



Acting
sustainably

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How we progress towards meeting Sustainability Targets 2020



Dear readers

2017 was one of the most successful years in the history of GF at least as far as financial performance is concerned. The global economic upswing and the associated high capacity utilization of our facilities led to an increase in energy consumption. The measures taken at our facilities including the increased use of renewable energies had a positive impact on our total energy consumption which only rose five percent, compared to an increase in turnover of almost ten percent. On the social side, one of our key targets is to anchor safety in our culture. In this regard, we are proud of the efforts done so far, as the accident rate decreased clearly faster than we expected.

Sustainability at GF always involves two aspects. As above mentioned, the first refers to the inside view of our own activities including our supply chain, whilst the second relates to our customers and the product lifecycle. The examples shown inside this report illustrate the tight imbrication in between our business model and sustainability.

With its new digital products, GF Piping Systems is making an important contribution to, among others, ensuring a leak and bacteria-free water supply. Lightweight components from GF Casting Solutions do contribute towards reducing vehicle weight and CO₂-emissions. Less weight means also a greater range, an important aspect not least in the case of electric cars. Laser texturing machines from GF Machining Solutions are offering a substitute solution to traditional processes like etching which use environmentally harmful chemicals.

I am glad our sustainability report has attracted your attention. We look forward to your feedback.

A stylized, handwritten signature in blue ink, appearing to read 'Y. Serra'.

Yves Serra
CEO

Key figures at a glance

Economic performance indicators

Sales

in CHF million

4'150

2017 4'150

2016 3'744

2015 3'640

EBIT / Net profit

in CHF million

352

2017 352

2016 311

2015 296

ROIC

in %

20.3

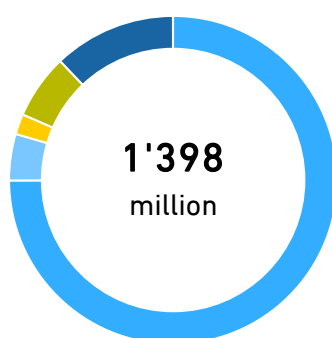
2017 20.3

2016 19.3

2015 18.9

Net value added 2017

in CHF



Employees ⁽¹⁾

Lenders

Corporation ⁽³⁾

Public authorities ⁽²⁾

Shareholders

(1) Salaries and wages, employee benefits and social security

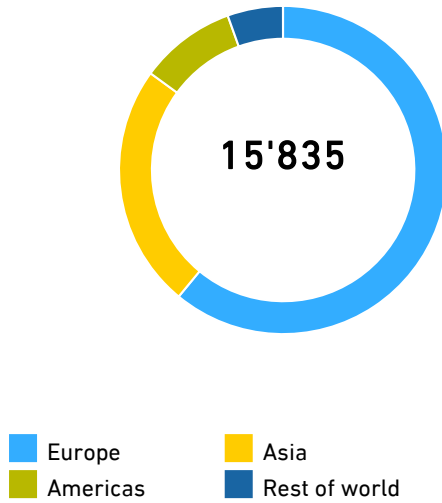
(2) Income taxes

(3) Retained earnings

Social performance indicators

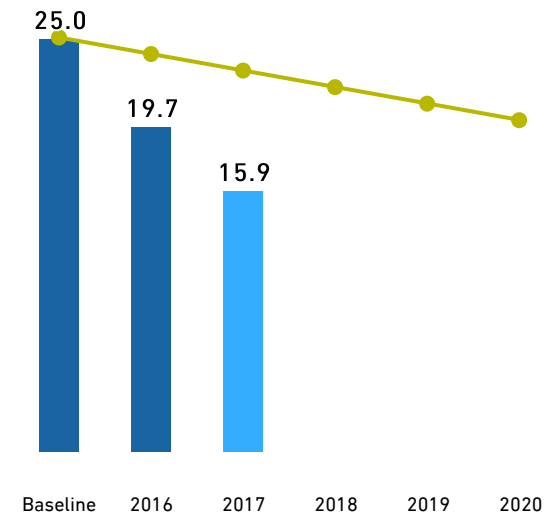
Employees by region

headcount



Accident rate

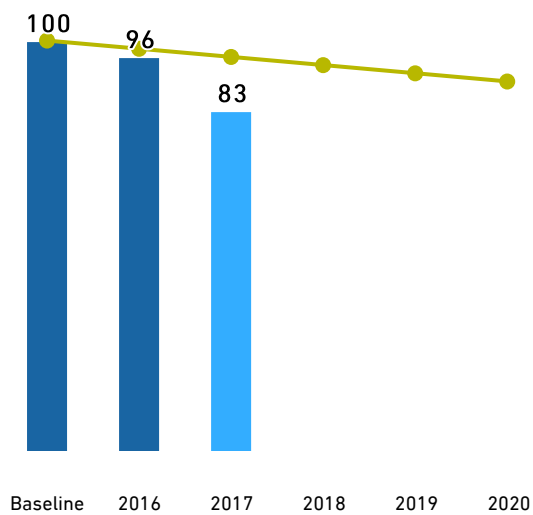
per 1 million working hours



Environmental performance indicators

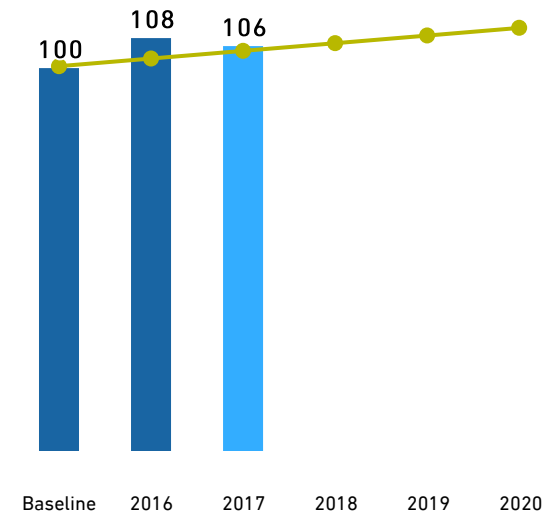
Non recycled waste intensity index

(non recycled waste/production volume) in %



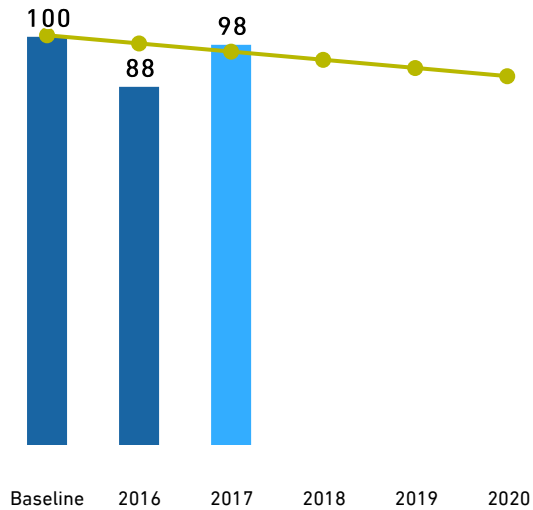
Energy efficiency index

(production volume/energy consumption) in %



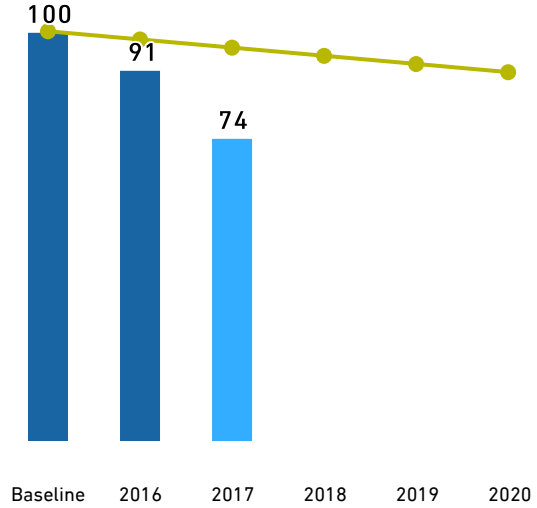
Emissions intensity index

(CO₂e emissions/production volume) in %



Water intensity index

(water consumption/production volume) in %



Ticker/Valor symbols

Telekurs, Dow Jones (DJT): FI-N

Reuters: FGEZn

Listing

Zurich, Switzerland: SIX Swiss Exchange

ISIN: CH0001752309

Sustainability indices member: SXI Switzerland Sustainability 25® and Ethibel Sustainability Index (ESI) Excellence Europe

Our Corporation

GF comprises three divisions: GF Piping Systems, GF Casting Solutions, and GF Machining Solutions. Founded in 1802, the Corporation is headquartered in Schaffhausen, Switzerland and is present in 34 countries with 136 companies, 57 of them production facilities. In 2017, the company employed 15'835 employees¹ and generated sales of CHF 4'150 million. GF is the preferred partner of its customers for solutions enabling safe transport of liquids and gases, lightweight casting components, and high-precision manufacturing technologies.



GF Piping Systems

GF Piping Systems is a leading supplier of piping systems made of plastics and metal. The division focuses on system solutions, high-quality components for the safe and leak-free transport of water, chemicals, and gas, as well as corresponding services. The product portfolio of fittings, valves, pipes, automation, and jointing technologies covers all applications of the water cycle.

GF Piping Systems supports customers in the fields of utility, industry, and building technology in over 100 countries through its own sales companies and representative offices. The division operates several research and development centers as well as more than 30 production sites in Europe, Asia, North and South America.



GF Casting Solutions

GF Casting Solutions² is a technologically pioneering development partner and manufacturer of lightweight casting solutions and systems made of aluminum, magnesium, and iron for the global automotive industry as well as for industrial applications. The highly complex lightweight solutions contribute significantly to making modern vehicles lighter, to reducing CO₂ emissions and to helping to advance the development of e-mobility.

GF Casting Solutions manufactures at 13 production sites in Germany, Austria, Romania, China, and the US. It also has sales offices in these countries, as well as in Switzerland, Italy, Korea, and Japan. The research and development centers with globally recognized lightweight expertise are located in Schaffhausen (Switzerland) and Suzhou (China).

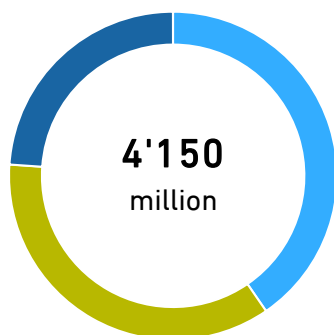


GF Machining Solutions

GF Machining Solutions is one of the world's leading providers of complete solutions to the tool and mold making industry, and to manufacturers of precision components. The portfolio includes milling, wire cutting and EDM machines, spindle systems, laser texturing, additive manufacturing, as well as automation and digitalization solutions. The key customer segments are the aerospace, ICT, medical, and automotive industries. GF Machining Solutions enables our customers to produce their components with lower energy consumption and offers innovative ways to optimize use of materials.

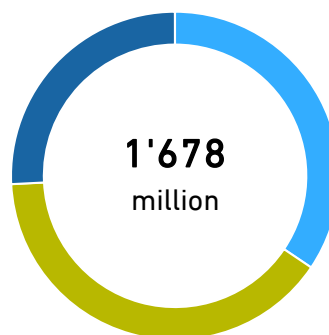
GF Machining Solutions has representation in more than 50 countries³. The division operates production facilities and research and development centers in Switzerland, the USA, Sweden, and China.

GF Corporation sales by division
in CHF



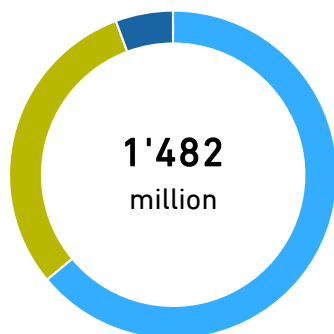
■ GF Piping Systems
■ GF Casting Solutions
■ GF Machining Solutions

GF Piping Systems sales by segment
in CHF



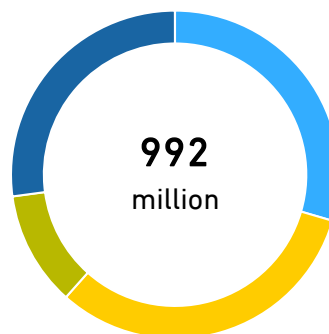
■ Industry
■ Utility
■ Building technology

GF Casting Solutions sales by segment
in CHF



■ Passenger cars
■ Trucks
■ Industrial applications

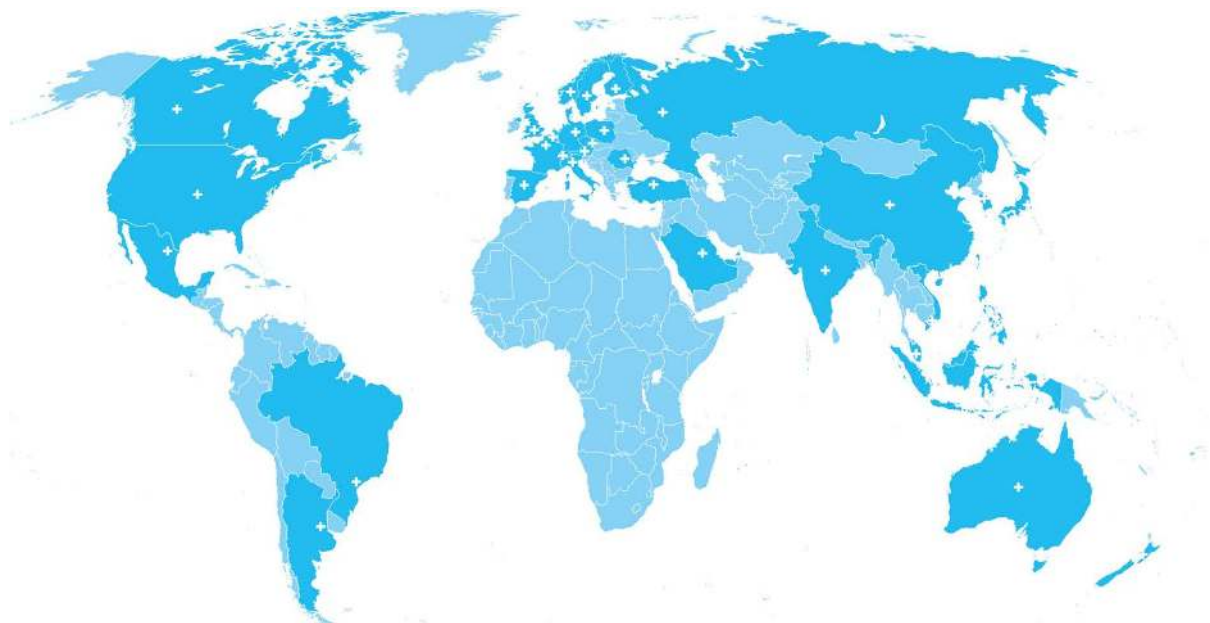
GF Machining Solutions sales by segment
in CHF



■ EDM (Electric Discharge Machining)
■ Milling
■ Automation/Tooling/Laser
■ Customer service

Worldwide presence

As of 30 April 2018 – without distribution and R&D centers⁴



Note: due to the limitations of the graphical capabilities of the pdf version, for details behind this graphic, please use the [online version](#) as a reference.

Sustainability program management

Responsibility for continuous integration of sustainability aspects into the daily operations of GF in order to reach the [Sustainability Targets 2020](#), defined in 2015, lies with each department and division. The topic is coordinated at the Corporate level by the Corporate Sustainability unit⁵ in close contact with the dedicated sustainability teams within the three divisions to ensure tracking of the progress of individual locations, business units, and divisions towards achieving the set targets.

The Executive Committee bears the ultimate responsibility for the topic of sustainability and for ensuring that the defined targets are met with progress discussed every six months. The annual performance objectives of the Executive Committee members include at least one related to sustainability (e.g. ensuring a zero percent accident rate in the business area of their respective responsibility).

Public policy

As a Swiss company, GF is a member of industry-relevant organizations in its home base, such as *economiesuisse* and *Swissmem*, which represent the interests of the Group on topics of public policy. GF does not provide financial contributions to any specific political party.

¹ Headcount figure.

² As at 31 December 2017, the division was called GF Automotive. The new name GF Casting Solutions was adopted in April 2018 as a result of the division broadening its portfolio through the acquisition of Precicast Industrial SA (Precicast), one of the only independent precision casting companies in Europe, specializing in super alloy components for aero engines and industrial gas turbines. The acquisition was closed on 16 April 2018, and therefore this report covering the 2017 calendar year excludes the activities of Precicast from its scope.

³ www.gfms.com/com/en/about-gf-machining-solutions/organization/where-to-find-us.html

⁴ The map shown above includes all locations of GF as of the time of the report's publication, therefore deviations exist to the status as of year-end 2017 based on the Precicast acquisition.

⁵ Positioned within the CFO organization and reports to the Head of Corporate Controlling and Investor Relations.

Our value chain

The role and responsibility of GF in society extends beyond the direct operations of the company, as we work with, and touch through our activities, a broad range of stakeholders. GF addresses the wide spectrum of sustainability topics in all steps of its value chain, and we look forward to continuously deepening our engagement.

To underscore our commitment to responsible business conduct, GF has been a member of the UN Global Compact, the world's largest sustainability network for companies and organizations, since 2015. Since 2016, GF has issued an [annual "Communication on Progress" report](#). 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 Organisation (ILO) form the basis for our common understanding of corporate responsibility.

Sustainability in our own operations

Good corporate governance lays the foundation for the way our business is conducted day to day. As a company with a 200-year history, GF is built on respect for the people who make our operations tick and on customer-centricity. We strive to achieve the highest levels of quality and create added value for customers while staying abreast of technological developments, innovating, and evolving in step with the times.

We are an organization representing a wide range of businesses and cultures. As one Corporation, we pride ourselves on our reputation, and we seek to foster a respectful, engaging, and motivating working environment for the diverse family of our employees.

As an industrial company, it is our key responsibility to take care of the safety standards of our facilities and to do our utmost to drive accident-free operations. Therefore, we place a particularly strong focus on anchoring safety in every GF site worldwide.

We also continuously invest in upgrading our production and office locations to make them more efficient and reduce any negative impact on the environment.

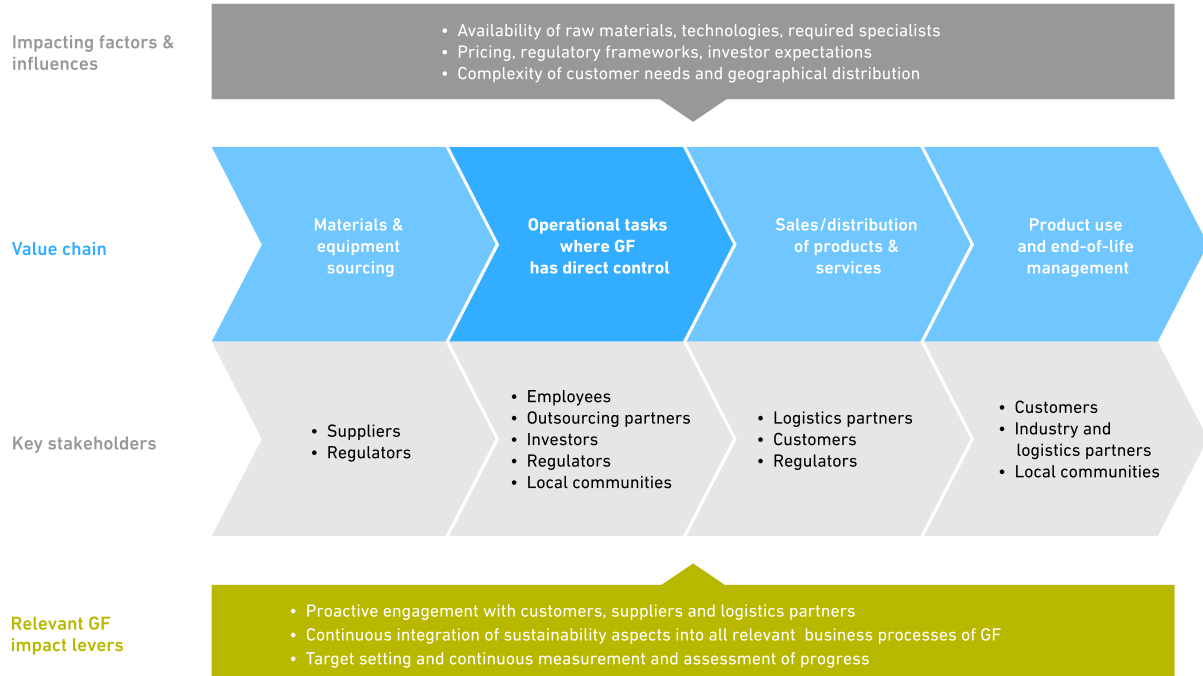
Materials and equipment sourcing

The decisions we make in designing solutions for our customers have an immediate link to the upstream activities in our supply chain, both on the social and environmental side. We recognize this and work toward increasing transparency within our complex purchasing network, as well as working together with our business partners to ensure adherence to GF standards and expectations.

Distribution of products and services / product use and end-of-life management

The solutions we develop for our customers carry sustainability considerations in their core. We continuously engage with customers to understand their needs and requirements, to meet and exceed their own expectations of suppliers with regard to social and environmental performance, as well as to optimize our logistics processes in order to be more efficient for our customers and more environmentally friendly.

Value chain of GF at a glance

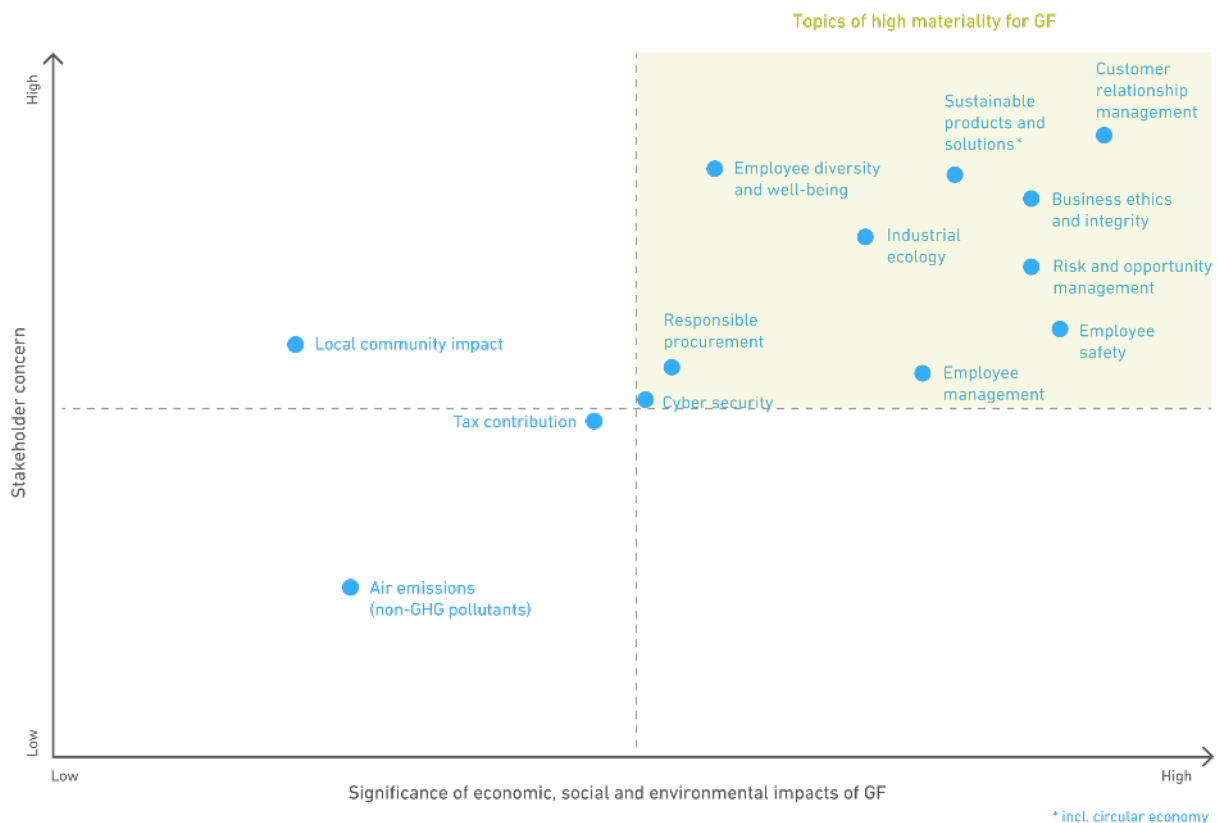


Materiality matrix

The focus of GF activities during 2017 was based on the measures defined as part of the [GF Strategy 2020](#) and the [Sustainability Targets 2020](#). As part of the process to derive this report, as well as to go one step further and define the reference points for a comprehensive sustainability strategy, in March 2018, we conducted a materiality assessment workshop, bringing together the internal company perspective with that of GF's broad range of external stakeholders.

In this session, we held a discussion on which topics carried highest relevance for GF at that point in time and the topics set to gain importance in the foreseeable future. The structured workshop included specialists from HR, the three divisions, and the Procurement, Logistics, Risk, Compliance, Investor Relations, Communications, and Sustainability departments. Input and feedback received throughout 2017 in various interactions with customers, employees, investors, regulators, and other external stakeholders was incorporated into the discussion. The outcome was summarized, verified with senior management, and fed into the resulting materiality matrix. The comprehensive sustainability strategy definition will be initiated in the second half of 2018.

The details behind each category in the matrix, as well as the reasoning behind their placement, are described below (see graphic and tables).



Topics of high relevance

Topic	Aspects included	Explanation for high materiality
Customer relationship management	<ul style="list-style-type: none"> - Customer relations - Customer satisfaction 	<p>Customers are one of our most important stakeholder groups, and it is crucial for us to maintain an ongoing positive interaction with them to understand their needs and thus provide best-fitting solutions for them. Only with our customers as partners can we create a sustainable impact across the three divisions.</p> <p>This is a key element of GF's business case and our strategic intentions.</p>
Sustainable products and solutions	<ul style="list-style-type: none"> - Sustainable products - Innovation - Circular economy 	<p>Customer behavior is changing, and resources are becoming scarcer. Therefore, we regard the topic of circular economy as an important consideration for responsible product innovation & development. Gradually, GF is incorporating the questions of how the procurement, production, and use of materials can move away from the "take-make-dispose" model to a circular approach, addressing within its R&D process the considerations of a product's life cycle and whether the materials/components can be re-, up-, and down-cycled.</p>
Business ethics and integrity	<ul style="list-style-type: none"> - Corporate governance - Business ethics & compliance - Human rights 	<p>A well- and responsibly-managed Corporate organization is key for almost all internal and external stakeholders and is ultimately aligned to their interests. It ensures rule-based decisions, clear checks and balances and sets objectives that are aligned to the social, regulatory, and market environment.</p>
Risk and opportunity management	<ul style="list-style-type: none"> - Risk management - Agility of business 	<p>An effective risk management framework is an important internal task of the company to ensure that the negative or positive future/potential impact on and by our business is recognized, assessed, managed and/or mitigated.</p> <p>We see the significance of this topic for GF first of all on account of its necessity, but even more so due to the strategic implication resulting, for example, from harmful events, missed opportunities, etc.</p>
Industrial ecology	<ul style="list-style-type: none"> - Greenhouse gas (GHG) emissions - Energy usage in GF operations - Water management - Circular economy in the use of materials at GF operations - Resource scarcity 	<p>External stakeholders and regulators position climate change and energy-related matters as being of the highest concern, and the international community is committed to tackling the challenges that come along. As a global company, as part of the precautionary principle, GF also attaches high relevance to this topic.</p> <p>While production and other activities of GF itself are not water intensive, sustainable water management is a topic that is of high relevance for society at large (e.g. access to clean water and leak-free water transport) and for the business of GF Piping Systems.</p> <p>As a responsible industrial company (both from a financial and environmental perspective), circular approaches are on the agenda of each division, both in terms of how we use materials within our operations and also how to incorporate it into the R&D process.</p>
Employee diversity & well-being	<ul style="list-style-type: none"> - Employee diversity & inclusion - Employee work-life balance - Employee health and well-being 	<p>Policy and public-related discussions and involved stakeholders position diversity as being of the highest concern. For GF, the issue is an important element in ensuring its continuing future success by retaining its existing talents and positioning itself as an attractive employer.</p> <p>Demand for flexible working models is growing, especially in the context of a good work-life balance, among the new generation of employees.</p>
Employee safety	<ul style="list-style-type: none"> - Safety at work 	<p>Safety at work is a strategic aspiration of the highest fundamental relevance to GF, with a significant impact on employees, contractors, and their families. It is key to GF's success to care about those people who work for the company and to avoid any risk impacting their health, well-being, and physical integrity by ensuring a culture of safety.</p>
Employee management	<ul style="list-style-type: none"> - Employee relations and management - Talent attraction - Employee training & development 	<p>The broad spectrum of functions and roles within the GF business requires development and maintenance of state-of-the-art human resource management processes and the possibility to engage, develop, and retain employees, while attracting new talent.</p>
Responsible procurement	<ul style="list-style-type: none"> - Supply chain management - Integration of social & environmental topics into procurement processes 	<p>The focus in relation to sourcing and supply chain matters is heavily linked to the upstream-related steps of our value chain.</p> <p>Prudent management of suppliers, while integrating social and environmental topics into the supplier management process, is gaining in relevance. We see this as part of our responsibility for the impact generated by our operations. It is also of interest to our customers, regulators, local communities, and other external stakeholder groups.</p>

14 Materiality matrix

Cyber security	- Data protection	Data protection is an important topic for GF, also in view of the new EU directive regarding GDPR. GF has appointed a Data Protection Officer to ensure compliance. While GF does not collect sensitive customer data, personal data of employees is stored and saved as required by the legal authorities.
	- IT security / system availability	Given the increasing digitalization trend, the availability, integrity, and security of data are key for our IT infrastructure and business systems. We ensure adequate IT service levels through an external provider with state-of-the-art IT / cyber security measures. In addition, we have IT security-related training in place.

The following topics were identified as being relevant for the business of GF, but carrying lower materiality weight. We therefore keep them on our radar for future development, while at the same time ensuring that GF leaves a positive impact in these fields with regard to the affected stakeholders.

Topic	Aspects included	Explanation for lower materiality
Local community impact	- Consultation and recognition of local communities' needs in order to minimize possible negative effects of our operations and ensure their positive impact.	GF's production sites do not carry material risks for, or have adverse effects on, local communities, and the direct impact is low. Nevertheless, good relations with our neighbors and cooperation with them on a local level to achieve common goals are of great importance for GF.
Air emissions (non-GHG pollutants)	- Non-GHG emissions (e.g. NO _x , SO _x , dust, and VOC) as part of production processes	While this topic is of high importance for the environment and local communities in general, the production facilities of GF do not release high quantities of non-GHG pollutants into the atmosphere. For this reason, we assess GF's impact on air emissions as rather low. Nevertheless, ensuring compliance with any regulatory requirements is key for our operations as part of the precautionary principle.
Tax contribution	- Tax transparency of the organization and its contribution to the local economy wherever it operates.	GF's businesses have a strong focus on Corporate responsibility, which includes the administration and payment of taxes. The Group is committed to following all applicable laws and regulations related to its tax activities and maintaining an open and honest relationship with the tax authorities based on collaboration and integrity. Keeping this in mind, the overall tax strategy is of lower relevance for the organization when it comes to its sustainability-relevant footprint.

Our stakeholders

GF maintains a continuous dialogue with its internal and external stakeholders, enabling key issues to be proactively recognized and addressed. This exchange is promoted through a wide range of activities and measures.

Customers

Lasting customer loyalty is built by our product and solutions specialists maintaining ongoing contact with our customers and by GF taking part in a variety of trade fairs and, organizing in-house events as well as customized training sessions for our customers. These events also ensure the ongoing development of products and their correct application. Centers of Competence (CoC) in various locations worldwide offer customers the opportunity to experience and test new technologies and solutions onsite.

In addition, targeted workshops on sustainability are held with customers from key market segments in order to jointly develop future-oriented products, solutions and services. These specific working groups are complemented by periodic customer surveys, which gather important customer opinions in all GF divisions.

Employees

At the end of 2017, GF proudly employed 15'835 people at locations in 34 countries around the world.

Ongoing and transparent communication with and engagement of our employees is crucial for GF, and we achieve these via a variety of channels, which include in-person meetings, training sessions, employee events, social media, a company's Intranet site, as well as an award-winning employee magazine, Globe, published four times a year in eight languages. Employee feedback is also collected and incorporated into relevant processes via periodic surveys as well as through interactions with employee representation bodies.

Investors

GF is in regular contact with its investors, be it via roadshows, events, meetings (including the Annual Shareholders' Meeting of the Corporation), or through active participation in annual assessments of the company by sustainability analysts.

The annual and mid-year financial reports, as well as the annual sustainability report, present key qualitative information about our business as well as quantitative figures for our shareholders, institutional investors, and interested members of the public.

Suppliers

Long-term successful partnerships with our procurement and logistics partners are essential for the continuity of our business. Ensuring that they represent and follow the standards that GF applies to itself is of the highest importance to us. All three divisions have therefore been engaged in an active dialogue with suppliers for years. They are working on progressively strengthening the implementation of social and environmental topics within the procurement and logistics processes.

Universities and research institutes

GF maintains close contact with universities and research institutes. Cooperation takes place on a number of levels, both in specific projects and in the provision by GF of internship and diploma work opportunities to students of technical colleges and universities. Collaborations exist in many countries around the world, such as with the Federal Institute of Technology (ETH) in Switzerland, the Fraunhofer Institute in Germany, the University of California in the USA, and TAFE in Australia.

Regulators

Regulators define the legal framework, within which the companies are allowed to operate, and organize the overall rules of social coexistence. For GF as an international company, it is crucial to stay abreast of and follow the relevant rules and regulations of each country in which it operates. To facilitate this, GF is a member of a number of chambers of commerce.

Local communities

Apart from sharing the economic success of the company via tax contributions and providing local job opportunities, GF supports and promotes cultural and social programs at its various locations, as well as aiming to create an overall positive impact on the local communities where it operates. In 2017, around CHF 4.5 million were contributed to local community engagement activities, whereof CHF 2 million at Corporation level and about CHF 2.5 million from the various local GF entities. Furthermore, GF involves local neighbors and communities in cases of major construction or renovation of facilities.

Media and general public

GF regularly publishes media releases on relevant topics and maintains a continuous exchange of information with journalists. All Corporate communications, publications, and news are published on the website at www.georgfischer.com, with information from past years archived.

Interested media professionals also have the opportunity to interview and hold in-depth discussions with management. Traditional media conferences are supplemented by the active presence of GF on the social media channels [Twitter](#), [Facebook](#), [YouTube](#), [LinkedIn](#), and [Xing](#).



Industry 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 (economiesuisse and Swissmem) to global networks such as the UN Global Compact – GF is involved in many ways.




Through its [Clean Water Foundation](#), GF contributes about CHF 1 million annually towards projects implemented with the help of selected partners (e.g. Caritas, Water Mission, Terre des Hommes, etc.) to ensure sustainable clean drinking water sources in the developing world.

Sustainability Targets 2020 – our progress

Products and innovations

Modules and targets	Targets 2020	Level of achievement	Progress status (year-end 2017)
Product responsibility GF products support the customer in saving energy and reducing CO ₂ -emissions during use of products.	GF provides CO ₂ -efficient and safe products to the customer.		All divisions place a strong focus on innovation and continuously work on developing new solutions that provide CO ₂ -efficiency benefits to our customers. Detailed examples of such products can be found in the section "Products and innovation" of this report.
Ecodesign GF products are optimized with regard to their environmental friendliness, resource efficiency, and durability.	<p>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 enable reduced energy consumption and/or CO₂-emissions.</p> <p>GF Piping Systems optimizes its products regarding their environmental friendliness, resource efficiency, and durability.</p> <p>GF Casting Solutions focuses on bionic design and lightweight construction.</p> <p>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.</p>		<p>While there is continuous room for improvement (e.g. in optimizing the choice of materials that are used in the products to facilitate their re-purposing at the end-of-life phase), the company is already on a good track with regard to the range of environmentally friendly products and solutions it offers. All divisions have made a commitment to increasing focus on the sustainability of their offering and to positioning it as such for their respective customer segments.</p> <p>GF Machining Solutions has joined the Blue Competence Initiative and made a commitment that the portfolio of all GF Machining Solutions machines sold by 2020 will have reduced average energy consumption during usage as per defined targets. To this effect, a multi-technology team was created and investments were made to create a necessary measurement infrastructure. The machines will be measured and compared, with initial results being expected in Q3 2018.</p>

Procurement and logistics

Modules and targets	Targets 2020	Level of achievement	Progress status (year-end 2017)
Procurement GF suppliers demonstrably comply with GF's Supplier Code for eco-friendly and socially responsible supply.	<p>All key suppliers have signed the GF Supplier Code.</p> <p>Systematically integrate sustainability aspects into supplier audits. At least ten audits focused on sustainability are carried out every year per division.</p>	 	<p>In 2017, the majority of GF suppliers signed the Code of Conduct. Therefore the target is on track to being achieved.</p> <p>Supplier audits do not yet systematically incorporate social and environmental criteria. Development of detailed criteria relevant to specific commodity groups is on the agenda of GF for 2018, with subsequent audits to follow.</p>
Logistics GF optimizes its logistics with regard to energy consumption, emissions, and packaging.	<p>Systematically measure and analyze key transport and environmental figures together with the most important transport service providers in Europe.</p> <p>Define and implement improvement measures together with transport service providers.</p>		GF works closely with its logistics partners to evaluate and implement improvement measures. Therefore, target achievement was on track in 2017.

Reduce GF product deliveries by air freight by 20% worldwide.







Efforts are being made to continuously decrease the share of air freight. In 2017, we saw an increase, however, due to the closure of one of our GF Piping Systems warehouses in China, complemented by an increase in production volume. Concrete strategic measures are being discussed to shift the transportation of products to rail and sea freight whenever possible.

People and safety

Modules and targets	Targets 2020	Level of achievement	Progress status (year-end 2017)
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 the end of 2020.	Zero severe accidents ¹		While the number and rate of accidents decreased over the last years because of the strong push of the Zero Risk campaign, 38 severe accidents occurred in 2017. Therefore, further efforts are needed to continuously reduce the probability of such cases.
	Reduce accident rate by 20%		Accident rate reduced by 35% from the baseline of 25.0 to 15.9 accidents per one million working hours in 2017 – significantly below the target rate for 2017 and even the one for 2020. Therefore, the target has been achieved but we need to make sure we continue to be vigilant about ensuring the culture of safety.
	All companies comply with GF safety standards		The GF safety audits will start in the majority of companies in 2018. We consider the target achievement to be on track.
Safety audits GF regularly conducts cross-site safety audits in order to constantly improve its safety culture.	Cross-site safety audits are performed per production plant and warehouse at least once a year		In 2017, the focus was on planning the audits and providing training for the auditors. GF Machining Solutions already conducted safety audits in every production plant. Therefore, target achievement is on track.
Employer responsibility GF strives to be an attractive employer to be able to attract talents, retain our performing employees, and develop our workforce. Furthermore, GF acts as a respectful and socially responsible employer.	Be recognized in our industry as an attractive employer		GF was ranked among "Switzerland's most attractive employers 2017". Continuous efforts are needed to maintain our status as an attractive employer across our international locations.
	Fill 70% of vacant leadership positions with internal candidates		The various professional development programs implemented by GF created a stable base within the company. GF filled 62% of vacancies in management in the period 2016–2017 with internal candidates. As of the end of 2017, 75% of all senior management positions came from within the GF ranks.
	Take actions to increase and promote diversity relative to gender, age, and origin		In June 2017, GF introduced a new and progressive policy for its employees in Switzerland, whereby the company offers parents of newborns three additional weeks of parental leave. This policy and other measures also facilitate the easier return of women to work after maternity leave.
Absences GF strives to lower the absence rate by implementing supportive measures.	Reduce absence rate by 10% across the organization		The absence rate decreased in 2017 very slightly to 4.02% as compared to 4.09% in 2016, with a total reduction of 5% against the baseline of 4.41%. We are on track to reach the absence reduction target by 2020.

1 Work-related accidents with injuries of GF employees and third party employees which cause at least 24 hours of hospitalization and need medical treatment.

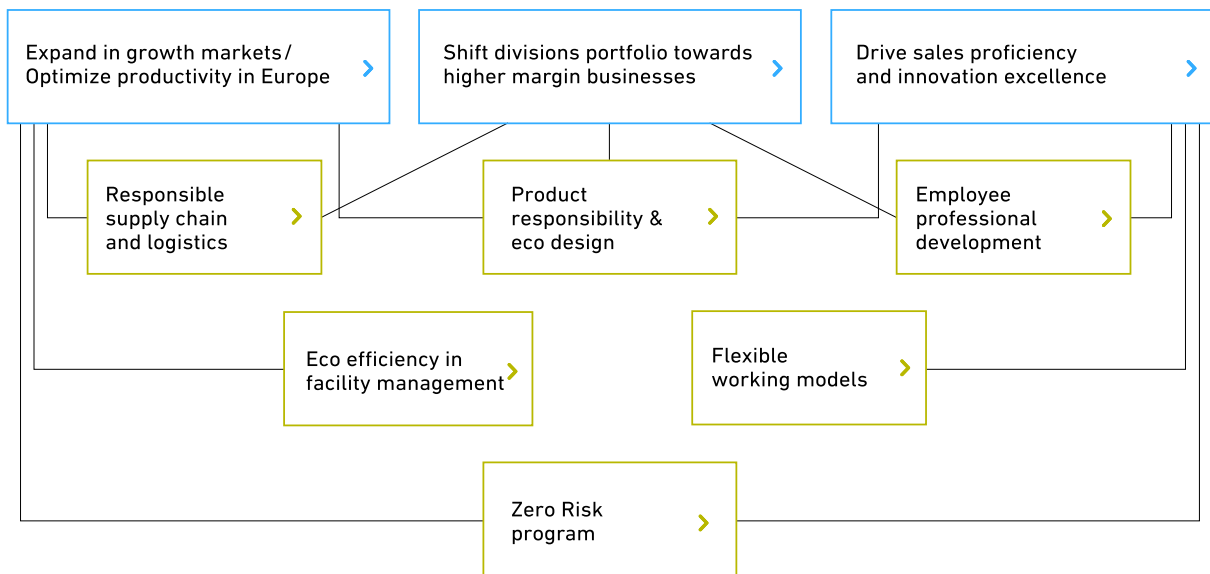
Environment and energy

Modules and targets	Targets 2020	Level of achievement	Progress status (year-end 2017)
Energy GF production companies actively apply energy efficiency measures and define local targets in order to realize the Corporate goal of increasing energy efficiency by 10% in every division by the end of 2020.	Increase energy efficiency by 10%		On the Group level, energy efficiency was above the expected target line (at 106 vs expected 104), but we observed a slight decrease from the 2016 level (108). As a strategic step, in 2017, several sites of GF Casting Solutions installed and ramped up new production equipment. The initial setup and testing of these machines ran in parallel to normal operations, thus leading to increased energy consumption. The old equipment will be decommissioned, and the new machines are expected to deliver efficiencies of up to 20% in the mid-term. The performance of GF Casting Solutions is decisive for that of GF as a whole, and ramping up of efficiencies of the new equipment and other facilities will be the focus for the division to meet the 2020 target for the Corporation.
CO₂e GF strives to reduce its CO ₂ e emissions from production by at least 10% in every division by the end of 2020.	Reduce CO ₂ e emissions by 10%		In 2017, CO ₂ e intensity was slightly above the target line (at 98 vs expected 96) being strongly influenced by the development of energy use. Systematic efforts will be made to reach the set CO ₂ e reduction target by 2020.
Materials and waste GF strives to reduce its non-recycled waste from production by at least 10%.	Reduce non-recycled waste by 10%		In 2017, non-recycled waste intensity declined by over 17% as compared to the baseline. The result was achieved mainly because of the high recycling rates of GF Casting Solutions' production sites. For the years to come, we need to ensure that we continue this positive trend and try to increase the proportion of reused materials even further (even in cases of production volume growth).
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 the end of 2020.	Reduce fresh water consumption in water-scarce and -stressed areas by 10%		The six production sites in water-stressed and water-scarce areas decreased their water consumption according to the target achievement path. Therefore, we are on track to meet the 2020 target.

Sustainable business management

The overall strategic direction of GF is driven through the [GF Strategy 2020](#), defined and communicated by the Corporation in 2016. Proactive management and integration of sustainability-relevant topics within all of our operating activities is key to achieving these set goals. Therefore, we are systematically addressing the topic through a broad spectrum of relevant initiatives run by GF.

GF Strategy 2020



Good governance

As an international industrial Corporation, GF is at home in a variety of segments 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 good Corporate Governance and ethically impeccable conduct.

Business conduct

GF's business conduct and Corporate strategy are based on the foundation of [five values](#). They shape and embody the philosophy and spirit of GF in our daily work for the benefit of our key stakeholders and our company. The values are translated into a set of standards for ethical conduct and integrity, which define GF's Corporate culture and are summarized in the [Code of Conduct document](#). The Code of Conduct is published in 18 languages and is binding for employees of all three divisions and at all locations¹. For the daily operations of the GF entities, it is complemented by internal policies and regulations implemented at the Corporate and local levels.



The five core values of GF are shared and lived up to at all levels: We put customers first.



We act fast.



We do what we say.



We reward performance.



We respect people.

Corporate Governance

The Board of Directors and Executive Committee are the highest management bodies of GF. They attach great importance to good Corporate Governance. The implementation and continuous improvement of the generally accepted principles of Corporate Governance ensure the presence of a necessary level of oversight, strategic and tactical management of the Corporation and its entities, as well as transparent communication with our internal and external stakeholders on all topics relevant for an assessment of the quality of GF as a Corporation.

The Board of Directors is responsible for monitoring the management of the company and for determining its strategic direction and financial and accounting policies. The three standing Board Committees (Audit Committee, Nomination Committee, and Compensation Committee) prepare the relevant topics for 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 Center² and support the Board of Directors in meeting its responsibilities.

In the interests of its stakeholders, the Georg Fischer Group, 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. For detailed information, including but not limited to the [tasks of each Board Committee](#) and the [Compensation Report](#), please see the respective section in the Annual Report 2017.

Risk management

Enterprise risk management is used at GF as a fully integrated risk management process, and it is systematically applied at all levels of the Corporation. Twice a year, the three divisions, the Corporate employees and all significant Corporate companies prepare a risk map of the key risks with regard to strategy, markets, operations, management and resources, financials as well as sustainability. The likelihood of the risk occurring is classified into one of four categories. Where possible and appropriate, the identified risks are subject to a quantifiable assessment, taking into consideration any measures that have already been implemented. Alternatively, a qualitative assessment of the risk exposure is applied.

The Head of the Service Center Risk Management & Tax acts as the Chief Risk Officer (CRO) and, in this function, reports directly to the CEO. The CRO is supported by a non-executive Risk Officer in each division. Supplemented by the Corporate Compliance Officer (CCO) and internal experts in Corporate Risk Management, the Risk Officers under the leadership of the CRO constitute the Corporate Risk Council. In 2017, this Council met twice. In addition, the CRO conducted workshops with the management of the three divisions as well as with the Executive Committee to analyze the risk situation, to discuss measures to mitigate risks, and to define the actual top risks for each unit.

The topics of these meetings were the optimization of risk reporting of compliance risks, the findings of a benchmark analysis regarding the enterprise risk management and business continuity management processes, as well as analysis of the risk maps. Identified risks were discussed in the Executive Committee, and adequate mitigating measures were determined. The resulting risk report was reviewed and approved by the Board of Directors in December 2017.

For further information on risk management, please see the relevant section in the [Annual Report 2017](#).

Corporate compliance

Compliance with the applicable laws and guidelines worldwide as well as with business ethics standards is monitored by Internal Audit and the CCO. The CCO reports to the General Counsel or, where necessary, directly to the CEO. As a member of the Corporate Risk Council, the CCO's task is to ensure that the issue of risk management is given 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 2017, including:

- an e-learning program on Anti-corruption/Anti-bribery for about 850 employees
- an e-learning program on Antitrust/Competition Law for about 650 employees
- an e-learning program on Export Controls/Sanctions for about 450 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 10'500 employees have received compliance training since it was introduced in 2011. The training program is ongoing, and the employees are required to participate every three years. In addition, in 2017, the Corporate Legal Department began offering one-on-one meetings to Senior Managers visiting Schaffhausen from other locations in order to provide general as well as specific legal advice and training to them upon request.

To further reinforce the compliance function in the company and to give due consideration to GF's strong presence in China in particular, the following measures have also been in force since 2015:

- Consistent implementation of the "GF Compliance Agreement for Intermediaries" as a guideline for GF 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 Agent" function to help to identify and assess compliance risks, to carry out initial cursory internal compliance controls on-site, and to support the identification and implementation of appropriate new measures.

A whistle-blowing program enables all employees to report any breaches of legislation or guidelines anonymously to the CCO. Proven breaches are subject to appropriate sanctions.

Product and service information and labeling

GF adheres to all relevant rules and regulations with regard to product safety and relevant labeling and information provided to our customers. This includes but is not limited to

- enclosing the CE³ and RoHS⁴ labels, when relevant
- upon customer request, providing to them a manufacturer declaration regarding conflict minerals (following the Dodd Frank Act) as well as a safety declaration regarding the presence of substances of very high concern in the products (according to REACH legislation)

Dedicated working groups within the divisions (e.g. Product Stewardship Group within GF Piping Systems) address issues related to the environmental, health and safety standards of GF products. These groups are responsible for tracking of new regulations and trends, defining and ensuring necessary internal processes, conducting relevant trainings and supporting customer inquiries.

¹ The Code of Conduct is an integral part of each employment contract.

² See "Organization of GF" in the respective section of the [Annual Report 2017](#).

³ Indication of conformity with health, safety, and environmental protection standards for products sold within the European Economic Area (EEA).

⁴ Indication of conformity with the EU's Restriction of Hazardous Substances Directive.

Products and innovations

A key aspect of GF's Strategy 2020, across the three divisions, is the transformation of GF from a pure product and system provider to a provider of integrated solutions. The goal is to support customers in the most meaningful way with added-value services over the entire life cycle of offered solutions. Here, sustainability aspects of our products play an integral role in achieving the purpose of all our business activities. For GF Piping Systems, this refers to ensuring and safeguarding long-lasting, leak-free, and high-quality transportation of water, gases, and chemicals. For GF Casting Solutions, this means designing and producing lightweight components for the next generation of mobility solutions. For GF Machining Solutions, this is providing our customers with modern high-precision machines and solutions that significantly improve the energy efficiency of product manufacturing in a variety of segments, including aerospace, ICT, and med-tech.

GF Piping Systems

Strategy and solutions

Significant losses are incurred every year globally during the transportation of water¹, gas² and other liquids for reasons that include outdated infrastructure and its poor maintenance. On one hand, this contributes to the challenge of ensuring water security in the context of climate change, urbanization, and growing populations. At the same time, it represents a loss of valuable natural resources as well as contributing to increased greenhouse gas emissions and causing a risk of environmental and social damage due to potential contamination.

The products and solutions of GF Piping Systems help to provide an answer to these challenges, as the division's expertise lies in the design and manufacture of best-in-class quality and energy-saving solutions for water management, treatment, and transportation, as well as leak-free piping solutions for gas and chemicals transport.

GF specializes in plastic piping systems, as we find these to have considerable advantages over the traditionally used metal materials when it comes to longevity³, flexibility, weight, and corrosion resistance. Based on in-house lifecycle assessments, these also have a significantly lower impact on the environment when used for water treatment and distribution.

The application of our respective product and service portfolio spans from installations for municipal water supply, office building facilities, private homes and hospitals, to those for cruise ships. We are 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. Depending on the specific customer need, we ensure the implementation of appropriate functionalities, suitable material composition, correct dimensioning and system control devices. In turn, this also means lower financial and environmental costs for our customers.

Successful product innovations achieve the right combination of economic, social, and environmental benefits.

Sanitation and hygiene are key when it comes to ensuring safe drinking water and clean water for industrial application (e.g. electronics industry).

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goals:



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. In 2017, we had the opportunity to work with the Erlabrunn Hospital in Germany, to supply the institution with the latest innovation developed by the division – the Hycleen Automation System.

This solution showcases the strategic thrust of GF Piping Systems, i.e. to grow significantly in the area of automation solutions, sensors, and intelligent valves, while at the same time expanding its global service business. The development of a digital offering that connects the diverse stakeholders in the value chain plays an important role in further increasing the efficiency of piping systems. Another example is Track & Trace, a new digital service developed by GF, which enables centimeter-precise positioning of GF products and remote monitoring of the piping installation to ensure timely intervention in case of potential issues.



A clean solution

When drinking water at the wrong temperature does not circulate enough in the piping, bacteria reproduce particularly fast. The Hycleen Automation System from GF Piping Systems was exactly developed for this kind of situation, and ensures perfect drinking water quality in hospitals, retirement homes and schools. [Read more](#)

GF Casting Solutions

Strategy and solutions

The pressing global issue of climate change is at the top of the international community's agenda. The Paris Climate Agreement, adopted in December 2015 by representatives of 196 countries, set the goal of limiting the rise in global temperatures to below two degrees Celsius above pre-industrial levels. 193 countries submitted their pledges⁴ to play their part in this joint effort, and the commitments are already finding their way into concrete policy. An example thereof is the plan of the French government to ban all petrol and diesel vehicles by 2040. Already, strict limitations exist on CO₂ emissions from vehicles in the EU⁵ and the USA⁶, while similar rules will apply in China as of 2020⁷.

This regulatory pressure has pushed the manufacturers and suppliers of the mobility sector to refocus urgently on the development of lightweight 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.

The vision of GF Casting Solutions is to be the first choice solution provider for lightweight casting components. Consequently, a cornerstone of the division's strategy is to expand its light metal expertise globally. In 2017, the division achieved two milestones. First, it acquired Eucasting Ro SRL, an aluminum die-casting specialist with two production sites in Romania. Secondly, as part of the joint venture with Linamar, it opened a new die-casting facility in North Carolina (USA). From 2018 onwards, GF Linamar will be manufacturing light metal components for the strategically important North American automotive market.

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goals:



GF Casting Solutions is continuously sharpening its innovation focus and working on developing new and optimally suited materials and new technologies (e.g. multi-material-design). By focusing on bionic design, GF Casting Solutions is looking to nature as an inspiration and is finding the most lightweight and at the same time robust structures. The division is developing state-of-the-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 cost-effective and thus provide customers with double 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 up to 40 percent lighter in comparison to other production methods or materials.

The division places a strong focus on ready-to-mount solutions and strives to get involved in the development of new vehicles at an earlier design stage. In addition to this, alternative powertrains and e-mobility have begun to have a significant impact on the automotive sector. Since one of the central challenges of electric vehicles is how to offset the weight of the heavy battery, the expertise of GF in lightweight technology is right on the mark to deliver the required solutions. Aluminum and magnesium high-pressure die-casting is GF's solution for crash-relevant components in a lightweight design. Collaborations exist with a number of customers to jointly develop components for electric vehicles, some of which are already in high-volume production. At the end of 2017, 20 percent of the order intake came from components and systems that the division provided for hybrid and electric vehicles.



Together, a step towards the distant future

In an extraordinary development and production partnership with Swissloop, GF Casting Solutions demonstrated its lightweight expertise – and made a key contribution to the team's remarkable success in the visionary Hyperloop Pod Contest 2017. With GF's support, the team hopes to achieve a major coup in 2018. [Read more](#)

GF Machining Solutions

Strategy and solutions

As a Swiss-based high-precision machine manufacturer, GF Machining Solutions places its emphasis on the highest quality and innovation in order to differentiate itself from the competition. The vision of the division is to be a trusted partner of the global precision machining industry during all phases of a machine's lifecycle. The focus is on reliability of the products to avoid unplanned interruptions, as well as on supporting customers to significantly improve the efficiency of their manufacturing operations. Increased automation, digitalization and connectivity of the machines, and progressive increase of their "intelligence" are key parts of this development.

GF Machining Solutions collaborates closely with its customers starting with the pre-sales production concept phase and right up to the end-of-life phase of the equipment, at which point the used systems are taken back and refurbished. With the introduction of remote access solutions, a

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goals:



further step has been taken in order to offer fast response times and remote maintenance capabilities.

Ensuring the energy efficiency of the machines is becoming intrinsic to the expectations of quality by customers and is a topic that is attracting steadily rising attention from regulators around the world. Therefore, GF Machining Solutions is working on developing solutions that will allow customers to produce their components with lower energy consumption. 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 have already been introduced.

The key focus of product development at GF Machining Solutions is to permanently push the envelope and offer solutions to customers that enable them to create innovative and sustainable products. An example thereof is the production of nozzles for gasoline direct injection engines (GDI engines). The high precision parts are produced on our [Microlution Femto Laser](#), which gives our customers the solution, allowing them to adhere to ever-tighter car emission regulations.

GF Machining Solutions works closely together with universities and international organizations to perform research into new technologies for use both in existing products as well as new applications. Because of such work, the division was able to develop the laser texturing solution as a substitute for conventional chemical etching technology, which uses acid and other pollutants. In contrast to other processes, laser texturing requires no cutting tools, so materials are saved in the process as well.

A variety of other features developed by GF Machining Solutions offer improved ecological balance of the machines. These include clean filtration systems with automatic particle separation, separation of chips and cutting fluid, reduction of compressed air consumption, and adaptation of the power of the machine pump according to customers' needs in terms of filtration, cooling and flushing.



Good for both people and the environment

Laser texturing has revolutionized the way molds are processed. A good example is GF Machining Solutions' customer Custom Etch Inc. The texturing and engraving specialist benefits from time savings of up to 50 percent when processing individual items. In addition, the company needs far fewer chemical substances. [Read more](#)

¹ Source: OECD Survey on Water Governance for Future Cities, 2014.

² Source: Rhodium Group, Untapped Potential. Reducing Global Methane Emissions from Oil and Natural Gas Systems, 2015. www.rhg.com/wp-content/uploads/2015/04/RHG_UntappedPotential_April2015.pdf

³ Piping systems made of plastics have a lifecycle 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.

⁴ As examples thereof, China aims to source 20% of its energy from low-carbon sources by 2030 and to cut emissions per unit of GDP by 60-65% of 2005 levels by 2030, while the EU and Switzerland have committed to reducing their domestic greenhouse gases by at least 40% and 50%, respectively, by 2030 compared to 1990 levels. Source: www.carbonbrief.org/paris-2015-tracking-country-climate-pledges.

⁵ In Europe, the defined limit of CO₂ per kilometer must not exceed 95 g/km for passenger cars and 147 g/km for light commercial cars by 2020.

⁶ www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-model-year-2017-and-later-light-duty-vehicle

⁷ www.reuters.com/article/us-china-autos-emissions/china-to-require-tougher-new-vehicle-emission-standards-for-2020-idUSKBN14C0Q4

A clean solution



The Erlabrunn clinical center has successfully implemented the Hycleen Automation System.

When drinking water is set at the wrong temperature and does not circulate enough in the piping, bacteria reproduce particularly fast. The Hycleen Automation System from GF Piping Systems was developed for exactly this type of situation, and ensures a perfect drinking water quality in hospitals, retirement homes, and schools.

Arnaud Andreolli, Product Manager for the building technology segment at GF Piping Systems in Sissach (Switzerland), knows the dangers of bacterial contamination in drinking water very well: "Especially elderly people or people with a weak immune system can get more easily infected with legionella and develop illnesses such as severe pneumonia." Owners or managers of properties in countries with particularly strict regulations, for example in Germany, Austria or Switzerland, have therefore increasingly been inquiring about solutions that ensure perfect drinking water quality, reports Andreolli.



Arnaud Andreolli is Product Manager for the building technology segment at GF Piping Systems in Sissach (Switzerland).

Up to 15 percent less energy

GF Piping Systems responded to this demand and developed the Hycleen Automation System – the first solution of its kind worldwide. Based on a four-stage concept (see info box "Low effort, big impact"), it guarantees bacteria-free drinking water for single-family houses and residential buildings as well as retirement homes, schools, and hospitals. By circulating the water and creating a permanent hydraulic balance across all the pipes, the system ensures a constant high temperature of over 55°C and consequently a virtually sterile environment. This prevents any

excessive formation of legionella bacteria, for which the ideal growth conditions are between 25°C and 50°C. The Hycleen Automation System only allows as much hot water to circulate in the pipes as necessary and in so doing prevents the loss of warmth and energy that would have been necessary to reheat the water. This enables owners or managers of large houses and buildings with multiple connections to save up to 15 percent in energy consumption.

German clinic is the first customer

The Erlabrunn clinical center in the Ore Mountains area, 130 kilometers south of Leipzig in Germany, is the first customer who has successfully implemented the Hycleen Automation System. Nine specialist clinics with around 320 beds, a medical supply center and an in-patient hospice are housed in the prominent building complex, which was once a miners' hospital. The water piping, consisting of five different widely-spread pipe systems, wind their way right through the complex. "Our previous drinking water supply circulated at high temperatures and high pressure," explains Gregor Günther, Technical Director at the Erlabrunn clinical center. "Therefore, we were looking for a circulation system with automatic adjustment capabilities to guarantee the best hygienic conditions and prevent the formation of germs over the long term," recalls Günther. The management team at the Erlabrunn clinic also chose the Hycleen Automation System from GF Piping Systems partly because they wanted to completely satisfy the official inspection and documentation requirements of the public health authorities. Due to the new solution, Gregor Günther can now quickly and easily access the relevant information when monitoring the quality of the drinking water.

Tapping into new markets

It took about two and a half years from the first Hycleen Automation System being developed to it being installed at the Erlabrunn clinical center. Plans are currently in progress to install such a system at a German daycare center as well as in an apartment block in Berlin. In Istanbul (Turkey), GF Piping Systems is supplying a hospital with 162 valves and four system masters. In addition to Germany and Turkey, the division also has plans to expand into the markets of Switzerland, Austria, Norway, Sweden, Finland, Denmark, France, Italy, Spain, Australia, India and the US.



Gregor Günther, Technical Director at the Erlabrunn clinical center: The Hycleen Automation System from GF reflects state-of-the-art technology.



The Erlabrunn clinical center in the Ore Mountains area, 130 kilometers south of Leipzig in Germany was looking for a solution that ensures perfect drinking water quality.



Five different widely-branched pipe systems wind their way through the building complex. The ideal challenge for the Hycleen Automation System.



When all 72 valves were installed, connected to two system masters and a control unit, and after a first automatic adjustment, the system functioned flawlessly.



Thanks to the installation, any irregularities which may occur, such as too low temperatures or defective valves and sensors, can now be monitored.

Ideal for existing buildings

With its locally installed components, the Hycleen Automation System is especially well suited to existing buildings. "Because of all its different pumps, types of pipe and pipelines, the Erlabrunn clinical center was the ideal challenge for implementing this system for the first time," remembers Arnaud Andreolli. And the challenge was mastered successfully. After all 72 valves were installed, connected to two system masters and a control unit, and automatically adjusted, the system functioned flawlessly. Readjustments were made based on the recorded measurement data. As a result of the installation, any irregularities which may occur, such as too low temperatures or defective valves and sensors, can now be reported directly to the operator's PC via the building management system. A function for sending push notifications to the safety engineer's smartphone is in the planning stages.

Low effort, big impact

The Hycleen Automation System from the Hycleen product range ensures optimum hygiene standards for drinking water in public and private buildings. Continuous monitoring and recording of the temperature is an important prerequisite for reliable assurance of drinking water quality. A unique system master with a control screen and easy-to-operate software manages up to 50 connected valves, sensors and applications. The Hycleen Automation System covers the four processes for ensuring drinking water quality: prevention, monitoring, intervention and risk assessment.

Prevention: Targeted preventive measures can make a difference to the quality of drinking water. Alongside ensuring the water is at the right temperature, these measures also include maintaining a constant hydraulic balance and regular flushing.

Monitoring: Monitoring refers to taking the existing drinking water quality as well as the type of building into consideration. A seamless temperature monitoring is just as important as the storing and documenting of measurements.

Intervention: An intervention should only be carried out as the last resort in ensuring high-quality drinking water. Some methods of intervention include thermal or chemical disinfection.

Risk assessment: Risk assessment is particularly important for larger projects. The wide range of data that can be obtained using the Hycleen system is a major help in assessing the condition of the drinking water and in recognizing risks.

Together, a step towards the distant future



High-speed to LA: The Swissloop team unveiled its pod to the public in Zurich on 23 May 2018.

In an extraordinary development and production partnership with Swissloop, GF Casting Solutions demonstrated its lightweight expertise – and made a key contribution to the team's remarkable success in the visionary Hyperloop Pod Contest 2017. With GF's support, the team hopes to achieve a major coup in 2018

In November 2016, when the preparations began for the Hyperloop Pod Competition initiated by Elon Musk, the technological visionary and founder of SpaceX and Tesla, no one could have predicted the extraordinary success of Swissloop, a team that brought together students from ETH Zurich and other Swiss universities – not even the 50 team members themselves. Over the eight months that followed, the technical development, design and testing work carried out by the electronic and mechanical engineering students was rewarded with an outstanding third place at the finals in Los Angeles in August 2017, despite some technical setbacks.



Roger Kupferschmid, Head of Research & Development at GF Casting Solutions, is working intensively on the future of mobility.

The future of mobility

Enabling the Swissloop pod, a transportation capsule weighing just 244 kilograms, to cover the one-kilometer test route as quickly as possible required ultra-light components as well as a powerful drive system. As the main sponsor and a specialist for lightweight components, GF Casting Solutions provided ambitious and committed support to the team by developing and producing an aluminum component for the pod's chassis.

"With this partnership, we want to show that we are addressing the future of mobility," said Roger Kupferschmid, Head of Research & Development at GF Casting Solutions, explaining one of the reasons for the partnership with Swissloop. "We have been working for some time now on energy-efficient and future-oriented mobility solutions, for example for hybrid and electric vehicles. It was interesting for us to take a look into the even more distant future with Swissloop." Lightweight components for the automotive industry are already one of GF's specialties. Given the expanding development of alternative, energy-efficient drive systems in the automotive industry and the associated challenge of using parts that are as lightweight as possible, GF Casting Solutions has set itself the goal of becoming the supplier of choice for lightweight cast components.

The lightweight aluminum chassis component was created in just five months, in close partnership with the Swissloop team. At the end of the process, GF Casting Solutions created a unique, tailor-made piece to provide the Swissloop pod with the necessary lightness and stability for potential speeds of up to 400 km/h and rocket-like acceleration.

Return to Los Angeles with new pod

The urge to continue development was motivation in itself for Swissloop to want to qualify for the 2018 Hyperloop Pod Competition. The organizers in California were impressed by the new team's concept, and invited it back to Los Angeles to take part in the Hyperloop Pod Competition. Swissloop wanted to develop a new transportation capsule with a new drive system for this year's race on 22 July 2018, which is all about achieving the fastest speed. GF Casting Solutions is involved again on account of the success of the partnership in 2017 and the team's sound concept.

As Swissloop's main sponsor the division was involved in the development of a new component for the chassis of the three-and-a-half-meter-long pod. In April 2018, two parts were sand-cast from an aluminum/silicon alloy before being finished by milling, drilling and heat treating. The aluminum axle carriers, which are painted in GF blue, hold the front and rear axles of the pod chassis and provide stability. They are both 35 cm high, 30 cm wide and 55 centimeters long, and weigh just five and a half kilograms each. "The optimized geometry and bionic design allowed us to even further reduce the weight of the cast part", recalled Dominik Mahnig, Head of Product Management & Development at GF Casting Solutions.

Electric motors for speeds of up to 500 km/h

The new pod was officially unveiled and presented to the public on 23 May 2018 in Zurich. The Swissloop team now has until the third Hyperloop Pod Competition on 22 July 2018 to put its new pod through its paces. In the upcoming competition, the pod, which is propelled by four electric motors with a combined output of 540 hp, will shoot through a 1.25-kilometer vacuum tube at speeds of up to 500 km/h. At high speed to the very end. And hopefully into the first place. GF has its fingers crossed!

"GF stands for extraordinary solutions in the field of lightweight design. A motivated team helps us to solve every problem. We are proud and happy to have GF as our main sponsor."

Luca di Tizio
Member of the Board of Swissloop



Swissloop's 2018 pod is propelled by four electric motors with an output of 540 hp and can reach speeds of up to 500 km/h.

What is the Hyperloop Pod Competition?

With the Hyperloop concept, Elon Musk, the founder of Tesla and SpaceX, aims to create a new transportation system capable of transporting passengers and freight in pods at speeds of up to 1200 km/h through a vacuum tube.

To promote the development of this technology, SpaceX launched a global competition for universities. More than 1'000 student teams applied to take part in this year's competition on 22 July 2018 in Los Angeles, and 20 of them qualified. Among them, is the Swissloop team, who is competing this year for the second time having already participated in 2017.

The 20 teams can spend a week testing their pods at the SpaceX premises in Los Angeles. Only the fastest pods get to travel through the 1.25-kilometer vacuum tube. The fastest pod wins.



Good for both people and the environment



Jean-Paul Nicolet from GF Machining Solutions knows the advantages of laser technology, especially for texturing PET bottles.

Laser texturing has revolutionized the way molds are processed. The customers of GF Machining Solutions, such as Custom Etch Inc., are not only saving up to 50 percent time when processing individual items but are also reducing the use of chemical substances.

At the beginning of 2011, the Custom Etch Inc. facility in New Castle (Pennsylvania) was still operating on traditional lines. Employees with protective clothing and face masks were working manually on the molds. "That has changed significantly," affirms Donald Melonio, Vice-President of Custom Etch. Seven years ago, the texturing and engraving specialist still exclusively used chemical etching to treat molds. The company now uses six ultra-modern laser machines from GF Machining Solutions that speed up the production process. "Every year, we engrave between 3'000 and 4'000 individual molds for the production of PET bottles, car lighting elements, and fiberglass doors," explains Donald Melonio. "Today, 35 percent of our orders are processed with laser machines from GF Machining Solutions." Chemical etching is still used for the other 65 percent. "Six laser machines are not enough right now to process our monthly volume of orders," elaborates Donald Melonio. "But our aim is to add further laser capacity to our production."

Custom Etch's clients include the major US beverage companies and bottlers as well as their mold makers. In early 2010, when the company faced a challenge to apply a geometric style texture to PET bottles for Pepsi brands, Custom Etch discovered laser texturing. "This was a very challenging project. We could have achieved the desired result manually by etching, but the labor cost and time would have been



Jean-Paul Nicolet from Laser-Business Development & Market Support at GF Machining Solutions in Geneva has looked after Custom Etch since 2011.

prohibitive”, Donald Melonio remembers. “Our search brought us to the GF Machining Solutions laser technology portfolio, and we purchased our first machine to fill the Pepsi order.”



Donald Melonio, Vice-President of Custom Etch: “We have evolved from a 100 percent manual process to an automated process that ensures 100 percent perfection.”



The texturing and engraving specialist uses six ultra-modern laser machines from GF Machining Solutions.



Laser technology is completely changing the way engraving and texturing companies work.



Today, a great share of the production is fully digitalized and automated—from product design to the finished mold.



Every year, Custom Etch engraves between 3'000 and 4'000 individual molds for the production of PET bottles.

25 percent less chemical substances

Jean-Paul Nicolet from Laser-Business Development & Market Support at GF Machining Solutions in Geneva has looked after Custom Etch since then. "Laser technology is completely changing the way engraving and texturing companies work," Nicolet points out. "Today, production processes – from product design to the finished mold – are fully digitalized and automated. Meanwhile, virtually everything product designers want can be realized." In addition, the GF Machining Solutions laser machines process the molds much quicker and more accurately than it would be possible manually. Donald Melonio confirms that his clients get the finished molds back in half the time previously required. "The labor costs previously involved in masking, applying patterns and acid etching molds have been significantly reduced." What makes him particularly happy is the reduction of chemical substances. "The use of chemicals is down 25 percent since laser technology was introduced," says Melonio.

Today, Custom Etch is GF Machining Solutions' second-biggest customer in the field of laser texturing. The production area at the New Castle facility has doubled with the purchase of the laser machines and the associated conversion to the innovative environmentally friendly technology. In 2017, Custom Etch also had four of its GF machines fitted with a more powerful laser, each one now operating at 100 rather than 50 watts. Because of this upgrade, each machine can process twice as many pieces in the same amount of time.

Laser technology is gaining ground

Jean-Paul Nicolet also works with other clients in the field of laser texturing. Despite the high investment costs of up to several hundred thousand Swiss francs for each laser machine, he sees a worldwide shift to the modern, more efficient, and more environmentally-friendly technology. The mold processing company Tian Zhi Zun (TZZ) in Suzhou (China), for example, uses four Laser P 4000 U machines and has switched all its production for clients from the automotive, electronics, consumer goods and aerospace industries from chemical etching to laser technology. "In China, there are sometimes high taxes and levies imposed on procedures involving chemical substances. As a result, there is naturally a great deal of pressure and motivation for change," says Nicolet. He has also noticed that many companies are interested in environmentally friendly manufacturing techniques such as laser technology of their own accord. "Especially for production facilities, the topic of sustainability is getting more and more important."

"Thanks to laser technology our use of chemicals has dropped significantly."

Donald Melonio
Vice President von Custom Etch Inc. (USA)

This is how chemical etching and laser texturing work:

Chemical etching uses chemicals to dissolve unprotected parts of a metal mold to produce a predefined structure or engraving. Precise manual work is required in the multistage process. After cleaning the mold, synthetic resin or protective lacquer is applied as acid protection. This protection is then removed using needles, styluses or scalpels on the areas to be etched. Wax print or multi-layer films are applied to these places to transfer the pattern. The desired engraving is created in the subsequent acid bath, where the material surface is removed from the unprotected areas. After the bath, the piece is intensively cleaned, rinsed off, and polished.

By contrast, fully digital 3D laser engraving offers more design options, greater safety, and a higher level of quality. The technology allows almost unlimited design options for individual surfaces, such as molds for automotive parts, entertainment electronics, packaging, tool and mold making, or shoes and sports items. A 5-axis laser applies the pattern directly to the mold surface, which means there is no need to use or dispose of chemical substances.

The international texturing and engraving specialist Custom Etch Inc. is member of GLG (Global Laser Group) and of SEC (Surface Etching Cooperation).

Procurement and logistics

For GF, sustainable management of the company includes the establishment and maintenance of long-term, trusting partnerships with our sourcing and logistics partners. Beyond the economic considerations, GF has specific expectations of them regarding their ethical conduct and compliance with relevant laws, regulations, and international standards in respect to social and environmentally friendly conduct. We see this, as well as environmentally friendly and efficient transport solutions, as not only forming part of good business conduct but also as a contribution to achieving business goals.

Procurement

The [Supplier Code](#) plays a crucial role in this context, and all key business partners are expected to actively sign the document by the end of 2020. By the end of 2017, the vast majority of GF suppliers had done so (GF Piping Systems 86 percent, GF Casting Solutions 75 percent, GF Machining Solutions 82 percent). Thus, we are on track to meet the relevant target set for Procurement.

A number of sustainability criteria, including questions about human rights, environmental risk exposure, health and safety in the manufacturing process, and conformity with relevant industry regulations (e.g. REACH, the Dodd-Frank Wall Street Reform, and Consumer Protection Act, etc.) form a standard part of the onboarding and periodic evaluation process of our suppliers. As an example thereof, GF is committed to ensuring that no conflict minerals are present in its supply chain. Due to the complexity of tracing the origins of these materials, the process is a step-by-step effort, and we continuously work on increasing transparency in this respect with our suppliers. Based on the information obtained from them, we are not aware of any conflict minerals present in the materials purchased during 2017 for the manufacture of our products.

As the next step, during the course of 2018, we plan to develop an in-depth framework for the assessment and continuous monitoring of our suppliers based on specific criteria for key commodity groups purchased by each division. The aim is to identify additional opportunities to improve GF's own, suppliers', as well as customers' sustainability performance.

Logistics

Each year, GF purchases a variety of raw materials and other goods as part of its supply chain and then delivers the finished products to sales companies and customers around the globe. To ensure that this process is carried out in an environmentally friendly manner, GF has set itself the **target** of reducing the relevant energy consumption, carbon emissions, and packaging material.

To achieve these goals, the divisions of GF are in close contact with their logistics partners to evaluate and implement improvement measures. In 2017, GF Piping Systems successfully conducted a pilot in which rail transport rather than air transport was used in the shipping of its containers. The division will therefore put more emphasis on this means of shipping going forward. Further steps are being taken to progressively switch away from airfreight to sea transport whenever possible.

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goal:



Employees and society

People and safety

At the end of 2017, we employed a total of 15'835 people¹ (15'163 FTEs), whereof 6'764 at GF Piping Systems, 5'738 at GF Casting Solutions, 3'255 at GF Machining Solutions, and 78 at the Corporate Center. GF assumes direct responsibility for their on-the-job safety, health, and well-being.

Motivated employees are crucial to the success of a company. As the realities of a modern workplace are continuously evolving, it is one of the key goals of GF to be agile and remain an attractive employer to its current and potential employees. This starts with the continuous fostering of a culture based on respect for one another and translates into the various measures and innovative initiatives to offer engaging and professional opportunities in all areas of our operations. This includes a broad set of continuous learning and development courses and programs, fair and competitive compensation, as well as progressive modernization of production and office facilities to promote a collaborative environment and the health and safety of our employees.

Diversity and flexibility

Present in 34 countries, GF is by its nature a global organization represented by a diverse network of employees from all corners of the world. We see the diversity of cultures, religions, nationalities, genders, and age groups as a valuable source of talent, creativity, and innovation, which lead us to better performance and decision-making.

One of the three core [strategic goals of GF](#) is to drive the company toward innovation excellence. A key ingredient required to achieve this goal is the establishment and fostering of a flexible and creative working environment. Through an initiative specific to locations in Switzerland² ("future@work"), the company continuously analyzes and implements steps toward the fostering of attractive and flexible work models, enabling employees to bring their work and private life better into balance. Currently, however, the percentage of employees working part-time is only 2.4 percent. One reason for this is that in work systems that involve shift work – as is the case for production facilities – it is extremely difficult to integrate part-time positions and therefore there is little demand.

In the year under review, 14.6 percent of employees Corporation-wide were women (2'213 FTEs). The proportion of women in management was 14.1 percent (90 FTEs) of the total workforce vs. 16.8 percent (95 FTEs) in 2016.

Seeing this as a necessary area for improvement, both from the overall employer attractiveness perspective but also as an opportunity to add diverse points of view to how we approach business tasks, GF has initiated a variety of measures to boost the percentage of women among the workforce and in management³. A working group, consisting of the Talent Management specialists from the Corporate level and the divisional HR, coordinates the topic, and progress is discussed at quarterly Corporate HR meetings.

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goal:



As an important milestone, the company introduced a new and progressive policy in June 2017 for its employees in Switzerland, whereby it offers parents of newborns three weeks of maternity or paternity leave in addition to the existing provisions under the collective employment agreement (16 weeks for mothers and five days for fathers). Furthermore, GF guarantees women a comparable position – whether part-time or full-time – up to a year after the birth of their child. Not only does this help to promote overall gender balance improvement, it also facilitates the easier return of women to work after maternity leave.

Additional measures across the locations place focus on the recruitment process and finding female candidates for positions key to the core business, on conducting complementary communication within the company, and on strengthening the existing training courses with aspects of modern leadership topics (e.g. raising awareness and sensitizing the participants on the added value of diversity).

The topic of diversity extends beyond gender. Discrimination based on any personal attributes⁴ is not tolerated within GF, and we strive to have an accepting and welcoming culture for all. We welcome applications from people with a disability and support their integration into our business. At the end of 2017, there were 298 employees with disabilities working at GF (2 percent of the total workforce).

GF also focuses on employees who are approaching retirement. We believe that they represent a wealth of know-how and experience. Therefore, an array of possibilities is offered to these employees around the world in order to ensure both the smooth transfer of their expertise to the new generation of GF specialists as well as facilitation of their personal transition to the next life phase. In Schaffhausen (Switzerland), for example, GF conducts awareness training sessions on what it means to go into retirement in terms of management of personal finances as well as on remaining active physically and mentally.

Fostering collaboration

Collaboration within and across divisions and functions is only feasible if a respective collaborative culture is continuously nurtured. This starts by living the [five values of GF](#), which support the culture in question, and is reinforced by training of all employees based on the framework of the “[7 habits of highly effective people](#)”⁵. Further, collaboration requires appropriate structures in terms of processes, infrastructure, and physical space.

In 2017, a project was launched to standardize Human Resources (HR) processes across the divisions and countries with the purpose of enhancing communication between line management, employees, and the HR department, as well as strengthening the common understanding of the Corporation's values and leadership. This initiative should help HR to successfully and efficiently support the day-to-day operations of GF and provide a boost to the implementation of Strategy 2020. The concept was developed by a cross-divisional team, and will be realized step by step over the next few years.

In parallel, GF has initiated a long-term program to modernize the working and communal spaces for back office employees. The pilot for such innovation spaces was implemented in late 2017 on the ground floor and in the outdoor facilities of the Corporation's headquarters in Schaffhausen. The new concept fosters collaboration through out-of-the-box co-working spaces. Further premises will be re-designed according to this concept in 2018, including at the GF Piping Systems location in Schaffhausen, as well as in the new GF Machining Solutions building in Biel, both in Switzerland.



GF has initiated a long-term program to modernize working and communal spaces for back office employees.



The new concept fosters collaboration through out-of-the-box co-working spaces.



In the next few years, GF is investing over CHF 100 million in new modern facilities.

Training and professional development

Knowledge and hence the development of employees are essential for a company's sustainable success. Therefore, GF supports its employees and strives to strengthen their know-how during their entire career through targeted and customized training and professional development activities.

On the Corporate level, the training and professional development portfolio is designed and implemented by the GF Academy, which coordinates respective Corporate-wide measures and programs that target social and technical management skills for the management and employees of all divisions and regions.

Complementary to these courses, the divisions also have their own training programs to provide relevant educational support to the

operations of specific business areas. These programs focus on applied technical education as well as training in the area of Occupational Health and Safety (i.e. [Zero Risk campaign](#)).

Many of these training programs take place at Klostersgut Paradies, the Corporate Training Center of GF in Schlatt (Switzerland). This facility is located within the [eight century-old building](#) of a former monastery and is equipped to modern standards with state-of-the-art infrastructure.

The education and training program has created a stable base within GF, so that the company has been able to fill 62 percent of [vacancies in management](#) in the period 2016-2017 with internal candidates. As of the end of 2017, 75 percent of all management positions came from within the GF ranks.

On average, GF provided 2.5 training days per employee in 2017 (compared to 2.2 days in 2016). The respective costs for employee education and training amounted to almost CHF 9.7 million (around CHF 800 per employee), reaching 77 percent of the workforce.

Special focus training programs

A key element of GF's Strategy 2020 is the topic of innovation. To accelerate the transformation of the company and to sharpen its customer focus, we are implementing the Design Thinking approach across all divisions to make it an integral part of Corporate culture. The core beliefs driving this initiative are that:

- success depends on clearly defined factors: multi-disciplinary teams, a “try early and fail quickly” culture and a structured process including rapid prototyping as well as ongoing dialog with customers
- innovation is not restricted to R&D – it is a team effort that spans all functions

To date, over 50 training sessions on Design Thinking for more than 1'000 employees have taken place around the globe (of which 500 people were trained in 2017).

As a follow-up to training, GF has launched concrete pilot projects in each division and defined teams that are responsible for successful implementation. It is fair to say that the change is already taking root, as our employees across the organization are starting to apply Design Thinking methodology in their meetings and projects.



At an internal Design Thinking presentation, CEO Yves Serra explained the significance of the Corporate-wide initiative in relation to Strategy 2020.



Lighthouse projects from the divisions were presented to over 60 guests.



The GF Piping Systems Design Thinking team: Jörg Hunnekuhl (second from the left), Sandra Schiller (third from the left) and Thomas Küssner (fourth from the left) with representatives of the innovation consulting firm IDEO.



The GF Automotive Design Thinking team: Stephan Philipp (third from the left), Udo Kreutzarek (fourth from the left) and Christophe Buch (fifth from the left) with IDEO representatives.



The GF Machining Solutions Design Thinking team: Stéphane Cru, Adrien Rodrigues, Tiziano Vigano, Volker Reichmann, Roberto Perez, Jean-Philippe Besuchet and Ivano Gazzetta (from left to right) with an IDEO representative.

In addition to Design Thinking, a Value Selling approach is being implemented within the organization to address the strategic target of realizing business potential in higher value areas. Together, they form the basis for collaborative work across functional and geographical borders to provide the best solutions and services fulfilling customers' needs and expectations. In 2017, almost 1'800 employees worldwide participated in

Value Selling training. The next step is to incorporate the learning into practice and everyday work and to intensify it with further training.

As part of the professional development framework for the employees of its division, GF Casting Solutions is continuing the successful program for young professionals, WiN⁶. Each intake of this program runs for two years and offers its participants a job rotation in different locations within the division to gain international experience and an enriched view of various business tasks. In 2017, 16 participants of the 2015 WiN cohort graduated from the program, eight of whom chose to do job rotations. The new intake that started in 2017 has 15 participants (running until 2019). WiN offers a broad range of possibilities and places emphasis on self-motivation and drive. Once a year, the group meets for training and team-building activities, including modules on conflict resolution, positive leadership and strengthening of social competencies. A similar program is planned for launch within GF Machining Solutions in the near future.

Collaborations with academia

GF works closely with various technical universities around the world. We offer possibilities for students specializing in science, technology, engineering and mathematics to do an internship at GF or to complete their bachelor's or master's theses by working on challenging projects and case studies. Current collaborations include top technical universities in Switzerland, Germany, Austria, and Australia. Furthermore, GF is developing similar collaborations with universities in China and the USA in order to strengthen access to engineering talent in these key markets. An excellent example of a fruitful partnership with a university was the Entrepreneurial Leadership Seminar (ELS) in Switzerland in 2017, where students from the master's program in Management, Technology, and Economics (MTEC) of ETH Zurich worked on real Strategy 2020 business projects and presented their findings to the Executive Committee of GF.

Apprenticeships are 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 that span a variety of technical and commercial professions. In 2017, GF trained 525 apprentices globally (540 in 2016).

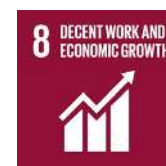
In Switzerland, the vocational training is part of the official education system, and in 2018, GF celebrates 100 years of supporting this program. GF was among the first companies to establish such professional education, and we are committed to maintaining this tradition. Here, GF has internal guidelines to ensure that persons, who completed an apprenticeship at the company are then also given preference if there is an open position. In the USA, GF is using the Swiss apprenticeship model to offer training positions in all three divisions. Collaborations on this are ongoing with many colleges across the country in the vicinity of GF locations. The goal of these measures is to make up for the shortage of qualified workers by taking a long-term perspective and developing the company's own specialists. As an additional positive side effect, this helps GF foster the reputation of being an attractive employer in its local area.

Employee satisfaction

Employee retention plays a major role in the ongoing success of GF. To measure the satisfaction and commitment of employees, the divisions regularly conduct surveys among their employees. The results and findings are used to design measures for improvement. In 2017, one such survey was conducted by GF Piping Systems, whereby the employees were asked about such topics as leadership quality, their own level of

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goals:



commitment to and satisfaction with GF, the company values as well as GF Strategy 2020. Over 4'000 employees took part in the survey (response rate of 82 percent), and 84 percent of them indicated that they would highly recommend GF Piping Systems as an employer. Very positive results were achieved across all topics of interest, with commitment to the company's objectives as well as to the company scoring the highest. At the same time, improvement potential was identified on certain topics, specifically in regard to cross-departmental cooperation. Based on this feedback, the division initiated the definition of improvement measures, which will be implemented during 2018.

Corporation-wide, the total fluctuation rate (including dismissals and retirement) in 2017 was 11.3 percent (compared to 11.6 percent in 2016).

Employee representation

GF respects the right of its employees to join employee representation bodies. Such setups therefore exist in a variety of GF locations and entities around the world, including Switzerland, Germany, Austria, China, France, Sweden, Japan, and Taiwan. Where local legislation provides for rights of co-determination for employees, these rights are protected.

Health and safety in the workplace

Reducing the risk of accidents

The health and safety of employees have the highest priority within GF, and therefore the company strives to achieve a 20 percent reduction in the accident rate by 2020, with the ultimate goal of having zero severe accidents. In order to achieve these targets, GF trains its employees, contractors and visitors on health and safety topics via the *Zero Risk* campaign⁷. For accidents that still occur, the divisions conduct monthly analyses⁸ of information about the causes of these accidents and possible mitigating actions for the future. At the same time, this data is also aggregated on a monthly and a half-annual basis on the Corporate level.

Continuing in the [steps of GF Casting Solutions](#), in late 2017, the GF Piping Systems division started the rollout of the campaign with the goal of providing at least one hour of safety training to each employee. Safety posters and videos were developed to accompany this initiative and are available in 17 languages.

Collaboration between GF and ETH Zurich

Get an impression of the Entrepreneurial Leadership Seminar (ELS) 2017



Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goal:





At GF Piping Systems the top management is fully committed to safety at work.

In [phase 2](#) of the campaign, GF Casting Solutions focused on lasting behavioral changes and conducted training for 3'500 of its employees in 2017⁹. The respective training sessions will be repeated for the companies that were newly acquired during 2017 and early 2018.

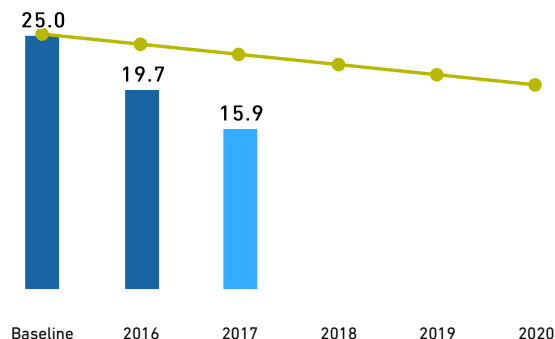
GF Machining Solutions plans the roll-out of the campaign for 2018, focusing on conducting on-site events to raise awareness about possible risky behaviors and ensure safe conduct during production at all times.

To successively root the safety culture in every GF site worldwide, the three divisions will conduct cross-site safety audits at the production plants and warehouses in 2018. During 2017, GF Piping Systems and GF Casting Solutions focused on audit training and established a process to communicate findings and share best practice solutions within the business. GF Machining Solutions has conducted these audits annually since 2016. Each site receives an overview of its safety at work status, and corrective actions are agreed on accordingly. The status of implementation of the corrective actions is reviewed during the subsequent audits.

To date, this continuous and consistent focus on *Zero Risk* has proven to be fruitful, as the accident rate per one million working hours decreased Corporation-wide to 15.9 in 2017 from the baseline of 25.0¹⁰. We are thus on track to achieve one of the Sustainability Targets 2020¹¹. Having said that, we of course need to ensure that we remain vigilant and continue to further internalize and practice the main messages of the *Zero Risk* campaign.

Accident rate

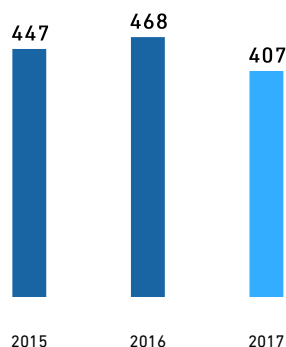
per 1 million working hours



The total number of accidents involving GF employees decreased in 2017 in each division, resulting in a 13 percent Corporation-wide reduction from 468 accidents in 2016 to 407 in 2017. Most of these accidents happened in the production and processing areas.

Accidents

number



At the same time, we unfortunately observed an increase in external employee accidents as well as a shift towards a higher severity of accidents. Therefore, further development of the *Zero Risk* campaign will focus on addressing third-party personnel and conducting further training for them on the principles of *Zero Risk* at work.

Employee well-being and absence rate

Besides the focus on fundamental workplace safety, GF also pays particular attention to the promotion of the health and well-being of its employees, as these are crucial for the retention of existing and attraction of new employees, and thus for ongoing success as a company. Consequently, GF encourages a healthy lifestyle, proper nutrition, and the importance of a good work-life balance among our employees. At our premises, GF has set the goal of offering safe and ergonomic workplaces, both in the back office and in the production facilities.

Proud to report

One excellent example of a lived safety culture is the production site of GF Machining Solutions in Changzhou (China), which at the end of 2017, celebrated three years of operations with zero accidents.

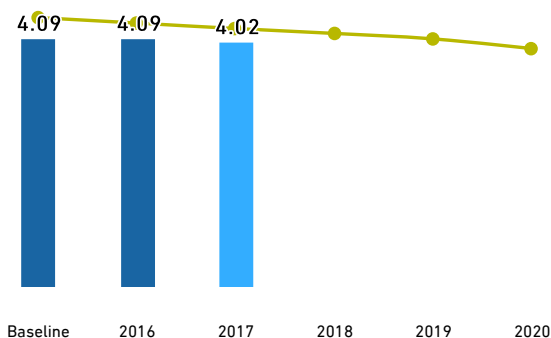
Following this approach, GF Casting Solutions in Singen (Germany) offers seminars for employees with irregular shift work on how to address any health challenges that may arise by optimizing sleep and nutrition routines. Furthermore, employees have the opportunity to give input on the working time distribution plans within the team in order to accommodate their individual needs.

Other locations have also realized various health and well-being programs for their employees. GF Piping Systems in Albershausen (Germany), for example, invested in mobile massage services for its employees as well as in height-adjustable tables. At GF Casting Solutions in Herzogenburg (Austria), a fitness competition was organized in 2017 among employees to motivate them to be as active as possible by, e.g. using the stairs instead of taking an elevator at the office, biking to work, hiking on the weekends, etc.

The combination of all these efforts could support the Corporation in nearing its goal of reducing the absence rate by 10 percent by 2020 (from a baseline of 4.41 percent¹²). In 2017, the absence rate decreased very slightly to 4.02 percent as compared to 4.09 percent in 2016 and 2015. This equaled on average 9.2 absence days per FTE per year, with 95 percent of the absences being due to non-work-related reasons. In the years to come, further efforts will be necessary in order to achieve the set goal in a timely manner.

Absence rate

in %



Anchored in the social environment

The values and principles of GF are also lived through the Corporation's commitment to promoting cultural, social and environmental engagement in the local communities. In 2017, around CHF 2 million were spent at the Corporate level on various activities of this kind, and an additional CHF 4.9 million were donated to various societal causes by our locations around the world. The biggest contributions at the Corporate level went to the Paradies Foundation, the Iron Library, the Homberger Foundation, and Clean Water, all of which are presented in detail below.

The Paradies Foundation

[The Paradies Foundation](#) was founded in 1975 with the aim of keeping the former Clarissan convent as a cultural heritage site and to using it for functions appropriate to the site's history. The Foundation therefore not only houses important historic collections, but also serves as a training center for GF.



In 2018, GF is celebrating 100 years of owning Klostergut Paradies.

The Iron Library Foundation

The [Iron Library Foundation](#), located in Klostergut Paradies, has the largest private collection of books on the subject of iron. Additionally, the collection includes an extensive selection of books on the subject of plastics, with a specific focus on their history. Together with the Corporate archive, the Iron Library is the center of competence for maintaining GF's historical and cultural heritage. It is open to the public, and visits can be arranged by appointment through the Foundation's website.



The dedicated team behind the Iron Library Foundation, the largest private collection of books on the subject of iron.

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 Ltd and its affiliated companies to help them learn a trade or attend a course of further education at polytechnic colleges, universities, or similar institutions. The aim is to provide the beneficiaries with a solid basis for their subsequent career development. Since 2008, the offer of scholarships has been available beyond Schaffhausen to all GF Corporate companies in Switzerland.

Clean Water Foundation

The Board of Directors of Georg Fischer Ltd founded the [Clean Water Foundation](#) in 2002, to mark the 200th anniversary of the Corporation. To date, the charitable Foundation has invested over CHF 10 million in more than 140 projects which provide people in the developing world as well as areas hit by catastrophes with sustainable access to drinking water. In 2017, seven new projects¹³ with contributions amounting to around CHF 470'000 and implemented through partnerships with a number of development organizations, including Caritas Switzerland and Water Mission (USA), were approved by the Foundation's Board.

¹ Headcount figure.

² Current local rules and regulations in certain other countries limit our flexibility to adapt employment conditions to expectations.

³ As each country where we operate has a different local cultural and structural starting point in regard to gender balance, we are addressing the necessary improvement potential on an individual market basis.

⁴ I.e. gender, race, skin color, origin, disability, religion, sexual orientation, political affiliation, familial status, etc.

⁵ Copyright by the Franklin Covey Corporation. The framework focuses on reinforcing a proactive attitude, outcome-oriented mindset, focus on goals, shared vision, listening and understanding, and on solving problems by celebrating different points of view, as well as the qualities and skills of each individual team member.

⁶ Stands for "Wissen & Netzwerk" in German (meaning "Knowledge & Network").

⁷ Details about the Zero Risk campaign, its background, and measures can be found on pages 40-45 of the [Sustainability Report 2015](#).

⁸ The recording of accidents by the sustainability specialists on the divisional level takes place in addition to the existing accident-reporting processes at each location (e.g. to insurance providers, etc.)

⁹ By the end of March 2018, all employees of the division had been trained.

¹⁰ Average for years 2013–2015

¹¹ To reduce the accident rate by 20% from the base rate (calculated as the average for 2013–2015).

¹² Average for 2013–2015

¹³ These projects will help communities in Nepal, Bangladesh, Kenya, China, Mali and Indonesia.

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goal:



Environment and energy

Current environmental challenges such as climate change, the rise in energy demand, the finite nature of fossil fuels, the scarcity of raw materials and issues associated with the current waste disposal practices are challenging businesses around the world to rethink their production processes and contribute to shifting toward sustainable development.

To play an active role in this, GF assessed the environmental effects of its direct operations and found that energy consumption, the resulting greenhouse gas (GHG) emissions, as well as the waste generated in production are the largest contributors to the Corporation's environmental footprint. From a manufacturing point of view, GFs impact on water consumption is less relevant, because most of the processes are not water intensive. Having said that, sustainable water management is a topic of key importance for the business of GF Piping Systems and for society in general. For that reason, we continue to manage it as one of relevance.

To start rethinking our manufacturing processes, in 2015, GF defined a set of environmental goals as part of the overall Sustainability Targets 2020. These goals focus on optimizing energy usage and reducing CO₂-equivalent (CO₂e) emissions, non-recycled waste, as well as water in water-scarce areas. These targets are binding for all 57 GF production sites worldwide. Since 2015, each one of them has put together measures and proposed projects to achieve the targets in a timely manner.

Energy and related GHG emissions

Energy consumption and the related GHG emissions are of high relevance for GF based on the specifics of our business, and care needs to be taken to avoid potential negative environmental impacts. For our operations, this means taking steps to consume energy more efficiently and to promote the use of renewable energy sources.

All energy-intensive locations of GF Casting Solutions as well as two major energy-consuming locations of GF Piping Systems have energy management systems in place and are certified according to ISO 50001. Furthermore, as of 2017, all GF production sites across the three divisions are certified for environmental management according to ISO 14001.

Energy consumption

In the year under review, GF's production sites operated at full capacity and sales grew by 11 percent (organically by 9.8 percent). We therefore observed a total energy consumption increase of 5 percent to 6.9 million gigajoules as compared to 2016. The installation of new equipment at a few sites of GF Casting Solutions (e.g. new iron molding line in Singen, Germany, and production line for coating and processing of castings in Herzogenburg, Austria) played a considerable role here. This was done as part of a strategic initiative to modernize the facilities and contribute to GF's overall shift toward providing higher value solutions for our customers. The initial setup and testing of the newly installed machines ran in parallel to the normal operations, thus leading to increased energy consumption. The old equipment will be decommissioned, and we expect the new machines to use up to 20 percent less energy in the short- to mid-term.

CDP rating

In addition to providing disclosure of our environmental management processes and indicators through sustainability reporting, GF participates in the annual assessment by the Carbon Disclosure Project (CDP). In 2017, GF maintained its positive result in the [CDP Climate Change](#) questionnaire. Compared to our industrial peers, GF ranked among the top 15 percent in the DACH region (with a B score).

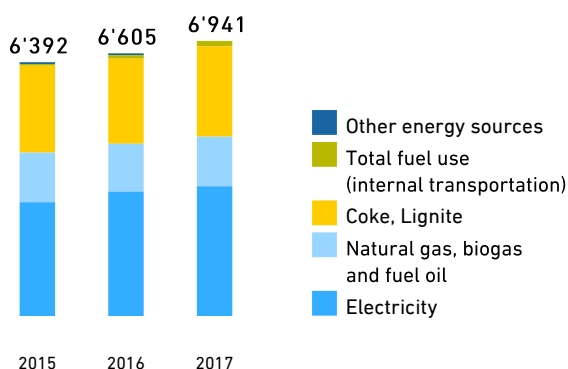
Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goal:



Energy consumption

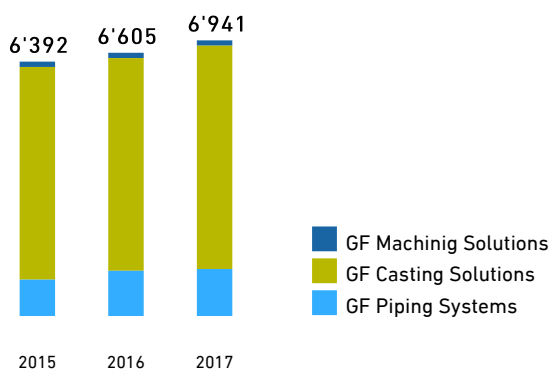
1'000 GJ



As part of the Sustainability Targets 2020, we set ourselves a goal of both improving energy efficiency and reducing CO₂e emissions by 10 percent until 2020. At the end of 2017, around 20 energy-saving projects were underway worldwide, whereof most in the productions sites of GF Piping Systems and GF Machining Solutions. Many of these initiatives focused on improved efficiency of cooling and ventilation systems, as well as the use of compressed air and of waste heat recovery. Other sites focused more on investments in energy-efficient equipment, such as, for example, the purchase of injection molding machines with [ecodrive functions by GF Piping Systems](#). Besides the complex efficiency projects, the implementation of energy-efficient lighting solutions was still popular among our sites. These projects are cost-effective and facilitate quick delivery of positive environmental results.

Divisional share of energy consumption

1'000 GJ



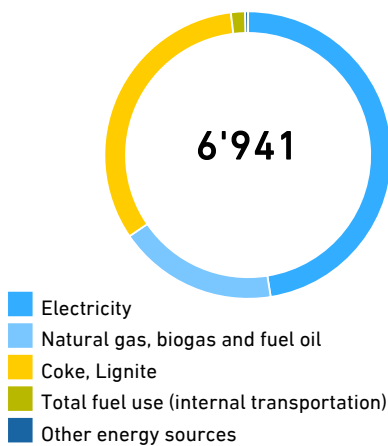
Composition of energy sources

Besides the amount of energy consumed, the composition of energy sources is equally relevant to GF's environmental footprint. The total amount of energy used in 2017 comprised mainly of electricity (whereof 36 percent certified green), coke (33 percent), natural gas (18 percent) and

others (0.3 percent). [Two GF Piping Systems sites](#) in Germany and Switzerland are pioneers within the Corporation due to using self-generated electricity from renewable sources. The overall share of green electricity increased by 48 percent as compared to 2016 due to the switch in 2017 to renewable electricity sources at the GF Casting Solutions production site in Herzogenburg (Austria).

Energy sources

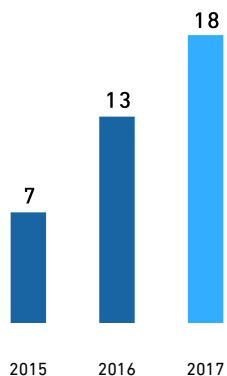
in 1'000 GJ



Further transition towards renewable energy sources is one of the meaningful ways that we see for our production facilities to decrease their carbon footprint. The total share of renewable energy was at 18 percent in 2017. This result was achieved by a mix of several measures, such as purchasing certified "green" electricity, installing on-site photovoltaic power plants and investing in renewable energy certificates. GF spent CHF 128 million on energy in 2017. We believe that on-site generation of energy could potentially lead to not only long-term environmental but also economic benefits. In the years to come, we will further evaluate the potential of various available options.

Share of renewable energy

in % (incl. certified green electricity)



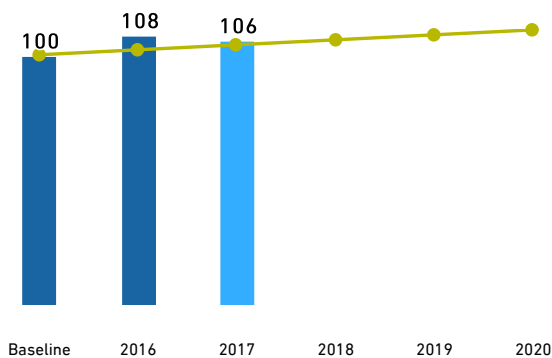
Target achievement: energy efficiency

While the energy consumption increased, it did so in line with the production volume growth in the divisions. The wide range of projects at the various sites enabled achievement of greater efficiencies in manufacturing, and, thus, all three divisions over-achieved in terms of the energy efficiency goals for 2017.

In the years to come, we will continue to enhance the management of measures that have worked well within the divisions. As the performance of GF Casting Solutions is decisive for that of GF as a whole¹, the focus of the division will be on ramping up of the new equipment and on further fine-tuning measures for other facilities. From 2018 onward, we will review the target achievement of the energy intensive sites monthly to take mitigating measures early on, when necessary.

Energy efficiency index

production volume/energy consumption



Emissions

To provide an appropriate contribution to the efforts of the international community to meet the goals of the Paris Agreement, it is important that we distinguish between the sources of air emissions. Most of the GHG emissions of GF stem from the purchased electricity that we consume (54 percent) and are classified as Scope 2 emissions². It follows that any action that we take to reduce our energy consumption will reduce these emissions and help to achieve the overall global GHG target. The remaining 45 percent are created by companies' consumption of fossil fuels (Scope 1³), and 1 percent is emitted by other activities throughout the value chain such as business travel (Scope 3). Besides CO₂ and methane (CH₄), no other powerful GHG emissions, such as sulfur hexafluoride (SF₆) or nitrous oxide (N₂O), are emitted because of our production processes.

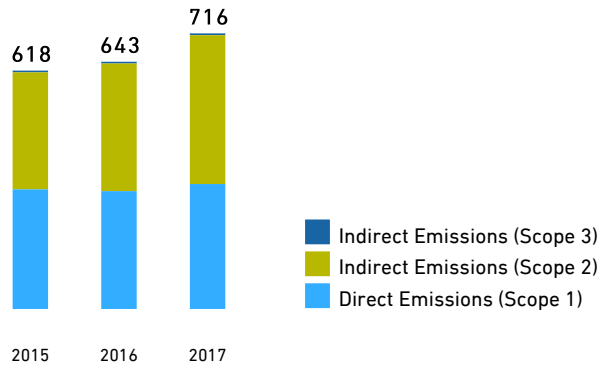
Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goal:



Total CO₂e emissions

1'000 tonnes



In 2017, we observed an 11 percent increase in GF's overall CO₂e⁴-emissions compared to the previous reporting period. Due to the full operational mode of the production facilities in 2017, Scope 1 and Scope 2 emissions increased by 6 percent and 17 percent respectively compared to previous years. As one of the remediation steps to lower the Scope 1 emissions, two sites of GF Casting Solutions in China and Germany made long-term investments by purchasing electric forklifts to reduce the consumption of fossil fuel use in on-site logistics. In parallel, GF Piping Systems took measures to lower Scope 2 emissions by purchasing guarantees of origin for their electricity. The 16 percent increase in Scope 3 emissions in 2017 was primarily due to reporting adjustments for business travel data collection. The process was streamlined in the upgraded Sustainability Information System, which led to improved transparency on respective trips and resulting emissions.

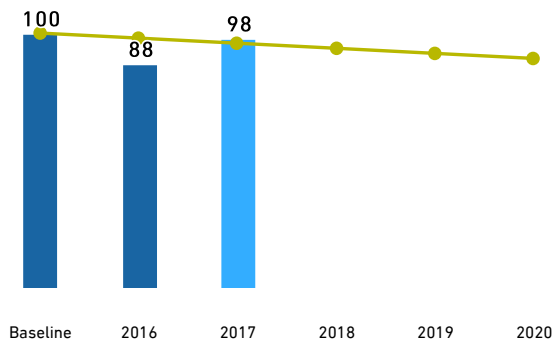
Target achievement: CO₂e emissions

In the year under review, GF narrowly under-achieved the target CO₂e intensity line, being strongly influenced by energy use development (see above), and systematic efforts are required to reach the set CO₂e reduction target by 2020.

The main mediating factors that helped to optimize the CO₂e emissions were the purchase of guarantees of origin in the GF Piping Systems division and the switch to renewable energy in the GF Casting Solutions division. The location with the highest share of renewable energy within GF Casting Solutions was Altenmarkt (Austria) with 67 percent. In contrast, GF Machining Solutions did not reach the target line due to the division's decision in 2016 to purchase "grey" energy for its production sites in Switzerland.

Emissions intensity index

CO₂e emissions/production volume



Waste and circular economy

Ensuring prudent and responsible resource and waste management is a topic of high relevance for GF. We aim to understand our production processes in a holistic way and systematically rethink them to close the material loops. As a rule, the castings of GF Casting Solutions are 100 percent recyclable, whether they are made of aluminum, magnesium or iron, and thus these materials are reused in circular fashion as much as possible at the division's plants. This also applies to the sand cores used during the iron casting production.

Beyond our own facilities, we also try to find third-party partners, whenever feasible, to use the materials that cannot be fed into the GF production process and would otherwise be wasted. An example of such a collaboration is at the [GF Piping System site in Traisen](#) (Austria), which collects filter dust and provides it as a raw material to the nearby cement factory, thus saving primary material. In Germany, as of 2017, the GF Casting Solutions sites in Leipzig and Singen collect their zinc dust for the local recovery plant. Due to this, the Singen site has already been able to reduce the amount of hazardous waste by 30 percent.

Further initiatives focused on both sourcing of re-usable materials and components as well as on revising our waste management processes to facilitate re-use are on the agenda of the three divisions.

Sustainable Development Goals

With its activities, GF contributes to the following UN Sustainable Development Goal:

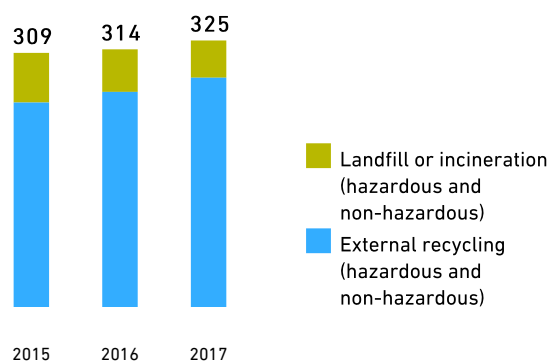




At the GF Piping Systems plant in Traisen (Austria) non-recyclable waste has been reduced by 20 percent thanks to a project in collaboration with the cement industry.

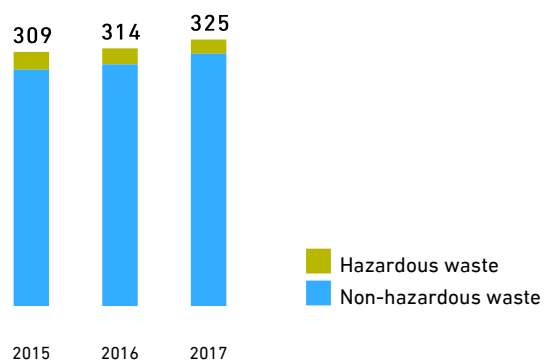
Waste disposal

1'000 tonnes



Composition of waste

1'000 tonnes



Target achievement: non-recycled waste

GF performed well in 2017 in terms of decreasing its non-recycled waste and meeting the respective [Corporate target](#). GF sites worldwide produced a total of around 325'678 tonnes of waste, which reflects an increase of 3.7 percent driven by a higher overall production volume as compared to 2016. At the same time, the amount of recycled waste increased by 6 percent in 2017 compared to the previous reporting cycle, while the amount of hazardous waste fell by 6.9 percent. A main contributor to this result was the reduction of hazardous waste within GF Casting Solutions.

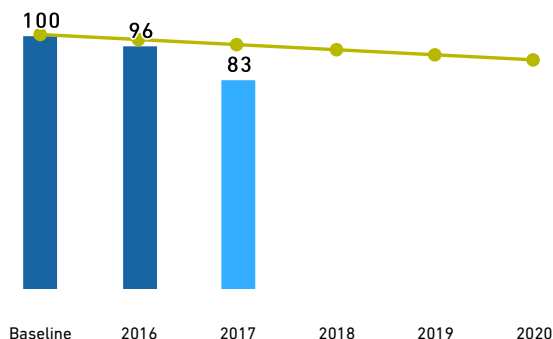
GF Piping Systems did not achieve the target intensity line in 2017 because of fewer recycling opportunities in the European recycling markets after changes to the legal framework in China⁵. Consequently, some of the waste that was recycled before was instead incinerated or sent to landfill. To avoid this environmentally negative practice in the future, GF Piping Systems is working on solving the challenge through a two-pronged approach. On one hand, the division aims to avoid generating waste and instead to re-granulate the plastic and reuse it as much as possible in its own operations. On the other hand, the goal is to intensify the search for other recycling and re-use opportunities. Since 2017, the GF Piping Systems site in Sissach (Switzerland) has been sending PE material for recycling, and during the year under review achieved a 94 percent recycling rate of non-hazardous waste (vs. 92 percent in 2016).

GF Machining Solutions will define and implement new measures to ensure timely achievement of the set target.

From an economic perspective, we have also observed that increasing recycling activities is beneficial if the sites find appropriate reuse opportunities. While the income from recycling activities of all divisions has not yet been able to offset the respective costs, we plan to review potential for further fine-tuning of internal recycling possibilities as well as for collaborations with third parties for material reuse.

Non-recycled waste intensity index

non-recycled waste/production volume



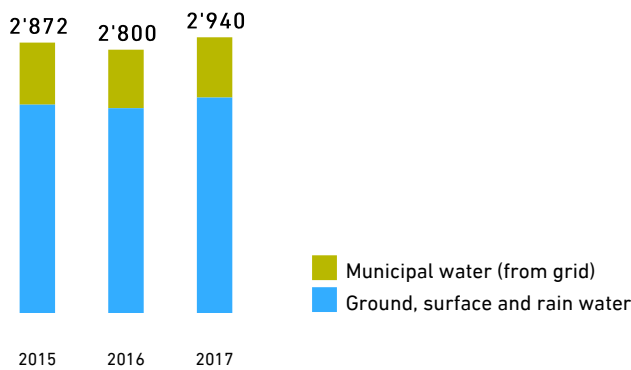
Water consumption

Water is essential to life on our planet, and so the good stewardship of this finite resource is important for GF. Translated to our operations, we strive to consume 10 percent less water in water-stressed and scarce areas by

2020. In early 2017, we conducted an analysis of GF production sites, which are located in water-stressed areas, using the World Resources Institute (WRI) tool⁶. At the six identified locations (all part of the GF Piping Systems division), whereof three in China and three in the USA, the [GF water target](#) is binding. These production plants reduced their water consumption beyond the targeted reduction path of 2 percent per year and are in a good position to meet the 2020 target.

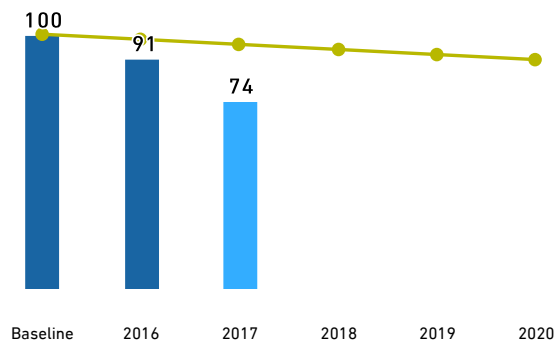
Water consumption

in 1'000 m³



Water intensity index

water consumption/production volume



For GF operations as a whole, the water consumption increased by 5 percent in 2017 compared to 2016 because of the launch of new equipment at GF Casting Solutions sites as well as higher production volumes at GF Piping Systems. Similar to energy consumption, we expect the water consumption to go down in the next few years as the new production lines of GF Casting Solutions are ramped up and the old ones are decommissioned.

Our manufacturing processes are generally not water intensive, as the water is primarily used for cooling, which is typically done in closed-loop cycles. Returning of wastewater to nature is also harmless, because no chemicals are used.

Spending on water and wastewater costs remained unchanged at CHF 3 million in 2017.

- ¹ 80% of the total amount of GF's energy consumption comes from the production processes of the division
- ² Indirect emissions (Scope 2) stem from purchased and consumed energy at GF plants and are not emitted by the company itself. Instruments to neutralize emissions such as the purchase of certificates are directly subtracted from the total amount of emissions.
- ³ Fossil fuels are consumed because GF uses natural gas and oil (e.g. for heating), and coke as well as petrol, and LPG and CNG gases (for internal transportation)
- ⁴ The reported emissions figures have been calculated by using specific emissions factors (residual mix factor where available, otherwise emission factors based on GHG Protocol) which consider the type of energy source and the electricity mix used in individual countries.
- ⁵ As of 2017, China prohibited the import of plastics and other materials, which affected companies and countries around the world.
- ⁶ www.wri.org/our-work/project/aqueduct

Disclosure information

Starting with the first environmental report in 1997, GF has been continuously expanding the recording and collection of sustainability-relevant data. Initially, only environmental figures were collected, and since 2005, social indicators have been included in the reporting as well.

Reporting cycle

The Sustainability Report has been published every two years since 2005, with an interim report published in the intervening years. Additionally, information on energy consumption and CO₂e emissions is also published annually under the Carbon Disclosure Project (CDP). This report covers the reporting period from 1 January – 31 December 2017, and it has been prepared in accordance with the GRI Standards: Core option (2016).

Scope of data collection and reporting

In the year under review, the reporting scope was revised, a new data management tool was implemented and the definitions of the following KPIs were updated:

- “Business travel” includes information on air travel booked via the internal travel agency and, since 2017, also the data on air travel booked individually but for business purposes. Business travel by car is reported in the same way as in the past reporting cycles.
- The basis for the calculation of the accident rate indicator was changed from “1'000 employees” to “one million working hours,” in alignment with industry practice.
- As of 2017, we provide a breakdown of donations made by the Corporation and its various entities according to four categories: charitable donations, sponsorship, societal investments, and the volume of orders placed with workshops employing people with a disability.
- The scope of the Sustainability Target 2020 on emissions was broadened from CO₂ (carbon) only, to CO₂-equivalents (CO₂e), thus better reflecting our efforts to reduce the GHG emissions.

In a change to the previous reporting periods, the information presented in this Sustainability Report accounts for the equity share that GF owns in the individual companies under the Corporation's control. This is done in alignment with the approach used in the financial data reporting and is based on the following criteria:

- All companies in which GF owns 50% or more of equity are consolidated at 100 percent.
- For companies where GF has a joint venture participation of 50 percent or less, environmental and health and safety data are weighted accordingly.

For consistency reasons, the historic data have been updated throughout the text of the report as well as in the performance indicator tables to reflect this revised approach.

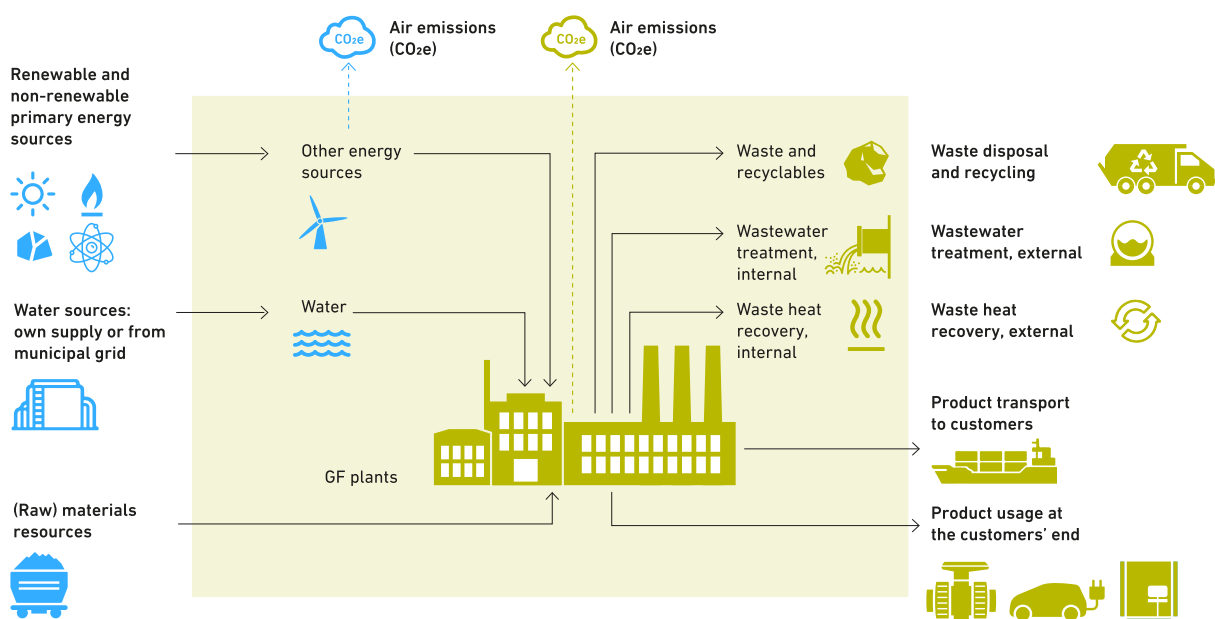
The target achievement paths in the area of the environment are calculated in relation to the production volume. The average consumption in the years 2013–2015 serves as a baseline year to reflect a more realistic consumption path¹. The Sustainability Targets were introduced in 2015 and have to be achieved within five years, i.e. by 2020. In order to provide companies with a realistic timeframe for target achievement, companies that joined GF before 2017 are included in the calculation for the achievement of the Sustainability Targets 2020. Companies that joined later have individual targets. Business divestments and closures can also affect the results. However, for the year under review, this had only a limited impact, and therefore, the results are comparable with those of the prior years. The companies acquired during 2017 have three years to join the social and environmental reporting. Economic performance indicators cover all of the companies under the scope of Corporate consolidation, as reported in the Annual Report 2017.

In the year under review, GF had 136 companies. About 75 percent of them report their indicators, which covers 91 percent of the production sites and 95 percent of the total workforce.

The social performance indicators are presented in this report based on the data collected from all sales and production companies worldwide with more than ten employees. They report this information to the sustainability teams at the divisional and Corporate levels on a monthly and bi-annual basis using the Sustainability Information System. Environmental performance indicators are reported by the production companies according to the same cycle.

The financial performance indicators follow Swiss GAAP FER principles (Swiss Generally Accepted Accounting Principles Accounting and Reporting Recommendations) and are consistent with those reported in the GF Annual Report 2017.

With regard to environmental figures, GF tracks and records the energy and water consumption (on the input side) and emissions into the air, waste, and wastewater (on the output side). The environmental impact of transportation within our locations, as well as business travel by plane or company car, is also calculated. The environmental footprint of purchased materials, the construction of facilities and buildings, as well as the use of products by customers are not covered at this point in time.



Recording limits for environmental data, as of 31 December 2017

External audit

Transparent and verified reporting is important to GF. Therefore, our Sustainability Report is externally audited and verified by SGS TÜV Saar GmbH. This includes the validation and verification of environmental and social performance indicators relevant to the GRI-Standards: Core option.

¹ In any given year, some of the indicators may be influenced by random weather fluctuation, such as a cold winter, which translates into an increase in energy consumption for heating.

GRI content index

102 General Disclosures

GRI reference number	Disclosure title	Location of content		
		Sustainability Report 2017	Annual Report 2017	Other
	Organizational profile			
102-1	Name of the organization	Landing page - "Sustainability Report 2017"		
102-2	Activities, brands, products, and services	"Our corporation"	"Key figures 2017"	
102-3	Location of headquarters	"Our corporation"		
102-4	Location of operations	"Worldwide presence"		
102-5	Ownership and legal form		"Organization of GF"	
			"Corporate structure and shareholders"	
102-6	Markets served	"Our corporation"		
102-7	Scale of the organization	"Worldwide presence"	"Key figures 2017"	
102-8	Information on employees and other workers ¹	"People and safety"	"Key figures 2017"	
		"Social performance indicators"		
102-9	Supply chain	"Our value chain"		
		"Procurement and logistics"		
102-10	Significant changes to the organization and its supply chain	"Our corporation"	"4. Corporate structure"	
		"Our value chain"	"Statement of changes in equity for the year ended 31 December 2017"	
		"Procurement and logistics"		
102-11	Precautionary Principle or approach	"Business conduct"		
		"Materiality matrix"		
102-12	External initiatives	"Our value chain"		UN Global Compact
		"CDP rating"		CDP
102-13	Membership of associations	"Our value chain"		UN Global Compact
	Strategy			
102-14	CEO statement	"Letter to our stakeholders"		
	Ethics and integrity			
102-16	Values, principles, standards, and norms of behavior	"Business conduct"		"Our values"
				"Code of Conduct"
	Governance			
102-18	Governance structure		"Corporate structure and shareholders"	
	Stakeholder engagement			
102-40	List of stakeholder groups	"Stakeholder dialogue"		
102-41	Collective bargaining agreements ²	"Employee representation"		
102-42	Identifying and selecting stakeholders ³	"Our value chain"		
102-43	Approach to stakeholder engagement	"Stakeholder dialogue"		
102-44	Key topics and concerns raised	"Materiality matrix"		
		"Stakeholder dialogue"		
		"Employee satisfaction"		
	Reporting practice			
102-45	Entities included in the consolidated financial statements	"Scope of data collection and reporting"	"Scope and principles of consolidation"	
102-46	Defining report content and topic boundaries	"Materiality matrix"		
102-47	List of material topics	"Materiality matrix"		
102-48	Restatements of information	"Scope of data collection and reporting"		

102-49	Changes in reporting	"Materiality matrix"		
		"Scope of data collection and reporting"		
102-50	Reporting period	"Disclosure information"		
102-51	Date of most recent report			Comprehensive version - "GF Sustainability Report 2015"
				Short version - "GF Sustainability Report 2016"
102-52	Reporting cycle	"Disclosure information"		
102-53	Contact point	"Contacts"		
102-54	Claims of reporting in accordance with the GRI Standards	"Disclosure information"		
102-55	GRI content index	"GRI content index"		
102-56	External assurance	"External audit"		
		"Validation"		

- 1 **Omission** Confidentiality constraints – breakdown of employee information by employment contract, region and gender, as well as information on activities performed by external employees is not shared publicly.
- 2 **Omission** Information on percentage of total employees covered by collective bargaining agreements is currently unavailable. In the next years, we will further develop our data collection process.
- 3 **Comment** As a normal course of business, GF continued working with the same stakeholders, as in the previous reporting cycles.

200 Economic Topics

GRI reference number	Disclosure title		Location of content	
		Sustainability Report 2017	Annual Report 2017	Other
	Economic performance			
103-1/2/3	Management approach disclosures	"Letter to our stakeholders"	"Letter to the shareholders"	
201-1	Direct economic value generated and distributed	"Key figures at a glance"	"Income statement for the year ended 31 December 2017"	
			"Income taxes"	
			"Key figures 2017"	
	Indirect economic impacts			
103-1/2/3	Management approach disclosures	"Our value chain"		
203-1	Infrastructure investments and services supported	"Energy and related GHG emissions"		
		"Clean Water Foundation"		
	Anti-corruption			
103-1/2/3	Management approach disclosures	"Our value chain"		
		"Good governance"		
205-2	Communication and training about anti-corruption policies and procedures ¹	"Corporate compliance"	"Corporate compliance"	
	Anti-competitive behavior			
103-1/2/3	Management approach disclosures	"Good governance"		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices ²		"Internal Audit" and "Corporate Compliance"	

- 1 **Omission** Confidentiality constraints – detailed breakdown of communication and training measures on anti-corruption by governance body member, employee category, region, or for business partners is not shared publicly.
- 2 **Omission** To the best of our knowledge, no incidents of non-compliance with laws and regulations in regards to anti-competitive behavior, anti-trust, and monopoly practices took place during the reporting period. GF does not disclose any details on its commercial litigation as a matter of internal policy and in line with the applicable laws. GF can, however, confirm that no fines or non-monetary sanctions have been imposed on Georg Fischer in 2017.

300 Environmental Topics

GRI reference number	Disclosure title	Location of content		
		Sustainability Report 2017	Annual Report 2017	Other
	Materials			
103-1/2/3	Management approach disclosures	"Materiality matrix", subpoint "Industrial ecology" "Waste and circular economy"		
301-1	Materials used by weight or volume ¹			
	Energy			
103-1/2/3	Management approach disclosures	"Sustainability in our own operations" "Environment and energy" "Sustainability Targets 2020 - our progress"		
302-1	Energy consumption within the organization	"Energy consumption" "Key figures at a glance" "Sustainability Targets 2020 - our progress" "Environmental performance indicators"		
302-3	Energy intensity ²	"Target achievement: energy efficiency" "Key figures at a glance" "Sustainability Targets 2020 - our progress" "Environmental performance indicators"		
302-4	Reduction of energy consumption	"Energy consumption" "Key figures at a glance" "Sustainability Targets 2020 - our progress" "Environmental performance indicators"		
	Water			
103-1/2/3	Management approach disclosures	"Sustainability in our own operations" "Water consumption" "Sustainability Targets 2020 - our progress"		
303-1	Water withdrawal by source	"Environmental performance indicators"		
	Emissions			
103-1/2/3	Management approach disclosures	"Sustainability in our own operations" "Emissions" "Sustainability Targets 2020 - our progress"		
305-1	Direct (Scope 1) GHG emissions	"Emissions" "Environmental performance indicators"		
305-2	Energy indirect (Scope 2) GHG emissions	"Emissions" "Environmental performance indicators"		
305-3	Other indirect (Scope 3) GHG emissions	"Emissions" "Environmental performance indicators"		
305-4	GHG emissions intensity	"Key figures at a glance" "Sustainability Targets 2020 - our progress"		

		"Target achievement: CO ₂ e emissions"		
		"Environmental performance indicators"		
305-5	Reduction of GHG emissions	"Key figures at a glance"		
		"Sustainability Targets 2020 - our progress"		
		"Emissions"		
		"Environmental performance indicators"		
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	"Environmental performance indicators"		
	Effluents and waste			
103-1/2/3	Management approach disclosures	"Sustainability in our own operations"		
		"Water consumption"		
		"Waste and circular economy"		
		"Sustainability Targets 2020 - our progress"		
306-1	Water discharge by quality and destination	"Environmental performance indicators"		
306-2	Waste by type and disposal method ³	"Waste and circular economy"		
		"Environmental performance indicators"		
	Environmental compliance			
103-1/2/3	Management approach disclosures	"Sustainability in our own operations"		
		"Good governance"		
307-1	Non-compliance with environmental laws and regulations ⁴			
	Supplier environmental assessment			
103-1/2/3	Management approach disclosures	"Our value chain"		
		"Procurement and logistics"		
308-1	New suppliers that were screened using environmental criteria	"Sustainability Targets 2020 - our progress"		

- 1 **Omission** No comprehensive information is available at this point in regards to the total weight or volume of materials that are used to produce and package GF's primary products during the reporting period. The topic will be included in the environmental data collection process within the next reporting cycles.
- 2 **Comment** As per defined Sustainability Targets 2020, GF set the goal to increase energy efficiency. The calculation thereof is a direct inverse of that for energy intensity.
- 3 **Comment** The types of waste disposal used by GF sites are indicated in the breakdown provided within the "Environmental performance indicators" table. No other disposal methods are applicable. The information on waste disposal methods is collected from and provided to the sites by waste disposal contractors.
- 4 **Omission** To the best of our knowledge, no incidents of non-compliance with environmental laws or regulations took place during the reporting period

400 Social Topics

GRI reference number	Disclosure title	Location of content		
		Sustainability Report 2017	Annual Report 2017	Other
	Employment			
103-1/2/3	Management approach disclosures	"Stakeholder dialogue" "People and safety" "Sustainability Targets 2020 - our progress"		
401-1	New employee hires and employee turnover ¹	"Employee satisfaction" "Social performance indicators"		
401-3	Parental leave ²	"Diversity and flexibility"		
	Occupational Health and Safety			
103-1/2/3	Management approach disclosures	"Health and safety in the workplace" "Sustainability Targets 2020 - our progress"		
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	"Reducing the risk of accidents" and "Employee well-being and absence rate"		
	Training and education			
103-1/2/3	Management approach disclosures	"Training and professional development" "Sustainability Targets 2020 - our progress" "Sustainable business management"		
404-2	Programs for upgrading employee skills and transition assistance programs	"Training and professional development"		
	Diversity and equal opportunity			
103-1/2/3	Management approach disclosures	"Diversity and flexibility"		
405-1	Diversity of governance bodies and employees ³	"Social performance indicators"		
	Non-discrimination			
103-1/2/3	Management approach disclosures	"Diversity and flexibility"		"Code of Conduct"
406-1	Incidents of discrimination and corrective actions taken ⁴	"Social performance indicators"		
	Freedom of association and collective bargaining			
103-1/2/3	Management approach disclosures	"Employee representation"		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk ⁵	"Sustainability Targets 2020 - our progress" "Employee representation"		
	Human rights assessment			
103-1/2/3	Management approach disclosures	"Our value chain" "Business conduct"		
412-1	Operations that have been subject to human rights reviews or impact assessments ⁵		"Internal Audit"	
	Supplier social assessment			
103-1/2/3	Management approach disclosures	"Our value chain" "Sustainability Targets 2020 - our progress"		
414-2	Negative social impacts in the supply chain and actions taken	"Sustainability Targets 2020 - our progress"		
	Public policy			
103-1/2/3	Management approach disclosures	"Stakeholder dialogue"		
415-1	Political contributions	"Public policy"		
	Customer health and safety			

103-1/2/3	Management approach disclosures	"Product and service information and labeling"		
416-1	Assessment of the health and safety impacts of product and service categories ⁶	"Product and service information and labeling"		
	Marketing and labeling			
103-1/2/3	Management approach disclosures	"Product and service information and labeling"		
417-1	Requirements for product and service information and labeling	"Product and service information and labeling"		
	Socioeconomic compliance			
103-1/2/3	Management approach disclosures	"Our value chain"		
		"Business conduct"		
419-1	Non-compliance with laws and regulations in the social and economic area ⁷			

- 1 **Omission** Confidentiality constraints - breakdown of new employee hires and turnover information by gender, age group and region is not shared publicly.
- 2 **Omission** Information is not available for all the countries, where GF operates. In the coming years, we will further develop our data collection process.
- 3 **Omission** Confidentiality constraints - breakdown of governance bodies and employees by age group is not shared publicly.
- 4 **Comment** One workplace incident, which was amicably resolved with the help of an external mediator.
- 5 **Omission** Human rights topics are included in internal audit procedures at individual locations. The selection of these locations is based on systematic and disciplined risk assessments in internal auditing. Details on the specific locations cannot be disclosed due to the underlying confidentiality as required by the internal audit charter.
- 6 **Omission** Information on the exact percentage of significant product and service categories assessed for health and safety impacts is currently unavailable. In the next years, we will further develop relevant internal processes.
- 7 **Omission** To the best of our knowledge, no incidents of non-compliance with laws and regulations in the social and economic area took place during the reporting period. GF does not disclose any details on its commercial litigation as a matter of internal policy, and in line with the applicable laws. GF can, however, confirm that no fines or non-monetary sanctions have been imposed on Georg Fischer in 2017.

Economic performance indicators

CHF million	2017	2016	2015	2014	2013
Order intake	4'274	3'749	3'662	3'836	3'795
Orders on hand at year-end	773	614	612	634	577
Income statement					
Sales	4'150	3'744	3'640	3'795	3'766
EBITDA	491	443	422	399	380
Operating result (EBIT)	352	311	296	274	251
Net profit/loss	258	225	198	195	145
Cash flow					
Cash flow from operating activities	410	400	328	248	309
Depreciation on tangible fixed assets	131	126	122	122	126
Amortization on intangible assets	8	6	4	3	3
Additions to property, plant, and equipment	-207	-174	-167	-152	-130
Cash flow from acquisitions and divestitures	-74	-96	-2	-20	-66
Free cash flow before acquisitions/divestitures	204	231	190	110	174
Free cash flow	130	135	188	90	108
Balance sheet					
Current assets	2'277	2'024	1'934	1'801	1'989
Non-current assets	1'333	1'178	1'149	1'188	1'137
Assets	3'610	3'202	3'083	2'989	3'126
Current liabilities	1'418	1'067	1'221	981	1'282
Non-current liabilities	823	935	732	904	866
Equity	1'369	1'200	1'130	1'104	978
Net working capital	899	838	819	864	764
Invested capital (IC)	1'466	1'333	1'279	1'354	1'224
Net debt	183	214	238	354	352
Asset structure					
- Current assets %	63	63	63	60	64
- Non-current assets %	37	37	37	40	36
Capital structure					
- Current liabilities %	39	34	39	33	41
- Non-current liabilities %	23	29	24	30	28
- Equity %	38	37	37	37	31
Key figures					
Return on equity (ROE) %	20.1	19.3	17.7	18.7	14.8
Return on invested capital (ROIC) %	20.3	19.3	18.9	17.9	16.7
Return on sales (EBIT margin) %	8.5	8.3	8.1	7.2	6.7
Asset turnover	3.0	2.9	2.8	2.9	3.0
Cash flow from operating activities in % of sales	9.9	10.7	9.0	6.5	8.2

Environmental performance indicators

	Unit	2017	2016	2015	2014	2013
Energy						
Total energy consumption	1'000 GJ	6'941	6'605	6'392	6'317	6'475
Electricity	1'000 GJ	3'296	3'168	2'878	2'835	2'944
Natural gas, biogas, fuel oil	1'000 GJ	1'247	1'205	1'262	1'186	1'342
Coke, lignite	1'000 GJ	2'265	2'121	2'156	2'192	2'082
Fuel use (for internal transportation)	1'000 GJ	110	92	80	72	75
Other energy sources	1'000 GJ	23	19	16	30	33
Energy sold	1'000 GJ	-103	-96	-105	0	0
Net energy consumption	1'000 GJ	6'838	6'509	6'287	6'317	6'475
Target line energy efficiency index ³ (production volume/energy consumption ⁴)		104	102	100		
Energy efficiency index (status at year-end)		106	108	100		
GHG emissions (in CO₂e)⁵						
Total CO ₂ e emissions	1'000 tonnes	716	642	617	671	773
Scope 1 (Direct emissions: energy consumption)	1'000 tonnes	325	307	313	313	311
Scope 2 (Indirect emissions: electricity and district heating)	1'000 tonnes	387	332	303	355	459
Scope 3 (Indirect emissions: business travel)	1'000 tonnes	5	4	2	3	2
Target line GHG emission intensity index ³ (CO ₂ e emissions/production volume ⁴)		96	98	100		
GHG emission intensity index (status at year-end)		98	88	100		
Air emissions						
Nitrogen oxides (NO _x)	1'000 tonnes	0.04	0.03	0.03	0.03	0.01
Sulphur oxides (SO _x)	1'000 tonnes	0.01	0.01	0.01	0.01	0.01
Water and wastewater						
Total water consumption	1'000 m ³	2'940	2'800	2'872	2'700	2'774
City water from public supply	1'000 m ³	635	625	650	584	602
Ground and rain water	1'000 m ³	2'304	2'175	2'222	2'116	2'172
Wastewater volume	1'000 m ³	2'078	1'974	1'956	868	895
Wastewater to sewage systems	1'000 m ³	920	893	884	821	814
Wastewater returned to nature, unpolluted	1'000 m ³	1'158	1'081	1'071	47	81
Target line water intensity index ³ (water consumption/production volume ⁴)		96	98	100		
Water intensity index (status at year-end)		74	91	100		
Waste and recycling						
Total waste	1'000 tonnes	326	314	309	315	324
Normal waste, recycling	1'000 tonnes	263	249	233	250	268
Normal waste, landfill or incineration	1'000 tonnes	44	45	54	43	36
Hazardous waste	1'000 tonnes	18	20	22	21	19
Hazardous waste, recycling	1'000 tonnes	16	14	15	15	13
Hazardous waste, storage or incineration	1'000 tonnes	2	6	6	6	6

75 Environmental performance indicators

Target line non-recycled waste intensity index ³ (non-recycled waste/production volume ⁴)		96	98	100		
Non-recycled waste intensity index (status at year-end)		83	96	100		
Business trips						
Air travel	1'000 pkm	36'872	31'863	14'305	22'342	19'693
Monetary values						
Expenditure for environmental protection	CHF million	18	15	16	13	14
Energy costs	CHF million	128	103	118	131	143
Water and wastewater costs	CHF million	3	3	3	3	4
Waste disposal costs and recycling credits	CHF million	8	8	7	9	8

1 The environmental performance indicators include all GF production companies.

2 Due to the implementation of a new Sustainability Reporting Tool, the historical data points have been consolidated and restated. The same GF company consolidation principles apply as in the Annual Report 2017.

3 The target line is calculated linearly based on the standardized baseline consumption (=100) and according to the defined target.

4 The production volume is defined based on the specificities of the businesses of the individual divisions: as "produced tonnes" for GF Piping Systems, as "gross value added" for GF Casting Solutions and as "hours worked" for GF Machining Solutions.

5 CO₂-equivalents is a unit used to transform other greenhouse gases into CO₂e (CO₂=1) according to their global heating potential. The applied emission factors are based on the GHG Protocol 2016.

Social performance indicators

	Unit	2017	2016	2015	2014	2013
Employees						
Number of employees	Headcount	15'835	14'808	14'424	14'140	14'066
	FTE	15'163	14'105	13'783	13'518	13'488
Female employees	Headcount	2'347	2'246	2'162	2'045	2'057
	FTE	2'213	2'055	1'805		
Student interns	Headcount	145	182	154	213	218
Apprentices	Headcount	525	540	509	506	476
Women in management positions ³	FTE	90	95	87	84	86
	% of total management positions	14	17	15	15	15
Women on the Executive Committee	Number	0	0	0	0	0
Women on the Board of Directors	Number	2	2	2	2	2
	%	22	22	22	22	22
Total departures	Headcount	1'603	1'512	1'127	1'393	1'500
Total employee fluctuation	%	11.3	11.6	8.9	11.0	11.9
Employee fluctuation, unwanted by GF	%	4.1	3.7	3.1	3.7	3.4
Part-time employees	Headcount	373	398	363	336	358
	%	2.4	2.7	2.5	2.4	2.5
Employees with disabilities	Headcount	298	308	290	291	276
	%	1.9	2.1	2.0	2.1	2.0
Employee surveys ⁴	Number of employees surveyed	6'987	1'300	8'000	7'400	6'700
Investigated incidents of discrimination	Number	1	0	2	0	0
Training and professional development						
Training and professional development	Number of GF employees with training (headcount)	12'192	10'635	10'125	9'377	9'170
	%	77	72	70	66	65
Training days	Work days	38'822	33'160	34'264	32'833	29'617
	Days per employee	2.5	2.2	2.4	2.3	2.1
Health and safety						
Work-related accidents involving injury	Number	407	468	447	541	626
Accident rate ⁵	per 1'000'000 working hours	15.9	19.7	20.8	25.2	28.7
Target line accident rate ⁶	per 1'000'000 working hours	23.0	24.0	25.0		
Fatalities, work-related	Number	0	0	1	1	6
Absence days due to work-related accidents or illness	Work days	6'750	7'542	7'676	7'750	10'591
Absence rate due to work-related accidents or illness	% of total work days	0.2	0.2	0.3	0.3	0.3
Total absence days	Work days	139'407	133'383	121'142	121'309	135'756
Total absence rate	% of total work days	4.0	4.1	4.1	4.2	4.6
Target line absence rate ⁶	% of total work days	4.2	4.3	4.4		
Community						
Order volume from workshops employing disabled people	CHF million	2.4	2.2	2.1	2.7	2.5
Charitable donations	CHF million	4.5	4.0	3.6	4.8	4.2

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

2 Due to the implementation of a new Sustainability Reporting Tool the historical datapoints have been consolidated and restated. The same consolidation principles apply as in the Annual Report 2017.

3 Management positions are defined as members of the management board of each business entity or managers who report to the managing director.

4 Figure shows the number of employees who were requested to participate in the survey.

5 The basis for calculation of the accident rate indicator was changed from "1'000 employees" to "one million working hours", in alignment with industry practice.

6 The target line is calculated linearly based on the baseline data and according to the defined target.



THIS IS TO CERTIFY THAT THE SUSTAINABILITY REPORT 2017 (AS OF 21/06/2018) OF

GEORG FISCHER AG SCHAFFHAUSEN, SWITZERLAND

- MEETS THE REQUIREMENTS OF A NEUTRAL COMPLETENESS AND PLAUSIBILITY CHECK ON A "LIMITED LEVEL OF ASSURANCE" AND
- HAS BEEN PREPARED IN ACCORDANCE WITH THE GRI STANDARDS (GRI STANDARDS FOR SUSTAINABILITY REPORTING) CORE OPTION.

THE SUSTAINABILITY REPORT 2017 (AS OF 21/06/2018):

- has been prepared in accordance with the GRI Standards Core option,
- contains both financial and non-financial information,
- is a separated document and covers the entire corporation.

THE SCOPE OF SERVICES INCLUDED:

- Assurance of the presented performance data, of the explanations for understanding the formation of the data in terms of plausibility, and the procedures of administration, monitoring and filing these data
- Comparison of the identified material topics and their boundaries in the sustainability report with the requirements of a report in accordance to GRI Standards Core option

ASSURANCE OPINION:

Based on our systematic, documented and verifiable assurance method, following the principles of the AA1000AS, and a limited level of assurance, nothing has come to our attention that would lead us to believe that the sustainability report of Georg Fischer AG for the year 2017 has not been prepared in accordance with the relevant GRI Standards and that the information and data contained in the report are not reliable. Moreover, we concluded that no material aspects under the Core option were excluded from the report.

In our opinion the content and quality of the report has been produced in line with the ten GRI Principles. However, there are improvements to be made in the areas of stakeholder inclusiveness, balance and clarity.

This certificate is based on an assurance report prepared at the conclusion of the assurance process, which provides more details on the process as well as recommendations for future improvements. The assurance report is available upon request from Georg Fischer AG.

DATE OF AUDIT: 12/13 JUNE, 2018

CERTIFICATE NUMBER: **SGS-G005-0618-19**

LUDWIGSHAFEN, 28 JUNE, 2018

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Member of the Management Board
SGS-TÜV Saar GmbH

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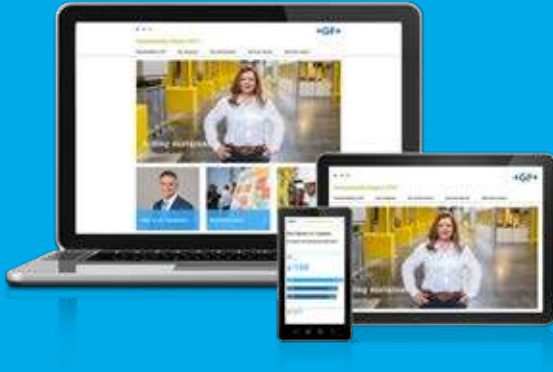
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AS A JOINT VENTURE OF SGS AND TÜV SAARLAND E. V., SGS-TÜV SAAR ENSURES THE RELIABILITY AND QUALITY OF PROCESSES, PRODUCTS AND TECHNICAL SERVICES.

Sustainability Report 2017

Find out more about sustainability at GF,
our progress and performance on
sustainability-report.georgfischer.com/17/en



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Imprint

Published by: Georg Fischer Ltd
Edited by: Georg Fischer Ltd
Designed by: NeidhartSchön AG
Photos by: Scott Gable, Anna Schroll, Nik Hunger,
Thomas Schwede, Helmuth Scham

Cover: GF employee, GF Linamar, Mills River (North
Carolina, USA)

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beyond the control of the company.

The Sustainability Report 2017 of GF is also available
in German. In the event of any discrepancy, the English
version shall prevail.

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