# SUSTAINABILITY REPORT 2014



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This is the third edition of the sustainability report published by ZF Friedrichshafen AG. It is based upon the fiscal year of 2014 and addresses customers, employees, suppliers, politicians, authorities, as well as all other target groups that are interested in our company and wish to know upon which values and principles we operate. The report is intended to offer transparency, with a particular focus on our sustainability activities and objectives.

During the evaluation and the compilation of the contents for this report, we again used the guidelines of the Global Reporting Initiative (GRI) as a framework. For the first time, the report applies the guidelines of the new G4 version of the GRI. They require that the company performs a materiality analysis which sets priorities in reporting and focuses on central elements of the performance indicators in the fields of economy, ecology, and society. The process for determining the material issues is described on pages 16-17 of this report. This report was compiled according to the "core" option and the fulfillment of the GRI indicators is shown in the GRI Content Index (page 74). The GRI has confirmed the placement of the standard materiality data (G4-17 to G4-27) both in the GRI Content Index and in the report text within the framework of a Materiality Disclosure Service.

At the same time, the report represents our progress report to the United Nations Global Compact that we joined in May 2012.

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### **Strategy and Analysis**

#### G4-1 Statement from the most senior decision-maker

As a global leader in driveline and chassis technology as well as active and passive safety technology, we have noticed especially in this reporting year how global megatrends are changing mobility expectations ever more dynamically. Population growth, a shortage of resources, climate change, demographic changes, and digitalization – factors such as these directly affect the mobility concepts of the future. Today more than ever, a company which is not able to supply answers quickly enough puts its business success at risk.

That is why sustainability is vitally important to us. From electric drives to hybridization and right up to the networked vehicle, we work daily on the solutions of the future – innovations that get us ahead as a company, but also contribute to more sustainable development worldwide. The need for technologically more advanced cars and commercial vehicles has never been more pressing. Strict CO<sub>2</sub> targets require a greater degree of energy efficiency and innovative product developments require well-trained, highly motivated employees. The long-term success of ZF depends to a considerable extent on how we treat our environment and our stakeholders.

The tasks of our sustainability program include systematically taking account of these interconnections, generating opportunities from potential risks, and creating evident added value for our company, our customers, our employees, the environment, and society. In the reporting period, we consolidated all sustainability-relevant tasks in a sustainability program for the first time.

We are celebrating our 100th anniversary in 2015 – and that too means sustainability to us. We aim to ensure that the growth of our company, whose dividends support two nonprofit foundations, remains in tune with its environment. This not only involves complying with laws and regulations, but also implementing ethically sound business practices with a clear commitment to value-based management and consistent social responsibility principles.

By signing the United Nations Global Compact, we have committed ourselves to promote and internationally endorse the principles that we live by. In our area of responsibility and control, we affirm the ten principles of the Global Compact that are based on the recognized UN standards to respect the protection of human rights, industrial relations, and the environment, as well as the fight against corruption.

We report annually on our progress in a sustainability report, which has been published for the third time and is in compliance with the guidelines of the Global Reporting Initiative (GRI).

#### Dr. Stefan Sommer,

Chief Executive Officer of ZF Friedrichshafen AG

## G4-2 Key impacts, risks, and opportunities concerning sustainability

The strategic framework of our sustainability program is determined to a large extent by the global megatrends which continually alter the world in which we do business. For instance, progressive globalization has a major impact on ZF's sales and sourcing markets and calls for a stronger international orientation of our structures and competencies. Furthermore, demographic change and increasing urbanization in many markets are leading to changes in consumer behavior – with fundamentally growing demand in potential conflict with finite resources. This requires a technology shift toward efficiency and resource conservation which ZF is driving forward by continually reducing for instance  $\mathrm{CO}_2$  and noise emissions.

Megatrends play a central part when we set our targets for innovation and sustainability management. Here, we consider long-term factors that are changing due to global economic, ecological, and social developments. We also factor in legislation and politics as well as product-field trends that already display the initial effects of individual megatrends. In our long-term strategy process based on this analysis, we have identified three central topics for product development: driveline efficiency, vehicle safety systems, plus advanced driver assistance systems and autonomous driving. All these areas stand

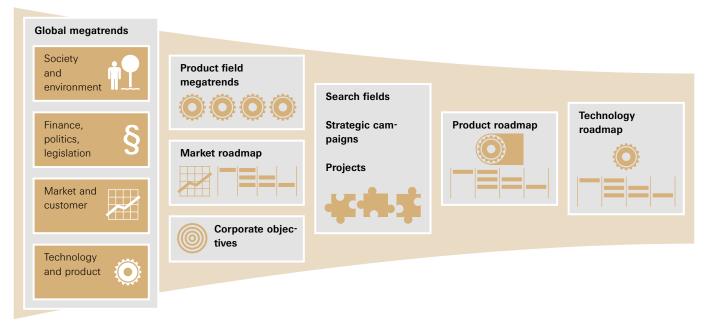
for car buyers' changed values, especially when it comes to fuel efficiency and safety. These findings directly influence the ZF innovation process.

Within an overall social context, ZF actually goes beyond the classical route of research and development work. With the ZF Denkfabrik (think tank) founded in 2015, the company embarked on new directions to identify trends, technologies, and future issues and to transport them into the relevant areas of the Group. There is an equal focus here on energy, sustainable mobility, and better urban quality of living. The ZF Denkfabrik was established to open up a new view of the distant future and to support the company in designing sustainable developments and creating added value for our customers.

During the reporting period, we analyzed the key sustainability effects of ZF, quantified them internally, and in a media analysis aligned them with the requirements of our stakeholders in order to further enhance our sustainability program. The findings revealed that top priorities are the ecological impacts and the safety of our products together with the energy efficiency of our pro-

duction. This means we consider the extent of ZF's impact in these three areas to be most important. Corresponding objectives formulated and implemented in our sustainability program are intended to help reduce the negative effects of ZF over the long term and to permanently multiply our positive contribution. Simultaneously, we take into account possible business risks that could result from the megatrends described as well as our own ecological and social impacts – for instance in the fields of climate change, security of supply, or attractiveness as an employer.

The ZF Innovation Process



### **Sustainability Program**

Strategic Target	Actions	Status 2014	Date
Product safety			
Guarantee of maximum product safety standards	Employee qualification and rollout of a new training concept	Revision of the role-oriented training concept for functional safety for all roles in the process (e.g. Safety Manager, developer, tester)	2016
	External appraisal / certification of processes relating to product safety	Examination of the software and electronic processes to ascertain compliance with ISO26262 and IEC61508 by TÜV Süd (Technical Monitoring Association)	Ongoing
	Cooperation in national and international bodies dealing with functional safety	Cooperation in working groups dealing with functional safety at ISO, VDA, and ZVEI	Ongoing
Environmental protection in pr	oduction		
20 percent reduction in specific $CO_2$ emissions relating to sales by 2020 compared to the average for the years 2006 to 2010	Annual review of target achievability	The trend toward target achievement in 2020 is positive. In 2014, above-average contribution to target achievement (confirmation during certification audit)	2020
2000 to 2010	Increase in energy efficiency within the framework of the environmental management system (global) and energy management system (in Germany) through a broad range of actions at the individual locations	Implementation of a large number of actions at the ZF locations whose effectiveness was confirmed in the certification audit	
	Installation of CO <sub>2</sub> -improved machinery for our own production	Commissioning of a gas and steam plant in Saarbrücken (leased) and installation of 2 combined heat and power plants in Friedrichshafen	
Reduction of specific energy consumption in relation to sales compared to the previ- ous year	Control of the energy consumption per sales indicator within the environmental management system (ISO 14001): Planning efficiency actions and annual review of target achievement	Group target achieved. Over-proportional contribution by ISO 50001-certified locations in Germany (confirmed by certification audit)	Ongoing
	Introduction of a systematic energy management system at all locations in Germany	Due to extension of the ISO 50001 certification to include the aftermarket locations, all German locations of ZF Friedrichshafen AG are certified according to ISO 50001	2014
	Appointment of Energy Management Officers for system and operational matters at the locations and at Group level.	Energy Management Officers have been appointed	2014

Strategic Target	Actions	Status 2014	Date	
	Include energy efficiency as a decisive criterion in the procurement process for new machines and systems	Ongoing, initial part-implementation carried out	2016	
Reduce or stabilize specific water consumption in rela- tion to sales, compared to	Control and annual review on location and Group levels within the framework of the environmental management system	Group target achieved. For project examples, see indicator description	Ongoing	
the previous year	Appropriate planning of water-saving projects (depending on relevance)	Industrial water treatment used for cooling in the hardening process (Brazil, Sorocaba)		
Reduce or stabilize specific wastewater generation in relation to sales, compared to	Annual review of the key figures/actions for target achievement, control via the environmental management system	Group target achieved	Ongoing	
the previous year	Resource-efficient design of operational processes	Replace phosphating ball-type joints with a water-free, hazardous-substance-free process (Dielingen)		
Reduce or stabilize specific waste generation in relation to sales compared to the previous year	Annual review of key figures/ actions for target achievement	Group target not achieved	Ongoing	
	Resource-efficient design of operational processes	Direct return of aluminum scrap to manufacturers for melting; then delivery to ZF foundry		
Valuate pollutants (hazardous substances) and substitute	Hazardous substances management at the locations	Target achieved		
as far as possible	Rollout/localization in Asia-Pacific region	Implementation underway	2015	
Environmental impacts of products	ucts			
Environmentally compatible product development	Increase the environmental compatibility of product developments compared to previous generations	<ul> <li>The 2nd generation of the 8-speed automatic transmission reduces fuel consumption and CO<sub>2</sub> emissions by a further 3 percent compared to the first generation</li> <li>The 9-speed automatic transmission reduces fuel consumption by up to 16 percent compared to common 6-speed automatic transmissions</li> </ul>	Ongoing	
	Further strengthen the electronics fields of competence and their integration into ZF products and systems, as well as the field of lightweight design to achieve fuel efficiency as well as reduced CO <sub>2</sub> and noise emissions during the utilization phase	Expand the technology fields of electronics, electrical drive technology, and lightweight construction	Ongoing	

Strategic Target	Actions	Status 2014	Date
	Further develop hybrid technology and e-mobility	<ul> <li>Establish the Electrical Drive Technology business unit</li> <li>Participate in/conduct several projects for the further development of the electric drive (NPE projects)</li> </ul>	Ongoing
	Establish a body spanning the different corporate functions that deals with product-related environmental protection	Preparatory work to establish the body	2015
Environmental impact of trans	ports		
Create transparency about environmental impacts of transport	Calculate and take account of emissions in transport projects (apart from pure cost analysis of internal projects in overland freight)	Group-wide method developed for calculating emissions in transport	2016
	Introduce a tool to increase transparency within the supply chain (ATM – Active Transport Management)	Include 35 suppliers by June 2015	Ongoing Group rollout
Ecologically efficient design of transport networks	Pool and consolidate inbound freight transports	A number of consolidation centers implemented (new: ECC – European Consolidation Center)	Ongoing
	Increase FTL share (full truck load)	FTL concept and regional trucker concept applied	
	Efficient empties management	Account coordination for empties management in Germany	
Shift to alternative modes of transport	Use alternative, environmentally friendly modes of transport	First use of railway transport instead of air freight for urgent transports from Europe to China	Ongoing
	Avoid and reduce air freight	Cause analysis and checking of corrective action	
	Check air freight shipments with new air freight release process	Air freight release process in operation since end of 2013	
Use sustainable logistics providers	Include emission valuation in the tender process for land freight (DE)	<ul> <li>Develop a manual         on how to include emissions calculation in the tender process</li> <li>Internal coordination of the procedure between Logistics and Purchasing</li> </ul>	2016
	Inquire about sustainability aspects of service providers (fleet, workload, emissions, empty journeys, etc.)	<ul> <li>Develop a service provider question- naire</li> <li>Coordination with Purchasing and inclusion in the tender process</li> </ul>	End of 2015

Strategic Target	Actions	Status 2014	Date
Employer attractiveness			
Positioning as an attractive employer worldwide	Intensify cooperation with international universities	<ul> <li>Increase in applications received in Germany by 25 percent compared to the previous year</li> <li>Improve employer ranking (e.g. trendence Graduate Barometer)</li> </ul>	Ongoing
	Internationalize the trainee program further	Increased number of applications for trainee program abroad	Ongoing
	Attractive qualification/personal development opportunities: establish and expand technical academies, global training, pro»motion programs, LiN (Learning on the Web) vocational training initiative, university student support programs, work-study degree models	Academy landscape portfolio more than doubled	Ongoing
	Family-friendly work structures to reconcile work and family	<ul> <li>Construction of ZF company children's daycare center in Friedrichshafen (approx. 60 places)</li> <li>Prepare for fourth re-certification by the Work and Family Audit</li> <li>Introduce the career module: social module</li> </ul>	Ongoing
	Flexible working time models (e.g. sabbaticals)	Introduce mobile working in Friedrich-shafen (used by approx. 800 employees)	Ongoing
	Global Employee Survey	Conceptual design, pilot, and further preparation of the global survey in March 2015 were completed	2015, then regular process every two years
	ZF Leadership Principles and 360° feedback	Leadership concept developed in terms of content and process, workshops for executive managers around the world planned	2017
Occupational health and safety			
OHSAS 18001 certification: Gradually increase the share of Group companies partici- pating in the matrix	Include locations within a centrally managed project with voluntary participation by the locations	Certification of two new locations in the Asia-Pacific region	Ongoing

Strategic Target	Actions	Status 2014	Date
Global accident reduction program	Reduce accident rate to fewer than 5 accidents leading to one or more lost days per one million working hours	Accident rate: 13.5 Lost days: 24 348	2025
	Establish a global organizational structure	Different implementation maturity at	2016
	Binding Group key figures and reporting standardized throughout the Group	location level	
	Accident management with monthly review of the KPIs (key performance indicators) as a management instrument at Group and location management level		
	Local actions		
	Participation of the Safety Officers in planning, procurement, and operation of machines, plants, and buildings		
	Regular safety inspections		
	Record near-accidents	New action	
	Safety leadership training for executive managers	New action	
Preserve and promote our employees' health	Preventive actions	<ul> <li>Apply work safety and health criteria when planning and procuring ma- chines and equipment.</li> </ul>	Ongoing
		Create and distribute the ArbMedVV communication pack	Done
	Foundation of the Occupational Medicine expert group and the interdisciplinary Health Management expert group	New action	2015
	Determine minimum medical standards worldwide	Draw up and pass global minimum medical standards	Done
		Global implementation initiated	Ongoing

### **Organizational Profile**

#### **G4-3** Name of the organization

ZF Friedrichshafen AG (in the following referred to as ZF)

### **G4-4 Primary brands, products, and services**

The company was founded in 1915 to produce gears and transmissions for aircraft, motor vehicles, and motorboats. Today, ZF is a global leader in driveline and chassis technology as well as active and passive safety technology (see page 4). ZF has eight main development locations in Europe, North America, and Asia. This global list is rounded off by the international service network that offers ZF customers an extensive range of services worldwide. It consists of 33 own service companies and more than 650 service partners.

ZF is primarily active in the automotive industry, for passenger car and commercial vehicle manufacturers. In 2014, 70 percent of sales were in the field of passenger cars and light commercial vehicles below six tons, 18 percent in the field of commercial vehicles over six tons, and 12 percent in the field of construction and agricultural machinery, marine, aviation, special vehicles, and rail vehicles, as well as wind power. ZF achieved a 63 percent share of its sales with driveline technology products, while the sales share of chassis technology products amounted to 37 percent.

The most important ZF product brands in the reporting period included:

- SACHS: clutches and dampers for passenger cars and commercial vehicles
- LEMFÖRDER: steering systems, chassis, rubber-tometal components, drive and brake components for passenger cars and commercial vehicles
- BOGE: shock absorbers for passenger cars, steering gears, and steering pumps
- ZF Parts: transmission and axle parts

#### **G4-5** Location of the organization's headquarters

Friedrichshafen (Germany)

#### **G4-6** Countries with significant operations

The focus of the international business activities of the ZF Group can traditionally be found in Western Europe, primarily in the domestic market of Germany. Here, the company has further large-scale locations in Schweinfurt, Saarbrücken, Passau, and in the Dümmer Region in addition to the Corporate Headquarters in Friedrichshafen. These locations accommodate both production and development capacities. In addition to that, there are further production companies throughout Germany as well as in Austria, Great Britain, Belgium, France, Italy, Spain, Hungary, Slovakia, the Czech Republic, Turkey, Russia, and the Netherlands.

#### **G4-7** Nature of ownership and legal form

ZF Friedrichshafen AG is a non-listed corporation in accordance with German law. The shareholders of ZF are the Zeppelin Foundation that is administered by the City of Friedrichshafen and holds 93.8 percent of company shares and the Dr. Jürgen and Irmgard Ulderup Foundation, Lemförde (Germany) that holds 6.2 percent of company shares. Employee stocks are not issued.

Each year, ZF gives the Zeppelin Foundation a dividend. The funds are exclusively used for non-profit and social purposes, especially in the fields of science and research, art and culture, as well as child and youth welfare. The Dr. Jürgen and Irmgard Ulderup Foundation in Lemförde supports the education and vocational training of young people as well as nature and landscape conservation. Jürgen Ulderup was the founder of the Lemförder Group, a company that is part of the ZF Group today.

### The City of Friedrichshafen - Zeppelin Foundation

http://www.friedrichshafen.de/unsere-stadt/zeppelin/zeppelin-stiftung

### Dr. Jürgen and Irmgard Ulderup Foundation

http://www.ulderupstiftung.de

#### **G4-8 Markets served**

As in the past few years, the market regions experienced different business trends in 2014. While growth in the North American and Asia-Pacific regions increased strongly and in Europe slightly, South America suffered a sharp fall in market development. The main growth driver for ZF was business with automatic passenger car transmissions and axle systems. The market success of the range of 8-speed automatic transmissions in particular is very pleasing. The markets for commercial vehicle products and off-road machinery proved more challenging. The Wind Power Technology business unit, which suffered from negative market influences in the previous years, saw a slight recovery.

The European region (Germany, Western Europe, and Eastern Europe) accounted for 56 percent of Group sales in 2014, at EUR 10.3 billion. In North America, the ZF Group generated sales amounting to EUR 3.7 billion – a Group sales share of more than 20 percent. Sales in South America totaled EUR 556 million in 2014. As in the previous year, the Asia-Pacific region recorded the largest percentage growth with an increase on the previous year of more than 20 percent to EUR 3.6 billion. The share of the region in Group sales amounted to approx. 19 percent. In Africa, ZF generated sales of EUR 177 million.

#### **G4-9 Scale of the organization**

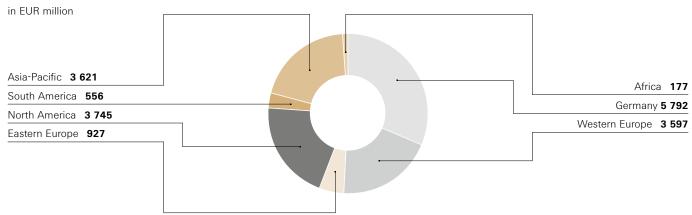
In 2014, ZF generated sales of EUR 18.4 billion (2013: EUR 16.8 billion) with its portfolio of several thousands of products in approximately 80 different product groups. The company has 113 production companies in 26 countries.

# G4-10 Employees by employment type, gender and region

As of December 31, 2014, ZF employees worldwide numbered 71 402. This represents an increase of 5 percent compared to the previous year, whereby it must be noted that due to the sale of the Rubber & Plastics business unit as well as the AIBC (South Africa) subsidiary in 2014, the employees of these companies are no longer included in the figures. More than two thirds of employees work in Europe, most of them in Germany. It can be predicted today that the internationalization of markets will continue to grow in significance and at a faster rate, a factor which is reflected in the development of the employee structure.

96 percent of employees have permanent contracts with the ZF Group. In Germany, this amount is 95.6 percent. The percentage of women employed by the ZF Group is 15.2 percent (Germany 12.7 percent and Europe 13.7 percent.). The region of North America has the largest percentage of women in the workforce with 24.5 percent.

#### Sales share according to markets



In the face of volatile markets, flexible working time models such as working time accounts, temporary employment contracts, and agency work are important tools to compensate for and mitigate the fluctuations in demand and sales. In 2014, a total of 3 638 temporary workers were deployed, the majority of which (75.9 percent, or 2 762) worked abroad.

#### Employee structure worldwide1)

Numbe	er ot	peo	nle

2012	2013 <sup>2)</sup>	2014
68 406	72 643	71 402
49 526	51 792	50 774
39 882	41 900	41 188
6 291	7 238	8 342
4 762	4 790	4 106
6 610	7 540	7 786
1 217	1 283	394
65 557	69 664	68 587
2 849	2 979	2 815
66 557	70 663	69 388
1 841	1 980	2 014
34 057	36 291	34 790
34 349	36 352	36 612
	62 124	60 549
	10 519	10 853
1 818	2 085	2 073
3 566	4 105	3 638
	68 406 49 526 39 882 6 291 4 762 6 610 1 217 65 557 2 849 66 557 1 841 34 057 34 349	68 406 72 643 49 526 51 792 39 882 41 900 6 291 7 238 4 762 4 790 6 610 7 540 1 217 1 283  65 557 69 664 2 849 2 979 66 557 70 663 1 841 1 980  34 057 36 291 34 349 36 352  62 124 10 519

- 1) Excl. ZF Lenksysteme, number of employees by contracts in accordance with the IFRS regulations until the end of the year
- 2) Incl. employees of the Rubber & Plastics business unit
- Direct and indirect participation in value creation processes

#### Employees by region and gender

in %

/0	Women	Men
Europe	13.5	86.5
thereof in Germany	12.7	87.3
North America	24.5	75.5
South America	8.8	91.2
Asia-Pacific	18.5	81.5
Africa	15.4	84.6
ZF Group (total)	15.2	84.8

# G4-11 Percentage of employees covered by collective bargaining agreements

In Germany, almost all employees are covered by collective bargaining agreements. These are based either on collective bargaining agreements or company regulations. Top-level executives are included in collective bargaining agreements under individual regulations (retirement pensions, part-time work for older employees, etc.). The percentage of employees covered by collective bargaining agreements in Germany is some 98 percent. Usually, collective bargaining agreements also apply in the foreign companies based on individual company regulations.

#### **G4-12** Description of the supply chain

ZF produces drive and chassis systems in 26 countries worldwide. A major part of value creation in production in our plants is the supply of components by suppliers. ZF suppliers are normally contractors who procure the raw materials or raw parts for the products ordered themselves, produce the products themselves, and in some cases design the products themselves. The material share provided by suppliers in relation to sales is some 60 percent.

When selecting strategic suppliers, ZF examines their environmental management carefully. ZF always takes care of transport of the externally supplied components. This is the only way to ensure transport is organized optimally and environmental aspects are taken into account throughout. As part of our freight management, we optimize and pool goods flows, achieving a better capacity utilization of the means of transport as well as avoiding unnecessary transports. Furthermore, we consider environmental aspects when selecting means of transport.

#### G4-13 Significant changes during the reporting period

During the reporting period, new joint ventures were set up in China, with Beijing Automotive Industry Corporation (BAIC) in the chassis segment, and with YTO in the agricultural machinery segment. The sale of the Rubber & Plastics business unit to Chinese company Zhuzhou Times New Material Technology Co., Ltd. is now complete. Furthermore, in January 2015, the sale of the shares in the ZF Lenksysteme GmbH joint venture to the joint venture partner Robert Bosch GmbH was concluded successfully.

In 2014, our Corporate Materials Management established central consolidation centers for sea freight in Charleston (USA), Bremen (DE), and Shanghai (CN), and adjusted the global footprint of our entire transport management operations. To prepare at an early stage for the growth in North America, China, and India, we analyzed the regional supplier base and resolved to set up Global Procurement Offices in Mexico, India, and China. The objective here is to prepare and develop the local supplier base to meet ZF-specific requirements.

#### **G4-14** Implementation of the precautionary principle

The Group-wide uniform reporting to the Board of Management and Supervisory Board of ZF with regard to the early detection and tackling of risks that threaten the existence of the company is regulated by a Group Directive. All elements of risk management are summarized in a risk management system. This system is not just aimed at fulfilling legal requirements; it should also contribute towards increasing the company's value by reducing risk potential and its probability of occurrence. All risks that exceed the threshold values with regard to scope of damage and probability of occurrence are reported by the corporate departments and decentralized reporting units. According to the directive, all divisions through to the individual companies are responsible for the implementation of a functioning risk management process (risk identification, risk assessment, risk management, reporting, monitoring/verification). This is performed in agreement with the respective Corporate Function Departments. Corporate Controlling is responsible for the risk management system on the Group level.

In addition, there are further instruments in the ZF Group that can be used for early detection such as monthly reports, strategic and operational planning, reports from the technical (expert) departments (Quality, Corporate Materials Management, Corporate Market, Compliance, etc.), standard audits from Corporate Auditing, and certifications according to the standards from the International Organization for Standardization (ISO).

Furthermore, there is a host of information systems and instruments that are geared towards specific risk fields such as the environment, quality, financial status, market (customers, suppliers/materials management), and competitive situation. The existing Corporate Function Departments also perform principal tasks within the context of risk management.

In the run-up to construction projects, the locations are tested with regard to possible polluted areas, in the event of acquisitions, potential environmental risks of the projects are determined with the aid of an environmental due diligence.

#### **G4-15** External initiatives that the organization endorses

ZF signed the United Nations Global Compact on May 1, 2012, thus committing itself to the observation and promotion of its ten principles. Since joining, ZF has also become a member of the German Global Compact Network and participates in exchanges between the member companies.

# **G4-16 Significant memberships in industry and business** associations

The ZF Group and its companies are committed to a wide range of associations and interest groups. The following list provides a representative selection.

- Employers' Association Südwestmetall http://www.suedwestmetall.de
- German Aerospace Industries Association (BDLI)
   http://www.bdli.de
   (ZF Luftfahrttechnik GmbH,
   Kassel-Calden is a member)
- German Association of Materials Management,
   Purchasing, and Logistics e.V. (BME)
   http://www.bme.de
- Carbon Composites e.V.
   http://www.carbon-composites.eu
- Compliance Network e.V.
   http://www.netzwerk-compliance.de
- German Global Compact Network http://www.globalcompact.de

 Chamber of Industry and Commerce Hochrhein-Bodensee

http://www.konstanz.ihk.de

 Chamber of Industry and Commerce Oberschwaben, Weingarten

http://www.weingarten.ihk.de

 Foundation of German Business - Remembrance, Responsibility, and Future (as a donor)

http://www.stiftung-evz.de

German Association of the Automotive Industry e.V. (VDA)

http://www.vda.de

German Engineering Federation e.V. (VDMA)

http://www.vdma.org

Association of German Engineers e.V. (VDI) –
 Lake Constance regional association (as a supporting member)

http://www.vdi.de/8078.0.html

Wissenswerkstatt Friedrichshafen e.V. (as a supporting organization)

http://www.wiwe-fn.de

 German Federation for Motor Trades and Repairs https://www.kfzgewerbe.de

 German Association of Electrical Engineering and the Electronics Industry (ZVEI)

http://www.zvei.org

(Member is the Auerbach plant,

Electronic Systems business unit)

 European Association of Automotive Suppliers (CLEPA)

http://www.clepa.eu

# **Identified Material Aspects and Boundaries**

### G4-17 Entities included in the consolidated financial statements

The merging of the major German ZF companies in order to create ZF Friedrichshafen AG took place on August 01, 2011. Four divisions that manage the operational activities as well as the corporate functions for functional management all operate under this roof. Furthermore, the foreign companies are operationally assigned to the divisions. The four divisions are:

- Car Powertrain Technology
- Car Chassis Technology
- Commercial Vehicle Technology
- Industrial Technology

A new division was added after the approval of the acquisition of TRW Automotive Holdings Corp. The operational business of ZF Services continues to be an independent business unit, organized in a comparable manner to a division and is represented on the Board of Management level by the Board member responsible for

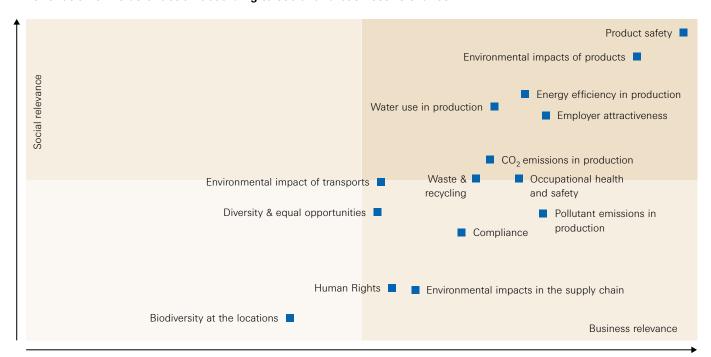
the Market segment. The Electronic Systems business unit also exists. Further companies belonging to the Group can be found in the 2014 Annual Report on pages 148 – 151.

#### **G4-18 Process for defining the report content**

To determine the report content, ZF followed the G4 guidelines of the Global Reporting Initiative (GRI). The company performed a materiality analysis which identified the sustainability topics important for the company, and assigned these to the relevant GRI aspects. The essential topics were determined by means of an impact assessment, further backed up by a media analysis, and assessed in terms of medium and long-term relevance for ZF.

Topics classified as relevant from both a social perspective as well as with regard to their importance for the business success of ZF are reported on as fully as possible with regard to the GRI requirements. GRI aspects assigned to other topics are only included in this report if they have a significant business relevance for ZF.

#### Prioritization of fields of action according to social and business relevance



### G4-19 | G4-20 | G4-21 All material aspects inside and outside the company

Material topics	GRI aspects of reporting [F G4-19]	Materiality within the organization [ <b>F</b> G4-20]	Materiality outside the organization [ <b>F</b> G4-21]
	- Economic performance - Procurement Practices - Indirect economic impacts - Overall	ZF Consolidated Group	
Product safety	- Customer health and safety - Product and service labeling	ZF Consolidated Group	Customers
Environmental impacts of products	- Products and services - Energy	ZF Consolidated Group	Customers
Energy efficiency in production	- Energy	ZF Consolidated Group	
CO <sub>2</sub> emissions in production	- Emissions	ZF Consolidated Group	
Water use in production	- Emissions - Water - Effluents and waste	ZF Consolidated Group	
Environmental impacts of transport	- Transport - Emissions	ZF Consolidated Group	Logistics service providers and suppliers
Waste and recycling	- Materials - Effluents and waste	ZF Consolidated Group	
Pollutant emissions in production	- Emissions	ZF Consolidated Group	
Employer attractiveness	- Market presence - Employment - Training and education - Labor-management relations	ZF Consolidated Group	
Occupational health and safety	- Occupational health and safety	ZF Consolidated Group	
Diversity and equal opportunities	- Diversity and equal opportunities - Equal remuneration for women and men - Equal treatment	ZF Consolidated Group	
Compliance	<ul><li>Anti-corruption</li><li>Anti-competitive behavior</li><li>Compliance (society)</li><li>Compliance (environment)</li></ul>	ZF Consolidated Group	
Human Rights	- Supplier assessments for impacts on society - Investment	ZF Consolidated Group	Suppliers
Environmental impacts in the supply chain	- Supplier environmental assessment	ZF Consolidated Group	Suppliers

# **G4-22** Restatemtents of information provided in previous reports

No subsequent changes were made in this report regarding the presentation of information compared to the reporting years 2012 and 2013.

# **G4-23 Significant changes in the Scope and Aspect Boundaries**

On September 15, 2014, an agreement was made with Robert Bosch GmbH, Stuttgart (Germany), to sell ZF's 50 percent shareholding in ZF Lenksysteme GmbH. In January 2015, the sale of the shares in the ZF Lenksysteme GmbH joint venture to the joint venture partner Robert Bosch GmbH was concluded successfully. Equity method accounting was ceased in September 2014. No changes to the scope of the report result from this sale because the non-financial performance indicators of ZF Lenksysteme GmbH were already not included in previous years' sustainability reports.

With effect from September 1, 2014, the sale of the Rubber & Plastics business unit to the Chinese company Zhuzhou Times New Material Technology Co., Ltd. was completed, and at the beginning of 2014, the AIBC Group in South Africa was sold. As a result of the sale of the Rubber & Plastics business unit in 2014, the employees from this business unit and from the sold AIBC subsidiary are no longer included in the employee figures. Only slight changes result from this with regard to the environmental key figures.

### **Stakeholder Engagement**

#### G4-24 Stakeholder groups engaged

At ZF, the employees, customers and suppliers, as well as the owners of the company, authorities, trade unions, associations, media and politics, as well as the business partners, and the residents at the locations are considered to be significant stakeholders. An ever more important group is the potential junior staff, which is why schools, vocational schools, universities of applied sciences, universities, and scientific institutes can be found at the top of the list of the stakeholder groups to be involved. As a B2B company, ZF has only rarely been in direct contact with national, non-governmental organizations (NGOs) that represent ecological and social concerns. However, as is the case with local environmental initiatives that are often in direct exchange with the location managements, these NGOs equally belong to the stakeholder groups that we consider to be important.

In order to ensure that we involve a broad, representative range of stakeholder groups in the compilation of our materiality analysis, we performed an international media analysis during the reporting period. The objective of this analysis was to filter out the most important stakeholder interests and the central topics and concerns from global social media, trade publications, and press reports on sustainability in the automotive industry. The findings of this valuation were directly applied in the materiality analysis.

#### G4-25 Identification and selection of stakeholders

Whoever acts in a sustainable manner should be aware of the interests of their stakeholders. In a first step, dialog was initiated with relevant stakeholders in order to identify the significance of various sustainability issues from both an external and internal perspective. An analysis of the results from an initial stakeholder survey indicated which topics must be taken into account and what needs to be done in order to retain the lasting trust of customers, employees, suppliers, and society as a whole. As part of a materiality analysis on reporting in compliance with the GRI G4 guidelines, the company also set out in 2014 to systematically integrate stakeholder inter-

ests into defining priorities for the field of sustainability. Talks were conducted during the reporting period with customer and association representatives, among others.

# G4-26 Approach to stakeholder engagement and frequency

ZF is involved in a regular exchange with its stakeholders via memberships in associations, in the German Global Compact Network, via personal contact with residents at the locations, with the media, with customers and suppliers through direct discussions as well as through surveys concerning topics such as sustainability, with employees via the works council as well as through internal events and Group media.

# **G4-27** Key topics and concerns raised through stakeholder engagement and response

In 2014, we identified the most important issues from the perspective of the stakeholders with the materiality analysis. Apart from product safety, they included above all environmental impacts of our production processes as well as our products throughout their life cycle.

The other expectations and requirements that are presented to ZF are always broadly similar: They are based on acting in accordance with the law and regulations, developing excellent and efficient products for the customers, and demonstrating responsibility for employees, the environment and, increasingly, also in the supply chain. The requirements of junior staff that are reflected in questions about values, future orientation, development opportunities, and working conditions are also particularly important to us. We also wish to address them in this report.

As part of our active membership in the environmental management committee at the VDA and in associated work groups on energy management or hazardous substances for example, we actively exchanged information on current topics and developments with other actors.

### Types of stakeholder communication (groups and the media)

Employees	"we>move" employee magazine, Intranet, Internet, internal commu- nication campaigns such as "Year of Energy", ZF Family Day, Social commitment/ZF hilft traveling exhibition
Potential employees	Cooperations with universities, Annual Report, Corporate Report, "Drive" company magazine, ZF website, involvement in trade fairs, social media, advertisements
Customers	Annual Report, Corporate Report, "Drive" company magazine, ZF website, brochures, advertisements, customer days, involvement in trade fairs
Suppliers and partners	Annual Report, Corporate Report, "Drive" company magazine, ZF website, involvement in trade shows, advertisements, supplier days, brochures, key purchasing strategy
Politics, associations, interest groups	Annual Report, Corporate Report, ZF website, personal discussions
Educational institutions	Cooperations with universities, Annual Report, Corporate Report, ZF website, involvement in trade fairs, advertisements
Press and the media	Annual Report, Corporate Report, ZF website, "Drive" company magazine, press releases, press conferences
Communities	ZF Family Day, press, ZF website, advertisements, sponsoring, regional trade shows such as the International Lake Constance Trade Fair (IBO)
Former employees	"Drive" company magazine, ZF Family Day, International Lake Constance Trade Fair, ZF website, ZF pensioner association
End customers	Annual Report, Corporate Report, involvement in trade fairs such as International Motor Show, North American International Auto Show, "Drive" company magazine, ZF website, brochures, advertisements, social media

### **Report Profile**

### **G4-28 Reporting period**

Fiscal year 2014 (corresponds to calendar year 2014)

### **G4-29** Date of most recent previous report

July 2014

#### **G4-30** Reporting cycle

Our sustainability report is published annually.

#### G4-31 Contact point for questions regarding the report

Christine Betz ZF Friedrichshafen AG Corporate Compliance/Sustainability Graf-von-Soden-Platz 1 88038 Friedrichshafen E-mail: sustainability@zf.com

# G4-32 "In accordance" option with GRI and Content Index chosen

This sustainability report was issued in compliance with Global Reporting Initiative guidelines and meets the "in conformity" core option. The G4 guidelines valid since May 2013 were applied.

#### **G4-33** External verification of the report

The report was not submitted for an external verification.

#### **Governance**

# G4-34 Governance structure including committees of the highest governance body

ZF Friedrichshafen AG is a non-listed corporation with two foundations as shareholders. The corporation is subject to the provisions of the German Stock Corporation Act that stipulates a dual management system comprising the Board of Management and Supervisory Board. ZF Friedrichshafen AG is led by the Board of Management, which manages the company, and by the Supervisory Board, which monitors the Board of Management. For the most part, the activities of the Board of Management are strategic in nature and comprise both the responsibility for the corporate functions and the divisions. In this context, particular importance is placed on close networking and cooperation within the Group. The operational topics of the divisions and business units are mainly processed in the divisions.

As of January 1, 2015, the Board of Management has been expanded by one member with sole responsibility for the region of North America. This acknowledges the increasing importance of this region in the run-up to the expected acquisition of the U.S. company TRW. The supervision of the Board of Management by the Supervisory Board, whose 20 members are appointed with equal representation, is supported by an Executive Committee and an Audit Committee which are both composed of members of the Supervisory Board.

ZF is set up along the lines of a matrix organization which links the Group-wide competencies of the corporate functions with the global business responsibility of the divisions and business units. The central departments of the ZF Group are headed by the members of the Board of Management. The four divisions for business in Car Powertrain Technology, Car Chassis Technology, Commercial Vehicle Technology, and Industrial Technology are assigned to the members of the Board of Management. A new division was added after the approval of the acquisition of TRW Automotive Holdings Corp. The divisions include the business units relevant to the respective industry. The Electronic Systems and ZF Services business units are an exception. They are

assigned directly to members of the Board of Management. The same applies to the responsibilities with regard to the North America, South America, and Asia-Pacific regions.

Since 2007, ZF has observed its own Corporate Governance Code that is closely aligned to the provisions of the German Corporate Governance Code (German abbreviation: DCGK), however, it takes the specific features of ZF as a non-listed foundation company more closely into account. Further developments of the DCGK are constantly checked with regard to their transferability to the ZF Corporate Governance Code. The Code was adapted in 2013.

The highest controlling body and its committees are nominated and voted based on the ZF Corporate Governance Code. In addition, the Executive Committee also ensures a proper discussion of personnel matters and strategic issues. In addition, the Audit Committee ensures the proper discussion of the Annual Financial Statements as well as the topics of compliance, revision, and planning. Three of the twenty members of the Supervisory Board are currently women. Three members of the Supervisory Board do not come from Germany. Five years is the maximum term of office for the members of the Supervisory Board in order to ensure the independence of the controlling body.

### **Ethics and Integrity**

# G4-56 Values, principles, standards and norms of behavior

Correct, responsible, and sustainable business management and the assumption of corporate social responsibility are fundamental components of our corporate policy. Compliance is thus an essential element in ensuring the long-term success of our company. Ever since its foundation, the ZF Group has been committed to fair and transparent business management and always bases its activities on applicable law and jurisdiction in the countries in which it operates. These include our commitment to sustainable development as well as our adoption of basic principles in the fields of human rights and working conditions, quality and environmental management, health and safety of employees, fair market behavior, and combating corruption.

Having signed the United Nations Global Compact, we unequivocally embrace its ten principles of responsible and sustainable activity. We also observe the ILO (International Labour Organization) core labor standards, the contents of the German Corporate Governance Code, and the OECD Guidelines for Multinational Enterprises.

Additionally, the following documents are binding for all ZF Group employees worldwide:

- "Give me 5" Corporate Principles, 2011
- Corporate Governance Code, 2007 (revised in 2013)
- Code of Conduct, 2008 (revised in 2014)
- Principles of Social Responsibility, 2011
- Environmental and Energy Policy, 2014 version
- Occupational Health and Safety Policy, 2013
- Corporate Statement, 2013

#### **Leadership Principles**

The Leadership Principles implemented in 2014 support the development of excellent leadership to a crucial extent. The ZF Leadership Principles define the basis for our executive managers' leadership work. They constitute a binding standard for management behavior and, together with our Corporate Principles, apply for all our executive managers at all our locations. Furthermore, the ZF Leadership Principles also provide orientation for our employees about what they can expect of executive managers.

#### **Business Partner Principles**

The Business Partner Principles were published in 2014. In the reporting year, an initial 2 000 or so selected suppliers of production materials were asked to confirm receipt of the Business Partner Principles and to recognize them.

#### **Economic Performance Indicators**

Management approach

#### **Economic performance**

Independence and financial standing are the foundations for our business success. Our profitability allows us to make the necessary investments in new products, technologies, and markets. In this way, we secure the future of our company in the interests of our customers, market partners, employees, and owners. The acquisition of TRW Automotive Inc. initiated in the reporting year also supports this objective and helps secure the future of ZF as a technology company. This is the largest acquisition in our corporate history. It extends the technological, geographical, and cultural range of our activities, while also increasing the attractiveness and competitiveness of the company.

In terms of its economic operations, ZF aligns itself with global megatrends. In doing so, fuel and emission reduction of drives, social trends such as increasing mobility, urbanization, and demographic change, as well as an increasing regulation and general globalization of the markets are central in terms of energy efficiency and climate protection. The internationalization of the company proceeds further. Even in previous years, ZF followed the manufacturers into new markets with its locations or prepared itself for new customers in growth markets, especially in North and South America, China, and other newly industrialized countries.

In 2012, ZF launched its ZF 2025 strategy process with the aim of ensuring the entire company remains competitive in the long term. Based on megatrends and their implications for ZF, the Board of Management defined top targets that were fleshed out as part of the new strategy process in the matrix organization of the divisions, business units, and corporate functions. This gives ZF robust long-term prospects supported by strategic initiatives and actions. They provide the framework for further Group approaches in strategic and operational planning.

During the process of drawing up the ZF 2025 strategy, fields of action in the portfolio were defined that are being further developed to ensure our long-term business prospects. ZF sees a need for action principally in the areas of advanced driver assistance systems, autonomous driving, and safety. With the acquisition of TRW, one of the market leaders in these fields, ZF has accomplished a major advance that completes its portfolio for a secure future.

The pooled strengths of both partners in research and development enable us jointly to offer customers advanced, holistic solutions. Both companies profit vastly from the complementary product portfolio that contains practically no overlaps. There are also further advantages of our acquisition of TRW: The division of business is much more international, with TRW strengthening our presence in North America and Asia. Looking at our customer portfolio, ZF now has a much broader base. The historically strong positioning of ZF with premium customers is supplemented by TRW's orientation toward volume customers, which broadens our customer base. Thanks to the acquisition, ZF achieves global market penetration as well as profitable diversification, while further expanding its technology and cost leadership.

#### Key figures for management

The top key figures ROCE (Return on Capital Employed), ZF Value Added, and operating profit are used to manage financial independence. Furthermore, the key figures of free cash flow and gross margin are extremely important in terms of control in all organizational units. The introduction of further liquidity-oriented key figures in sectors such as working capital as well as the supplements in reporting complete the restructuring of the business administration control concept.

#### Market presence

ZF is a fair and reliable employer for its employees that lives and breathes its values equally at all its locations worldwide, and communicates them to the wider public. We value the varied cultural backgrounds of our employees which enrich our global group structure. At the same time, we aim to be a responsible employer dedicated to improving the economic and social situation of our

employees right through to their family environment.Our commitment beyond the borders of divisions and locations shapes our corporate culture and is the key to our success.

#### Indirect economic impact

At ZF, we know that a company can only achieve business success in an intact economic environment. The success orientation of a company must match the development of the surrounding and dependent companies so that sustainable corporate governance is possible for all. This principle plays a major role in our relations with business partners, but also in our investments in production materials and capacities. That is why we have firmly anchored factors of sustainable corporate management in our Corporate Principles. We see them not as individual actions, but as a central aspect of entrepreneurial activity in our daily decision-making. Our decisions are based on clear, transparent corporate values. Moreover, we consider aspects of sustainability together with their opportunities and risks, and we take fundamental decisions for successful future development accordingly this applies to our entire value creation chain. We build up connections with our customers, suppliers, and society so that we can develop sustainable solutions within a ZF Friedrichshafen AG network.

#### **Procurement Practices**

We are aware that economic growth very much depends upon the general acceptance of our business activities in the immediate environment and in society at large. Another highly significant criterion is customer satisfaction, which is directly linked to the quality of our products. For this reason, materials management is vitally important, therefore a trusting and reliable collaboration with our suppliers is a priority. Only then can we guarantee the high quality of our products as well as ZF's delivery reliability.

Establishing an effective and efficient value creation chain throughout is the declared objective of the ZF Advanced Procurement Strategy (APS 25) that we are pursuing within the framework of the ZF 2025 group strategy. This strategy contains three sub-goals: increasing ROCE, total quality management, and standardiza-

tion. Its systematic implementation is supported by a sourcing decision process which ensures sourcing decisions based on total cost of ownership criteria. In this way, materials management not only contributes to achieving business targets, but can also take account of environmental factors such as energy costs alongside pure purchasing costs.

Another component of APS 25 is the integration of sustainability in supplier selection and supplier management. In 2014, ZF published a Business Partner Code which will in future form the binding foundation for supplier self-assessments and audits. In the reporting year, we asked some 2 000 selected suppliers of production materials to confirm receipt of the code and to accept its principles. We want all our business partners to implement the Code of Conduct in the near future.

**Aspect: Economic performance** 

#### **G4-EC1** Direct economic value created and distributed

In 2014, the net profit or loss before tax as well as depreciation and amortization (EBITDA) amounted to EUR 2 044 million (2013: EUR 1 703 million). The purchasing volume of production materials in 2014 totaled EUR 3.4 billion. This includes internally purchased materials and directed buy volumes. The value of operational materials was some EUR 3.4 billion. EUR 201 million in income tax was paid to the German government (2013: EUR 221 million). Personnel expenses totaled EUR 4 236 million (2013: EUR 3 979 million).

6 539 employees work for ZF Research and Development worldwide. Of these, about 1 000 engineers and technicians work at the ZF Group's Corporate Research and Development departments in Friedrichshafen (Germany), and an additional 350 in Pilsen (Czech Republic), Shanghai (China), and Tokyo (Japan). In 2014, we invested EUR 891 million in R&D. Thus, the target of five percent of sales for research and development costs was reached.

Preparatory measures in connection with the acquisition of the U.S. company TRW Automotive Holdings Corp. initiated in the year under review and the financing required for this transaction already impacted on the ZF Group's net assets, financial position, and results of operations in 2014.

Further diversifying financing resources helps to promote and secure the strategic objective of safeguarding the financial independence of the ZF Group at any time. Attainment of this target is reviewed on a monthly basis (see also Points G4-EC7 and G4-EC8, and the 2014 Annual Report, pages 84 and 110).

# G4-EC2: Financial implications and other risks and opportunities due to climate change

ZF's business is affected in various ways by climate change. It presents certain risks for our production activities, but also opportunities for our products.

#### Greenhouse gas emissions

In this context, one of the main factors affecting our production activities is the emission of greenhouse gases. Operating costs are rising due to ever stricter legislation involving tougher regulations for plant approvals. These can for instance require even stricter adherence to emission limit values at the locations or in emissions trading, and may demand retrofitting equipment. Reducing greenhouse gas emissions is a central element of ZF environmental policy, which is managed worldwide by our environmental management system according to ISO 14001. Our declared target is the continuous reduction of emissions by 20 percent by 2020. This is also how we aim to combat increasing operating costs, among other things.

#### Losses due to extreme weather

Extreme weather situations caused by climate change such as high water and flooding or extreme drought have so far only affected our production locations in isolated cases. Nevertheless, ZF sees these developments as a megatrend and is addressing the resulting risks within its environmental management system and the environmental targets defined in its sustainability program.

Finally, suitable precautionary measures must be taken to minimize the increased risk of losses at the locations and in the supply chain caused by increasing extreme weather situations and natural disasters. Because global warming is changing the energy balance of the atmosphere, periods of extreme heat, heavy rainfall, and flooding can become more frequent and more intensive. That is why a sustainable corporate development includes early precautions against extreme weather and natural disasters.

This applies in particular for the ZF location in Passau, where the Danube, Inn, and Ilz rivers converge. In June 2013, large areas of Passau were under several meters of water due to combined extremely high water levels in the rivers. The electricity and water supplies had to be temporarily cut off, leading to millions of euros of damage. The ZF location Passau-Grubweg was also directly affected by the disaster, and operations had to be temporarily suspended.

In order to manage potential risks from high water incidents of this magnitude, ZF is working intensively on creating reliable high-water protection. In coordination with Passau, the water authorities, and the state of Bavaria, ZF is developing a concept for a seamless location protection in the Passau district of Grubweg, which will offer protection against surface or ground water penetration even in the event of extreme high water. The first section will be completed by the end of 2016. ZF is contributing a large part of the financing and taking on long-term responsibility for employees, customers, and the entire Passau region.

We have only seen isolated examples of higher premiums for property insurance at locations at risk from natural hazards such as high water, storm, or extreme drought, but they could increase in the future if damage incidents occur more frequently. These aspects are decisive factors when building new premises or purchasing production facilities.

#### Water scarcity at locations worldwide

Some of our production locations in Brazil and Mexico are in so-called "water stressed areas". Permits for water withdrawal for production are in some cases already restricted in these areas. If the water scarcity persists, this problem could worsen or spread to other regions.

Resource scarcity results in increased investment costs for the technical modernization of production equipment.

Furthermore, we are currently faced with more expensive electricity in Brazil. A large part of the country's electricity supply comes from hydropower, so if water becomes more scarce, the price could climb even higher. Such a development could also lead to electricity rationing which would put energy supply to the locations at risk.

To enable us to better estimate environmental risks in certain regions, we are currently launching projects which assess in advance the extent to which a particular region is subject to a certain risk. The findings will provide an additional criterion for our decisions on awarding contracts to suppliers, in this way contributing to supply security.

We have identified another risk to supply security from long international supply chains. To minimize and more effectively manage this risk, the ZF Group is working on localizing sources. The objective here is to reduce transport costs and actively contribute to lower  $\mathrm{CO}_2$  emissions. Furthermore, this can limit the effects of failures in the supply chain to the region affected.

We are also carrying out initial projects to identify robust methods of determining the emission values and/or environmental impacts of selected products and materials.

#### Solutions on a product level

Our products consume most resources during their utilization phase. Within their competitive environment, ZF products even today stand out due to the fact that they contribute to an economical utilization of resources. For example, the second generation of our 8HP 8-speed automatic transmission saves an additional 3 percent of fuel. The plug-in hybrid transmission scheduled to arrive on the market in 2015 is also based on the 8HP transmission modular kit. Another example is our Get2 rail drive concept that combines the advantages of existing ZF applications with a savings potential of up to 5 percent. Furthermore, our TraXon modular automatic transmission system for heavy trucks is now ready for start of produc-

tion: It reduces consumption by 6 to 9 percent (up to 12 percent in the hybrid version) compared to manual transmissions. We also impressed the industry with our AVE 130 electric portal axle for purely electric low-floor buses, which in 2014 was awarded the International busplaner Sustainability Prize 2015.

The development of strong products like these opens up new sales opportunities for ZF. At the same time, a possible increase in fuel or energy taxes may result in an increase in logistics costs as well as a decrease in demand for individual mobility on the market side. We can mitigate this risk with innovations in hybrid technology, e-mobility, and lightweight design. For instance, in 2014 we developed the basis for the volume production of innovative lightweight components made out of thermosetting and thermoplastic FRP materials.

#### **Further influences**

The opportunities and risks for our wind power sector vary widely because they are dependent on state regulation, in particular support of renewable energies.

European companies may face higher organizational costs from the expansion of reporting obligations as well as the obligation to publish non-financial data, but also from customer requirements for the disclosure of data with relevance to the environment.

#### **G4-EC3** Coverage of benefit plan obligations

Private retirement provisions are becoming more and more important. ZF is prepared for this and already developed a series of attractive models for private employee pensions some years ago. The essential commonality among these models is the possibility to convert gross income into retirement benefits. All employees with indefinite employment contracts in Germany receive the ZF pension as a voluntary employer contribution. In every year of employment, the company pays a contribution to the company pension scheme for employees, depending on their individual remuneration. Taking into account actuarial variables, these contributions are converted into annual pension components using a transformation table. The resulting company-financed components are provided as an employer's pension commit-

ment and contribute significantly to the retirement pensions of our employees. The participation rate is almost 100 percent.

The ZF pension is also linked to an own contribution by employees, strengthening their personal retirement provisions. The employee-financed components are reinsured by an external pension fund.

Furthermore, since 2012, our employees have been able to profit from an innovative pension scheme: By converting at least three percent of their gross pay into pension benefits, employees can receive an additional basic occupational disability allowance which is free for the employee. The ZF retirement benefits are also aimed toward our goal of becoming a more attractive global employer as part of the ZF 2025 strategy. Further instances of social benefits include payments connected to the period of employment such as anniversary bonuses.

In the Consolidated Balance Sheet for 2014, a total of EUR 3 803 million in provisions for pensions was accounted for. This is approximately EUR 1 074 million more than in the previous year. The vast majority of provisions (approx. 97 percent) affects benefits for employees with an employment contract in Germany.

Further figures can be found in the 2014 Annual Report (pages 126-128).

### **G4-EC4** Financial assistance received from government

During the fiscal year of 2014, ZF received EUR 4 million (2013: EUR 4 million) in government grants for investments as well as expense subsidies amounting to EUR 11 million (2013: EUR 17 million). Investment grants were basically received for investments at various locations in Great Britain, Australia, China, and Russia. Expense subsidies mainly comprise reimbursements from pre-retirement part-time work and state research subsidies. In addition, several projects promoted by the German Federal Government's National Electric Mobility Platform (NPE) in order to further advance developments in electric drives are currently up and running.

**Aspect: Market presence** 

# G4-EC5 Ratios of standard entry level wage compared to local minimum wage

ZF is a fair employer that pays attention to a remuneration of its employees that is in line with the market. This is ensured in two ways in Germany:

First, through external benchmarks and market comparisons. With regard to those employed on the collectively agreed scale, the locations regularly participate in benchmarks of the respective employers' associations. Employees are paid more than the minimum standard as per the collectively agreed scale at many locations. With regard to management, remuneration benchmarks take place at regular intervals with service providers. Furthermore, market comparisons are made on a case-related basis such as when appointing staff.

At ZF, temporary and subcontract workers are paid in accordance with the standard wages that are otherwise paid. Together with its suppliers in Germany, ZF has negotiated minimum wages for such workers in five different categories that are, in some cases, 50 percent above the collective bargaining agreement rate. Furthermore, ZF is entitled to check that the employees of suppliers receive the respective minimum wages or standard wages from service providers and that legal regulations regarding the minimum wage are also fulfilled in the global environment. Our declaration of adherence to collective agreements which external service providers must sign requires that the applicable legal provisions and the collective-agreement provisions applicable to the contractor at the location of its registered office as well as other mandatory working conditions are observed during execution of the work order, and that each employee receives at least the respective collective-agreement wages as well as any supplements established in the collective agreement. This declaration also applies to subcontractors engaged by ZF.

# **G4-EC6** Proportion of senior management hired from the local community

ZF traditionally recruits management staff from within the company's own ranks. This also applies to international locations. ZF has now launched the Global Opportunities and Living Abroad (GOaL) initiative as well as a job-rotation program in order to work toward an improved exchange between various cultural backgrounds and characters. A principle objective of ZF is to open up international careers for employees of all nationalities and integrate the management and junior staff into an international talent management at all locations.

**Aspect: Indirect economic impacts** 

#### **G4-EC7** Infrastructure investments and services provided

ZF invests significantly in technical professions. We aim to promote interest and enthusiasm for MINT subjects early on among children and young people, especially girls. To do this, ZF offers its CyberMentor program, participates actively in the Girls' Day, and runs 'Wissenswerkstatt' (Knowledge Workshops) (see page 55).

In higher education, ZF finances multiple endowed professorships in the Lake Constance region. We support colleges in Ravensburg, Weingarten, and Constance in technical study courses. Furthermore, ZF supports an endowed professorship for Corporate Management at Zeppelin University in Friedrichshafen as well as one for Automotive Mechatronics (together with other companies) at the University of Stuttgart. The total amount of donations made by the ZF Group in 2014 was EUR 16.4 million (2013: EUR 10.8 million). ZF also made a donation of EUR 20 million to the Zeppelin University in 2012 for an upcoming construction project to be completed between 2012 and 2015. ZF also provides funding over a period of five years for the Endowed Chair of Passenger Car Chassis Technology and Dynamics at the Chinese-German College for Postgraduate Studies (CDHK) at the renowned Tongji University in Shanghai.

The company is also making a further contribution to the local urbanistic development in Friedrichshafen and communication with the city's citizens with the ZF Forum, the new ZF corporate headquarters in Friedrich-

shafen. The ZF Forum will include the ZF Academy for employee education and vocational training and also be home to a "glass workshop" for children and youths, which is part of Wissenswerkstatt Friedrichshafen e.V., as well as a school students' research center. Furthermore, the ZF Forum will provide a meeting place for customers, partners, schoolchildren, students, employees, and citizens. As part of the ZF centenary celebrations, we are investing in exhibition rooms at other locations.

At the Passau-Grubweg location, ZF is working in close cooperation with the City of Passau, the water authority, as well as the Free State of Bavaria on the realization of seamless defenses against high water in the Passau district of Grubweg (see G4-EC2). The first section should be finished by the end of 2016. ZF makes a major contribution to the financing and in this way takes on responsibility toward employees, customers, and the entire Passau region.

#### **G4-EC8** Indirect economic impacts

ZF is one of the biggest employers and customers in all regions that the company is active in. On average, ZF products contain around 60 percent supplied materials and products. The purchasing volume of the ZF Group rose along with sales in the year under review, thanks in particular to the expansion of business in the regions of North America and Asia-Pacific. Solely for the procurement of production materials, ZF maintains a global network consisting of approximately 5 000 suppliers (2013: 3 500), ranging from small family businesses through to large groups. ZF calls upon approximately 26 500 suppliers for non-production materials (2013: 25 000).

Once again in 2014, ZF set up new joint ventures, for instance in China with Beijing Automotive Industry Corporation (BAIC) and with YTO in the agricultural machinery segment. The expertise that flows into such joint ventures creates new business opportunities for the companies and their suppliers, especially in the emerging markets of Asia-Pacific as well as South America.

In the reporting year, we also further strengthened the international development locations. A new addition includes a Technology Development department at the

Northville location in Michigan (USA), in order to meet local needs more effectively. The development competencies were extended substantially in the Engineering Center in Shanghai (China) and a team was established for advanced product engineering. The research locations strengthen the demand for specialists and help build up know-how in the respective countries. Basic and technological development in the industries enable ground-breaking innovations in mobility and renewable energies that go far beyond the area of influence of the ZF Group.

#### Ongoing tax payments by regions 2014

	in EUR million
Western Europe	149.1
Eastern Europe	5.2
North America	10.3
South America	1.3
Asia-Pacific	63.5
Africa	3.1
Total	232.5

#### **Aspect: Procurement Practices**

### **G4-EC9** Proportion of spending on local suppliers

85 percent of global purchases for non-production materials (excl. investments) are to be made locally. For 2014, the local procurement of production materials is calculated using a key figure. The average of all divisions amounted to 69 percent for production materials.

#### Localization ratio

	in percent
South Korea	80
Germany	80
China	73
	77
Brazil	72
Italy	70
USA	80
Australia	52
Thailand	45
United Kingdom	46
Turkey	42
Hungary	42
Mexico	40
Spain	27
France	18
Austria	14
Russia	24
Malaysia	10
Slovakia	10
Czech Republic	4
Belgium	25

#### **Environmental Performance Indicators**

#### Management approach

By implementing various environmental protection measures, we fulfill our responsibility toward people and the environment, which is anchored in the ZF values. This simultaneously protects us against entrepreneurial risks – in the areas of compliance, customer relations, and reputation – while improving our operating efficiency to the benefit of the environment. In order to uphold our responsibility in business activities and ZF products, we are constantly working toward the global implementation of legal requirements and internal standards.

The conservation of natural resources forms the basis of our environmental strategy that is based upon the environmental policy that was adopted in 1996 and has been further developed since then. It is globally binding for all locations.

Environmental policy includes major fields of action which are essential for us: climate protection, environmental impact of our production, eco-friendly product design, and environmental performance improvement. This policy rests on environmental objectives in the individual fields of action, controlled by our certified environmental and energy management system. The locations contribute locally to attainment of the objectives.

### Organizational structures and compliance

The global ZF environmental organization covers all the levels of the company from each individual division to various regions, and right down to the locations. The Corporate Environmental Protection Officer is responsible on the Group level and Senior Environmental Protection Officers are appointed on a divisional level. In individual regions, the regional coordinators support in ensuring compliance, the implementation of ZF standards, as well as the control of the environmental management system. Our environmental organization works together closely with the Occupational Safety & Health department in order to leverage synergies. The leading Environmental Protection Officers from the divisions and regions meet up several times per year in the Envi-

ronmental Manager Committee (EMC) to coordinate current developments and further develop the environmental strategy. In addition, working groups are established for important specialist areas to perform preparatory work for the EMC.

#### ZF environmental and energy policy

We respect our planet's natural source of life and are committed to resource conservation and the reduction of environmental pollution. This commitment to sustainable environmental protection is anchored in ZF's Corporate Principles and is the basis for our work. This results in the following principles which are checked on a regular basis and are binding for all employees worldwide. Our executive managers are role models for their implementation.

### 1. We are committed to environmentally-friendly product design

Our products are designed to be as energy and resource efficient as possible. Our striving for technological innovations and excellent solutions also includes environmentally friendly product design. We are convinced that our innovative strength in terms of environmental issues contributes to our competitiveness.

# 2. We reduce the environmental impact of our operating processes to a minimum

We design our processes to be as energy and resource efficient as possible and reduce environmental pollution caused by our activities to a minimum. We take appropriate actions to ensure that environmental hazards are prevented and limited in the event of an incident. For this purpose, we use environmentally-friendly technologies for our investments that are, at least, state-of-the-art; in particular, we actively support the worldwide climate protection efforts.

# 3. We continuously improve our energy and environmental performance

We implement our environmental and energy objectives worldwide with the help of appropriate management systems, review the agreed performance levels on a regular basis, and, if any discrepancy is detected,

we take the necessary improvement actions. For Corporate Development projects, we perform environmental risk assessments.

#### 4. We strive to be a role model on a worldwide level

We want to be a role model in terms of dealing with the environment and its resources. In order to meet our claim to excellence, we not only comply with the respectively applicable legal requirements but also work on the worldwide implementation of ZF-internal standards.

### We actively involve employees, suppliers, service providers, and customers and engage in dialog with the authorities and society

We involve our employees in the development and implementation of our environmental and energy policy. We train and motivate them regularly; our employees actively contribute to shaping our environmental protection and energy management. Our suppliers and service providers are expected to comply with the respectively applicable environmental and energy specifications; from our suppliers with processes especially relevant to the environment, we demand a certified environmental management system. When dealing with environmental and climate protection issues, we engage in a dialog with the authorities and all parties interested on site. Furthermore, we report regularly on the outcome of our efforts.

### In-house environmental protection

All ZF locations are obliged to conduct active environmental management. In 2014, 102 production companies and organizational units worldwide were certified in accordance with the international ISO 14001 standard; this corresponds to 95 percent of the production locations. All production and main development locations with more than 50 employees and after being part of the Group for more than one year are obligated to align their environmental management to the requirements of the ZF Group's environmental management system and to be certified within the ZF Group certificate in accordance with ISO 14001. The Group's environmental management system covers all regions: Eastern and Western Europe, Africa, North America, South America, and

Asia-Pacific. It regulates important matters throughout the Group: For instance, all environmental protection officers are granted the right to submit a direct report to the location management or the sequence and cycle are defined with regard to internal audits.

The Board of Management evaluates annually whether the environmental objectives are reached and whether the environmental management is qualified to meet current requirements: A Group review is created based upon the valuation of the locations and the Group unit for environmental protection. This review is presented to the Board of Management and is used to derive the strategic environmental and sustainability objectives for the entire company.

The environmental management system was extended in Germany in 2013 to include an energy management system in accordance with ISO 50001. Since 2014, all the German production and service locations have been integrated in the certification matrix for energy. As part of the energy management system, the locations locally and annually define specific targets to increase efficiency and take appropriate actions.

#### Investments in environmental protection

Expenditure on environmental issues is not calculated as costs, but as investments. We invest above all in the environment-friendliness of technical equipment and its ecofriendly operation, as well as in nature conservation, landscape care, and a climate-friendly energy supply (see G4-EN31).

#### **ZF Environmental Award**

In order to motivate staff to engage in environmental protection, ZF has been presenting an internal award for outstanding work in the field of environmental protection since 1995. In 2014, the award went to the project "Elimination of phosphating of angle joints" at the Dielingen location. An alternative surface treatment prior to hardening makes phosphating of production parts superfluous. After the reorganization of production, which will be completed in 2015, we will save around EUR 550 000 in material and production costs per year.

Furthermore, we will conserve precious resources such as water, electricity, and chemicals. This will significantly reduce environmental impacts from such factors.

#### **Emissions**

The majority of the emissions generated by our products occur during the utilization phase. That is why one focus of our emissions reduction work is on developing products that contribute to cutting emissions in vehicles (see Aspect: Products).

Simultaneously, we also strive to reduce emissions from our production facilities. It is a declared objective of the ZF Group to reduce  $\mathrm{CO}_2$  emissions from production in relation to sales by 20 percent by 2020. The starting figure is the average specific  $\mathrm{CO}_2$  emissions in the years 2006 to 2010.

To achieve this objective, we have defined three significant fields of action. First: continuous improvement of energy efficiency in production. In 2013, an energy management system in accordance with ISO 50001 was introduced at all our German locations, which are responsible for some 60 percent of our total emissions. Second, we plan to gradually increase the share of renewable energies. The third field of action is the installation of low-  ${\rm CO}_2$  plants. For example, at the Friedrichshafen location, we are currently installing a second gas-powered combined heat and power plant which supplies process heat for production.

### Transport

We design our processes to be as energy and resource-efficient as possible and reduce environmental pollution from our activities to a minimum. Applying suitable actions, we ensure this is also implemented in the management of our goods flows for components, both on the part of suppliers and customers of ZF. By more efficient utilization of means of transport, we strive to reduce the number of transports and actively support global climate protection regulations.

#### **Energy**

Energy procurement and consumption is a major topic at the ZF production locations. Most of the energy (approx. 60 percent) is used in the form of electricity. The environmental objectives valid throughout the Group envisage an annual reduction in energy consumption in relation to sales. To achieve this objective, the key performance indicator energy consumption per sales is controlled within the environmental management system in accordance with ISO 14001. Actions to increase efficiency are planned at the various locations. These measures, in combination with the energy management system in accordance with ISO 50001, enabled us to increase energy efficiency in Germany in 2014 by some ten percent. As from 2015, we will roll out the systematic energy management system at all European production locations. An external certification is currently being evaluated.

#### Water consumption

Water is used at the ZF locations in production, e.g. for surface treatment processes, washing, rinsing, or cleaning, as a coolant, or for non-production purposes such as sanitary water, drinking water, in the canteen, or during construction projects.

At locations in water-stressed areas, water consumption in production is a major aspect because the withdrawal of freshwater could be increasingly restricted in the future. However, the objective of ZF's water management goes beyond reducing consumption in risk areas: We want to continually reduce specific water consumption throughout the Group. To do this, we introduce specific water-saving projects and control progress within the environmental management system, both at location and Group level. We make full use of all technical methods of saving water in production processes.

#### Wastewater and waste management

ZF is constantly working toward minimizing the volume of waste sent for disposal as well as hazardous waste by altering processes, optimizing procedures, and substituting hazardous substances in operations. At ZF, wastewater is usually fed into the public sewer system and treated in the wastewater treatment plants connected to the sys-

tem. However, our environmental management system is continually reducing the volume of wastewater generated. Direct discharges into surface water only take place at a few locations where a public infrastructure is lacking. In these cases, the discharge only takes place with approval from the authorities and is treated according to state-of-the-art technology and whilst strictly monitoring the threshold values. No bodies of water are significantly affected by wastewater discharges. In Germany, installations for the handling of substances hazardous to water are operated according to the regulations of the Water Act, and globally, according to the country-specific requirements. In India for instance, the environmental law defines a prohibition on certain processes hazardous to water within a protection zone measuring many kilometers around supply-relevant surface water. Within the context of the integrated environmental permit, no surface treatment using solvents may be performed in these zones. ZF is committed to installing water-saving equipment that exceeds these statutory requirements.

#### Materials

At ZF, environmental protection starts with material selection. Right from the start, in the product development phase, we consider the total lifecycle of a product including the factors product materials, utilization phase,

as well as disposal and recyclability, and design our products accordingly. By reducing material variety, ensuring materials are easily separated, and using consistent materials, we continually increase the recyclability of our products. We systematically substitute materials containing hazardous substances. All these principles are anchored by guidelines in the development phase.

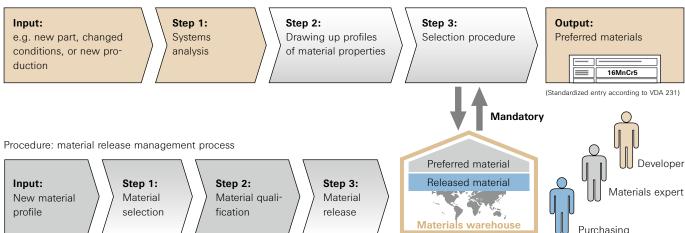
In 2014, the R&D Committee approved implementation of a management approach for managing the materials portfolio in the ZF Group. This approach was defined particularly by the ZF strategy for expansion on international markets as well as in the interests of advancing our cost leadership by reducing the number of our suppliers and pooling purchasing volume.

The newly established ZF Materials Warehouse provides information on almost all existing materials, and will in the future also classify them as approved and preferred materials. It will only be possible to use a non-approved material in future after submitting a release application to the Materials Department, which will examine the material and check its conformity with the fixed requirements. This procedure optimizes costs, simplifies material selection, and guarantees that only materials are used which comply with technical standards and country-specific laws banning certain materials.

#### Future process architecture

Material selection and release processes

Process: material selection depending on the component



#### **Biodiversity**

The production activities of our company have largely only minimal to no impact on local species. To ensure this continues, ZF pays attention to not selecting locations that are close to protected areas in as far as possible. Furthermore, our environmental reporting system records the situation in protected areas for evaluation by our environmental management system.

Two locations are in or close to protected areas. There, we have taken extra precautions to meet the increased requirements regarding plant permits, emissions protection, and dealing with environmentally-sensitive substances.

#### Product-oriented environmental protection

ZF can make a decisive contribution to environmental protection with product innovations. Our aim to go beyond legal requirements is firmly anchored in the development process in corresponding Group Directives. Thanks to the company's innovations in the areas of lightweight construction, hybrid drives, and increased driveline efficiency, ZF products actively help reduce  ${\rm CO}_2$  emissions in the utilization phase. The high quality of our global service network guarantees the long service life of ZF products.

The 9005 Group standard in conjunction with Group Directive GD 92-13 must be observed during the development of new ZF products. It serves to ensure product conformity with the environmentally-relevant requirements of the ZF customers and the legal stipulations of the countries in which the product is to be marketed.

The planned establishment of a cross-departmental committee dealing with environmental protection will systematically pool Group-wide efforts and ensure constant further development and improvement of our products with regard to the environment.

#### **Aspect: Materials**

#### **G4-EN1** Materials used by weight or volume

Steel and aluminum are the raw materials that ZF primarily procures. Accounting for up to 70 percent by weight, steel boasts the highest share. A standard ZF product, the 8HP70 8-speed automatic transmission, comprises approx. 58 percent steel and 25 percent aluminum. The rest contains lubricating oil (7 percent), silicon (3 percent), rubber and plastics (2.2 percent), and copper (1.5 percent) as well as other metals, alloys, and solvents in extremely small quantities.

# **G4-EN2** Percentage of materials used that are recycled input materials

ZF frequently uses recycling materials in its production. This includes steel from scrap steel and aluminum from scrap aluminum. Recycling oils are also used in production, for instance as hydraulic oil.

Furthermore, ZF contributes to a high share of waste being channeled back into the material cycle via external recycling procedures. This especially includes scrap metal/metal chips, waste oil, paper and cardboard, wood and demolition waste. As a result of their material composition, ZF products make a disproportionately high contribution to meeting the recycling quotas according to the EU End-Of-Life Vehicle Directive.

#### **Aspect: Energy**

#### **G4-EN3** Energy consumption within the organization

Total energy consumption decreased slightly in 2014. The reasons for this include the sale of Boge Elastmetall, but also overproportional energy savings due to the actions of the energy management system in Germany. Total energy consumption also includes the energy for internal electricity generation, for instance in combined heat and power plants (CHP).

Direct energy consumption in Production is mainly accounted for by cutting machines for metal machining complete with respective cooling lubricant supply, compressed air supply, and heat treating installations, as well as air conditioning in the buildings.

#### Indirect energy consumption

The indirect energy consumption refers to the electricity used in the Group as well as the heat from a district heating network used. Since 2014, ZF has been operating a combined gas and steam turbine plant at a German location that supplies around 25 percent of the energy consumption of the German locations.

Due to particularly efficient electricity generation, we saved some 35 percent of  $\mathrm{CO}_2$  emissions compared to the standard electricity mix in Germany. The process heat produced during electricity generation is additionally used as district heating for heating purposes.

Furthermore, some locations also generate electricity from renewable sources. For instance, geothermal installations are in operation at the Friedrichshafen location (Germany) and Shanghai (China) for building heating. At the Schweinfurt location, district heating is supplied from thermal recycling which generates 40 percent less  ${\rm CO}_2$  than district heating from fuel oil. In 2012, ZF Services in Delfgauw (the Netherlands) completely switched its energy supply to 100 percent wind power.

#### **G4-EN4** Energy consumption outside the organization

Energy consumption outside the organization is not yet recorded everywhere. However, there are programs and actions in place in various areas designed to reduce this consumption.

#### **Employee mobility**

Last year, we conducted an employee survey on commuting practices at the Friedrichshafen location. The findings revealed that the majority of employees drive to work in their private cars. Mainly because of poor accessibility in many areas, public transport plays a lesser role.

Based on this survey, ZF will in 2015 launch various projects to change perceptions in this area. Central issues will be incentives to use local public transport and bicycles to travel to work.

#### Absolute energy consumption 2010 - 2014

in gigawatt hours



■ Electricity ■ Natural gas ■ Others

#### **Business trips**

Since last year, a shuttle bus has operated between the Friedrichshafen and Schweinfurt locations to reduce individual traffic on this highly frequented route. The reaction was positive, and good capacity utilization of the shuttle bus saved some 60 t of  $CO_2$  emissions. As a result of the successful pilot phase, the offer will be continued.

Furthermore, ZF has created a carpooling center that is intended to reduce employee traffic throughout Germany via the creation of carpools for business trips as well as for commuting. Plant buses are also being deployed at some locations in China and Brazil in order to take employees to work and back home again.

#### **Transport and logistics**

Basically, ZF is responsible for all transports to ZF plants performed by suppliers. For more details, see G4-EN30.

#### **Product use**

The vast majority of energy consumption outside the organization comes from the use of our products. For initiatives designed to reduce consumption, see G4-EN7.

#### **G4-EN5 Energy intensity**

In 2014, the specific energy consumption declined by approx. 12 percent from 147.0 to 129.5 MWh per EUR million of sales. The reasons for this include the

sale of Boge Elastmetall, but also overproportional energy savings thanks to the energy management system introduced in Germany.

### **G4-EN6** Reduction in energy consumption

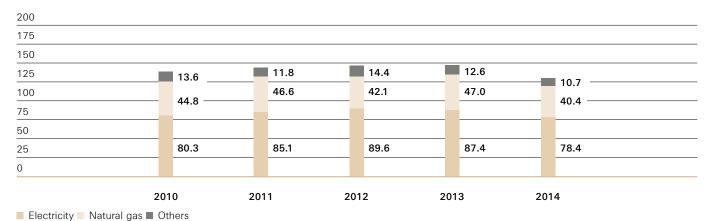
In order to permanently reduce the company's energy consumption, ZF is establishing a Group-wide energy management system. Since 2013, an externally certified energy management system in accordance with ISO 50001 has been in operation at all German locations. By implementing specific programs and actions at the locations, the system ensures that energy is used more efficiently and consumption is reduced accordingly. The Group energy management system will also be introduced and certified at the European locations as from 2015.

Alongside improving energy efficiency, we are also optimizing energy supply itself: After the first successful operation phase of a combined heat and power plant (CHP) in Friedrichshafen, another CHP was built which has been supplying parts of Plant 2 with electricity and process heat since September 2014.

The potential to increase energy efficiency are being identified in detail and implementation measures initiated. At the different locations, ZF has also appointed energy managers and established working groups to

#### Specific energy consumption 2010 - 2014

in megawatt hours per EUR million of sales



develop a holistic concept for energy-relevant topics and corresponding actions, including the issue of energy procurement.

Energy efficiency was established as a key factor governing procurement process decisions. When choosing new machines and systems, we place great importance on optimal energy use. In addition, we have added energy efficiency (e.g. energy consumption, utilization of process heat, energy-optimized operation) to our technical delivery specifications.

# **G4-EN7** Reduction of the energy requirements of products and services

ZF develops both fuel-saving conventional transmissions as well as innovative hybrid transmissions and purely electric drives. Energy efficiency is a significant criterion of the ZF 9005 standard for environmentally-friendly product design. With solutions such as lightweight construction, a better energy efficiency can be achieved in product utilization. The ZF Composites Tech Center in Schweinfurt (Germany) founded in 2013 deals with the advanced engineering of production technologies for fiber-reinforced plastics (FRP). It cooperates closely with Product Development in a host of projects to develop the basis for the volume production of innovative lightweight components made out of thermosetting and thermoplastic FRP materials. For example, in 2014 it continued its work on a passenger car rear axle composed entirely of fiber-reinforced plastics material. If increased energy efficiency, for instance from reduced vehicle weight, reduces consumption by 0.5 liters per 100 kilometers,

this cuts  ${\rm CO_2}$  emissions by just under three tons per passenger car over a service life of 250 000 traveled kilometers.

Measures on modern vehicles to boost energy efficiency can compromise comfort in the overall vehicle. The interplay of driveline and chassis with low-frequency effects is complex. New overall vehicle models and the close coupling of simulations and testing provide reliable forecasts of the effects of vibrations on vehicle occupants. In order to support the development of innovative products even more effectively with simulations, a cross-divisional, centralized computer cluster is being set up at ZF throughout Germany. In this way, highly computing-intensive simulations such as computational fluid dynamics can be completed much faster.

Developing products that can make vehicles more energy efficient allows ZF to admirably fulfill its product responsibility requirements. Examples such as hybrid technology and electrification in the driveline are described under Aspect G4-EN27.

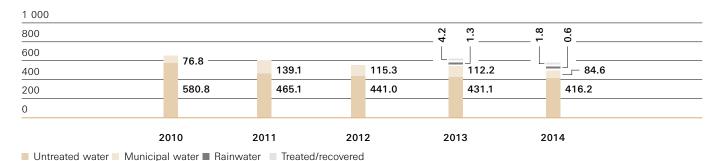
Aspect: Water

#### **G4-EN8 Total water withdrawal by sources**

Water is used at the ZF locations for production purposes, as a coolant, or for non-production purposes such as sanitary water or drinking water. The water supply at the ZF locations usually comes from the public network

#### Specific water consumption 2010-2014

in cubic meters per EUR million of sales



(municipal water supply). If this is not possible for infrastructural reasons, some of the required water is taken from rivers or underground water (untreated water).

Applying solutions to reduce water consumption at the locations, for example cascade rinsing systems for washing processes, or process water recycling, we have continued the trend toward using less water.

#### **G4-EN9** Water sources significantly affected

At locations without a connection to the municipal water supply, untreated water is used. For example, our five relatively small locations in India are located in water-stressed areas and due to the lack of local infrastructure, they work with well water.

The use of groundwater and surface water is documented in our environmental reporting system. In 2014, five locations used surface water including the Schweinfurt location (Germany) that uses water from the Main river as a coolant. 17 locations in Europe and South America extracted groundwater for their production requirements.

### **G4-EN10** Water recycled and reused

Reductions in water consumption are primarily achieved by re-using treated coolants or process water, using rain water, or by means of optimized sanitary equipment. For example, at the São Bernardo location (Brazil), the treatment of process wastewater and the its reuse in phosphating saves 61 000 cubic meters of water per year. Optimized cooling circuits at the Passau location (Germany) led to savings of tens of thousands of cubic meters of water per year.

Since 2013, the volume of re-used water can be centrally calculated thanks to the introduction of the new ERIS+ reporting software. The largest percentage of recycled water is used at a Brazilian location where cooling water from the ventilation system is re-used, allowing a reduction in the consumption of fresh water.

#### **Aspect: Emissions**

## G4-EN15 Direct greenhouse gas (GHG) emissions (Scope 1)

The latest VDA emission factors have been used since the reporting year 2013 to calculate the quantity of direct and indirect greenhouse gas emissions. In terms of the  ${\rm CO}_2$  emissions from electricity consumption, the direct emissions caused by power generation are taken into account.

Total  $\mathrm{CO}_2$  emissions by ZF dropped slightly in 2014. Reasons for this are first the sale of the Boge Elastmetall locations. And second, last year a gas and steam power plant was leased at a German location which covers around 25 percent of the electricity demand of all German locations with a lower  $\mathrm{CO}_2$  emission factor than the standard electricity mix. As a result, we save 35 percent of  $\mathrm{CO}_2$  emissions relating to the amount of electricity used.

# G4-EN16 Energy indirect greenhouse gas (GHG) emissions (Scope 2)

See explanations under G4-EN15.

# G4-EN17 Other indirect greenhouse gas (GHG) emissions (Scope 3)

The data on Scope 3 emissions has not yet been fully collected. Nevertheless, the Group has taken measures to reduce greenhouse gas emissions that fall under Scope 3 of the Greenhouse Gas Protocol. See also G4-EN4.

#### G4-EN18 Greenhouse gas (GHG) emissions intensity

Similar to total  $\mathrm{CO}_2$  emissions, we have also succeeded in reducing the intensity of emissions. This is due above all to the operation of the high-efficiency gas and steam plant and the resulting lower emissions. If this development continues in the coming years, we are set to reach our Group target of reducing our  $\mathrm{CO}_2$  emissions by 20 percent by 2020.

#### G4-EN19 Reduction of greenhouse gas (GHG) emissions

The Group objective to reduce the specific  $\mathrm{CO}_2$  emissions by 20 percent by 2020 is our central initiative to reduce greenhouse gas emissions. Among other pro-

grams, a Group-wide energy management system was launched (see page 33). Objectives to increase efficiency are set each year also at the various locations and measures are implemented to achieve these goals. Additionally, in 2013, the German locations were certified in accordance with ISO 50001. Starting in 2015, the energy management system is being expanded to the European locations.

#### G4-EN20 Emissions of ozone-depleting substances (ODS)

There are officially-coordinated reduction plans in place to reduce the emissions of volatile organic compounds (VOC) from large paint and degreasing installations at the German locations, and ZF takes these as a basis for action. Where technically possible, we have already switched over to water-based paints or aqueous degreasing procedures. Further measures include self-contained installations and thermal aftertreatment of exhaust air. Throughout Europe, all installations that still work using VOC possess respective balances. Chlorofluorocarbons (CFC) are no longer used within the Group.

#### G4-EN21 $NO_x$ , $SO_x$ and other significant air emissions

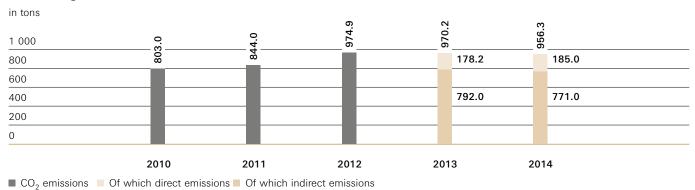
Due to the sell-off of Boge Elastmetall, which was responsible for the majority of emissions of solvents, these emissions have dropped drastically, while  $\mathrm{NO}_{\mathrm{X}}$  emissions have remained almost constant. Specific total emissions continue to decline.

Aspect: Effluents and waste

## **G4-EN22** Total water discharge by quality and destination

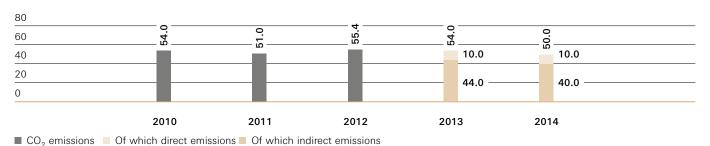
At ZF, wastewater is usually fed into the public sewer system and treated in the connected wastewater treatment plants. Direct discharges into surface water only take place at a few locations, due to a lack of public infrastructure. In these cases, the discharge only takes place with approval from the authorities and is treated according to state-of-the-art technology and whilst strictly monitoring the threshold values. Installations for the handling of substances hazardous to water are designed according to the regulations of the Federal Water Act (Germany) or the country-specific requirements.

### Absolute CO<sub>2</sub> emissions 2010 - 2014



#### Specific CO<sub>2</sub> emissions 2010 - 2014

in tons per EUR million of sales



Process wastewater is treated before discharge into the public sewer system. Water-saving devices that usually go beyond the statutory requirements are installed extensively. In India, the environmental law defines a prohibition on certain processes hazardous to water within a protection zone measuring many kilometers around supply-relevant surface water for instance. The environmental permit there specifies that no surface treatment of products using solvents may be performed in these zones.

#### G4-EN23 Waste by type and disposal method

The specific waste generation slightly rose in 2014. Reasons for this include construction activities which generate an exceptionally high volume of waste at individual locations. Furthermore, waste treatment processes which were outsourced up to the previous year were integrated in our own waste treatment and disposal systems. In 2014, one location generated a one-off increase in waste generation due to process and product changes.

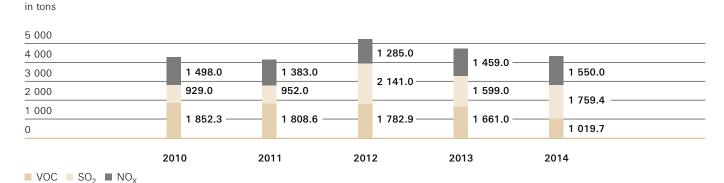
#### **G4-EN24** Total number and volume of significant spills

At ZF, the relevant processes with a potential risk for the release of hazardous substances are essentially surface treatment, carbide treatment, magnesium machining, and hardening. At the locations, preventive technical safety measures ensure that hazardous substances cannot spill into the ground and endanger the groundwater, even in the event of a potential release in the case of a breakdown. A Group-wide reporting obligation has been introduced in the event of a release.

In 2014, nitrous gases leaked from a waste acid tank into a closed waste storage facility at a German location. The leak was detected immediately and both the tank contents as well as the air in the room were pumped out. No people were at risk or injured. The incident was reported to the responsible authority.

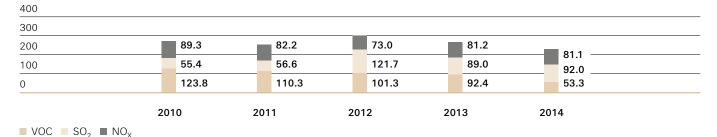
## **G4-EN25 Handling of hazardous waste**No details.

### Absolute VOC, NO<sub>x</sub>, and SO<sub>2</sub> emissions 2010 - 2014



### Specific VOC, $\mathrm{NO}_{\mathrm{x}_{\mathrm{r}}}$ and $\mathrm{SO}_{\mathrm{2}}$ emissions 2010 – 2014

in kilograms per EUR million of sales



# G4-EN26 Water bodies significantly affected by discharges of water and runoff

See page 35.

**Aspect: Products and services** 

# **G4-EN27** Mitigation of environmental impacts of products and services

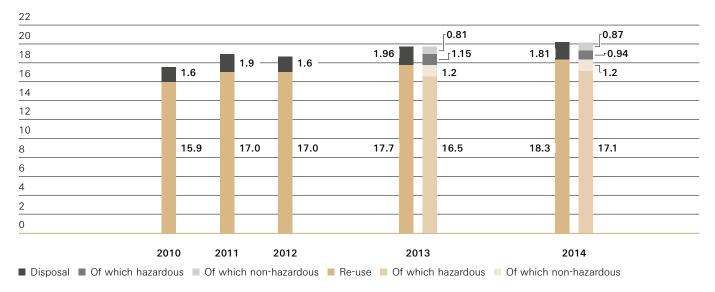
ZF engineers have achieved a great deal over the past few years in order to reduce vehicle fuel consumption and the associated emissions. ZF once again launched numerous products on the market in the fiscal year 2014. In the Passenger Car Powertrain Technology division, the second generation of the 8-speed automatic transmission (8HP) went into volume production. The transmission achieves additional fuel savings of three percent. The plug-in hybrid transmission scheduled to arrive on the market in 2015 is also based on the 8HP transmission modular kit.

In the commercial vehicle market, the ZF Group was able to underpin its technological leadership with the Innovation Truck: Thanks to intelligent driveline and steering technology and telematics, the long truck-trailer combination can be maneuvered easily and reliably from outside the driver's cab purely electrically using a tablet.

The AVE 130 electric portal axle for purely electric lowfloor buses was awarded the "International busplaner Sustainability Prize 2015" in November 2014. The modu-

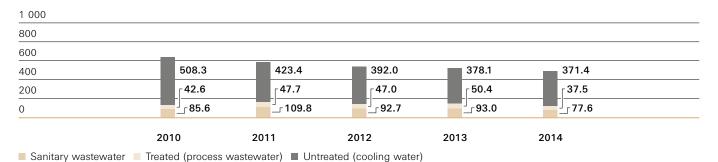
#### Waste 2010 - 2014

in tons per EUR million of sales



#### Wastewater 2010 - 2014

in cubic meters per EUR million in sales



lar TraXon automatic transmission system for heavy trucks was developed to maturity and the highly successful EcoLife multi-ratio transmission has also been used in coaches since last year.

In the rail vehicle area, customers benefitted from the world's first EMU (Electrical Multiple Unit) multispeed transmission. The Get2 rail drive concept combines the advantages of previous ZF applications with a savings potential of up to five percent.

For special vehicles, ZF offers the advanced EcoLife Offroad, an enhanced model of the EcoLife 6-speed automatic transmission for city buses. Excellently equipped for extreme loads, it is setting new standards for automatic transmissions in medium and heavy special vehicles. Based on the successful passenger car transmission modular kit, the high-performance, efficient 8HP90S 8-speed automatic transmission is tailored to the requirements of light special vehicles. It can handle up to 1 000 Nm of input torque and yet is nonetheless extremely light and compact.

In Marine Propulsion Systems, the product portfolio was expanded to include the TOUGH GEAR W 10000 and the hybrid-ready ZF 3300 PTI transmissions.

In the agricultural machinery area, the integrated powerful ZF-TERRA+ generator module and the new power take-off generator enable electrification of the driveline.

Furthermore, ZF diversified its portfolio to meet the demands of the sophisticated low-wind and high-performance offshore market. The new generation of 3MW gearboxes for wind turbines with a rotor diameter of more than 130 meters has significantly increased annual power generation. The advanced design of the 6.2MW OCTOPUS is making it possible for customers to build even larger wind turbines in the rough offshore environment.

The MotorBrain research project launched three years ago presented its results with electric drives in 2014. The researchers and engineers involved developed highly integrated electric drives that combine the most important elements of the driveline for electric vehicles. The MotorBrain prototypes manage without rare earth elements, which currently constitute major cost drivers in hybrid electric and electric vehicles. Their extraction is also extremely difficult and highly polluting.

These activities give an idea of what we mean by product responsibility. Examples of further product development initiatives can be found under G4-EN7.

#### **G4-EN28 Reclaimed products and packaging**

Within the context of the respective legislation, ZF is obligated to take back packaging. For example, ZF assumes this responsibility in Germany by participating in external collection systems: Packaging is taken back and recycled through a dual system or sector solutions (for automobile repair workshops or for information technology, communications technology, consumer electronics). In this respect, we exceed the level of the statutory recycling quotas.

In 2014, a total of 379 000 tons of packaging was reclaimed at all locations in Germany in accordance with §6(1) of the Packaging Directive, of which 320 000 tons were paper, paperboard, and cardboard (PPC). 130 395 tons of packaging in accordance with §6(2) were taken back, of which 123 500 tons were PPC, and in accordance with §7, a total of some 3 860 000 tons were taken back, of which around 2 240 000 tons were PPC.

Various vehicle parts are reclaimed through a global reclaiming system at the service locations and remanufactured for industrial use. Locally remanufactured spare parts are available at 77 locations in 36 countries for clutches, steering gears, steering pumps, and automatic transmissions, among other things.

Unlike classic repairs, remanufacturing involves disassembling large quantities of products according to a fixed procedure and replacing wear parts. By remanufacturing units, ZF manages to save 20 000 tons of material each year. In comparison to producing a new part, remanufacturing can save up to 90 percent of energy for production. In 2014, our service locations worldwide recovered

a total of approximately 15 400 automatic transmissions. Some of them are overhauled and used as exchange units.

**Aspect: Compliance** 

# **G4-EN29** Fines and sanctions for non-compliance with environmental laws and regulations

In 2014, we committed no offences and were not required to pay any penalties or fines.

**Aspect: Transport** 

# **G4-EN30 Significant environmental impacts of trans-** ports

The overall transport costs for incoming deliveries, outgoing deliveries, and other transports amounted to EUR 262 million in 2014 (2013: EUR 304 million). These figures refer to the Group excluding ZF Lenksysteme and can be broken down as follows:

As a principle, the strategic decision was taken in the Group that ZF would be responsible for all transports carried out from suppliers to ZF plants. In countries where this is not yet implemented (for instance China), we have launched projects to implement this strategic direction there as quickly as possible.

#### Mode of transport

	Share (in %)	Costs (in EUR)
Land freight	38.44	100 736 790
Sea/air freight	33.99	89 094 412
Courier express/post/special shipments	13.01	34 088 389
Plant traffic/round trips	8.82	23 116 530
Project logistics/heavy transports	4.05	10 604 731
Relocations (office equipment/employees)	1.51	3 958 866
Rail transport	0.18	484 119
Total transport costs		262 083 837

ZF Logistics always strives to develop new concepts that can simultaneously reduce transport costs and emissions. We are making extra efforts to pool transports and increase the FTL (full truck load) quota.

Currently, we are also working on a Group-wide method for calculating emissions in transport. Internal projects in the area of land freight aim to additionally include the measurement of emissions alongside cost considerations in 2015. Furthermore, from as early as 2016, we will take emissions and energy consumption into account when selecting logistics service providers for the freight volume within Germany.

When selecting transport service providers, we always consider the company's "green logistics" credentials. Before awarding contracts to companies, we first check whether they offer  ${\rm CO_2}$  reporting, if sustainability is firmly anchored in their corporate strategy, and if they use environmentally friendly technologies.

The ZF intercontinental supply chains are to be organized based around sea freight. Again in 2014, air freight still had to be used due to the tense situation in various supply chains caused by production start and large sales volumes. However, the approval process for air freight implemented in 2013 increased transparency in this area. As a result, critical supply chains are identified at an early stage. The appropriate measures can then be taken to transport the goods by sea freight as soon as possible, minimizing the volume of air freight tonnage. The first action to be taken here is for urgent transports from Europe to China. In the future, we will take care to transport materials via rail instead of air freight in order to systematically cut emissions.

#### Aspect: Overall

### **G4-EN31 Environmental protection expenditures and investments**

In 2014, ZF spent just under EUR 19 million at its world-wide locations on investments in environmental protection (2013: EUR 22.7 million) and EUR 40 million on the operation and maintenance of environmental actions already taken (2013: EUR 37.84 million).

Investments in environmental protection comprise all costs spent in the area of technical equipment for protection of the environment (water, soil, and noise protection as well as clean air). This category also includes investment costs for nature and landscape conservation as well as investments in energy supply.

Among the expenditures for operation and maintenance are costs for waste and wastewater management, protection of the direct environment on the company site, soil remediation, and regular costs for nature and landscape conservation.

In 2014, the environmental management of ZF Friedrichshafen AG was awarded third prize in the Office and Environment competition of the Bundesdeutscher Arbeitskreis für Umweltbewusstes Management (B.A.U.M: German Environmental Management Association). We impressed the jury above all with the Passau office building concept, which comprises energy-efficient architecture, lighting, and air conditioning, as well as environmentally friendly printing management.

**Aspect: Supplier Environmental Assessment** 

# Evaluation of suppliers regarding ecological aspects, working methods, human rights, and social impact – management approach

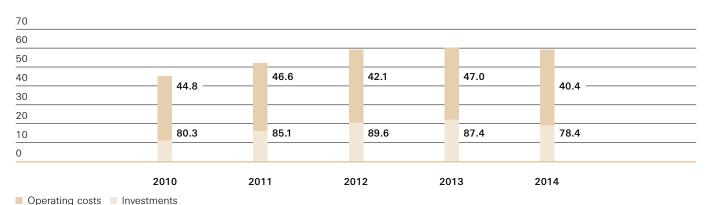
The success of our globally operating company is to a particular degree based on a professional cooperation with our business partners worldwide. The foundations of this cooperation are common values and standards. Observing applicable laws and compliance with recognized standards of social and ecological responsibility as well as acting with integrity are indispensable aspects for trust-based, successful business relationships. The ZF Group expects its suppliers to recognize and apply the Principles of Social Responsibility developed by the Group and motivates them to introduce and implement similar principles in their companies. In case of new or existing suppliers, we encourage compliance with these ZF standards in a suitable manner.

### Management approach regarding the environment

Our customers demand first-class products that are as ecologically friendly as possible. To this end, we have developed and implemented an environment and energy policy that meets our own and our customers' high standards. We also expect our suppliers and ser-

#### Expenses 2010 - 20141)





<sup>1)</sup> Differences in the presentation of results in the previous year's report are a result of the inclusion of additional costs not related to the environmental management system, e.g. for development

vice providers to at least comply with the respectively applicable environmental and energy regulations. In the case of suppliers with processes especially relevant to the environment, we demand a certified environmental management system. We actively involve suppliers, service providers, and customers in environmental and climate protection issues, and try to engage in dialog with the authorities and society.

## Management approach regarding human rights and social impacts

ZF considers compliance with and the protection of human rights to be an important foundation of engaging in business. In signing the United Nations Global Compact, the Group has declared its commitment to observing the ten principles in which protecting human rights is a central element. Alongside all ZF departments, this particularly affects Corporate Materials Management. As we are committed to establishing sustainable and long-lasting cooperation with our suppliers, we see our suppliers systematically as strategic partners. This includes the expectation that they conduct business according to the same principles as ZF.

# Management approach regarding work practices and humane employment

We have set Group-wide targets for occupational health and safety management and regularly monitor our progress. Besides complying with the respective national occupational health and safety standards, we work on appropriate and suitable Group-wide minimum standards for the health and safety of our employees. We actively involve our employees and their representatives in the further development of safe and healthy workplaces. We regularly qualify and motivate them so that every employee is aware of their own responsibility and their environment. We also expect our suppliers and service providers to comply with the respectively applicable occupational health and safety regulations.

### **Guidelines and organization**

ZF revised its Code of Conduct in 2013 and, as a consequence, substantiated the requirements placed upon the cooperation with business partners, especially those regarding compliance with the relevant law and acting

with integrity. In doing so, we aim to work towards business partners adhering to values comparable with the social principles of ZF as well as the ten principles of the United Nations Global Compact. Our Business Partner Principles were published at the beginning of the reporting year. All suppliers of production materials and non-production materials are prompted to affirm these principles and requirements and to behave accordingly. In order to disseminate the supply chain sustainability principles anchored here, we sent them initially to around 2 000 selected suppliers of production materials and required their confirmation of receipt. Furthermore, the contents of the Business Partner Principles provide the binding foundation for supplier self-assessments and audits.

With the Advanced Procurement Strategy (APS 25), ZF Corporate Materials Management has oriented its strategy toward 2025. The consistent implementation of measures and monitoring of activities are now firmly established in day-to-day operations. Consequently, APS 25 now focuses on the requirements in newly industrialized countries. Our sustainability principles help to consolidate a responsible and reliable supplier management. The long-term goal is a purchasing strategy which dispenses with materials from critical procurement sources.

The APS 25 is based upon the ZF environmental policy, the ZF Principles of Social Responsibility, as well as the ten principles of the United Nations Global Compact and implements these principles into the supply chain. ZF requires all suppliers of production materials to comply with these three sets of principles. We have taken the next step by integrating environmental and social standards into the supplier selection process; evaluating potential new suppliers using supplier self-assessments and audits.

In the reporting year, we monitored all potential new suppliers during the approval process for compliance with the standards, a procedure we will continue to apply consistently in the future. 1 300 audits were conducted in the year under review at the existing volume production suppliers.

External service providers in Germany must sign a declaration of adherence to the collective agreements which guarantee fair wages, normal working hours, and a rejection of unregistered labor and tax evasion. This declaration also applies to subcontractors contracted by ZF and includes the proviso that ZF can check compliance at any time.

With the ZF Supplier Academy, we created a strategic cooperation and qualification platform in order to promote and support cooperation with our production material suppliers. Founded in 2011, the ZF Supplier Academy is now established in the ZF Group worldwide. ZF suppliers have the opportunity to take part in ZF Supplier Academy seminars in their regions. Participation provides suppliers with an extensive insight into ZF requirements, standards, guidelines, and procedures so that they can subsequently apply them effectively in their companies. One training course for suppliers is the ZF Production System S40011, which suggests ways of increasing efficiency in production.

With our Energy Efficiency Award, established in 2011, we raise our suppliers' awareness of sustainability aspects.

# G4-EN32 Percentage of new suppliers that were screened using environmental criteria

# Evaluation of suppliers regarding ecological aspects, working methods, human rights, and social impacts (G4-EN32, G4-LA14, G4-HR10, G4-S09)

The Business Partner Principles represent values that ZF recognizes, supports, and communicates to partners. They specify fundamental sustainability requirements of cooperation with our business partners. They are based on the principles of the United Nations Global Compact and the ZF Principles of Social Responsibility. For our suppliers, it includes requirements relating to human rights, labor standards, occupational safety and health protection, environmental protection, responsible raw materials procurement, business ethics, and compliance.

We see the implementation of the sustainability standards anchored in these principles as mandatory in our supply chain and consider it our duty to take appropriate action if we identify deviations or violations. In order to identify and avoid possible deviations from sustainability standards at an early stage, we require new potential suppliers to submit a self-assessment according to the Supplier Self Assessment Sustainability template during the approval process.

Our focus is on compliance with the terms relating to freedom of association, fair labor conditions and practices, as well as the rejection of any form of discrimination, forced labor, or child labor, which is why these aspects are addressed, queried, and evaluated in the forms sent to our suppliers. The self-assessment by the suppliers also includes an examination of criteria relating to environmental and compliance requirements.

In the course of the approval process, all new potential suppliers of production materials worldwide were evaluated in the reporting year. 100 percent of new suppliers underwent the self-assessment according to defined sustainability criteria. No indications of infringements against our principles of environmental protection, human rights, labor practices, forced labor, child labor, or freedom of association were identified.

We are currently analyzing and examining various procedures for effectively inquiring about sustainability criteria in high-risk countries within our supplier chain. In the long term, we want to use tools to support our supplier inquiries. In the coming year, we plan to obtain information from suppliers about their environmental and social standards.

Based on the provisions of the Dodd Frank Act, Sec. 1502, all relevant production material suppliers of ZF were obligated in 2014 to fulfill the disclosure requirement for the use of conflict materials (gold, coltan, cassiterite, wolframite and its derivatives such as tantalum, tin, or tungsten) from the Democratic Republic of the Congo (DRC) and adjacent countries in company products, and to verify their origins.

To provide a solution for the reporting and identification of conflict minerals along the entire supply chain, ZF has been using a web-based solution since 2013. As part of the tool-assisted supplier inquiry program, a total feed-back of 41 percent was recorded in the reporting year. The result of the inquiry indicates that the reviewed supply chains do not source products that finance conflicts in DRC regions. We intend to increase the feedback rate from suppliers again in 2015.

**G4-EN33 Significant environmental impacts in the supply chain** 

Evaluation of suppliers regarding ecological aspects, working methods, human rights, and social impacts (G4-EN33, G4-LA15, G4-HR11, G4-S010) See G4-EN32.

# Social Performance Indicators Labor Practices and Decent Work

Management approach

#### **Human resources policy**

As part of the changing market environment, ZF is compelled to respond to megatrends such as globalization, strong growth in the Asia-Pacific region and North America, technological and demographic change, and worldwide population growth. At the same time, highly-qualified personnel are the key to the company's sustainable success. In this respect, attracting and systematically further developing talented and highly-skilled personnel is one of ZF's major challenges and a key target of our ZF 2025 corporate strategy.

This strategy is focused on the corporate objective of becoming an attractive employer worldwide. For this purpose, we defined our strategic pillars Leadership 2025, Competitive Work Environment, and One Global Corporate Culture and translated them into strategic targets designed to help us find effective answers to today's challenges.

Within the framework of leadership initiatives, ZF has developed and launched consistent leadership principles throughout the Group aimed at establishing one common understanding of management. These form the basis for the two pillars One Global Corporate Culture and One ZF in line with the ZF 2025 corporate strategy. Talent management and qualifications are supported and developed by promoting initiatives such as international training, the establishment of functional academy concepts, study program funding and PhD programs, as well as the use of professional experts. These are former ZF experts and executive managers who offer ZF their valuable expertise and skills over the long term so that this knowledge is sustainably secured for ZF. In adopting this holistic approach to management, we systematically monitor and anticipate aspects of the age structure within the workforce in all corporate areas, which allows us to secure the capabilities of our employees and to confidently respond to the challenges of demographic change.

Our Corporate Social Responsibility Principles describe the company's fundamental understanding of rights and principles that apply to all employees. They are based on our Corporate Principles and are implemented in the different countries and at different locations in compliance with the respective laws and existing practices. Our principles reference, among other things, the ILO Core Labor Standards, the UN Global Compact, and the OECD Guidelines for Multinational Enterprises.

Alongside the statutory framework agreements mentioned above, the ZF Code of Conduct applies to all employees worldwide. It regulates matters such as conflicts of interest, courtesies, business and private expenses, secondary employment and participations, protection against discrimination, data privacy, the conduct with suppliers and competitors, company donations, and the interrelated field of occupational safety, health, and environmental protection. The Code of Conduct includes a clear statement on the issue of diversity: Discrimination is not tolerated at ZF, and the only factors that are important for career advancement are performance, personality, abilities, and suitability.

The Leadership Principles implemented in 2014 support the development of excellent leadership to a major extent. The ZF Leadership Principles define the basis for our executive managers' leadership work. They constitute a binding standard for management behavior and, together with our Corporate Principles, apply for all our executive managers at all our locations. The ZF Leadership Principles also provide our employees with an orientation so they know what they can expect of our executive managers.

#### **Employer attractiveness**

Global access to qualified employees represents a great challenge to companies. ZF seeks qualified specialists in all markets, who find attractive working and qualification opportunities at all our company locations worldwide. Also because of global market opportunities, ZF strives to be a valued, fair, and reliable employer. The varied cultural backgrounds of our employees, their competencies, and their diligence and motivation shape our corporate culture and are the key to our success. There-

fore, we have set ourselves clear strategic objectives: By 2020, the number of international executive managers is to be increased by 50 percent in the ZF Group and the number of women in executive positions is to be doubled.

The mobility of our employees is inextricably linked to this and is therefore growing in significance. In this context, global mobility and job rotation programs are currently being developed and implemented in the divisions. In a pilot project in 2014, we supported employees in a job rotation scheme, whereby they changed their location within the Group for a number of years. After joint work-introduction periods over a number of weeks in each country, two employees then swapped jobs for several years.

A further central issue is the safe and employee-friendly design of the workstations in order to maintain the performance and health of the employees and to prevent work-related accidents and illnesses. We anchored this at the beginning of 2013 through ZF guidelines on occupational health and safety.

### Ranking

ZF's attractiveness as an employer made further gains last year. For example, in the 2014 trendence Graduate Barometer ranking among prospective engineers, ZF came 16th on the list, rising six places. In the 2014 employer ranking of the Universum Communications consultancy company, ZF ranked 26th out of 100 in the engineers group. Focus magazine ranked ZF Friedrichshafen AG sixth among "Germany's best employers" in the automotive manufacturer and supplier industry. That makes us the first supplier, directly after Audi, BMW, Volkswagen, Porsche, and Daimler. ZF also made it to the front of the field in the overall ranking, achieving 31st place. Equally, a more than 25 percent increase in job applications in Germany compared to the previous year proves that ZF is a sought-after employer.

#### Flexible working

We value individual development opportunities and compatibility of work and family. Thus, we systematically create family-friendly working structures that come with

time-management models and high flexibility for parents. Flexibility in terms of working times is an important topic at ZF that the Group Works Council is also involved in. A wide range of individual working time and mobile working models are already available to our employees at our German and many international locations. A ZF Group Works Council agreement also regulates sabbaticals, therefore facilitating both individual breaks and the care of relatives for an extended period.

#### **Actions**

As part of our employee-oriented and family-conscious HR policy, ZF commenced construction of a children's daycare center in 2014 which will offer places for a total of 60 children. Completion is scheduled for September 2015. There will also be a health center in the new two-story building with a company doctor service, as well as a physiotherapy and fitness area for employees. ZF at the Friedrichshafen location has ranked among certified family-friendly companies in Germany since 2006. Specific examples of employee support are full daycare in children's daycare centers, special vacation programs, and support in caring for family members.

In the Success Factor Family company network, ZF is involved in a joint initiative of the Federal Ministry for the Family and the German Chamber of Commerce. The network raises public awareness of the commitment and experience of family-friendly companies in an effort to motivate others to implement ideas and activities for a better balance between job and family in daily working life.

The second ZF future study FERNFAHRER (Truckers), aimed at increasing overall understanding of the transport and logistics industry, was presented in Brussels. Interviews with experts as well as surveys among drivers and apprentices create a differentiated picture of the future challenges for the transport industry. According to this, changing values in society are also affecting the profession of driver, and the "king of the road" image will soon be a thing of the past. In addition, plannability and the compatibility of family and job are becoming ever-

more important. As a globally acting company, ZF depends on efficient and reliable logistics, and will adjust to these demands.

### **Employer-employee relationship**

The applicable legislation around the globe as well as the CSR guidelines that apply for ZF worldwide form the basis for our cooperation with our employees' interest groups. The CSR guidelines specify that the establishment of employee or trade union interest groups is not to be questioned at ZF even if the national standard in the country does not fully conform with the ILO standards. Our guidelines state the following with regard to this matter: "Every ZF employee is entitled to join a trade union and to found a workers' representation in the company without prior approval. No employee or employee representative shall be disadvantaged as a consequence of exercising his or her rights in this respect. ZF respects the right to collective bargaining and negotiations (ILO Convention No. 98) for the regulation of working conditions and strives for a constructive cooperation marked by mutual trust and respect." Working on this basis, ZF has for many years enjoyed open and constructive cooperation with employee representatives characterized by trust and respect.

#### Occupational health and safety

For ZF, occupational safety as well as the preservation and promotion of our employees' health are top priorities. That is why we have firmly anchored occupational health and safety in our corporate objectives since 2013.

The issue of prevention plays a key role here. We regularly assess the risks at our workstations, initiate the necessary measures, and check whether they have been implemented efficiently. We use state-of-the-art technology and knowledge. When planning and procuring machines and work equipment, occupational safety and health protection criteria are essential.

We have set ourselves Group-wide targets for occupational health and safety management and regularly monitor our progress. Besides complying with the respective national occupational health and safety standards, we work on appropriate and suitable Group-wide minimum

standards of health and safety. We involve our employees and their representatives in the further development of safe and healthy workplaces. We regularly qualify and motivate them so that every employee is aware of their responsibility for themselves and others. We also expect our suppliers and service providers to comply with the respectively applicable occupational health and safety regulations.

Our international occupational safety management is controlled by our occupational health and safety committee consisting of coordinators from the various divisions and regions, as well as by the guidelines the committee has developed on all major issues. To aid the compilation of risk assessment reports and accident management, we are implementing an IT solution that is being successively rolled out following a test phase at the end of 2014. A team of machine safety experts formed in 2013 defines key processes and interfaces and draws up good-practice examples on how to source, commission, and retrofit machinery. There is also a Group-wide approval checklist for new machinery and plant which creates uniform approval standards and is enthusiastically welcomed by our safety experts.

In our Integrated Management System (IMS), occupational safety is guaranteed based on the international standard BS OHSAS 18001 (Occupational Health and Safety Assessment Series). The introduction of OHSAS is still voluntary at ZF. However, the gradual increase in the share of the certified Group companies is a fixed element of the occupational health and safety objectives. The international occupational safety management system at ZF was expanded again in 2014 to nine locations in the Group (2013: seven). Locations which have applied for inclusion in the OHSAS matrix in 2015 include 17 North American locations, plus seven in the Asia-Pacific region, South America, and Europe.

#### Accident reduction program launched

Despite all our efforts, we were not able to reach our target of significantly reducing the accident rate of our employees. Therefore, the Board of Management in December 2014 passed an ambitious global accident reduction program that defines a clear target: By 2025,

all locations must reduce their accident rate (accidents resulting in one or more lost days per million working hours) to less than five. This is equivalent to a reduction of 60 to 70 percent compared to today's figures. As most accidents are caused by incorrect behavior, we can only achieve our objective by changing the safety culture. That is why executive managers must train their employees to work more safely and convince them to act in the proper way and help formulate best safety practices on their own initiative.

Core elements of the Board of Management resolution on global accident management are:

- Establishment of a worldwide organizational structure with Safety Officers subordinate to the Location Management at all locations
- Definition of and compliance with globally uniform minimum standards, including accident management standards, binding Group key figures and reporting
- Accident management with monthly review of the KPI as a management instrument at Group and location management level
- Local actions to permanently reduce accident numbers and severity, managed by our regional and division coordinators
- Early and regular participation of the Safety Officers in the planning, procurement, and operation of machines, facilities, and buildings
- Regular safety inspections by representatives of the Location Management
- Recording of near-accidents

This program is supplemented by modular Safety Leadership training courses for executive managers.

#### Changes to the framework regulations

There are numerous laws, regulations, and rules in Germany for ensuring occupational health and safety. Currently, government regulations are noticeably gaining in importance compared to the rules of the employers' liability insurance association (BGV). This means BGV rules are being rolled back and state regulations passed.

#### **ArbMedVV**

Especially significant is the revised Occupational Health Care Ordinance (ArbMedVV). Some of the changes contained here represent a paradigm shift in the necessary procedures which many company members have to implement. There is a key emphasis on personal responsibility for obtaining information. For instance, preventive medical checkups with subsequent presentation of the findings to the employer are no longer required; instead employers and employees agree on the extent of preventive medicine. This is not only a fundamental change for the medical staff performing such checkups, but also for employees, HR departments, and executive managers. It requires notification and explanation for everybody involved. To distribute this information efficiently and in line with the law, the Central Health department drew up an easily understandable and target-groupspecific information package which is available online or from the central functions (such as the Health Committee and the Human Resources Council).

#### Health management

In 2014, a strategy was developed that provided the basis for useful coordination to achieve synergies from the large number of decentralized activities in health management. Following a decision by the Human Resources Council, the Central Health department is now responsible for central coordination of health management. In order to involve other key organizational units, the

### **Test Bay Safety Project**

ZF innovations are subject to stringent functional and load tests extremely early in the development process to ensure they meet the necessary safety requirements. However, the 2 200 or so employees in 24 different test bays are still exposed to a certain risk during work with these prototypes. To minimize this risk, the Test Bay Safety (SiP) project with a 30-strong ZF team tackling the issue was created in 2009. In 2014, it was recognized for its outstanding successes with an award (Schlauer Fuchs) from the Timber and Metal Industry Employers' Liability Insurance Association (BGHM).

implementation concept provides for the establishment of bodies which will supplement the existing Health Committee. This means the Occupational Medicine expert group will in the future be responsible for medical topics in a narrower sense, while the interdisciplinary Health Management expert group will deal with fields of activity in health management identified in the strategy development process.

Wherever necessary, we aim to supplement local requirements at all locations with minimum ZF medical standards and to monitor their implementation. That is why we drew up and approved checklists for the definition and checking of indispensable minimal medical standards in 2014. The rollout is scheduled for 2015.

#### **Education and vocational training**

Qualified personnel are the foundation of the company's sustainable success. In this respect, attracting and systematically further developing talented and highly-skilled personnel is among the major challenges faced by ZF in a constantly changing market, and a key target of the ZF 2025 corporate strategy.

Leadership excellence is one of the strategic targets of the ZF Group. Therefore, we completely revised all of our management development programs and introduced the first programs in 2014. To promote a uniform approach in human resources management, we introduced new, globally binding leadership principles and implemented them during large group meetings with executive managers. Additionally, we are systematically expanding leadership competencies to meet future strategic challenges by integrating executive manager development into the ZF Strategy 2025.

Talent management and qualifications are also supported and strategically developed by promoting initiatives such as international training, the establishment of functional academy concepts, study program funding, and the ZF PhD program.

As part of the ZF Academy Model, we will promote the specialist qualification of executive managers and employees in all Corporate Functions. The objective here

is to achieve systematic global advanced training of employees with technical training programs derived from the ZF 2025 strategy. Various ZF-internal academies offer employees in Corporate Materials Management, Corporate Quality, Corporate Finance, IT, and other associated functions an extensive range of advanced training opportunities. After again significantly boosting this program internationally in 2014, we will in the future complete it by setting up further academies.

All qualification programs are systematically evaluated. Within the framework of a continuous improvement process, both participants and trainers submit a valuation after every event. The individual valuations form the basis for regular reviews and appropriate revisions. We select external service suppliers such as training course providers and trainers according to fixed criteria and a tough selection process carried out jointly by the specialist department and Purchasing.

Close cooperation between HR Development, ZF Group and the HR Development departments of the individual divisions, regions, and technical (expert) departments standardized and permanently strengthened operational processes in HR development in 2014. By establishing cross-divisional working groups, we achieved close coordination of the areas involved with the objective of effective qualification of employees and executive managers at all locations.

### Programs for school pupils and students

We again increased our international training capacities. For example, we intensified our cooperation with colleges and universities in China, the USA, and several European countries, along with further efforts to internationalize our trainee program. The number of applications for our trainee program from abroad has risen considerably. In order to prepare Corporate Materials Management for future global growth, we launched the strategic initiative "Frontloading Materials Management Experts". The objective is to recruit new employees in Asia and America above and beyond current requirements, to train them, and prepare them for the future assignments in Materials Management via project tasks.

In 2014, ZF hosted the German National Mathematics Competition, and again organized the Lemförder Dialog, an exchange platform for representatives from education, politics, and business. These initiatives, aimed at attracting young people to natural sciences and technical subjects, are extremely important to ZF.

ZF is also committed to the CyberMentor program designed to enthuse girls for professions in the MINT area (mathematics, computer science, natural sciences, and technology) and simultaneously, ZF wants to support them with personal mentoring. A total of 800 girls take part every year throughout Germany. In 2014, eleven female ZF engineers acted as mentors for the program. ZF again took part in the Girls' Day 2014, presenting a program for employees' daughters that showed them in a cross-generational exchange how fascinating technical subjects can be.

The Wissenswerkstätten (Knowledge Workshops) at the ZF locations continue to be very popular. So far, more than 13 000 children and youngsters have gained handson experience in the world of technology in the technical classrooms. Further educational facilities have already been opened at other German ZF locations (Schweinfurt, Passau, and Saarbrücken). In the course of 2015, another Wissenswerkstatt will open its doors for the ZF locations in Northern Germany near Osnabrück.

#### Diversity, equal opportunities, and equal pay

Within the framework of leadership initiatives, ZF developed and implemented consistent leadership principles throughout the Group aimed at establishing one common understanding of management and forming the basis for One Global Corporate Culture and One ZF in line with the ZF 2025 corporate strategy. All executive managers in the Group take part in training courses on the ZF Leadership Principles.

We believe that diversity and appreciation of this diversity have a positive effect on ZF and the society in Germany. That is why in 2014, we became a member of the Diversity Charta and now belong to a group of approximately 1 950 signatories dedicated to an embracing, prej-

udice-free corporate culture. With this voluntary commitment, we pledge to actively promote diversity in our organization.

Tackling the subject of inclusion, ZF organized a specialist conference on the professional potential of people in the autism spectrum. They frequently have special skills and talents – and yet face enormous difficulties in the labor market. At the invitation of ZF, experts set out ways in which both the people affected and companies can benefit from inclusion.

In order to remain an esteemed and coveted employer, we value individual development opportunities and the reconciliation of work and family. To this end, we offer a variety of arrangements such as flexible working time models or the possibility of mobile working. More than 130 female executive managers came to Friedrichshafen for the 2014 Global Women Leadership Summit to discuss their personal career experience, to report on examples of best practice, and to debate the issues. The ideas they came up with, such as a mentoring program, job rotation, and more flexible working time models, are currently being implemented. We are giving implementation of the mentoring program top priority. That is why a pilot program is starting in 2015 for the female executive managers in the Group. This will be followed by the rollout of a mentoring program open equally to men and women.

ZF is present in many countries of the world and embraces the diversity of cultures and people. We foster the exchange of thoughts, ideas, and methods as well as understanding between cultures and people. Our Corporate Principles as well as the ZF Leadership Principles include a clear stand on the issue of diversity: At ZF, employees are not discriminated against on the basis of skin color, gender, age, nationality, religious denomination, social background, disability, or sexual preferences. This applies to the recruitment of new employees, the existing employment relationship, as well as the professional advancement at ZF. The only characteristics that are important here are performance, personality, skills, and qualification.

#### **Aspect: Employment**

#### **G4-LA1** New employee hires and employee turnover

The ZF Group has been recording the quota of (voluntary) labor turnover since 2013. As in the previous year, it differed greatly from region to region. While it declined in almost all regions, it increased to 9.7 percent in Asia-Pacific, remaining overall at the same level as in the previous year.

#### Employee turnover1)

in %

	2013	2014
Europe	1.5	1.4
thereof in Germany	0.5	0.5
North America	7.0	6.2
South America	2.1	1.1
Asia-Pacific	8.0	9.7
Africa	6.5	2.3
Total	2.8	2.8

<sup>1)</sup> Employees in permanent contract that have voluntarily resigned in ratio to the average number of employees, in percent

### **G4-LA2** Benefits provided to full-time employees

In many countries, the ZF social and health insurance benefits are above the level as required by law. In 2014, the global review of the company's pension plans drawn up in 2013 was examined in more depth with regard to financial aspects.

There are also country-specific company benefits based on national cultural norms and the extent to which such benefits need to be paid above and beyond the basic state benefits. For example, it is the custom in China that someone who wants to marry and have a family must own their own house. To support its employees in this, ZF China pays a bonus as part of the monthly salary which benefits all employees. ZF North America offers comprehensive insurance coverage for all full-time employees and their families. This includes a health insurance policy that also covers prescription medication. In addition, the company offers special policies covering dental and vision treatment. In addition, employees are provided long-term and short-term occupational dis-

ability coverage, as well as a tax-deferred retirement plan. All employees and their families in Brazil receive health insurance, dental care, life insurance, and medication subsidies. There are also benefits for full-time employees, such as profit-sharing, a six-month leave period for pregnant women, food subsidies, and a shuttle service to the workplace. In Germany, ZF offers private disability coverage for cases of need. Employees have the advantage of special conditions and can normally take out insurance without a medical checkup. This is available for employees and apprentices as well as their immediate family members.

#### **G4-LA3** Return to work after parental leave

Support for young parents is something we cherish at ZF. That is why we are for instance building a ZF children's daycare center with 60 places for employees' children. In 2014, a total of 945 employees took parental leave; 783 were male and 162 female. A total of 961 employees returned from parental leave; 819 were male and 142 female.

**Aspect: Labor/Management Relations** 

# **G4-LA4** Notice periods regarding significant operational changes

Traditionally, codetermination plays an important role at ZF. The employee representatives and the Board of Management engage in a regular dialog based on trust. As a result, ZF employee representatives learn of important operational changes promptly and extensively. All legal obligations are adhered to. The Group Works Council (GWC) unites all locations in Germany in a single body. The European Works Council (EWC) represents all locations and subsidiaries in the European region. It is always informed and consulted with regard to changes that affect the company as a whole or at least two enterprises or companies in different states located within its scope. The topics that are essentially dealt with in the exchange and the discussions include fundamental questions regarding corporate development, site closures and relocations, investments, organizational changes, and employee issues.

#### Aspect: Occupational health and safety

## **G4-LA5** Percentage of total workforce represented in health and safety committees

The Law of Occupational Health and Safety that stipulates the organization of occupational health and safety committees applies at the German locations. Members of the works councils are also represented in these committees. Prior to the meetings of the occupational health and safety committees, specialists for occupational safety and health, medical officers, and representatives of the works council together with the responsible executive managers carry out inspections and audits to gain an insight into the current state and need for change.

# G4-LA6 Injuries, occupational diseases, lost days, and work-related fatalities

#### Rate of accidents

ZF places great value on employee health and safety. To monitor this, we use accident statistics to record all accidents that occur at work and result in one or more days of absence. The working days lost recorded in the reporting year amounted to 24 348 days, which was an increase of 5.2 percent. The 1 711 work accidents that caused these working days lost are equivalent to an accident rate of 13.5 per one million working hours. This is a reduction by 2.8 percent, or similar to the previous year, but it is still higher than the ZF target values. To protect employee health, the Board of Management launched the initiative for global accident management described on page 53.

Most accidents occurred in Europe, mainly in Germany. For the third year in succession, the North American region improved and achieved a model accident rate of 4.8, demonstrating the improvement potential of actions initiated by ZF. The Asia-Pacific region records the lowest accident rate, however it has the highest level of accident severity in the Group. As in the previous year, there were again no work-related fatalities in the Group.

In Germany we started rollout of an accident management software which will enable a breakdown of accident data according to gender as from 2015. Currently,

independent contracting parties are not included. We are at present examining the extent to which accident reporting can be extended to agency workers.

#### **Occupational diseases**

Noise-induced hearing loss (BK 2301) was the most frequently reported occupational disease (OD, German abbr. BK) among ZF employees. This is not surprising for a metal-processing company. In 2014, 18 cases were identified (2013: 28). Most of the identified cases in 2014 were reported at the locations of Schweinfurt (8, 2013: 13) and Saarbrücken (4, 2013: 8), followed by Passau (3, 2013: 4). As noise-induced hearing loss usually develops over years of exposure to noise, the latest figures of detected occupational diseases do not necessarily reflect current working conditions. In recent years, we have implemented several measures to reduce noise emissions (see G4-LA7).

Furthermore, two cases of mesothelioma caused by asbestos (BK 4105) were recognized in 2014 as well as one work-related skin disease. The company's medical officer services are particularly aware of work-related skin diseases as when symptoms occur, the spread can often be avoided before it develops into an occupational disease. In 2014, 74 employees were reported to have suspected cases of an occupational-related skin disease (BK 5101), but only one case was confirmed. In nearly all of the rejected cases, benefits were provided in accordance with § 3 of the Occupational Disease Regulations.

Accident rate LTAR

Accidents with working days lost per one million working hours

	2012	2013	2014
EMEA	17.2	16.6	17.8
thereof in Germany	18.3	17.1	19.4
thereof Europe excluding Germany	11.0	14.6	11.4
North America	5.01)	8.0	4.8
South America	13.0	11.7	12.6
Asia-Pacific	4.5	4.8	3.5
ZF Group (total)	14.1	13.6	13.5

<sup>1)</sup> without Mexico

A breakdown according to gender shows that all occupational diseases recognized in 2014 affected men. This must be understood in the context of the fact that the types of work which can typically cause occupational diseases are traditionally mainly performed by men.

#### **G4-LA7** Workers with high incidence or risk of diseases

There are no indications of groups of employees who have a high rate or risk of disease due to their work. Due to the statutory appointment of company medical officers in Germany, an adequate overview of conditions is available here.

The risks of occupational diseases (see G4-LA6) and work-related health problems typical in the metalworking industry are known, and preventive as well as intervention measures are in place. For instance, the recognized key indicator method is used to evaluate strains on the muscular-skeletal system at the workplace, and corresponding prevention and intervention measures are taken in the form of ergonomic design of workplaces.

We provide the required skin protection agents to prevent work-related skin diseases, and stipulate their use in skin protection plans. Whenever employees suspect they have health problems, they can consult the company doctor or medical service during working hours. All employees have the option of attending additional health checkups alongside the mandatory checkups at ZF.

Noise-induced hearing loss usually develops over years of exposure to severe noise. Possible preventive measures include technical noise limitation such as those successfully implemented at our Friedrichshafen location. Strain on the inner ear is also reduced by wearing suitable personal protective equipment (PPE). This hearing protection equipment is available to all employees affected, and wearing it is mandatory in areas affected by noise.

In the metalworking industry, the risk of occupationallyrelated infectious diseases is negligible. Only the medical personnel working in the medical service is exposed to this risk, and they are entitled to free vaccinations. People who take business trips to countries with increased health risks including possible infectious diseases receive obligatory preventive care in the form of extensive travel-related medical advice or checkups, including corresponding vaccination options.

# **G4-LA8** Health and safety topics covered in formal agreements with trade unions

The codetermination practiced at the German ZF locations also applies in the field of health and safety at work. Close cooperation between the Works Councils and the Group Works Council takes place with regard to these topics.

Occupational health and safety topics are part of the Group Directives and guidelines steered by the various locations. In Germany, their approval process provides for the participation of employee representatives in topics subject to codetermination. On a location level, there are various guidelines in existence covering occupational health and safety. A Group Directive regarding occupational health and safety was prepared in 2014, and a draft for the directive is planned for 2015. However, ratification may be delayed because of the integration of the new structures and processes from the acquisition of TRW.

**Aspect: Training and Education** 

### **G4-LA9** Average hours of training

ZF is one of the largest training companies in Germany and attaches a great deal of importance to qualified apprenticeships. In 2014, approximately 7 000 applications were received for technical and commercial apprenticeships. Even during an apprenticeship, an international assignment is possible. In 2014, ZF employed some 1 900 apprentices at 13 locations in Germany (including ZF Lenksysteme) – around 200 of them are students completing a dual study program at Baden-Württemberg Cooperative State University (DHBW). The young target group can choose from 35 different apprenticeships and DH courses of study. In 2014, 539 young people started an apprenticeship or dual study program at ZF. Thus, once again in 2014, ZF Friedrichshafen AG ranked among Germany's major providers of training

and apprenticeship opportunities in Germany. As ZF is keen to offer all its apprentices a job after they qualify, the number of ZF apprenticeship places has remained stable for years. Approximately 95 percent of former apprentices are hired.

At its Gray Court (South Carolina, USA) location, ZF has teamed up with the Piedmont Technical College to implement a system similar to the German model of combined degree programs. The training program will in the future be extended to ZF locations throughout Asia.

ZF remains one of the three founding companies involved in introducing the Michigan Advanced Technician Training (MAT<sup>2®</sup>) program. The program is developed according to German training standards and monitored by the German-American Chamber of Commerce and the German Chamber of Industry and Commerce (IHK). Currently, ZF is involved in the apprenticeship programs for the professions of mechatronics technician, IT specialist, and technical product designer at the Northville and Lapeer locations. ZF Services is at present making initial investigations in Vernon Hills, Illinois. MAT<sup>2®</sup> has the potential of establishing itself as a national standard.

#### Advanced and further training

The continuous development and qualification of employees and executive managers is a crucial factor of success in safeguarding the long-term future of the ZF Group. HR development at ZF takes account of this and provides a qualification of the relevant target groups that meets all requirements and needs. Specialist staff and executive managers are supported in their current function or are prepared for new tasks through a variety of support programs and qualification measures. Through efficient and modern learning architectures, a large workforce is qualified across locations and divisions worldwide in accordance with uniform ZF standards.

Since 2011, we have been establishing and expanding our academies worldwide. Within the continually growing academy landscape, executive managers and employees are qualified in specialist areas, creating a Groupwide uniform knowledge level. In 2014, the existing academies dedicated to Corporate Materials Management and Corporate Quality were significantly expanded and new academies for employees of Corporate Finance and IT were added to the portfolio. We also developed initial concepts for establishing a Production and an HR academy. The portfolio available more than doubled in 2014, and it will continue to grow vigorously in coming years, above all in the North America, South America, and Asia-Pacific regions.

With the Learning on the Web (LiN) vocational training initiative, ZF is supporting qualification measures with new media. Via this platform, employees are able to compile contents according to their own needs.

In 2013, ZF began to roll out the new pro»motion program environment. The new pro»motion programs are geared to people with special potential in the ZF Group. This is how ZF ensures globally consistent and continuous manager development across various management levels. We systematically support talents, preparing them for their next management function. This ensures their effectiveness in the new position and improves leadership quality in the entire Group. Since its introduction, just under 500 employees from 19 countries have successfully completed the program.

For executive managers employed under collective bargaining agreements in the North America region, we introduced the iLead training scheme in 2012. By 2014, more than 500 employees in the USA had taken part.

# **G4-LA10** Programs that support the continued employability of employees

The objective of knowledge management is the conscious, responsible, and systematic handling of knowledge as a resource. In order to retain knowledge in the organization, ZF implements knowledge batons where employees who are leaving the company make their practical knowledge available to the organization. The documentation of existing know-how takes place via storage media that enables knowledge to be shared and exchanged using search engines where employees can input specific queries. Collaboration Rooms, Wikis, and virtual communication media now support the virtual

cooperation of employees. Best-practice databases store valuable practical experience and make it available for re-use. Expert forums ensure the targeted exchange of knowledge and experience. In 2014, we also started introducing Yokoten, a lean management process. This instrument provides for horizontal knowledge transfer in the organization. It comprises methods of documentation and dissemination of knowledge through functional approaches and for the avoidance of repeated errors.

The suggestion and idea management schemes provide employees with a platform for the submission of suggestions for improvement and ideas. The ideas@ZF project has established conditions for an idea management process across all locations. This allows ideas to circulate between the German locations. Starting in 2015, it will spread to international locations. Thanks to the continuous improvement process, specific improvement potential is identified and implemented.

Knowledge and idea management in the Corporate HR function creates awareness of the effective handling of knowledge and ideas, provides advice, and supports the professionalization of existing activities as well as the building of new activities in knowledge and idea management.

In 2014, the M3 project (Market and Employee-Oriented Assembly) won the Demography Excellence Award for especially exemplary solutions to demographic challenges. The project aims to define and implement ergonomic and work-organizational design principles.

# **G4-LA11** Percentage of employees receiving regular performance and career development reviews

In 2013, ZF launched a standardized development landscape under the name pro»motion based on the strategy to support executive managers prior to a promotion to a more senior management position. This offers executive managers the opportunity to systematically prepare for the specific responsibilities of their new role and thus ensures management success within the company. By basing the learning contents closely on the policies of the ZF 2025 strategy, pro»motion contributes to establishing and implementing the strategic objectives. Participation in the program is obligatory for all executive managers that have been certified as suitable for the next management level in the ZF SteeR evaluation process before they take up their new responsibility. ZF SteeR (System to evaluate existing Resources) is the Group-wide instrument for performance and potential assessment of executive managers. ZF SteeR enables Group-wide HR and successor planning, and simultaneously ensures evaluation of all executive managers using uniform performance and potential criteria.

Furthermore, ZF introduced a new, worldwide-compliant short-term incentive (STI) for executive managers in 2014. ZF Incentive supplements the existing incentive model to include elements of individual targets that are taken from the ZF 2025 strategy. A new feature is a year-over-year item in the financial target figures that will reflect to a greater degree the requirements of the company to make sustainable, continuous improvements to our company's results. ZF is planning to introduce a long-term incentive for top management in 2015 which will integrate sustainable corporate development into our performance goals.

Furthermore, ZF has added a quality facility to its academies in order to support the worldwide professionalization of employees in the specialist functions. The academies are intended to inform and train all employees of a particular function in a uniform way around the world on topics of relevance for their particular responsibility, therefore increasing their professionalism (see LA9).

The first worldwide employee survey, the Global Employee Survey (GES), took place in March 2015. The objective was to identify improvement potential and derive concrete improvement actions. We asked about work-relevant issues such as working conditions and cooperation between employees. Starting in June 2015, the results will be communicated and improvement measures implemented.

#### **Aspect: Diversity and equal opportunities**

## G4-LA12 Composition of governance bodies and breakdown of employees by aspects of diversity

Three of the ten members of the shareholders of the Supervisory Board are women. No woman is currently represented on the Board of Management. On the Supervisory Board, a total of two of the employer representatives as well as one employee representative are of international origin.

With the HR strategy as part of ZF 2025, the topic of diversity also came to the fore. ZF understands diversity to be the key to success, a driver of innovations, and a company value-enhancing factor. ZF focuses its attention on four core dimensions that will significantly help to meet the strategic challenges in the coming years and contribute to the future competitiveness of ZF. These dimensions are a balanced ratio of genders, aspects such as cultural background or internationality of the workforce, a variety of experience and expertise, and solutions to demographic changes. All of these factors are systematically analyzed and processed on a regular basis, and reported to the Board of Management. With the introduction of ZF Career Modules for executive managers, we have defined a binding framework for job and career decisions. The modules determine criteria for promotion and support multidivisional, multidisciplinary experience, as well as helping internationalize management. ZF has been a member of the Diversity Charta (Charta der Vielfalt) since 2014. This comprises a voluntary commitment to the active application of diversity in the organization.

In 2014, the percentage of women in the Group amounted to 15.2 percent (2013: 14.5 percent) – and with 24.5 percent (2013: 21.9 percent) was at its highest in North America. The aim is to increase this amount by introducing various measures such as improvements in combining work and family. A career module in the form of a social module was introduced which accounts for parental leave, leave to care for relatives, or other types of social commitment. In order to promote equal opportunity and employee satisfaction, the compatibility of work and family at ZF is still an important objective:

Since 2006, the ZF location in Friedrichshafen has been a certified family-friendly company in Germany. As part of the "berufundfamilie" (career and family) audit certificate, family-related targets and measures are firmly established. The objective is to expand existing programs in the company or to establish new ones. ZF initiated an audit for the fourth time in 2014. Furthermore, additional family-friendly minimum standards were defined and consistently implemented via a work and family expert body.

Another major milestone in this area is ZF's decision to build a company children's daycare center at the Friedrichshafen location with 60 all-day places. The opening is scheduled for November 2015. Furthermore, we expanded childcare places throughout the Group. What remains equally important is our provision of daycare for employees' children during school holidays at all the large locations in Germany, with some 500 places.

We are actively implementing the aspect of career and family care as a new field. At the Friedrichshafen location, several rounds of talks took place on this subject in 2014, attended by some 500 employees. The program will be extended to further locations in 2015.

In accordance with the statutory basis, ZF records the handicapped rate for Germany. In 2014, the share of employees with disabilities amounted to 5.5 percent as of the key date of 2014-12-31 (2013: 5.4 percent). In both years, the level exceeded the share of five percent that the legislator stipulates to the company. As a result, it was not necessary to make any compensation payments.

In addition, company-internal agreements on Mobile Working were concluded at the Friedrichshafen location, which allows employees to perform up to ten hours of their work per week outside their workplace. It aims to improve the work-family balance, at the same time increasing the attractiveness of ZF as an employer. Currently, some 800 employees take advantage of this offer.

#### **Aspect: Equal Remuneration for Women and Men**

## **G4-LA13** Ratio of basic salary and remuneration of women to men

At ZF, remuneration is defined according to statutory requirements as well as, if applicable, collective agreements and/or company regulations. Employee representatives are included in the process according to the requirements in each case. Remuneration advisors are consulted above all wherever no framework regulations are in place. Support by remunerations advisors usually consists of the provision of market data which enables ZF to align remuneration levels with market requirements.

In Germany, the basic salaries of those employed on the collectively agreed scale are defined in accordance with the applicable contractual regulations (usually the collective agreements of the metal and electrical industries). As the evaluation of the position is performed irrespective of the job holder, the principle of same pay for the same tasks irrespective of gender applies here. The definition of the basic salaries is subject to codetermination and is therefore monitored in the jointly represented committees.

The evaluation of executive management positions as a basis for remuneration benchmarks with the assistance of the Hay System is also performed irrespective of the person. Worldwide, the decision lies with the Hay Commissions that also have employee representatives. ZF cooperates with the Hay Group during the evaluation of management positions. ZF has procured licenses from the Hay Group in order to use the PayNet Salary Database for Germany. Licenses for Brazil, India, and China followed in 2013.

### **Human Rights**

Management approach

#### Investments in implementing human rights

In joining the United Nations Global Compact, ZF declared its commitment to business practices which respect human rights. We also require our business partners to observe the first two principles of the United Nations Global Compact. That is why our mandatory Business Partner Principles contain the statement: "Business partners undertake to adhere to the nationally and internationally applicable laws and regulations at their locations worldwide. They are responsible for respecting human rights and in particular preserving human dignity." The ZF Group requires selected suppliers to perform self-assessment on the basis of the Supplier Self Assessment Sustainability. In addition, ZF conducts a risk-based examination for its business partners in order to identify possible compliance and integrity risks (Business Partner Compliance Due Diligence).

In 2014, the Board of Management of ZF resolved that all new joint ventures would be contractually bound to implement the ZF Compliance Management System or at least a comparable management system. For all existing joint ventures with a majority-held ZF participation, ZF Board representatives are called upon to ensure that the ZF Compliance Management System is implemented.

#### **Equal treatment**

We attach great importance to a corporate culture that is characterized by mutual respect, trust, tolerance, and fairness. We respect the dignity, privacy, and personal rights of every individual. It is explicitly formulated in the Code of Conduct for our employees that we do not tolerate any discrimination, especially on the grounds of race, gender, religion, age, nationality, social or ethnic origin, disability, belief, sexual orientation, or political and trade union engagement. These principles apply to the recruitment of new employees, to employees with a valid employment contract in relations with each other and in dealings with our business partners, and to the professional promotion of our employees. The only deter-

mining factors here are performance, personality, skills, and qualification. Accusations of discrimination will be investigated.

**Aspect: Investment** 

# G4-HR1 Significant investment agreements and contracts that include human rights clauses or screening

ZF links all business contracts with adherence to its Business Partner Principles, which specify both a declared commitment to sustainable development as well as the adoption of the principles relating to human rights and working conditions, quality and environmental management, employee health and occupational safety, fair market practices, and rejection of corruption.

ZF reserves the right to scrutinize the business relationship with the business partner in case of nonconformance with the Business Partner Principles. In this regard, ZF acts pursuant to the principle of proportionality, which means that in each case ZF carefully examines which consequences are appropriate, suitable, and necessary. This can lead, for example, to immediate termination of the business relationship as well as to enforcement of compensation claims.

Business partners are natural or legal persons, from whom ZF procures supplies or services, or vis-à-vis whom ZF provides supplies and services, without them being employees of ZF or companies affiliated with ZF. For instance, business partners can be suppliers, customers, commercial agents, representatives, intermediaries, consultants, or other providers of goods and services.

External service providers in Germany must sign a declaration of compliance with collective agreements which specifies fair remuneration, compliance with working times, and rejection of undeclared labor and tax avoidance. This declaration also applies to subcontractors contracted by ZF and includes the proviso that ZF can check compliance at any time.

### **G4-HR2** Employee training on human rights

As an integral part of the principles of the UN Global Compact, human rights are also a binding element of our Code of Conduct, Corporate Principles, and principles of social responsibility. Therefore, they are included in our compliance training courses, which are described in more detail under G4-SO4.

**Aspect: Equal treatment** 

### **G4-HR3** Incidents of discrimination and actions taken

There were no incidents of discrimination in the reporting year.

### **Society**

#### Management approach

ZF places great importance on being a recognized partner in society and actively engaging in social matters at its locations. The ZF Forum, that is currently under construction, will be open to customers, partners, school pupils, students, employees, and members of the public, offering them a vibrant meeting place. Cultural institutions such as the ZF Kunststiftung (Art Foundation), and sports support such as the ZF Arena in Friedrichshafen illustrate how much we value the local community and demonstrate our wish to contribute to society. We encourage our employees to be active in the community, and give them opportunities to do so, for instance by giving them special leave.

The ZF Group is fully owned by two foundations which receive the dividends paid out. These funds are exclusively used for charitable and social purposes.

For more details, see G4-7, EC7, and EC8.

### **ZF** Compliance

For ZF as one of the automotive industry's largest suppliers worldwide, compliance is an essential element of successful management and good corporate governance. It is both an obligation and an incentive to conduct reliable and respectful dealings with customers, business partners, employees, and the environment. Compliance with existing laws is a major component for business and sustainable success, and ZF has clearly defined internal regulations that ensure this. Our principle "If there is no legal way, there is no way for ZF" underlines our stance here. This is the basis for the lasting, trusting cooperation with our employees and business partners.

All employees are called upon to contribute to ZF's success through their own actions, everywhere and at all times. This applies to employees of ZF as well as to executive managers and the Board of Management in equal measure. Internal directives apply for every employee worldwide and support them in adhering to legal require-

ments in their daily work. This entails the task of preventing misconduct and ensuring that risks to the integrity and lawfulness of our actions

- are identified in advance and in time,
- are prevented through suitable measures,
- are correctly responded to in case such risks materialize, and, subsequently,
- the task of identifying the causes in order to prevent recurrence.

ZF communicates the relevant rules to its employees via the Code of Conduct and the Compliance Directive.

#### **Code of Conduct**

The ZF Code of Conduct establishes binding principles for all employees of the ZF Group in their dealings with each other, with business partners, and the environment. The new version of the Code of Conduct issued in 2014 defines eight binding principles for correct, law-abiding, and ethical behavior. Subjects covered here are e.g. adherence to laws, fair competition, corruption, business and social responsibility, occupational safety, data protection, and transparency. In the reporting year, the Code of Conduct was published on the Intranet page of the Corporate Compliance department in twenty ZF languages.

We instructed 2 500 executive managers in the ZF Group to confirm receipt of and compliance with the Code of Conduct and to communicate it to their colleagues. It is indispensable that all ZF employees know, have read, and understand the Code of Conduct. To support our employees, we have provided an online training module that clearly explains the contents of the Code of Conduct.

#### **ZF Group Directive "Compliance"**

Supplementary to this, the revised Compliance Directive came into force in the second half of 2014. It describes in particular rules regarding anticorruption and antitrust law. Additionally, it spells out how to correctly handle courtesies. An application form is available for favors and benefits that require approval. The following topics are regulated by the directive:

- Responsibilities, tasks, and authorities of the Compliance Organization
- Rules for lawful and responsible conduct
- Ban on corruption
- Business partner integrity
- Rules for dealing with business gifts, invitations, and other courtesies
- Sponsorship and donations
- Behavior in competition
- Contacting the Corporate Compliance Office and reporting incidents.

#### **ZF Compliance Management System**

The ZF Compliance Management System (CMS) creates the framework for meeting these requirements. It focuses on the subjects of anticorruption, antitrust law, and larger-scale financial losses for ZF. The CMS meets the following requirements: independence and effectiveness of the Compliance Organization, integration of compliance into business processes, transparent decision processes, and corresponding HR processes (sanctions). The focus is on preventing violations, based on the three pillars of prevention, detection, and reaction.

The Compliance Organization is set up along the lines of the organizational structure of the ZF Group of corporate functions, divisions, and regions. Consequently, the Compliance Organization is divided into two parts: the Corporate Compliance department in the corporate headquarters and Compliance Officers in the divisions, business units, regions, and central departments. The Compliance Officers are in turn supported by local Compliance Delegates at the individual locations.

ZF Compliance Organization					
Prevent	Detect	Respond			
<ul> <li>Risk analysis</li> <li>Regulations</li> <li>Communication</li> <li>Training</li> <li>ComplianceHelpdesk</li> <li>Business partner due diligence</li> </ul>	<ul><li>Notification</li><li>Investigation</li><li>Monitoring</li></ul>	<ul><li>Deriving actions</li><li>Sanctioning misconduct</li><li>Actions monitoring</li></ul>			

#### **Compliance Management System for participations**

In 2014, the ZF Board of Management resolved that the respective contracts for all joint ventures must specify the binding application of ideally the ZF Compliance Management System, or at least a comparable management system. For all existing joint ventures with a majority-held ZF participation, ZF Board representatives are called upon to ensure that the ZF Compliance Management System is implemented.

### ZF Trustline, Case Management, and ComplianceHelpdesk

In addition to preventive legal consulting services, training and communications measures, as well as business partner audits, a case management system was introduced, which permanently records and evaluates corresponding compliance actions. It is connected to our electronic notification system ZF Trustline, which employees can use to anonymously report suspected serious misconduct - for instance violations of competition and antitrust law, health protection, occupational safety, corporate security and environmental protection, or cases of corruption and conflict of interests. If compliance-related questions or uncertainties arise, employees can contact the Compliance Helpdesk in confidence. The Compliance Helpdesk serves as a preventative function since inquiries about issues can be systematically clarified in advance.

**Aspect: Anti-corruption** 

# **G4-SO3** Percentage of operations assessed for risks related to corruption and risks identified

In the previous year, a Compliance Health Check was conducted by an independent, external company. The objective of this analysis was to determine, on the basis of the risk profile of ZF, whether the maturity level of ZF, i.e. the design, adequacy, and functioning of the Compliance Management System (CMS) is appropriate. Certain actions were derived from these findings in the reporting year. Apart from a fundamental reorganization of the compliance area, we offered for instance additional training and new awareness programs. What's more, we prepared a new edition of the regular compliance risk analysis, which will take place as from next year.

In terms of compliance, business partners can pose a risk if their actions or also failures to act can be attributed to ZF. As a result, ZF can be held liable if no suitable precautionary measures were taken, for example to prevent bribery. Therefore, all business functions of our company are obliged to take suitable measures – preferably before business relations with a partner are taken up – to ensure that the business partners are adequately examined and instructed.

In 2012, the ZF Compliance department started preventatively examining certain business partners. We selected a risk-based approach according to which only business partners are examined that pose a higher compliance risk due to their business model. These include intermediaries, agents, and service providers. They are checked to determine whether the integrity of the individual or company is ensured, the associated contracts are available or need to be renewed, and whether the invoiced amount paid by ZF corresponds to the services provided.

In order to support employees in selecting a new business partner in future, a guideline was drafted in 2014, which will become binding in the course of 2015.

#### **G4-S04** Communication and training on anti-corruption

A core element of our strategy against corruption is the function of our executive managers as role models who act in accordance with our values and communicate them to the employees. Our Code of Conduct, which contains a clear ban on corruption, is binding for all employees worldwide. For this reason, we instructed approx. 2 500 executive managers in the ZF Group to comply with the Code of Conduct and to communicate it to their employees as well as to ensure it is followed.

#### Information provided

Compliance communication serves to sensitize employees and to convey values and expectations with regard to employee conduct. Through a range of communication actions, we ensure compliance is firmly anchored at ZF, and continuously inform employees about current compliance topics via various communication channels.

The Corporate Compliance Intranet page was expanded in the reporting year. Apart from basic information such as guidelines on antitrust law or the Code of Conduct, the portal lists all local compliance contacts. Also in 2014, we issued the first Compliance Newsletter, which as from now will be issued twice per year to inform above all the contacts and all interested employees about current topics and projects in the area of compliance. We also use our "we move" employee magazine as an information medium.

If employees have urgent questions regarding compliance issues, they can contact Compliance via phone or e-mail.

#### **Training opportunities**

ZF has integrated target-group-oriented compliance training courses in its training concept. The objective of the training courses is to firmly anchor compliance in employees' consciousness and in this way to prevent legally critical acts. The courses convey knowledge and promote the ability to act in critical situations. For demonstration purposes, the training courses address aspects from everyday work in order to put what has been learned into practice.

#### **Classroom training**

Classroom training offers the opportunity to directly exchange ideas and experience regarding compliance-relevant topics and questions. Therefore, ZF attaches great importance to the participants' active involvement in the training courses, for instance by jointly working through case studies or by discussing case studies relevant to everyday work.

In 2014, the Compliance Delegates went through special, extensive compliance training that provided on-site support and helped communicate a uniform message. Supplementary to the training activities for Materials Management employees in 2012, ZF started advanced training in the 2nd half of 2014. Furthermore, we implemented the training series "Compliance for Executive Assistants and other Assistants" which will be continued in 2015.

#### Online training

Online training supplements classroom training and serves to convey broad, non-limited knowledge to all employees.

To replace the basic compliance training course put together in 2009, we introduced a new online training course in 2014 about the Code of Conduct which clearly explains the 8 principles using examples. All ZF employees, in particular new employees, are encouraged to complete the online training which is available on the Intranet.

To prevent the risk of a violation of antitrust law, ZF implemented an online training course on antitrust law in 2014, which, in addition to a general module, also included two further modules providing special knowledge for employees from Sales and Materials Management. Executive managers were obliged to complete the antitrust law online training.

# **G4-S05** Confirmed incidents of corruption and actions taken

As in the previous year, no confirmed incidents of corruption occurred.

Aspect: Anti-competition behavior

# G4-SO7 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices

In South America, the antitrust authorities searched a ZF plant on suspicion of the infringement of competition rules in September 2014.

### **Product Responsibility**

#### Management approach

Our enthusiasm for innovative products and processes and our uncompromising pursuit of quality have made us a global leader in driveline and chassis technology, as well as in active and passive safety technology. We are contributing toward a sustainable future by producing advanced technology solutions with the goal of improving mobility, increasing the efficiency of our products and systems, and conserving resources. Improvements in energy efficiency, cost-effectiveness, dynamics, safety, and comfort are key to our work. The aspects of safety and energy efficiency (with their associated environmental protection) are key elements of product responsibility for ZF because they help to prevent accidents and protect the health of traffic participants. At ZF, sustainability is not another product development objective; it is an integral part of our company worldwide.

Founded in 2013, the ZF Composites Tech Center in Schweinfurt (Germany) for the advanced engineering of production technologies for fiber-reinforced plastics (FRP) achieved its first successes in the reporting year. It works in close cooperation with Product Development in a host of projects to develop the basis for the volume production of innovative lightweight components made out of thermosetting and thermoplastic FRP materials. In 2014, Advanced Engineering continued its work on a passenger car rear axle composed entirely of fiber-reinforced plastics material.

In the context of target fleet values for CO2 emissions, we are continuously further developing conventional drives and hybrid drives. For a long time, ZF has been working hard to push forward e-mobility in addition to hybrid technology. Thanks to our competencies in the areas of drive and electronics as well as their intelligent networking, we generate innovations meeting practical requirements. Based on the central electric drive, ZF implemented a model whereby the electric drive is integrated into the chassis near the wheel on the right and

left sides. In addition, several projects are up and running in order to further advance developments to the electric drive.

An innovation prototype was set up to demonstrate ZF's expertise and the approaches to finding solutions in the area of driver assistance systems. The long-distance truck with a length of 25 meters proves that it can be very easy with the aid of modern technology to steer and move a large truck-trailer combination weighing up to 60 tons using remote control in maneuvering mode with centimeter accuracy. Further assistance in this respect comes courtesy of the electric drive in the hybrid concept, which provides very precise yet zero-emission driving. The concept went down extremely well with customers and the public in general. With the acquisition of TRW initiated last year, we took a big step toward rounding off our technology portfolio and further increasing our competencies in the areas of safety, advanced driver assistance systems, and autonomous driving.

When it comes to products in the mobility area, the safety of traffic participants is paramount. That is why our responsibility for our products includes an uncompromising dedication to quality. Our ZF4Q quality strategy is derived from the ZF 2025 corporate strategy. It focuses on products and customers. The ZF Quality Management System is based on three elements: Quality Planning as a synonym for prevention, Quality Assurance to secure the current volume production, and Quality Management to shape processes and structures. The goal is to implement all processes, both industrial as well as business processes, at a high level of maturity and to continually improve them in line with the ZF Production System.

At the same time, the Quality Organization will be analyzed and receive an even more global focus in the future. Working in partnership with our suppliers also plays an important role for us. After all, we will only be able to jointly achieve our quality objectives if the entire supply chain is optimally coordinated.

The Quality Strategy focuses on our employees, whose expertise in the field of quality will increase through the newly established ZF Q Academy.

Moreover, ZF motivates employees to remain constantly involved in the continuous improvement process. Our "Total Quality Management" contest was held for the 20th time in 2014. Overall, more than 1 100 employees worldwide entered the competition with around 340 projects, which not only contributed to quality improvements, but also initiated product innovations and production improvements.

#### **Product safety**

Passenger and goods transport presents companies with special challenges in the area of product safety. That is why ZF places great importance on the safe use of products and protection of the end users. Our enthusiasm for innovative products and our uncompromising pursuit of quality have made us a global leader in driveline and chassis technology, as well as in active and passive safety technology. Despite increasing product complexity, standardized product development processes and continuous quality control guarantee absolutely reliable components that support the driver and help prevent accidents. Various group directives guarantee compliance with our quality standards and statutory requirements as well as ensuring effective handling of customer-specific demands.

Group Directive 92-13 communicates a uniform basic understanding and provides the framework for ZF product developments. In line with the customer-specific requirements, the individual business units design the sequence of their product evolution process themselves within the framework defined by the directive. This directive defines both the release stages (gates) that must be passed within the product evolution process to obtain release, and the minimum requirements that must be fulfilled to pass the individual gates.

Directives 03-07 and 09-06 govern the information flow regarding quality aspects and how to deal with reporting obligations to customers and authorities such as the US National Highway Traffic Safety Administration, NHTSA. To meet these reporting obligations, officers are appointed in the divisions who act as internal contacts and ensure all incidents that require reporting are logged and communicated. Safety-relevant defects, accidents that can be attributed to a ZF component, and safety recalls are included in the reporting obligation.

Group Directive 09-04 has a lessons-learned function, governing a Group-wide process to ensure the effective elimination of defects or faults that arise at the customers', for instance in the assembly plants or in the field. The directive determines the responsibilities of Quality Management Officers for analysis and improvement actions in the overall ZF organization as well as communication with customers.

Group Directive 06-16 anchors the application of safety standards such as IEC 61508 or ISO 26262 during the new and further development of safety-relevant, mechatronic systems. Compliance with the process steps is ensured and documented by the implemented independent reviews.

However, at ZF product safety starts in their preliminary stages. As the quality of our products is considerably influenced by our suppliers' quality performance, Directive 83 defines extensive supply chain requirements. It requires our suppliers to implement a quality management system and prescribes measures that ensure smooth-running processes between suppliers and ZF. The directive is regularly updated and must be implemented by all suppliers as an element of purchasing terms and conditions, supply contracts, and general terms and conditions of business.

#### Improvement of driving safety

Our customers welcome our determined focus on products and services, which provide great customer value. This includes a focus on continuous improvement of driving safety and increasing digitalization and networking. The acquisition of TRW Automotive Holdings Corp. increases ZF competencies in this area and ensures access to groundbreaking technologies in the areas of active and passive safety, advanced driver assistance systems, and autonomous driving. ZF's active systems are

strategy-capable. This means that they can also be linked with an electronic control network that is more intelligent and acts in a more flexible manner than the sum of the individual systems, thus taking active safety in the vehicle to a new level.

The development and improvement of passive and active accident prevention systems are subject to guidelines that require stringent risk assessment of these systems, and in this way guarantee they are failsafe. Directive 06/11 determines the handling of customer requirements for products with integrated software, and standardizes procedures for their development. It encompasses the determination and analysis of the system requirements, the system design, the function and software development activities as well as system integration, testing, validation, and release.

#### **Product labeling**

ZF operates chiefly in the B2B area and supplies components for installation in products for end consumers. As our products are not visible to the end consumer, product labeling is of little importance. We supply our customers with data and information about our products and the materials used, which ensure proper handling and safe use.

Aspect: Customer health and safety

# **G4-PR1 Share of significant products and services** assessed for health and safety

Safety is extremely important across the entire automotive industry. People need to rely 100 percent on the technology wherever passengers and goods are transported. This requirement starts with a matter of course: Safety-relevant systems and components in vehicles must perform their tasks in a reliable manner and may not break down. With its product focus on driveline and chassis technology, ZF products are central to vehicle and occupant safety.

ZF applies stringent benchmarks right from component development and through design and materials selection. Just one example of our holistic approach is ZF standard ZFN 9005 for environmentally friendly product design.

We basically differentiate between two product categories, each of which is subject to specific Group Directives:

- Products with integrated software
  - DG 06-11 (Process Requirements for the Development of Systems With Integrated Software)
  - GD 06/16 (Functional safety of electrical and electronic systems with software)
- Products without integrated software
  - KR92/13 (Releases in the product development process)

These directives apply for the entire ZF Group and all products it manufactures.

Usually, customer specifications and statutory regulations are available for both product categories, which we then supplement with in-house test specifications based on ZF product expertise. The group directives determine the process for dealing with and ensuring adherence to these specifications. At decisive points in the project progress, we test components individually, in assemblies, and in overall systems on test benches under the relevant duty cycles and then evaluate the results. Depending on the provisions, we also perform tests in the overall vehicle.

Our uncompromising approach to product quality continues in manufacturing. Therefore, even in the development process, we draw up requirements specific to the means of production as well as the properties of the means of production and equipment derived from these requirements.

This is how ZF guarantees its manufacturing locations worldwide use stable processes in production which ensure the shipped products comply with the specifications agreed with the customer during development.

A further stage in the product life cycle is the implementation by appropriately trained Customer Service personnel of service concepts designed during the development process.

# G4-PR2 Percentage of significant product and service categories for which health and safety impacts are assessed

Approximately 90 percent of our products relate to the automotive sector. Product defects that caused a vehicle recall did not occur in this reporting year. The reasons for high-grade product safety are efficient processes as outlined in GD 92-13 ranging from product development, through incoming goods inspections, supplier support, and production protection to failure analysis in the field.

**Aspect: Product and service labeling** 

## **G4-PR5** Results of surveys measuring customer satisfaction

An extremely close and long-standing cooperation between manufacturers and suppliers is common in the automotive sector. This particularly applies to the suppliers that provide significant and technologically complex vehicle components. In doing so, they must be oriented towards the comprehensive specifications of the manufacturers that are often drafted together. Delivery reliability and innovative ability are important criteria for the customers. As a large portion of vehicle innovations originate from the suppliers, the R&D activities are decisive for long-term customer satisfaction and business success. Every new order can be seen as an indicator of customer satisfaction.

At present, ZF does not carry out central studies of customer satisfaction; instead the individual business units measure satisfaction and derive appropriate actions within their own areas of responsibility. The business units are in direct contact with their customers and have direct access to their own product range. They have the obligation to take suitable measures in the event of possible deviations.

As part of the introduction of a central Key Account Management in 2015, we are planning a central customer satisfaction survey, a so-called Voice of the Customer (VoC), with a pilot customer. The VoC is an independent assessment of satisfaction carried out by an independent, external, and globally operating service provider that ensures a systematic approach to informa-

tion definition, collection, and analysis, as well as data comparability over time. The results will enable us to develop more targeted, precise improvement actions.

# **GRI CONTENT INDEX AND PROGRESS COMMUNICATION ON** PROGRESS TO UN GLOBAL COMPACT



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G4-LA10	Programs that support the continued employability of employees	58-59			_
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G4-LA12	Composition of governance bodies and breakdown of employees by aspects of diversity	60	6	We do not report on the share of minorities in our workforce. This information must be treated confidentially and is not collected for reasons of rights to privacy.	_
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### **IMPRINT**

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Editorial deadline: June 30, 2015

The report is available in German and English; both versions are available online for download at www.zf.com.

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