SUSTAINABLE DEVELOPMENT

Today, roughly 3.5 million kilometers of pipelines are installed in about 120 countries. Pipelines offer a more sustainable and safer alternative to transport by road, railway, air, or sea. Sulzer is an innovative and social employer that focuses on reducing its environmental footprint. These factors are critical for sustainable business development.

🗋 45

INNOVATION AND TECHNOLOGY

SUSTAINABILITY

SOCIAL
SUSTAINABILITY

ECOLOGICAL
SUSTAINABILITY

🗋 48

🗋 46

The pressure and aspiration to be environmentally conscious is growing. Companies are looking for products and services that are more eco-friendly and sustainable. To counteract global warming, organizations need to manage their ecological footprint.

Sustainability includes not only environmental, but also social responsibility. As workforces and supply chains are spread across the globe, companies face challenges regarding safety, health, and equal opportunities for their employees.

Sulzer develops innovative, efficient, and eco-friendly solutions for customers and takes measures to reduce its own environmental footprint. The company provides employees with a safe and healthy work environment and offers opportunities for professional development.

Embedding Sustainability in Daily Business

Sulzer wants to do business responsibly. The company embeds its sustainability activities in daily business and sets up suitable management frameworks, systems, and processes.

Vision

Our customers recognize us for our leading technologies and services as well as for delivering innovative and sustainable solutions.

Values

— Customer Partnership: We exceed the expectations of our customers with innovative and competitive solutions.
— Operational Excellence: We perform on the basis of structured work processes and LEAN principles.
— Committed People: We are committed to high standards and show respect for people.

Strategic priorities

— Technology leadership
— Outstanding services
— Continuous operational improvement
— Collaborative advantage

The global QESH (Quality, Environment, Safety, and Health) network and functional councils such as HR, Legal and Compliance, and a global Procurement organization drive the sustainability agenda at Sulzer. The group function ESH is in charge of company-wide environment, safety, and health management, which includes defining and implementing ESH standards and initiatives. To ensure quality (Q) management is close to the business, it is carried out on a divisional and a local level.

Global functional coordination teams are responsible for the information transfer and collaboration between the group and divisional functions. The QESH officers consult with line management on QESH topics, establish local organizations, and conduct regular training workshops.

Complying with international laws and standards

As an international company, Sulzer complies with international and national hard law as well as soft law. The company applies the OECD Guidelines for Multinational Enterprises, the United Nations' Universal Declaration of Human Rights and its protocols, the UN Global Compact (UNGC), and the ILO's Declaration on Fundamental Principles and Rights at Work of 1998. Furthermore, the company participates in the Greenhouse Gas (GHG) Protocol and the Carbon Disclosure Project (CDP).

Sulzer's integrated management system is based on global standards and norms. All manufacturing and service activities are performed under the issued certificates ISO 9001, ISO 14001, and OHSAS 18001 and/or SCC. Due to the discontinuation of locations, the rate of certified sites decreased in 2015. However, it remained high; in total, 85% of all sites have earned the ISO 9001; 65% the ISO 14001; and 74% the OHSAS 18001/SCC. The company conducts internal and external QESH audits regularly to ensure legal compliance and compliance with Sulzer's internal standards and programs. In 2015, 28 Sulzer QESH and external health and safety audits were completed (2014: 18).

LEAN and safe behavior

Two of the cornerstones of its sustainability efforts are Sulzer's Safe Behavior Program (SBP, read more on page 48) and Sulzer LEAN. While SBP focuses on implementing a preventive safety culture, the LEAN initiative has the goal of creating value for customers and other stakeholders by reducing waste of all kinds (e.g., overproduction, unnecessary transport, defects, excess inventory, and more).

Fair and transparent reporting

Sulzer collects data systematically and continues to report on its financial as well as extrafinancial performance. The centralized reporting platform provides an integrated approach for group-wide reporting across functions. The data is generated and collected on the site level. As a reference, the number of total working hours is used. Overall, 85% of total working hours report on environmental data. The coverage of occupational health and safety data is 86% (of total working hours); 100% (of total working hours) report on HR data. Extrafinancial data is collected according to two different reporting cycles: Environmental data cover the reporting period October 1, 2014 to September 30, 2015. The reporting cycle for the health and safety indicators AFR and ASR as well as HR data is the financial calendar year, i.e., January 1, 2015 to December 31, 2015. During the internal Sulzer audits, the ESH team reviews environmental data critically in coordination with the audited site to ensure accurate reporting of the figures.

Observing Global Trends — Providing Innovative Solutions

Global megatrends and their effects force society to think about new technological solutions. Sulzer helps manage the ever-increasing demands of a globalized world with its innovative products and services.

Today's technology is already partially able to mitigate negative consequences of climate change. To foster this development, companies must reshape themselves as well as their products and services continuously. In 2015, Sulzer invested CHF 73.4 million in research and development (2014: CHF 76.2 million). This equals 2.5% relative to sales (2014: 2.4% of sales). In total, the company filed 30 patents in 2015.

Providing pumps for solar project in China

Environment-friendly technology is on the rise. In China, CGN Delingha Solar Energy Co. Ltd launched the first 50 MW solar thermal power project. The plant will consist of a concentrated solar thermal power (CSP) system, which uses pumps to circulate the heat transfer fluid (HTF). Sulzer has successfully supplied various pumps for such critical HTF applications to CSP plants in Spain, USA, India, Morocco, and South Africa. Therefore, the Chinese customer trusted Sulzer with the order of the heat-transfer-circulation pumps and additional equipment. Sulzer provided an efficient, economical, and competitive solution to CGN Delingha. Since this is the first 50 MW CSP project in China, it will help to position Sulzer for future solar thermal power projects in China.

Adapting to customer needs

In Eastern European oilfields, several thousand pumps are installed. Most of them are relatively old and in need of overhauls. A competitor challenged Sulzer's retrofit business by offering low-end and low-price pumps with acceptable but rapidly decreasing efficiency levels. Further, they showed rather unsatisfactory quality and reliability compared with industry standards. To offer an alternative to its premium, engineered retrofits, Sulzer has developed cost- and time-efficient standardized retrofit solutions. The upgraded pumps are as efficient as competitors' pumps, however, their efficiency is stable and their reliability does not decrease over time. Sulzer offers the standard retrofits at an even more competitive price than the original low-end pumps. A further advantage is reduced lead time; the retrofits can be installed within one to three months.

Increasing output of hydrogenerator by 15%

Because much of the UK hydroelectric capacity was built during the 1950s, the time for large-scale overhauls and refurbishments is rapidly approaching. Sulzer's Service Center in Falkirk, Scotland, was awarded a turnkey project to repair one of two generators at the Lochay Power Station, near Stirling, Scotland. One of the generators — commissioned in 1958 — started to exhibit some noise and vibration issues. Sulzer refurbished the hydrogenerator and was able to increase the overall output by 15% (from 22 MW to 25.6 MW). Furthermore, the engineers extended the generator's working life for another 40 years.

Combining capacity, efficiency, and strength

Reducing emissions has become an important means of mitigating climate change. To purify natural gas and absorb CO_2, separation columns can use either a random or a structured packing. Sulzer has developed NeXRing™, a new generation of high-performance random packing. This new product provides an industry-leading combination of capacity, efficiency, and strength. The open structure of the random packing design lowers the pressure drop by 50% from that of conventional packing. The first test results are promising; the capacity of a CO_2 absorber increased by 10% after the conventional random packing was replaced with NeXRing. Furthermore, the combination of more efficient separation with lower pressure drop translates into significant cost savings.

"Every solution starts with a customer's need. By observing the markets closely and addressing global megatrends, we set the foundation for our innovative technology."

Ralf Gerdes,
Head Global Technology

Number of patents

30
(2014: 36)

R&D investments

CHF 73m
(2.5% of sales)
(2014: CHF 76m/2.4% of sales)

Improving Environmental Performance with Local Initiatives

To reduce its environmental footprint, Sulzer's production and service sites carry out local initiatives based on mandatory ISO 14001 certifications. In 2015, the company further extended its environmental reporting scope. While energy consumption remained stable, greenhouse gas emissions, waste production, and water consumption decreased.

> "ISO 14001 helps Sulzer continually improve its ecological performance in a diverse production and service environment."
>
> *Daniel Oehler,*
> *Head of Group Environment,*
> *Safety, and Health*

Sulzer aims to reduce its environmental footprint systematically. Decreasing energy consumption, greenhouse gas (GHG) emissions, production of waste, and water consumption are the company's focus areas. To achieve this goal, local sites have improvement programs in place. Moreover, the company adjusted the reporting requirements for fuel consumption in 2015 and expanded it from on-site transportation to all vehicles operated by Sulzer. This measure will further increase the quality of the company's environmental data.

Changes in the energy mix

The changed reporting requirements resulted in a modified energy mix. Total energy consumption remained stable in 2015. The use of electricity, fuel oils, and district heating decreased by 8%. Both gas and fuel consumption increased by 1% and 93%, respectively. Sulzer has a rolling year-on-year target to maintain or lower energy consumption per 1 000 working hours. The company has met this target. The energy consumption per 1 000 working hours remained stable in 2015.

In 2016, the company plans to conduct a pilot project in one of the divisions to reduce the energy consumption of its car fleet. In addition, Sulzer's QESH (Quality, Environment, Safety, and Health) network will continue to focus on sharing best practices regarding energy-reducing measures. In this way, the company strives to keep its energy use stable or to lower it from last year's level.
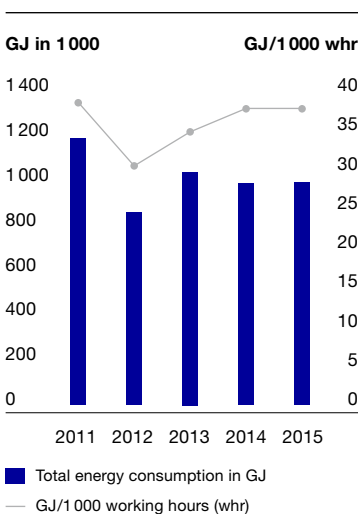
Decrease of greenhouse gas emissions

Sulzer reports greenhouse gas (GHG) emissions (scopes 1, 2, and 3[1]) according to the Greenhouse Gas Protocol and the Carbon Disclosure Project (CDP) initiative. To meet current reporting practices, the company updated scope 1 reporting fundamentally by introducing new CO_2 emission factors in 2015. These factors will be reviewed and updated each year.

In 2015, scope 1 emissions, which predominantly stem from the use of fossil energy sources, increased by 5%. The increase of emissions from fuel consumption because of the changed reporting requirements was partially offset by the strong decrease of direct emissions from chemicals (refrigerants). Scope 2 and 3 emissions decreased by 7% and 5%, respectively. Both improvements stem from changes in the country-specific energy mixes. With a decrease of 5% in 2015, Sulzer met its year-on-year rolling target to maintain or reduce GHG emissions in CO_2 eq. per 1 000 working hours. In the short term, the planned pilot projects mentioned above to reduce fuel consumption will affect the amount of CO_2 emissions. To further improve the accuracy of its reporting, the company intends to expand its GHG reporting to business flights in 2016.

Avoiding, reusing, and recycling waste

At Sulzer, waste is usually managed locally as part of ISO-14001-certified environmental management systems. To decrease industrial waste, Sulzer follows the principle "avoid, reuse, and recycle". Waste quantities vary typically from year to year and depend strongly on the type of projects conducted as well as on construction work done at Sulzer. The company evaluates waste production in two ways: by looking into the waste's hazardousness, and by considering its treatment. Generally, recycling rates are comparatively high at Sulzer because of the materials used: metals, sandblasting residues, and foundry residues are fairly easy to recycle.

Energy consumption

GJ in 1 000   GJ/1 000 whr

■ Total energy consumption in GJ
— GJ/1 000 working hours (whr)

In 2015, total waste decreased by 5%. With a decrease of waste produced by 6% per 1 000 working hours, Sulzer met its year-on-year rolling target to maintain or reduce waste quantities (per 1 000 working hours) compared with last year's values. In 2016, the company plans to conduct pilot projects with a zero waste policy at selected sites. It aims to improve the amount of recycling by sharing best practices about waste management.

Decrease of water consumption

Sulzer collects data on the water consumption and discharge of its operations. To shrink its organizational water footprint, the company focuses primarily on reducing water consumption. For Sulzer as a manufacturer of pumps for the water market, water risks are market related and—to a much lesser extent—related to operations.
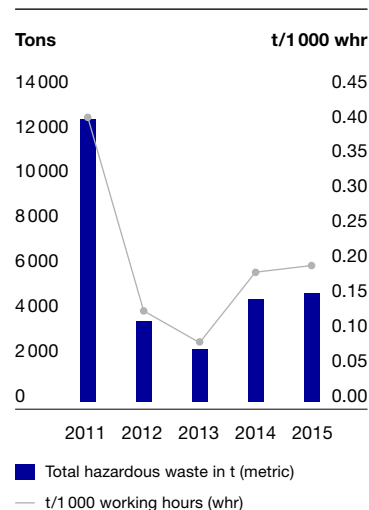
Overall, water consumption decreased by 17% in 2015. While 37% of the water used was for cooling purposes, 35% was process water. The consumption by m^3/1 000 working hours decreased by 17%. So, the year-on-year rolling target to maintain or reduce the water consumption per 1 000 working hours was met.

Hazardous waste

■ Total hazardous waste in t (metric)
— t/1 000 working hours (whr)

Key figures

		2015	2014	Change in +/−%
Energy	**GJ**	**970 832**	**965 814**	**0.5**
— Energy consumption per working hours (whr)	GJ per 1 000 whr	37	37	
— Share of electricity	%	55	60	−9
— Share of gases	%	24	24	1
— Share of fuels	%	12	6	93
— Share of fuel oils	%	2	2	−11
— Share of district heating	%	7	7	−10
— Share of other sources	%	<1	1	4
Greenhouse gas emissions	**tons CO_2 eq.**	**105 960**	**110 820**	**−4**
— GHG emissions per working hours	tons CO_2 eq. per 1 000 whr	4.06	4.28	−5
— GHG scope 1[1]	tons CO_2 eq.	20 560	19 550	5
— GHG scope 2[1]	tons CO_2 eq.	66 290	71 210	−7
— GHG scope 3[1]	tons CO_2 eq.	19 110	20 060	−5
Waste	**tons**	**29 071**	**30 666**	**−5**
— Waste per working hours	tons per 1 000 whr	1.1	1.2	−6
By treatment				
— Recycling	%	66	66	
— Waste to landfill/incineration/other treatment	%	34	34	
By hazardousness				
— Non-hazardous waste	%	84	85	
— Hazardous waste	%	16	15	
Water	**m^3**	**1 311 922**	**1 581 631**	**−17**
— Water consumption per working hours	m^3 per 1 000 whr	50	61	−17

[1] Scope 1: direct emissions from Sulzer stemming from primary energy sources such as natural gas and fuels used on-site; scope 2: indirect emissions from secondary (converted) energy sources such as electricity and district heating; scope 3: indirect emissions from the production and transport of fuels and gases not included in scopes 1 or 2.

Safe Behavior and Targeted Talent Promotion

The company focuses on providing a healthy and safe work environment for its roughly 14 000 employees in over 40 countries. To achieve sustainable business success, Sulzer offers learning and development opportunities as well as tools that enable cooperation and respectful behavior.

As an industrial company with over 170 locations around the world, Sulzer considers the health and safety of its employees as an essential asset. Because people work in different surroundings such as offices, factories, and at customers' sites, the safety risks are manifold and—in part—difficult to control. Employees need to feel responsible for their own safety as well as the safety of their colleagues.
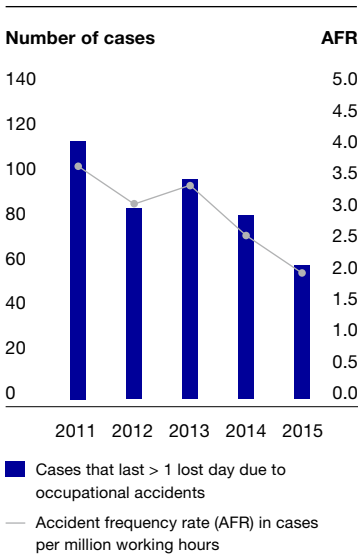
Empowering employees to act safely

Sulzer's global Safe Behavior Program (SBP) is designed to foster a team-oriented approach to safety. It focuses on developing safety leadership as well as employee empowerment. Thanks to the efforts within the SBP, Sulzer reached an accident frequency rate (AFR) below two cases per million working hours—the lowest AFR ever in its history. In general, Sulzer continued to decrease the severity of its accidents (measured by accident severity rate; ASR). To improve the effectiveness of the SBP, Sulzer instigated the Safety Culture Assessment program. In 2015, almost all Sulzer sites were visited by independent safety experts. They analyzed the maturity of the local safety culture and provided direct guidance on how to further improve safety management systems and leadership competence.

Despite the company's efforts, a total of 57 major accidents happened at Sulzer in 2015, resulting in 1 444 lost working days. One employee died in an occupational accident while working at a client's site. Sulzer is profoundly dismayed by this fatality. Investigations to understand the root causes are ongoing. Sulzer remains committed to pursuing its ultimate goal of zero accidents.

To address a subject which is central to safety excellence, Sulzer launched a pilot program aimed at raising safety leadership and risk competence skills at the managerial level in 2015. Beginning in Asia and progressing to Europe, over 100 senior and mid-level managers participated in a series of workshops. These are designed to increase the managers' ability to engage the workforce more proactively and with greater consistency in safety. Because safety excellence depends on the abilities of all members of a team, Sulzer plans to develop further trainings and workshops to enhance safety competence at all levels.

Local initiatives to balance work and free time

Sulzer is aware that work-life balance, personal development, and flexibility are becoming more and more important in a job. Thus, the company supports local sites in offering opportunities in this field. For example, Chemtech's CT Balance program is designed to improve health and work-life balance. It involves numerous events, campaigns, and workshops that are individually designed and adapted to the needs of local staff. Another initiative is the Work Positive program launched by the Pumps Equipment site in Wexford, Ireland, in 2015. The platform includes guidelines and literature as well as on-site training in stress management and improving work-life balance.

Training leaders with targeted programs

For employees to live out the *one* company approach, learning processes have to be aligned. Thus, Sulzer's training efforts focus on developing a common business understanding and fostering collaboration across borders.

The company specifically trains its leaders to lead by example. The Sulzer Management Training (SMT) imparts management basics as well as current leadership topics to executives who are new in their roles. The program has been rolled out globally and supports the company's strategic goals and its ongoing reorganization. More than 60 participants in all three regions passed the SMT in 2015. Leaders who aim to

Accidents

Number of cases		AFR
140		5.0
120		4.5
		4.0
100		3.5
80		3.0
		2.5
60		2.0
40		1.5
		1.0
20		0.5
0		0.0

2011 2012 2013 2014 2015

■ Cases that last > 1 lost day due to occupational accidents

— Accident frequency rate (AFR) in cases per million working hours

develop their individual capabilities and to reach a new leadership level can participate in the Leadership Program for Development and Impact (PDI). In 2015, 75 managers and experts participated in one of the PDI. Thanks to its efforts, Sulzer filled 60% of leadership positions with internal talent in 2015.

Sulzer's learning and development programs comprise different learning methodologies and concepts, including new media. Employees are able to adapt these technologies in their own business environment. The Learning Management System (LMS), a cloud-based platform for training and development administration, supports them in this regard. The company has completed the implementation of the LMS in the entire Pumps Equipment division and will continue to introduce it throughout the company.

Facilitated processes thanks to global eHR tool
Efficient human resources (HR) management is becoming an important competitive factor. In recent years, Sulzer has implemented an electronic human resources (eHR) management platform. Currently, it contains information on more than 7 500 employees, secures the data centrally, and enables access from all local sites. The eHR application grants access to all global and local training workshops across the company. It allows HR processes such as recruiting, performance management, succession, or competency to be performed online. In the years to come, Sulzer will focus on further rolling out the application globally. With its venture into eHR, the company is ahead of many competitors and is well-equipped for the future.

Embracing different backgrounds
At Sulzer, employees collaborate across borders—geographic, cultural, and demographic ones. The company's workforce is geographically spread all over the world. Both Sulzer and its customers benefit from this proximity. Sulzer also appreciates age differences and welcomes fresh impetus; experienced employees work closely with apprentices and younger professionals to embrace different viewpoints. In 2015, 14.5% of the company's workforce was female. Close collaboration with academic institutions enables Sulzer to attract talented young women and men.

Code of Business Conduct guiding all behavior
Sulzer shows respect for every individual's fundamental rights and supports human rights throughout its value chain. The company's strong vision and values, its Code of Business Conduct, and its efficient compliance system guide employees on responsible and ethically correct behavior. The company continuously increases its efforts to ensure a fair, non-discriminatory, and safe work environment. Read more on corporate governance on page 51.
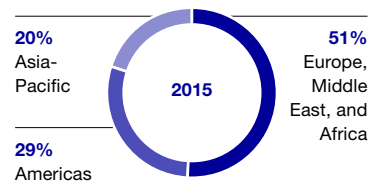
> "Achieving the best safety result in our company history makes us proud of our employees. It shows that they feel responsible and take their own and their colleagues' safety seriously."
>
> *Andreas Hugener,*
> *Head Group Human Resources a.i.*

Geographical spread of employees

20% Asia-Pacific
2015
51% Europe, Middle East, and Africa
29% Americas

Key figures

		2015	2014	Change in +/− %
Accident frequency rate (AFR)	Cases per million working hours	1.9	2.6	−24.0
Accident severity rate (ASR)	Lost days per million working hours	48.1	53.9	−10.8
Health and safety training	hours	106 610	81 768	30.4
Voluntary attrition rate	%	7.5	7.2	0.3
Share of women (of total workforce)	%	14.5	14.0	0.5
Leaders from internal talent pipeline	%	60	89	−29.0
Number of employees	FTE	14 253	15 494	−8.0

☐ Find further sustainability data at www.sulzer.com/sustainability

History of sustainability at Sulzer

Sulzer has a long tradition of responsible action. The company builds on its strong industrial heritage and engineering competence. Sulzer aims to improve its economic, social, and ecological performance over time.

Year	Measures
1834	First statement on "getting it right the first time" from Johann Jakob Sulzer
1845	Sickness Benefit Association for factory workers
1870	Company-owned apprentice workshop for young craftsmen
1872	Society for low-cost housing construction
1890	First workers' council in Switzerland
1919	Switzerland's first regularly published customer magazine Sulzer Technical Review (STR)
1945	First working memberships in ISO committees
1988	Founding member of the European foundation for quality management (EFQM)
1990	First employee participation program
1991	First environmental policy
1992	Reissue of traditional quality principles, quality as "the attitude in all we do"
1993	Official launch of ISO 9001 certification campaign Start of environmental data collection
1995	First product life cycle analysis
1996	First external environmental report First ISO 14001 certificate
1997	First external social report Corporate values with important total quality elements
1998	Principles of cooperation
2000	Integrated QESH management systems based on ISO 9001:2000
2001	First comprehensive sustainability data collection
2002	Corporate values Code of Business Conduct SEED database for sustainability data collection First internal SA 8000 and OHSAS 18001 audits
2003	Corporate risk council First lean production initiative
2004	First external report on sustainability SEED light database for smaller sites
2005	QESH as a key process for operational excellence Program for Development and Impact (PDI)
2007	Health and safety awareness program SEED mini database for service sites
2008	First GRI A+ rating for the Sulzer Sustainability Report Sulzer safety rules New competency framework
2009	Sulzer core values New employer branding strategy Sustainability Council established
2010	First environmental product declarations (EPD) Corporate-wide LEAN platform to foster organizational excellence
2011	Global employee engagement survey Corporate-wide initiative to increase diversity
2012	New strategic priorities Rollout of global Safe Behavior Program (SBP)
2013	Consolidation of financial and extrafinancial reporting platforms onto SAP-BPC initiated
2014	Global employee engagement survey Consolidation of financial and extrafinancial reporting platforms onto SAP-BPC completed
2015	First time to achieve an accident frequency rate below two cases per million working hours Extension of environmental reporting scope