+GF+

Sustainable for you

Sustainability Report 2015

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Sustainability for us – and for you



Yves Serra, President and CEO

"The products of our divisions contribute to improving the sustainability footprint of our customers."

Dear readers,

Our strategy cycle 2011–2015 has drawn to a close, and I am glad to report that we not only reached our financial targets but also made significant steps forward with our sustainability initiative. To take just a couple of examples, the number of occupational accidents has been cut almost in half since 2011, thanks not least to a large safety campaign especially at GF Automotive, and the proportion of climate-damaging air freight within our supply chain has shrunk considerably.

Sustainability contributes directly to the achievement of our financial objectives. For example, modern automation and dust extraction devices in our foundries help to improve cleanliness and at the same time reduce costs.

Moreover it allows us to align our customer claims, i.e. that we help them reduce the emissions of the cars they sell, with our own efforts to lower emissions within our factories.

We will therefore continue to invest in our premises to make them even more environmentally friendly and safe for our employees. But sustainability at GF goes beyond internal considerations. The products of all three divisions contribute to improving the sustainability footprint of our customers and directly or indirectly to conserving natural resources. This can, for example, be via modern piping systems that guarantee decades of leak-free water transport, lighter components for latest-generation cars, or modern machine tools that significantly improve the production of energy-efficient products, such as modern aircraft turbines.

These achievements are a source of pride in the GF name for our 14 400 employees around the world. With an array of training and development options, the internal GF Academy fosters enthusiasm among employees at all levels. We increased the number of training days for our employees by a further 10% in 2015. This is just one of the factors that help make GF an attractive employer for men and women, young talents and seasoned experts.

I look forward to hearing your feedback on GF and our Sustainability Report.

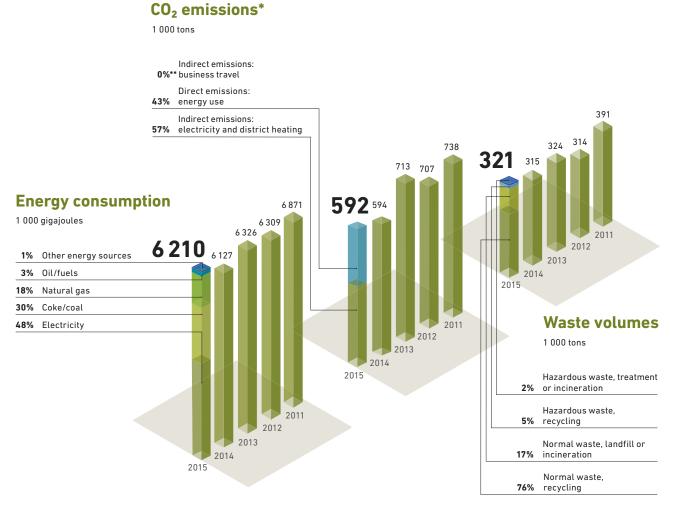
Yves Serra, President and CEO



Employees worldwide



Key figures



* Real emissions, calculated based on ecoinvent 1.3.

** Business travel accounted for 2 000 tons and represented less than 0.5%.

14474

Employees

Employees by region (in %)

25%	Asia	
23%	Germany	
18%	Switzerland	
13%	Austria	
9 %	Americas	
6%	Rest of Europe	
6%	Rest of world	

Decrease of accidents at work



Between 2011 and 2015 corporate-wide accidents decreased by 44%. The initiation of the "Zero Risk" campaign by GF Automotive contributed substantially to this result and had a significant influence on the safety behavior of the employees.

Certifications

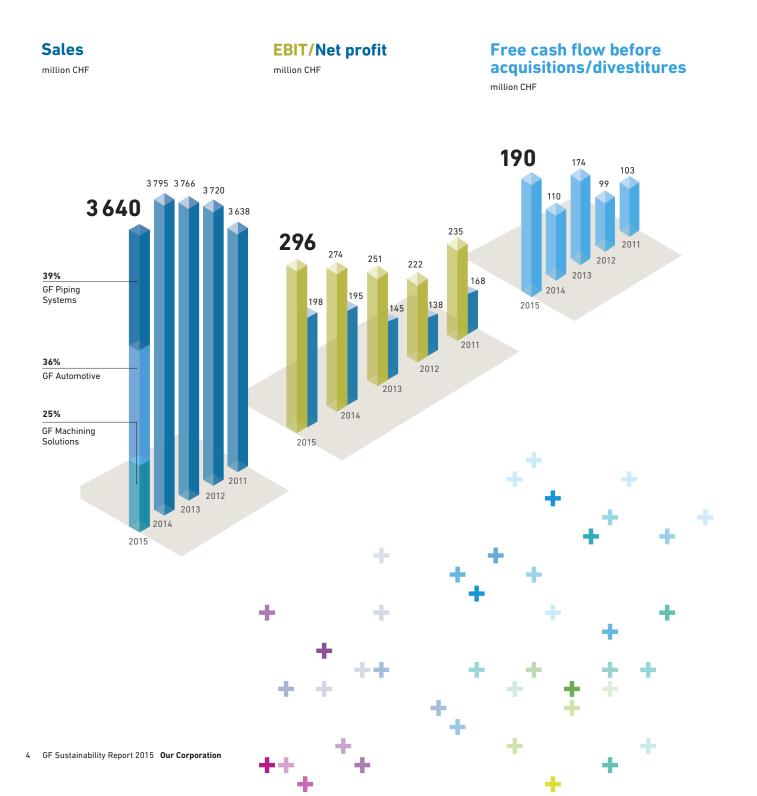


As of 31 December 2015 all production sites were certified according to OHSAS 18001 (Occupational Health and Safety Assessment Series).

All sustainability data are collected and processed through the GF Sustainability Information System (SIS).

Our Corporation

GF comprises three divisions: GF Piping Systems, GF Automotive, and GF Machining Solutions. Founded in 1802, the Corporation is headquartered in Switzerland and is present in 32 countries with 121 companies, 45 of them production facilities. Its approximately 14 400 employees generated sales of CHF 3.64 billion in 2015. GF is the preferred partner of its customers for the safe transport of liquids and gases, lightweight casting components in vehicles, and high-precision manufacturing technologies.

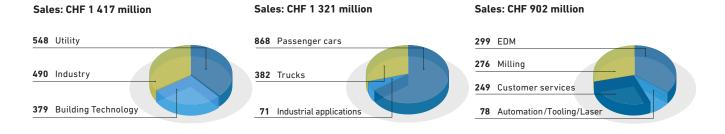


GF Piping Systems is a leading supplier of piping systems made of plastics and metal. The division focuses on system solutions and high-quality components for the safe transport of water and gas in industry, utilities, and building technology. Its product range includes fittings, valves, pipes, automation and jointing technologies and covers all applications throughout the water cycle.

GF Piping Systems supports its customers in over 100 countries through its own sales companies and representative offices. The division is present in Europe, Asia, and the Americas with more than 30 manufacturing sites and research and development centers, which also support energy-saving use of raw materials and resources. **GF Automotive** is a technologically pioneering development partner and manufacturer of lightweight cast components and systems made of ductile iron, aluminum, and magnesium for the glob al automotive industry as well as a variety of other industrial applications. The highly complex lightweight components contribute to making modern vehicles lighter and reduce their CO₂ emissions.

GF Automotive manufactures at nine production plants in Germany, Austria, and China. In those countries as well as in Switzerland, Korea, and Japan it also operates sales offices. The lightweight research and development competency is in Schaffhausen (Switzerland) and Suzhou (China). **GF Machining Solutions** provides milling and electrical discharge machines (EDM), additive manufacturing solutions, laser texturing, automation, tooling, and spindles. These complete solutions make the division one of the world's leading provider to the tool- and mold-making industry and to manufacturers of precision components. The most important customer segments are the aerospace industry, ICT, and the automotive sector.

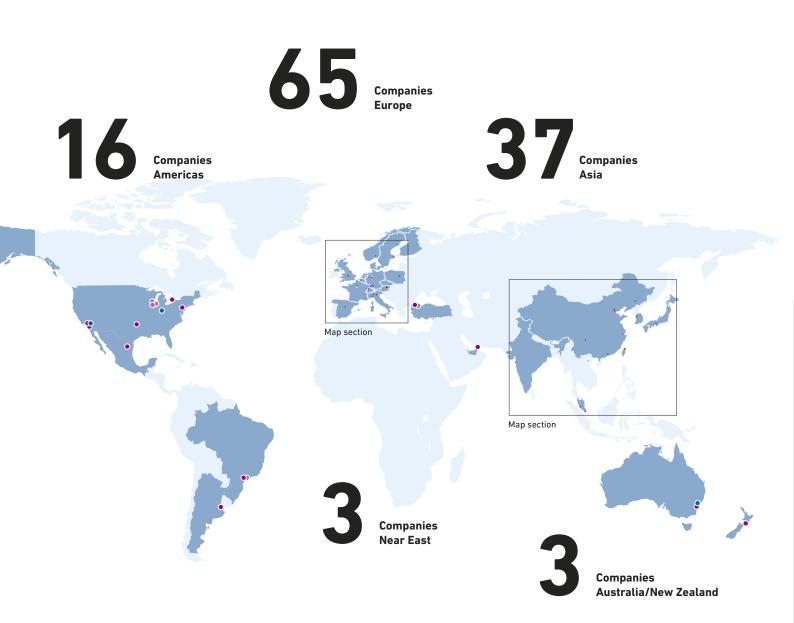
GF Machining Solutions operates its own sales companies in more than 50 countries to provide customer services locally. Production facilities as well as research and development centers are located in Switzerland, Sweden, and China.



	Corporation		GF Piping Systems		GF Automotive		GF Machining Solutions	
IF million	2015	2014	2015	2014	2015	2014	2015	2014
Order intake	3 662	3 836	1 429	1 493	1 331	1 412	902	932
Sales	3 640	3 795	1 417	1 476	1 321	1 415	902	905
EBITDA	422	399	193	190	148	154	92	65
EBIT	296	274	143	142	89	93	78	53
EBIT before one-off effects	294	274	149	142	95	93	64	53
Net profit	198	195						
Free cash flow before acquisitions/divestitures	190	110						
Return on sales (EBIT margin) %	8.1	7.2	10.1	9.6	6.7	6.6	8.6	5.9
Return on sales (EBIT margin) before one-off effects %	8.1	7.2	10.5	9.6	7.2	6.6	7.1	5.9
Return on invested capital (ROIC) %	18.9	17.9	18.0	17.1	22.1	21.8	21.9	16.9
Number of employees	14 424	14 140	6 237	6 086	5 037	4 898	3 003	3 008

Worldwide presence

As a global industrial company, GF conducts business throughout the world through its three divisions. The company operates 124 companies in 33 countries (as of 30 June 2016).



Affiliated Companies

• Corporate Management

Americas El Monte (2), CA, US Hamilton, BM

Asia Shanghai, CN Singapore, SG

Europe Biedenkopf-Wallau, DE Caselle di Selvazzano, IT Epe (2), NL Neuhausen, CH Palaiseau, FR Sargans, CH Schaffhausen (3), CH Singen (3), DE

• GF Piping Systems

Americas

Buenos Aires (2), AR Easton, PA, US El Monte, CA, US Irvine, CA, US Mississauga, CA Monterrey, MX Sao Paulo, BR Shawnee, OK, US Beijing, CN

Australia/ New Zealand Riverwood, AU Wellington, NZ

Changchun, CN Dujiangyan, CN Karawang, ID Mumbai, IN New Taipei, TW Osaka, JP Shah Alam, MY Shanghai (5), CN Shenzhen, CN Singapore (1), SG Yongin-si-si, KR

• GF Automotive

Americas Henderson, NC, US

Asia Kunshan, CN Suzhou, CN

Europe Altenmarkt, AT Biedenkopf-Wallau (2), DE Herzogenburg (3), AT Leipzig, DE Mettmann (2), DE Schaffhausen, CH Singen, DE Werdohl, DE

GF Machining Solutions

Americas Chicago, IL, US Lincolnshire, IL, US Sao Paulo, BR

Asia Asia Beijing (2), CN Changzhou, CN Hanoi, VN Hong Kong (3), CN New Taipei, TW Seoul, KR Shanghai (2), CN Shenzhen, CN Singapore, SG Tianjin, CN Yokohama, JP

Europe

Barcelona, ES Brno, CZ Coventry, GB Cusano Milanino, IT Langnau, CH Losone (3), CH Luterbach, CH Meyrin (3), CH Nidau, CH Palaiseau, FR Schorndorf, DE Vällingby, SE Warszawa, PL

Near East Istanbul, TR





Map section Europe

Map section Asia

Australia/ New Zealand Riverwood, AU Asia

Villepinte, FR Warszawa, PL Near East

Europe Albershausen, DE

Caselle di Selvazzano, IT

Cernusco sur Naviglio, IT

Bruxelles, BE

Coventry, GB Daupenthal-

Epe (2), NL

Madrid, ES

Sissach, CH

Stockholm, SE

Taastrup, DK

Rud, NO

Ettenheim, DE

Mornshausen, DE

Herzogenburg, AT

Schaffhausen (3), CH

Busalla, IT

Dubai, AE Cerkezköy, TR

Traisen, AT Valeggio sul Mincio, IT Zhuozhou (2), CN

Highlights 2015

Sustainable Investment: GF achieves prime status



GF has moved up one level in the oekom research AG ranking to C+ and is now classified as a prime investment. Oekom research is one of the leading rating agencies worldwide in the field of sustainable investment.

Climate protection: GF among top ten industrial corporations



In the annual climate protection ranking by the Carbon Disclosure Project (CDP), GF has been named the sector leader among industrial corporations. With this, GF ranks among the ten best industrial corporations in Germany, Austria, and Switzerland.

GF and Caritas: together for clean drinking water



Hugo Fasel, Director of Caritas Switzerland, and Yves Serra, CEO of GF, at the contract signing in November 2015

The supply of clean, potable water is one of the major global challenges of our time and a deciding factor in the fight against global poverty. GF and Caritas are extending their partnership in this area by another four years. Specifically, the Clean Water Foundation of GF will provide Caritas with a further CHF 1 million for the implementation of sustainable drinking water projects.

Second GF Water Technology Summit



Pietro Lori, Head of GF Piping Systems until August 2016, welcoming guests to GF Water Technology Summit

In mid-September 2015 the second GF Water Technology Summit took place in Switzerland. More than 40 water specialists from around the world accepted the invitation from GF Piping Systems, in order to exchange experiences and develop strategies for the future together. At the center of the two-day conference stood the topic "Waste water and reconveyance". Representatives from leading water conveyance companies and innovative start-ups presented the newest strategies and technologies for the reprocessing of waste water.

ABB sustainability award for suppliers



That products, production and processes at GF are equally geared towards sustainability is shown by the reception of the ABB award. GF Automotive was honored with the first Global ABB Supplier Sustainability Award. The award was given to the foundry in Leipzig (Germany), whose operation is orientated towards the conservation of resources, low emissions, and its employees, setting new standards in the ABB supply chain.

Award for future-oriented casting solutions



Dr. Martin Stehle (right), Sales Director at GF Automotive in Singen (Germany), receives the Newcast Award from the Bundesverband der Deutschen Gießerei-Industrie (BDG)

The first prize in the category "Best Substitution of another Production Process" was won by GF Automotive with a console for a truck cabin suspension at the Newcast Award 2015. The expert jury rewarded the iron sand-casted component, which is 13% lighter compared to its iron-forged predecessor. At the award ceremony, Dr. Martin Stehle, Sales Director at GF Automotive in Singen, proudly explained: "We really appreciate this award. As a result of the collaboration of the whole team we were able to show that products like this are the future of castings."

Awarded for lightweight design again



For the third consecutive time GF Automotive in Altenmarkt has received the prestigious IMA Award from the International Magnesium Association. The foundry convinced the jury in the category "casting-component design" with the magnesium seat frame for the Mercedes SLK. The product, which is cast in one piece, is about 30% lighter than preceding models and hence weighs about the same as a comparable carbon construction.

Top Corporation, top products: awards for GF in China



At the CIMT 2015, Asia's largest trade fair for machine tools, GF Machining Solutions Beijing (China) received two awards: the company was named one of the top 30 machine-manufacturing companies in China, and the high-speed milling machine Mikron HEM 700U was named as one of the top 20 most innovative products.

Sustainable Business Management

GF reached profitability levels in the 2015 business year not seen since 2006. The 2011–2015 strategy targets published in early 2011 were all met. Key factors were the company's expansion of its global presence and the reduction of its dependence on the economic cycles.

Owing to the Swiss franc's sharp appreciation in January 2015, sales decreased by 4% to CHF 3 640 million. Nevertheless, the operating result (EBIT) rose to CHF 296 million, up 8% compared to the previous year. Adjusted for one-off effects, the EBIT stood at CHF 294 million, resulting in an EBIT margin (ROS) of 8.1%. The strategy objective of 8% was therefore exceeded. The return on invested capital (ROIC) increased to 18.9%, well inside the strategy objective range of 16% to 20%. Total net profit amounted to CHF 198 million and free cash flow rose to CHF 190 million, which equates to an increase of 73%.

Sustainable growth 2011–2015

GF has continuously improved its profitability over the last five years. While the Corporation reduced its dependence on Europe to less than 60% of its turnover, the share of GF Piping Systems has increased to 40% of the total turnover. In addition, GF Automotive focused on its most promising technologies and GF Machining Solutions moved towards less cyclical sectors.

Strategy 2020 and objectives

The 2020 strategy calls for profitable growth within all three divisions by leveraging the successful path of the last five years and by adding significant novelties to its offering as well as acting on its global footprint. By 2020, the Corporation aims to achieve a turnover in the range of CHF 4.5 to CHF 5.0 billion (at constant exchange rates) for an average growth of 3% to 5% per year, whilst the targets for profitability levels are 18% to 22% for the ROIC and 8% to 9% for the EBIT margin. The target for earnings per share is well above CHF 50, compared to an average of CHF 40 in the past five years.

In order to achieve these goals, GF will firstly continue to optimize productivity in Europe. At the same time, the Corporation will keep expanding its activities in the growth markets of Asia and America, reinforced through selected acquisitions and joint ventures. The aim is to generate more than 50% of its global turnover in those two regions and thus better balance its geographical sales mix.

Secondly, all three divisions will shift their portfolios towards higher margin businesses. GF Piping Systems plans to increase the share of higher-end products like sensors, valves, and automation technology as well as develop the promising service business. GF Automotive will make further investments in its value chain, as customers are increasingly calling for ready-to-mount components. The division also intends to enlarge the scope of its non-automotive businesses. GF Machining Solutions will continue strengthening its presence in less cyclical sectors such as medtech, aerospace, and ICT.

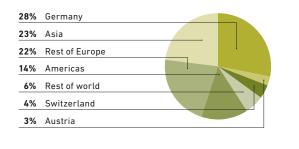
Thirdly, GF will continue to boost its competencies in sales through investments in training for the sales organization and also speed up the pace of innovation.

Global market presence

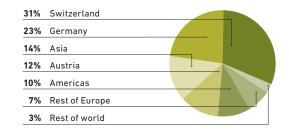
Asian countries, and in particular China, remain the strongest growth markets for GF. The share of total turnover from this region continued to rise in 2015, amounting to 23% (2014: 21%). Germany was by far the largest market in the year under review, with a share of 28% of total turnover (2014: 29%). The share of turnover for all companies in Europe was 57% (2014: 59%). The number of employees in Asia continued to grow due to the rising global presence of GF: At 25%, this market region has the highest number of employees, followed by Germany at 23% and Switzerland at 18%.

Sales 2015 by region (in %)

100% = CHF 3.64 billion



Gross value added 2015 by region (in %) 100% = CHF 1.35 billion



Investments

Targeted investments are essential for a company such as GF to guarantee competitiveness and long-term growth. Investments in property, plant, and equipment in 2015 totaled CHF 167 million, of which CHF 80 million (48%) went to GF Automotive and CHF 46 million (28%) to GF Piping Systems. The total amount of investment planned for 2016 will be at the same level. During the years 2014–2016, GF invested in total EUR 59 million in a cutting-edge production line at the Singen location in Germany. This facility will provide a big boost to the efficiency and competitiveness of the largest foundry of GF Automotive.

Outlook 2016

The economic environment remains demanding and volatile. Nevertheless, the momentum observed during the second half of 2015 is positive in markets in which GF operates. The backlog of both GF Automotive and GF Machining Solutions stands at high levels. The secular trends underpinning all three divisions of GF remain positive and their well-balanced geographical presence should foster profitable growth as well as a better stability of earnings. The outlook in our markets in China remains quite stable despite the current uncertainties. The positive momentum continued in the first half of 2016. The markets remain volatile and uneven. Assuming that the macroeconomic uncertainties do not have a significant impact on client demand, GF expects a result in 2016 in line with the goals of Strategy 2020.

Five-year overview Corporation CHF million

⁼ million					
	2015	2014	2013	2012	2011
Order intake	3 662	3 836	3 795	3 691	3 734
Sales	3 640	3 795	3 766	3 720	3 638
EBITDA	422	399	380	351	370
EBIT	296	274	251	222	235
Net profit	198	195	145	130	168
Free cash flow before acquisitions/divestitures	190	110	174	99	103
Return on sales (EBIT margin) %	8.1	7.2	6.7	6.0	6.5
Return on sales (EBIT margin) before one-off effects %	8.1	7.2	6.8	5.9	6.4
Return on invested capital (ROIC) %	18.9	17.9	16.7	15.7	13.3
Net debt	238	354	352	334	294
Equity	1 1 3 0	1 104	978	979	1 223

Challenges and Strategy

Sustainability is one of the main pillars of the GF business model. With its products, GF helps to safeguard water supply, reduce emissions, and improve energy efficiency.

The challenge of water management

Where there is water, there is life, which is why water is key in all aspects of sustainable development. Providing access to clean drinking water is a task that poses a significant challenge to humankind. In 2015, 663 million people, i.e. one in nine, still lack improved drinking water sources.

GF Piping Systems is working on resource-saving solutions for the supply, treatment, and distribution of water and is helping to ensure the efficient use of the valuable resource. At the same time, an appropriate range of products are being used to make energy savings. Energy consumption can be reduced by means of an appropriate design, suitable material composition, correct dimensioning and by ensuring that the individual system components can be controlled as per client needs. In turn, this also means lower costs for clients.

It's not just ensuring a problem-free water supply that is proving a huge challenge worldwide, drinking water must also be clean! Hygiene requirements are becoming more stringent every day. As a result, GF Piping Systems employs modern, environmentally friendly disinfection technology in large public buildings, such as hospitals, schools, and sports facilities, to ensure a faultless water supply. The focus in the future will also be placed on ensuring gentle water treatment and secure distribution without any leakages or contamination. On the basis of extensive LCAs (Life Cycle Assessments), it has been proven, for example, that plastic piping systems have a significantly lower impact on the environment when used for water treatment and distribution than traditional materials. The simple fact that users have access to important information and tools for using these systems ensures that resource-saving technologies can be used in a worthwhile manner. As part of a new strategy cycle, a new business unit has been created, named "Services", which is dedicated to products, systems and how to use them, and provides the relevant tools to do so. We create clear added value for our clients by providing them with support and sustainable solutions.

The challenge of climate change

Never in the past have so many cars been sold as in the present day. In China alone, there are currently over 140 million cars and commercial vehicles with 300 million more vehicles forecast to be sold by 2050. Due to the anticipated impact on the environment that this growth will have, a high level of expectations are being placed on manufacturers. As a result, CO_2 emission limits will be significantly reduced in Europe, the US, and China by 2030. This means that manufacturers who want to continue to successfully sell vehicles will have to further reduce fuel consumption. In order to achieve this aim, weight-saving measures, i.e. using lightweight components, will play an increasingly important role in car manufacturing.

GF Automotive is thus employing its entire development expertise in attempting to create the lightweight car of the future. It is developing new and optimally suited materials and almost every component is being checked to see if its weight can be reduced. By focusing on bionic design, GF Automotive is looking to nature as an example and is finding the most lightweight and at the same time robust designs. GF Automotive is developing state-ofthe-art production methods and in doing so is constantly ensuring that its solutions have the highest level of functional integration. The most successful projects have resulted in casting solutions that are lighter and more costeffective and thus provide clients with twice the value. A single cast iron part, for example, can replace ten steel sheet metal parts. This not only streamlines the production process but also reduces vehicle weight considerably, as casting is 40% lighter in comparison to other production methods.

By using lighter components in vehicles, we are setting in motion a chain reaction of reduction, as every component that is reduced in weight results in the reduction of the weight of the whole vehicle. A lightweight vehicle uses less fuel, which means lower CO_2 emissions. This has significant impacts, for example, if the parts in a VW Golf weigh 2.82 kg less per vehicle, this has a dramatic positive influence on lowering the CO_2 emissions of the automobiles.

GF Automotive will also push on with producing lightweight vehicles in the future, in keeping with the maxim of "Passion for your Lighter Future". The division is thus focusing on ready-to-install solutions and becoming involved in the development of new vehicles at an earlier stage. In addition to this, alternative drives and the use of electric-powered vehicles will have a considerable impact on the sector in the coming years. For this reason, collaborations have already been established with clients to work together on developing components for electric vehicles.

The challenge of energy consumption

The sustainable and efficient use of energy presents a wide range of challenges. Energy savings and the targeted use of energy are two of the main factors for ensuring a sustainable energy supply in the future. The main strategic approaches in this sense are the monitoring of energy consumption, the use of energy-saving machines, products and solutions as well as the use of renewable energy.

GF Machining Solutions is working on developing solutions that allow clients to continuously reduce energy consumption in machines used to manufacture parts. Standard energy management solutions that allow systems to be completely shut down during idle periods and auxiliary equipment to be switched on and used when necessary are just some of the developments made to ensure a drop in energy consumption.



Compliance and Governance

As an international industrial group, GF is at home in a range of sectors and countries. Wherever we operate, we comply with the applicable laws and regulations. We firmly believe that sustainable and long-term success is based on legally and ethically impeccable conduct.

An important component of the Corporate strategy are the five values of GF. They shape day-to-day interactions of the employees and are key in dealing with clients and partners. At the same time, GF has set own standards for itself regarding to good governance based on the highest standards for ethical conduct and integrity. These standards are defined in the Code of Conduct, which is an important basis of our corporate culture. The Code of Conduct is published in 16 languages and is binding for employees in all GF divisions and at all locations.

Compliance with the applicable laws and guidelines worldwide as well as with business ethics standards is monitored by Internal Auditing and the Corporate Compliance Officer (CCO). The CCO reports to the General Counsel or – where necessary – directly to the CEO. The CCO is also a member of the Risk Council, which ensures that the subject of risk management is accorded appropriate importance within the company.

Training is carried out under the direction of the CCO at the Corporate companies by means of e-learning or in person. The Executive Committee determines the respective focus topics together with the CCO. A range of internal compliance training sessions were held in 2015, including:

- an e-learning program on anticorruption for about 600 employees.
- an e-learning program on competition law and cartel law for about 560 employees.
- on-site training at newly acquired companies in the Middle East, Turkey, and China, and for specific employees with compliance roles.

A total of 6 502 employees have received compliance training since it was introduced in 2011. The training is intended to be repeated every three years.

To further reinforce the compliance function in the company and give due consideration to the strong presence in China in particular, the following measures were also implemented in 2015:

- Consistent implementation of the "GF Compliance Agreement for Intermediaries" as a guideline for GF's business partners who act on behalf of or in the interests of GF Companies as well as the continuation of specific compliance measures for intermediaries in China;
- Development of a web-based system to avoid conducting business with sanctioned organizations and individuals;
- Introduction of a "Compliance Agents" function to identify and assess risks, carry out internal controls, and identify and implement new measures.

A whistle-blowing program enables all employees to report any breaches of legislation or guidelines anonymously to their superiors, Internal Auditing, or the CCO. Proven breaches are subject to rigorous sanctions.

Corporate Governance

The Board of Directors and the Executive Committee of GF attach great importance to good corporate governance. In the interests of shareholders, customers, business partners, and employees, the company, which is organized in accordance with Swiss law, fulfills all obligations under the guidelines of the Swiss Stock Exchange with regard to information on corporate governance. The implementation and ongoing improvement of the corporate governance principles ensure the necessary level of transparency to enable investors to judge the quality of the company at all times.

Management Bodies

The Board of Directors and Executive Committee are the highest management bodies. The Board of Directors is responsible for monitoring the management of the company and for determining its strategic direction and fi-

Our values

In 2010, the Executive Committee defined the core values of GF that are shared throughout the Corporation. These examples demonstrate how GF employees worldwide are living the five values and spell out what they mean to them.

We put customers first



"It's always a challenge to find a solution that meets all of the customer's needs. But this is exactly what makes it so exciting for me."

Sabine Tunzini Head of Material and Process Development GF Automotive, Schaffhausen (Switzerland)

We do what we say



"Our customers can only be satisfied if we keep our promises and meet our deadlines. Especially in the production field it's important that one can rely on each other."

Ron Smith Process Technician GF Piping Systems, Dallas (USA)

We act fast



"In this day and age we have to find solutions rapidly. That's what gives us a distinct competitive edge."

Jessica Shen Export Specialist, GF Piping Systems, Shanghai (China)

We respect people



"Carefully listening to others is a way of showing people that you respect them. That is the basic prerequisite for successful cooperation."

Rino Infantino Technical Service Specialist GF Machining Solutions, Charlotte (USA)

We reward performance



"Giving employees individual support, advancement and recognition is more important than money alone. During my studies I learned at GF how extremely valuable this is."

Marius Chylka HR Development Employee GF Automotive, Werdohl (Germany)

nancial and accounting policies. The three standing Board Committees (Audit Committee, Nomination Committee, Compensation Committee) prepare the business of the Board of Directors as a whole. Where required, temporary committees can also be formed. The Executive Committee addresses all issues of relevance to the company, takes decisions within its remit, and submits proposals to the Board of Directors. The Chief Executive Officer and the Heads of Corporate Development and Corporate Finance & Controlling make up the Corporate Center and also support the Board of Directors in meeting its responsibilities.

Sustainability Structure

The Executive Committee bears ultimate responsibility for sustainability – this is a strong, clear statement by the company. The Sustainability Council, which comprises representatives from Human Resources, Sustainability, Investor Relations, and Communications, plans the further development of sustainability management. Together with the Executive Committee, the Council sets the sustainability targets for the three divisions as well as the 121 Group companies. Progress is monitored every six months by the Executive Committee.

Review Sustainability Targets 2011–2015

At GF, sustainability targets are defined in alignment with the corporate strategy for a period of five years. This table provides an overview of the key goals and their degree of achievement in 2015 as well as in the strategy cycle 2011 to 2015.

Important key figures improved

GF's economic performance was encouragingly positive in recent years: despite the strong appreciation of the Swiss franc in 2015, the company was able to achieve its strategic targets in full. At the same time, the company managed to significantly improve important KPIs such as increasing energy efficiency or reducing the accident rate. By contrast, the five-year goals for reducing CO₂ emissions and waste volumes in production couldn't fully be achieved yet.

Continuous monitoring

The basis for achieving the goals is the consistent adherence to high company standards. This is reflected in both the cross-divisional and the transnational establishment of management systems. This ensures continuous monitoring of processes, performance, and results. At GF, all production facilities are certified in accordance with OHSAS 18001 (Occupational Health and Safety) while the majority are certified according to ISO 9001 (Quality Management), and ISO 14001 (Environmental Management). Energy-intensive production sites must also be certified in accordance with ISO 50001 (Energy Management). Currently, these are eight locations.

~8%

EBIT margin

16-20%

Return on invested capital

Growth:

Investments in growth markets

10%

Reduction in waste volumes in production

20% Reduction in CO, emissions from production

10% Increase in energy efficiency in production

10% Reduction in the accident rate

10% **Reduction** in the absence rate

100%

Introduce 100% management system for occupational health and safety

ECONOMIC TARGETS

ECOLOGICAL TARGETS

SOCIAL TARGETS

16 GF Sustainability Report 2015 Review Sustainability Targets 2011-2015

Status as at 31 Dezember 2015. The base for the calculation of target achievement is the average of the years 2007–2009.

- **+++** Target achieved
- **★ ↓** Long-term target, in plan
- Target not achieved yet

	Results 2015		Results 2011–2015
+++	From 7.2% to 8.1% in 2015. The abolishment of the peg of CHF 1.20 Swiss francs per euro had a negative impact on sales and EBIT. All three divisions achieved their goals as defined in the strategy in the year under review.	***	The EBIT margin increased in the strategy period from 6.5% in 2011 to 8.1% in 2015. The 8% EBIT margin target defined in the 2011–2015 Strategy was achieved in the year under review.
+++	At 18.9%, the return on invested capital (ROIC) is one percentage point above the previous year's level (17.9%). All three divisions contributed significantly to value generation and achieved returns twice as high as the cost of capital (WACC).	+++	Between 2011 and 2015, the return on invested capital rose continuously from 13.3% to 18.9%. In each year, it was significantly higher than the corresponding capital costs.
+++	GF has successfully increased its presence in Asia and America. GF Automotive has started a joint venture with machining specialist Linamar; GF Machining Solutions has entered into the 3D printing business through its strategic partnership with EOS.	+++	Measured against 2010, dependency on sales in Europe has been reduced gradually from 69% to 57%. At the same time, Asia's share in sales increased by 5 percentage points to 23% and that of America by 3 percentage points to 14% through investments in growth markets.
+	Waste volumes and hazardous waste were at a level comparable to the previous year.	+	Total waste volumes both in 2015 and in the base year 2010 were 321 000 tons. The target was therefore not achieved.
+++	CO ₂ emissions were significantly reduced. The substitution of oil with natural gas and electricity contributed to the reduction in CO ₂ emissions.	+	Over the past five years, CO_2 emissions have been cut from 738 000 tons to 592 000 tons. However, the target of a 20% reduction was not achieved.
+++	Energy efficiency in production could be further increased in 2015. Energy-efficient machines as well as demand-based control systems contributed to the rise in efficiency.	+++	The target of improving energy efficiency by 10% based on production volumes was exceeded considerably over the past five years, reaching 47%, through targeted investments into energy-efficient systems.
+++	The accident rate was further reduced in 2015. The global establishment of safety standards as well as the implementation of targeted awareness campaigns and training contributed to this.	***	The accident rate was continuously reduced over the reporting period, but particularly in 2013 and 2014. This was due to the comprehensive introduction of the OHSAS standard as well as targeted safety campaigns.
+	The absence rate in 2015 remained at around the same level as the previous years.	***	Starting from 2010 as a basis, the absence rate has been reduced by means of targeted measures, from 140 000 days in 2010 to 124 100 in 2015. The goal was therefore clearly achieved.
+++	As per 31 December 2015 all production facilities have been certified. Newly founded or acquired production facilities must obtain OHSAS 18001 certification after three years at the latest.	+++	By the end of 2015 the certification of all productions plants according to OHSAS 18001 was achieved.

Sustainability Targets 2020

The new sustainability targets form an integral part of the Strategy 2020. Set by the Executive Committee every five years, they act as guidelines for the implementation of central environmental and social measures in the companies.

Focus on the essential

As an international group with operations in more than 30 countries, GF strives to embed the issue of sustainability in all its companies. The in-depth examination of the topics that are essential to GF forms the foundation of a common sustainability understanding: whether it is resource-friendly and environmentally sound products, efficient production processes, or a safe and employeefriendly working environment - GF employees around the world are committed to achieving the common targets in their work and specialist areas. The following figure shows what GF is aiming to achieve by 2020 in the areas of procurement and logistics, people and safety, and environment and energy as well as products and innovations:

PROCUREMENT

PEOPLE AND SAFETY

ENVIRONMENT AND ENERGY

PRODUCTS

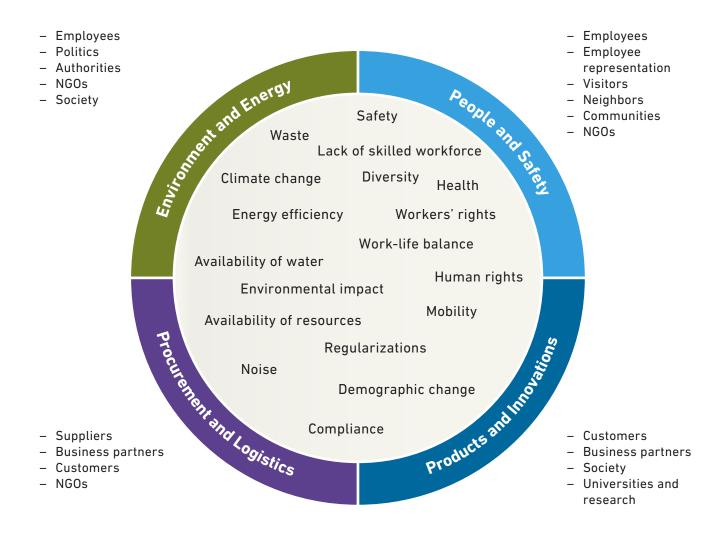
Modules and targets Procurement AND LOGISTICS GF Suppliers demonstrably comply with GF's Supplier Code for eco-friendly and socially responsible supply. Logistics GF optimizes its logistics with regard to energy consumption, emissions, and packaging. Accidents at Work GF strives to reduce its severe accidents to zero and to reduce the accident rate by at least 20% in every division by end of 2020. Safety Audits GF regularly conducts cross site safety audits in order to constantly improve the safety culture. Employer Responsibility GF strives to be a most attractive employer to attract talents, to retain our performing employees, and to develop our workforce. Furthermore, GF aims to stay a respectful and socially responsible employer. Absences GF strives to lower the absence rate by implementing supportive measures. Energy GF production companies actively apply energy efficiency measures and define local targets in order to realize the corporate goal of increasing the energy efficiency by 10% in every division by end of 2020. GF strives to reduce its CO₂ emission from production by at least 10% in every division by end of 2020. Materials and Waste GF strives to reduce its non-recycled waste from production by at least 10% by weight in every division by end of 2020. Water GF strives to reduce its fresh water consumption in water-scarce and stressed areas by at least 10% by volume in every division by end of 2020. **Product Responsibility** GF products support the customer in saving energy and reducing CO₂ emissions during the use of products. **AND INNOVATIONS** Ecodesian

GF products are optimized with regard to their environmental friendliness, resource efficiency, and durability.

 All key suppliers have to sign the GF Supplier Code. 	The base for the calculation of target achievement is the average of the years 2011–2014.		
 Integrate sustainability aspects systematically in supplier audits. At least ten audits focused on sustainability are carried out every year per Division. 			
 Systematically measure and analyze key transport and environmental figures together with the most important transport service providers in Europe Define and implement improvement measures together with transport service providers Reduce GF product deliveries by air freight by 20% worldwide 			
 Zero severe accidents Reduce accident rate by 20% All companies comply with GF safety standards or above. 			
 Cross site safety audits are performed per production plant and warehouse once a year at least. 			
 Be recognized in our industry as an attractive employer Fill 70% of vacant leadership positions with internal candidates Take actions to increase and promote diversity relative to gender, age and native origin 			
 Reduce absence rate by 10% across the organization 			
 Increase energy efficiency by 10% 			
– Reduce CO_2 emissions by 10%			
 Reduce non-recycled waste by 10% 			
 Reduce fresh water consumption in water-scarce and stressed areas by 10% 			
 GF provides CO₂-efficient and safe products to the customer. 			
 Systematic introduction of Ecodesign measures in product development in order to promote energy- and resource-efficient products Each division monitors its environmentally friendly products which allow reduced energy consumption and/or CO₂ emissions. GF Piping Systems optimizes its products regarding their environmental friendliness, resource-efficiency and durability. GF Automotive focuses on Bionic Design and lightweight construction. GF Machining Solutions joins the Blue Competence Initiative and reduces the average energy consumption by 15% for milling machines and by 20% for EDM machines. 			

Acting sustainably together

GF maintains a continuous dialogue with its internal and external stakeholders, enabling key issues to be recognized early and addressed actively. This exchange is promoted by means of a wide range of activities and measures. During the first half of 2017, GF will conduct an external stakeholder dialogue in order to further systematize sustainability issues that are material to the company.



Employees

GF has set itself the goal of being an attractive employer. Targeted on-the-job support and training are just as important in achieving this goal as a continuous flow of transparent information. With this in mind, a new Corporation-wide intranet site was launched in November 2015. In addition, the employee magazine Globe, which is aimed at the 14 400 employees, is published quarterly in seven languages. Globe was again recognized as the best employee magazine in Switzerland in 2015. The communications and information tools are supplemented by a range of internal training (on seven habits, compliance, etc.), workshops, and events. Employees are surveyed regularly as regards their satisfaction, including divisionand location-based surveys. GF came first in the Industry category and tenth among the 500 largest Swiss employers in the 2015 Best Recruiter study.

Employee representation

Employee representatives in both Switzerland and Europe meet regularly and exchange views with the Executive Committee and the Head of Human Resources. Following the Swiss franc shock, the constructive partnership enabled an increase in working hours to be implemented quickly at all Swiss locations – and then reversed again at the end of 2015.

Neighbors, local communities, and the public

True to its fundamental values, GF supports and promotes cultural and social programs at its various locations, as well as activities that contribute to the common good. In 2015, around CHF 2 million was spent at the Corporation level on social involvement activities. In addition to this, some 30 GF corporate subsidiaries support local activities, making substantial contributions. Numerous open days were also held again in 2015 to maintain contact with the public and neighbors. For major construction work, such as building the new PL2 production line in Singen, Germany, local communities and neighbors are actively informed and involved.

Customers

Lasting customer loyalty is created by GF taking part in trade fairs worldwide, through in-house events (such as GF Piping Systems' Water Technology Summit or GF Machining Solutions' Solutions Days) as well as through training programs and on-site training sessions developed specially for customers. These events also ensure continuous development of products and their correct application. Some 40 Centers of Competence (CoCs) worldwide offer customers the opportunity to examine and test new technologies and improved products onsite. In addition, targeted workshops on sustainability are held with customers from key market segments (such as the automotive industry) in order to work together on the products of tomorrow. These specific working groups are complemented by periodic client surveys, which gather important customer opinions in all GF divisions.

Suppliers

Incorporating environmental, social, and compliance standards in its procurement processes is essential for GF. It has therefore engaged in active dialog with suppliers for years. They all have to comply with the Supplier Code, which is based on the most important international standards and conventions. In close cooperation with key logistics partners, GF has also set itself the target of reducing key data with regard to energy consumption, CO₂ emissions, and packaging material.

Associations and NGOs

As an international company with Swiss roots, GF cultivates an ongoing exchange with international and national associations and organizations. From Swiss trade associations (Swissmem) to European initiatives (such as the VDMA's Blue Competence Initiative) to global networks such as the UN Global Compact – GF is involved in many ways. In 2015, for example, GF renewed its partnership with Caritas Switzerland for a further four years. Through its Clean Water foundation, GF is again donating CHF 1 million to Caritas for clean water projects.

Universities and research

GF maintains close contact with universities and research institutes. Cooperation takes place at project level repeatedly, benefiting the economy and science equally. Institutions such as the Federal Institute of Technology (ETH) in Zurich, Empa in Dübendorf, RWTH Aachen, and the Fraunhofer Institute in Stuttgart are all in GFs innovation network.

Financial community

GF is in regular contact with financial analysts. The CEO and CFO also present the company in road shows. Some 60 representatives from major financial institutions attend the conference for financial analysts at the stock exchange in Zurich held in the spring. The highlight for shareholders is the annual general meeting in Schaffhausen. In the year under review, 1 027 shareholders attended to vote on the resolutions of the Board of Directors. The annual and mid-year reports present key information and figures for shareholders, investors, and interested members of the public.

Media/general public

GF publishes media releases on relevant topics regularly and maintains a continuous exchange of information with journalists. All corporate communications, publications, and news are published on the website www.georgfischer.com and archived. Interested media professionals also have the opportunity to interview and hold in-depth discussions with management. Traditional media conferences are supplemented by intense activity on the social media channels Twitter, Facebook, YouTube, LinkedIn, and Xing.

Procurement and Logistics

Ethical conduct and sustainability include long-term, trusting partnerships, the legally compliant conduct of suppliers as well as environmentally friendly transport solutions.

Procurement

Incorporating environmental, social, and compliance standards into its procurement processes is essential for GF. It has therefore long engaged in an active dialog with suppliers. The GF Supplier Code plays a fundamental role in this context. It defines the requirements in terms of sustainable management for all companies supplying goods and services to GF and is applicable worldwide to all suppliers and their employees. GF expects the principles set out in the Code to be implemented in the respective companies. In addition, GF buyers regularly perform inspections and discuss incidents on-site to ensure compliance. The supplier audits that are conducted worldwide examine the quality of services, adherence to environmental and social conditions as well as safety and compliance requirements.

Logistics

Every year within the supply chain, a variety of raw materials and other goods are acquired, and products are transported to sales companies and customers around the globe. Therefore, environmentally friendly transports have a high degree of importance. In close cooperation with key logistics partners, GF has set itself the target of reducing key performance indicators with regard to energy consumption, CO₂ emissions, and packaging material.

In light of this, systematic reduction of air freight is an integral component of GF's sustainability goals. For example, GF Piping Systems implemented a project to switch goods transport for sales companies and clients abroad from air transport to sea transport.



72%

The proportion of sea transport increased from 56% to 72%

"We have done a great deal to reduce the proportion of climate-damaging air transport."

Mr. Jasko, why did GF Piping Systems optimize the global goods transport?

Our goal was to reduce costs, make processes more efficient and also protect the environment. We therefore implemented a range of targeted measures to reduce the proportion of climate-damaging air transport.

What did you do specifically?

One prerequisite for successfully switching from air to sea transport was an analysis of the regular demand from sales companies and major clients abroad. Based on the findings of this analysis, smaller deliveries that were previously sent individually by air freight are now grouped in containers and sent together. Optimal distribution is managed via new distribution centers, for example in Singapore, from where deliveries reach all locations in Asia and Australia.

Are you already seeing results?

The measures we have taken are already showing signs of success. Between 2011 and the end of 2015, we increased the proportion of sea transport from 56% to 72%.

Environment and Energy

The largest impact on the environment in industrial manufacturing operations stems from energy consumption and air emissions. Relevant from an environmental standpoint is further the waste caused by manufacturing activities, while water consumption plays a less significant role. Foundries have the highest environmental impact due to the large quantities of coke, natural gas, and electricity needed for their energy- and material-intensive smelting processes.

Climate and energy

Improving energy efficiency, reducing CO_2 emissions as well as the selection of adequate ressources go hand in hand. Both have a high priority among GF sustainability targets. Key measures on the path to achieving these targets are increasing the energy efficiency of production facilities as well as expanding the waste heat recovery systems. One current option for reducing energy consumption is to use waste heat from engineering plants for heating or generating power. This is being done at many locations, and in particular at GF Automotive's foundry in Singen, where since 2008 the waste heat from the production has also been used by the nearby factory of the company Maggi.

Energy measures // GF implemented a considerable number of measures in recent years in order to achieve its sustainability goals 2015. Because energy consumption has the biggest environmental impact on GF, production processes should be streamlined so as to minimize the consumption of energy and increase energy efficiency. The key measures are described in detail below.

Energy consumption // Sales grew organically by 1% in 2015 compared with the previous year. At the same time, energy consumption increased 1.4% to 6.21 million gigajoules (GJ). This moderate rise was achieved thanks to the coming into production of new energy-efficient molding machines, the upgrading of production plants with energy-efficient actuators, the optimization of heating, the use of waste heat, and the lighting and the installation of free cooling in refrigeration systems. In addition, simple and effective measures, such as a complete shutdown of machines when they are not in use, made a contribution to reducing energy consumption. All told, GF spent more than CHF 127 million on energy in 2015. The 13 largest production sites account for 90% of total energy requirements. Around two thirds of the energy was consumed by the four largest foundries in Singen and Mettmann (Germany) as well as Herzogenburg and Altenmarkt (Austria). By contrast, the 20 production sites with the lowest consumption figures account for less than 3% of overall energy consumption.

GF has set a quantitative goal for improving energy efficiency and would like to increase this goal by another 10% in production by 2020. In the year under review, measures for reducing energy consumption were implemented at all production facilities. In particular, these include the expansion of waste heat recovery, acquisition of energy-efficient equipment and components, and demand-based system controls.

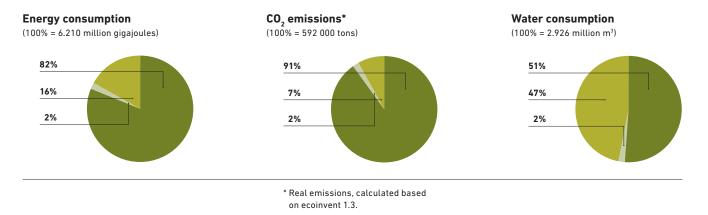
All energy-intensive locations of GF Automotive as well as the two most important locations of GF Piping Systems have modern and integrated energy management systems and are certified to DIN EN ISO 50001. This standard is compatible with certifications to ISO 9001 (quality), ISO 14001 (environment) and OHSAS 18001 (job safety and health).

Energy sources // The most important energy sources at GF are electricity, coke, natural gas, and oil. Coke is used in the foundries for the energy-intensive smelting and carburizing. The main energy source used to keep production processes running is electricity, followed to a lesser extent by natural gas and coke.

Oil is used primarily to heat buildings, supplemented by energy from waste heat recovery and district heating. In 2015, electricity's share of total energy consumption was around 48%, while coke accounted for 30% (31% in 2014). The remainder was covered by natural gas and other energy sources.

Contribution of the divisions to four key environmental indicators

GF Piping Systems 📕 GF Automotive 📕 GF Machining Solutions



Renewable energy and heat recovery // In 2015, GF raised the share of renewable energies and heat recovery in its total energy consumption to 15% (13% in 2014). The increase in the share of eco-electricity and greater proprietary production of hydroelectric power at the Herzogenburg and Traisen (Austria) sites have made a significant contribution. In 2015, around 12% of the electricity requirements were met with hydroelectric power in Traisen (Austria).

Emissions

Carbon dioxide (CO_2) emissions along with methane (CH_4) and other greenhouse gases contribute to climate change. In industrial production these air pollutants result primarily from the supply and use of fossil fuels such as coke, natural gas, and oil. Furthermore, other air pollutants such as nitrogen oxides (NO_x) , sulfur oxides (SO_x) , and volatile organic compounds (VOCs) are also released.

- Direct and indirect emissionen // In the recording and reporting of greenhouse gases, a distinction is drawn between direct (Scope 1) and indirect (Scope 2 and Scope 3) emissions of air pollutants:
- Direct emissions (Scope 1) are created by the company's consumption of fossil fuels such as gas, oil, and coke.
- Indirect emissions (Scope 2) are not created by GF itself, but by the generation of electricity and district heating which are purchased and then consumed at GF plants and sites.
- Indirect emissions (Scope 3) are released through other activities along the value chain, such as business trips and transportation.
- **Greenhouse gas emissions //** Carbon dioxide (CO₂) and methane (CH₄) are among the greenhouse gas emissions

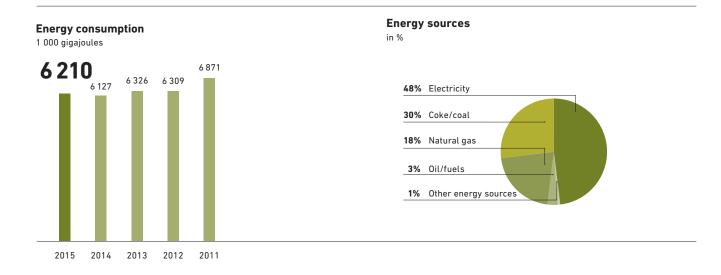
indirectly caused by GF when the company consumes energy. Any measures taken to reduce energy consumption therefore also lower these emissions. The figures reported here have been calculated on the basis of specific emission factors (e.g. ecoinvent data base) that take into account the type of energy source used and the electricity mix in individual countries.

CO₂ // The total CO₂ emissions fell by a modest 0.3% in 2015 compared with the previous year to 592 000 tons. In 2015, direct emissions at production sites (Scope 1) remained unchanged at 252 000 tons of CO₂ (2014: 252 000 tons).

The electric power and district heating bought and used by GF emitted at the producers around 338 000 tons of carbon dioxide (Scope 2) compared with 342 000 tons in 2014. Compared with the Scope 1 and Scope 2 figures, emissions caused by employee business travel (Scope 3) are low. At around 2 000 tons, they accounted for less than 0.5% of total CO_2 emissions. GF is therefore currently focusing on introducing measures to enhance energy efficiency in production.

CH₄ // Approximately 95% of the Group's methane emissions arise from electricity production, with the rest attributable to the burning of fossil fuels at production sites. Compared with the previous year, methane emissions were reduced by 27% in 2015.

Except for the energy consumption, production processes themselves only cause minor emissions of CO_2 and methane. GF's production processes do not release any other greenhouse gases; in particular, our plants do not use any sulfur hexafluoride (SF₆).



Emissions // Approximately 54% of emissions of both nitrogen oxides (NO_x) and sulfur oxides (SO_x) occur at GF during fossil fuel combustion, while electricity generation accounts for around 46%. Changes in these emissions should therefore always be viewed in close conjunction with the overall energy requirements. Emissions of sulfur oxides fell by 24% in 2015, while nitrogen oxide emissions dropped by 22%.

Volatile organic compound (VOC) emissions were caused in approximately equal measure by production processes and energy consumption. These emissions are mainly attributable to the use of cleaning agents, adhesives, and paints. In the year under review, there was a modest increase in VOC emissions compared with the previous year (2015: 170, 2014: 160).

None of GF's production processes emit any substances that damage the ozone layer. Except for tiny quantities in a few laboratories, GF does not use any halogenated hydrocarbons. Such substances are contained in a few closed systems, for example in fire protection or refrigeration systems. However, they do not cause any emissions unless there is an incident or a fire.

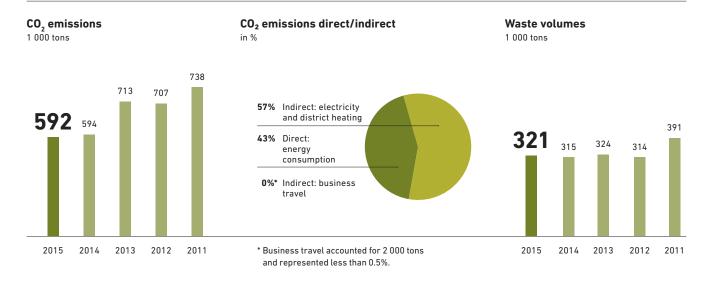
Legal framework // New legal guidelines have been issued at various levels in recent years in order to reduce greenhouse gases. For example, the Mettmann and Singen (Germany) sites have been subject to the European Union's Emissions Trading Registry since 2013. In Switzerland, the CO₂ Act has been in effect since the year 2000. This law aims to achieve, by 2020, a 20% reduction in the country's CO₂ emissions compared with the level of 1990. To achieve this, there has been a CO₂ tax levied on fossil fuels such as oil and natural gas since the beginning of 2008; 2014 and 2015, this tax has been CHF 60 per ton of CO_2 emissions (as of 2016 it is CHF 84 per ton). Because the revenues from this tax are reimbursed to the population and business community, its financial impact on GF is minor.

Waste and recycling

Avoiding waste in the first place or recycling it if it does occur is an effective way to save valuable resources and is therefore a key feature of environmental management at GF. At the same time, this approach reduces the cost of disposal, and fewer raw materials have to be purchased. In addition, the emphasis also lies on reducing waste during production. The wise consumption of resources plays as big a role as the recycling of industrial waste. GF Automotive, for example, uses around 500 000 tons of recycled material in its foundries annually.

GF distinguishes between four categories of waste depending on the type of waste and manner of disposal:

- Normal waste that is recycled
- Normal waste that is landfilled or incinerated
- Hazardous waste that is recycled
- Hazardous waste which is treated or incinerated
- **Closing the circles** // GF's production facilities make the most of the opportunities offered by the recycling economy, channeling waste from production directly back into the manufacturing processes whenever possible. In 2015, GF internally recycled 76% of its waste (2014: 80%). The volume of waste being landfilled or incinerated fell by 3 percentage points on the previous year.



Water

Careful use of water plays an important role in industrial production. GF obtains only 24% of its total water consumption from public supply systems; the remaining 76% comes from GF's own sources and surface waters. This industrial water is used primarily to cool equipment and cast parts. As it is not polluted in the process, its environmental impact is minor. Due to rising production volumes, water consumption in 2015 rose by 6% compared with the previous year.

Waste water // Around one third of the water used at GF becomes wastewater. The other two thirds are used for cooling, evaporate, or are returned to nature unpolluted. The wastewater is treated at public wastewater treatment plants. The total amount of wastewater produced increased by 7% compared with the previous year.

Due to the diverse characteristics of the divisions and locations a uniform reference base is currently not in place. A respective development project will be implemented in 2017.

Environmental costs

Spending on energy fell by 5% to CHF 127 million in 2015. Water costs remained unchanged at CHF 3 million. Due to high recycling rates, waste disposal costs decreased by 22%.

Incidents and regulatory compliance

Compliance with environment regulations is checked using the Sustainability Information System (SIS). This analysis also incorporates the number of incidents that have an impact outside of GF production facilities and complaints from residents or other interested parties. No incidents were reported in 2015.

Legal conformity

This self-declaration confirms that relevant legal requirements regarding environment and health and safety have been monitored and respected. In the 2015 reporting year, no cases of non-compliance with legal requirements regarding the environment and health and safety were reported or otherwise detected.

Smart solutions for increased efficiency

40000 b

kg of CO₂ is the saving achieved by customers each year with a new machine

400

companies have joined the "Blue Competence" initiative to date

> % less power consumption is the target for EDM machines made by GF Machining Solutions

20



As the Head of Development Projects, Gary Cooper of GF Machining Solutions in Nidau (Switzerland) worked in close collaboration with other R&D teams on increasing the energy efficiency of milling and EDM machines.



The high-speed milling machines by GF Machining Solutions use less energy without having to forego high precision

As a member of the European initiative "Blue Competence Machine Tools", GF Machining Solutions guarantees customers not only sustainable production but also efficient products. For this reason, the division continuously works to develop new solutions aimed at reducing the machines' power consumption, thereby helping customers to improve their own energy and CO₂ footprint.



Sustainable development in the sector // In view of increasingly ambitious international targets for climate protection as well as rising energy costs, energy efficiency is becoming more and more important in the production industry – both in ecological and economic terms. This is why, as a leading worldwide provider of machine tools and automation solutions for the production of precision parts, molds, and dies, GF Machining Solutions has joined the initiative "Blue Competence Machine Tools". Within the framework of this initiative, European machine tool manufacturers have joined forces to promote sustainable development in their sector.

"Transparency for customers"



Interview with Pascal Boillat, Head of GF Machining Solutions

Mr. Boillat, how important are energy-efficient machine tools for industry today?

Against the backdrop of global climate targets, limited resources and high energy costs, energy efficiency plays a crucial role in production. This is why we offer our customers machine tools, automation solutions, and services that combine technical and technological innovation with sustainability.

Why did GF Machining Solutions join the "Blue Competence" Alliance?

A company wanting to be well-established at a global level has to clearly emphasize its competitive advantages. The "Blue Competence" initiative is the ideal platform for us to communicate what we are capable of in terms of energy efficiency, resource conservation, and CO_2 reduction under a recognized label. The fact that we have committed to meeting the industry's uniform targets as part of the initiative provides us with additional motivation to improve our products and solutions on an ongoing basis.

How do customers benefit from "Blue Competence"?

The initiative's targets clearly enhance transparency for customers. The label creates additional trust.

What other projects is GF Machining Solutions planning in connection with "Blue Competence"?

Our aim is to fit our entire range of milling and EDM machines with energy-saving modules. In addition to individual machines, however, we are increasingly starting to look at processes and automation solutions in production, too. Here, too, we can help our customers save energy and reduce emissions. The main aim of "Blue Competence" is to develop environment-friendly products and solutions to help customers save energy costs and improve their CO₂ footprint. To this effect, GF Machining Solutions has launched a project that sets out to further improve the energy efficiency of milling and EDM machines. "We've optimized our machines where we saw the greatest energy-saving potential", explains Gary Cooper, Head of Development Projects with GF Machining Solutions in Nidau, Switzerland. In collaboration with all departments – from Research & Development to Production and Commissioning – his team examined the energy-wasting components in the machines and worked on the relevant solutions.



An optimized jet for extracting the oil-air mixture in the tool spindle uses around 57% less compressed air than before

As much as four tons less CO₂ // One of these solutions is the new Econowatt module, which enables an entirely new and flexible standby mode in milling and EDM machines. The result: the machines consume virtually no power at all when idling. If the machine is needed again for production, an automatic warm-up program ensures that it is ready for operation at a time that can be programmed in advance. Users can choose between three different standby levels, depending on how much energy they want to save and what degree of precision they require. The earlier the warm-up starts, the greater the accuracy is right from the start. "This allows the customer to save energy flexibly without having to forego high precision", says Gary Cooper proudly. BLUECOMPETENCE Alliance Member

Partner of the Engineering Industry Sustainability Initiative

The "Blue Competence" initiative

The "Blue Competence Machine Tools" initiative aims to contribute significantly to meeting the European Union's ambitious climate and energy targets. The project is already highly successful. Over 400 companies from the European machine tool industry have joined the initiative since 2012, as well as eight national associations. Together, the member companies have committed to concrete and verifiable sustainability targets. Every member must fulfill uniform criteria. These include clearly defined sustainability requirements and measures relating to both products and staff. When developing sustainable machines, for example, the entire life cycle of the equipment has to be taken into account. In addition to resource-friendly operation, targets include concepts for clean disposal as well. Moreover, members advise their customers on how to run the machines in an energyefficient manner.

"Sustainable improvement of our products is an ongoing process."

Benoit Defrasne, Head of Milling Marketing & Product Management, GF Machining Solutions

"We use frequency-controlled pumps to provide the cooling lubricants for milling: they ensure the optimum operating point, thereby saving energy", Cooper further explains. In addition, an optimized jet for extracting the oil-air mixture in the tool spindle uses around 57% less compressed air than before.

GF Machining Solutions has now also introduced LED bulbs for the workspace lighting and for the new signal lamps in the machines. These new modules enable a GF Machining Solutions milling machine to save up to four tons of CO, per year when operated continuously. "The demand for energy-efficient machines has increased significantly in the last few years," says Benoit Defrasne, Head of Milling Marketing & Product Management with GF Machining Solutions in Nidau (Switzerland). For Defrasne, as a sales specialist, the introduction of the machines with the "Blue Competence" label is a clear competitive advantage. In European industrial companies in particular, energy efficiency in machines is a key issue, he says, as sustainability is becoming an increasing concern, and the statutory requirements with regard to CO_2 reduction are becoming more and more rigorous. "Worldwide, too, energy-saving machines are progressively more in demand in view of scarce resources and high energy prices", says Defrasne.



All high-precision series produced by GF Machining Solutions are equipped with the latest environmental-friendly technologies

Not only high-speed milling machines but also EDM machines help saving energy: new spark generators with resonance circuit enable significant savings. By this means GF Machining Solutions offers the most energy-efficient architecture currently available on the market.

The new energy-saving technologies are already applied to all high-precision series produced by GF Machining Solutions. All other machine series and newly developed products will likewise be fitted with the innovative solutions soon. All GF Machining Solutions products will thereby guarantee the very highest level of energy efficiency – at no extra cost to the customer: all the measures are applied on a price-neutral basis. The division will continue to optimize the sustainability of its products. The aim is to achieve a reduction in average energy consumption of 15% in the milling machines and 20% in the EDM machines. "Blue Competence provides the ideal framework for us to meet our own objective, which is to supply our customers with energy-saving and resource-friendly products", says Defrasne.

People and Safety

Motivated employees are the basis of success for a company – today and in the future. The declared goal of GF is to offer employees attractive and interesting jobs. This includes a fair wage and good benefits, along with training and professional development opportunities. GF further places particular emphasis on ensuring that the approximately 14 400 employees work in safe conditions and return home healthy after a day's work.

Diversity and flexibility

As a company that produces in more than 30 countries and has a presence in more than 120, GF experiences every day how valuable the various qualifications and characteristics of its global workforce are. The diversity of cultures, religions, nationalities, genders, and age groups is a valuable source of talent, creativity, and innovation.

GF employed a total of 14 424 people in 2015. In addition, approximately 1 000 people worked as temporary employees or subcontractors for GF. GF assumes direct responsibility for on-the-job safety and health and also guarantees appropriate wages and benefits for these employees. In the year under review, 17.3% (2 491) of employees were women, an increase of 6% compared with 2014. The proportion of women in management at the Corporate companies was 12.4% (76 women). This is an increase of 5% compared with 2014 (74 women).

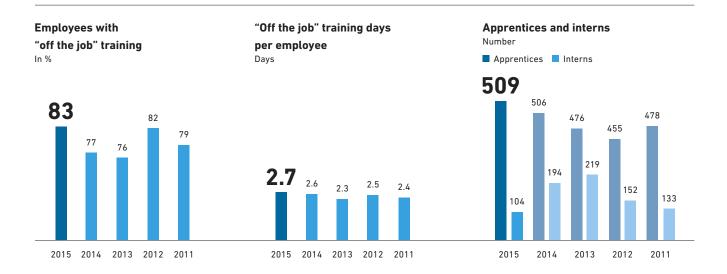
Further measures to promote diversity are indispensable. Additional measures are planned, in particular, to boost the percentage of women among the workforce and in management. A good example for a young and successful female engineer at GF is Maggie Jiang, who has been serving the major client SAIC Volkswagen for more than five years as the Head of Sales of the iron foundry in the Chinese city of Kunshan.

Another example is the initiative "future@work@GF", which has as its goal the development of a more attractive and flexible work model for women and men, enabling them to have a better work-life balance. The idea is not only to promote the balancing of job and family, but also to ensure that current and future employees perceive GF as an attractive employer. Currently, it is possible to work part-time at more than 50% of GF companies; however, the percentage of employees working part-time is



"I really appreciate the wide variety of challenges that I experience in my position at GF Automotive. With a management position in sales, I have the possibility to be the link to our most important customers. In this role I can work on my own skills while also leading and developing a team."

Maggie Jiang Head of Sales Iron Casting, GF Automotive, Kunshan (China)



low at 2.3%. A reason for this is that in work systems with shift work – as is the case for GF Piping Systems and GF Automotive – it is extremely difficult to integrate parttime positions and therefore there is little demand.

In addition, GF has set the goal of offering safe and ergonomic workplaces. The company is continually working in the production facilities to improve the ergonomy of workplaces and to relieve employees having to do particularly heavy work by using robots.

We welcome applications from people with a disability and support their intergration into our workforce. People with disabilities make up about 2% of the total workforce.

Training and professional development

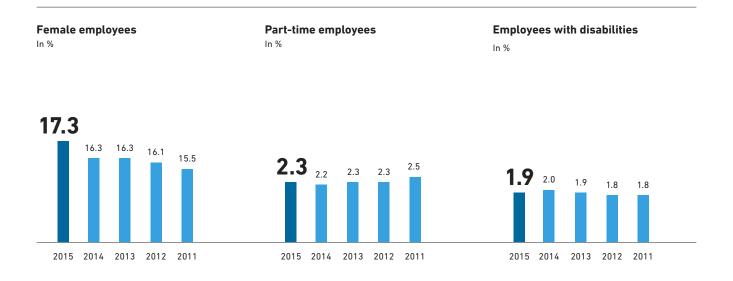
Knowledge and hence the development of employees are essential for a company's sustained success. GF nurtures and accompanies its employees during their entire career through targeted training and professional development activities.

The training and professional development portfolio is designed and implemented by the GF Academy: The GF Academy combines Corporation-wide training and professional development measures and programs for management and employees of all divisions and regions.

Additionally, the divisions have their own training programs. They focus on applied technical education as well as training in the area of occupational health and safety. Additionally, the divisions focus on the implementation of Corporation-wide strategic education and training initiatives that aim to promote social and technical management skills. By doing so, the divisions can provide targeted support to the operations of the business areas. Many of these education and training programs take place in the Klostergut Paradies, the corporate training center in Schlatt (Switzerland). The center has an excellent infrastructure.

Apprenticeships have a long-standing tradition at GF and ensure that the Corporation can draw on a skilled workforce. There is a broad range of training opportunities spanning a variety of technical and commercial professions. Across the entire Corporation, GF trained 509 apprentices in 2015 (506 in 2014). In addition, GF offers graduates an internship after their training, enabling them to gain professional experience. GF also has internal guidelines to ensure that persons who have completed an apprenticeship are given preference for job hiring. In the US, GF is using the Swiss apprenticeship model to offer training positions in all three divisions. Agreements have already been reached with colleges, and professors are also involved. The close cooperation with some States in the US has led to direct governmental support of these initiatives. GF has similar initiatives in mind for China. The goal of all these measures is to make up for the lack of qualified workers by developing the company's own specialists. In addition, GF gains the reputation of being an attractive employer in its local area.

GF Automotive counts on its young professionals program called WiN, which encourages an exchange program for young talents to gain experience in different locations, while also offering job rotation. GF works closely together with various universities and offers students around the world possibilities for an internship as well as for completing their bachelor's or master's work. This especially in areas where sustainable, advanced technologies are developed.



In 2015, the costs for employee education and training accounted for CHF 6 million and reached 83% of employees (CHF 500 per employee).

The education and training program, together with the management development program that has been in place for one year, has created within GF a stable base so that the company has been able to fill 70% of the vacant positions in senior management in 2015 with internal candidates. With this the company reached an important sustainability goal.

Employee satisfaction

Employee retention plays a major role for the ongoing success of the Corporation. To measure the satisfaction and commitment of employees, GF regularly conducts employee surveys. The results and findings are used to design measures for improvement. In 2015, approximately 8 000 people in 41 companies throughout the Corporation (about 55% of the workforce) were surveyed. A measure resulting from these surveys was for example improving the ergonomy of workplaces in production.

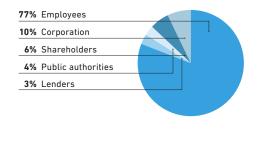
The fluctuation rate (including dismissals and retirement) in 2015 was 9.9% (previous year 11.6%). The number of employees leaving due to dissatisfaction with pay, conditions, the atmosphere at work, or career prospects fell compared with the previous year.

Health and safety in the workplace

The safety and health of all employees, temporary workers and visitors has the highest priority at GF. Given this, one of GF's sustainability goals was to obtain OHSAS (Occupational Health and Safety Assessment Series) 18001 certification for all production sites. This is an important step on the way to establishing a comprehensive culture of occupational safety. As of year-end 2015, all production facilities were certified. Newly founded or acquired production facilities must obtain OHSAS certification within three years at the latest. In addition to certification, the "Zero Risk" work safety initiative has given new momentum to job safety at regular intervals since 2015, while also creating awareness for occupational safety. This initiative was launched in 2015 by GF Automotive, and at the same time safety regulations were heightened. Further events related to occupational safety as well as targeted training courses will be implemented in the coming months to improve workplace safety. Management training courses as well as employee events aim at integrating job safety even more into daily work and ensuring that every employee goes home safe and sound.

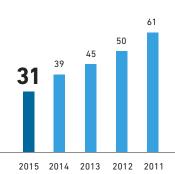
Distribution of the net value added 2015 (in%)

100% = CHF 1.21 billion



Work-related accidents

Accidents per 1 000 employees



Accidents // The across-the-board certification, together with the cross-divisional safety campaigns, had a positive impact on the number of accidents, which fell from 39 per 1 000 employees in 2014 to 31 in 2015. The accident rate for temporary employees was 108 accidents per 1 000 employees. Most accidents happened, as in previous years, in the areas of production and processing.

We were profoundly shocked by a tragic work accident in 2015 in which a young worker from an external construction company died while working on a new production hall in Singen (Germany). He was so badly injured in the accident that he died at the accident site despite the efforts of his colleagues. We express our deepest sympathy and condolences to family members, and we would like to thank all of our colleagues as well as the local first responders who attempted to save his life.

Absence rate // The absence rate remained unchanged compared to the previous year at 3.8%. Per full-time equivalent, this is equal to 8.7 absence days per year. 94% of these absence days were non-work-related. In order to enhance employee motivation to pursue a healthy lifestyle through adequate exercise, proper nutrition, and relaxation, the various GF companies offer a wide range of health promotion activities.

	2015	2014	2013	2012	2011
Employees, total	14 424	14 140	14 066	13 412	13 606
Europe	8 783	8 676	8 548	8 871	9 465
– Thereof Germany	3 382	3 383	3 220	3 351	3 859
– Thereof Switzerland	2 642	2 686	2 539	2 577	2 650
– Thereof Austria	1 830	1 719	1 926	2 059	2 073
 Thereof Rest of Europe 	929	888	863	884	883
Asia	3 502	3 455	3 468	3 2 2 6	3 077
– Thereof China	3 1 3 1	3 085	3 073	2 839	2 688
Americas	1 262	1 259	1 290	1 259	1 011
Rest of world	877	750	760	56	53

Number of employees



GF Training Center Klostergut Paradies



The Iron Library Foundation has the largest private collection of books on the subject of iron

Anchored in the social environment

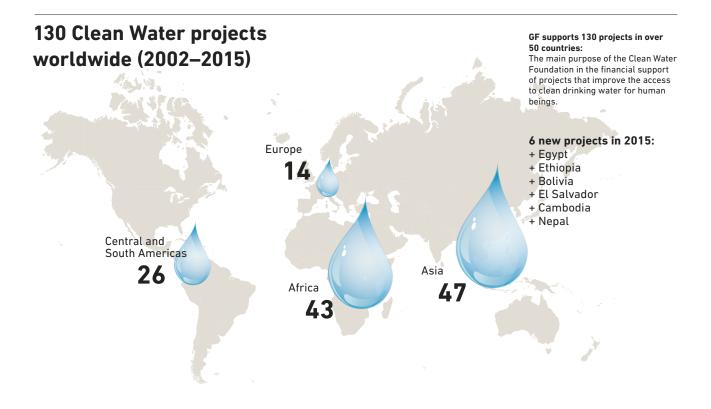
Through its fundamental values and corporate principles, GF is committed to promoting cultural, social, and environmental involvement. To this end, the holding company and Corporate companies are locally involved at their respective locations. To underscore the importance of social responsibility in the Corporation, GF became a member of the UN Global Compact, the world's largest sustainability network for companies and organizations in 2015. Starting 2016, GF will issue a "communication on progress" for the UN Global Compact. In addition, the guidelines for multinational companies of the Organization for Economic Cooperation and Development (OECD) as well as the agreements of the International Labor Organization (ILO) form the basis for a common understanding for social responsibility.

In 2015, around CHF 2 million were spent at Corporation level on social involvement activities.

The biggest contributions in 2015 went to the Klostergut Paradies Foundation, the Iron Library, the Homberger Foundation, and Clean Water, and which are presented in detail below:

Klostergut Paradies Foundation // The Klostergut Paradies Foundation, with the former Clarissan convent as a heritage site, houses not only important collections, but it also serves as a training center for the Group.

- The Iron Library Foundation // The Iron Library Foundation has the largest private collection of books on the subject of iron. Together with the Group archive, it is the center of competence for maintaining the Group's historical and cultural heritage.
- The Homberger Foundation // From its inception in 1927, the Homberger Foundation has borne the name of its founder, the former Honorary Chairman of the Board of Directors and long-standing Managing Director, Ernst Homberger. The foundation provides financial assistance to the children of employees of Georg Fischer AG and its affiliated companies to help them learn a trade or attend a course of further education at polytechnics, universities, or similar institutions. The aim is to provide the beneficiaries with a solid foundation for their subsequent career development. Since 2008, the offer of training bursaries has been available beyond Schaffhausen to all GF Corporate companies in Switzerland.
- Clean Water Foundation // The Board of Directors of Georg Fischer AG founded the Clean Water Foundation in 2002, upon the 200th anniversary of the Corporation's founding. So far, GF has invested more than CHF 9 million in Clean Water projects and with more than 120 projects has helped people in developing countries and areas hit by catastrophes to have a better supply of drinking water over the long run. The foundation is an example of how GF lives its corporate culture.



Some of the projects that GF supported financially and followed closely were:

Social entrepreneur project in Bangladesh

Caritas Switzerland is coordinating a major project to provide people with limited financial means with the know-how, the equipment (kits), and the material (chlorine) to filter polluted surface water and thereby convert it into safe drinking water. The technology to do so was developed by the Geneva-based NGO Antenna. A total of 4 000 families (approximately 20 000 persons) received better access to safe drinking water during the project period. Based on a positive project evaluation, Caritas will continue implementation with the aim of enabling job creation and better access to affordable and safe drinking water.

Water distribution network for Kibakwe (Tanzania)

In cooperation with the communities of Eldagsen (Germany) and Kibakwe (Tanzania), GF funded the construction of a new water distribution network and a solar-powered pump station in a new deep well through the Clean Water Foundation. Every day, about 300 000 liters of drinking water flow down the mountains via six water distribution systems into the spread-out village, providing clean water to the 8 000 inhabitants.

The Foundation Board has already approved the support for six additional water projects for 2016. GF will continue to support the Clean Water Foundation with a significant annual amount of funding, thereby making a significant contribution to improving the supply of drinking water in developing countries.



Martin Neubert, Team Leader in the core shop at the Singen site (Germany), actively engages in discussion with his colleagues once a week regarding safety rules and sources of danger at the workplace.

Fewer accidents thanks to "Zero Risk"

50000 employees are reached by the "Zero Risk" campaign being run by GF Autom

run by GF Automotive

were registered by GF Automotive in the first quarter of 2016 as compared to the previous % fewer accidents were registered by year

> severe accidents is GF's stated goal

"Integrated approach"



Interview with Josef Edbauer, Head of GF Automotive

No severe accidents! This is the stated goal of GF at all its sites. To achieve this, the company relies on the support of all its employees. And in order to raise safety awareness at work, GF Automotive has initiated the campaign "Zero Risk". Posters, films, and exciting activity days draw staff attention to potential sources of danger at the workplace.

Mr. Edbauer, occupational safety has always been a high-profile issue at GF. How does the campaign "Zero Risk" differ from existing activities?

We've always been very active in the area of occupational safety. But "Zero Risk" is the first time we've adopted an integrated approach. We can convey safety-related topics in a more concentrated form by closely dovetailing communication, activities and workshops. The visual style of the campaign is also new: our aim is to attract interest – we want to provoke people without shocking them. I believe we've managed to achieve this very successfully.

How is the GF Automotive division management

supporting the campaign?

The division management has provided strong support for the safety campaign from the outset. We wanted our staff to realize that this issue has top priority. We've emphasized this with a video clip in which all members of the division management and the managing directors at the sites give their own personal statement on occupational safety at GF.

Where will the campaign go from here?

We're very proud of the fact that accident figures have developed so positively. The challenge now will be to maintain this excellent level and ensure that employee awareness remains high on a lasting basis. With this in mind, we are working on a continuation of the campaign and on rewards for achievements at the facilities. Draw attention to potential dangers // Where liquid metal is cast into molds and heavy machinery is moved, there is a particularly high risk of accidents occurring. As the Team Leader in the core shop of the GF Automotive foundry in Singen in Southwest Germany, Martin Neubert is wellaware of this fact. "The risk of burns or bruises is very high here in Singen, of course", he says. For this reason he discusses with his team once a week where potential dangers lie and how accidents can be avoided.

Since October 2015, Neubert has been supported in his work by the campaign "Zero Risk" that uses posters, videos, and exciting events at the GF Automotive sites to raise staff awareness of potential risks at the workplace. The activities are geared towards key topics that are important to occupational safety. The first such topic was eye injuries. Activities were organized in Singen which allowed staff to try out special glasses so they could experience how certain eye injuries and diseases affect vision. In addition, a large walk-in model of an eye was set up and staff members were able to have an eye test and have their intraocular pressure measured.

"Our events go down very well with the staff", says Martin Neubert. Great interest was also shown in activities on the subject of hand injuries, such as exercises with a Parkinson glove, measurements of muscle strength, and touch exercises in a feeling box. This summer there will be further activities on the subject of tripup hazards at the workplace. "I'm always pleased to see how many colleagues join in the activities", says Neubert. An additional source of motivation in Singen is the accident clock. Every team that remains accident-free for 365 days receives the reward of a small party financed by the company. "We weren't expecting the huge incentive



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No accidents at work

Everything is fine before an accident.Everything changes after one. For you, your family and your friends. Don't let it come to that. Protect yourself! Don't take any risks. Look out for yourself – and for your co-workers.

Provoke people without shocking them: one of three posters which are drawing attention to potential risks at the workplace

impact this idea would have", says Neubert. Staff teams are now much more careful to point out potential sources of danger to each other in order to avoid accidents. The success of these activities in Singen is also reflected in the accident statistics. In 2015, the accident rate dropped by as much as 59% as compared to previous years.

Central management and local activities // The campaign "Zero Risk" was started simultaneously at all GF Automotive production sites in Europe: in addition to Singen In addition to communication experts, all safety coordinators at the various sites were involved. The campaign launch received strong support from the division management under Josef Edbauer and the site managing directors.

"The title 'Zero Risk' reflects our vision of no accidents and also calls upon staff not to take risks at work", explains Tina Köhler. The various topics of the campaign were determined in collaboration with the occupational



Within the campaign interesting events have been organized at all GF Automotive facilities. In Singen (Germany), for example, employees could participate in activities on the subject of "hand injuries".

these are Mettmann, Werdohl, and Leipzig in Germany, along with Altenmarkt and Herzogenburg in Austria. The two Chinese sites Suzhou and Kunshan have also been involved in the initiative since January 2016. This means that "Zero Risk" is reaching more than 5 000 staff members at all GF Automotive production sites and is successful – worldwide: in the first quarter of 2016, there were 26% fewer work accidents in the division than during the equivalent period of the previous year.

The "Zero Risk" campaign was developed and organized centrally by an interdisciplinary team led by Tina Köhler, Head of PR and Internal Communication at GF Automotive. safety specialists. There is a focus on each individual topic for two to three months. Striking posters are put up at the sites to draw attention to the current topic. To launch the campaign, employees were shown a film in which all managing directors explain just how important the subject of occupational safety is.

Meanwhile, the various activities such as the life-size eye model in Singen are organized individually at the sites. Activities were of course held there previous to this on the subject of safety. But "Zero Risk" supports existing activities, supplements them and gives them a uniform motto. What's more, there is now a lively exchange of ideas between safety coordinators on the "Zero Risk" team. Tina Köhler's team will be meeting again this summer to decide on the next "Zero Risk" topics. One aspect about the campaign is especially important to Tina Köhler: "This is not just about individual activities", she says. "Our aim is to change the GF Automotive safety culture on a lasting basis."



"The aim of our campaign is to ensure that the subject of safety is always present."

Tina Köhler, Head of PR and Internal Communication, GF Automotive

GF Piping Systems in Malaysia:

Accident-free for more than **1000** days

Occupational safety enjoys top priority not just at GF Automotive but also in the other divisions GF Piping Systems and GF Machining Solutions. The GF Piping Systems production and sales company in Malaysia was particularly successful in 2015: they managed to stay accident-free for 1 000 days! This achievement was celebrated in a big way by the 42 staff members at the site on 29 September 2015.

This success was the result of ongoing awarenessraising and regular training sessions: once a month, all employees at the site near Kuala Lumpur take part in a so-called "Toolbox" meeting on the subject of safety. Here, employees have the opportunity to contribute their ideas towards improving work safety. Training sessions on lift truck safety, first aid and firefighting exercises are also held at least twice a year. There is an Emergency Response Team consisting of 15 staff members who are trained in the areas of firefighting, handling accidents with chemicals, and first aid. The preventive work pays off: in the first half of the year, not a single accident occurred at GF Piping Systems in Malaysia!



Products and Innovations

GF attaches a lot of importance to working closely with its clients. The focus areas of this collaboration are product development and innovation as well as the achievement of sustainability benefits. In this sense, along with quality, GF has strategically anchored energy efficiency as well as climate and environmental protection as main elements of product development across all divisions.

Client needs are at the center of what GF does. A key aspect of the Strategy 2020 is to transform GF from a pure product and system provider to an integrated solution provider. The goal is to support clients in the most meaningful way over the entire life cycle of a product.

GF Piping Systems

For GF Piping Systems this means being involved in the entire process, from the construction and design of a piping system to the logistics, installation, and commissioning as well as maintenance and repairs. Clients throughout the world are requesting an ever greater number of products and solutions that meet increasingly strict environmental requirements. Plastics, for example, combine qualities that enable environmentally friendly and costefficient use while meeting the requirements for sustainability. Piping systems made of plastics are long-lasting and sustainable solutions that have a life cycle of more than 50 or even 100 years, depending on where they are used. Frequent maintenance work is not needed, as no deposits or dangerous microbial contamination build up in the piping.

Successful product innovations achieve the right combination of economic and environmental benefits. GF was able, for example, to introduce not only a better flow geometry with the new generation of membrane valves, but to cut the loss of pressure in half, which has a very positive affect on the energy consumption for the pump input power.

Desalination of sea water is increasingly used today to boost the availability of drinking water in dry regions, such as Western Australia or the Arabian peninsula. It is absolutely necessary to have large piping systems that are resistant to the corrosive environment and that can transport the water. An important aspect is the need for inexpensive options to manufacture large connectors to enable distribution. GF has made some important progress in this area with the new Cassini connector system, which is inexpensive and easy to assemble.

GF Automotive

Whether made of aluminum, magnesium or iron, the castings of GF Automotive are 100% recyclable. The iron casting produces parts for new car models out of scrap iron. Thus a new use is found not only for pieces of old cars, but also for railways that are no longer used. In addition to the use of environmentally friendly material, the continual reduction of weight and the lowering of CO, emissions play a central role. The global CO₂ guidelines have pushed to the fore among manufacturers and suppliers the issue of lightweight solutions and alternative drive systems. The reduction of components and the manufacture of lighter parts, thereby lowering the weight of the vehicle, is indisputably one of the most important factors for cutting back fuel consumption and emissions. GF Automotive uses its know-how in bionic design and lightweight solutions in the development of vehicle components in order to continually optimize its products in terms of design, material, and production processes.

Another important factor with regard to making vehicle fleets environmentally friendly is alternative drive systems. GF Automotive has been working on new components together with clients for some years, some of which are already in high-volume production. In the area of emobility GF Automotive is in demand more than ever as an expert for lightweight solutions, as one of the central challenges is to offset the kilograms added by the heavy battery. Magnesium or aluminum components can help. In addition, batteries in cars need stable casings that are as compact as possible. Engineers at GF Automotive are also developing solutions for the cooling of electromotors.

GF Machining Solutions

The focus at GF Machining Solutions is on product development as well as on constantly rising technical standards, especially with regard to energy consumption for machines. As part of the "Blue Competence" sustainability initiative, the division set clear targets to lower the energy consumption of milling and EDM machines.

In addition, GF Machining Solutions is expanding its position as a solution provider for clients. This includes the optimization of client response processes and the offering of clear solutions, but also the maintenance of installed machine tools by their own service organization.

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In the area of innovation GF Machining Solutions works together with universities and international organizations to carry out research into new technologies for use both in existing products as well as for new applications. An example of this are laser machine tools. Thanks to this unique technology, it is possible to do away with processes that damage the environment, such as the coating of pressure rollers, and replace them with more environmentally friendly processes.

Clean water for Sri Lanka

850000

meters of PE pipes made by GF Piping Systems supply the town of Ampara with clean drinking water

>20000

inhabitants are benefitting from the new water distribution

200

welders were trained by GF Piping Systems directly on site



Shekhar Jagtap, Managing Director of GF Piping Systems in India, was personally in charge of the water distribution project for the town of Ampara. Additional infrastructure projects in Sri Lanka are already in sight. Many people still do not have access to clean drinking water in the rural areas of Sri Lanka. As part of a large-scale infrastructure project in the east of the island state, GF Piping Systems provided a modern, environmentally friendly piping system and contributed its expertise to ensuring that the population of the town of Ampara can now benefit from running water.

Part of a big infrastructure project // For many people in the world, clean drinking water is by no means a given. In the island state of Sri Lanka in the Indian Ocean, the inhabitants of small towns and villages usually depend on wells to obtain water for daily cooking and washing. The well water, however, is frequently contaminated with pathogens. What is more, the population suffers from frequent dry periods and droughts.

One exception now is the town of Ampara, situated 360 kilometers east of Sri Lanka's capital Colombo. Here, the population of some 20 000 inhabitants have recently gained access to fresh, clean tap water thanks to a state-of-the-art pipeline system provided by GF Piping Systems. "We supplied a total of around 850 kilometers of piping and more than 200 000 fittings and other components for the Ampara project", explains Shekhar Jagtap, Managing Director of GF Piping Systems in India. In addition to the Indian subcontinent, his subsidiary also covers Bangladesh, Bhutan, Nepal, and the Maldives as well as Sri Lanka, since 2013.

The drinking water pipes were laid over the past three years by Sunpower, one of the country's largest construction companies. The pipeline network in Ampara forms part of a much bigger infrastructure project being run by Sri Lanka's central water authority, the National Water Supply and Drainage Board. The ultimate aim is to provide drinking water for almost 650 000 people in the eponymous district of Ampara in the east of the country by 2025. The project is being funded over a 15-year period by international cooperation projects, which include the governments of Australia and Japan as well as the European Union, for example.

When it came to installing the water distribution system for the town of Ampara, Sunpower opted for GF Piping Systems. The division is the exclusive supplier of all





"Sustainable supply"



Interview with Pietro Lori, Head of GF Piping Systems (until August 2016)

Mr. Lori, how important are projects such as the one in Sri Lanka for GF Piping Systems?

The sustainable supply of clean drinking water is a key issue in many countries of the world. Large-scale infrastructure projects such as the one in the town of Ampara demonstrate how the safe and secure transport of water can be ensured with efficiency and expertise. Thanks to our products and know-how we are the ideal partner when it comes to implementing this kind of elaborate project in developing and emerging countries.

What challenges do water supply projects involve in terms of products, employees, and services?

The challenges we are faced with are many and varied. There are difficulties in the area of logistics, for example, because the infrastructure in these countries is not very far advanced. This means our employees often have to demonstrate a high level of flexibility as well as creativity in finding solutions. We also attach great importance to training the parties involved on site so as to ensure our products are applied correctly. In the case of Ampara this meant training more than 200 welders.

Several hundred kilometers of polyethylene piping were laid in Ampara. What is the advantage of this kind of material as compared with others?

Our PE pipes have demonstrated a better life cycle assessment than comparable products made of other materials: they have a very long service life, are resistant to corrosion, and are very lightweight. Thanks to a longlasting system life cycle the PE pipes are very cost-efficient, too. Consequently, our solutions deliver the perfect combination of both economic and ecological factors. piping systems. The high quality of GF products and the division's extensive portfolio were the decisive factors here. "We were the only competitor able to provide the customer with a complete system solution from a single source", as Shekhar Jagtap relates.

Products with good life cycle assessment // The core of the new piping system consists of some 850 kilometers of drinking water pipes made of corrosion-resistant polyethylene (PE) with diameters of between 63 and 315 mm – and that's only the main lines. They have an expected service life of at least 100 years and a particularly positive life cycle assessment as compared to other materials. The CO₂ footprint of a PE pipe made by GF Piping Systems is only half the size of a comparable metal pipe, for example. What is more, the fact that they are colored blue prevents them from being damaged during later construction work since they are readily identifiable as drinking water pipes.

"Our expertise allows us to provide perfect support for projects in developing countries."

Shekhar Jagtap, Managing Director GF Piping Systems India

More than 200 000 electrofusion fittings of the ELGEF system are installed under the streets of Ampara. This patented GF Piping Systems technique ensures reliable and long-lasting pipe connections. In order to ensure correct use of the relevant electrofusion equipment, GF Piping Systems provided on-site training sessions for Sunpower employees. Three GF experts trained a total of 200 welders in the correct use of the products.

One challenge that emerged as the project progressed was the town's remote location. "As Ampara has neither an airport nor a rail connection we had to transport all the material by road from distant Colombo", explains Jagtap. In order to minimize the environmental impact and the costs, GF Piping Systems planned the truck deliveries as precisely as possible.



More than 200 000 electrofusion fittings of the ELGEF system are installed in Ampara



The effort was certainly worth it for the population of Ampara. Since completion of the main lines this June, every household can apply to the water authority for a connection. Poorer families are exempt from the connection fee, which costs the equivalent of 15 Swiss francs. The water comes from a reservoir near the town and is purified in a treatment plant operated by Sunpower before flowing into the pipelines.

After the great success of the Ampara project, Sunpower and GF Piping Systems aim to further expand their collaboration in Sri Lanka. "There may be a new infrastructure project in the fall which will be around twice as large in scale as the one in Ampara", says Jagtap. The National Water Supply and Drainage Board has now approved all GF Piping Systems products for the distribution of water. As a result, even more people in Sri Lanka can hope for fresh drinking water in future – thanks to the products and experience of GF Piping Systems.



GF Clean Water Foundation

Commitment to clean drinking water

Above and beyond its business operations, GF is closely involved with "clean water" issues. Since 2002 the company has supported drinking water projects all over the world through its Clean Water Foundation. All in all, GF has invested a total of some CHF 9 million in the foundation to date, providing around 250 000 people with a sustainably improved supply of drinking water. Between 2002 and 2015 the foundation was able to implement 130 projects involving the transport, distribution, and storage of water, for example. The main projects in 2015 were in Egypt, Ethiopia, Bolivia, El Salvador, Cambodia, and Nepal. Further information is available at **www.cleanwater.ch**.

In order to implement projects in an especially efficient and effective manner, the Clean Water Foundation and Caritas Switzerland entered into a partnership to bring access to clean drinking water in 2011. At the end of 2015, GF extended this collaboration by another four years, providing another CHF 1 million to realize drinking water projects with the charity organization. As part of this partnership, GF is also making its know-how and technical expertise available.

About the report

As a pioneer in the area of sustainability, GF has been systematically recording and analyzing its key environmental figures since 1997. The worldwide reporting system was expanded in 2005 to include key social figures and the Sustainability Information System (SIS) was enlarged. In 2015, the SIS was integrated into the financial reporting of the company. Data on energy consumption and CO_2 emissions are also checked and analyzed under the Carbon Disclosure Project (CDP). The Sustainability Report has been published every two years since 2005, with an abridged interim report published in the intervening years. Unless otherwise stated, this report covers the reporting period from 1 January to 31 December 2015.

Data collection limits

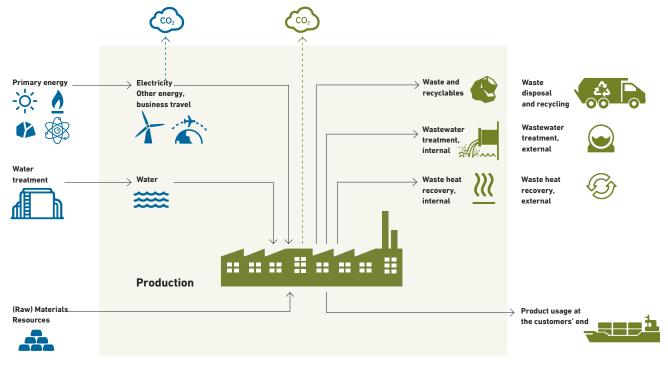
Data from all GF Group companies is recorded in the Sustainability Information System. This also includes majority holdings and joint ventures in which GF has a stake of more than 50%. Although acquisitions, divestitures, and closures affect the results, this only had a limited impact on the Group-wide results in 2014 and 2015, meaning that the results are readily comparable with those of the previous year.

All sales and production companies worldwide with more than ten employees calculate their social performance indicators using the Sustainability Information System. In the year under review there were 121 companies, of which 97 are either sales or production companies. About 90% of them report their indicators. This covers 99% of the workforce, while the environmental indicators cover some 85% of the workforce and 95% of the environmental impact of the Corporation as a whole. There have been only slight changes in the Group reporting since the 2013 Sustainability Report.

In terms of environmentally relevant key figures, GF records energy and water on the input side, and emissions into the air, wastewater, and waste on the output side. All flows within the data collection limits are taken into account. The impact of business travel by airplane and company cars is also calculated. Purchased materials and the construction of buildings and facilities are not included. Waste and wastewater treatment, transport for deliveries and for product distribution as well as the use of products by clients are not covered.

External audit

GF attaches great importance to an external audit of the Sustainability Report. In view of this, SGS TÜV Saar GmbH validated and verified the environmental and social key figures. The report follows the fourth generation of the Global Reporting Initiative (GRI) standards.



Recording limits for environmental data, as of 30 June 2016

GRI Content Index

Reference	and Description	Sustainability Report 2015	Annual Report 2015	Comments on Sustainability Report 2015
Number	Description	Page	Page	
	Standard disclosures			Following GRI 4
	Strategy and analysis			
	Strategy and analysis		2-5, 10-12,	
G4-1	CEO statement	1	(28–30)	See also page 10, 12 f, 16 f, 18
	Organizational profile			
G4-3	Name of the organization	4, 62	U4, U6	
		-, 02	U3. 2–4.	
G4-4	Primary brands products and services	4, 5	26,65	
G4-5	HQ location	4.7	26,98–100	Page 7 status 2016
G4-6	Countries of operation	5, 6, 7	98–100	Page 6/7 status 2015/2016
G4-8	Markets served	6, 7	98–100	Page 6/7 status 2015/2016
G4-9	Scale of operation	1, 2, 3, 5, 6, 11	U3, 1, 116	Page 5/6 status 2015/2016
		1, 2, 3,		
G4-10	Number of employees	34-37, 59	U3, 30, 116	
G4-11	Collective bargaining agreements	21, 35	29	Internal agreements
G4-14	Precautionary approach	16	28-31, 72	Continuous review
G4-16	Memberships and partnerships	8, 21, 38, 53	30-31	Clean Water Foundation
	Material aspects and boundaries			
G4-17	List of entities	7	98-100	Status 2016
G4-18	Defining report content	1, 54		Internal targets & G4-DMA
	Stakeholder engagement			
G4-26	Approach to stakeholder engagement	20, 21, 36	5, 30–31	External dialogue as of 2017
G4-28	Report profile Reporting period	54		
G4-28 G4-30	Reporting cycle	54		Annual
G4-30 G4-31	Contact point	61	U5	Annudl
G4-31 G4-32	Content index and in accordance	54	00	"Following GRI 4"
G4-32 G4-33	Assurance	54	43.113	
04-00		54	45, 115	
	Governance			
G4-34	Governance structure	15	26-27, 32-42	Management boards
	Ethics and integrity			
G4-56	Codes of conduct	14, 15, 22	26, 32	

Economic category

Reference	and Description	Sustainability Report 2015	Annual Report 2015	Comments on Sustainability Report 2015
Number	Description	Page	Page	
	Specific disclosures			Following GRI 4
		1, 10, 12, 14, 16, 18,		
G4-DMA	Management approach	19, 22, 46, 47	4, 10–12, 49	
	Economic performance			
			U3, 1, 58,	
G4-EC1	Direct economic value generated and distributed	5, 11	62–63, 116	
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due			
	to climate change	12, 13, 24–26	28-30	
	Indirect Economic Impacts			
GA-EC7	Development and impact of infrastructure			
	investments and services supported	38, 39	30-31	

Environmental category

Reference	and Description	Sustainability Report 2015	Annual Report 2015	Comments on Sustainability Report 2015
Number	Description	Page	Page	
	Energy			
G4-EN3	Energy consumption within the organization	16, 17, 24, 25	28-30	
G4-EN4	Energy consumption outside of the organization	22, 23		Eg. Freight
G4-EN6	Reduction of energy consumption	23-26	30	
G4-EN7	Reductions in energy requirements of products	-		
	and services	28, 32	30	
	Water			
G4-EN8	Total water withdrawal by source	27	-	
	Emissions			
G4-EN15	Direct greenhouse gas (GHG) emissions (scope 1)	3, 17, 25	28-29, 30	Tabal manufactor and a factor
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (scope 2)	1, 3, 25, 26	29	 Total greenhouse emissions Scope 1 and Scope 2
G4-EN19	Reduction of greenhouse gas (GHG) emissions	1, 16, 17	28-29, 30	Real CO ₂ emissions
G4-EN20	Emissions of ozone-depleting substances (ODS)	26		No such emissions
G4-EN21	$\mathrm{NO}_{\mathrm{x}}, \mathrm{SO}_{\mathrm{x}},$ and other significant air emissions	26		
	Effluents and Waste			
G4-EN22	Total water discharge by quality and destination	27		
·····	Total weight of waste by type and disposal method	26, 27	29, 30	
	Products and Services			
G4-EN27	Extent of impact mitigation of environmental			
	impacts of products and services	13, 28, 32, 33	30	

		Sustainability Report 2015	Annual Report 2015	Comments on Sustainability Report 2015	
Number	Description	Page	Page		
	Compliance				
	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	27		No incidents in 2015	
	Transport				
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members				
	of the workforce	19, 22, 23			

Social category

Reference	and Description	Sustainability Report 2015	Annual Report 2015	Comments on Sustainability Report 2015
Number	Description	Page	Page	
	Labor practices and decent work			
	Employment			
G4-LA1	Total number and rates of new employee hires and			
	employee turnover by age group, gender, and region	36	(1), (30), (93)	Turnover
	Occupational Health and Safety			
G4-LA6	Type of injury and rates of injury, occupational			
	diseases, lost days, and absenteeism, and total			
	number of work-related fatalities, by region			
	and by gender	3, 17, 37, 44	28-29	Absence and accident rates
			-	-
	Training and Education			
G4-LA10	Programs for skills management and lifelong			
	learning that support the continued employability			
	of employees and assist them in managing career			
	endings	14, 20, 35	29	-
	Labor Practices Grievance Mechanisms			
GA-LA16	Number of grievances about labor practices filed,			
	addressed, and resolved through formal grievance			Whistleblowing program
	mechanisms	14	(36), (38)	Compliance Agents
	Society			
	Local Communities			
G4-S01	Percentage of operations with implemented local			
	community engagement, impact assessments,			
	and development programs	38. 48 ff.	30-31	
				•
	Anti-corruption			
G4-S04				
	policies and procedures	14		Whistleblowing program

Environmental performance indicators

	Unit	2015	2014	2013	2012	2011
Energy						
Total energy consumption	1 000 GJ	6 210	6 127	6 326	6 309	6 871
Electricity	1 000 GJ	2 963	2 900	3 015	2 957	2 999
Natural gas	1 000 GJ	1 1 3 3	1 042	1 195	1 200	1 4 4 6
Coke/coal	1 000 GJ	1 879	1 922	1 853	1 918	2 1 6 4
Oil/fuels	1 000 GJ	207	230	229	210	241
Other energy sources	1 000 GJ	28	32	34	24	21
CO ₂ emissions						
Total CO ₂ emissions	1 000 tons	592	594*	713	707	738
Scope 1 (direct emissions:						
energy consumption)	1 000 tons	252	248	250	255	293
Scope 2 (indirect emissions:						
electricity and district heating)	1 000 tons	338	338	455	445	437
Scope 3 (indirect emissions: business travel)	1 000 tons	2		8	8	8
Air emissions						
Nitrogen oxides (NO _x)	1 000 tons	0.88	1.15	1.35	1.33	1.36
Sulphur oxides (SO _x)	1 000 tons	1.72	2.27	2.62	2.65	2.77
Methane (CH ₄)	1 000 tons	0.52	0.72	1.04	0.98	0.93
Volatile organic compounds (VOC)	1 000 tons	0.17	0.16	0.18	0.18	0.20
Water and wastewater						
Total water consumption	1 000 m ³	2 926	2 749	2 841	2 835	2 867
City water from public supply	1 000 m ³	693	608	639	630	637
Cooling/industrial water from own supply	1 000 m ³	2 233	2 1 4 2	2 202	2 205	2 2 3 0
Wastewater volume	1 000 m ³	911	850	868	874	948
Waste and recycling						
Total waste	1 000 tons	321	315	324	314	391
Normal waste, recycling	1 000 tons	244	251	269	248	319
Normal waste, landfill, or incineration	1 000 tons	54	43	36	45	47
Hazardous waste	1 000 tons	23	21	19	21	25
Hazardous waste, recycling	1 000 tons	17	15	13	14	17
Hazardous waste, storage, or incineration	1 000 tons	6	6	6	7	8
Monetary values						
Expenditure for environmental protection	million CHF	16	14	14	20	17
Energy cost	million CHF	127	134	146	140	152
Water and waste water costs	million CHF	3	3	4	3	4
Waste disposal costs and recycling credits	million CHF	7	9	8	5	3

The environmental performance indicators include all GF production companies.

* The CO₂ emissions (Scope 2) decreased mainly due to the purchase of hydro power certificates by the division GF Piping Systems.

Social performance indicators

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	Unit	2015	2014	2013	2012	2011
Employees						
Headcount	Number	14 424	14 140	14 066	13 412	13 606
Female employees	Number	2 4 9 1	2 305	2 275	2 165	2 109
	%	17.3	16.3	16.3	16.1	15.5
Women on management boards	Number	76	74	73	75	68
	%	12.4	11.8	11.7	12.1	11.1
Departures, total	Number	1 435	1 642	1 692	1 363	1 416
Departures unwanted by GF	Number	526	519	475	514	516
Employee fluctuation, total	%	9.9	11.6	12.1	10.2	10.4
Employee fluctuation, unwanted by GF	%	3.6	3.7	3.4	3.8	3.8
Part-time employees	Number	334	307	324	311	335
	%	2.3	2.2	2.3	2.3	2.5
Employees with disabilities	Number	277	279	264	247	240
	%	1.9	2.0	1.9	1.8	1.8
	Number					
	employees					
Employee surveys	surveyed	8 000	7 400	6 700	6 500	11 400
	Number					
-	companies	41	44	46		
Investigated incidents of discrimination	Number	2	0	0	0	4
Training and professional development						
Training and professional development	Number	11 900	10 900	10 700	11 000	10 800
	%	83	77	76	82	79
"Off the job" training days	Number	39 400	36 700	32 400	33 800	33 300
	Days per					
	employee	2.7	2.6	2.3	2.5	2.4
Student interns	Number	104	194	219	152	133
Apprentices	Number	509	506	476	455	478
Health and safety						
Work-related accidents involving injury	Number	449	543	627	675	818
	Per 1 000					
Accident rate	employees	31	39	45	50	61
Fatalities, work-related	Number	1	1	6	0	1
Absence days due to work-related accidents						
or illness	Number	7 700	7 800	10 600	10 500	10 400
	Number					
	(% of total					
	working days)	0.23	0.24	0.32	0.33	0.32
Absence days, work-related and						
non-work-related	Number	124 000	124 000	139 000	146 000	143 000
	Number					
	(% of total working days)	3.8	3.8	4.2	4.6	4.4
		5.0				
Community						
Order volume from workshops employing disabled people	CHF million	2.1	2.7	2.5	3.0	3.5
Charitable donations	CHF million	1.6	2.8	2.2	2.2	2.2
		1.0	2.0	2.2	2.2	2.2

The social performance indicators include all GF companies with ten or more employees.

Validation



THIS IS TO CERTIFY THAT

GEORG FISCHER AG, SCHAFFHAUSEN, SCHWEIZ,

MEETS THE REQUIREMENTS OF A NEUTRAL PLAUSIBILITY CHECK AND THE

SUSTAINABILITY REPORT 2015

- HAS BEEN CREATED "FOLLOWING WITH GRI 4"
- COMPRISES THE ENTIRE GEORG FISCHER AG INCL. ALL BRANCH OFFICES
- THE FINANCIAL DATA CORRESPONDS WITH THE CONTENTS OF THE ANNUAL REPORT AND
- THE NON-FINANCIAL DATA CORRESPONDS WITH THE CONTENTS OF THE SUSTAINABLE INFORMATION SYSTEM

USING THE REQUISITE DOCUMENTS AND PROGRAMMES, THE REPORT WAS REVIEWED IN AN AUDIT ACCORDING TO THE FOLLOWING CRITERIA

- THE REPORT CONFORMS TO THE STATEMENT "FOLLOWING WITH GRI 4"
- DOCUMENTATION OF THE GRI CATEGORIES ECONOMICS, ENVIRONMENT AND SOCIETY
- DOCUMENTATION OF REGULAR SUCCESSES/DEVIATIONS AND OBJECTIVES IN ACCORDANCE WITH G4-DMA COMPLIANCE WITH THE CAREFUL SELECTION OF THE RECOMMENDED GENERAL AND SPECIFIC STANDARDS
- CONFORMITY WITH FINANCIAL AND NON-FINANCIAL DATA SETS

CERTIFICATE NUMBER: SGS-GF01-0916

LUDWIGSHAFEN, 7 OCTOBER 2016

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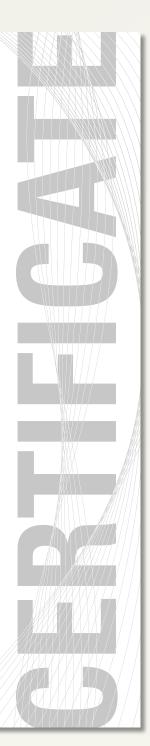
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AS A JOINT VENTURE OF SGS AND TÜV SAARLAND E. V., SGS-TÜV SAAR ENSURES THE RELIABILITY AND QUALITY OF PROCESSES, PRODUCTS AND TECHNICAL SERVICES.



GF publishes a full sustainability report every two years. The next report will be published in 2018. The reporting period includes the particular calendar year.

The statements in this publication relating to matters that are not historical facts are forward-looking statements that are not guarantees of future performance and involve risks, uncertainties, and other factors beyond the control of the company.

Publisher's information Published by: Georg Fischer Ltd Edited by: Georg Fischer Ltd Publishing System: ns.publish by Multimedia Solutions AG Designed by: Neidhart + Schön Group Photos by: Nik Hunger, Oliver Hess All other photos: Georg Fischer Ltd Translation: CLS Communication AG Printed by: Neidhart + Schön AG



Printed by: Neidhart + Schön AG



Climate Partner ° Print | ID: 53232-1609-1005

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