efficiency – and thus ultimately the market appeal – of electric mobility.

High-quality lubricants can also make a significant contribution to more climate-friendly mobility. Such lubricants require additives that firstly reduce friction and secondly protect against wear. With Additin® RC3502, our Additives business unit has developed a new product to the stage of marketability which combines these properties and thereby significantly improves its application at the customer. Additin® RC3502 is stable, non-corrosive and free of mineral additives. Thanks to these properties, it makes engines more efficient and long-lasting, as well as reducing the amount of fuel required.

It is not just in our products that we implement targeted developments, but also in our research and development infrastructure. For example, in the third quarter of 2018 we started operations at a new laboratory for application development and technical services in the field of polyurethane dispersions (PUD) in Latina, Italy. This forms part of our existing development center in the Urethane Systems business unit. Sustainability is the driving factor in this case, too, as growing regulatory pressure on the use of chemicals is encouraging applied research into water-based technologies. Therefore, the establishment of an application technology center for this purpose is entirely consistent with our commitment to environmentally friendly technologies.

We also generate impetus for innovation by means of cooperations with universities. In the year under review, Urethane Systems extended and expanded its cooperation with the Center for UMass/Industry Research on Polymers (CUMIRP) at the University of Massachusetts Amherst in the U.S. Since October 2018, the business unit has also been involved in Cluster M, which focuses on research into the mechanics and manufacturing of polymers and composites. The cluster's research areas include innovations in the field of additive manufacturing technologies and next-generation 3D printing formulations. As part of this cooperation, we are introduced to the latest technological developments in the field of 3D printing and additive manufacturing, gain access to unique test equipment, and become part of a powerful industrial network in this area.

In the previous year, we had already gained promising access to the German start-up scene with a financial investment in the "High-Tech Gründerfonds (HTGF) III." This fund pursues the goal of supporting promising start-ups in the technology sector in order to bring inventions to the stage where they are ready for the market. The fund covers a wide variety of topics: robotics, the Internet of Things (IoT), energy, medical and biotechnology, chemistry and software. This investment will help us gain access to new technologies and identify partners for cooperations.

Further information on the topic of research and development can be found in the Combined Management Report on page 66 of this Annual Report.

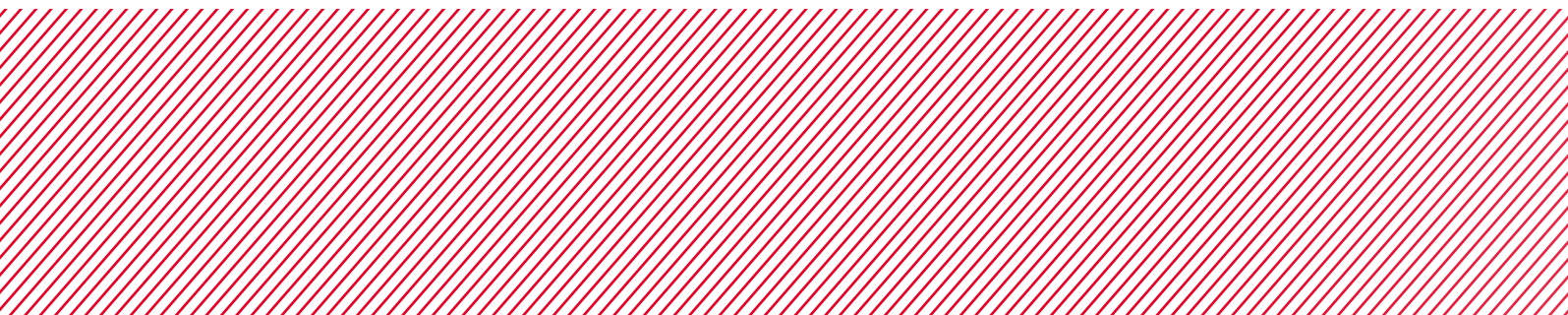


## VALUING CUSTOMER RELATIONSHIPS

Customer satisfaction and customer loyalty are among our most important measures of success. Via a central inquiry management system, customers can obtain information on our products, their applications and potential risks, and product certificates. Critical feedback from customers gives us valuable information on how we can further improve our products and processes. Based on a central CRM system and a uniform complaint management platform, each of our business units has its own market- and customer-oriented complaint management processes. Shared elements of these processes include clear targets, for example in relation to processing times for customer complaints, a corresponding statistical analysis of the complaints received, and structured monthly reporting to the management of the respective business unit.

In the year under review, the majority of the customer complaints that were classified as justified following a review were attributable to logistics and particularly to the packaging of our products. In such cases, we always aim to find a sustainable solution to the problem that occurred together with our customer and the responsible logistics partner. For example, in 2018 we countered corrosion of p-chloride vats in the Additives business unit by using a different type of seal. Meanwhile, the Leather business unit successfully introduced a system for securing pallets in containers in line with customers' needs. This directly resulted in faster and safer unloading and a considerably lower number of complaints.

Regular customer surveys conducted by an external service provider bring us important findings about our customers' loyalty, their expectations, and their perception of our services in comparison to competitors. Each business unit conducts an anonymous online survey once every two years. In the 2017/2018 survey, the customer loyalty index score was 75.1, on a par with the previous year. Based on the results of the customer satisfaction analysis, we will continue to implement targeted measures in the business units in order to at least maintain this very good level of customer satisfaction and keep successfully retaining our customers.



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