# CREATING the exceptional

#### **SUSTAINABILITY REPORT 2016**



## TO1 Our sustainability targets 2016

This is an overview of the targets we set in our Sustainability Report 2015. Except where otherwise stated, the data refer to 2016. You can find more detailed information on target attainment in the relevant chapters of this report.













Strategy	
and growth	

strategy	Governance
nd growth a	nd compliance

	Target attainment	Page no.
Strategy and growth		
Step up dialogue with key stakeholder groups	•00	24
Governance and compliance		
Update the Code of Conduct for Evonik's employees by 2017	•00	33
Employees		
Develop and introduce a Group-wide HR KPI system	•00	39
Ongoing development of Group-wide master policies on remuneration and fringe benefits	•00	41
Value chain and products		
Continue to analyze potential risk suppliers through the TfS initiative annual target <sup>a</sup>	•00	50
Renewed review of suppliers assessed in 2012 and 2013 <sup>a</sup>	•00	50
Conduct at least 20 initial supplier sustainability audits through TfS annual target <sup>a</sup>	•00	50
Continue follow-up of audits performed in 2015 <sup>a</sup>	•00	50
Continue internal sustainability training for at least 60 percent of procurement staff affected by the TfS initiative annual target a	•00	50
Total R&D expenses of over €4 billion by 2025 <sup>b</sup>	0.0	53
Further structuring of the sustainability analysis of Evonik's business, plus plans for external validation of the method <sup>c</sup>	0.0	56
RSPO certification of three further Evonik sites <sup>d</sup>	•00	52
The environment		
Conduct at least 60 ESHQ audits annual target	•00	59
Reduce specific greenhouse gas emissions by 12 percent by 2020 <sup>e</sup>	0.0	61
Reduce specific water intake by 10 percent by 2020 <sup>e</sup>	0 • 0	64
○ Safety		
Accident frequency indicator ≤ 1.3 annual target	•00	71
Improvement in incident frequency indicator $^{f}$ (Cefic Process Safety Performance Indicator) in the manufacturing units $\leq 48$ annual target	•00	72
Follow-up on Employee Survey 2015: derive and implement safety-related measures by year-end 2017 <sup>g</sup>	0.0	70
Risk evaluation for at least 99 percent of all substances marketed in quantities exceeding 1 metric ton p. a.	000	76
Further evaluation of all products containing > 0.1 percent of chemicals of very high concern	000	76

<sup>&</sup>lt;sup>a</sup> Previously reported in the section on supplier management in the chapter "The business". | <sup>b</sup> Previously reported in the section on research and development in the chapter "The business". | <sup>c</sup> Previously reported in the section on sustainability analysis of our business in the chapter "Sustainability management". | <sup>d</sup> Previously reported in the section on biodiversity in "The environment". | <sup>e</sup> (Reference base: 2012); 80% target attainment by 2018. | <sup>f</sup> Number of incidents per 1 million hours worked, taking 2008 as the reference base (expressed in percentage points: 2008 = 100). | <sup>g</sup> For 90% of measures introduced.

<sup>•</sup> Target achieved • Target partially achieved or target horizon extends beyond 2016 • Target not achieved

## TO2 Sustainability indicators for the Evonik Group

The following overview contains the main indicators for our six sustainability areas of action. You can find more detailed information in the relevant chapters.

		2013	2014	2015	2016
2	Sales in € million	12,708	12,917	13,507	12,732
Strategy and growth	Adjusted EBITDA in € million	1,995	1,882	2,465	2,165
	Adjusted EBITDA margin in %	15.7	14.6	18.2	17.0
Str	ROCE in %	15.1	12.5	16.6	14.0
_	Female Supervisory Board members in %	10	15	20	35
Governance and compliance	Female Executive Board members in %	20ª	20	20	20
	Training in antitrust law	642	514	493	937
wernance ar	Training in fighting corruption <sup>b</sup>	946	404	1,600	828
% B	Training in the Code of Conduct	3,924	1,542°	2,823	12,025
	Internal investigations	42	28	27	33
	Commitment Index <sup>d</sup>	148 (2010)	157 (2012) <sup>e</sup>	151	_1
ees	Employee turnover in % <sup>g</sup>	6.0	3.9	4.7	4.7
Employees	Average length of service in years	_h	15.1	15.0	14.9
<u></u>	CPD per employee in hours	13 <sup>i</sup>	9	13	16 <sup>j</sup>
	Female managers in % <sup>k</sup>	18.8	20.1	20.8	22.0
	Procurement expenses in € billion	8.5	9.1	8.3	7.6
	No. of sustainability audits (TfS)	_'	93	179	241"
_ v	No. of sustainability assessments (TfS)	_'	2,605	2,580	1,773
hain	Use of renewable raw materials in production in %	9.6	8.8	8.6	9.2
Value chain	R&D expenses in € million	394	413	434	438
Val	R&D ratio in %°	3.1	3.2	3.2	3.4
	Proportion of resource-saving products in %	_'	_'	~50	~ 50
	External sales of chemicals segments covered by life cycle analyses in %	_!	_1	~70	~ 70
	Scope 1 greenhouse gas emissions in million metric tons <sup>p</sup>	5.9	5.9	5.6	5.4
ţ	Scope 2 greenhouse gas emissions in million metric tons <sup>q</sup>	0.9	0.9	1.0	1.0
The environment	Water consumption in million m <sup>3 r</sup>	74.5	78.1	71.3	65.7
ڳ ≑ ڪ	Production in million metric tons	10.06	10.35	10.36	10.58
e	Hazardous production waste in thousand metric tons	218	212	213	227
	Non-hazardous production waste in thousand metric tons	152	156	153	124
	Accident frequency <sup>s</sup>	0.9	1.2	1.0	1.2
	Incident frequency <sup>t</sup>	50	53	55	43
>	Health ratio in %"	94.9	95.9	95.4	95.3
Safety	Occupational Health Performance Index <sup>v</sup>	5.1	5.4	5.3	5.5
- iš	Occupational Disease Rate <sup>w</sup>	0.28	0.40	0.30	0.36
	Outgoing shipments, hazardous goods in thousand metric tons	5,600	5,849	5,531	4,025
	Outgoing shipments, other goods in thousand metric tons	3,546	3,531	3,438	4,078

Since October 1, 2013. | b Managerial employees. | c The training concept was altered in 2014 so the figure is not fully comparable with the other years. | d Commitment Index on employee satisfaction, maximum score 200. | e Since 2012 the employee survey has been conducted every three years. | f The next employee survey is planned for 2018. | g Continuing operations only. | h No data available. | Refers to Germany; worldwide from 2016. | Since 2016 the figure excludes apprentices in Germany. Management Circles 1–3; continuing operations only. | h No data compiled for this year. | m Thereof Evonik: 29. | h Thereof Evonik: 145. | e Ratio of R&D expenses to sales. | c CO<sub>2</sub> equivalents. | d CO<sub>2</sub> equivalents, net (market-based). | f Includes water used to generate steam, in the manufacture of products, to cover evaporation losses, and process water. | s Number of accidents involving Evonik employees and contractors' employees under Evonik's direct supervision per 1 million working hours. | Number of incidents per 1 million working hours (reference base: 2008). | e Refers to Germany; calculated from: (Target working hours – Sickness-related hours lost)/ Target working hours. | Max 6.0 (index takes account of key aspects of occupational medicine, health promotion and emergency medical management). | w Number of newly identified cases of occupational illnesses per 1 million working hours.



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At Evonik, we believe that responsible action and business success are inseparable. We began early on to entrench environmental and social criteria in our corporate decisions so that we could strike out in new and sustainable directions. Our Sustainability Report for 2016 shows how successfully we are doing that.

The essence of a fiscal year:
We have continued to analyze
the sustainability of our business
operations and increasingly
aligned our innovation-related
activities toward sustainability.
Our sustainability-related activities support the Sustainable
Development Goals (SDGs) of
the United Nations in many
areas. In the future we want to
firmly embed these activities
in our corporate strategy and
our management processes.

Today our contribution toward reaching the SDGs already ranges from resource-conserving products such as the high-performance insulation material CALOSTAT® to our new combined-cycle power plant in Marl, which reduces  $CO_2$  emissions by up to 280,000 tons annually.

Projects like these demonstrate that if you want to change something, you have to be creative. Unusually creative. We wish you inspiring reading.





From left:

**KLAUS ENGEL**Chairman of the Executive Board

**THOMAS WESSEL**Chief Human Resources Officer

## Dear readers,

Sustainable management and responsible behavior are two of the cornerstones of Evonik's business model. For us, the year 2016 is a special milestone in this regard. For one thing, we have been included for the first time in the top group of the renowned indexes Dow Jones Sustainability World and Europe. For another, we've been pleased to have our work doubly honored by the German Sustainability Award 2016—with the award in the research category and the general award as one of the five most sustainably operating major companies in Germany. We regard these honors as a motivation to steadfastly continue moving along our chosen path.

Our guiding principle is our sustainability strategy. It defines the necessary areas of action for our company's balanced management of economic, environmental, and social factors. These definitions are the result of our materiality analysis, which we are continuously refining and deepening in an intensive dialogue with our stakeholders. In 2016 we continued our development of the corresponding dialogue events and management processes.

All of this is reflected in the new structure and presentation of content in this sustainability report.

In terms of its extent and depth, this report has stringently applied the criterion of materiality.

In our conversations with employees, customers, investors, and business partners, we are reminded every day of the close connection between environmentally and socially responsible behavior on the one hand and economic success on the other. Protecting our climate and our environment is one of the major global challenges of our time. We believe this means we should continue to work with full commitment to attain our ambitious environmental goals—but there's more to it than that. Sustainability has long since developed into a growth driver and a key criterion in purchasing decisions.

Our product portfolio and the orientation of our research and development activities reflect this development. So does our in-house Innovation Award, with which we honor outstanding research performance. In the year 2016, all of the nominations in the category "New Products/System Solutions" were products whose applications contribute to sustainability. They include an especially environmentally friendly biosurfactant made of renewable raw materials; an additive that in combination with silica and silanes further reduces the

rolling resistance of tires, thus further lowering fuel consumption and  $CO_2$  emissions as well; and a synthetic transmission oil that boosts the energy efficiency of wind turbines.

In order to make sustainable products' contribution to business success reliably measurable and thus controllable, in 2016 we continued to refine the sustainability analysis of our business operations. As part of this process, we refined our methods and subjected them to validation by independent auditors.

In the operation of our production facilities all over the world, we assign absolute priority to plant safety, and thus the protection of employees, neighbors, and the environment, ahead of sales and profits. Our corporate culture initiative Safety at Evonik is strongly established at the Group. Through this initiative we give all of our approximately 35,000 employees a binding and verifiable set of guidelines that specify how individual behavior helps to avoid accidents and helps to ensure compliance with the strictest safety standards.

But good sustainability management doesn't begin with a company's own products and production processes. Through even earlier factors such as our purchasing volume, we exert considerable influence on our social and environmental surroundings. We are conscious of this responsibility. Consequently, we are further increasing transparency and sustainability along our entire supply chain. We are also successfully demonstrating this approach as a founding member of the Together for Sustainability initiative.

In addition to the environmental aspects, we are increasingly focusing on the protection of fundamental human rights. That's why we and our colleagues on the Executive Board consider it important to document Evonik's positions regarding human rights above and beyond the existing codes of responsible corporate management. In the years ahead, at the global level we will steadily monitor compliance with this policy statement on human rights.

Through all of these activities, we are emphasizing our determination to act as a good corporate citizen and our firm commitment to the principles of the UN Global Compact. We are also taking a further step by firmly anchoring the sustainable development goals defined by the United Nations in the corporate strategy and the management processes of Evonik.

In every company, highly motivated and highly trained employees are a key factor of sustainable success. We would therefore like to especially thank all those who during the year under review once more helped to translate our company's high expectations and ambitious goals into daily behavior and shared successes. This contribution does not end at the factory gates. Instead, it includes a wide variety of activities and commitments in the neighborhoods surrounding our locations.

We hope this report offers you an interesting reading experience. We will be pleased if the following pages provide you with a practical motivation or two and give you an impression of why we can proudly say that Evonik achieved a great deal in 2016.

KLAUS ENGEL Chairman of the Executive Board THOMAS WESSEL Chief Human Resources Officer



## Using energy efficiently

The word energy is derived from an ancient Greek word meaning working within. Within Evonik, many experts have been working for years to maintain a balance between economic growth and decreased energy consumption. For these efforts, 2016 was another important year.

The centralized energy management system we introduced in 2015 is helping to continually improve energy efficiency at Evonik and reduce





CO<sub>2</sub> emissions. Thus it's making a key contribution to climate protection and resource conservation.

These processes are having an impact internally and are also being monitored by external auditors. In 2016 Evonik underwent further extensive

external audits. Now for the first time, it has received certification according to the ISO 50001 standard for all of its companies in Germany as a whole. Outside Germany as well, some of Evonik's large and small locations have already been audited according to this international standard.

Evonik's internationally uniform energy management system applies to all of the company's locations and activities, whether they are in the areas of production, research or administration. A key component of this system is a shared awareness throughout the Group of the need to consume energy in sensible and economical ways. In training courses held all over the world, every Evonik employee is sensitized to the need to apply this principle. Many suggestions for improving and





- 1 The gas-fired power plant in Marl has an efficiency rate of 90 percent.
- **2** The commissioning ceremony of the power plant in May 2016.
- 3 The plant produces the steam required in the Chemical Park around the clock.

refining energy management are flowing from Evonik locations into the overall process.

In addition to these continuous efforts to use energy more efficiently, in 2016 Evonik made its biggest step toward reducing its CO2 emissions when it commissioned a combined-cycle gas turbine power plant to replace a coal-fired unit at its biggest location in Marl. This cogeneration power plant, which was built in partnership with E.ON, reduces the facility's CO<sub>2</sub> emissions by up to 280,000 tons per year. That corresponds to the CO<sub>2</sub> emissions of a city of 30,000 inhabitants.

The new power plant, which uses combined heat and power technology, generates an electrical output of 60 megawatts and a thermal output of 100 megawatts. Its fuel efficiency rate is approximately 90 percent.

"Together with renewable energies, natural-gas power plants that work with combined heat and power technology will play an important role in the energy mix in the future," says Andreas Steidle, who heads Evonik's energy management team. In addition to electricity, the production facility in Marl primarily requires steam. Steidle calculates that if Evonik wished to produce this steam from renewable raw materials, it would have to burn three million tons of wood annually; this corresponds to the lumber produced by half of the forest area of the federal state of North Rhine-Westphalia. Combined heat and power technology is therefore the first choice wherever facilities require electricity and heat all year round. At other locations, Evonik buys the steam from external suppliers. For example, in Darmstadt it comes from a waste incineration plant. "We find out on site which energy generation system is most appropriate," says Steidle. "Then we adapt the system to match local requirements."

The gas-fired power plant in Marl is also a backup power plant for the renewable energies in the electrical grid. If the amount of solar and wind power is insufficient, the gas-fired power plant can immediately step in and feed electricity into the public grid. In this way it protects the electrical grid from fluctuations and possible outages.

In spite of these impressive successes, the energy experts at Evonik are continuing their work. As Steidle explains, "This is an ongoing process whose mainspring is the commitment and enthusiasm of the employees. That's why we want to further intensify the sharing of experiences in 2017, among other things. That way we'll keep generating ideas about ways to boost our energy efficiency and thus help implement Evonik's sustainability strategy."

## Training for young refugees

When Somayeh Jafari, a 32-year-old woman from Iran, came to Germany, all she had was a suitcase. Invisible, yet heavier than any suitcase, is the sense of loss she has carried ever since. She left her family, friends, and familiar surroundings behind. Sajid Khan, 21, who fled from Bangladesh in the hope of starting a new life in Germany, has a similar story. After their initial, often difficult, experiences in this foreign land, both of them are seeing something like normality return to their lives. Both are participating in a training program at Evonik. "The best way to gain a foothold here is to develop your career prospects," says Hans Jürgen Metternich, Head of Training North at Evonik.

Evonik expanded the Starting a Career program for the 2015/16 academic year to include a mea-



sure financed and operated by the Evonik Foundation for young refugees like Jafari and Khan. The program was launched by the social partners of

the chemical industry to help young people who are not yet ready to begin a traineeship. For eight months, the participants gather practical experience in scientific and technical fields, supported by socio-educational counselors. Refugees also take German lessons. "Language is the key to integration," says Metternich. Refugees and young people who are not refugees complete the program together. "All the participants learn from and with one another," he adds.

Jafari and Khan have benefited from this concept. Both have completed the first Starting a Career for Refugees program, improved their German, and gotten to know the professional environment in Germany. Their commitment has impressed



Evonik. Since August 1, 2016, both of them have been trainees at the Marl location. Jafari is learning to be a chemical technician, and Khan is an upand-coming chemical laboratory technician. They are not the only refugees who have successfully completed the program. Of the 30 refugees who have completed the program, 21 were able to directly begin a traineeship at Evonik or another company after graduating. Three of the 30 are attending secondary school, and four have begun jobs that are covered by national social insurance.

"I had already sent out many job applications before the Evonik Foundation enabled me to participate in Starting a Career," says Jafari, who had been unable to find employment in Germany inspite of her Iranian degree as a construction engineer. Khan had also sought employment in his new home country for a long time without success.



- 1 The refugees Sajid Khan and Somayeh Jafari are trainees at Evonik.
- 2 As part of Starting a Career, the young people receive support from socio-educational counselors.
- **3** Refugees and non-refugees learn together.





"I'm very thankful for the opportunity to follow up the Starting a Career program with a training program at Evonik," he says. In the meantime he has even been elected to the committee representing young people and trainees in Marl.

Evonik has operated the Starting a Career program for 17 years, during which about 1,100 young people have completed it. For many of them it was a springboard to vocational training programs. "Thanks to the Evonik Foundation's measure, the program now also opens up new perspectives for young refugees and gives them a key boost as they make a new start in Germany," says Metternich.

The Evonik Foundation intends to give even more refugees a chance in the future, with 20 being included in the program every year over a period of three years. "The people who come to us in

distress are an opportunity for Germany if we succeed in integrating them into the labor market as fast as possible," Metternich explains.

After all, refugees don't leave their homes willingly; they leave because they are in a hopeless situation or because war has put their lives at risk. Without friends or family in Germany, Jafari and Khan often feel lonely. The training program has offered them social integration in Germany and is the first step toward a self-determined future.



## Precision work in construction

On this sunny but cool spring day, these particular row houses in Herzogenaurach, Bavaria, aren't very warm-not yet, at any rate. Eight families will be moving into these modern brick houses, but not until the end of 2017. Till then, the workmen will have a lot to do. They are wielding their screwdrivers, saws, spatulas, planes, and other tools at many points in the shell structures. These are normal routine activities. Nonetheless, this construction site is very special, because the new buildings are part of a research project at the Technische Hochschule Nürnberg. Evonik is participating in the project. Together with other companies, the partners are planning and constructing innovative energy-storing houses that generate more energy than they consume. It's an unusual project that points out one path to the future of construction.

The heating, hot water provision, and lighting of public and private buildings account for 40 percent of overall energy consumption in Germany. They also represent almost 20 percent of the country's total  $CO_2$  emissions. Innovations from companies such as Evonik are making a key contribution to Germany's effort to reach its climate protection





targets. For the construction sector, scientists at Evonik have developed an innovative insulation

material that significantly boosts buildings' energy efficiency: CALOSTAT®. Evonik launched this high-performance insulation material, which is based on silicon dioxide, on the market three years ago. Building contractors and architects are very interested in this product. They use CALOSTAT®

not only for new buildings such as the ones in Herzogenaurach, where the facing bricks of the shell structures, for example, have been filled with the insulation material, but also for the subsequent thermal insulation of older houses. That's because most older buildings are insulated either inadequately or not at all. Energy-saving renovation can reduce an older building's energy needs by as much as 90 percent. CALOSTAT® is an insulation material characterized by very low thermal conductivity. That makes this product especially





- 1 These houses in Herzogenaurach will generate more energy than they consume.
- 2 The facing bricks have been filled with CALOSTAT®.
- 3 CALOSTAT® also connects existing and new construction.

attractive for building renovation in city centers, where houses stand close together and in many cases there's no room to apply thick layers of insulation material. "With our product, the insulation thickness can be reduced by up to 50 percent by comparison with traditional materials-with the same level of insulation," explains Bettina Gerharz-Kalte, who heads the Thermal Insulation unit at Evonik. A shell structure insulated with CALOSTAT® keeps heat inside the house in winter and outside it in summer. That also reduces air conditioning costs. A further benefit of this high-performance insulation material is that CALOSTAT® is nonflammable and thus fulfills increasingly stringent fire prevention requirements.

But the team of experts that developed CALOSTAT® has set its sights on more than just the purely technical properties of this material. They also consider the needs of customers and users, and they work with partners to develop system solutions. Thanks to a facade panel that can be used to insulate public buildings or high-rises, Evonik was included in the KlimaExpo.NRW exposition in 2016, a climate protection initiative of the state government of North Rhine-Westphalia. This insulation panel makes it possible to save energy in many ways. For example, a building in which it is used as a facade element can reach the passivehouse standard, even though the element is only 12 centimeters thick.



"Feedback from our customers and partners is important for the further development of our product," says Gerharz-Kalte. The impressively small

environmental footprint of CALOSTAT® has also made it popular on the market. The insulating material can be recycled without any problems or disposed of as normal construction waste, because it consists almost entirely of mineral raw materials. For CALOSTAT®, Evonik has received the Material Health Certificate in gold from the Cradle to Cradle Product Innovation Institute in the USA.

## Safety in the Greater China region

Raw materials for the cosmetics industry, lightweight construction materials for the aerospace sector, and high-grade plastics are some of the products Evonik manufactures in the Greater China region, which includes China, Taiwan, and Hong Kong. Evonik operates ten production facilities in the region, including plants in Shanghai, Jilin, and Nanning. About 3,000 employees work in these facilities, which posted sales of about €1.3 billion in 2016. "Of course we're proud of our ultramodern production facilities and the quality of our products. But we're equally proud of our



high level of occupational and plant safety," says Yonggang Bu, Head of the region's Environment, Safety, and Health unit.

At Evonik, safety and health are the top priority throughout the company. For years now, it has had good overall safety figures all over the world. Targeted measures in the Greater China region, as well as throughout the Group, support the continuous improvement of its levels of safety.

The Safety at Evonik initiative, which was launched in 2013, further reinforces the company's safety culture. The basic aim of the initiative is to change the behavior of all employees, supervisors, and managers. A set of safety guidelines has established basic principles of action and standards that are binding all over the world. These principles are being embedded at Evonik through training courses that are divided into six modules. In the years ahead, all of the company's employees will complete these modules. The Greater China region





is setting a good example: 99 percent of all the employees in this region completed the fourth module of the Safety at Evonik initiative last year.

What's more, employees, executives, and safety experts in the region are attending additional workshops that deal with near-accidents-dangerous situations in which an accident was avoided at the last minute. The aim is to ensure that all the participants are aware of possible risks in their work environment and can react appropriately in case of an emergency. "We are encouraging our employees to report every near-accident. An analysis of these situations will help us find out how we can avoid real accidents," says Yonggang Bu. On paper, the number of reported near-accidents at the locations in the Greater China region was significantly higher in 2016 than in 2015. At first glance, that's a setback-but at second glance it's the desired result of the training sessions. "We've

ANNEX







- 1 Evonik's top priority is the safety of its processes and facilities all over the world.
- 2 One of Evonik's ten production facilities in the region is located in Shanghai.
- 3 Safety first: Evonik employees in China.

managed to raise our employees' awareness of this important theme. Thanks to our systematic reporting process, we can now further expand our prevention systems," Yonggang Bu explains.

In order to guarantee safety, he and his team conduct regular audits at the Evonik facilities. During these audits, the safety experts investigate whether Evonik's stringent company-wide standards are being complied with. Possible problems are openly discussed. Finally, the team gives the management recommendations for future activities.



In addition, Evonik's Global Process Safety Competence Center (GPSC) offers participants opportunities to have discussions and learn from

one another using examples of best practice. The experts from the interdisciplinary staff of GPSC develop safety concepts for all Evonik facilities

throughout the world on the basis of the Group's high standards. They visit the facilities and join local managers and staff members to identify and discuss potential hazards. This is how Evonik sets a good example not only in the Greater China region but also on the global level. "We will continue to forge ahead with our safety precautions at the technical and organizational levels," says Yonggang Bu. After all, every accident is one accident too many.



## Taking control of their lives

The number of people with handicaps in southern Africa is estimated to be over 18 million—that's at least ten percent of the total population. "Many of these people are left to their own devices, especially in rural regions," says Andreas Wörster, the founder of the aid organization Utho Ngathi Disability Projects, which has headquarters in Siegen and Johannesburg. "In many cases, people with handicaps are housebound and live outside the village community. Our goal is to integrate them into community life." Wörster, a 51-year-old German, is convinced that this can be done through education, the development of individual capabilities, and an adequate income. He's familiar with the realities of the situation, as he has



lived in South Africa for the past 27 years. Evonik has supported the work of his aid organization for the past three years.

Utho Ngathi has created a wide variety of projects in South Africa and Zambia in order to support

and integrate people with disabilities. It plans to conduct educational campaigns in order to draw attention to their difficult situation. It also organizes home visits to provides people with regular care and support and makes wheelchairs and walkers available so that they can participate in community activities.

Evonik began its involvement with the aid organization by donating wheelchairs for children. "It's very moving to see how a wheelchair can change a person's life for the better by making him or her mobile," says Heinrich Ruth, who is responsible for Evonik's business with amino acids for animal feed in Africa. It soon became clear to Evonik that its cooperation with Utho Ngathi should be a long-term one. The company wanted to strengthen its commitment to people with disabilities in southern Africa—and also to contribute its business skills. "In order to be recognized, people need to have meaningful work that contributes to their society," says Ruth.

Wörster and Ruth decided to work together on implementing a project that would provide



the rural population with better sources of valuable protein and more closely integrate people with disabilities.

Many people in southern Africa are still malnourished because they have no access to high-quality food and balanced meals. Many of them cannot afford to buy meat, fish or eggs.

The two men soon came up with a plan. Utho Ngathi and Evonik are building henhouses holding 300 birds each in the rural village region of Macubeni in eastern South Africa. People both with and without disabilities can work here and earn a living. At the same time, the additional supply of meat can improve the villagers' diet.

The construction work started in July 2016. While Evonik employees in South Africa joined Utho Ngathi in Macubeni to build the henhouses, Evonik colleagues in Germany and in South Africa organized a donation campaign to finance the project. Several thousand euros were collected. "In addition, we got a local producer of animal feed, one of our large customers in this region, on board," says Ruth. This producer donated high-quality animal feed and taught the future



operators of the henhouses how to take care of the chickens, carry out cleaning operations, and ensure good hygiene.

In August, the first chicks were moved into the three henhouses in Macubeni. By now, several generations of chickens have already been raised and sold. Ten villagers work in the henhouses—people with handicaps and people without them work together with a will. Utho Ngathi pays them a small salary from the profits gained from the chicken sales, and enough money is still left over to support six villagers who make home visits to people with handicaps.

"Evonik really got the ball rolling," says Wörster. Evonik's Employer Branding unit has linked Utho Ngathi with students from RWTH Aachen University who are members of the international student network Enactus. Together, these partners have built a solar-powered fish farm in a village in Zambia, which is now being managed by villagers both with and without handicaps. The chicken farming is also ongoing. Two more henhouses were built in February 2017, one of them for laying hens. In addtion, the Evonik Foundation has also pledged to support Utho Ngathi financially until 2020.





- 1 Chicken farming enables people with disabilities to lead a selfdetermined life.
- 2 Henhouses were built in Macubeni with the help of Utho Ngathi and Evonik.
- 3 The villagers look after the chickens with great zeal and commitment.

## Sustainable development goals

In fall 2015 the United Nations published 17 global sustainable development goals, known as SDGs for short, to be achieved by 2030. They replace the eight Millennium Development Goals, which expired in 2015.

In 2016 we analyzed how our sustainability activities support the SDGs in various fields. You can find some examples on pages 4 to 13 of this report. We will continue to examine the SDGs and their significance for our business in detail in 2017. That is a further step toward establishing them firmly in our corporate strategy and management processes.



End poverty in all its forms everywhere



End hunger, achieve food security and improved nutrition and promote sustainable agriculture



Ensure healthy lives and promote well-being for all at all ages



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Achieve gender equality and empower all women and girls



Ensure availability and sustainable management of water and sanitation for all



Ensure access to affordable, reliable, sustainable and modern energy for all



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



Reduce inequality within and among countries



Make cities and human settlements inclusive, safe, resilient and sustainable



Ensure sustainable consumption and production patterns



Take urgent action to combat climate change and its impacts



Conserve and sustainably use the oceans, seas and marine resources for sustainable development



Protect, restore and promote sustainable use of terrestrial eccosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels



Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

15

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## ONGOING DEVELOPMENT AND OUTLOOK

2016 was a good year for our business and we worked intensively on our major sustainability issues.

Based on this, we are taking further steps to apply sustainability criteria in the management of our operating performance.

#### **TARGETS FOR 2017**

- Ongoing development of methods and indicators for sustainable portfolio management
- Analysis of sustainability requirements in individual markets and regions
- Harmonization of internal sustainability reporting processes and monitoring systems



## RECOGNITION OF OUR SUSTAINABILITY PERFORMANCE

Sustainability is a growth driver for Evonik.
The following accolades received in 2016 testify to our performance:

Inclusion
for the
first time
in the
renowned
Dow Jones
Sustainability Index
World and
Dow Jones
Sustainability Index
Europe

Dow Jones
Sustainability Indices
In Collaboration with RobecoSAM 60

### GERMAN SUSTAINABILITY AWARD

Evonik is one of the five most sustainable large corporations in Germany



Top 5 Deutschlands nachhaltigste Großunternehmen 2016

## **KEY FIGURES FOR EVONIK IN 2016**

- · Sales €12.7 billion
- Adjusted EBITDA €2.165 billion
- Adjusted EBITDA margin 17.0%
- ROCE 14.0%

#### **IMPLEMENTATION**

Sustainability management

- Sustainability analysis of all business lines extended and method validated
- ened
- Stakeholder approach sharpened and implemented through various dialogue formats
- Ongoing alignment of the reporting process to materiality
- Internal Expert Circles set up on sustainability issues

Page Topic | GRI indicators

- 17 Business model | G4-2, G4-8
- 18 Fiscal 2016 | G4-2, G4-4, G4-9, G4-13, G4-20, G4-21, G4-EC1
- 18 Materiality analysis | G4-18, G4-19, G4-22, G4-23, G4-26, G4-27
- 22 Stakeholder management | G4-11, G4-16, G4-24, G4-25, G4-26, G4-27, G4-37, G4-53, G4-LA4, G4-LA5, G4-HR4, G4-SO1
- 25 Sustainability management | G4-2, G4-34, G4-35, G4-36, G4-37, G4-48, G4-49

Strategy and growth

#### **Business model**

#### Strong market positions, a clear culture of innovation, sustainable business activities

Evonik is one of the world's leading specialty chemicals companies. We concentrate on attractive growth markets especially health, nutrition, and resource efficiency. Our strengths include the balanced spectrum of our business activities, end-markets and regions. Around 80 percent of sales come from market-leading positions, which we are systematically expanding.

Our specialty chemicals make an indispensable contribution to the success of our customers' products in global competition. Close cooperation with them enables us to build up a deep knowledge of different businesses and end-markets, leading to products that are tailored exactly to specific customer requirements. Technology centers and customer competence centers throughout the world support this claim.

Research & development are important drivers of profitable growth. Our strong innovation culture and well-trained and highly motivated managers and employees form the basis for this.

A wide range of activities help us to gain and develop talented employees and position Evonik as a preferred employer in order to retain them.

Our sustainability strategy takes up the growth markets identified in our corporate strategy and defines areas of action geared to balanced management of economic, ecological and social factors. We undertake to comply with internationally recognized standards, and more far-reaching internal guidelines and principles of conduct. See "Governance and compliance", page 26.

Our sustainability reporting complies with the Global Reporting Initiative (GRI G4, core). We are a member of the GRI's Gold Community.

#### Decentralized corporate structure

Our specialty chemicals operations are divided into three chemical manufacturing segments, which operate close to their markets and customers and have a high degree of entrepreneurial independence. The Nutrition & Care segment produces specialty chemicals, principally for use in consumer goods for daily needs, and in animal nutrition and healthcare products. The Resource Efficiency segment supplies high-performance materials for environment-friendly and energy-efficient system solutions for the automotive, paints, coatings, adhesives and construction industries and many other sectors.

The Nutrition & Care and Resource Efficiency segments operate in attractive markets. They both offer customers customized, innovation-driven solutions and the aim is for them to achieve above-average, profitable growth through innovations, investments and acquisitions.

The heart of the Performance Materials segment is the production of polymer materials and intermediates, mainly for the rubber, plastics and agriculture industries.

The Performance Materials segment is characterized by processes that make intensive use of energy and raw materials. It therefore concentrates on integrated, cost-optimized technology platforms, efficient workflows, and economies of scale. Our strategic goal for this segment is to contribute earnings to finance the growth of the Evonik Group. In the future, investments and, where appropriate, alliances will concentrate on securing and extending our good market positions.

In addition, the Services segment offers services for the chemical segments and external customers at our sites and supports the chemicals businesses and the management holding company by providing standardized Group-wide administrative services.

#### C01 Corporate structure

		Evonik		
Segments	Nutrition & Care	Resource Efficiency	Performance Materials	Services

#### Fiscal 2016

#### A good performance in 2016—Acquisitions strengthen growth segments

#### Pleasing volume trend

Driven by good demand for our products worldwide, all segments registered pleasing volume growth. However, there was a substantial reduction in selling prices, partly because lower raw material prices were passed on to customers. Overall, sales declined 6 percent to €12,732 million.

#### Adjusted EBITDA at a good level

Adjusted EBITDA was €2,165 million, down 12 percent from the high prior-year figure. The main reasons for this decline were lower selling prices, while higher volumes and lower raw material costs had a positive effect. The adjusted EBITDA margin was good at 17.0 percent (2015: 18.2 percent).

#### Another very good return on capital employed

Within our value-oriented management approach, our success is measured principally by ROCE, which was 14.0 percent in 2016 and therefore well above our cost of capital. In our regular review of the cost of capital, this was confirmed as being unchanged at 10.5 percent before taxes in 2016.

#### Total value added

Value added is calculated from sales and other revenues less the cost of materials, depreciation and amortization and other expenses. Overall, value added declined 5 percent to €4,616 million. The largest share of value added—68 percent (2015: 65 percent)—went to our employees. 9 percent (2015: 10 percent) was paid to the state in income and other taxes. A further 5 percent (2015: 5 percent) went on interest payments. Shareholders of Evonik Industries AG received 18 percent of value-added, compared with 20 percent in the previous year.

T03 Breakdown of value added

3,128 401 229 14	3,121 470 245 11
401	470
· ·	
3,128	3,121
4,616	4,838
2016	2015

#### Major events

On May 6, 2016 Evonik signed an agreement to purchase the specialty additives business of Air Products and Chemicals, Inc., Allentown (Pennsylvania, USA) for US\$3.8 billion (approximately €3.5 billion). The acquisition was closed on January 3, 2017 following the approval of the relevant antitrust authorities. The two businesses are an ideal fit: Evonik and the Air Products specialty additives business target the same customers in their core markets, but with different and complementary products. The new business will be integrated into our Nutrition & Care and Resource Efficiency growth segments.

On December 9, 2016 Evonik signed an agreement to acquire the global silica business of J. M. Huber Corporation, Atlanta (Georgia, USA), for US\$630 million. In this way, we aim to strengthen our position in this profitable, low-cyclical business, especially in North America and Asia. The transaction is contingent upon the approval of the antitrust authorities but is expected to be completed in the second half of 2017. We intend to integrate the business we are acquiring into our Resource Efficiency growth segment.

You can find further information on fiscal 2016 in our Annual Report 2016.

#### Creating extensive value

Our innovations enrich and simplify people's daily lives in many different ways. At the same time, we help secure the basis of life for the growing world population. The chart "Evonik's resources and value contributed in 2016" on the next page shows how we create value for our customers, society, the environment and our company.

#### Materiality analysis

#### Our materiality analysis

Our sustainability activities are based on our materiality analysis. In our materiality analysis in October 2015, we identified and prioritized the key sustainability topics for Evonik. We surveyed around 500 representatives of stakeholder G4-24 groups of relevance for Evonik. They included customers, suppliers, local residents around our sites, analysts, investors, and representatives of universities, research institutes, professional associations, political parties, non-governmental organizations and the media. The stakeholders were selected by G4-25 Evonik experts who are in close contact with the respective stakeholder groups. Evonik employees took part in the survey G4-26 on the intranet. In a second step, we included selected sustainability experts within the Evonik Group, representatives of relevant corporate functions and representatives of the workforce.

<sup>&</sup>lt;sup>1</sup> Evaluation based on groups for which analyzable results were obtained.

Strategy and growth

19

#### **OUR RESOURCES**



#### **VALUE CONTRIBUTED**

#### Stakeholders

34,351 employees

арргох. 31,000 suppliers

арргох. 37,500 customers

€7.6 billion procurement volume

#### The environment

#### 9.32 million metric tons raw material inputs

9%

renewable raw materials

68 PJ net energy input

#### 6.4 million metric tons direct and indirect CO2eq emissions a

73 million m<sup>3</sup> water consumption

#### **Financials**

#### €6,041 million property, plant and equipment as of December 31, 2016

€960 million capital expenditures in 2016

#### Knowledge

€438 million R&D expenses

2,700 R&D employees

#### Production

approx. 90 production sites

6.5 km<sup>2</sup> largest production site Marl (Germany)

#### **NUTRITION & CARE**

The Nutrition & Care segment produces specialty chemicals, principally for use in consumer goods for daily needs, and in animal nutrition and healthcare products.

#### RESOURCE **EFFICIENCY**

The Resource Efficiency segment supplies highperformance materials for environment-friendly and energy-efficient system solutions to the automotive, paints, coatings, adhesives and construction industries, and many other sectors.

#### **PERFORMANCE MATERIALS**

The heart of the Performance Materials segment is the production of polymer materials and intermediates, mainly for the rubber, plastics and agriculture industries.

#### **SERVICES**

The Services segment offers services for the chemical segments and external customers at our sites and supports the chemicals businesses and the management holding company by providing standardized Group-wide administrative services.

#### Society

#### €69 million spending for vocational training

95.3% employee health ratio

€2.5 billion wages and salaries

€10.3 million donations and sponsorship

#### The environment

€37 million  $investment\ in$ environmental protection

#### -17 percentage points reduction in specific greenhouse gas emissions b

#### 92.2 million metric tons CO<sub>2</sub>eq avoided by using Evonik products<sup>c</sup>

70% of sales covered by life cycle analyses

#### Financials

€12.7 billion sales

€362 million income taxes

#### Knowledge

арргох. 230 new patents filed

> 24,500 patents and patent applications

#### Products & solutions

> 4,300 products & solutions

approx. 50% of sales generated with resource-efficient productsd

Scope 1 and 2 (market-based).

b Reference base 2012.

In accordance with WBCSD Avoided Emissions Guidance 2013, Figure refers to 2015.

d Products that are proven to make a contribution to resource efficiency during application.

SUSTAINABILITY REPORT 2016

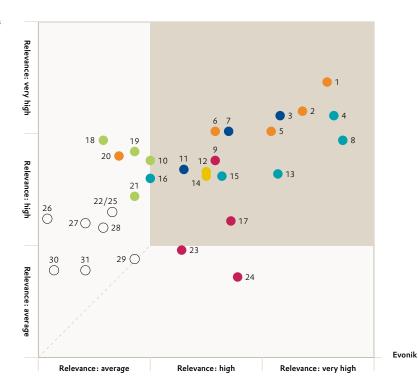
G4-18 The results of the materiality analysis were presented to the decision-making bodies and the Executive Board.

In the year under review, we validated our materiality analysis and confirmed its relevance. This took place through an internal workshop, and was also based on further talks G4-25 with departments within the company and with external G4-26 stakeholders.

#### C03 Materiality analysis 2015 / 2016

G4-18, G4-19, G4-27





Asp	ect	Relevance	Area of action
1	Plant safety	Very high	•
2	Occupational safety	Very high	•
3	Compliance	Very high	•
4	Customer satisfaction	Very high	•
5	Product stewardship	Very high	•
6	Transportation safety and logistics	High	•
7	Responsible management/corporate governance	High	•
8	Innovations/technologies	High	•
9	Sustainability strategy and management as part of corporate strategy	High	•
10	Waste management	High	•
11	Morals and ethics (in business)	High	•
12	Appeal as an employer	High	•
13	Efficient use of scarce resources/materials	High	•
14	Qualification/training, advanced training	High	•
15	More sustainable products	High	•
16	Products and solutions/life cycle considerations	High	•

Aspect	Relevance	Area of action
Aspect	Relevance	Area or action
17 Growth markets	High	•
18 Water management	Average	•
19 Emissions into the air	Average	•
20 Health protection and promotion	Average	•
21 Climate change	Average	•
22 Sustainability management in the supply chain (standards)	Average	•
23 Health	Average	•
24 Population growth	Average	•
25 Dialogue and cooperation with stakeholders	Average	_
26 Regional commitment at the sites	Average	_
27 Equal opportunity	Average	-
28 Employability (demographic change)	Average	-
29 Work/life balance	Average	-
30 Focus on population in cities	Average	-
31 Diversity	Average	_

21

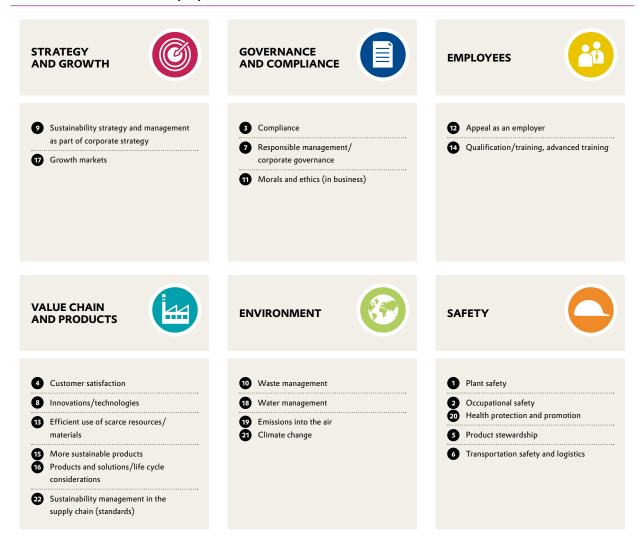
#### Six areas of action for sustainability

G4-18 The results of the materiality analysis performed in 2015 are G4-19 grouped in six areas of action. To drive forward development of the reporting process, the allocation of the various topics to the areas of action and their names were modified in 2016

(see footnotes to chart CO4). This sharpens the focus of our reporting on materiality and enhances the consistency of the report, which is now systematically structured on the basis of these six areas of action.

#### CO4 19 identified sustainability topics are bundled in six areas of action

G4-18, G4-19



The "governance/compliance" area of action has been renamed "governance and compliance", "employer excellence" has been renamed "employees", and "sustainable products and solutions" has been renamed "value chain and products". G4-23

The following sustainability topics have been allocated to other areas of action: "innovations/technologies" (from "strategy and growth" to "value chain and products"), "customer satisfaction" (from "strategy and growth" to "value chain and products"), "sustainability management in the supply chain (standards)" (from "governance and

In view of the way in which we manage sustainability topics, we have separated morals and ethics (in business)/sustainability management in the supply chain (standards), which were bundled together in the Sustainability Report 2015. Morals and ethics (in business) has been assigned to "governance and compliance", while sustainability management in the supply chain (standards) has been assigned to "value chain and products". Às a result, the number of sustainability topics identified has increased from 18 to 19. Topics 17 (growth markets), 23 (health), and 24 (population growth) have been combined in topic 17 "growth markets "(previously "particular challenges and business options").

G4-24

G4-25

SUSTAINABILITY REPORT 2016

In 2016, our activities focused on the operational alignment of our Corporate Responsibility structures, and on optimizing stakeholder management. This comprised the following measures:

- Systematic identification of the stakeholder groups of relevance for Evonik
- A deeper insight into sustainability issues in dialogue with stakeholders
- Systematic involvement of Evonik's regions and their diverse contacts to stakeholders in the dialogue on sustainability issues

timely identification of future trends and requirements. In G4-27 2016, we reviewed and systematically classified the stakeholder groups of relevance for us. In view of their importance, local residents around Evonik's sites are now classed as G4-22 a separate stakeholder group. The stakeholder groups were then bundled on the basis of issues and further differentiated according to whether they have a direct or indirect influence on Evonik.

Dialogue with our stakeholders takes place both at operational level—for example, with customers and suppliers—and G4-26 at Group level through associations and advocacy groups. The format varies depending on the target group and issue.

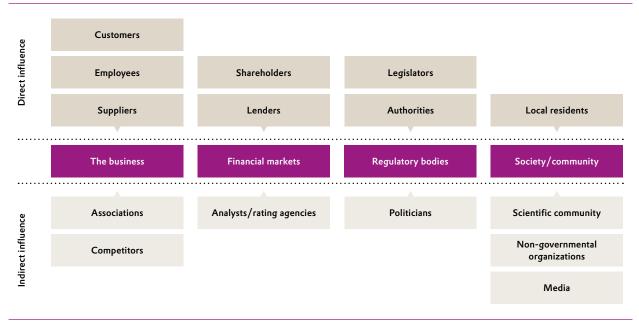
#### Stakeholder management

#### Systematic identification of the stakeholder groups of relevance for Evonik

Dialogue with our stakeholders is important to give us a better understanding of different perspectives, and to ensure

#### C05 Evonik's stakeholder groups

G4-24



#### C06 Stakeholder engagement 2016

G4-26, G4-27

Stakeholder groups <sup>a</sup>	Examples of stakeholder engagement	Key issues
CUSTOMERS	Trade shows, talks with customer, reports Stakeholder dialogue "Healthy nutrition for a sustainable world"	<ul> <li>Quality, reliability of supply, prices</li> <li>Innovations</li> <li>Governance and compliance</li> <li>Support to help customers achieve their sustainability targets</li> </ul>
EMPLOYEES	<ul> <li>Employee surveys</li> <li>Intranet, employee magazine</li> <li>"Roundtable" discussions and networks</li> <li>Social media platforms</li> <li>Workshops on specific issues,</li> <li>e.g., human rights</li> </ul>	Wages and salaries     Vocational and advanced training     Safety     Combining work with raising a family     Leadership quality     Current business development     In-house changes     Customer focus
SUPPLIERS	Supplier workshops, e.g., our "Sustainability Day"     TfS event in Mumbai	<ul> <li>Price, quality, payment practice</li> <li>Governance and compliance</li> <li>Safety</li> <li>Environmental protection</li> </ul>
SHAREHOLDERS	Annual Shareholders' Meeting     Roadshows/conferences	Attractive dividend policy     Current business performance and outlook
CREDITORS	Talks with rating agencies     Talks with lenders	Ratings and rankings     Current business development and outlook
LEGISLATORS	<ul> <li>Involvement in the work of associations</li> <li>Dialogue partner in the opinion-forming process</li> <li>Stakeholder dialogue: "Healthy nutrition for a sustainable world"</li> <li>Brainstorming workshop in Brussels on "sustainable food"</li> </ul>	<ul> <li>Governance and compliance</li> <li>Safety</li> <li>Environmental protection</li> <li>Appeal as an employer</li> </ul>
AUTHORITIES	Talks with authorities Brainstorming workshop in Brussels on "sustainable food"	<ul> <li>Environmental protection</li> <li>Safety</li> <li>Permitting procedures</li> <li>Governance and compliance</li> <li>Appeal as an employer</li> </ul>
LOCAL RESIDENTS	<ul> <li>Open days</li> <li>Invitations to tours and discussions</li> <li>Environmental and neighborhood hotlines</li> <li>Survey on acceptance, Wesseling site</li> </ul>	Safety     Appeal as an employer     Local activities     Current business development     In-house changes

<sup>&</sup>lt;sup>a</sup> Only includes stakeholders with a direct influence.

G4-18

G4-24

G4-25

G4-26

#### More intensive dialogue in 2016

In 2016, we stepped up our dialogue with stakeholders in order to take a deeper look at certain sustainability topics. For this purpose, we specifically contacted stakeholder groups that were underrepresented in our materiality analysis in 2015, such as politicians and nongovernmental organizations. Key stakeholder dialogues in 2016 included:

- "Healthy nutrition for a sustainable world", organized by the Corporate Responsibility division in collaboration with the Animal Nutrition Business Line in November 2016. This event was deliberately dialogue-oriented, with a panel discussion, market-places on various topics, and opportunities for online interaction. In addition, Evonik employees could follow it in real time via a live blog. The findings from this stakeholder dialogue are used directly in sustainability activities, especially by the Animal Nutrition Business Line.
- Future food production was also the central focus of a brainstorming workshop organized by our Corporate Office in Brussels in fall 2016. Around 25 representatives of EU institutions, national representative offices, associations and companies were invited to attend.
- The Evonik meets Science forum has been tailored to contact with universities and research institutes for many years. The focus of the forum held in Bonn 2016 was "New materials for sustainable innovation."

Since 2016, the Evonik regions with their wide-ranging contact to stakeholders have been integrated more closely into the dialogue on sustainability issues. The focus varies, depending on the cultural specifics of each region. Overarching topics such as education and training, and activities to strengthen local cohesion and infrastructure have proven particularly important. Our goal is to further extend collaboration with the regions on sustainability.



The stakeholder dialogue "Healthy nutrition for a sustainable world" was held in Berlin in November 2016.

#### Advocacy

Evonik plays an active part in many societal debates and is a partner in opinion-forming processes at regional, national, European, and international level. Our offices in Berlin and Brussels are important interfaces for dialogue between representatives of politics and public life. Our employees there network closely with politicians, trade associations and the general public, support them in shaping political conditions, and take up issues in the areas of digitalization, energy and climate protection, the environment, sustainability, research & development, and labor market and trade policy.

We took part in consultations, hearings, and discussions. In addition, we follow legislation in the area of employment and social policy with particular interest, most recently on issues such as the minimum wage, temporary staffing, and workplace regulations.

#### Trustful collaboration

Trustful collaboration between representatives of the management and employees is vital for Evonik's success. This collaboration takes account of operating conditions and the laws applicable in the various countries.

In Germany, the fundamental rights of our employees and their representatives to be consulted are anchored in statutory regulations such as the Codetermination Act and the legislation on executive staff councils. There are elected bodies representing our employees at all sites in Germany. Works Councils represent exempt and non-exempt employees, while executive staff councils represent our executives. Timely discussion of all major changes with these bodies is ensured. The time prior to the implementation of such measures is several weeks or months, depending on the significance of the upcoming changes. Where necessary, during this period

G4-27

4-26

25

Strategy and growth

written agreements are made on the upcoming measures and their impact on employees. There are comparable rules on the type and scope of consultation and negotiation in many other regions where Evonik has employees.

The information and consultation rights of employees on cross-border European issues are represented by the Evonik Europa Forum, which is composed of employee and employer representatives.

At company level in Germany, employees' interests are represented by employee representatives on the Supervisory Board.

Evonik does not restrict employees' rights to freedom of assembly or the right to collective bargaining. These rights are also ensured in countries where freedom of association is not protected by the state. This is shown by the fact that, based on our sites worldwide, there are employee representatives for about 84 percent of our employees.

#### Sustainability management

#### Organization of sustainability management

The Executive Board bears overall responsibility for sustainability at Evonik, and direct responsibility is assigned to the Chief Human Resources Officer, who is also responsible for all climate-related aspects at Evonik. The Corporate Responsibility (CR) division bundles the strategic framework, in close collaboration with other central functions and the operational segments, and coordinates the Group-wide implementation of sustainability activities.

Responsibility for sustainability management in the Evonik Group is set out in a corporate policy. The revised edition came into effect at the start of 2017.

The global strategy for sustainability issues is adopted by the HR Executive Committee, which comprises the Chief Human Resources Officer, the human resources officers of the segments, and the heads of Corporate ESHQ, Corporate Responsibility, and Human Resources.

Decision-making competence for Group-wide sustainability projects is delegated to the CR Panel, which is chaired by the Head of Corporate Responsibility. The members are the strategic CR Partners of the segments, the corporate functions, and representatives of the workforce. The CR Panel meets at least twice a year.

While the CR Panel has a strategic focus, the Global Corporate Responsibility Committee concentrates on operational realization and on supporting the segments and corporate functions in these topics.

Operational support is provided by project-related CR Expert Circles. In 2016, CR Expert Circles were set up on "sustainability labeling of Evonik products," and "low carbon technologies."

#### Our targets for 2017

- Ongoing development of methods and indicators for sustainable portfolio management
- Analysis of sustainability requirements in individual markets and regions
- Harmonization of internal sustainability reporting processes and monitoring systems

#### Accolades for our sustainability performance

Evonik was included in the important Dow Jones Sustainability Index World and the Dow Jones Sustainability Index Europe for the first time in 2016. We achieved particularly high scores for all environmentally related criteria.

Evonik is also included in the sustainability-oriented index families FTSE4Good Global and STOXX® Global ESG Leaders. Important sustainability rating agencies such as Oekom Research and Sustainalytics also rank us among the leaders in the chemical sector.

In addition, our work received two accolades from the German Sustainability Award 2016—one in the research category, and as one of the five most sustainable large corporations in Germany.

#### C07 Sustainability management at Evonik



G4-26



Good and responsible management of the company is an important element of Evonik's corporate philosophy. Our materiality analysis also shows its high relevance for our company as a sustainability topic. That includes compliance with the applicable laws, internal regulations and binding voluntary commitments.

#### WHAT WE STAND FOR

#### **CORPORATE VALUES**

Courage to innovate, responsible action, sparing no effort

#### **CODE OF CONDUCT**

www.evonik.com/coc
Our main compliance rules are set
out in our Code of Conduct, which
applies worldwide and is binding for
all Evonik employees.

- Revised in 2016; effective from spring 2017
- Available in 27 languages



GLOBAL SOCIAL POLICY

www.evonik.com/gsp

OUR VALUES FOR THE ENVIRONMENT, SAFETY, HEALTH AND QUALITY (ESHQ) www.evonik.com/esh

EXECUTIVE BOARD
POLICY STATEMENT ON
HUMAN RIGHTS

www.evonik.com/policy-statement

**CODE OF CONDUCT FOR SUPPLIERS** 

www.evonik.com/coc-supplier

#### **TARGETS**<sup>a</sup>

- Supervisory Board: ≥30% men and ≥30% women
- Executive Board: ≥20% or 25% female members<sup>b</sup>
- Female managers at top 2 levels below Executive Board: 20% per level by year-end 2019
- Antitrust law: draw up a risk roadmap for all business lines and define measures
- Code of Conduct: introduce externally operated whistleblower system

33 INTERNAL INVESTIGATIONS

WITH CONSEQUENCES

#### TRAINING SESSIONS

12,025
Code of Conduct

937 Antitrust law

**828**Fighting corruption

#### **SUPERVISORY BOARD**

The Supervisory Board supervises the work of the Executive Board 10 shareholder representatives and 10 representatives of the workforce

20





**WOMEN**in management
positions c

**16.7**%

1st management

19.5%

2nd management

#### Page Topic | GRI indicators

- 27 Corporate governance | G4-34, G4-35, G4-36, G4-37, G4-38, G4-39, G4-43, G4-44, G4-51, G4-52, G4-57, G4-LA12
- 28 Opportunities and risks | G4-2, G4-45, G4-46, G4-EC2,
- 30 Compliance | G4-14, G4-49, G4-50, G4-57, G4-58, G4-EN29, G4-EN34, G4-LA16, G4-HR4, G4-HR7, G4-SO3, G4-SO4, G4-SO5, G4-SO7, G4-SO8, G4-SO11, G4-PR9
- Voluntary commitments | G4-15, G4-16, G4-56
- 37 Human rights | G4-HR3, G4-HR4, G4-HR5, G4-HR6, G4-HR12, G4-LA16
- 37 Donations and sponsorship | G4-SO6

- $^b \,\, 20\%$  up to June 30, 2017; 25% from July 1, 2017 to June 30, 2022.
- Refers to the top two management levels below the Executive Board at Evonik Industries AG.

a Extract.

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Governance and compliance

#### Corporate governance

Good and responsible management of the company is an important element of Evonik's corporate philosophy. It also plays a significant role in our sustainability strategy. The principles of corporate governance relate mainly to collaboration within the Executive Board and Supervisory Board and between these two boards. They also include the relationship between Evonik and its shareholders, and other people and organizations that have a business relationship with the company.

Evonik's Executive Board and Supervisory Board are explicitly committed to responsible corporate governance and identify with the goals of the German Corporate Governance Code. As provided for by the foreword to the Corporate Governance Code, this includes scope to deviate from its recommendations if this is necessary to reflect enterprise-specific requirements. The latest declaration of conformity with the requirements of the German Corporate Governance Code has been published on our website. According to the declaration of conformity as of December 2016, there are only two deviations from the Corporate Governance Code. These relate to transmission of the Annual Shareholders' Meeting via modern communication media and the availability of voting proxies during the Annual Shareholders' Meeting. Both exceptions are based mainly on organizational reasons.

#### **Executive Board**

The Executive Board of Evonik Industries AG is responsible for running the company in the company's interests, taking into account the interests of the shareholders, employees and other stakeholders. For details of the Executive Board's general responsibility for sustainability topics see "Strategy and growth", page 25. The Executive Board discusses sustainability, especially aspects relating to the environment, safety and society, several times a year at its meetings.

## Percentage of women on the Executive Board and in management

The Supervisory Board has set a target of at least 20 percent female members of the Executive Board by June 30, 2017. The Executive Board satisfies this requirement as it comprises one woman and four men. For the period from July 1, 2017 to June 30, 2022, the Supervisory Board has raised the target for the proportion of women on the Executive Board to 25 percent.

For the period from January 1, 2017 to December 31, 2019, the Executive Board has set a target of 20 percent female managers at the first two management levels below the Executive Board. So far, the targets were 8.0 percent for the first management level and 18.8 percent for the second management level. The key reason for selecting a three-year period instead of the statutory maximum of five years is that it is easier to predict the number of staff leaving and the succession constellation, allowing timely scope for fine-tuning where necessary. At the end of December 2016 the proportion of female managers was 16.7 percent at the first management level and 19.5 percent at the second management level.

#### Supervisory Board

The Supervisory Board advises and supervises the Executive Board. It appoints the members of the Executive Board and names one member as the Chairman of the Executive Board. It also decides on the remuneration of the members of the Executive Board. The Supervisory Board examines the company's annual financial statements, the Executive Board's proposal for the distribution of the profit, the consolidated financial statements for the Group and the combined management report. The Executive Board is required to obtain the approval of the Supervisory Board on decisions of fundamental importance, which are defined in a separate list. The Supervisory Board has the following committees: an Executive Committee, an Audit Committee, a Finance and Investment Committee, a Nomination Committee and a Mediation Committee in accordance with the German Codetermination Act of 1976.<sup>2</sup>

The Executive Board provides regular, timely and extensive information for the Supervisory Board on all matters of relevance for the company. Major sustainability aspects are included in context. On this basis, Evonik's sustainability activities are also discussed at meetings of the Supervisory Board. For example, the Executive Board's report to the Supervisory Board meeting in fall 2016 included Evonik's sustainability strategy.

#### Composition of the Supervisory Board

In accordance with the provisions of the German Codetermination Act, the Supervisory Board comprises twenty members, ten representatives of the shareholders and ten representatives of the workforce. The Supervisory Board regularly reviews the efficiency of its work and reports on this in the Report of the Supervisory Board, which is contained in Evonik's Annual Report 2016. Annual training sessions are held for members of the Supervisory Board to ensure they can meet the rising demands made on the Supervisory Board.

www.evonik.com/responsibility.

<sup>&</sup>lt;sup>2</sup> The exact composition of the committees is published in the Declaration on Corporate Governance at: www.evonik.com/declaration-on-corporate-governance.

SUSTAINABILITY REPORT 2016

The German law on equal participation of women and men in management positions in the private and public sectors came into force in spring 2015. In compliance with the statutory requirements and its own targets, Evonik's Supervisory Board comprises at least 30 percent women and at least 30 percent men. At present, the Supervisory Board comprises seven women and thirteen men. To ensure the independence of members of the Supervisory Board, Section 5.4.2 of the German Corporate Governance Code specifies that a Supervisory Board member should not have any personal or business relations with the company, its executive bodies, a controlling shareholder or an enterprise associated with the latter which may cause a substantial and not merely temporary conflict of interests. The Supervisory Board considers all current members to be independent because, in its view, election as an employee representative does not conflict with such independence.

Further information on corporate governance at Evonik can be found in the corporate governance report, which is available on our website and is also part of the Annual Report 2016.

#### Performance-oriented remuneration of senior management

The Supervisory Board is responsible for the contracts of employment with the members of the Executive Board. It sets the total remuneration package for each member of the Executive Board, comprising a basic salary, variable short- and long-term components, pension benefits, the reimbursement of expenses, insurance, and various other fringe benefits. The contracts with members of the Executive Board and all executives include remuneration elements based on personal

performance and the overall performance of the Group. As one of our significant sustainability topics, occupational safety (accident indicator) influences the remuneration of the Executive Board.

The remuneration report in the Annual Report 2016 contains further information on the remuneration of the Executive Board and Supervisory Board.

#### Opportunities and risks

As a specialty chemicals company with a presence throughout the world, Evonik is exposed to a range of influences that may constitute either opportunities or risks. Timely identification and mitigation of risks is therefore the basis of our extensive risk and opportunity management.

At Group level, risk management is assigned to the Chief Financial Officer and is organized on a decentralized basis in line with Evonik's organizational structure. The corporate divisions, segments and service units bear prime responsibility for risk management. They are responsible for early identification of risks, estimating their implications, introducing suitable preventive and control measures, and the related internal communication. Their risk officers coordinate the relevant risk management activities. A central Corporate Risk Officer coordinates and oversees the processes and systems. Validation of the Group-wide risk situation and verification that risks have been taken into account appropriately in figures is undertaken by the Risk Committee, which is comprised of representatives of the corporate divisions and chaired by the Chief Financial Officer. The risk management system

#### C08 Structure of risk management



is overseen by the Supervisory Board, especially the Audit Committee.

In line with our mid-term planning, risks are evaluated over a period of three years. Opportunities and risks are defined as positive or negative deviations from the plan. We evaluate risks on the basis of our risk catalogue using the COSO enterprise management model. The organizational units conduct an extensive annual risk inventory. This is supplemented by quarterly reviews of all opportunities and risks relating to the present year to spot changes in the opportunities and risks that have already been identified and identify new risks and opportunities.

The opportunity and risk report in Evonik's Annual Report 2016 provides information on risks and opportunities relating to sustainability such as environmental risks and legal/compliance risks. To supplement this, this section lists the risks and opportunities associated with sustainability that our experience shows are of particular interest to sustainability analysts and investors and to sustainability rating agencies. In the future, we intend to link these more closely with the opportunities and risks that Evonik already identifies through its established opportunity and risk management process.

#### Fighting corruption and the Code of Conduct

All Evonik employees are required to act lawfully in a business environment. The rules are set out in our new Code of Conduct. Failure to comply with this obligation can result in risks for the company. Training helps raise employees' awareness. One focus is on fighting corruption. To report misconduct in the Group, employees have access, among other things, to a worldwide hotline. See page 32.

#### **Employees**

The expertise and commitment of our employees are important factors in our business success. Losing high performers and bottlenecks in gaining qualified staff are potential risk factors. To counter this, our Human Resources division uses a range of measures to attract and retain employees. Our sustainability activities are another benefit in the competition for talented employees because they help raise our profile as an attractive employer. See "Employees", page 38.

#### Human rights

Evonik monitors the observance of human rights along its value chain. We have established several policies and processes to minimize the associated risks. Our commitment is underpinned by the Policy Statement on Human Rights adopted by the Executive Board in summer 2016. See page 36.

#### Supply chain

As a specialty chemicals company, Evonik needs a broad spectrum of raw materials. The increasing volatility of procurement entails both opportunities and risks. This applies, in particular, to renewable raw materials, whose availability and market price are influenced by climate factors. We align our procurement strategy and procurement management to warding off bottlenecks and risks, for example, the purchase of conflict minerals. Moreover, we expect our suppliers to share our principles of entrepreneurial responsibility and to accept their own responsibility towards their employees, business partners, society and the environment. If our suppliers violate these principles, Evonik is exposed to reputational and financial risks. To prevent this, we have introduced our own Code of Conduct for Suppliers, supplemented by stringent supplier assessments. See "Value chain and products", page 49.

#### Sustainability analysis of our business

Our sustainability analysis identifies additional opportunities and risks in our business. The key elements in the list of criteria used for this analysis are ecological and societal sustainability aspects from our materiality analysis. See "Value chain and products", page 56.

#### **Environment and safety**

We actively manage risks to people and the environment at our production sites by steadily optimizing occupational and plant safety and product stewardship. We identify risks at all levels of the organization and have policies and management systems to address them. Compliance is monitored regularly by internal and external audits. We have anchored a common safety culture throughout the Group. A Global Process Safety Competence Center operating from locations in Germany, China and the USA analyzes potential process risks around the world to guarantee high standards of process safety. For further information see "The environment" and "Safety".

Further information can be found in the opportunity and risk report in the Annual Report 2016.

#### Compliance

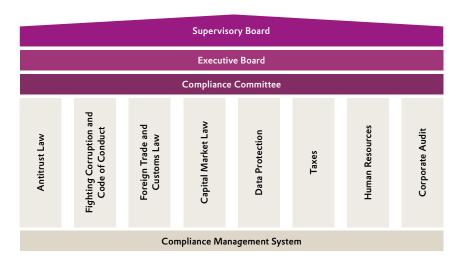
SUSTAINABILITY REPORT 2016

"Responsible action" is one of our corporate values. Observing compliance rules strengthens the trust of our business partners, shareholders and general public in Evonik and its employees. Therefore, every employee is required to respect our compliance rules. That includes compliance with the applicable laws, internal regulations and binding voluntary commitments. The main compliance requirements are set out in our Code of Conduct.

#### House of Compliance

The compliance areas of specific relevance to Evonik are bundled in a House of Compliance. They include antitrust law, fighting corruption, the Code of Conduct, foreign trade and customs law, capital market law, data protection, taxes and human resources. Corporate Audit has an advisory function. Environment, safety, health and quality are bundled in a separate corporate division with the same name, which has functional responsibility for these topics (see "The environment" and "Safety"). Other areas of relevance for compliance are corporate security and IT security.

#### C09 House of Compliance



The role of the House of Compliance is to define minimum Group-wide standards for the compliance management systems for these areas and ensure that they are implemented. The process of forming a consensus, sharing experience and coordinating joint activities takes place in the Compliance Committee, which is composed of the heads of the respective units, who have independent responsibility for their areas, and the Head of Corporate Audit. The Compliance Committee is chaired by the Head of Antitrust Law & Compliance.

#### Compliance Management System

The compliance organization is headed by the Chief Compliance Officer, who reports to the Executive Board member with responsibility for compliance. The compliance organization is responsible for fighting corruption and for all aspects set forth in the Code of Conduct that are not allocated to any other corporate division. The Compliance Team, which is headed at Group level by the Head of Antitrust Law & Compliance focuses principally on strategic issues and is also in

charge of developing and implementing the related concepts and standards for the Evonik Group. At decentralized level, the Business Compliance Officers and Regional Compliance Officers perform the operational compliance functions for the segments and business lines. The Business Compliance Officers also provide legal advice for the operational units.

The minimum Group-wide standards for the organizational units' compliance management systems are set out in the Compliance Policy. Every organizational unit has specified the minimum standards for its area and established the tools and processes shown in the next chart on the basis of defined values and specific targets. The necessary measures are in place to avoid compliance risks and systematic misconduct, identify infringement of the rules, apply appropriate sanctions, and correct faulty processes.

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	Responsibility of Management		
	Values and Objectives		
Prevention	Detection	Response	3
<ul> <li>Risk analysis</li> <li>Policies &amp; standards</li> <li>Processes</li> <li>Training</li> <li>Awareness raising/communication</li> <li>Advice &amp; support</li> </ul>	<ul> <li>Investigations</li> <li>Whistleblower system</li> <li>Monitoring &amp; audits</li> <li>Reporting</li> </ul>	<ul><li>Corrective measures</li><li>Sanctions</li><li>Lessons learnt</li></ul>	
	Compliance Organization		

#### Risk analysis

To identify potential risks as early as possible, every unit is required to perform regular risk analyses. They take up the relevant rules and voluntary commitments entered into by Evonik that affect their area of operation and ensure timely identification and implementation of the relevant changes. Based on the results of this risk analysis and other findings, each organizational unit issues binding general standards as applicable, along with instructions on the precautions to be taken for business activities where there are special compli-

Risk analyses on fighting corruption and antitrust law were performed in all operating units in the Evonik Group in 2015 and 2016. On this basis, a risk roadmap was drawn up to fight corruption in each business line. The results have been discussed individually with the heads of the business lines and measures to minimize risks have been defined. Some of these will be specified in more detail in 2017 and will then be implemented. One focus will be business relations with stateowned companies and dealing with officials. Other topics are working with sales intermediaries and consultants, and implementing compliance rules in joint ventures in which Evonik has a stake.

#### Training

Training concepts have been developed for all aspects bundled in the House of Compliance. They also define the type, frequency and content of training, and the target groups. Each organizational unit is responsible for their realization. We pay special attention to training in the areas of antitrust law, fighting corruption, and the Code of Conduct. Based on a uniform Group-wide training concept, the target groups for these issues are defined by function and hierarchical level and allocated to the relevant training levels using a risk-based

approach. All administration is handled via our IT-based Future Zone platform. The relevant employees will be selected automatically via SAP and individually flagged up for the next date.

Training frequency is defined on the basis of risk and is every two or three years. Alternating face-to-face and online training is planned for everyone in the target groups. Training for the other target groups on the issues covered by the Code of Conduct is exclusively online. Completion of the training sessions is monitored by the administration system. Groupwide, training is carried out by compliance officers using uniform training materials, which are adapted as necessary to take account of regional factors.

#### Raising awareness and providing advice

Every organizational unit is responsible for raising employees' awareness of the importance and scope of the rules on each compliance issue. That includes advising and supporting them in questions relating to a particular issue. This allows timely identification and evaluation of risks. The aim is to ensure that Evonik's business decisions and activities meet the applicable compliance rules. In our training sessions, we inform employees where they can get advice.

#### Internal investigations

Internal investigations into alleged compliance violations, along with possible improvements and sanctions, are based on uniform principles and standards. They are applicable for all units that perform internal investigations, not just those in the House of Compliance.

In the reporting period, 33 internal investigations were conducted by the compliance units in the House of Compliance into suspected violations of rules. 21 allegations were received via internal reporting channels (e.g., email, phone), while twelve were received via external channels (e.g., email, letter). The following measures were taken on the basis of these internal investigations: The employment contracts with four employees were terminated. Six employees received a warning or reprimand and one employee was transferred to a different position. In six cases, further measures were taken, e.g., training or awareness raising.

No significant fines and no non-monetary penalties were imposed on Evonik in 2016 for failure to comply with laws or regulations.<sup>1</sup>

#### Whistleblower system

SUSTAINABILITY REPORT 2016

Every employee is required to report possible or actual violations of the Code of Conduct to the responsible department or Compliance Officer without delay, regardless whether they relate to the employee or to his/her colleagues. In such cases, employees can contact the following persons or organizations:

- Their line manager
- The Chief Compliance Officer or Head of Compliance
- The head of the responsible organizational unit
- The Legal & Compliance division or the Business or Regional Compliance Officer by phone or email
- · The hotline via an intranet form

The hotline is monitored by the Legal & Compliance division, which treats all allegations received as absolutely confidential if requested to do so. External third parties can submit allegations to the Chief Compliance Officer anonymously by letter or by email. Employees are informed of the whistleblower system and contact channels in training sessions.

We investigate all alleged violations and treat all information with the greatest possible confidentiality. Evonik does not tolerate any disadvantage to employees who report possible or actual violations or cooperate in the investigation of such violations—except if the allegations comprise an abuse of the whistleblower system.

#### Compliance reporting

In the annual compliance report to the Executive Board, the Audit Committee of the Supervisory Board (condensed version) and the segment boards, the specialist departments report on the major risks, events and measures relating to the compliance management systems for which they are responsible. Each unit reports directly to the regional head and the other responsible members of the management.

The units notify the Head of Antitrust Law & Compliance or the Chief Compliance Officer of material risks and violations of the rules, and of the results of investigations and the measures derived from them as soon as they become aware of them.

#### Review of the compliance management system

Every organizational unit must regularly check the appropriateness and effectiveness of its compliance management system. In addition, regular checks are performed by Corporate Audit. In 2016 the compliance management system for fighting corruption and the Code of Conduct was audited in conformance with audit standard 980 of the German Institute of Auditors (IDW PS 980).

#### The pillars of the House of Compliance

#### Antitrust law

Fair competition provides an incentive for innovation and high-quality products for the benefit of consumers. Evonik fosters fair competition and complies with antitrust and competition law. All employees are required to abide strictly by antitrust law and the related internal regulations.

The global Antitrust Law team is led by the Head of Antitrust Law & Compliance, who reports to the Head of the Legal & Compliance division. It is composed of a corporate team that advises the operating units on both strategic and antitrust issues. In addition, the global team includes lawyers in North America, Latin America, China and Russia who specialize in antitrust law.

The following training sessions on antitrust law were held in 2016:

T04 Training in antitrust law

	Employees		
Worldwide	trained	Management	Other
Total	937	737	200
By region			
Germany	458	385	73
Other European countries	22	22	0
Greater China	199	119	80
North America	161	142	19
Latin America	7	7	0
SEAANZ	13	9	4
MENA	8	7	1
Japan	18	17	1
Korea	11	10	1
India	39	19	20
Sub-Saharan Africa	1	0	1

<sup>&</sup>lt;sup>1</sup> Violations in 2016; significance threshold €100,000.

## **Targets**

- · Complete the risk analysis, draft a risk roadmap for each business line, discuss the results with the heads of the relevant business lines and define action to minimize the risks
- Train Evonik's lawyers in Germany in the revised rules on dealing with investigations by authorities
- Update the training materials for specific target groups, e.g., sales support staff

## Code of conduct and fighting corruption

Evonik is committed to fair competition for the benefit of its customers, shareholders and other stakeholders. In addition, we respect the independence of officials. Therefore, we ban all forms of corruption, including "facilitation payments". We deliberately set stricter standards than the law in some countries. Evonik forbids all forms of corruption and has a zero tolerance principle. Our rules on preventing corruption are summarized in section 9 of the Code of Conduct, the Master Gifts and Hospitality Policy, together with regional implementation regulations, and the Policy for the Use of External Third Parties for Distribution and Dealing with Authorities (Policy on External Intermediaries). Every employee can access checklists on the compliance site on the intranet. These contain the key points of each policy. The corruption-related risks inherent in donations and sponsorship are explained at training sessions with the aid of specific examples.

The new Code of Conduct contains extensive rules on conflicts of interest in the following cases:

- Secondary employment
- · Financial interests in competitors, business partners or other companies connected to Evonik
- Business transactions and decisions involving relatives and other related parties

Unless statutory provisions rule otherwise, employees must report all incidents to their supervisor and the responsible HR department, which is required to make a prompt decision on each case.

Our activities in 2016 focused on completely revising the Code of Conduct and continuing the risk analysis on fighting corruption.

The updated Code of Conduct comes into force in spring 2017 on the basis of a resolution of the Executive Board and is applicable for the Evonik Group worldwide. When implementing the Code of Conduct in the future, we will ensure that it is effective and enforceable for all employees in all

countries affected. The Code of Conduct sets minimum standards and takes precedence over less stringent national laws. In the event of conflict, mandatory national laws take precedence.

The Code of Conduct will be available online in 27 languages as soon as it is introduced. It applies to all Evonik employees, the Executive Board and the governance bodies of all Evonik companies. They are required to comply with the rules set forth in the Code of Conduct, to ensure they are familiar with its content, and to take part in the relevant training. All managers and supervisors are required to set an example. They therefore have a special responsibility and must ensure that their employees observe the rules of this Code of Conduct.

#### Compliance rules for business partners

Evonik has issued a special code of conduct for suppliers, setting out binding requirements for these business partners. See "Value chain and products", page 49.

Intermediaries, above all sales intermediaries, are subject to a compliance check before the establishment of the business relationship and every five years thereafter. Intermediaries also have to sign a compliance declaration.

Risk-based compliance checks (due diligence) and any necessary measures are also applied to business partners involved in acquisitions, joint ventures, corporate venture projects and major investment projects. These are based on uniform rules for the Evonik Group.

Training in fighting corruption and the Code of Conduct Overview of training in fighting corruption in 2016:

T05 Training in fighting corruption and the Code of Conduct

Worldwide	Employees trained	Management	Other
Total	828	636	192
By region			
Germany	301	234	67
Other European countries	260	233	27
Greater China	187	105	82
North America	35	35	0
Latin America	4	2	2
SEAANZ	9	6	3
MENA	0	0	0
Japan	27	17	10
Korea	1	1	0
India	2	2	0
Sub-Saharan Africa	2	1	1

Overview of training in the Code of Conduct in 2016:

T06 Training in the Code of Conduct

Worldwide	Employees trained	Management	Other
Total	12,025	1,943	10,082
By region			
Germany	9,189	1,377	7,812
Other European countries	218	28	190
Greater China	525	88	437
North America	1,614	352	1,262
Latin America	125	18	107
SEAANZ	209	47	162
MENA	7	4	3
Japan	35	5	30
Korea	40	10	30
India	56	14	42
Sub-Saharan Africa	7	0	7

#### Targets

- · Start of activities to introduce the new Code of Conduct
- More detailed structuring and implementation of measures derived from the risk analysis
- Group-wide installation of an anonymous whistleblower system operated by an external provider

# Foreign trade and customs law

Every employee is required to observe the applicable foreign trade and customs regulations. The provisions of the corporate policy on the House of Compliance and the compliance management system, and the rules on compliance with global trade regulations are designed to ensure compliance with applicable trade regulations. Our trade compliance organization comprises a special department with Group-wide responsibility, a special IT system and a Group-wide network of around 70 people, including the trade compliance officers responsible for the operating units.

#### Capital market law

As a publicly listed company, we are subject to a large number of capital market regulations. Compliance with these is supported by our capital markets compliance officer. Evonik has issued Group-wide operating procedures to ensure capital market compliance. These provide an overview of the regulations and obligations that have to be observed by Evonik and its employees. They include, in particular, a ban on insider trading and unlawful disclosure of insider information, regulations on own-account trading by managers, and the obligation to disclose insider information. The operating procedures also define standards of behavior for employees and their

accountability in this area. Supported by training, all relevant employees and governance bodies receive an in-depth insight into the regulations of the EU Market Abuse Regulation and the German Securities Trading Act.

In 2016 the focus was on implementing the extensive new regulations of the EU Market Abuse Regulation, which came into effect on July 3, 2016. This included, in particular, the legal requirement to provide information for members of the Executive Board and Supervisory Board of Evonik on the new obligations relating to directors' dealings. In addition, the system used for the insider list was modified and the capital market compliance instructions were revised.

## Data protection

The organization of data protection and rules on reliable processing of personal data are set out, among other things, in the Compliance Policy and a separate data protection regulation. The Corporate Data Protection Officer monitors observance of these requirements and assists the organizational units in implementation. In particular, his role is to monitor correct usage of information processing programs that handle personal data. Increasing global data sharing requires additional technical and organizational security measures. These are monitored continuously. Web-based training programs are mandatory for all employees. Information on the relevant requirements and responsibilities was made available to employees on the intranet. A challenge at present is implementing the new European data protection law, which comes into effect in May 2018, and integrating it into the established data protection management system.

#### Taxes

The corporate policy on taxation defines responsibilities for taxes. Procedural rules and training programs for the Tax department and, above all, other units raise awareness of this issue and the need to comply with tax law. In view of the wide range of national tax regulations, Evonik has issued uniform internal rules to standardize cross-border measures. These take precedence over less stringent national tax regulations.

#### Human resources

Evonik aims to ensure that all employees act in accordance with the principal labor and social standards and respect internationally recognized human rights. The goal of our human resources and social policy is therefore to offer a working environment that respects the individuality of all employees and encourages their initiative. We create the basis for good and trustful collaboration, where performance and rights are recognized. All employees should have the opportunity to develop their potential. Therefore, we have given an undertaking to observe internationally recognized standards of conduct such as the Guidelines for Multinational Enterprises issued by the Organisation for Economic Cooperation and Development (OECD), and the International Labour Standards of the International Labour Organization (ILO). We immediately take counteraction if these are not observed.

## Corporate Audit

Corporate Audit supports the Executive Board and subsequent management levels in the performance of their supervisory duties and continuous improvement of business processes by performing independent, objective audits. This is part of Evonik's worldwide internal control system (ICS). A targeted, systematic approach is used to evaluate a range of issues and processes to check that they are correct, reliable, effective and cost-efficient, protect assets, and comply with laws and regulations. The role, powers and responsibilities of Corporate Audit are defined in a corporate policy.

A key focus is auditing the internal control system and the risk management system. To reduce risks, eliminate shortcomings and weaknesses, and improve processes, relevant measures are then agreed with the unit audited.

#### Other compliance-related activities

## Corporate security

Protecting our employees, sites, plants and shipments from criminal acts has top priority for us. Moreover, protecting our know-how is a key success factor.

The corporate policy on Security and the related regulations form the basis for timely identification of major risks, so action can be taken to reduce them. Implementation is the responsibility of the operational units under the strategic leadership of the Corporate Security division. Where necessary, the regional security organization can provide support.

Through our presence in growth markets, we operate in regions and countries where there are heightened security risks. We conduct specific risk analyses to address these.

Information is provided for employees on business trips on the security situation at their destination. In addition, we issue recommendations on conduct and travel guidelines, and provide support in emergencies.

## IT compliance

Binding Group-wide policies and regulations outline the safe use of information systems. The responsible unit monitors implementation of the legal and in-house compliance requirements. In the reporting period, the internal control system was extended and the related processes were automated. The IT Compliance Index, which measures compliance with the relevant rules, remained at a good level in 2016, although the requirements increased.

State-of-the-art information security and data protection technologies are used throughout the Group. In addition, a special cybersecurity program was taken into service in 2016. Optimized systems management constantly improves operational security, especially the security of critical IT systems. In view of the continuously rising threats, we regularly review our security measures, and implement and proactively adapt riskbased countermeasures.

Training, including compulsory training in some cases, and constant information (e.g., via the intranet and internal social networking platforms) ensure that employees are always aware of the need for IT compliance.

# Voluntary commitments

We are convinced that reliable and responsible management of the company is the basis for Evonik's long-term business success and acceptance by society.

We have therefore given undertakings to comply with internationally recognized standards, and more far-reaching internal guidelines and principles of conduct.

#### C11 Voluntary commitments

External <sup>a</sup>	Chemie <sup>3</sup>	Global Reporting Initiative	Responsible Care®	Together for Sustainability	UN Global Compact	World Business Council for Sustainable Development (WBCSD)
Exte	econsense – Forum for Sustainable Development of German Business	ILO – International Labour Standards	OECD Guidelines for Multinational Enterprises	Code of Responsible Conduct for Business	WBCSD Low Carbon Technology Partnerships Initiative	
Internal	Code of Conduct for Evonik's employees	Global Social Policy	Our Values for the Environment, Safety, Health and Quality	Policy Statement on Human Rights	Code of Conduct for Suppliers	

<sup>&</sup>lt;sup>a</sup> See glossary for further information.

The starting point for responsible corporate management at Evonik is the Code of Conduct, together with the Global Social Policy and our values for the Environment, Safety, Health and Quality (ESHQ). In summer 2016 the Executive Board adopted a Policy Statement on Human Rights. As an important issue, human rights are included in the updated Code of Conduct that comes into effect in spring 2017.

In the Global Social Policy, Evonik defines the principle of social responsibility to its employees. This includes a commitment to comply with internationally recognized standards of conduct. See page 35.

By joining the UN Global Compact, Evonik gave an undertaking that, within its sphere of influence, it would respect and promote labor rights and human rights, avoid discrimination, protect people and the environment, and fight against corruption. As a member of the Global Compact, we also want to make a contribution to achieving the 17 sustainable development goals. Our sustainability activities support these in many areas.

Evonik is committed to the Code of Responsible Conduct for Business, which includes fair competition, social partnership, the merit principle and sustainability. As a signatory to the chemical industry's Responsible Care® Global Charter, we also have an obligation to continuously improve our performance in health protection, environmental protection, product stewardship and safety. Our ESHQ Values define protecting people and the environment as core elements of our actions. They outline Evonik's understanding of ESHQ. Together with more detailed guidelines and procedures, they form Evonik's ESHQ regulations.

For information on our Code of Conduct for Suppliers and our activities as a founding member of the chemical industry's Together for Sustainability initiative, see "Value chain and products", page 50.

Evonik is involved in many competency networks on sustainability, both nationally and internationally. These include econsense, an association of leading German companies that operate in the global arena, and Chemie<sup>3</sup>, the sustainability initiative of the German chemical industry. In addition, Evonik is a member of the World Business Council for Sustainable Development (WBCSD) and is committed to its Vision 2050: "9 billion people living well, within the limits of the planet." We are also committed to the WBCSD's climate initiative, the Low Carbon Technology Partnerships Initiative. Evonik regularly reports on its climate performance as part of the Carbon Disclosure Project (CDP). See "Environment", page 64.

We are a member of the Global Reporting Initiative's Gold Community and our reporting complies with the GRI G4 Guidelines, core level.

# Human rights

We undertake to respect human rights. The basis for this comprises our Code of Conduct, the Code of Conduct for Suppliers, our Global Social Policy, and the Policy Statement on Human Rights adopted in 2016.

#### Discrimination

Our Code of Conduct and Global Social Policy forbid discrimination on the basis of origin, race, religion, age, gender, sexual orientation or disability. Employees who feel they have been discriminated against have a right to lodge a complaint. Contacts for reporting cases of discrimination are available at all sites.

Information on the complaints procedure is provided in internal media and in many cases in personal discussions. Moreover, appropriate measures and activities have been established in all regions to avoid discrimination. These are accessible to all employees and reach over 90 percent of our workforce. Eight cases of discrimination were reported in 2016. They were followed up and action was taken to eliminate discrimination.

# Donations and sponsorship

The Executive Board defines the aims and conditions for the Group's donations and sponsorship. It has delegated coordination and monitoring to the Board Office/Communications division on the basis of specific policies and guidelines. For example, individual donations of supra-regional significance and sponsorship from a threshold of €100,000 require the approval of the Executive Board. The segments and regions can decide on regional and site-specific activities within an annual budget approved by the Executive Board. In the Evonik Foundation, the management is responsible for coordinating and supervising donations. The Executive Board of the Evonik Foundation defines the areas of focus.

In 2016, the Evonik Group was once again involved in many donations and sponsorship projects (see "Society", page 78). These included donations totaling €220,000 to political parties in Germany. Of this amount, €90,000 was donated to the CDU/CSU, €90,000 to the SPD, €20,000 to Bündnis 90/Die Grünen, and €20,000 to the FDP.

In 2016, Evonik renewed and refined its entry in the joint list of lobbyists maintained by the European Commission and European Parliament.



The high skills and motivation of our employees worldwide are crucial for Evonik's success. Gaining, developing and retaining first-class employees is therefore one of our top priorities.

## **TARGETS FOR 2017**

- · Establish a learning strategy for the ongoing development of various employee groups
- Roll out updated employer branding campaign
- · Conduct a pulse check on employee satisfaction



## **TRAINING**

VOCATIONAL TRAINING

€69 million

CONTINUING PROFESSIONAL DEVELOPMENT

€500 per employee p. a.

hours per employee p. a.



**98**% **PASS RATE** 

vocational training

**EMPLOYEES** 34,351

## **EMPLOYEE SURVEY**

83.9% геѕропѕе rate

1.973 follow-on теаѕигеѕ

200 commitment

index

14.9 YEARS **AVERAGE LENGTH OF SERVICE** 

4.7% **EMPLOYEE TURNOVER** 

# **DIVERSITY**



**24.7**%

**WOMEN** Group-wide including **22.0**%

in management positions

**7.1**%

**EMPLOYEES** with disabilities a

DIVERSITY COUNCIL

**NATIONALITIES** 



# AWARDS AND ACCOLADES<sup>b</sup>

for employer branding











# Page Topic | GRI indicators

- 39 Human resources strategy
- HR organization and management | G4-35 40
- 40 Attracting employees | G4-EC6
- 40 Vocational and advanced training | G4-LA10
- 41 Performance and remuneration | G4-11, G4-52, G4-LA2, G4-LA9, G4-LA13
- 42 Identification and diversity | G4-LA1, G4-LA2, G4-LA3, G4-LA12
- 43 Employee satisfaction | G4-53
- 45 Leadership | G4-LA10, G4-LA11
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- <sup>a</sup> In Germany.
- b Selected awards and accolades.

As a specialty chemicals company, Evonik's goal is profitable growth worldwide. The excellent level of our employees' skills and their high motivation are essential for our success in demanding markets. Consequently, it is important how we attract, develop and retain our employees. The results of our materiality analysis confirm the significance of being an attractive employer, and of our employees' skills, vocational training and continuing professional development. Managing diversity is another focal area of human resources management at Evonik.

We engage in regular exchange with our stakeholders to check the internal and external perception of our market positioning and our global employer brand. Other indicators are employer rankings and selective surveys of our target groups. Within Evonik, our most important tool is the global employee survey, which is held regularly every three years. We pay especial attention to employee satisfaction, the level of employee turnover and the average length of service in the Group.

In view of the rapid pace of change in our markets and our goal of continuous improvement, skills, vocational training and continuing professional development are important topics at Evonik. We specifically prepare our employees for ongoing changes and new market trends. This is ensured by a wide range of development programs and individual training for employees, from new hires to Group executives. The success of these measures is reflected both in our very good scores for employee satisfaction, and in the intensive use of our talent pool to fill internal vacancies. Further indicators are total spending on training activities and—in Germany—the high pass rate at the end of vocational training.

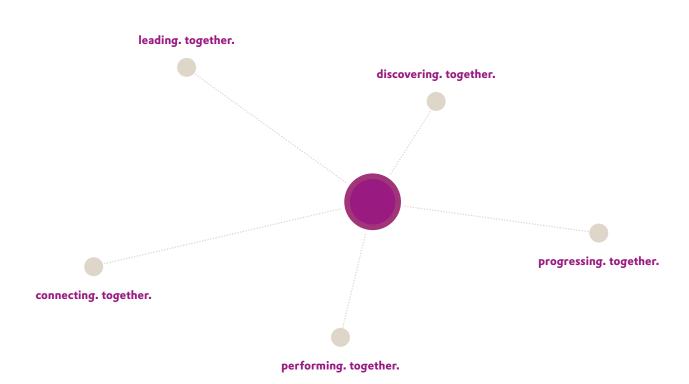
**Employees** 

For us, diversity means utilizing the entire spectrum of experience, competencies and viewpoints that our employees contribute in their daily work. As a reflection of the varied requirements, attitudes and perspectives found in society and our markets, diversity is an important driver of our competitiveness and innovative capability.

The project to define a system of key performance indicators to guide and optimize our global HR work was successfully completed in 2016. Tracking of these indicators will start in 2017.

## C12 HR strategy

G4-26



# Our human resources strategy

The basic elements of Evonik's human resources strategy are positioning the company as an attractive employer, training and continuing professional development, and corporate diversity. To drive our continuous development in line with this, we have defined five areas of action:

- Attract (discovering.together.)
- Develop (progressing.together.)
- Perform (performing.together.)
- Retain (connecting.together.)
- Lead (leading.together.)

SUSTAINABILITY REPORT 2016

Our annual strategy process ensures continuous development of our HR activities in all of these areas.

# HR organization and management

The Executive Committee HR is the highest decision-making body for HR. It adopts the global HR strategy and takes decisions on the Group-wide HR organization. This committee comprises the Chief Human Resources Officer of Evonik Industries AG, the human resources officers of the segments, and the Head of Corporate Human Resources. The Global HR Committee supports the Executive Committee HR in defining the global HR strategy and takes further decisions on its implementation in the Group. The permanent members of the Global HR Committee are representatives of the HR departments in the segments, regions, corporate functions and service units. Operational support comes from HR Expert Circles comprising specialists on specific issues.

#### C13 Structure of Human Resources steering bodies



# Activities relating to our HR strategy in 2016

## Attracting employees

Evonik wants to offer its employees an attractive working environment that encourages ideas, rewards commitment, and maintains their physical and mental capabilities. We also incorporate these dimensions into our employer branding in order to attract the most talented employees and managers to

In 2016, our employer branding activities included:

- Employee roadshows at our sites to foster identification and team spirit
- A solar-operated fish farm project with the Enactus student network. Students from RWTH Aachen, the not-forprofit organization Utho Ngathi Südliches Afrika e.V., and our Animal Nutrition Business Line helped people in Zambia learn fish farming and use it as an additional source of income
- The annual Evonik Student Network Day, which brings us into contact with relevant universities and student networks
- Internships to enable students to get to know Evonik better
- The Evonik Perspectives program to maintain contact with students whose performance is above average

Evonik regularly achieves very good scores in employer rankings. This documents the success of our employer branding activities. In the ranking by Focus magazine in cooperation with the kununu employer assessment portal, we once again secured a position among the top 10 in the Chemical & Pharmaceuticals category in 2016.

Similarly, in a study conducted by DEUTSCHLAND TEST and Focus Money, Evonik was ranked as the best company in the German chemical industry for vocational training. In China, we were included in the list of the most popular employers published by the Top Employer Institute in both 2015 and 2016.

# Vocational training and continuing professional development

Our personnel development is geared to the early identification and development of talented employees and those with potential. We focus on the individual needs of our employees. In this way, we lay the foundations for our policy of filling key positions from within the company.

SUSTAINABILITY IN 2016

A wide range of training and continuing professional development programs are offered at segment, regional and site level to ensure that our employees are well prepared for their work and can build on their skills.

In the reporting period, we focused especially on executive development and extending functional competencies. Overall, we invested around €500 per employee<sup>1</sup> in continuing professional development in 2016. The average number of hours of training is 16 hours per employee per year.<sup>2</sup> These indicators cover 94 percent of employees worldwide.

The Evonik Development Landscape, which is based on our competency model, provides a wide range of personal and professional development modules covering leadership and management, function-specific programs, project management, and personal competencies. The offerings are tailored to our business requirements and are regularly evaluated by us. The programs also take account of the regional requirements of our employees. The high quality of the content and methods used around the world is highlighted by the fact that our activities are perceived as best practice within the industry. In Singapore, our Asia Pacific Development Landscape employee development program received a bronze award in the HR Excellence Awards 2016.

Important objectives for talent development at Evonik are personal responsibility, diversity, internationality and entrepreneurship. In 2016, we set up a pilot project on Self Orientation. In addition, we are gaining experience of a cross-company social entrepreneur leadership program.

Our strong commitment to training and continuing professional development is part of our corporate responsibility in the areas of social and human resources policy. The number of apprentices and skilled employees hired at the end of their training is directly aligned to the personnel requirements of individual units. In this way, we can offer young people clear future perspectives when they successfully complete their training and counter the effects of demographic change.

At year-end 2016, around 1,950 young people were being trained by Evonik. That figure includes roughly 390 who were being trained on behalf of other companies. Training comprised more than 40 recognized vocational training courses and combined vocational training and study programs at 17 sites. 51 places for young people who are not yet ready for an apprenticeship were taken up on the "Start in den Beruf" pre-training program. This program was specifically extended to offer eleven places to refugees as part of a project organized and financed by the Evonik Foundation. In total, 90 pre-training places have been made available in the 2016/2017 project period, including 20 especially for young refugees and 20 for young people from Germany who had not found a vocational training place. About 530 new apprentices, including eleven refugees, started their training at Evonik in 2016. Apprentices accounted for around 8 percent of our workforce in Germany, which is still well above the national average. In all, we invested €69 million in vocational training of employees.

Our high commitment to vocational training is also reflected in the examination results. Over 98 percent of our apprentices passed their examinations, and around 9 percent received an overall grade of "very good".

#### Performance and remuneration

Fair, market- and performance-oriented remuneration is anchored in our remuneration policies and human resources tools worldwide. Our overall remuneration concept is accompanied by Group-wide policies on remuneration and fringe benefits. In this way, we foster our employees' motivation and performance, honor their contribution to Evonik's success, and underpin our attractiveness as an employer.

Remuneration is set on the basis of objective criteria such as responsibility, competencies and success. Personal attributes, such as gender, age, etc., play no part in the process. Collective agreements on remuneration cover 100 percent of our employees in Germany and around 75 percent of our employees worldwide. Around 97 percent of our sites and regions have performance- or profit-oriented incentive systems. These systems cover around 99 percent of our employees. They also apply for part-time employees, provided in some regions that they meet the prescribed minimum working hours. This is well received by our workforce, as evidenced by the positive feedback on remuneration and fringe benefits in our employee survey.

In 2017 our employee share program "Share" will be offered for the first time to employees in China and Singapore, as well as to staff in Germany, Belgium and the USA. The high participation rates are an expression of our participatory corporate culture. The participation rate of around 38 percent in 2016 was a new record. Around 10,000 employees, including apprentices, purchased nearly 380,000 shares through the "Share" program and were allocated around 130,000 bonus shares through the company's subsidy program.

<sup>1</sup> For 2016, for the first time, we were able to compile worldwide data on continuing professional development. In some cases, the data contains both direct and indirect costs, e.g., travel expenses in connection with training. Some of the calculations are based on estimates

<sup>&</sup>lt;sup>2</sup> For the first time, the hours calculated exclude apprentices in Germany. Training courses attended by German apprentices (in parallel with in-house vocational training) in 2016 are included in the data on vocational training.

Evonik offers voluntary social benefits to employees in all regions where it has a presence. These are available to more than 97 percent of our employees. More than 99 percent of our employees have statutory or company pension insurance and health insurance. This also applies for part-time employees, as long as they work the prescribed minimum number of hours in some regions.

**T07** Personnel expense

SUSTAINABILITY REPORT 2016

in € million	2016	2015
Wages and salaries	2,498	2,520
Social security contributions	377	370
Pension expenses	205	209
Other personnel expense	48	22
	3,128	3,121

## Diversity and retaining employees

We see diversity as a key to corporate success. Diversity means fostering creativity, trying out new things, and better understanding the needs of our customers. Shared corporate values and an established corporate culture ensure high employee retention at Evonik.

Our diversity strategy includes gender networks, WoMentoring, and clear diversity targets for executives. For us, diversity goes beyond focusing on gender and origin. The diversity of disciplines pursued during training, experience of several organizational units or functional areas, and mixedage teams are equally important to us. We regularly evaluate our employee data on the basis of these criteria.

Following establishment of our Diversity Council in 2016, diversity is now is now firmly anchored in the organization of Evonik's top management. The Diversity Council is a highcaliber body comprising members of the Executive Board and executives from various organizational units. It coordinates the ongoing development of our diversity strategy and the implementation of effective measures for the entire Group.

The diversity strategy is also the strategic foundation for Evonik's resolutions on implementing German legislation on gender quotas. 1 It confirms our intention of stepping up tried and tested measures to support women in managerial positions. The proportion of female managers<sup>2</sup> has already increased from 20.1 percent in 2014 to 22.0 in 2016. At the most senior management level below the Executive Board<sup>3</sup>, the proportion of female executives was stable at around 10 percent in this period.

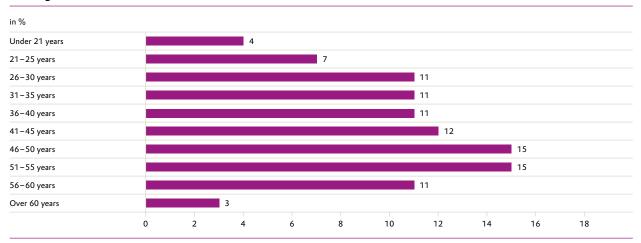
T08 Percentage of women in management

Senior management	9.6	10.4	10.5
in %	2016	2015	2014

Employees with disabilities accounted for 7.1 percent of the workforce at Evonik in Germany. That is well above the quota of 5 percent set for the country.

The average age of our employees on the reporting date was 41.8 years. Our workforce comprises more than 100 nationalities.

#### C14 Age structure



<sup>1</sup> The German law on equal participation of women and men in management positions in the private and public sectors.

Corresponds to Management Circles 1 to 3 and includes Group executives, senior management functions at Evonik grades 6 and 7, and other management functions at Evonik grades 1 to 5.

<sup>&</sup>lt;sup>3</sup> Corresponds to Management Circle 1: Group executives

SUSTAINABILITY IN 2016

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We work with staffing agencies in Germany to cover shortterm or temporary bottlenecks. All agencies must provide evidence of a valid operating permit. If agency staff have been used for a job for more than six months, we examine whether it is a permanent job for which a permanent employee can be hired. Alongside appropriate remuneration, we make sure that agency staff are covered by the high social and safety standards applicable for our own staff. Since the chemical industry requires a large number of highly qualified employees, fewer agency staff are used than in other sectors of manufacturing industry. Evonik had around 670 agency staff as of December 31, 2016. That was around 3 percent of our total workforce in Germany.

#### T09 Employees by contractual status

	Dec. 31, 2016	of which female in %
Employees	34,351	24.7
of which employees on permanent contracts	30,281	23.9
of which employees on limited-term contracts	2,388	34.5
of which apprentices/trainees	1,682°	25.9

<sup>&</sup>lt;sup>a</sup> Including a proportion of apprentices abroad and apprentices with an Evonik contract who are being trained for third parties

#### **Employee satisfaction**

Within our connecting.together. area of action, there are close links between support for diversity and employee satisfaction. The employee turnover rate<sup>1</sup> and average length of service are indicators of the true level of employee satisfaction. In 2016, employee turnover was 4.7 percent, while the average length of service was 14.9 years.

T10 Employee turnover and length of service

	2016	2015	2014
Employee turnover in %	4.7	4.7	3.9
Average length of service in years	14.9	15.0	15.1

In the year under review, we provided Group-wide information G4-26 on the results of the employee survey conducted in fall 2015. By taking part in this survey and utilizing the opportunity for candid feedback, our employees have actively shaped the continuous development of Evonik over the years. The response rate of 83.9 percent (around 27,700 participants) was the highest in Evonik's history. The leadership quality index scored 143 out of a total 200 points, while the commitment index scored 151 out of 200 points. Although these are good results overall, they also highlight scope for further selective improvement.

Following evaluation of the survey, priority is being given to employee development, leadership, fostering innovation and change, customer focus, and occupational safety. Going forward, work on the potential for improvement will be coordinated by an international team comprising project coordinators, HR staff at the management holding company, global HR Services, the segments and the regions. The time until the next employee survey in 2018 will be used to implement and evaluate the improvements identified. This will be coordinated by the staff responsible for the relevant areas of action. Here are two examples:

- Employees throughout the Group showed a desire for better career opportunities for specialists. In response to this, a team of personnel development experts has drafted sample career paths for various specialist functions. Implementation is planned for the first half of 2017.
- The survey confirmed that candid communication between managers and employees is especially important to foster a high level of personal commitment. Many employees indicated that they would like more and better feedback from their managers. We therefore commissioned a Groupwide team of experts to drive forward the existing leadership model in this respect and to come up with appropriate recommendations and tools.

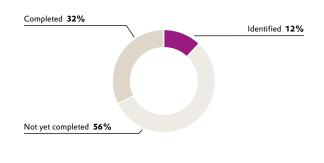
<sup>&</sup>lt;sup>1</sup> Indicator shows total employee turnover.

T11 Measures initiated following the employee survey<sup>a</sup>

	No. of measures
Communication & cooperation	514
Employee development	341
Leadership	321
Innovation and change	160
Customer focus	112
Occupational safety	195
Other topics	330

<sup>&</sup>lt;sup>a</sup> Aligned to Evonik's core topics.

## C15 Status of follow-up measures



An interactive intranet site enhances the transparency of communication: All employees can use this to access information on the status of activities.

All measures are entered in a reporting database, which tracks the implementation status. In all, 1,973 measures had been implemented by the end of December 2016. 514 of them are designed to strengthen communication and cooperation, while 341 focus on employee development.

The Executive Board and Executive Committee receive regular updates on this project.

Maintaining and promoting the health and employability of employees is an important element in Evonik's corporate responsibility. Our well@work program supports this goal. In 2016 this program focused on three aspects: exercise, a healthy diet, and career and family.

 We improve knowledge of exercise through talks and the intranet, and also offer practical opportunities for exercise in the workplace. In addition, our employees have access to a wide range of sports activities.

- In addition to providing information on healthy eating, we offer our employees a range of healthy options in our canteens.
- Combining work and family life has also been part of our well@work approach for many years. The review of our performance and the award of the "berufundfamilie" certificate by the Hertie Foundation in 2016 documents our commitment to a family-friendly human resources policy aligned to different phases of life. Core elements of this policy are support in caring for children and close relatives, and flexible worktime models.

Worldwide, more than 94 percent of our workforce can seek advice on workplace-related, health, personal or family problems from social and employee counseling centers.

Around 93 percent of our employees around the world have access to initiatives to help them combine working with family life. Examples in Germany are the provision of a large number of childcare places, vacation programs for more than 800 children, and extensive support on issues related to caring for elderly and sick relatives.

In Germany, there were 621 employees on parental leave in 2016. Nearly one third of them were already on parental leave at the turn of 2015/2016. The proportion of male employees on parental leave was 41 percent. In 2016 they took an average of 1.6 months parental leave, while female employees took an average of 6.9 months. Apart from a few exceptions, all employees who returned to work after parental leave in 2015 were still working for us a year later.

The regular, contractually defined working hours for approximately 78 percent of our employees are based on collective agreements. We are not aware of any fines imposed on the company in 2016 for exceeding statutory working hours. We limit employees' regular working hours to 48 hours a week unless shorter working hours are applicable. That also applies when integrating new entities such as Evonik Catalysts Pvt. Ltd. in India, which was acquired in mid-2015. About one in ten employees at this company had not yet been transitioned to this aspect of our Global Social Policy at year-end 2016. The transition process will be completed in the course of 2017. More than 83 percent of our employees benefit from annual vacation rules that exceed the statutory provisions in their country. Since there are no statutory rulings in the USA and the United Arab Emirates, the situation there is based on customary regional practice.

SUSTAINABILITY IN 2016

lives. However, interest in the options offered is very low: On average it is in the low single-digit percentage range (based on total headcount).

# T12 Percentage of part-time employees by gender and region

	Part-time employees 2016			Part-time employees 2015		
in %	Female	Male	Total	Female	Male	Total
Regions/countries	18.2	2.0	6.0	18.0	2.0	5.8
Germany	27.8	2.3	8.5	27.1	2.3	8.2
Other European countries	15.2	5.7	7.3	16.2	5.6	7.3
North America	0.2	0.2	0.2	0.2	0.1	0.1
Asia-Pacific	0.1	0.1	0.1	0.1	0.2	0.1

#### T13 Extended periods of leave

Percentage of emplo who have the option of to an extended period of or unpaid leave (>3 mor	
Germany	100
Other European countries	49
North America	96
Central and South America	84
Asia-Pacific	85
Middle East, Africa	0

## Leadership

Evonik strives for a uniform Group-wide understanding of leadership centering on a trustful relationship between employees and managers. That includes:

- A clearly defined common understanding of values that is implemented through uniform processes and binding standards
- An institutionalized dialogue on leadership issues and goals across all levels
- Employee objectives that are derived from the overriding corporate objectives and broken down to each employee's individual working environment

A global IT platform assists us in implementing our common understanding of leadership in our day-to-day work. The corresponding technology was installed in 2016 for around 11,000 employees with a view to further digitization of HR. Employees and their managers now have access to a flexible and transparent tool to agree, fine-tune and evaluate objectives.

The system can also be used for the annual employee development reviews, where employees and their line managers discuss individual goals, potential and development. In the reporting period, more than 5,000 employees and managers in China and North America used this system for development reviews. Other countries are to be rolled in during 2017.

Committed leaders are essential for value-oriented management of the company. In 2016 a further 25 corporate talents therefore made a contribution to a not-for-profit housing construction project in Vietnam in collaboration with Habitat for Humanity. Habitat for Humanity is an international charity that uses donations to build housing for families and other needy persons around the world. In addition, as part of our talent development activities, around 30 corporate talents discussed topics such as ethics, values and morality with representatives of the protestant and catholic churches. This program was also piloted with an international group of about 15 participants from around the world.

#### Targets

- Establish a learning strategy for the ongoing development of various employee groups
- Roll out our updated employer branding campaign (internally and externally)
- Conduct a pulse check on employee satisfaction

# Further facts and figures

# T14 Employee fluctuation 2016<sup>a</sup>

	Fluctuation rate in %	No. of employees who left the company
By gender		
Female	5.2	416
Male	4.6	1,171
By age		
Under 30	4.7	348
30 to 50	3.0	497
Over 50	7.7	742
	4.7	1,587
thereof dismissed by employer	1.4	484

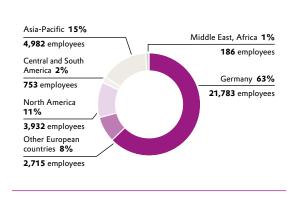
<sup>&</sup>lt;sup>a</sup> Reference base: no. of employees in each category as of December 31,

# T15 Recruitment of employees from the labor market in 2016<sup>a</sup>

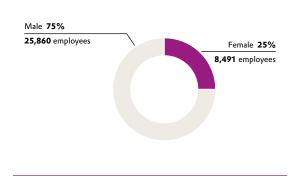
	No. of employees	in %
By region		
Germany	874	4.0
Other European countries	149	5.5
North America	406	10.3
Central and South America	147	19.5
Asia-Pacific	551	11.1
Middle East, Africa	42	22.6
By gender		
Female	746	8.8
Male	1,423	5.5
By age		
Under 30	987	13.0
30 to 50	1,037	6.2
Over 50	145	1.4
	2,169	6.3

<sup>&</sup>lt;sup>a</sup> Reference base: employees by category in the continuing operations as of December 31, 2016 based on headcount in each category.

# C16 Employees by region



# C17 Employees by gender





арргох. 50%

## **OF SALES**

generated with products for resource-efficient applications

€438 million

3.4%



# **REWOFERM® 446 SL**

A particularly environment-friendly product with good skin tolerability

#### Awards:

- Bio-based Material of the Year 2016
- SEPAWA Innovation Award 2016



# **GERMAN SUSTAINABILITY AWARD**Winner of the research category



# THIRD TIME IN SUCCESSION

Gold rating for Evonik from Together for Sustainability Our approach to sustainability includes the entire value chain. We drive forward the transparency and sustainability of our suppliers and help our customers meet their sustainability targets. In collaboration with them, we want to develop further products and solutions for applications that are resource-efficient and environmentally compatible.

# TARGETS

## Supply chain

- Conduct at least 20 supplier sustainability audits a year
- Continue the analysis of suppliers of critical raw materials through TfS self-assessments
- By 2020: 90% of suppliers of critical raw materials covered

## Research & development

- Over €1 billion additional sales in six growth fields by 2025
- Increase sales generated with products and applications that are less than five years old from 10% (2016) to 16% in the mid term

# Sustainability analysis of the business

 Increase sales of the chemical segments covered by sustainability analysis from 70% to approx. 80%

#### Page Topic | GRI Indicators

- 49 Procurement and sourcing | G4-12, G4-13, G4-EC9, G4-EN32, G4-EN33, G4-LA14, G4-LA15, G4-HR4, G4-HR5, G4-HR10, G4-HR11, G4-SO9
- 51 Production inputs and output | G4-9, G4-EN1
- Research & development | G4-EC4, G4-EC7
- 54 Products and markets | G4-4, G4-8
- 55 Customer satisfaction
- 56 Sustainability analysis of the business

Progressive climate change, feeding the growing world population, and using limited resources responsibly are some of the global challenges addressed by the United Nations' sustainable development goals. Our products and solutions provide important answers to future-oriented questions like these

All Evonik's business processes are based on the principle of responsible management. Our approach to sustainability therefore includes the entire value chain. That means: In addition to our own production and business processes and the products we market (gate to gate), we always consider the supply chain for our raw materials, goods and services (upstream) and the product benefits for our direct customers and their applications in their end-markets (downstream).

We have observed growing demand from customers for products for energy- and resource-efficient applications. In response to this interest, we provide innovative solutions that utilize our expertise as a world-leading specialty chemicals company. Our special strength is working in close partnership with our customers. That gives us a good strategic basis so we can ensure timely identification of promising developments in our markets and gain access to new growth areas.

Evonik's product portfolio ranges from high-quality intermediates to complex formulations and system solutions. Our markets cover a balanced and diverse spectrum, including pharmaceuticals, consumer and care products, food and animal feed, paints and coatings, the automotive industry, mechanical engineering, and construction. None of the end markets that we supply accounts for more than 20 percent of our sales.

Evonik uses a wide range of raw materials in the production of its products. Along with technical goods and services, they are sourced from a variety of suppliers. We have central positions in important value chains—because we process substances, and provide functional specialty chemical products and innovative system solutions based on them.

The global focus of our business is evident from the fact that 81 percent of our sales are generated outside Germany. We have production facilities in 25 countries on five continents and are therefore close to our markets and our customers.

Our activities along the value chain are split into six areas of action, which are derived from our materiality analysis. "Governance and compliance" covers the entire value chain. Focal areas are sustainability management in the supply chain, efficient use of scarce resources/materials, innovations/technologies, customer satisfaction, more sustainable products, and products and solutions/life cycle considerations.

# Upstream: supply chain and raw materials

Evonik has a significant influence on society and the environment through its procurement volume. We are aware of this responsibility. By selecting suppliers carefully, we do not simply secure and increase their sustainability standards, we also enhance the quality of the entire value chain. We therefore focus on validation and evaluation of suppliers. In addition, we specifically monitor certain raw materials. These include renewable raw materials, and raw materials where there is a potential supply risk or reputational risk, for example, conflict minerals.

**C18 Value chain** G4-20, G4-21

Value chain  Supply chain/raw materials  Evonik production/processes  Customer/end-customer applications  Strategy and growth  Governance and compliance  Employees  Value chain and products  The environment		Upstream	Gate to gate	Downstream
Governance and compliance  Employees  Value chain and products  The environment	Value chain	Supply chain/raw materials		
Employees  Value chain and products  The environment	Strategy and growth		•	•
Value chain and products  The environment	Governance and compliance	•	•	•
The environment	Employees		•	
	Value chain and products	•	•	•
660	The environment		•	
Sarety	Safety	•	•	

#### Procurement and sourcing

Our goal is an efficient procurement organization to guarantee long-term reliability of supply for the production of Evonik products and, at the same time, to secure competitive advantages for our operating businesses.

Procurement is organized globally at Evonik and comprises direct procurement (raw materials, logistics and packaging) and indirect procurement (general and technical goods and services). Both are subdivided into strategic and operational procurement activities. Global procurement is managed from Germany, with the support of regional units in Asia and in North and South America.

Alongside economic requirements, our procurement strategy takes account of sustainability aspects such as health, quality, safety, social factors and environmental protection. In addition, we are a member of the UN Global Compact, which imposes binding principles.

Validation and evaluation of our suppliers is an integral part of sustainable supply chain management at Evonik. We therefore work systematically both to extend strategic relationships with suppliers and to validate new suppliers. Validation is the first step in every new supply relationship. It comprises economic and quality-related requirements as well as environmental, social and corporate governance aspects. We expect our suppliers to share our principles and to act correctly in all respects, which means accepting the responsibility towards their employees, business partners, society and the environ-

These requirements are documented in our Code of Conduct for Suppliers, which is based on our corporate values, the principles of the UN Global Compact, the International Labour Standards issued by the International Labour Organization (ILO), and the topics addressed by the Responsible Care® initiative.

Tools used to evaluate suppliers include the system developed by Together for Sustainability (TfS), an initiative established by the chemical industry to foster sustainability in the supply chain (see page 50). Here, we pay special attention to our strategic suppliers and suppliers of strategic raw materials.

Our goal is to drive forward transparency and sustainability along the supply chain and bring about further improvements. If suppliers have particularly serious shortcomings and no improvement can be identified, we reserve the right to end our collaboration with them.

As part of our strategic supplier management, we have set the following targets, which are applicable throughout the Evonik Group:

- Conduct at least 20 supplier sustainability audits under the shared audit principle of the Together for Sustainability
- Continue the analysis of suppliers of critical raw materials through TfS self-assessments.
- Evaluate the sustainability performance of 90 percent of suppliers of critical raw materials by 2020 (status at yearend 2016: > 70 percent).

# Validation and evaluation of suppliers

Suppliers are evaluated using a method that identifies and quantifies risk factors. The aim is to safeguard the supply of raw materials and technical goods to Evonik and gain access to new procurement markets and suppliers.

In 2016 we extended our validation process for new suppliers. Alongside quality, environmental protection, safety, health and energy management, the routine assessment of all potential suppliers now also includes antitrust law and fighting corruption, labor and social standards, human rights, conflict minerals, and responsibility within the supply chain. In all, around 1,000 new suppliers of raw materials, technical goods and services were evaluated using these criteria.

The principles are also used to evaluate existing suppliers. Strategic suppliers are checked regularly, and improvement measures are adopted, depending on the outcome of the assessment. Eleven suppliers were dropped in 2016. In one case, we were able to reactivate the supply relationship following successful improvements.

To minimize the risk to Evonik, evidence and self-assessments on compliance with the relevant German legislation (MiLOG, AEntG, SGB and HwO) were obtained from more than 1,000 suppliers and evaluated.<sup>1</sup>

<sup>1</sup> MiLoG = German Minimum Wage Act; AentG = German Employee Secondment Act; SGB = German Social Code; HwO = German Ordinance on Craftsmen.

## Together for Sustainability

Harmonization of global standards in the supply chain creates transparency and makes it easier for both suppliers and customers to assess and evaluate sustainability performance. The chemical industry set up the Together for Sustainability (TfS) initiative for this purpose in 2011. Evonik is one of six founding members. The aim of TfS is the joint development and implementation of a global assessment and audit program for responsible procurement of goods and services. In this context, TfS helps make environmental and social standards measurable and implement specific improvements. The initiative had 19 members at the end of 2016. The member companies have already initiated more than 720 audits and 6,300 assessments worldwide.

In 2016, we evaluated over 70 percent of suppliers of critical raw materials using sustainability criteria. These criteria include country risks, the supply situation and market availability. In addition, we reviewed the sustainability performance of other significant suppliers.

A particular focus for us in 2016 was the process for following up on audits and assessments. Corrective measures were initiated with 46 suppliers, where major or critical deviations were identified during audits. In 68 cases, supplier assessments showed that insufficient attention had been paid to sustainability aspects. Here too, corrective action was initiated.

In addition, we initiated reassessments and re-audits of suppliers initially audited or assessed in 2012 and 2013. These covered 38 assessment candidates and twelve audit candidates.

In 2016 we audited sustainability standards at 29 supplier sites and arranged for 145 sustainability assessments to be conducted by an external service provider.

Another TfS conference was held in 2016. The venue this time was India. With 500 participants, the turnout was even higher than at the previous conferences in China and Brazil. A range of talks showed the participants the enormous importance of sustainable supply chains. The focus on sustainability aspects in India is increasing with the region's growing importance for the global chemical industry.

In October 2016, the Chinese Petroleum and Chemical Industry Federation (CPCIF) and TfS signed an agreement on closer cooperation. CPCIF gave an undertaking that it would strengthen the industry in China and step up international exchange. The aim of the agreement is to extend joint activities in the area of sustainability. The agreement includes organizing appropriate seminars and, above all, encouraging sustainability in the supply chain. In addition, the aim is to acquire Chinese companies as members of TfS. The responsible departments at both organizations will hold regular talks on possible additional activities in the future.

As a member of the initiative, Evonik is also subject to TfS assessments. At the start of 2016, we received a gold rating for the third time in succession, ranking us among the top 2 percent of the companies assessed.

To further increase the procurement-specific and general competencies of our employees, we continued our Shaping Procurement and Developing Excellence (SPADE) vocational training and continuing professional development program. This also helps to promote international and interdisciplinary sharing of experience. The training modules build on each other and are supplemented by units that examine specific aspects in greater depth. A new modular learning catalog has been developed. It contains around 20 relevant modules, which can be presented as webinars or face-to-face training sessions. This supplements the SPADE Advanced training module. In the reporting period, around 69 percent of procurement staff took part in these and other training programs that include sustainability issues.

## Procurement in 2016

In 2016 we sourced raw materials and supplies, technical goods, services, energy and other operating supplies with a total value of around €7.6 billion (2015: €8.3 billion) from around 31,000 suppliers. Local sourcing accounted for around 77 percent of this amount (2015: 75 percent). We define local sourcing as deliberate procurement from sources which are geographically close to our production site. Raw materials and supplies make up 59.3 percent of procurement volume (2015: 59.0 percent). Spending on petrochemical feedstocks was around €3 billion and accounted for 65 percent of our raw material base.

SUSTAINABILITY IN 2016

Value chain and products

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#### Conflict minerals

In view of its very broad product portfolio, Evonik procures a wide range of different raw materials. We have implemented strategic procurement concepts and management systems for "critical raw materials", whose availability is vital for our production processes.

The Dodd-Frank Act requires companies listed on the US stock market to disclose whether their products contain potential conflict minerals. These are mineral raw materials from the Democratic Republic of Congo and its neighboring countries. Evonik is not listed on US stock exchanges and therefore has no legal obligation to comply with the reporting requirements of the US stock market regulator. At the same time, as a responsible company, Evonik meets its duty of care with regard to conflict minerals in the supply chain and checks the origin of such substances. Moreover, since the start of 2016 we have required new suppliers to provide evidence of origin in the pre-qualification process. In our checks up to year-end 2016 we did not identify any use of conflict minerals in Evonik products.

# Gate to gate: production and processes

Many of our products are based on the use of advanced processes and technologies, which we are continuously improving. At many of our sites, we have backwardly integrated production complexes where key precursors are produced in adjacent production facilities. The benefit for our customers is the extremely high reliability of supply. Our world-scale facilities are also a high entry barrier for potential competitors.

Efficient production facilities and a well-stocked innovation pipeline are crucial elements in Evonik's business model. Continuous improvements in both areas are therefore a matter of course to us. In many cases, we develop and use in-house production processes that have a technological edge in order to ensure production is both resource-efficient and profitable.

Our largest production sites—Marl, Wesseling and Rheinfelden (Germany), Antwerp (Belgium), Mobile (Alabama, USA), Shanghai (China) and Singapore—have integrated technology platforms used by various units. This results in valuable economies of scale and maximizes the use of material flows because by-products from one production line can be used as starting products on others.

Continuous process optimization has always been very important for Evonik. The associated expertise is provided, first and foremost, by our Process Technology unit and the Simplification, Excellence, Empowerment and Cooperation (SEEC) team. SEEC brings together process and technology experts from various organizational units with a wide range of knowledge. It is supported by the company improvements and suggestion program. For the targets for resource efficiency in production, see "The environment", page 57.

Research and development is another important driver of our profitable growth. Innovations strengthen our leading market and technology positions and give us access to new, high-growth businesses. Evonik's innovative capability is evidenced, for example, by the number of patents. See page 53.

# Production inputs and output

Production inputs increased from 8.66 million metric tons to 9.32 million metric tons in 2016. Output increased slightly to 10.58 million metric tons in 2016.

T16 Production inputs and output

in million metric tons	2011	2012	2013	2014	2015	2016
Raw material inputs	9.51	8.16	8.23	8.75	8.66	9.32
thereof renewable raw materials	0.69	0.73	0.79	0.77	0.74	0.86
Use of renewable raw materials in production in %	7.3	9.0	9.6	8.8	8.6	9.2
Production	10.35	9.71	10.06	10.35	10.36	10.58

#### Renewable raw materials

SUSTAINABILITY REPORT 2016

Using renewable resources remains very important to Evonik. In 2016, they accounted for around 9 percent of production inputs (2015: around 9 percent). The vast majority comprised dextrose and saccharose, which were used as substrates in fermentative production of amino acids. Natural fats and oils and their derivatives are used to produce precursors for the cosmetics, detergents and cleaning agents industry, and in technical processing aids. We endeavor to raise the proportion of renewable raw materials wherever this makes sense from a technical, economic, ecological and social perspective.

#### Palm oil

A small proportion of palm oil and palm oil derivatives are used in our production processes. Evonik has been a member of the Roundtable on Sustainable Palm Oil (RSPO) since 2010 and publishes its targets for palm oil in the RSPO's annual progress report. The RSPO was set up to place global production of palm oil on a sustainable long-term basis. Evonik supports this process.

Our Personal Care business has now had all nine sites that use palm oil derivatives certified by an external auditor. This shows that our organizational structure at these sites meets the RSPO requirements. Our Personal Care business therefore achieved the target set for 2016, and has created the basis for a continuous transition to certified raw materials.

In addition, more than 50 personal and household care products have been switched to RSPO-certified palm oil derivatives. In collaboration with our customers and suppliers, we aim to extend our portfolio of certified products further in 2017.

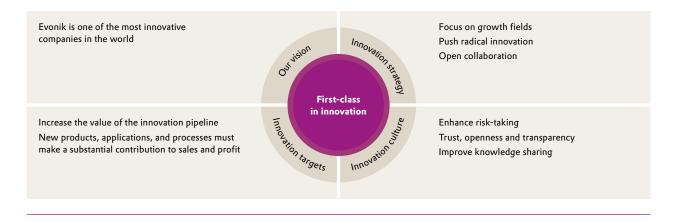
#### Research & development

High innovative capability is essential for Evonik. It is an important driver of profitable growth and strengthens our leading market and technology positions. As a company, we are proud of our culture of innovation, which is firmly established in our innovation management and management development. The vision underlying our research & development (R&D) is "Evonik is one of the most innovative companies in the world."

In the light of this, in 2016 we took an important step to pave the way for the future. We restructured our innovation portfolio and now focus on six growth fields with above-average

- Sustainable Nutrition: Establishing additional products and services for sustainable nutrition of livestock and people
- Healthcare Solutions: Developing new materials for implants, as components of cell culture media, and for custom-tailored, innovative drug formulations
- Advanced Food Ingredients: Creating a portfolio of health-enhancing substances and nutritional supplements as a contribution to healthy nutrition
- Membranes: Extending SEPURAN® technology for efficient gas separation to further applications
- Cosmetic Solutions: Developing further products based on natural sources for cosmetics and sensorially optimized formulations for skin care products
- Smart Materials: Developing products and technologies for additive manufacturing, electronic applications, and thermal insulation systems.

#### C19 Our claim: First-class in innovation



Value chain and products

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- We aim to generate more than €1 billion in additional sales in the six growth fields by 2025.
- Sales generated with products and applications that are less the five years old should increase from 10 percent (2016) to 16 percent in the mid term.

Evonik has an extensive patent strategy to protect new products and processes.

Around 90 percent of our R&D is performed by our segments. That includes, first and foremost, research geared specifically to their core technologies and markets, and the development of new business. The Nutrition & Care and Resource Efficiency growth segments receive an above-average share of our R&D funds. By contrast, the Performance Materials segment focuses on optimizing processes and products.

Our strategic innovation unit, Creavis, concentrates on mid- and long-term projects that support Evonik's growth and sustainability strategy and open up new business options.

On the basis of the identified potential in the strategic growth fields, Creavis sets up project houses, which spend three years exploring an area of innovation in conjunction with the segments and external experts.

For example, the Medical Devices Project House is currently working on new solutions for medical technology and extending Evonik's competence in biomaterials and polymers. In particular, it is addressing applications in implantology. The Composites Project House ended in spring 2016 and was integrated into the Resource Efficiency and Performance Materials segments. Notable successes were materials and processes that enable automated production of composites at competitive prices.

## Facts and figures 2016

The value and quality of our patent portfolio have increased steadily in recent years. In 2016, patent-driven sales accounted for 56 percent of total sales in the Evonik Group.

## T17 Innovative capability and patent protection at Evonik

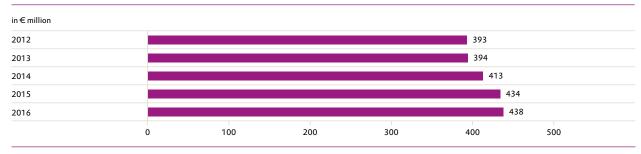
	2016
No. of new patent applications filed	арргох. 230
Patents held and applications filed	more than 24,500
Registered/pending trademarks	7,000

Our innovation pipeline is well stocked. It comprises a balanced mixture of well over 500 projects. In 2016 we fine-tuned the nature and scope of our innovation projects as part of the realignment of our innovation portfolio. Since then, greater priority has been given to larger mid- and long-term projects. In the reporting period, some of our projects were again funded by the European Union or the Federal Republic of Germany. In all, we received around €2.9 million for this.

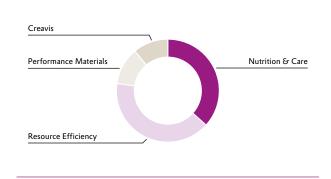
In view of the strategic importance of R&D, we have raised R&D expenses by an average of 4 percent since 2011. In 2016, R&D expenses totaled €438 million, a rise of 1 percent year-on-year. The ratio of R&D expenses to sales was 3.4 percent (2015: 3.2 percent). In view of our growth strategy, we aim to retain this ambitious level and to invest more than €4 billion in R&D up to 2025. We are therefore sticking to the target we set in 2015.

In the past three years, Evonik has also spent €158 million on the construction of laboratory capacity and pilot plants. Examples are the new competence center for silanes at the Rheinfelden site in Germany, and the composites pilot plant for the Crosslinkers Business Line in Marl (Germany).

#### C20 R&D expenses



#### C21 Breakdown of R&D expenses



#### Open innovation as a success factor

Evonik's global R&D network comprises 35 locations with approximately 2,700 R&D employees. Key success factors for our R&D are close collaboration with customers and extended networking with external partners. The Industry Cross Innovation department brokers contact to new markets of potential interest for Evonik. In this way, new, marketdriven projects are identified in collaboration with sectors with which we do not yet have direct customer relationships. New alliances were established with a range of companies in 2016. These show how we can use cross-sector collaboration and bundle competences along the value chain to tap into marketable solutions with and for our partners.

In addition, our corporate venture capital activities give us an insight into innovative technologies and emerging business activities. We invest in specialized technology funds and startups that are a good fit with our growth strategy. In this way, we speed up the pace of innovation. One example from 2016 is the US start-up Nanotech Industrial Solutions, Inc., which provides a new technology platform for lubricant additives. This is an attractive complement to our competencies as the technology leader in oil additives.

## Focus on sustainability

Sustainability is an important element in our corporate culture and our innovation culture. As a specialty chemicals company, we want to provide solutions that balance social, ecological and economic aspects—in collaboration with our customers. Our market-oriented R&D plays a key role in improving the ecological footprint of our customers still further and differentiating us from our global competitors. We are therefore increasingly focusing our innovation pipeline on products for applications that make efficient and environmentally compatible use of resources. That is demonstrated, for example, by our internal Innovation Award, which honors

outstanding research achievements. All nominations in the category "New Products/System Solutions" in 2016 were for products with particularly sustainable applications. These

- An environment- and skin-tolerant biosurfactant that is produced entirely from renewable regional resources (REWOFERM®)
- An additive that is used in combination with silica and silanes to reduce the rolling resistance of tires. This brings a further significant reduction in fuel consumption and CO<sub>2</sub> emissions (POLYVEST® ST)
- A synthetic base fluid for wind turbine gears, which increases their energy efficiency and service life (VISCOBASE® 11-522)

Our innovation unit, Creavis, manages its portfolio using the Idea-to-People-Planet-Profit (I2P<sup>3</sup>) process. Each strategic research project is assessed on the basis of environmental influences (planet) and societal aspects (people) as well as economic criteria (profit). I2P3 was developed jointly by our strategic research, the Life Cycle Management group, and the Innovation Excellence group, with external support from the renowned Wuppertal Institute for Climate, Environment and

Evonik also received the prestigious German Sustainability Award in 2016 for its innovative capability. The award in the research category went to a Creavis project: A new production process for thermoelectric generators (TEGs) to utilize exhaust heat, which was developed in collaboration with Process Technology. This reduces the production cost of TEGs by up to 70 percent. TEGs can help improve fuel economy in vehicles by enhancing the efficiency of alternators. In the steel, aluminum and glass industries, TEGs can harvest heat radiated by semi-finished products and exhaust gas systems.

# Downstream: customers and end-customer applications

Evonik's customers are mainly industrial companies that use our intermediates in their own products and solutions. Our operating segments make a key contribution to enhancing the product benefits that differentiate our customers in the market and make them successful in global competition.

## Our products and markets

Working closely with our customers, we extend our solid knowledge of their requirements, markets and trends. That G4-27 helps us tailor products to their specific needs. Regional specifics are taken into account through our numerous technology and competence centers.

Value chain and products

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Alongside products and solutions, many of our businesses sell services along the entire value chain. A good example is our Animal Nutrition Business Line, with its broad range of specialist services.

At Evonik, the operating businesses are responsible for customer relationship management, which is aligned to market and customer needs on a decentralized basis by our segments and business lines. Alongside competence centers and customer-focused development centers, all employees play a part in this through their high expertise and professionalism.

Overall, we have observed that customers increasingly value products and solutions that make a contribution to sustainable development. That applies, for example, to the desire for improved resource efficiency.

To make the sustainability performance of our products transparent, we have intensified and driven forward the methodology used for the related analyses. The process has been performed repeatedly in all business lines since 2013. For a more detailed overview of our progress in 2016, see inside front cover.

## Evonik's resource-efficient products

Evonik helps its customers meet the rising sustainability requirements on the world's markets. In particular, we use the Evonik Carbon Footprint to assess products that are resource- and energy-efficient in the application phase. Examples are amino acids for animal nutrition, silica-silane technology for "green" tires, additives for hydraulic fluids, and functional silanes to protect building facades. For further information, see the Evonik Carbon Footprint brochure on our website at www.evonik.com/responsibility.

Evonik also provides renewable raw materials as a basis for future-oriented solutions for modern wind turbines, additives for environment-friendly water-based paints, and ingredients for the cosmetics industry.

REWOFERM® SL 446, a new sophorolipid-based biosurfactant from the Nutrition & Care segment, received two awards in 2016. REWOFERM® SL 446 is 100 percent bio-based. Alongside very good cleaning properties, it has an excellent toxicological and ecological profile and is fully biodegradable.

The membranes business is one of our growth fields and shows how our innovative products give us access to new markets. SEPURAN® membranes developed by the Resource Efficiency segment allow particularly efficient separation of methane, nitrogen or hydrogen from gas mixtures. The SEPURAN® product family, which has been systematically extended in recent years, now comprises membranes for the treatment of biogas, the separation of nitrogen, and the treatment of helium and hydrogen. In fall 2016 we held the groundbreaking ceremony for a further production complex for membrane modules in Schörfling (Austria).

#### Customer satisfaction

Leading market positions account for around 80 percent of G4-27 Evonik's sales. Our aim is to be integrated into our customers' supply chains where possible. That allows optimal alignment of our research & development, production, marketing and distribution workflows to our customers' requirements.

High customer satisfaction is very important to maintain and extend our operating business. This is illustrated by the high priority accorded to this in our materiality analysis.

At Group level, we have a Marketing & Sales Excellence (MSE) team that offers special staff training and management tools to support the continuous development and positioning of our segments through customer focus.

Customer satisfaction analyses are an example. MSE bundles Group-wide customer surveys and provides the tools and expertise needed to conduct such surveys. The aim is to regularly measure customer satisfaction in order to define measures that raise customer loyalty across the board and identify scope for improvement in the development of products and services. The focus is on a holistic view of customer relationships, including product quality, product development, pricing, service, communication, logistics, and complaints management.

Evonik's ten industry teams also make a cross-business contribution to this. These teams pool solutions expertise for specific sectors or markets and provide a Group-wide communication platform for dialogue with customers. In this way, we build expertise and at the same time increase our visibility in our key markets. Examples of the present industry teams are Automotive, and Paints & Coatings.

## Sustainability analysis of the business

Evonik responds to pressing future issues by developing sustainable products and processes. At the same time, we want to strengthen and expand our leading market positions.

#### Methodology

Our aim is to gain the most accurate possible insight into the sustainability challenges and opportunities of our business. We focus especially on market trends and future market developments along the value chain. The sustainability analysis of our business has therefore been driven forward and external validation of the methodology has been undertaken. We have therefore achieved the target we set ourselves for 2016.

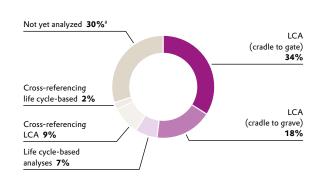
Our sustainability analysis is based on a method focusing on the value chains of our businesses and takes account of criteria from the supply chain through production to subsequent use. The list of criteria reflects key ecological and societal aspects of our materiality analysis. On this basis, we again worked with all three chemical segments in 2016. The sustainability analysis now covers around 94 percent of our Group sales. The result is a structured presentation of the sustainability performance of all our businesses, which we want to report on more extensively in 2017.

#### Life cycle analyses

Life cycle analyses are a focal area of our sustainability analysis. The high expertise and strong operational involvement of the Life Cycle Management group play a key role in ensuring that Evonik has wide-ranging knowledge of the environmental impact of its operations and is able to quantify this. We performed further life cycle analyses in 2016, for example for the silica-silane technology used in "green" tires. Around 70 percent of the external sales of our chemical segments has now been covered. In the mid term, we aim to extend this to around 80 percent of the external sales of our chemical segments.

Evonik's procedure comprises a broad spectrum of methods, including life cycle assessments (LCA), which comprise either a cradle-to-gate analysis, covering all stages from product development through raw material and energy inputs to production, or a cradle-to-grave analysis covering the entire life cycle including subsequent use and disposal. Another tool is the life cycle-based calculation of the carbon footprint of our products. In addition, we use cross-referencing approaches, where findings, for example from existing LCAs, are used to evaluate similar products.

# C22 Sales of our chemicals segments covered by life cycle analyses



<sup>&</sup>lt;sup>a</sup> Life cycle analyses planned in some cases.

## Resource-saving solutions

Evonik products offer customers resource-saving and energyefficient solutions for a wide range of applications. In this way, we play a part in meeting the rising sustainability requirements of our markets. At the same time, we are continuing to develop our business opportunities in these markets. See page 55.

Our sustainability analysis includes an extensive analysis of the contribution made by our products to improving resource efficiency in their respective applications. This covers energy savings and the reduction in greenhouse gas emissions, water consumption and the use of raw materials. The results confirm that in 2016 around 50 percent of the sales generated by our chemical segments once again came from products that make a measurable contribution to improving the resource efficiency of their applications.



Protecting our environment and the climate are major global challenges of our age. Maintaining the natural basis of life for future generations is part  $of our \ corporate \ responsibility. \ Our \ environmental$ targets make an important contribution to this. We make continuous improvements to our processes, and our capital expenditures and investment in environmental protection make use of state-of-the-art technologies.

## **TARGETS**

- · Reduce specific greenhouse gas emissions by 12% from 2013-2020
- · Reduce specific water intake by 10% from 2013-2020
- · Continuously reduce hazardous production waste

6.4 million

**DIRECT AND INDIRECT** CO2eq EMISSIONS<sup>a</sup>

72.7 million m<sup>3</sup>

92.2 million metric tons

**AVOIDED GREENHOUSE GAS EMISSIONS** 

over the application life cycle of selected Evonik products



**Brochure on the Evonik Carbon Footprint** www.evonik.com/responsibility

# **PRODUCTION WASTE**

in thousand metric tons

non-hazardous



#### **NEW GAS AND** STEAM TURBINE POWER **PLANT IN MARL**

reduces greenhouse gas emissions and use of surface water



Rating

**CDP Climate Change** 





Rating in initial participation in **CDP Water** 

Page Topic | GRI indicators

Our management system | G4-35, G4-EN31

Climate change and emissions into the air | G4-EC2, G4-EN3, G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN19, G4-EN20, G4-EN21

Water management | G4-EN8, G4-EN10, G4-EN22

66 Waste management | G4-EN23

68 Biodiversity | G4-EC8, G4-EN11

<sup>&</sup>lt;sup>a</sup> Scope 1 and 2, total, net (market-based).

b Including use to produce steam, in the manufacture of products, to cover evaporation losses and as process water.

Protecting our environment and the climate are major global challenges of our age. Maintaining the natural basis of life for future generations is part of our corporate responsibility. That includes steadily reducing emissions, continuous improvements in the efficient use of materials and resources, and developing products that help us forge a link between economic success and ecological progress.

We have defined Environment, Safety, Health and Quality (ESHQ) Values, which address our responsibility for the environment and our endeavors to continuously improve our products, processes and systems. For further information see "Value chain and products".

Our materiality analysis provides further insight into issues of relevance for the environment area of action: climate change, emissions into the air, water management, and waste management. In these areas, we pay especial attention to monitoring, analyzing and managing developments.

We have set demanding environmental targets for the period 2013–2020 (reference base: 2012). These provide valuable guidance for a continuous improvement in our performance in protecting the climate and our environment. Their development is monitored and reported in detail.

Our central quantitative targets are reducing specific greenhouse gases by 12 percent and reducing specific water intake by 10 percent. Both of these targets are per metric ton of output. Our aim is 80 percent attainment of these targets by 2018. In addition, we want to achieve a further reduction in hazardous production waste by setting a qualitative target for this.

# Our management system

The basis for our actions is an extensive, integrated management system that is aligned to our corporate structure. The Corporate ESHQ division pools all Group-wide strategic management and coordination tasks relating to the environment. The head of the Corporate ESHQ division reports directly to the relevant member of the Executive Board (Chief Human Resources Officer).

The structure of the management system is based on legal requirements and internal regulations such as policies and standard operating procedures. This supports a process of continuous improvement in environmental performance and compliance.

Corporate ESHQ uses a central audit system to regularly monitor implementation of the binding Group-wide strategy and the management system. Based on the findings and analysis of our internal and external audits, site inspections and reviews, talks are held on possible improvements and how to implement them. The Executive Board is informed annually of the outcome of the audits.

Our management parameters are monitored regularly via a central sustainability reporting system (SuRe), which contains a wide range of data on climate change, emissions into the air, water management, and waste management.

Overall, we compile more than 50 production- and plant-related sustainability indicators. These are captured locally on a plant-specific basis and can be evaluated via the reporting system on the basis of management units, legal structures or regions. The data capture and processing methods are explained regularly at training sessions and are subject to internal and external audits. In 2016 we successfully introduced a technically upgraded version of our central reporting system (SuRe 2.0). The new system allows additional evaluations and is more user-friendly.

#### Organization

The global ESHQ strategy is adopted by the Executive Committee HR. Decisions on ESHQ issues relating to implementation of this strategy are taken by the ESHQ Panel, which is composed of representatives of the segments, regions and the Technical Committee, and employee representatives. It is chaired by the head of the Corporate ESHQ division.

The role of the Global ESHQ Committee is to regularly discuss ESHQ issues and prepare decisions to be taken by the ESHQ Panel. This committee comprises representatives of the relevant functions in the segments and the heads of the regions.

Specialist knowledge of selected issues is bundled in ESHQ Expert Circles, which are convened as required and are responsible for implementing specific environmental requirements in the operational units. For example, there are Expert Circles on climate strategy, environmental protection, and management & audits.

The operational segments and site services define the business-specific implementation of the decisions taken. The Corporate ESHQ division ensures cross-segment rules on the relevant processes.

## C23 Structure of the ESHQ steering bodies



#### Our activities in 2016

Our management system for the environment, safety, health and quality applies to the entire Evonik Group. In addition, we require our manufacturing sites to be validated as conforming to ISO 14001, the internationally recognized environmental management standard. As a result of the necessary start-up and preparatory phase for new units, the proportion

of output covered by ISO 14001 validation varies. However, it is always between 95 and 100 percent. Audits are conducted to monitor implementation by the segments, regions and sites. Alongside audits on specific issues, we conducted 60 ESHQ audits worldwide in 2016.

We made successful progress with our environmental targets in 2016. Specific greenhouse gas emissions and specific water intake both declined significantly, by 6 percentage points and 13 percentage points respectively. As well as targeted measures to raise energy efficiency and save water, the reductions mainly come from structural upgrades at Marl Chemical Park in Germany. The highly efficient new gas and steam turbine power plant, which has replaced the old coal-fired plant, has high fuel efficiency, resulting in the avoidance of considerable amounts of CO<sub>2</sub> emissions each year. In addition, specific CO<sub>2</sub> emissions from natural gas, which is the primary energy source, are far lower than from coal. The water data are also very positive. Unlike its predecessor, the gas and steam turbine power plant is cooled via a cooling circuit with recooling facilities rather than by oncethrough cooling. The replacement of once-through cooling by closed-circuit cooling systems at our site in Kaba (Hungary) also led to a considerable reduction in the use of freshwater.

## T18 Status of our environmental targets

Change in % compared with 2012	2012	2013	2014	2015	2016	Target 2020
Specific greenhouse gas emissions <sup>a</sup>	100	93	92	89	83	88
Specific water intake <sup>b</sup>	100	95	112°	107	94	90

<sup>a</sup> Energy- and process-related emissions as defined by the Greenhouse Gas Protocol/Scope 2 emissions calculated using the market-based method.

<sup>c</sup> Start-up of the hydrogen peroxide facility in Jilin (China).

In 2016 we invested €37 million (2015: €43 million) in measures to achieve a further improvement in environmental protection. The year-on-year decline was mainly due to the completion

of major investment projects such as the expansion of capacity for specialty silica in Ako (Japan) in 2015.

Operating costs for environmental protection facilities rose slightly to €292 million in 2016 (2015: €283 million).

#### T19 Environmental protection investment and operating costs

in€million	2012	2013	2014	2015	2016
Operating costs for environmental protection	251	250	259	283	292
Investment in environmental protection	39	29	107	43	37

b Reporting on specific water intake has been recalculated retrospectively. Based on our regular analytical verification—checks on random samples of reported data and audits—gaps in reporting in one organizational unit were identified and corrected.

# Climate change and emissions into the air

## **Energy inputs**

We regard responsible use of energy as equally important on ecological and economic grounds. We use a broad spectrum of technical and organizational measures to raise energy efficiency, including co-generation plants and expansion of integrated structures linking chemical production and energy generation. Third-party production facilities are included in these measures. We also consider using renewable energies. Important criteria for assessing whether we can include them

in our energy mix are reliability of supply and cost-efficiency. Many of our energy management systems meet the high standards of ISO 50001.

In our reporting, we distinguish between primary energy inputs, normally fossil fuels used to generate electricity and steam, and secondary inputs, i.e., purchased electricity and steam. We also use secondary fuels such as thermal processing of by-products from production, waste and sewage sludge. Substitute fuels accounted for around 9 percent of total energy inputs in 2016, the same proportion as in 2015.

# T20 Energy inputs

2012	2013	2014	2015	2016
32.72	31.74	32.93	35.48	37.96
23.93	22.38	23.69	19.86	15.84
0.27	0.20	0.18	0.23	0.24
7.42	7.96	7.62	7.75	7.71
18.98	18.59	18.45	19.38	19.17
11.77	12.50	12.31	12.41	11.60
6.18	5.15	6.34	6.59	6.27
10.51	8.26	8.00	7.92	7.83
89.48	86.03	89.23	89.29	87.20
67.20	65.27	68.92	68.95	67.76
9.71	10.06	10.35	10.36	10.58
6.92	6.49	6.66	6.66	6.40
	32.72 23.93 0.27 7.42 18.98 11.77 6.18 10.51 <b>89.48</b> <b>67.20</b> 9.71	32.72 31.74 23.93 22.38 0.27 0.20 7.42 7.96 18.98 18.59 11.77 12.50 6.18 5.15 10.51 8.26 89.48 86.03 67.20 65.27 9.71 10.06	32.72     31.74     32.93       23.93     22.38     23.69       0.27     0.20     0.18       7.42     7.96     7.62       18.98     18.59     18.45       11.77     12.50     12.31       6.18     5.15     6.34       10.51     8.26     8.00       89.48     86.03     89.23       67.20     65.27     68.92       9.71     10.06     10.35	32.72     31.74     32.93     35.48       23.93     22.38     23.69     19.86       0.27     0.20     0.18     0.23       7.42     7.96     7.62     7.75       18.98     18.59     18.45     19.38       11.77     12.50     12.31     12.41       6.18     5.15     6.34     6.59       10.51     8.26     8.00     7.92       89.48     86.03     89.23     89.29       67.20     65.27     68.92     68.95       9.71     10.06     10.35     10.36

a Including captive hydroelectric and solar power.

Alongside a large number of specific measures, the changes in Evonik's energy mix and the reduction in total energy inputs were driven principally by the replacement of a coal-fired power plant by a highly efficient gas and steam turbine plant in Marl (Germany). The slight reduction in the sale of power and steam to third parties was partly due to the shutdown of a third-party production facility at Marl Chemical Park and the associated change in the customer structure.

## Greenhouse gas emissions

Emitting greenhouse gases into the air is a side-effect of all production processes. Use of efficient technologies and production processes will help us achieve our goal of reducing specific greenhouse gas emissions by 12 percent by 2020 (reference base 2012 = 100).

The carbon footprint shows the volume of greenhouse gas emissions of a company, process or individual product in  $CO_2$  equivalents, in other words,  $CO_2$  and the other greenhouse gases defined in the Greenhouse Gas Protocol (GHG Protocol),  $CH_4$ ,  $N_2O$ ,  $SF_6$ , HFCs, PFCs and  $NF_3$ .

The standard used to report our greenhouse gas emissions is the GHG Protocol. This includes direct  $CO_2$  emissions (Scope 1 emissions) from energy generation and production, and indirect  $CO_2$  emissions (Scope 2 emissions) from purchased energy. Together with other greenhouse gases, the total is expressed as  $CO_2$  equivalents.

b Differences between the data and totals are due to rounding differences.

The environment

Scope 2 emissions were calculated in the past using the location-based method, which includes regional emission factors. Since 2015, the majority of our sites around the world have also calculated Scope 2 emissions using the market-based method, which takes account of the specific emissions of individual suppliers and market participants. This enhances accuracy and also enables us to meet the requirements of the GHG Protocol. In some cases, the data available is not sufficient for this method. We therefore use established factors

from the International Energy Agency in certain cases. To ensure comparability, for 2016 the  $\mathrm{CO}_2$  contribution to Scope 2 emissions is therefore reported using both methods. In addition, we have recalculated our Scope 2 emissions retroactively from 2012 using the market-based method. These data are used to determine the specific GHG emissions for our  $\mathrm{CO}_2$  target. The new method covered more than 95 percent of our power-related Scope 2 emissions in 2016, and around 77 percent of external steam inputs.

#### T21 Greenhouse gas emissions

Changes compared with the reference year (2012) in %	100	93	92	89	83
<b>Specific greenhouse gas emissions, net (market-based)</b> in metric tons CO <sub>2</sub> equivalents per metric ton production	0.72	0.67	0.66	0.64	0.60
Production in million metric tons	9.71	10.06	10.35	10.36	10.58
CO <sub>2</sub> net <sup>c</sup> (market-based)	1,025	882	909	1,011	1,004
CO <sub>2</sub> net <sup>c</sup> (location-based)	973	859	966	1,058	1,009
CO <sub>2</sub> gross (market-based)	4,220	3,996	3,967	4,189	4,084
CO <sub>2</sub> gross (location-based)	3,126	2,925	3,003	3,156	3,068
Scope 2 <sup>b</sup>					
Total	5,964.0	5,875.3	5,933.7	5,593.2	5,380.2
Fluorinated hydrocarbons (HFC)	7.0	6.3	8.1	3.6	3.2
Dinitrogen oxide (N₂O)	63	130	66	50	53
Methane (CH <sub>4</sub> )	14	14	14	14	12
Carbon dioxide (CO <sub>2</sub> )	5,879	5,725	5,846	5,525	5,312
Scope 1					
in thousand metric tons CO <sub>2</sub> equivalents <sup>a</sup>	2012	2013	2014	2015	2016

Differences between the data and totals are due to rounding differences.

Greenhouse gases are clearly dominated by  $CO_2$  emissions. In line with Evonik's fuel mix, most Scope 1  $CO_2$  emissions (72 percent) are due to the combustion of coal and natural gas. Due to the structural modernization of the power plants in Marl (Germany), the proportion of coal-based  $CO_2$  emissions at Evonik declined to 28 percent in 2016 (2015: 33 percent), while the proportion of gas-based  $CO_2$  emissions increased to 44 percent (2015: 39 percent). The high fuel efficiency (89 percent) of the state-of-the-art gas and steam turbine power plant in Marl and realization of specific measures to raise energy efficiency resulted in far lower greenhouse gas emissions in 2016. Both gross and net greenhouse

gas emissions declined by 3 percent despite a slight rise in output. Relative to output, net greenhouse gas emissions were 6 percent lower than in the previous year.

The 30 European facilities operated by Evonik that fall within the scope of the European Union's Emissions Trading System (EU ETS), 1 emitted 3.7 million metric tons of  $CO_2$  in 2016. The reduction of 0.3 million metric tons  $CO_2$  compared with 2015 was mainly due to the new gas and steam turbine power plant in Marl (Germany).

<sup>&</sup>lt;sup>a</sup> GWP factors: CO<sub>2</sub>: 1, N<sub>2</sub>O: 310, CH<sub>4</sub>: 21, HFC: 140 – 11,700.

b Recalculated from 2012 using the market-based method of calculating Scope 2 emissions to ensure comparability.

<sup>&</sup>lt;sup>c</sup> Total Scope 2 = Power and steam sourced externally less power and steam supplied to third parties. The table shows the CO<sub>2</sub> emissions associated with the purchase of electricity and steam as both gross and net values. The net figure shows the position after subtracting electricity and steam production for third parties from total inputs. That enables us to eliminate the proportion of energy-related CO<sub>2</sub> emissions attributable to third parties at our large multi-user sites and generate company-specific indicators.

<sup>&</sup>lt;sup>1</sup> In the management report in the Annual Report 2016 the number of plants covered by the European Emissions Trading System is given as 27 because the four power plants at Marl Chemical Park in Germany are managed as a single complex.

Responsible use of energy is a priority at all of our sites on ecological and economic grounds. We therefore constantly strive to make the provision of energy more efficient, improve energy generation still further, and optimize the structure of our integrated energy management systems. Our commitment in this area is shown by the fact that many of our sites have obtained or are preparing to obtain validation under ISO 50001, a global standard for energy management systems. As well as reducing pressure on resources by using co-generation plants at several of our large sites, we have established many integrated structures linking chemical production and energy generation. For example, large amounts of steam generated in exothermic processes at various production facilities are supplied to other plants via steam networks. This reduces steam production in our power plants, which in turn reduces consumption of fossil fuels. Another example is the use of liquid and gaseous by-products from production as substitute fuels for energy generation. These include hydrogen and propene from the production of prussic acid, acrolein and acrylic acid. We also generate steam from the exhaust heat from various incineration plants for waste, sewage sludge, exhaust gases and wastewater.

Apart from  $CO_2$  emissions from fuels, only  $N_2O$  emissions (expressed in greenhouse gas equivalents) are of significance at Evonik. Although they account for less than 1 percent of total GHG emissions, fluctuations in these emissions are not insignificant for the overall development of our GHG emissions because of their high greenhouse gas potential.  $N_2O$  is only emitted by a few production processes and measures have been implemented to reduce these emissions.

# Evonik Carbon Footprint<sup>1</sup>

By paying special attention to the distribution of emissions among the various sources along the value chain, we are able to provide an extensive overview of greenhouse gas emissions—from the extraction of raw materials through production to disposal of the products. These data have been reported since 2008.

The key parameter is the carbon footprint (CO<sub>2</sub>eq footprint). The table below shows the development of greenhouse gas emissions for Evonik's products, based on the confirmed data for 2015, excluding the usage phase. The data cover Evonik's direct energy and process emissions (Scope 1), emissions from purchased electricity and heat (Scope 2), and categories 1, 2, 3, 4, 5, 6, 7, 8, 9 and 12 from Scope 3. These include emissions from the production of purchased raw materials, packaging materials, capital goods, energyrelated emissions outside Scope 1 and 2, emissions from inbound transportation of raw materials, from the disposal of production waste, business trips, commuting by employees, Evonik's fleet of vehicles, energy requirements for offices, and emissions from the disposal and recycling of products sold. The reported data exclude, among other things, the usage phase of Evonik's products.

The reduction in greenhouse gas emissions shown by the Evonik Carbon Footprint from 25.7 to 24.7 million metric tons  $CO_2$ eq between 2014 and 2015 is principally due to the routine updating of emissions factors. This takes place every two years and resulted in a reduction in emissions this time. As a consequence, emissions from purchased raw materials decreased despite a slight rise in volumes. Moreover, the updated emissions factors resulted in a reduction in emissions from waste disposal and the disposal of purchased products.

## T22 Change in greenhouse gas emissions along Evonik's value chain<sup>a</sup>

in million metric tons	2011	2012	2013 <sup>b</sup>	2014	2015
CO <sub>2</sub> eq emissions	22.9	22.2	23.4	25.7	24.7

<sup>&</sup>lt;sup>a</sup> Core specialty chemicals business (excluding the usage phase and the carbon black activities, which were divested in 2011).

b Compared with the data for 2011 and 2012, the reporting threshold contains two additional Scope 3 categories from 2013 and three additional categories from 2014.

<sup>&</sup>lt;sup>1</sup> The updated figures for 2016 will be published in summer 2017 in our brochure "Evonik Carbon Footprint". Therefore, the figures here relate to 2015.

The distribution of the various categories along Evonik's value chain is shown in the next table.

## T23 Greenhouse gas emissions along Evonik's value chain a

in million metri	c total CO <sub>2</sub> eq	2015
Scope 1	Evonik production facilities	5.6
Scope 2 net, market-based	Purchased energy (net, total purchased power and steam—sale of power and steam to third parties)	1.0
Scope 3	Category 1: Purchase of chemical raw materials, packaging materials and indirect goods	9.3
	Category 2: Capital goods	0.5
	Category 3: Energy-related activities (outside Scope 1 and 2)	0.7
	Category 4: Inbound shipments of chemical raw materials	0.4
	Category 5: Disposal and recycling of waste	0.4
	Category 6: Business trips by employees	0.04
	Category 7: Commuting by employees	0.1
	Category 8: Leasing of goods, upstream (company cars, power and heating requirements for offices)	0.02
	Category 9: Outbound shipments of products	0.5
	Category 12: Disposal and recycling of products	6.2
Total		24.7

<sup>&</sup>lt;sup>a</sup> Core specialty chemicals business (excluding the usage phase).

## CO<sub>2</sub>eq avoided by using Evonik products

Evonik markets a variety of products whose use makes a positive contribution to reducing greenhouse gas emissions compared to conventional alternatives. The avoidance of greenhouse gases shown here results from applications for the following five products: "green" tire technology, amino acids for animal nutrition, foam stabilizers for insulating materials, specialty oxides for energy-saving light bulbs, and oil additives for hydraulic fluids. The amounts stated are avoided over the usage life cycle of the products, based on volume sales of the products manufactured by Evonik in the year given. The method used to compile the data is the WBCSD Avoided Emissions Guidance published in October 2013.

The increase in avoided emissions between 2011 and 2013 was mainly due to an increase in sales volumes. The significant increase in avoided greenhouse gas emissions in 2014 was essentially due to a modified data basis for amino acids in animal nutrition. The underlying life cycle analysis was updated in 2014. In the recalculation process, production data for amino acids and the production of representative feed formulations were adjusted. In addition, an increase in sales volumes of other products increased avoided greenhouse gas emissions in 2014.

Despite higher output in 2015, avoided greenhouse gas emissions were around the same as in 2014. This was mainly because the underlying life cycle analysis for "green" tires was updated in 2015, resulting in lower specific avoidance of greenhouse gases.

#### T24 Greenhouse gas avoidance during the application life cycle

in million metric tons	2011 <sup>a</sup>	2012 a	2013	2014	2015
CO <sub>2</sub> eq avoided <sup>b</sup>	57.3	60.4	61.2	92.5	92.2

<sup>&</sup>lt;sup>a</sup> The data for 2010 to 2012 have been recalculated and adjusted retroactively on the basis of the WBCSD Avoided Emissions Guidance.

b Basis: selected Evonik products in the year under review.

SUSTAINABILITY REPORT 2016

# Carbon Disclosure Project—Climate reporting at a high level

Evonik constantly strives to improve its reporting on key environmental indicators and is engaged in intensive exchange with rating agencies such as the Carbon Disclosure Project. The CDP compiles detailed annual data on the greenhouse gas emissions and energy consumption of companies worldwide. It also evaluates the opportunities and risks of climate change for their business activities and how the management takes them into account in its strategy. The CDP currently meets the information needs of more than 800 institutional investors with assets under management of over US\$100 trillion. The investors use the data to derive a climate risk profile for the companies, which they then use in their investment decisions.

In 2016, we were able to build on the very good results obtained in 2015. With a score of "A-" for climate change reporting, Evonik attained the status of an index/country leader in the MDAX, which positions it among the top 15 percent of the MDAX companies.

#### Other emissions into the air

Alongside emissions of greenhouse gases as reported above, energy generation and industrial production result in further emissions into the air. Our goal is a further reduction and greater control of such emissions. To achieve this, we use a range of technical and organizational measures. Our environmental management systems set the framework for us to achieve the statutory thresholds. Relevant sources of emissions are constantly monitored in accordance with statutory requirements. Our production and exhaust gas treatment facilities are fitted with emissions monitoring devices. Action includes returning exhaust gases to production processes and thermal processing of residual gases with a high calorific value as a substitute for natural gas. We also take the emissions profile into account through state-of-the art technical design and planning of new facilities.

T25 Other emissions into the air

in metric tons	2012	2013	2014	2015	2016
Carbon monoxide (CO)	1,017	1,066	1,053	889	1,057
Sulfur oxides (SO <sub>X</sub> /SO <sub>2</sub> )	3,652	3,215	3,052	2,424	2,297
Nitrogen oxides (NO <sub>X</sub> /NO <sub>2</sub> )	4,963	4,734	4,739	4,478	4,528
Non-methane volatile organic compounds (NMVOC)	1,019	951	835	661	701
Particulates	441	363	366	257	359
Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn)	1.38	1.41	1.58	0.15	0.23
Emissions of ozone-depleting substances <sup>a</sup>					
in metric tons CFC-11 equivalents	0.05	0.07	0.09	0.16	0.07

a Ozone depletion potential (ODP) is a relative parameter indicating how dangerous substances are for the ozone layer compared with the reference substance, fluorinated hydrocarbon R11 (trichlorofluoromethane).

SO<sub>x</sub> emissions predominantly come from energy generation and the recycling of sulfuric acid. The decline in 2016 was mainly due to the replacement of a power plant block in Marl (Germany) by a new gas and steam turbine power plant with lower emissions. Although coal inputs at the power plants were lower overall, heavy metal emissions increased as a result of the different composition of imported coal. This was the reason for the Group-wide increase in emissions of heavy metals 2016. NO<sub>x</sub> emissions increased slightly in 2016, largely due to the rise in coal inputs as a result of higher production output in Nanping (China), and changes in the fuel mix in Hanau (Germany). Changes in the product mix, higher output and one-off factors were the principal reasons for the rise in NMVOC and particulate emissions in 2016.

## Water management

We are committed to responsible use of water, want to save water wherever possible and achieve a further reduction in our emissions into water. A good water supply is crucial for smooth production processes because water is one of the most important auxiliaries used in the chemical industry. Our goal is to reduce specific water intake, i. e., intake per metric ton of output, by 10 percent by 2020 (reference base 2012 = 100). We take into account surface water, groundwater and drinking water to reflect the special significance of freshwater.

Evonik mainly uses water for cooling and for process purposes in production facilities, to generate steam in power plants, and for sanitary requirements. To reduce the use of freshwater, we have established integrated supply systems with graduated water qualities. For example, we use water that is no longer suitable for cooling purposes to rinse filters or in industrial cleaning processes. In addition, the water that evaporates from cooling circuits is often replaced by condensate or recycled drinking water. In accordance with ISO 14046, the intake of sea water for cooling purposes at our methionine facility in Singapore is not taken into account in our overview of our water footprint; however, it is reported separately.

Consumption of freshwater dropped substantially, by 10 percent, from 474.6 to 429.1 million m³ in 2016. This was mainly because a coal-fired power plant block in Marl (Germany) was replaced by a modern gas and steam turbine power plant. Unlike its predecessor, the new plant is cooled using a closed-circuit system with recooling facilities. Similarly, at the site in Kaba (Hungary), once-through cooling was replaced by closed-circuit cooling, thus saving freshwater.

The sea water required for once-through cooling of our world-scale DL-methionine plant in Singapore increased significantly in 2016 because—unlike 2015—this was the first full year of operation.

## T26 Water intake by source

in million $m^3$	2012	2013	2014	2015	2016
Drinking water <sup>a</sup>	18.2	18.4	19.2	18.5	18.1
Groundwater	84.7	77.7	80.9	80.1	75.8
Surface water	313.9	315.0	394.9	371.8	331.6
Recycling of water from third parties & use of rainwater	4.0	2.9	2.6	4.3	3.4
Total freshwater <sup>b</sup>	420.9	413.9	497.6	474.6	429.1
Salt water (sea water)	_	_	_	41.9	130.9
Total	420.9	413.9	497.6	516.5	560.0
Production in million metric tons	9.71	10.06	10.35	10.36	10.58
<b>Specific water intake</b> <sup>c</sup> in m <sup>3</sup> freshwater per metric ton production	41.2	39.2	46.3	43.9	38.7
Changes compared with the reference year (2012) in %	100	95	112	107	94

Differences between the data and totals are due to rounding differences.

About 77 percent of the freshwater used in 2016 was surface water, mainly from rivers. Just under 1 percent comprised recycled water and rainwater.

Most of our total water intake (around 96 percent) is used for cooling purposes in energy generation and production. For this, we mainly use surface water and sea water. Around 67 percent of the groundwater intake is also used for cooling.

Water used in closed cooling circuits is included when calculating the proportion of total water that is used for cooling. In 2016, nearly 72 percent of cooling of production facilities used closed-circuit systems with recooling facilities. The remainder were cooled using once-through systems. Only 4 percent of the freshwater used is required for production purposes.

#### T27 Water discharge

	2012	2012	2011	2015	
in million m <sup>3</sup>	2012	2013	2014	2015	2016
Once-through cooling water <sup>a</sup>	340.7	339.4	419.5	445.2	494.3
Process water (including drinking water and					
water from sanitary installations) <sup>b</sup>	55.4	54.6	55.3	54.0	53.0
Total	396.1	394.0	474.8	499.2	547.3

Figures for 2012-2015 recalculated.

<sup>&</sup>lt;sup>a</sup> Water from municipal or other utilities.

b The water data for 2012–2015 have been recalculated. Based on our regular analytical verification—checks on random samples of reported data and audits—gaps in reporting in one organizational unit (mainly once-through and closed-circuit cooling water) were identified and corrected.

<sup>&</sup>lt;sup>c</sup> Excluding water for remediation purposes.

a Including salt water.

b Direct and indirect discharge and water sold to third parties.

The difference between water intake and once-through cooling water is due to the use of water, among other things, to produce steam, in production, to cover evaporation losses and as process water. In 2016 the difference was 65.7 million m<sup>3</sup> (2015: 71.3 million m<sup>3</sup>).

#### **Emissions into water**

Our sites aim to make a contribution to protecting natural water resources. The basic principles of the management of our industrial wastewater are the same as for waste management: "avoidance before reuse/recycling before disposal." When planning new production plants, we therefore consider the use of processes that generate little or no wastewater. That takes pressure off the environment and reduces the cost of water treatment. We continue these efforts in the operational phase. We also have high technology standards and infrastructure for the disposal of wastewater at our sites.

Production effluent undergoes multi-step chemical and physical treatment in our wastewater treatment facilities. Separate drainage systems prevent production effluent and cooling water becoming mixed. This means that cooling water can be discharged into rivers with rainwater without treatment. We have also built high-performance collector systems as part of our water protection measures. These are used for intermediate storage of peak wastewater loads which could overburden the wastewater treatment facilities. In this way, wastewater can subsequently be fed gradually to the treatment plants. We also incinerate some sewage sludge in our own facilities, and use the heat from the resulting incineration gases to generate steam. Wastewater discharged from our sites is carefully monitored by regular sampling and continuous measuring equipment. In addition to in-house monitoring, we are subject to supervision by the authorities in the form of unannounced control visits to verify compliance with discharge limits.

T28 Wastewater loads a

in metric tons	2012	2013	2014	2015	2016
Chemical oxygen demand (COD)	4,787	4,767	4,302	4,808	4,633
Total nitrogen (N)	447	469	441	434	418
Total phosphorus (P)	96	97	95	84	107
Adsorbable organic halogen compounds (AOX)	1.8	1.7	1.9	1.7	1.9
Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn)	5.5	5.1	5.1	5.6	5.6

<sup>&</sup>lt;sup>a</sup> The data on wastewater loads comprise all direct discharges into receiving water and proportionate indirect discharges.

Chemical oxygen demand (COD) accounts for the highest proportion of wastewater loads. This is the concentration of all substances in the wastewater that can be oxidized under certain conditions. The reduction in the COD and total nitrogen loads was mainly attributable to local production fluctuations and to process optimization. The increase in the total phosphorus load (phosphates expressed as phosphorus) was principally due to an increase in the use of phosphoric acid as a product stabilizer.

The rise in adsorbable organic halogen compounds (AOX load) is essentially within the analytical variation for the measuring method because in many cases the values obtained are only slightly above the detection threshold. Heavy metal emissions were unchanged from the prior-year level.

# Waste management

In line with sustainable development, we are constantly endeavoring to improve waste integration and material flow management. The following priorities have been set for waste management at Evonik: The first priority is to avoid waste through continuous process improvements and by extending integrated production systems. If this is not possible, waste should be recycled or used to generate energy, and as a last resort, it should be disposed of safely.

SUSTAINABILITY IN 2016

We use catalysts to increase yields and reduce side reactions. Integrated material flows also make a contribution. The benefits of integrated production sites and systems are also used for systematic waste management, for example in Marl (Germany), which is our largest site. Here, hydrocarbon residues are used as a substitute for heating oil in the synthesis gas plant, and waste sulfuric acid in the sulfuric acid plant is reprocessed. Sewage sludge can also be reused within the

integrated production structure. Dewatering is followed by thermal reprocessing by incinerating it in a separate incineration plant with integrated flue gas treatment. Some of the exhaust gases from the production plants are used as substitute fuels in this process. The incineration gases are then used to generate 20 bar steam. To conserve resources, at many of our sites we use substitute fuels such as liquid residues from production processes.

T29 Waste<sup>a</sup>

in thousand metric tons	2012	2013	2014	2015	2016
Hazardous production waste	227	218	212	213	227
of which reprocessed	138	137	131	132	133
of which disposed of	89	81	81	81	94
Non-hazardous production waste	160	152	156	153	124
of which reprocessed	104	104	110	93	71
of which disposed of	56	48	46	60	53
Hazardous building and demolition rubble	32	23	19	8	14
of which reprocessed	4	3	6	2	5
of which disposed of	28	20	14	6	9
Non-hazardous building and demolition rubble	96	97	109	82	73
of which reprocessed	65	64	87	62	50
of which disposed of	31	33	22	20	23
Total	515	489	497	455	438

<sup>&</sup>lt;sup>a</sup> Differences between the data and totals are due to rounding differences.

The total amount of waste decreased by 3 percent from 455,000 metric tons to 438,000 metric tons in 2016, but the development differed by category. Hazardous production waste was 7 percent higher than in 2015 due to expansion of capacity, new facilities, and increased disposal of sewage sludge. However, relative to output, hazardous production waste in 2016 was 9 percentage points lower than in 2012

(2012 = 100 percent). By contrast, the amount of non-hazardous production waste was 29,000 metric tons lower than in 2015. Considerably less recyclable biomass waste was recorded. This was primarily attributable to a drop in demand for certain products.

Building and demolition rubble can fluctuate considerably between years because it depends on specific projects. In 2016 it declined by 3,000 metric tons (3 percent).

T30 Waste management

			-	-	
in thousand metric tons	2012	2013	2014	2015	2016
Incineration with recycling of heat energy	68	66	63	64	58
Disposal by incineration	84	84	90	81.5	93
Recycling (including composting)	181	185	224	176	127
Landfill	58	51	31	46	50
Chemical/physical/biological treatment	24	18	19	7	16
Other disposal methods	37	30	23	21	20
Other reprocessing methods	63	56	47	61	75
Total <sup>a</sup>	515	489	497	455	438

<sup>&</sup>lt;sup>a</sup> Differences between the data and totals are due to rounding differences.

The percentage of waste reprocessed comprises recycled substances, incineration with recycling of heat energy, and other disposal methods. In 2016 it declined by 7 percentage points year-on-year to 59 percent, mainly because of the reduction in biomass waste. Evonik develops methods of recycling waste in accordance with the statutory framework. For example, we recycle or re-use precious metal catalysts and industrial packaging.

# **Biodiversity**

Many of our sites are adjacent to conservation areas. In principle, the industrial premises used by Evonik do not include any natural habitats (either protected or restored).

T31 Evonik sites adjacent to conservation areas<sup>a</sup>

Evonik site	Country	Area in km²	Use	Status of conservation area (adjacent)
Gramatneusiedl	Austria	0.050730	Production	92/43/EEC area
Hanau	Germany	0.776949	Production	92/43/EEC area
Lülsdorf	Germany	1.035502	Production	92/43/EEC area
Marl	Germany	8.029755	Production	92/43/EEC area
Wesseling	Germany	0.328367	Production	92/43/EEC area
Americana	Brazil	0.300699	Production	national
Etzen-Gesäß	Germany	0.039277	Production	national
Lenzing	Austria	0.003585	Production	national
Mobile	USA	6.772000	Production	national
Morrisburg	Canada	1.318957	Production	national
Portland	USA	0.012060	Production	national

<sup>&</sup>lt;sup>a</sup> As of 2015.

In 2015, five sites were adjacent to conservation areas that are protected by the European Union's Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC). Six further sites are adjacent to conservation areas that are regulated by country-specific legislation. The next update of these data is scheduled for 2017.

Our site in Mobile (Alabama, USA) is close to the Fowl River. Members of the local management team belong to the Fowl River Forever steering committee that is working on a plan to protect the water quality. All stakeholders are involved in order to describe the present situation, identify problems, define targets, and develop strategies. As members of the steering committee, Evonik employees met with stakeholders several times in 2016 and played a part in shaping the planning process.

A 4 km² wildlife habitat area borders our site in Lafayette (Indiana, USA). Every year, Evonik organizes a butterfly encounter in collaboration with the Purdue University Department of Entomology. The general public is invited to identify and photograph regional butterflies. Entomologists also discuss the significance of the habitat for protecting endangered species and other aspects of biodiversity. Purdue University publishes an annual report on the results of the species count in the Evonik Wildlife Habitat Area.

An Evonik product for the treatment of ballast water makes a practical contribution to maintaining biodiversity. Modern cargo ships take up to 100,000 metric tons of ballast water on board to minimize the risk of capsizing during the voyage. In this way, many foreign organisms get into local ecosystems. This can cause a dramatic reduction in the original local biodiversity, resulting in economic, ecological and health problems.

Our scientists have developed the PERACLEAN® Ocean process to remove potential foreign organisms. The active substances decompose into substances that are ecologically safe so the treated ballast water can be discharged without damaging ecosystems. Extensive testing in normal shipping operations started in 2016. All international tests will be completed by mid-2017 and type approval by the US Coast Guard is expected for early 2018.

#### rargets

- Reduce specific greenhouse gas emissions by 12 percent in 2013–2020
- Reduce specific water intake by 10 percent in 2013–2020
- · Reduce hazardous production waste



Safety and health protection are top
of our agenda. They have the highest priority,
even before sales and profits. Protecting
the health and employability of our employees,
and preventing accidents and incidents at work,
in the operation of our production facilities,
during transportation and on the way to
and from work are of central importance to
Evonik. The Safety at Evonik initiative is firmly
established throughout the Group as part of
our safety culture. In this way, we provide clear
and measurable guidance for the personal conduct
of our employees to prevent accidents and ensure
the highest standards of safety.

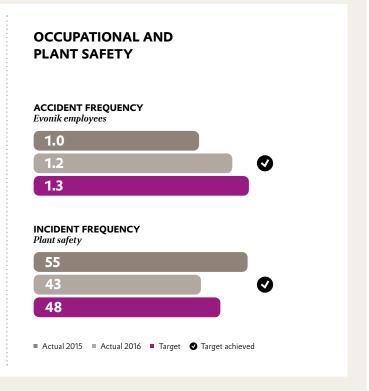
# TARGETS

### Product stewardship

We have set the following global targets for product stewardship up to 2020:

- Risk estimate for >99% of substances placed on the market in quantities of >1 metric ton p. a.
- Make GPS Safety Summaries available
- Conduct a far-reaching assessment for all products containing > 0.1% hazardous chemicals of high concern (hChC)

# TRANSPORTATION SAFETY 4.0 million metric tons (2015: 5.5 million metric tons) Outgoing shipments of hazardous goods 4.1 million metric tons (2015: 3.4 million metric tons) Outgoing shipments of other goods 0 (2015: 0) Transportation accidents HEALTH PROTECTION Health ratio 95.3% (2015: 95.4%) Occupational Health Performance Index 5.3 5.5 Long-term target ≥ 5.0



### Page Topic | GRI indicators

- Occupational and plant safety | G4-14, G4-16, G4-EN26, G4-EN27, G4-EN30
- 72 Health protection
- 74 Transportation safety and logistics | G4-LA5, G4-LA6, G4-LA7, G4-LA8, G4-PR1
- 75 Product stewardship | G4-PR3, G4-SO2

### Occupational and plant safety

Safety and health protection have priority over sales and profits at Evonik. This is confirmed by our materiality analysis and regular discussions with our stakeholders. Protecting the health and employability of our employees, and preventing accidents and incidents at work, in the operation of our production facilities, during transportation and on the way to and from work are of central importance to Evonik. We take an all-round approach to safety, covering employees, their working situation, products and the general working environment.

In the Evonik Group this is ensured by globally valid policies and operating procedures that are firmly anchored in an integrated management system. Observance of these rules is monitored via a central audit system. At operational level, businessspecific implementation is defined by the segments. Steering bodies at Group level ensure that mission-critical processes are implemented across the segments (see "The environment", Structure of the ESHQ steering bodies, page 59).

We analyze incidents carefully so we can learn from them. The lessons learned are communicated in our regular global newsletter "Learning from one another", which reports on topical safety issues. Our binding targets and key performance indicators are used to check implementation of the requirements and identify the need for further action. The relevant parameters are accident frequency as a measure of occupational safety and incident frequency as an indicator of plant safety.

Our crisis and incident management ensures that in the event of accidents and incidents everything is done to prevent and limit damage. We also play an active part in the relevant national and international associations.

The Safety at Evonik initiative is firmly established throughout the Group as a fundamental management approach geared to implementing a safety culture in all areas of occupational and transportation safety. In 2014 we developed binding principles of action, which are grouped in four themes. They define the appropriate behaviors and provide clear and measurable guidance for the personal conduct and leadership of all groups of employees, from local personnel to our management. All employees worldwide receive training in this.

### Occupational and plant safety in 2016

To review the effectiveness of our safety culture, we asked our employees for feedback by including a special safetyrelated set of questions in our Group-wide employee survey G4-26 in 2015. The results were available at the start of 2016 and were intensively analyzed and discussed within the Group.

They showed that safety is well-established as a topic throughout the Group and is regarded as very important. No significant differences were identified between the various Evonik locations. Potential was identified for communication and involving employees in work on safety issues. To improve these aspects, we have introduced a new Safety at Evonik Toolbox to give our plants access to best practices from around the Group. Practical work with the toolbox is planned for 2017.

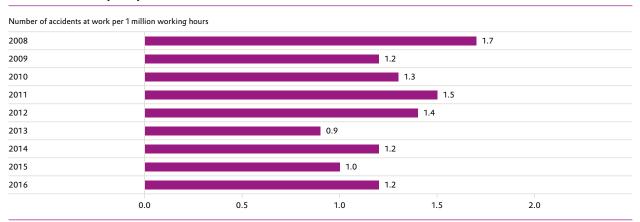
We stepped up process safety by integrating the Global Process Safety Competence Center (GPSC) into the Technology & Infrastructure unit. A new risk matrix has been developed as a central measure. This defines a uniform procedure for technical process safety analyses. To guarantee a uniformly high standard for safety concepts on preventing the release of substances, fires and explosions around the world, analyses are systematic and risk-based. Support is provided by selected, experienced safety experts from the GPSC and the Global Safety Expert Network, which is under the functional leadership of the GPSC.

### C24 Framework of the safety culture

The behaviors are linked—supporting each other through four common themes across the three groups of employees

Theme	Everyone	Supervisors	Managers
Standards	Follow rules	Ensure compliance	Set high standards
Communication	Speak up	Encourage the team	Communicate openly
Risk management	Be mindful	Promote risk awareness	Confront risk
Involvement	Get involved	Involve the team	Involve the workforce

### C25 Accident frequency indicator



### Accident frequency deteriorated but was below the ceiling set

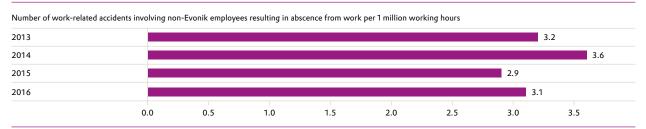
Our focus on the safety of employees covers safety on the way to and from work as well as safety at work. Contractors' employees working at our sites are also included. In 2016, we achieved our target with an accident frequency rate<sup>1</sup> of 1.2 for Evonik employees. That was within our defined maximum limit of 1.3, but a slight deterioration compared with the previous year (1.0). Discussing the accidents provided valuable pointers for developing and communicating accident prevention measures for the future.

There were no fatal accidents at work involving our employees or contractors' employees at our sites in the reporting period, nor were there any fatal traffic accidents involving employees on the way to or from work or on business trips.

Safety

The accident frequency indicator for contractors (number of work-related accidents involving non-Evonik employees resulting in absence from work per 1 million working hours) increased slightly year-on-year to 3.1 (2015: 2.9).

### C26 Accident frequency indicator, contractors' employees



### Improvement in the incident frequency indicator

Process safety at our plants is another focus of our global safety initiative. The concepts to prevent fire and the release of hazardous substances are regularly analyzed in detail. The aim is timely identification of risks so we can implement appropriate measures to prevent the risks-complemented

by reliable concepts for protection. We monitor and evaluate plant safety using the incident frequency indicator,<sup>2</sup> which covers incidents involving the release of substances, fire or explosion, even if there is little or no damage (process safety performance indicator defined by the European Chemical Industry Council, Cefic).

<sup>1</sup> Number of accidents involving Evonik employees per 1 million working hours. This figure includes accidents involving contractors' employees under Evonik's direct supervision.

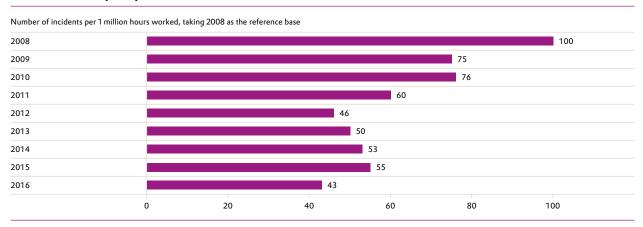
<sup>&</sup>lt;sup>2</sup> Number of incidents per 1 million hours worked in the production facilities operated by the segments, taking 2008 as the reference base (expressed in percentage points: 2008 = 100).

This indicator improved considerably to 43 points in 2016 (2015: 55), and was also well within our ceiling of a maximum of 48 points. The measures taken in 2015 and 2016 are therefore having an effect. In particular, we will be stepping up the process safety measures introduced in 2016 to support the positive development in 2017 as well.

Another common indicator of plant safety is often used in external comparisons. This is defined as the number of incidents per 1 million hours worked by all employees in the Group. Evonik's performance rated by this indicator was 1.0 (2015: 1.3).

### C27 Incident frequency indicator

SUSTAINABILITY REPORT 2016



### **Targets**

- · We set annual limits for the occupational safety and plant safety indicators. For 2017 these are:
  - Accident frequency rate: max. 1.3
  - Incident frequency, taking 2008 as the reference base: max. 48
- In addition, we want to revise our management development concept on safety and align it to the new requirements

### Health protection

Global management of health protection and promotion at Evonik takes a long-term, holistic approach, covering employees, the working situation, products and the general working environment. This approach includes high-quality medical care where necessary, applying ergonomic and health-related measures to structure working conditions, and a functioning emergency management system at plant level. In addition, we offer a selective range of health promotion measures, which are bundled in the Group-wide well@work initiative. In this way, we help our employees adopt a healthy lifestyle.

The key objectives and aspects of our occupational health strategy are described in the Evonik Guidelines for Health Protection and Promotion. The corporate policy Occupational Health and Health Promotion sets binding worldwide standards for assessing health hazards, occupational medicine, emergency medical response, preventive check-ups, workplace ergonomics, rehabilitation and reintegration, health promotion in the workplace, and dealing with alcohol and drug abuse.

There are works agreements on health topics at many of our sites, especially in Germany. In line with statutory requirements, at our German sites we have Occupational Safety Committees that meet at least four times a year to discuss issues relating to occupational safety and the protection of health. They are composed of employer and employee representatives, safety specialists, safety officers and occupational medicine specialists, and cover more than 99 percent of our employees in Germany. There are also comparable bodies at sites outside Germany.

Fulfillment of the requirements is checked regularly by corporate audits and regional environment, safety and health (ESH) audits, and through an extensive occupational health reporting system. Action is taken if there are indications of scope for improvement or deviations from the applicable guidelines. Where necessary, improvements are suggested or required. As an overriding indicator, we have established an Occupational Health Performance Index.

Safety

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### **Emergency medical management**

The Group-wide standard on Medical Incident and Emergency Management defines binding basic requirements for emergency medical management at Evonik's sites. The exact equipment and human resources required at each site depend on production-related risks and the availability and quality of local infrastructure (e.g., emergency services and hospitals).

Specific procedures have been defined for accidents where employees come into contact with chemicals and require special medical treatment. Emergency medical management also includes pandemic plans and regular training exercises. An extensive preventive program is in place for employees on business trips and foreign assignments, including a global emergency management system for medical problems and risks to personal safety.

### Workplace-related preventive healthcare

The results of our hazard assessment help us take suitable preventive measures to avoid work-related illnesses and health problems. Where we identify a heightened risk for specific employees, technical and organizational measures have priority over the use of personal protective equipment. Information and training of employees in risks and preventive measures play an important part in avoiding health impairments. At preventive medical check-ups, employees receive advice on their individual health risks and, where necessary, appropriate precautions.

Evonik regularly reports on occupational illnesses. The indicator used for this is the Occupational Disease Rate (ODR), which is defined as the number of newly identified cases of occupational illnesses per 1 million working hours. The calculation includes all cases recognized in the reporting period, including latent illnesses (i.e., those where the causes lie well in the past). The ODR was 0.36 in 2016 (2015: 0.30).

### The well@work company health management program

In the area of health promotion, Evonik supports long-term programs on exercise, diet, stress and work-life balance, substance abuse and avoiding infections. The aim is to encourage employees to adopt a healthy lifestyle. We also offer our employees fit-for-life seminars. These run over several days and focus on a healthy lifestyle and maintaining longterm well-being and employability.

In the intermediate term, we aim to establish programs in these five basic areas at all sites. There are already health promotion offerings and measures of various types at almost all sites around the world.

These basic programs are supplemented by campaigns, which concentrate on different topics each year, and general medical check-ups to screen for treatable risk factors and diseases. The combined focus of the campaigns at our German sites in the reporting period were diabetes, breast cancer and early diagnosis of breast cancer, and eyes and eye diseases. The North America region also ran a region-wide campaign on the prevention and early diagnosis of diabetes.

At all of our German sites there are interdisciplinary health task forces that concentrate on implementing health management as part of the Group-wide well@work initiative.

### Occupational Health Performance Index

The Occupational Health Performance Index comprises six parameters—two from each of the following areas: occupational medicine, health promotion and emergency medical management—which we consider especially significant for occupational health management. The index also takes account of the scope and quality of the measures implemented. It shows the extent to which internal requirements and targets have been implemented and enables us to measure progress in the area of occupational health and drive forward continuous improvement. The index is calculated annually. To maintain constant awareness of these issues, in 2016 we decided to define a long-term annual target of  $\geq 5.0$ for this index. In 2016 the performance index was 5.5 compared with 5.3 in 2015 (maximum: 6.0).

The Occupational Health Performance Index is currently calculated for 64 sites around the world, which employ 87 percent of Evonik's workforce. For Germany, we also calculate a health ratio, which was 95.3 percent in 2016 (2105: 95.4 percent). This is the ratio of target working hours less sickness-related hours lost to target working hours.

### **Targets**

- Occupational Health Performance Index ≥ 5.0
- Inclusion of further sites in the calculation of this index (15 in three years)

### Transportation safety and logistics

Safe transportation of goods is extremely important for us. We use a uniform process to select logistics service providers for transportation. We also regularly review their performance. In keeping with our understanding of sustainability, that includes evaluating the Responsible Care® performance of all transportation providers. Our aim is to minimize risk at all stages, from loading through transportation to unloading. Risk assessment is an important tool for managing the risks involved in transportation.

The standards we set for the transportation of dangerous goods are even higher than the national and international regulations. In order to be registered by our logistics procurement unit for transportation, all logistics service providers have to recognize and acknowledge our requirements. These specify that, as well as ensuring safety, the transportation of goods must be sustainable, and the provider must meet its ecological as well as social responsibility and comply with all statutory provisions. Further, we have defined minimum requirements for customers who collect goods themselves or use their own logistics service providers.

In addition, Evonik maintains a close and constant dialogue with other chemical companies and with logistics service providers to draw joint lessons from incidents and recommend precautionary measures.

### Activities in 2016

Our regular truck inspection day, which is not pre-announced, contributes to a continuous reduction in safety shortcomings. For the third time, extensive checks were carried out on trucks at 13 sites. The checks included technical condition, personal protective equipment, securing of loads, labeling and drivers.

Safety and care also have top priority at interfaces between production (storage tanks) and transportation (tankers and containers). To avoid product spillages, which could result in accidents, environmental damage or traffic incidents, it is important to ensure that the numerous filling and emptying processes in our plants are carried out safely. A regular week-long campaign on safe filling and emptying processes is therefore held at our sites. Regular training of employees to raise awareness of hazardous goods and help them meet statutory requirements in the transportation of such goods is essential and forms an integral part of Evonik's safety culture.

Securing loads correctly is another important aspect. This covers both the operational process of physically securing loads and developing a strategy to harmonize and standardize the procedure for securing loads and the equipment required. The aim is to use certified equipment for all types of cargo

transport units on all means of transportation to ensure validated safety for everyone involved. In 2016 we introduced best practice workshops and thus established a uniform procedure for securing our products during transportation.

In addition, Evonik has started to implement the CTU Code.<sup>1</sup> This comes into force on December 1, 2018, along with the International Maritime Dangerous Goods Code, but is already mandatory for the transportation of dangerous goods in Germany.

Our experts analyze the transportation risks of products with elevated risk potential to identify and evaluate safety and environmental risks and introduce measures to minimize them. Transportation risk analyses are examples of how Evonik puts safe transportation into practice. Alongside a number of analyses in Germany and elsewhere in Europe in 2016, we conducted analyses in the USA, Mexico and China. The concept for analyzing supply chains includes the following points:

- · Identifying critical substances/products
- · Identifying supply chains to be analyzed
- Pre-assessment to evaluate supply chains
- Transportation risk analyses
- Monitoring "critical" supply chains and regions

### T32 Outgoing shipments of hazardous goods

in thousand metric tons	2015	<b>2016</b> <sup>a</sup>
Air	0.3	0.3
Ocean	384	410
Inland waterway	1,081	750
Rail	749	601
Pipeline	1,814	838 <sup>b</sup>
Road	1,502	1,426
Total	5,531	4,025

### T33 Outgoing shipments of other goods

in thousand metric tons	2015	<b>2016</b> <sup>a</sup>	
Air	3	3	
Ocean	898	1,106	
Inland waterway	22	103	
Rail	173	457	
Pipeline	16	40 <sup>b</sup>	
Road	2,326	2,369	
Total	3,438	4,078	

<sup>&</sup>lt;sup>a</sup> Excluding goods collected by customers.

b External shipments only.

<sup>&</sup>lt;sup>1</sup> CTU Code = Code of Practice for Packing of Cargo Transport Units (CTUs).

The data on the shipment of goods in 2016 differ from those in 2015 as a result of internal harmonization of reporting. As a consequence, goods collected by customers and internal shipments via pipeline are no longer included.

We are using tracking and tracing systems in selected pilot projects. As well as allowing complete monitoring of all stages in the transportation of hazardous goods, these systems can monitor pressure and product temperature, and respond to leaks. Safety-related data allow preventive action to be taken quickly to avoid transportation accidents.

We use uniform Responsible Care® criteria to evaluate transportation incidents. There were no reportable incidents in the shipment of goods in 2016.

In January 2016 we started to introduce a global transport management system in the Evonik Group. The benefits are more flexible planning and greater transparency of process workflows, bringing greater flexibility for our customers as well. At the same time, freight, process and network costs can be reduced.

### Sustainability in transportation and logistics

The principal ecological impact of the transportation of goods is the use of fossil fuels. We therefore keep a close eye on protecting the climate and the environment in the transportation of goods. In collaboration with Procurement, our operational logistics staff regularly examine ways of reducing the number of road shipments by optimizing capacity and using multimodal shipment by rail, inland waterway or ocean freight. This also reduces the impact on communities around our sites, for example, as a result of noise, exhaust fumes and vibrations. In 2016, this was aided by improved transportation concepts, load optimization and pre-loading concepts. In addition, further action was taken in the area of sustainability. For example, strategic suppliers were selected for road transport of packaged goods. We are successfully shifting shipment of packaged goods to intermodal transportation. Another example of the measures to enhance sustainability is aligning the size of ships used to transport gaseous chemicals to demand.

### Targets for 2017

- Identify critical products and drive forward the development of safety standards for their transportation
- Develop a training concept to implement the CTU Code
- Check products for potential classification as polymerizable substances

### Product stewardship

In the chemical industry, product stewardship ranks alongside plant, occupational and transportation safety as a vital precondition for doing business. It is our "license to operate". Evonik is no exception, as confirmed by the results of our materiality analysis.

Through our products and solutions, we aim to make a measurable contribution to avoiding environmental impact and enhancing people's quality of life. That includes timely identification and evaluation of the potential health and environmental risks in our portfolio. We therefore examine the entire value chain of each of our products—from procurement of the raw materials to delivery to our industrial customers, who receive all relevant information on the handling and disposal of our products. That includes, for example, safety data sheets and technical information sheets.

As well as complying with all statutory requirements, such as the European Chemicals Regulation REACH<sup>1</sup> and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), product stewardship at Evonik includes voluntary commitments that go beyond these regulations.

We have been committed for many years to the international Responsible Care® initiative and the Responsible Care® Global Charter of the International Council of Chemical Associations (ICCA), which includes the Global Product Strategy (GPS). Our long-standing commitment to this was renewed in 2014 by the signature of the Chairman of the Executive Board.

The key elements of our product stewardship have been defined in a Product Policy. To supplement this, an operating procedure that was revised in 2016 defines how these commitments are to be implemented within Evonik, together with control mechanisms to monitor their observance.

### Responsible handling of chemicals

In light of the global trade in chemicals and chemical products, it is important to encourage broad communication on their safe handling and use. We ensure this through an extensive worldwide information system. This includes information portals, safety data sheets—not just for dangerous products—in more than 30 languages, technical data sheets, GPS Safety Summaries, and extensive information on our website. There are also 24/7 emergency hotlines, including a translation service, and email addresses.

<sup>&</sup>lt;sup>1</sup> REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals.

### Trustful collaboration with our customers

The life cycle of a product starts with research & development and ends with recycling or safe disposal. Our specialist departments provide advice for our customers at all stages in the product life cycle, from selection of the raw materials through dealing with possible toxicological, ecotoxicological and physical chemistry risks and the resulting exposure-based risks, regulatory requirements relating to the planned application, right up to transportation and disposal. Where necessary, we give customers training in how to handle our products.

### Our chemicals management systems

We evaluate all substances placed on the market (>1 metric ton p. a.). Particularly dangerous substances are included from lower tonnages. That allows a soundly based assessment of the risks. Where necessary, restrictions are placed on certain usage patterns or, in extreme cases, a complete ban is issued on use in certain products.

Evonik evaluates its substances using its own Chemicals Management System (CMS). This system, which was developed in-house, supports us in global product evaluation, analogously to a life cycle analysis. The content of the CMS has been harmonized with the GPS requirements. Two-thirds of assessments had been completed by the end of 2016, and GPS Safety Summaries for more than 150 substances had been made available on our website and the ICCA portal. The summaries are in English; some are also available in Japanese, Korean and Chinese. Following the completion of REACH on schedule in May 2018, we will focus on publishing further GPS Safety Summaries. Cefic is working to simplify the preparation of these Safety Summaries and Evonik is playing an active part in this.

As an extension of the CMS, our Chemicals Management System PLUS is used for products containing substances of very high concern. These are subject to a more detailed examination to bring about a further reduction in the negative impact on people and the environment. In the reporting period, around 1 percent of our products met the criteria for evaluation on the basis of CMS PLUS.

In addition, we play an active role in many national and international associations and initiatives that are driving forward scientifically based risk assessment.

### Evonik is systematically implementing REACH

Under REACH, all substances produced, imported or placed on the market in the EU in quantities of more than 1 metric ton p.a. have to be registered. Evonik supports the aim of protecting health and the environment in the handling of chemicals. To implement the complex REACH requirements, we maintain a close dialogue with our suppliers and customers, as well as with industry associations and authorities.

So far, nearly 70 percent of the substances identified as being relevant at present have been registered. We will complete all necessary REACH registrations on schedule by the end of May 2018.

Alongside registration, evaluating dossiers and substances, restriction and authorization are becoming more important. We constantly compare the substance lists published by the authorities with our own portfolio to ensure timely identification of any of our substances that are affected. If such substances are identified, we examine suitable measures. We also collaborate closely with our customers to work out the next steps. In addition, we examine the raw materials we procure. If any substances are categorized as being of very high concern or are on the list of potential candidates, we discuss the steps to be taken with our suppliers or look for alternatives. We have set up email addresses for all REACH-related inquiries from customers and suppliers to ensure they receive timely and full replies.

REACH will be a focal area of our activities in 2017. We assume that there will be a significant increase in the number of our substances registered under REACH until complete fulfillment of the requirements in May 2018. In addition, follow-on activities are required for those substances that have already been registered (test proposals, evaluations, etc.).

The regulatory requirements for chemicals are also rising steadily in many other regions. The Evonik Group will therefore be driving forward global product stewardship through its own task force.

### The Globally Harmonized System (GHS)

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) initiated by the United Nations classifies dangerous goods and substances for labeling on packaging and in safety data sheets. Evonik ensured timely implementation of the GHS requirements in the European Union in 2015. The GHS is still not applied uniformly around the world. We have therefore set up an in-house database to gather information on progress, changes and national requirements for internal communication.

Nanotechnology is a generic term for a wide range of developments and innovations. Their common feature is the investigation, production and use of minute structures measuring around 1 to 100 nanometers. Evonik has decades of experience of producing nanostructured materials. We handle the associated technologies responsibly and utilize the possibilities they offer. Nanomaterials can make a substantial contribution to environmental protection and climate protection through new products and efficient system solutions for our customers. For example, we see considerable opportunities in new materials for high-end batteries and energy-saving applications in the construction sector.

In our measures to protect employees, customers and consumers when handling nanomaterials, we are guided by the latest scientific research findings on hazards and risk evaluation and by epidemiological and toxicological studies. Evonik also supports the establishment of new methods of investigation aligned to the specific effects of nanomaterials, which refine the evaluation of risks. For example, we are involved in the OECD Working Party on Manufactured Nanomaterials, where we work closely with leading research institutes. We are also involved in various research projects such as NanoScreen and NanoToxClass. These are investigating, for example, the potential impact of the release of nanomaterials from products. In this context, we are working with the ECETOC<sup>1</sup> Nano Task Force. We are also continuously investigating the potential hazards and safe handling of these materials. The results of our research are communicated openly and transparently to our stakeholders. Representatives of Evonik take part in the German government's NanoDialog, where experts from industry, science, authorities and industry associations discuss the opportunities and risks of nanotechnology.

### Biotechnology

Evonik utilizes the opportunities offered by biotechnology for efficient and environmentally compatible production processes and innovative products. We use micro-organisms for biocatalysis processes and fermentative production processes. Biotechnology is used to produce essential amino acids, probiotics, nutritional supplements and pharmaceutical and cosmetic ingredients that are difficult or impossible to access through conventional chemical synthesis. Such products have to be registered before they can be produced and placed on the market. That requires detailed explanations of the production processes and the micro-organisms used as well as safety aspects. We have issued guidelines on safe and responsible use of biotechnology. In this way, we meet demands of our customers and the general public for transparent action and communication, and stringent risk prevention.

Safety

### Animal protection

We need toxicological and ecotoxicological data to assess the safety of our products. As the first step, we examine all alternatives in detail (QSAR, read-across, literature, non-animal testing). Various task forces have therefore been set up, for example to pool expertise in in-silico methods and evaluate in-vitro methods for the skin sensitization endpoint. For instance, in 2016 we entered into a cooperation agreement with Epithelix for the development of an in-vitro method for the respiratory sensitization endpoint.

Despite this, from a scientific and legal perspective, tests on animals are often the only way to meet the necessary data requirements. Evonik only arranges for animal tests to be performed by test institutes that are validated in accordance with the applicable national and international legal provisions and ensures that they meet animal protection standards. As a responsible company, we have also drawn up our own animal protection guidelines.

### **Targets**

We have set the following targets for product stewardship for the period up to 2020:

- Establish a risk estimate for >99% of substances that are placed on the market in quantities of >1 metric ton p.a. (Chemicals Management System, CMS).
- Make GPS Safety Summaries for these substances available via the Evonik website and the ICCA's GPS portal (CMS).
- Conduct a more far-reaching assessment using defined criteria for all products containing >0.1% hazardous chemicals of high concern (hChC), for example, CMR<sup>2</sup> 1A/1B chemicals and PBT<sup>3</sup> chemicals (CMS<sup>PLUS</sup>).

<sup>&</sup>lt;sup>1</sup> ECETOC = European Centre for Ecotoxicology and Toxicology of Chemicals.

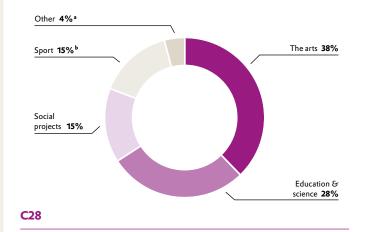
<sup>2</sup> CMR = carcinogenic, mutagenic, toxic for reproduction.
3 PBT = persistent, bioaccumulative, toxic.



Social commitment has a firm place in Evonik's corporate culture and our understanding of values. Essentially, we make a distinction between donations and sponsorship activities. An important element in this is donating funding to the Evonik Foundation, which enables it to realize or support not-for-profit projects. Established in 2009 as the successor to the former Degussa Foundation, its roots lie in providing support for the development of young scientists. Since 2015, the Evonik Foundation has supported charitable and church-related undertakings as well as not-for-profit activities.

# DONATIONS AND SPONSORSHIP of public projects in 2016

In 2016 the Evonik Group provided a total of €10.3 million for donations and sponsorship projects. The Evonik Group and the Evonik Foundation used this budget principally to fund education & science, social projects, the arts, sport, and other projects and activities.



- <sup>a</sup> Includes donations of €220,000 to political parties in Germany: €90,000 to the CDU/CSU, €90,000 to the SPD, €20,000 to Bündnis 90/Die Grünen, and €20,000 to the FDP (total amounts in each case).
- b Excludes sponsorship of the Borussia Dortmund soccer club.



# ASSISTANCE FOR REFUGEES

since 2015

The Evonik Foundation sets a clear example for the integration of refugees. It has so far been involved in over 90 projects that have provided support for more than 13,000 refugees. Most of the funding is for language tuition, training and employment initiatives.

For more information please visit: www.evonik-stiftung.de/en

Page Topic | GRI indicators

Donations and sponsorship | G4-EC7, G4-SO6

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Social commitment has a firm place in Evonik's corporate culture and our understanding of values. We regard it as our contribution to the sustainable development of society. Essentially, we make a distinction between donations and sponsorship activities. 1 Our active responsibility and the personal commitment of our employees around the world provide important social impetus in and around our sites.

### How we live our social commitment

Our sponsorship is aligned to **Evonik's** four core competencies—creativity, specialization, self-renewal, and reliability. We normally only sponsor projects and initiatives that fit our core brand. Moreover, our aim is to foster the positive development of society through our sites around the world. Within binding strategic guidelines, our operating units therefore support projects tailored to the regions and sites where they operate.

The work of the Evonik Foundation is an important element in how we put our social responsibility into practice. In keeping with its mission, this company-related foundation focuses its activities on four principal themes: young people, science, Germany, and integration. The Evonik Foundation only provides scholarships and donations for projects and organizations based in Germany. In addition to this, it implements its own projects.

Overall, Evonik concentrates its social commitment on the following areas:

### • Education & science

Education and science are prerequisites for the progress and prosperity of society as a whole. Evonik and the Evonik Foundation therefore support education at all levels—from preschool, elementary and secondary schools to university degrees (including doctoral degrees), as well as vocational and specialist training. For many years, we have also been involved in programs that give young people opportunities to prepare for work.

### Social projects

Intact communities and solidarity make societies viable and worth living in. One special goal is therefore supporting people in difficult circumstances. We therefore provide funding for the Evonik Foundation, for example, to enable it to initiate and support projects and initiatives for refugees. In addition, the Evonik Group provides humanitarian assistance in the wake of natural catastrophes.

### The arts

Our commitment to culture and the arts has grown out of our core competency "creativity". We are convinced that encounters with culture and the arts contribute to the ongoing development of society, and foster diversity and an open and tolerant co-existence—values that we live daily in our company.

### Sport

Sport creates bonds that transcend cultural, social and language barriers. It fosters tolerance and respect and therefore makes a contribution to peaceful coexistence. Evonik therefore supports both popular sports activities, and elite sports.

### The Evonik Group

Our social commitment creates social values. In the long term, we expect this to be beneficial for our company.

### Education & science

Our goal is to interest young people, in particular, in science. That is why we set up the Young Spirit program: Evonik employees visit preschools and elementary schools to interest children in scientific phenomena through hands-on experiments. More than 200 employees take part in this initiative. In view of its success in Germany, we have now extended the Young Spirit program to many other regions.

<sup>&</sup>lt;sup>1</sup> Further information on our policy on donations and sponsorship can be found in the "Governance and compliance" section of this report.

Another high-profile educational project is the Evonik Cyber Classroom. Our partner schools around the world use this virtual classroom to make scientific relationships clearer with the aid of 3D technology. In 2016, we upgraded and improved the technical basis for internet access to the content, which is available in ten languages. In addition, Evonik presented the Cyber Classroom at Nauka 0+, the Russian science festival for children and young people in Moscow, which attracted around 800,000 visitors. In 2017, the Cyber Classroom will be introduced at various partner schools in China.

In the USA, Evonik supported the You Be The Chemist program run by the Chemical Educational Foundation (CEF), which is also aimed at school kids. In Belgium, we supported the Brainshake 2016 knowledge quiz organized by Antwerp universities and colleges.

### Social projects

Evonik's social commitment has two main focuses. On the one hand, we want to be a reliable partner and good neighbor for the communities around our sites. We therefore get involved with schools and local welfare projects. In the state of Louisiana (USA), where Evonik has two production facilities, we supported the victims of a catastrophic flood that left many people homeless in 2016. Alongside all of this, Evonik has set up a large number of projects around the world to improve environmental quality around our sites. For example, employees at our Map Ta Phut site in Thailand regularly help clean local beaches.

Our activities also include projects with broad social relevance. Since 2016 Evonik has provided support for the extension and conversion of the Jewish Museum in Frankfurt (Germany). In parallel with this, collaboration with the Jewish museums in Berlin and Frankfurt was stepped up. That included presenting a book about Jewish soccer clubs in the Nazi era, and readings by actors Johanna Wokalek and Joachim Król from the "Ma'asse" book. We also agreed free tours of both museums for fans of the Borussia Dortmund soccer team. In this way, we support our sponsorship partner's work to counter right-wing radicalism.

### The arts

Evonik fosters diversity in society through a wide range of cultural projects. In 2016, we agreed a five-year partnership with the conductor Thomas Hengelbrock and the Balthasar-Neumann choir and ensemble. Moreover, we donated a statue of the composer Ludwig van Beethoven by the sculptor Markus Lüpertz to Singapore. We also continued our traditional partnerships, for example with the Ruhr Festival in Recklinghausen, the Küppersmühle museum in Duisburg, and the intonations chamber music festival in Berlin. In addition, we supported the film of Ralf Rothmann's novel "Young Light".

### Sport

In the spirit of good neighborly relations, Evonik promotes sport at many of its sites around the world. One example is the Evonik Sportpark in Marl (Germany), which was opened in 2016. This modern sports complex is used by local clubs as well as by company employees who take advantage of our sports and health promotion programs.

As a sponsor of the German professional soccer club Borussia Dortmund, we are particularly interested in projects that combine sports and culture. In the light of this, we supported the production of the cinema documentary "You'll never walk alone", which looks at the Jewish cultural history behind this well-known soccer anthem.

### **Evonik Foundation**

The Evonik Foundation is based in Essen (Germany). Established in 2009 as the successor to the former Degussa Foundation, its roots lie in providing support for the development of young scientists. The Evonik Foundation's statutes were extended in September 2015 and it can now support charitable and church-related undertakings as well as not-for-profit activities.

One focus of the Evonik Foundation is granting scholar-ships for scientific research, especially doctoral degrees. Its scholarships have an excellent reputation—especially because they foster a close link between scientific theory and practice. Elements include regular meetings for scholarship students, scientific colloquia, and a mentoring program. In 2016, the Evonik Foundation supported 18 particularly gifted and committed science students at 16 universities in Germany and in collaboration with foreign universities.

Another key project is the Germany Scholarship program. The Evonik Foundation finances 200 scholarships, making it one of the biggest sponsors of this program, which was initiated by the German Ministry of Education and Research. Scholarships are awarded to support students who demonstrate strong social commitment as well as a good academic record.

In addition, the Evonik Foundation awards scholarships specifically to refugees in cooperation with the Ruhr University in Bochum (RUB). This program targets young men and women who wish to embark on a degree course in engineering, science or business studies at RUB, or to continue a course they had started in their home country. They receive monthly financial support to enable them to obtain a bachelor's or master's degree. The Evonik Foundation also pays their social security contributions and the cost of educational materials. This is the first project of its kind in Germany.

The Evonik Foundation is also involved in a wide range of other integration projects for refugees. With the support of Evonik's sites, the Evonik Foundation has so far reached out to more than 13,000 refugees through some 90 projects.

Examples include funding to upgrade the outdoor area at a housing facility for asylum seekers in Haltern am See (Germany). Thanks to the project, the area has been turned into a versatile space that fosters communication and encounters between residents and the local community. In Hanau (Germany), the Evonik Foundation supports the OASE café, which was opened at the end of 2015 as a meeting point for refugees and local inhabitants. In December 2016 the project was presented with the Hanau municipality's integration

award. The variety of the projects for refugees shows what successful integration in schools, universities, companies, and the local community can look like.<sup>1</sup>

Enthusiasm and enjoyment of science can be awakened in children at elementary school. Some years ago, the Evonik Foundation therefore launched Professor Proto's Fantastic Institute in collaboration with scholarship students. This webbased learning platform has been developed constantly since then. Professor Proto provides insights into the fascinating world of chemistry through exciting experiments and videos.

Since 2016, the Evonik Foundation also provided support for KEMIE, a project organized by RUB where parents and children experience chemistry together. The aim is to give children in the third to sixth grades an early introduction to science. The children visit RUB once a month with one of their parents and perform experiments under the professional guidance of educational specialists.

In collaboration with Utho Ngathi Südliches Afrika e.V., a not-for-profit organization based in Siegen (Germany) and Johannesburg (South Africa), the Evonik Foundation encourages the integration of young people with disabilities in southern Africa. Utho Ngathi works with the young people, their families and village communities to improve their quality of life. The focus is on economic self-help projects. One of Utho Ngathi's key projects is building and operating an inclusive chicken farm in Macubeni (South Africa).

<sup>&</sup>lt;sup>1</sup> Further information on the work of the Evonik Foundation can be found on the foundation's website at www.evonik-stiftung.de/en.

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ANNEX

# T34 Overview of targets for 2017 and beyond

Our sustainability strategy is geared to integrating sustainability even more firmly into our operating units and establishing it in our regions. The following targets are intended to play a central part in this.

	Planned deadline
Strategy and growth	
Ongoing development of methods and indicators for sustainable portfolio management	2017
Analysis of sustainability requirements in individual markets and regions	2017
Harmonization of internal sustainability reporting processes and monitoring systems	2017
Governance and compliance	
Female Executive Board members: ≥20% or 25% <sup>a</sup>	2017 ff.
Supervisory Board: ≥30% female and ≥30% male members	2017 ff.
Women at the first and second management levels below the Executive Board: 20% at each level <sup>b</sup>	Year-end 2019
Antitrust law: draw up a risk roadmap for all business lines and define measures	2017
Code of Conduct: introduce an externally managed whistleblower system	2017
Employees	
Establish a learning strategy for the ongoing development of various employee groups	2017
Roll out our updated employer branding campaign	2017
Conduct an annual pulse check of the employee survey	2017
■ Value chain and products	
Structured presentation of the sustainability performance of the business lines in the chemical segments	2017
Extend life cycle assessments to approx. 80% of the external sales of our chemical segments	2017
Conduct at least 20 supplier sustainability audits under the shared audit principle of the Together for Sustainability initiative	2017 ff.
Continue the analysis of suppliers of critical raw materials through TfS self-assessments. Evaluate the sustainability performance of 90% of suppliers of critical raw materials by 2020 (status at year-end 2016: 74%)	2020
In collaboration with our customers and suppliers, we aim to further extend our portfolio of RSPO certified palm oil derivatives	2017
We aim to generate over €1 billion additional sales in the six R&D growth fields we have identified	2025
Increase sales of products and applications developed in the past five years	С
The environment	
Reduce specific greenhouse gas emissions by 12% (reference base: 2012)	2013-2020
Reduce specific water intake by 10% (reference base: 2012)	2013-2020
Further reduction in production waste, including hazardous production waste	2013-2020
Safety	
Accident frequency rate ≤ 1.3	2017
Incident frequency rate ≤ 48 (reference base 2008 = 100)	2017
Revise the management development concept on safety	2017
Occupational Health Performance Index ≥ 5	2017 ff.
Include further sites in the calculation of the Occupational Health Performance Index (15 in three years)	2017-2019
dentify critical products and drive forward transportation safety standards	2017
Draft a training concept to implement the CTU Code <sup>d</sup>	2017
Check products for potential classification as polymerizable substances	2017
Establish a risk estimate for $>$ 99% of substances placed on the market in quantities of $>$ 1 metric ton p. a.	By 2020
Make GPS Safety Summaries available via the Evonik website and the ICCA's GPS portal	By 2020
Conduct a more far-reaching assessment of all products containing >0.1% hazardous chemicals of high concern (hChC)	By 2020

 <sup>&</sup>lt;sup>a</sup> 20% up to June 30, 2017; 25% from July 1, 2017 to June 30, 2022.
 <sup>b</sup> So far 8% at the first management level below the Executive Board and 18.8% at the second management level.
 <sup>c</sup> From 10% in 2016 to 16% in the mid term.
 <sup>d</sup> CTU Code = Code of Practice for Packing of Cargo Transport Units.

# About this report

### Evonik's Sustainability Report 2016

This is the ninth full Sustainability Report published by Evonik. The report covers the 2016 fiscal year (January 1 to December 31, 2016), except where otherwise indicated, and is based on Evonik's organizational structure in 2016. The aim is to give our customers, employees, owners and the general public an insight into how we run our business and live our values. The Sustainability Report supplements the ecological and societal aspects included in the Annual Report 2016. The next Sustainability Report will be published in 2018.

### Method

In this report on 2016, we have once again applied the GRI G4 Guidelines in accordance with the "core" option. Further, this report takes account of the ten principles of the UN Global Compact.

We validated our materiality analysis in 2016 and confirmed its relevance. The scope and depth of this Sustainability Report are aligned even more systematically to materiality than in the past. The reporting structure is therefore consistently based on the six sustainability areas of action derived from our materiality analysis, which form the basis of our sustainability activities: "strategy and growth", "governance and compliance", "employees", "value chain and products", "the environment", and "safety". In view of the increasing significance of governance and compliance, the associated content has been combined in a separate chapter, supplemented among other things by comments on sustainability-related opportunities and risks. These comments supplement the information in the opportunity and risk report in Evonik's Annual Report 2016. Reporting on other, less material elements has been streamlined. Information about our activities along the value chain and our products, which was previously spread throughout the report, is now bundled in a separate

The recommendations made in the independent practitioner's limited assurance report on the Sustainability Report 2015 have been taken up in the structure of our corporate responsibility steering bodies and optimization of our stakeholder management. Each chapter contains a clearer outline of our management approach and highlights the targets we have set. The most important performance indicators for our six areas of action are summarized in a new overview ("Sustainability indicators for the Evonik Group"), supplemented by tables showing the attainment of our objectives in 2016 and our targets for the future (see inside front cover and page 83). In addition, this report contains more tables and charts than the previous edition in order to enhance the information content and the transparency of our sustainability activities.

This Sustainability Report is also Evonik's progress report for the UN Global Compact.

### Scope of reporting, limits and data capture

Our data cover the relevant companies worldwide that were included in the scope of consolidation for the consolidated financial statements of Evonik Industries AG for the period from January 1 through December 31, 2016. The consolidated financial statements are prepared in accordance with the International Financial Reporting Standards (IFRS). Alongside Evonik Industries AG, they include all material German and foreign subsidiaries directly or indirectly controlled by Evonik Industries AG. Joint operations are included on a pro rata basis. Material associates and joint ventures are recognized at equity if we are able to exert a significant influence. Initial consolidation or deconsolidation takes place as of the date on which the company gains or loses its controlling influence.

In fiscal 2016 the Evonik Group comprised 45 German and G4-22 110 foreign companies. Reporting focuses on the continuing operations. Relevant data on personnel and social indicators are based largely on the global SAP HR information system. For supplementary information, we use the HR information collector application (SAP notes management). The focus of our reporting and thus limits of our report are derived principally from the sustainability topics derived from our materiality analysis and the associated six areas of action.

The ecological data for our specialty chemicals business in 2016 comprise emissions and consumption at 89 production sites in 25 countries and thus cover over 95 percent of total output. Occupational safety data include other small sites (mainly administration), so the data here cover 134 locations in 42 countries. The data were compiled using sustainability reporting software developed specifically for this purpose (SuRe 2.0), which was technically updated and successfully introduced in 2016. The reporting segments reflect Group and segment interests in order to provide a detailed reflection of production activities. In some cases, data are reported at plant level to ensure this.

All reporting units are clearly coded to allocate them to organizational and business entities and geographical region. This allows consolidation at management and legal entity level as well as a detailed regional analysis of the data. The ecological data are updated annually without taking changes in the Group into account. The prior-year figures are not adjusted for changes in the portfolio of companies consolidated. The figures for each company are included in full, without adjustment to reflect Evonik's stake in them.

The key data in this report are rounded in line with standard commercial practice. In some cases, this may mean that individual values do not add up exactly to the totals given and percentages are not an exact reflection of the values stated.

This report is published in English and German and is posted on Evonik's website. To ensure it is up-to-date, we have included all relevant data available to us as of the editorial deadline on February 28, 2017.

### Major divestments/acquisitions of relevance for **ESH in 2016**

G4-22

G4-23

On March 3, 2016 Evonik acquired all shares in MedPalett AS (MedPalett), Sandnes (Norway) from Biolink Group AS, Sandnes (Norway). Medpalett specializes in food ingredients containing anthocyanins, which are known for their natural antioxidant properties.

On July 4, 2016 Evonik acquired the probiotics business of NOREL S.A. (NOREL), Madrid (Spain), one of the world's leading suppliers of feed additives, through an asset deal. The acquisition comprises the existing probiotics product portfolio and the production site in León (Spain). This acquisition positions Evonik as an innovative solution provider in the field of antibiotic-free animal nutrition.

Effective August 31, 2016, Evonik acquired the business of biotech company Transferra Nanosciences Inc. (Transferra), Burnaby (Canada) through an asset deal. Transferra is a contract development and manufacturing organization that uses its expertise in liposomal drug delivery systems to provide both products and services to biotech companies for the development of pharmaceuticals. This acquisition enables Evonik to extend the portfolio of its Health Care Business Line in the area of parenteral drug formulation.

These acquisitions have been integrated into the Nutrition & Care segment. They also had an impact on product streams, and the emissions and consumption data.

Acquisitions, capacity expansions and new facilities are recognized as soon as possible. However, if the facilities are only acquired at the end of a fiscal year or new plants have not yet come into service or are at an early stage of start-up, inclusion of environmental aspects in the Sustainability Report can normally only start in the following year.

### Updated data

Our ESH data are constantly checked by a large number of G4-22 internal and external audits. In addition, large amounts of data have to be reported to national authorities. In most cases, their submission and approval dates are later than the internal deadline for Evonik's ESH data. To enhance efficiency, we endeavor to use a single set of data for both internal and external reporting. Since internal and external audit findings are examined for any possible change in ESH indicators, our databases are naturally subject to dynamic change. If such adjustments reveal discrepancies of more than 3 percent compared with published data for prior periods, (principle of materiality), the data are corrected and indicated accordingly. If the English version of this report differs from the German version, the statements and phrasing of the original German shall prevail.

### External review

The chapters titled "Strategy and growth", "Governance and G4-23 compliance", "Employees", "Value chain and products", "The environment" and "Safety" were subject to a limited assurance review by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (indicated by  $\checkmark$ ). The independent practitioner's limited assurance report is printed on page 100.

# Major sites

### T35 Major sites <sup>a</sup>

Employees	2014	2015	2016
Germany			
Marl	6,923	6,939	6,988
Hanau-Wolfgang	3,385	3,391	3,561
Essen	2,435	2,447	2,510
Darmstadt	1,691	1,736	1,712
Wesseling	1,334	1,358	1,385
Other European countries			
Antwerp (Belgium)	1,007	1,029	1,044
Slovenská Ľupča (Slovakia)	251	247	248
Ham (France)	209	192	196
Gramatneusiedl (Austria)	165	157	144
Kaba (Hungary)	124	124	128
North America			
Mobile (Alabama, USA)	731	789	830
Lafayette (Indiana, USA)	544	570	606
Parsippany (New Jersey, USA)	409	415	423
Greensboro (North Carolina, USA)	205	188	164
Birmingham (Alabama, USA)	110	114	159
Central and South America			
São Paulo (Brazil)	197	206	217
Castro (Brazil)	99	107	102
Americana (Brazil)	70	85	98
Mexico D.F. (Mexico)	64	76	79
San José (Costa Rica)	-	-	64
Asia-Pacific			
Shanghai (China)	1,418	1,448	1,446
Singapore (Singapore)	523	496	562
Nanping (China)	370	353	418
Nanning (China)	357	369	367
Dombivli (India)	-	275	279
Middle East/Africa			
Midrand (South Africa)	28	44	50
Umbogintwini (South Africa)	30	32	30
Teheran (Iran)	14	17	23
Dubai (United Arab Emirates)	19	20	22
Elandsfontein (South Africa)	7	16	18

As of December 31.

<sup>&</sup>lt;sup>a</sup> The list covers about 70 percent of Evonik employees.

ANNEX

# Awards and accolades 2016

### T36 Awards and accolades a

	Awards and accolades	Products and projects	Presented by
Evonik Industries AG	German Sustainability Award 2016	Germany's Top 5 sustainable large corporations	Stiftung Deutscher Nachhaltigkeitspreis
Creavis <sup>b</sup> and Technology & Infrastructure	German Sustainability Award for Research 2016	Winner with the research project "High-performance process for thermoelectric generators"	Stiftung Deutscher Nachhaltigkeitspreis
Creavis <sup>b</sup>	IChemE Global Award	Development of a new technology for the purification of palm oil	Institution of Chemical Engineers (IChemE)
Creavis <sup>b</sup> , Resource Efficiency and Performance Materials	Inclusion in the KlimaExpo.NRW exhibition of climate-related achievements	Development of an innovative insulating system with CALOSTAT® and PLEXIGLAS®	Regional government of North Rhine-Westphalia
Evonik Corporation, Tippecanoe Laboratories	Environmental Award	Support for environmental protection	Tree Lafayette
Evonik Thai Aerosil Co. Ltd. and Evonik United Silica (Siam) Ltd.	IEAT Environmental Governance (Green Star) Award	Maintaining high environmental standards	Industrial Estate Authority of Thailand (IEAT)
Nutrition & Care, Household Care Business Line	Bio-based Material of the Year 2016	REWOFERM® SL 446	nova Institute for Ecology and Innovation
Nutrition & Care, Household Care Business Line	SEPAWA Innovation Award 2016	REWOFERM®	SEPAWA e.V.
Resource Efficiency, Oil Additives Business Line	Meyer-Galow Prize for Chemistry with Business Studies 2016	Development of DRIVON™ technology	Gesellschaft Deutscher Chemiker e. V.
Group Works Council of Evonik Industries AG	German Works Council Award 2016 in the category "Innovative work by the Works Council"	Project: "Group Works Council 2020 – Innovative succession planning"	"Arbeitsrecht im Betrieb" journal in cooperation with the German Trade Union Confederation (DGB), the Otto-Brenner Foundation, Deutsche Betriebsräte-Tag, and AXA
Awards from customers			
Nutrition & Care, Household Care Business Line	Best Innovation Contributor Award Laundry & Home Care	Specialty polymer for floor cleaners for use on damaged surfaces	Henkel AG & Co. KGaA
Resource Efficiency Coating & Adhesive Resins Business Line	Sustainability Award	Continuous contribution to the sustainability of the product and project pipeline at Henkel	Henkel AG & Co. KGaA

### T37 Ratings and rankings a

Ratings and rankings	Classification
Carbon Disclosure Project • Climate Change • Water	A-, Index Leader MDAX B
EcoVadis	Gold Standard
Oekom Research	Prime Standard B-
Sustainalytics	Top 5 in the chemical industry

<sup>&</sup>lt;sup>a</sup> Selected ratings and rankings.

a Selected awards and accolades.
 b Evonik's strategic innovation unit.

SUSTAINABILITY REPORT 2016

# G4 content index of the Global Reporting Initiative (GRI) including the ten principles of the UN Global Compact (UNGC)

For 2016, we applied the G4 Guidelines of the Global Reporting Initiative in accordance with the "core" level. This index also refers to the corresponding principles of the UN Global Compact.

The Sustainability Report 2016 was submitted to the GRI Materiality Disclosures Service. The GRI has verified that the materiality disclosures in accordance with G4 (G4-17-G4-27) are correctly located.



### T38 GRI Index and UN Global Compact

AR = Annual report; SR = Sustainability Report

UNGC principle	G4 Standard Disclosures		Reference	Page	Comments	
	General standard disclosures					
	Strategy an					
	G4-1	Statement from the most senior decision-maker	Foreword	2-3		
	G4-2	Key impacts, risks and opportunities	Strong market positions, a clear culture of innovation, sustainable business activities	17		
			Principles and objectives, business management systems	53 (AR)		
			Opportunity and risk report	93-102 (AR)		
			Sustainability management	25		
	Organizatio	onal profile				
	G4-3	Name of the organization	Credits	106		
	G4-4 F	Primary brands, products and services	Decentralized corporate structure	19		
			Market positions	19		
	G4-5	Location of the organization's headquarters	Credits	106		
	G4-6	Countries where the organization	About this report	84		
		has significant operations	Global output, reporting based on regions	52; 169-170 (AR)		
	G4-7	Nature of ownership and legal form	Evonik on the capital markets	47 (AR)		
			Credits; shareholder structure	106-107		
	G4-8	Markets served	Evonik's end-markets	48 (SR); 52 (AR)		
	G4-9	Scale of the organization	Key figures for the Evonik Group	107		
			About this report	84		
			Balance sheet	120-121 (AR)		
			Production inputs and output	51-52		
6	G4-10	Employees by employment contract, region and gender	Diversity/retaining employees; further facts and figures	42-43; 45-46		
3	G4-11	Percentage of employees covered by	Trustful collaboration	24-25		
		collective bargaining agreements	Performance and remuneration	41		

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NGC nciple	G4 Standard Disclosures	1	Reference	Page	Comments
	Report pr	ofile			
	G4-28	Reporting period	About this report	84	
	G4-29	Date of most recent previous report	About this report	84	
	G4-30	Reporting cycle	About this report	84	
	G4-31	Contact point for questions	Credits	106	
	G4-32	"In accordance" option and	GRI Index	88	
		GRI Content Index chosen	About this report	84	
	G4-33	Reference to external assurance report	About this report	84	
			Independent Assurance Report	100-101	
	Governan	ce			
	G4-34	Governance structure, including com-	Overview of the Executive Board	5 (AR)	
		mittees of the highest governance body	Report of the Supervisory Board	28-35 (AR)	
			Organization of sustainability management	25	
	G4-35	Delegation of authority for economic, environmental and social topics	Sustainability management at Evonik	25	
			Shareholders and the Shareholders' Meeting	45 (AR)	
			Active integration of the Air Products specialty additives business	85 (AR)	
			The environment	58	
	G4-36	Executive-level responsibility	Overview of the Executive Board	5 (AR)	
		for economic, environmental and social topics	Sustainability management chart	25	
	G4-37	Processes for consultation	Corporate governance	27	
		between stakeholders and the highest governance body	Organization of sustainability management	25	
			Employee survey	43-44, 70	
			Trustful collaboration	24-25	
	G4-38	Composition of the highest governance body and its committees	Supervisory Board	28-30 (AR), 197-198 (AR)	
	G4-39	Independence of the Chair of the highest governance body	Report of the Supervisory Board; Corporate Governance Report	32; 42-43 (AR)	
	G4-40	Nomination and selection processes for the highest governance body	Corporate Governance Report; Supervisory Board	40-41; 44 (AR)	
	G4-41	Processes to avoid conflicts of interest	Corporate Governance Report	41-43 (AR)	
	G4-42	Highest governance body's role in strategies and goals	Report of the Supervisory Board	28-30 (AR)	
	G4-43	Measures to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics	Report of the Supervisory Board	28-35 (AR)	
	G4-44	Evaluation of the highest governance	Report of the Supervisory Board	29-31 (AR)	
		body's performance with respect to governance of economic, environ- mental and social topics	Remuneration report	106 (AR)	
	G4-45	Highest governance body's role with regard to opportunities and risks of relevance to sustainability	Corporate Governance Report; Supervisory Board committees	36-45 (AR)	
	G4-46	Highest governance body's role in reviewing the effectiveness of risk management	Corporate Governance Report; Supervisory Board committees	36-45 (AR)	

JNGC orinciple	G4 Standard Disclosures		Reference	Page	Comments
	G4-47	Frequency of the highest governance body's review of sustainability-related	Corporate Governance Report	36-45 (AR)	
		risks and opportunities	Opportunity and risk report	93-102 (AR)	
	G4-48	Highest committee that approves the	Foreword	2-3	
		sustainability report	Organization of sustainability management	25	
	G4-49	Process for communicating	Whistleblower system	32	
		critical concerns to the highest governance body	Organization of sustainability management	25	
			Employee survey	43-44, 70	
	G4-50	Critical concerns that were	Whistleblower system	32	
		communicated to the highest governance body	Report of the Supervisory Board	30-31 (AR)	
	G4-51	Remuneration policies for the	Remuneration report	112-113 (AR)	
		highest governance body and senior executives	Performance-related remuneration	107 (AR), 171–173 (AR)	
	G4-52	Process for determining remuneration	Remuneration report		
	G4-32	Process for determining remuneration	Performance-related remuneration	106-113 (AR) 171-173 (AR)	
			Performance and remuneration	41	
	G4-53	Stakeholders' views regarding	Corporate Governance Report	36-45 (AR)	
	3.33	remuneration	Website	www.evonik. com/annual- shareholders- meeting	
	G4-54	Ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees			Evonik believes it is very important to offer specialists and executives market-oriente and performance-related salaries based on uniform glol evaluation criteria. Remunerati is therefore based on objectiv criteria such as the required knowledge and skills, and performance. Personal characteristics do not have any impa We do not consider this to be a relevant indicator to assess the appropriateness of our remuneration systems and therefore do not report it.
	G4-55	Ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country to the median percentage increase in annual total compensation for all employees			See comment on G4-54
	Ethics and	integrity			
)	G4-56	Values, principles, standards and	Voluntary commitments	35-36	
		norms of behavior	Governance and compliance	26	
)	G4-57	Mechanisms for seeking advice on	Corporate governance	27-28	
		ethical and lawful behavior	House of Compliance	30	
)	G4-58	Mechanisms for reporting concerns	Corporate governance	27-28	
	· •	about unethical or unlawful behavior	House of Compliance	30	
			Whistleblower system	32	

UNGC principle	G4 Standard Disclosures		Reference	Page	Comments
	Specific :	standard disclosures			
	Category:				
		onomic performance			
7	G4-DMA	Management approach	A good performance in 2016	18	
	G4-EC1	Economic value generated and distributed	Total value added	18	
7	G4-EC2	Risks and opportunities posed by	Carbon Disclosure Project	64	
		climate change and their financial implications	Opportunities and risks	28-29	
			Opportunity and risk report	93-102 (AR)	
			Climate change and emissions into the air	60	
	G4-EC3	Defined benefit plan obligations	Defined benefit obligations	159-163 (AR)	
	G4-EC4	Financial assistance received from government	Research & development; facts and figures 2016	53	Evonik is involved in some research activities that receive government assistance.
	Aspect: ma	rket presence			
6	G4-DMA	Management approach	Employees; Our products and markets	39; 54	
6	G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	Remuneration—Uniform global evaluation criteria	42	This indicator is not relevant for our sector. Evonik believes it is very important to offer specialists and executives marketoriented and performance-related salaries based on uniform global evaluation criteria. Remuneration is based on objective criteria such as the required knowledge and skills, and performance. Personal characteristics do not have any impact.
6	G4-EC6	Proportion of senior management hired locally	Further facts and figures	46	
	Aspect: inc	lirect economic impacts			
	G4-DMA	Management approach	Strong market positions; Intensive dialogue in 2016; Organization of sustainability management	17; 24; 25	
	G4-EC7	Development and impact of	Total value added	18	
		infrastructure investments and services supported	Research & development; facts and figures 2016	53	
			Vocational training and continuous professional development	40-41	
			Society/Donations and sponsorship	78-81	
	G4-EC8	Significant indirect economic impacts, including extent of impacts	Total value added	18	
		impacts, including extent of impacts	Regional development	69 (AR)	
			Biodiversity	68	
		ocurement practices			
	G4-DMA	Management approach	Procurement and sourcing	49	
	G4-EC9	Proportion of spending on local suppliers	Procurement in 2016	50	
	Category:	environmental			
	Aspect: ma	terials			
7, 8	G4-DMA	Management approach	Value chain and products	48	
7, 8	G4-EN1	Materials used by weight or volume	Production inputs and output	51-52	

UNGC principle	G4 Standard Disclosures		Reference	Page	Comments			
	Aspect: energy							
7, 8	G4-DMA	Management approach	The environment	58, 60				
7, 8	G4-EN3 Energy consumption within the organization		Energy inputs	60				
	Aspect: wa	ter						
7, 8	G4-DMA	Management approach	The environment	58, 64-65				
7, 8	G4-EN8	Total water withdrawals by source	Water management	65				
8	G4-EN10	Water recycled and re-used	Water management	64-65				
	Aspect: bio	odiversity						
8	G4-DMA	Management approach	The environment	58, 68				
8	G4-EN11	Operational sites owned/leased in or adjacent to protected areas and areas of high biodiversity outside protected areas	Biodiversity	68				
	Aspect: em	issions						
	G4-DMA	Management approach	The environment	58; 60-61				
7, 8	G4-EN15	Direct GHG emissions (Scope 1)	Climate change and emissions into the air	60				
7, 8	G4-EN16	Energy indirect GHG emissions (Scope 2)	Climate change and emissions into the air	60-61				
7, 8	G4-EN17	Other indirect GHG emissions (Scope 3)	Climate change and emissions into the air	63				
			Evonik Carbon Footprint	62				
8	G4-EN18	GHG emissions intensity	Climate change and emissions into the air					
8, 9	G4-EN19	Reduction of GHG emissions	Climate change and emissions into the air	62				
7, 8	G4-EN20	Emissions of ozone-depleting substances	Other emissions into the air	64				
7, 8	G4-EN21	NO <sub>xr</sub> SO <sub>x</sub> and other significant air emissions	Other emissions into the air	64				
		luents and waste						
8	G4-DMA	Management approach	The environment	58, 64-65; 66-67				
8	G4-EN22	Total water discharge by quality and destination	Water management	64-66				
8	G4-EN23	Total weight of waste by type and disposal method	Waste management	66-68				
		oducts and services		10 51				
7, 8, 9	G4-DMA	Management approach	Value chain and products; safety	48, 54–55; 75–77				
7, 8, 9	G4-EN27	Extent of impact mitigation of environmental impacts of products and services	Product stewardship; Evonik's resource-efficient products	75-77; 55-56				
	Aspect: co	mpliance						
8	G4-DMA	Management approach	Compliance	30				
8	G4-EN29	Sanctions for non-compliance with environmental laws and regulations		100, 164; 187 (AR)	Risks relating to legal dispute and legal proceedings are disclosed in the annual repor			
	Aspect: tra	nsport						
8	G4-DMA	Management approach	Safety	74				
8	G4-EN30	Significant environmental impacts of transporting products	Sustainability in transportation and logistics	75				

UNGC principle	G4 Standard Disclosures		Reference	Page	Comments				
	Aspect: ove	erall							
8	G4-DMA	Management approach	The environment	57					
8	G4-EN31	Total environmental protection expenditures and investments by type	Environmental protection investment and operating costs	59					
	Aspect: supplier environmental assessment								
8	G4-DMA	Management approach	Upstream: supply chain and products; Procurement and sourcing	48; 49					
8	G4-EN32	Percentage of new suppliers that were screened using environmental criteria	Validation of suppliers	49					
	Aspect: en	vironmental grievance mechanisms							
8	G4-DMA	Management approach	Compliance; The environment	30; 58					
8	G4-EN34	Formal grievance mechanisms for environmental impacts	House of Compliance; Whistleblower system	30; 32	We report on how we manage this issue as part of our compliance and ESHQ management system, but do not explicitly detail the number of grievances about ecological impacts.				
	Category: s Sub-catego	social ry: labor practices and decent work							
	Aspect: em	ployment							
6	G4-DMA	Management approach	Employees	39					
6	G4-LA1	New hires and employee turnover	Attracting employees	40, 46					
			Employee satisfaction	43					
	G4-LA2	Benefits provided to full-time	Performance and remuneration	41-42					
		employees that are not provided to temporary or part-time employees	Employee satisfaction	43					
6	G4-LA3	Return to work after parental leave	Employee satisfaction	44					
	Aspect: lab	or/management relations							
3	G4-DMA	Management approach	Employees	39					
3	G4-LA4	Minimum notice periods regarding operational changes	Trustful collaboration	24					
	Aspect: occ	cupational health and safety							
1, 6	G4-DMA	Management approach	Safety	70					
	G4-LA5	Percentage of total workforce repre-	Trustful collaboration	24					
		sented in formal joint management- worker health and safety committees that help monitor and advise on occupational health and safety programs	Health protection	72					
	G4-LA6	Injury, occupational diseases, days lost and fatalities	Occupational and plant safety	70-72	Reporting injuries by gender is not material to us and is not permitted in some regions. Ou focus is on general prevention, analyzing incidents and the lessons that can be learned.				
			Health protection	72					

UNGC principle	G4 Standard Disclosures		Reference	Page	Comments				
	G4-LA7 Workers with high incidence or high risk of diseases		Workplace-related preventive healthcare	73					
			Product stewardship	75-77					
	G4-LA8	Health and safety topics covered in formal agreements with trade unions	Safety	70; 72–73					
	Aspect: tra	ining and education							
6	G4-DMA	Management approach	Employees	39					
6	G4-LA9	Average hours of training	Vocational training and continuing professional development	40-41	Our data on advanced training currently cover around 94 percent of our employees. Drawing a distinction by gender or employee category is not significant for us. The hours reported do not include vocational training of our approximately 1,700 apprentices.				
	G4-LA10	Programs to support the continued employability of employees	Vocational training and continuing professional development	40-41					
6	G4-LA11 Percentage of employees receiving regular performance and career development reviews		Leadership	45	The systematic performance and development reviews introduced by Evonik are not restricted by gender or employee category.				
	Aspect: diversity and equal opportunity								
	G4-DMA	Management approach	Retaining employees/diversity	42					
6	G4-LA12	Composition of governance bodies and breakdown of employees by indicators of diversity	Corporate Governance; Corporate governance report	27-28 (SR); 40, 44 (AR)	Differentiation by minority groups is not relevant for our management practices.				
	Aspect: eq	ual remuneration for women and men							
6	G4-LA13	Ratio of basic salary and remuneration of women to men	Performance and remuneration	41-42	Evonik believes it is very important to offer specialists and executives market-oriented and performance-related salaries based on uniform global evaluation criteria. Remuneration is based on objective criteria such as the required knowledge and skills, and performance. Personal characteristics do not have any impact.				
	Aspect: su	pplier assessment for labor practices							
	G4-DMA	Management approach	Upstream: supply chain and products	48-49					
	G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	Procurement and sourcing; Validation of suppliers; Together for Sustainability	49					
	G4-LA15	Significant negative impacts for labor practices in the supply chain and actions taken	Procurement and sourcing; Validation of suppliers; Together for Sustainability	49	We do not report in detail on negative impacts on labor practices identified in the assessment of our suppliers. We report on the findings as part of the evaluation process.				

UNGC principle	G4 Standard Disclosures		Reference	Page	Comments
	Aspect: lab	oor practices grievance mechanisms			
	G4-DMA	Management approach	Compliance; Employees	30; 35	
	G4-LA16	Formal grievances relating to labor practices	House of Compliance; Whistleblower system	30; 32	
			Human rights	37	
	Sub-catego	ory: human rights			
	Aspect: no	n-discrimination			
6	G4-DMA	Management approach	House of Compliance; Employees	30; 35	
6	G4-HR3	Total cases of discrimination and measures taken	Internal investigations; Human rights	31-32; 37	
	Aspect: fre	edom of association and collective barg	aining		
2, 3	G4-HR4	HR4 Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk and measures taken	Trustful collaboration	24-25	In the reporting period, we did not become aware of any restrictions in freedom of asso- ciation or collective bargaining
			House of Compliance; Employees	30; 35	
			Human rights	37	
			Procurement and sourcing; Validation of suppliers	49	
	Aspect: ch	ild labor			
2, 5	G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor and measures taken	House of Compliance; Employees	30; 35	
			Human rights	37	
			Procurement and sourcing; Validation of suppliers	49	
	Aspect: for	rced or compulsory labor			
2, 4	G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor and measures taken	Human rights	37	
			Procurement and sourcing; Validation of suppliers	49	
	Aspect: se	curity practices			
1	G4-HR7	Percentage of security personnel trained in human rights policies or procedures	House of Compliance; Corporate security	30; 35	We do not report on the per- centage of security personnel that were specifically screened using human rights criteria. We report on the screening proces
			House of Compliance; Employees	30; 35	
			Human rights	37	
	Aspect: su	pplier human rights assessment			
2	G4-DMA	Management approach	Human rights	37	
2	G4-HR10	Percentage of new suppliers that were screened using human rights criteria	Procurement and sourcing; Validation of suppliers	49	We do not report on the per- centage of suppliers that were specifically screened using human rights criteria. We report on the screening procedure.
2 G4-HR1		Significant negative human rights impacts in the supply chain and actions taken	Procurement and sourcing; Validation of suppliers	49	We do not report in detail on negative impacts on any viola- tion of human rights criteria identified in the assessment of our suppliers. We report on the findings as part of the evaluation process.

ANNEX

UNGC principle	G4 Standard Disclosures		Reference	Page	Comments				
	Aspect: compliance								
	G4-DMA	Management approach	House of Compliance	30					
	G4-SO8	Fines and sanctions for non-compliance with laws and regulations	Internal investigations; Opportunities and risks "legal/compliance"	32 (SR); 100, 164, 187 (AR)	No significant fines exceeding €100,000, and no non- monetary penalties were imposed on Evonik in 2016 for failure to comply with laws or regulations.				
	Aspect: su	pplier assessment for impacts on society	!						
	G4-DMA	Management approach	Upstream: supply chain and products	48-49					
	G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	Procurement and sourcing; Validation of suppliers	49	We do not report on the percentage of suppliers that were specifically screened for impacts on society. We report on the screening procedure.				
	Aspect: gr	ievance mechanisms for impacts on soc	iety						
2, 3	G4-DMA	Management approach	House of Compliance; 30; 32 Whistleblower system						
2, 3	G4-SO11	Grievances on social impacts received through formal mechanisms	House of Compliance; Whistleblower system	30; 32	We do not report on the numbe of complaints on impacts on society received through forma grievance mechanisms. We tak- up the reason for the grievance in internal procedures and take appropriate action in line with our corporate policies.				
	Sub-catego	ry: product responsibility							
	Aspect: cu	stomer health and safety							
	G4-DMA	Management approach	Occupational and plant safety; Product stewardship	70; 75					
	G4-PR1	Percentage of significant products and services for which health and safety impacts are assessed	Product stewardship	75-77	Our assessments focus on products not services.				
	G4-PR2	Incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products	Annual report	100-102 (AR)	We do not report on the numbe of incidents of non-compliance with regulations and voluntary codes of conduct relating to the health and safety impact of products and services. Any incidents and proceedings are reported in the section on legal risks in the annual report.				

ANNEX

Risks relating to legal disputes

disclosed in the annual report.

and legal proceedings are

Product stewardship

75-76

Significant fines for non-compliance

with laws and regulations concerning

the provision and use of products and

services

# Independent Practitioner's Limited Assurance Report<sup>1</sup>

### To Evonik Industries AG, Essen

SUSTAINABILITY REPORT 2016

We have been engaged to perform a limited assurance engagement on the sections marked with <u>u</u> in the Sustainability Report of Evonik Industries AG, Essen (hereafter the "Company") for the period from 1 January to 31 December 2016 (hereafter the "Sustainability Report").2

### Management's Responsibility

Company's Management is responsible for the preparation and presentation of the Sustainability Report in accordance with the criteria as set out in the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) (hereafter the "GRI-Criteria") and for the selection of the information to be assessed.

This responsibility includes the selection and application of appropriate methods to prepare the Sustainability Report as well as the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Sustainability Report, which is free of material misstatements due to intentional or unintentional

### Audit Firm's Independence and Quality Control

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

The audit firm applies the national legal requirements and professional standards - in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Institut der Wirtschaftsprüfer ("Institute of Public Auditors in Germany; IDW"): Requirements to quality control for audit firms ("Entwurf eines IdW Qualitätssicherungsstandards 1 "Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis" (IdW EQS 1)") – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Practitioner's Responsibility

Our responsibility is to express an opinion on the sections marked with  $\checkmark$  in the Sustainability Report based on our

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the Sustainability Report.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that the sections marked with  $\underline{\checkmark}$  in the Sustainability Report has not been prepared, in all material respects, in accordance with the GRI-Criteria.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the practitioner's judgement. This includes the assessment of the risks of material misstatements of the information marked with  $\underline{\mathscr{A}}$  in the Sustainability Report with regard to the GRI-Criteria.

<sup>1</sup> Our engagement applied to the German version of the Sustainability Report. This text is a translation of the Independent Assurance Report issued in German—the German

<sup>&</sup>lt;sup>2</sup> Our engagement refers to the German version of the Sustainability Report.

Within the scope of our work we performed amongst others the following procedures:

- Obtaining an understanding of the structure of the sustainability organization and of the stakeholder engagement;
- Inquiries of personnel involved in the preparation of the Report regarding the preparation process, the underlying internal control system and the Sustainability Report sections marked with
- Analytical procedures on selected information of the Sustainability Report;
- Comparison of selected sustainability information with corresponding data in the consolidated financial statements and in the group management report;
- Assessment of the presentation of selected sustainability information in the Report regarding the sustainability performance;
- Performance of site visits or web conferences as part of the inspection of processes for collecting, analyzing and aggregating selected data at the corporate headquarters in Essen, as well as at selected sites or group companies in Darmstadt (Germany), Marl (Germany), Singapore, Bekasi (Indonesia) and Gibbons (Canada);
- Gaining further evidence for selected data of the Sustainability Report due to inspection of internal documents, contracts and invoices/reports from external service providers.

### Conclusion

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the sustainability information marked with  $\checkmark$  in the Sustainability Report of the Company for the period from 1 January to 31 December 2016 has not been prepared, in all material respects, in accordance with the GRI-Criteria.

### Emphasis of Matter - Recommendations

Without qualifying our conclusion above, we make the following recommendations for the further development of the Company's sustainability management and sustainability reporting:

- Further development of management approach and reporting for the material sustainability issues, e.g. by consistently connecting those KPIs with (ideally quantified) targets as well as with measures for achieving the targets;
- Further standardization and formalization of the reporting process and the underlying internal control system for sustainability information.

### Restriction on Use and Distribution

We issue this report on the basis of the engagement agreed with Evonik Industries AG. The review has been performed for purposes of the Company and is solely intended to inform the Company about the results of the review. The report is not intended for any third parties to base any (financial) decision thereon. We do not assume any responsibility towards third parties.

Munich, April 20, 2017

# PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft

Hendrik Fink ppa. Dr. Patrick Albrecht Wirtschaftsprüfer (German Public Auditor)

# Glossary

SUSTAINABILITY REPORT 2016

### Audit

An audit is an investigation used to check that specific products, sites and/or processes meet certain specified criteria. Audits may be performed by internal specialists or external auditors, especially if validation in compliance with official standards is required.

### Carbon Disclosure Project (CDP)

The Carbon Disclosure Project (CDP) is a not-for-profit organization and is currently the world's largest and most important initiative by the financial sector on climate change. It is currently supported by more than 800 institutional investors with total assets under management of over US\$100 trillion. Companies report data and information on CO<sub>2</sub> emissions, climate risks and reduction targets and strategies to the CDP on a voluntary basis once a year. Investors use the data to derive a climate risk profile for companies, which they then use in their investment decisions.

### Chemie<sup>3</sup>

This is a joint initiative of the German Chemical Industry Association (VCI), the German Mining, Chemical and Energy Industrial Union (IG BCE), and the German Chemical Industry Employers' Federation (BAVC) to drive forward sustainable development.

### CO<sub>2</sub> equivalents (CO<sub>2</sub>eq)

Parameter used to compare the global warming potential of various different greenhouse gases. The reference basis is carbon dioxide and the abbreviation is CO<sub>2</sub>eq.

### Code of Responsible Conduct for Business

The six principles of the Code of Responsible Conduct for Business initiated by the Wittenberg Center for Global Ethics obligate companies to generate profits without corruption, exploitation and environmental damage.

### Compliance

Compliance refers to all activities to ensure that the conduct of a company, members of its governance bodies and its employees respect all applicable mandatory standards such as legal provisions, statutory requirements and prohibitions, in-house policies and voluntary undertakings.

### Conflict minerals

The Dodd-Frank Act defines coltan, cassiterite, wolframite and their derivatives (tantalum, tin, tungsten), and gold as conflict minerals if they are used to finance armed conflict in the Democratic Republic of Congo and neighboring territories.

### Corporate governance

Corporate governance comprises all principles on the management and supervision of a company. As an expression of good and responsible management, it is therefore a central element in a company's management philosophy.

### Diversity

Evonik defines diversity as a balanced employee structure, not just in terms of gender, but also in relation to specialist areas, experience of different organizational units and functional areas, a broad age range and various nationalities, in other words, diversity across the board.

### Dodd-Frank Act, Section 1502

The Dodd-Frank Wall Street Reform and Consumer Protection Act (known as the Dodd-Frank Act for short) was adopted in 2010. Its prime aim is regulation of the US financial market. Section 1502 contains disclosure and reporting requirements for listed US companies on the use of certain minerals originating from the Democratic Republic of Congo and neighboring states.

### econsense - Forum for Sustainable Development of German Business

econsense is an association of leading German companies and organizations that operate in the global arena. It promotes sustainable development and corporate social responsibility.

### Global Reporting Initiative (GRI)

The GRI is a global, network-based not-for-profit organization based in Amsterdam. It publishes the world's most commonly used guidelines on sustainability reporting. The aim is to ensure the comparability of the economic, ecological, social and societal performance and impacts of reporting companies. This sustainability report has been prepared on the basis of the specifications of the GRI G4 Guidelines in accordance with the "core" level.

### Greenhouse Gas Protocol (GHG Protocol)

The Greenhouse Gas Protocol is regarded as the most widespread voluntary international standard for calculating and compiling data on greenhouse gas emissions from industry. It was developed by the World Business Council for Sustainable Development and the World Resources Institute.

### International Labor Standards

The International Labour Organization (ILO) and its actions are defined by four basic principles: freedom of association and the right to collective bargaining, the elimination of forced labor, the abandonment of child labor, and the elimination of discrimination in respect of employment and occupation. These basic principles are set out in eight conventions with the ILO. These are known as the international labour standards.

### Life cycle assessment

A life cycle assessment comprises compiling and assessing the inputs and outputs and potential environmental impact of a product system during its life cycle, based on a standardized international method (DIN EN ISO 14040/44). Alongside life cycle assessments, Evonik performs life cycle-based analyses with reduced scope to obtain information on specific environmental impacts (e. g., carbon footprints).

### Low Carbon Technology Partnerships Initiative (LCTPi)

The LCTPi was set up by the World Business Council for Sustainable Development to accelerate the development of low carbon technology solutions. It comprises more than 150 companies with 70 partners who are responding collaboratively to the challenges of climate change.

### Materiality

The GRI G4 Guidelines center on the principle of materiality. Companies should pay more attention to presenting the material impacts of their business activities. To do this, they need to identify their central areas of action using a systematic materiality analysis. The goal is to evaluate the relevance of these topics from the viewpoint of stakeholders and the company. A materiality matrix is derived from the expectations of both groups.

### Megatrends

Megatrends are long-term, global societal developments which companies can help to solve through their business activities. They are far-reaching trends of strategic significance.

### **OECD Guidelines for Multinational Enterprises**

The guidelines issued by the Organisation for Economic Cooperation and Development (OECD) are government recommendations to multinational enterprises operating in or from member states. They comprise principles and benchmarks for responsible corporate action, but are not legally binding.

### Responsible Care®

Responsible Care® is the global initiative of the chemical industry to bring about a continuous improvement in environmental protection, health and safety. As well as complying with legislation and other regulations, the industry cooperates with government agencies and other stakeholders in various voluntary initiatives.

### Roundtable on Sustainable Palm Oil (RSPO)

The RSPO was established in 2004 at the initiative of the WWF. Its aim is to encourage sustainable production of palm oil and limit environmental damage. Members include non-governmental organizations, companies—such as Evonik—and institutions.

### Scope 1, Scope 2 and Scope 3 emissions

To harmonize international reporting of greenhouse gas emissions in the corporate sector, emissions are allocated to three categories (scopes): direct emissions from a company's own plants (Scope 1), indirect emissions from the purchase of secondary energy such as electricity and steam (Scope 2), and emissions from upstream or downstream processes within the supply chain (Scope 3).

### Stakeholders

Stakeholders are individuals or groups that have a legitimate interest in the activities and decisions of a company or organization. They may be, for example, the company's employees, customers, suppliers, people who live close to its production facilities, non-governmental organizations, associations and the media.

### Sustainable Development Goals

In fall 2015 the United Nations published 17 global sustainable development goals, to be achieved by 2030. They replace the eight Millennium Development Goals, which expired in 2015.

### Together for Sustainability (TfS)

TfS is an initiative established in 2011 by chemical companies to drive forward transparency and sustainability in the supply chain. Evonik was a founding member.

### **UN Global Compact**

The United Nations Global Compact is a strategic initiative for companies that undertake to align their business operations and strategies with ten universally recognized principles relating to human rights, labor standards, environmental protection and fighting corruption. Companies that join the Global Compact give an undertaking that they will report annually on their progress.

### Vision 2050

The Vision 2050 of the World Business Council for Sustainable Development describes the pathway to achieving a sustainable world with around 9 billion people living well within the limits of the planet by 2050. Companies play a key role in this.

### World Business Council for Sustainable Development

The World Business Council for Sustainable Development (WBCSD) is a CEO-led organization that aims to drive forward sustainable development worldwide. More than 200 international enterprises now belong to the WBCSD.

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This report contains forward-looking statements based on the present expectations, assumptions and forecasts made by the Executive Board and the information available to it. These forward-looking statements do not constitute a guarantee of future developments and earnings expectations. Future performance and developments depend on a wide variety of factors which contain a number of risks and unforeseeable factors and are based on assumptions that may prove incorrect.

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### PRODUCTION OF EVONIK'S SUSTAINABILITY REPORT 2016

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### Key figures for the Evonik Group

### T39 Key figures

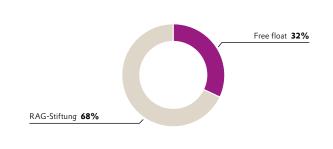
in € million	2012	2013	2014	2015	2016
Sales	13,365	12,708	12,917	13,507	12,732
Adjusted EBITDA <sup>a</sup>	2,467	1,995	1,882	2,465	2,165
Adjusted EBITDA margin in %	18.5	15.7	14.6	18.2	17.0
Adjusted EBIT <sup>b</sup>	1,887	1,404	1,256	1,752	1,448
ROCE <sup>c</sup> in %	20.4	15.1	12.5	16.6	14.0
Net income	1,165	2,054	568	991	844
Adjusted net income	1,076	806	782	1,128	930
Earnings per share in €	2.50	4.41	1.22	2.13	1.81
Adjusted earnings per share in €	2.31	1.73	1.68	2.42	1.99
Total assets as of December 31	17,166	15,883	15,685	17,005	19,645
Equity ratio as of December 31 in %	31.9	43.0	41.6	44.6	39.5
Cash flow from operating activities	1,420	1,055	1,066	1,971	1,758
Free cash flow <sup>d</sup>	490	-49	-60	1,052	810
Capital expenditures <sup>e</sup>	960	1,140	1,123	877	960
Depreciation and amortization e	580	585	606	700	707
Net financial debt/assets as of December 31	-1,163	571	400	1,098	1,111
No. of employees as of December 31	33,298	33,650	33,412	33,576	34,351

Figures for 2012 and 2013 contain the former Real Estate segment as a discontinued operation.

Differences between the data and totals are due to rounding differences.

Evonik is one of the world's leading specialty chemicals companies. The central elements of our strategy for sustained value creation are profitable growth, efficiency and values. Our strengths include the balanced spectrum of our business activities, end-markets and regions, and working closely with customers. Around 80 percent of sales come from market-leading positions, which we are systematically expanding.

### C29 Shareholder structure



<sup>&</sup>lt;sup>a</sup> Earnings before financial result, taxes, depreciation and amortization, after adjustments.

<sup>&</sup>lt;sup>b</sup> Earnings before financial result and taxes, after adjustments.

Return on capital employed.

d Cash flow from operating activities, continuing operations, less cash outflows for capital expenditures on intangable assets, property, plant and equipment. e Intangible assets, property, plant, equipment and investment property.

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