

TRADITION AND VISION **SUCCESS WITH WAFERS**

Non-financial report

Extract from the Annual Report 2018

Non-financial report issued by Siltronic AG, Munich

(Implementation of the requirements contained in sections 315b, 315c in conjunction with sections 289b to 289e of the German Commercial Code)

1	Foreword	10	5. Personnel aspects
2	1. The framework for this sustainability report and non-financial report	11	Headcount and personnel planning strategy
3	2. The Siltronic business model and our ethical principles	12	Relationship with employee representatives and employees' rights
3	The Siltronic business model	12	Diversity and equal opportunity
3	Corporate ethics at Siltronic	13	Advanced training and demographic trends in Germany
3	The impact of ethical principles on the organization of Siltronic	13	Remuneration and equal pay
4	Non-financial performance indicators within our organization	14	Occupational health and safety
5	3. Determining the contents of this report	14	Employee satisfaction
5	Siltronic's most important stakeholders	15	6. Supply chain
6	Determining the contents of the report	15	Supplier relationships
7	4. Environmental aspects	15	Conflict minerals
7	Management of raw materials and supplies	15	Siltronic limbers up to be "Fit for the NAP"
7	Management of energy (consumption of energy within Siltronic)	15	Sustainability with regard to customers
8	Management of waste	16	7. Social responsibility or social aspects
9	Management of water	16	Combating legal violations, particularly corruption and bribery
10	Environmental protection measures	16	Human rights
10	Emission of greenhouse gases	17	Non-profit purposes and corporate volunteering
10	Other air emissions	17	Relationships with associations and with politics
10	Influence of climate change	17	Taxes
		17	Dialog at regional levels
		18	United Nations Global Compact
		19	Report of the independent auditor

Foreword

GRI 102-14

In order to achieve economic success, companies need to be trusted by society. We take our corporate responsibility seriously. We combine corporate success with responsible action – in our production processes, in our use of resources and in all our interactions with our employees.

We are one of the global market leaders in the field of hyperpure silicon wafers and supply all leading consumers of these wafers throughout the semiconductor industry. Silicon wafers are key components in the vast majority of electronic parts that make our lives easier, safer, and ecologically friendlier. Our technologies form the basis for manufacturing more compact and energy-efficient components in the modern world of electronics. Consequently, we contribute towards preserving precious resources and reducing carbon dioxide emissions worldwide. We continually and consistently improve our production processes with the aim of reducing energy consumption and increasing the percentage of supplies that can be reused. In order to make deliveries to our customers as environmentally friendly as possible, we combine deliveries and utilize multiple-use packaging solutions.

Our employees represent our greatest asset and the cornerstone of our success. We treat one another with respect, honesty, and openness and see the differences between people as a source of enrichment. Our goal is to achieve even greater diversity within our organization, focusing in particular on mentoring more women and employees with varying cultural experiences to take up positions in middle and upper management. We support a work life balance with a variety of measures. Occupational health and safety are deeply embedded in our business processes.

Siltronic implements the ten principles of the United Nations 'Global Compact' initiative for the protection of human rights, social and environmental standards, and the fight against corruption. We respect internationally proclaimed human rights and promote their observance within our sphere of influence.

Siltronic employees worldwide take on the daily challenge of making our processes better, safer, simpler, environmentally friendlier, and therefore more sustainable. Together, we want to live up to our responsibility to reconcile the impact of our business activities with the expectations and needs of society.



Dr. Christoph von Plotho
CEO



1. The framework for this sustainability report and non-financial report

We see sustainability as the positive impact of our current activities on future conditions in the ecological, economic, and social spheres, mitigating inequalities and promoting an open future. Consequently, the underlying reason for this non-financial report or sustainability report is the question of how Siltronic contributes towards the improvement or deterioration of ecological, economic, and social aspects at local, regional, and global levels.

We believe that sustainable activity is also beneficial for Siltronic as a company. For instance, we are safeguarding our profitability by deploying raw materials more efficiently and optimizing energy consumption. Profitability is an important factor in our ability to provide employees with above-average social benefits and offer them a wide range of advanced training measures. A dedicated, well-trained workforce is more capable of breaking new ground in the field of research and development, which, in turn, has a beneficial impact on our profitability in the medium and long term. In this manner, a cycle is created that is not only positive for stakeholders and the environment, but for Siltronic as a company, too.

With this sustainability report or non-financial report we supplement the economic aspects outlined in the consolidated financial statements and the combined management report by including ecological and social aspects and explaining how we propose to reconcile these with one another.

This report is the summarized, separate non-financial report for the financial year 2018 and applies to both the Siltronic Group and Siltronic AG. Information that applies only to Siltronic AG, is indicated in the text. The non-financial report has been issued and was made available to the public on <https://www.siltronic.com/en/our-company/sustainability.html>.

Information included in this report was prepared based on the Sustainability Reporting Standards of the Global Reporting Initiative (GRI) and is aligned to the Sustainable Development Goals of the United Nations. Moreover, this report provides information regarding sustainability to the degree relevant for reporting the 'Communication on Progress' of the United Nations Global Compact. The reported period corresponds to that of the consolidated financial statements and all Group entities were included. We intend to prepare the sustainability report on an annual basis, as in the past. **GRI 102-50, -52**

This non-financial report was subject to an audit by the Supervisory Board of Siltronic AG. Hence, the Supervisory Board has asked an audit firm to execute a corresponding audit. KPMG AG Wirtschaftsprüfungsgesellschaft has performed an audit using ISAE 3000 to obtain a limited assurance regarding the information required in accordance with Sections 315b, 315e in conjunction with 289b to 289e of the German Commercial Code. **GRI 102-56**

2. The Siltronic business model and our ethical principles

Section 289c para. 1 of the German Commercial Code

The Siltronic business model

Siltronic is a globally operating market and technology leader specialized in manufacturing hyperpure silicon wafers. Since wafers form the basis for semiconductors all our customers are manufacturers of semiconductors. [GRI 102-2](#)

Wafers are produced by melting hyperpure silicon and extracting a crystal from the melt by means of a pulling process. The crystal is sawn into individual wafers, polished, and subject to a final inspection prior to packaging. We deploy many special-purpose machines in the course of manufacturing and a considerable part of the process takes place in cleanrooms. Production costs are attributable (in decreasing order) to personnel, auxiliaries and operating materials, depreciation, raw materials and energy. [GRI 102-9](#)

The production equipment largely consists of machines for pulling crystals, furnaces, measurement equipment, cleaning systems, and machines for the mechanical and chemical treatment of the wafer surfaces. Most of the wafer manufacturing process takes place in cleanrooms. From our four production sites we dispatch our wafers directly to our customers' chip factories, which are located (in alphabetical order) in Israel, Japan, Korea, Malaysia, Singapore, Taiwan and (mainland) China, the USA, and Western Europe. At each of our four largest sites we run a production, administration and sales department. In addition, we operate small sales or administration units in six countries. [GRI 102-4, -6, -9](#)

We produced some 28.2 million wafers in the reporting year (2017: 27.6 million). [GRI 102-7](#)

Additional information on our business model is available in the combined management report.

Corporate ethics at Siltronic

In order to achieve economic success, companies need to be trusted by society. In our efforts to ensure that Siltronic's business is conducted responsibly and compliant to all statutory regulations, we have developed various guidelines, including: [GRI 102-16](#)

- Code of Conduct: We have drawn up a Code of Conduct for our Group that sets out binding rules for responsible and law-abiding conduct, which all Siltronic employees are required to observe. The Code of Conduct deals in particular with the

topics of behavior towards one another, leadership as an example, dealings with business partners, handling information, separation of private and corporate interests, quality, safety, health and environment, and social responsibility. [GRI 102-17](#)

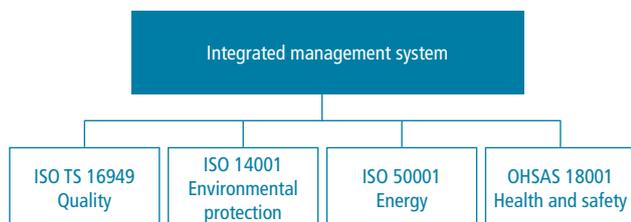
- Voluntary commitments: Siltronic implements the ten principles of the United Nations' Global Compact initiative for the protection of human rights, social and environmental standards, and the fight against corruption. Siltronic adheres to the principles of the chemical industry's Responsible Care® initiative. Siltronic has also become a signatory to the 'Diversity Charter'. By signing, Siltronic undertakes to actively implement and promote equal opportunity and diversity. As a supplier to the electronics industry, Siltronic observes the Code of Conduct set out by the Responsible Business Alliance RBA which leading companies in the electronics industry use to promote social and ecological responsibility as well as ethical business practices worldwide. [GRI 102-12, -13](#)
- Strategy handbook: This handbook sets out Siltronic's highest aims and defines our mission statement. Our mission statement consists of aspiring to create added value for our stakeholders. We want to achieve this aim by offering wafers of outstanding quality at competitive cost.

The impact of ethical principles on the organization of Siltronic

The above guidelines have an impact on the organizational structure of Siltronic, whereby the most important organizational measures for ensuring the ethical principles are (a) management systems, (b) the existence of a separate department for environmental protection, occupational health and safety, and plant process safety, and (c) reporting channels to the Executive Board and Supervisory Board.

We control operational processes via our Integrated Management System (IMS). The IMS outlines processes and responsibilities and defines group-wide standards, including those relating to quality, energy, occupational health and safety, environmental protection, and plant process safety. The standards are based on national and international standards, laws, customer requirements, and our own principles. Selected management systems are certified by a globally operating service provider. The certifications include ISO 14001 for environmental protection, OHSAS 18001 for occupational health and safety, ISO 50001 for energy management at our sites in Germany, and ISO 9001 and ISO TS 16949 for quality systems.

Group management system



In order to identify and manage the variety of possible risks entailed in conducting business, the Executive Board has implemented a risk management system, which is described in detail in the combined management report in the chapter 'Risk and opportunity report'. In addition, we have installed a compliance system aimed at avoiding, identifying, and sanctioning company-related statutory violations, for which the Siltronic compliance organization is responsible. Siltronic has appointed compliance officers in all of its active entities. As a protected reporting channel, we have also appointed an external ombudsman to whom our employees and third parties can anonymously report any violations of statutory regulations. The Chief Compliance Officer reports directly to the CEO of Siltronic AG. [GRI 102-17](#)

As a company working with complex chemical and mechanical processes, we have a high degree of responsibility for the operation of our equipment as well as for the protection of people and the environment. For this reason, we have appointed employees at production sites who are specially trained in the fields of environmental protection, occupational health and safety, and plant safety. These employees are grouped together in the Quality Management and Sustainability department reporting directly to the CEO. The allocation of responsibilities among the members of the Executive Board is presented in the combined management report. [GRI 102-11](#)

For information on the composition of the Supervisory Board and its cooperation with the Executive Board, please refer to the explanations in the Corporate Governance Report and the Report of the Supervisory Board. Information on the remuneration of the Executive Board and the Supervisory Board is available in the Remuneration Report.

Non-financial performance indicators within our organization

The management of the Siltronic organization is based on financial performance indicators. The most important of these are recorded monthly on a local and Group basis and entered in reporting systems, where they are compared with previously determined targets. The most important financial performance indicators in 2018 were EBITDA margin, ROCE and net cash flow.

Apart from these financial performance indicators we use non-financial performance indicators as guidance. However, none of these indicators is used to manage the Company.

Similar to the financial performance indicators, non-financial performance indicators also have a hierarchy according to their significance. From the wide range of non-financial performance indicators that can be assigned to sustainability, the Executive Board has selected five performance indicators through which it is informed in the course of routine reporting. Each of these indicators has a target for the fiscal year. The five non-financial indicators relating to the field of sustainability are as follows:

[Section 289c para. 3 number 5 of the German Commercial Code](#)

- The efficient use of silicon (raw materials management)
- The efficient use of energy (energy management)
- The avoidance of waste (waste management)
- The number of work accidents per 1 million working hours (safety)
- Work accidents per year involving chemicals (safety)

In view of the high relevance of water in our production, we will be introducing a performance indicator to measure the efficiency of using water as from 2019.

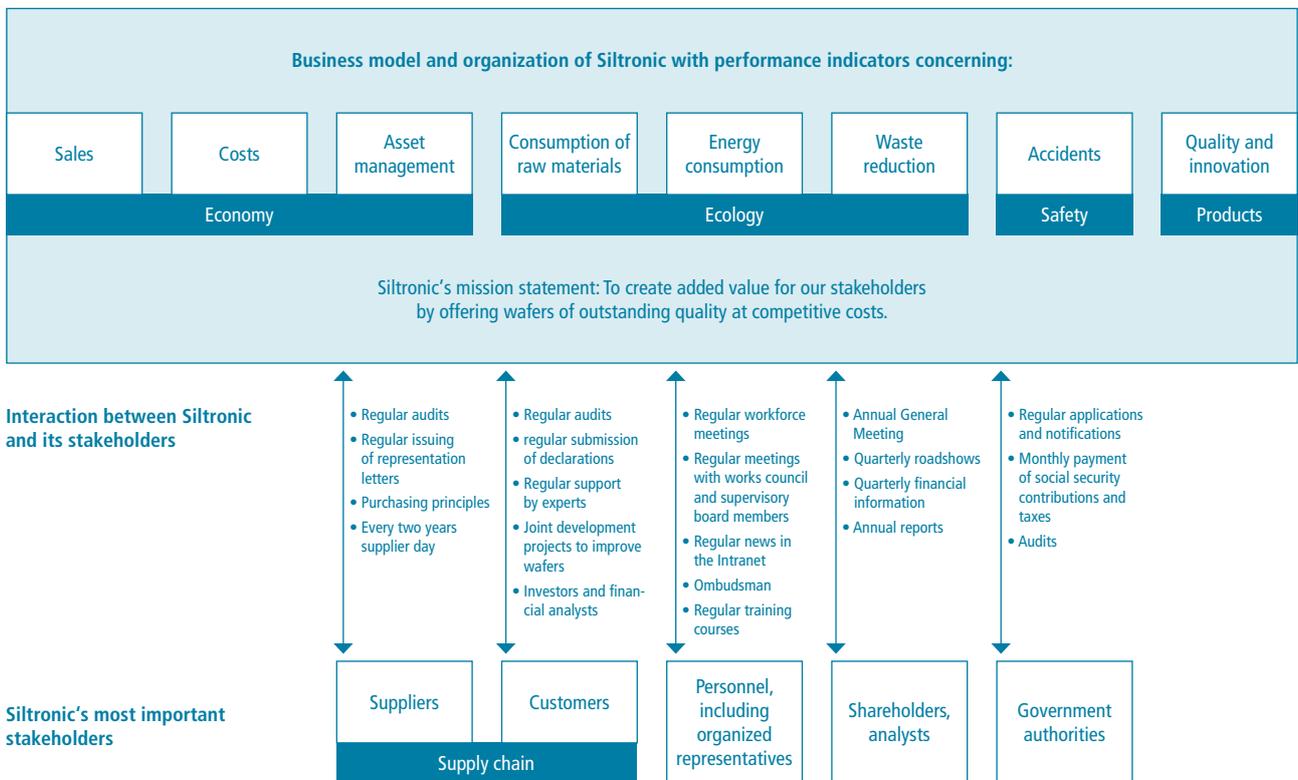
Non-financial performance indicators are reviewed during the year and in case of negative variances the cause for the development is analyzed in order to introduce improvement measures.

3. Determining the contents of this report

Siltronic’s most important stakeholders

Due to its extensive activities, Siltronic impacts outside individuals, companies, and public authorities in various ways. The defining of stakeholder groups that have been assessed as the most important ones is based on the number of interactions with a particular stakeholder group and the involvement of managers. **GRI 102-42**

The following diagram shows the most important interactions and their frequency of exchange. **GRI 102-40, -43**



Determining the contents of the report

In order to identify the topics important for this report – environmental topics, personnel aspects, supply chain (including human rights), social responsibility and social aspects (including fight against corruption and bribery) –, we determined various sustainability aspects as a first step. The identification of sustainability topics is based on the following considerations:

- Specifics of the company
- The ten principles of the United Nations’ Global Compact project and the Sustainable Development Goals formulated by the United Nations
- Discussions with customers
- Specifics of our industry
- Result of external rating agencies that have conducted an assessment using last year’s non-financial report and other documents

The second step entailed prioritizing the topics according to materiality, which also involved a risk assessment. Each topic was then allocated to a general group.

In a fourth step, the result was subject to a validation process, which was carried out in consultation with internal experts and by comparing it with the corporate strategy. This resulted in the following list: [GRI 102-46, -47](#)

	Environmental aspects	Supply chain	Personnel aspects	Society
Compliance	x			
Reduction of specific silicon consumption	x	x		
Reduction of specific consumption of auxiliary materials	x			
Reduction of specific energy consumption			x	
Environmental impact of transportation	x	x	x	x
Recycling			x	x
Water consumption	x	x		
Environmental protection measures			x	x
Greenhouse gas emissions	x	x		
Diversity	x	x		
Advanced training, demographics	x			
Occupational health and safety	x			
Water consumption	x			

The analyses did not reveal any reportable risk.

4. Environmental aspects

Section 289c para. 1 of the German Commercial Code, UNGC



Management of raw materials and supplies

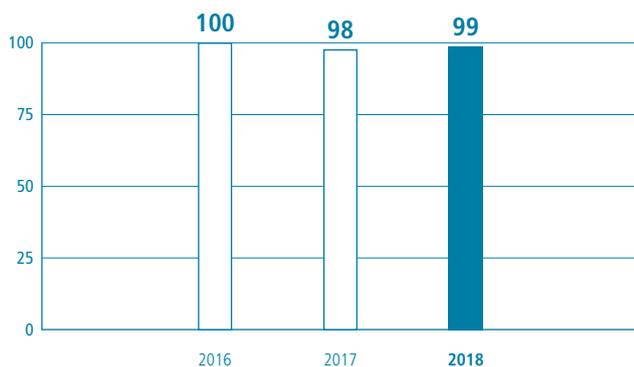
As wafers consist almost entirely of hyperpure silicon, silicon is by far the most important raw material for Siltronic. After oxygen, silicon is the second-most frequently found element in the Earth's crust and non-toxic. For this reason, we regard silicon wafers as an unrivaled raw material for manufacturing semiconductors and the raw material of choice for our products in the long term.

We endeavor to use silicon as efficiently as possible, thereby contributing towards reducing environmental pollution and helping us remain competitive. The 'efficient use of silicon' performance indicator triggers in particular that silicon residues are recycled in our production cycle, that manufacturing processes are further developed with the aim of increasing yield, and that investments are made in new machinery. We set a target value for this performance indicator on an annual basis. The will to achieve the goals leads to the emergence of new ideas that are tested. If their use in production scenarios looks promising, investments are made to implement them. Unfortunately, the increasing physical and chemical specifications required by our customers on many wafer types has a negative impact on the yield.

The following table illustrates how the efficient use of silicon has developed, whereby 2016 was selected as the basis for comparison:

Development of the efficient use of silicon

in %



The specific target for the reporting year was to avoid a deterioration of two percentage points measured against the previous year. The fact that no year-on-year improvement was set as a target for 2018 is due to the product mix our customers ordered. Furthermore, our customers ask for wafers showing more sophisticated technical specifications. With such wafers our customers can produce chips which consume less electricity (with the chip having a higher performance at the same time) but the specific consumption of silicon increases before the chip production starts. The specific goal for the entire year 2018 was slightly missed since the efficiency was below expectation at the beginning of the year. In the course of the financial year the efficiency improved and in the fourth quarter the target was exceeded.

Apart from the raw material silicon, chemicals, gases, and polishing agents used as supply materials play a role in our production process. As the various supplies are less important to us than silicon, no performance indicators were reported to the Executive Board. Of course we continuously work on changing our production processes with the aim of reducing the specific amounts of auxiliary materials required. Specific reductions are usually achieved by avoidance (e.g. by using less chromium) or by recycling (e.g. by reducing the use of polishing agents and cleaning baths). Progress is usually measured using quantitative factors and compared with targets after one or two years.

Management of energy (consumption of energy within Siltronic)

A substantial part of the process of transforming the purchased silicon into wafers is performed at high temperatures and in air-conditioned cleanrooms. The large amount of energy required to drive this process makes wafer production an energy-intensive industry.

In 2018, energy consumption totaled 719 GWh. Consumption includes production, research and development, and administration. Sales offices are not included in the total, as their overall energy consumption is insignificant. Electricity is by far the most important source of energy.

Energy consumption

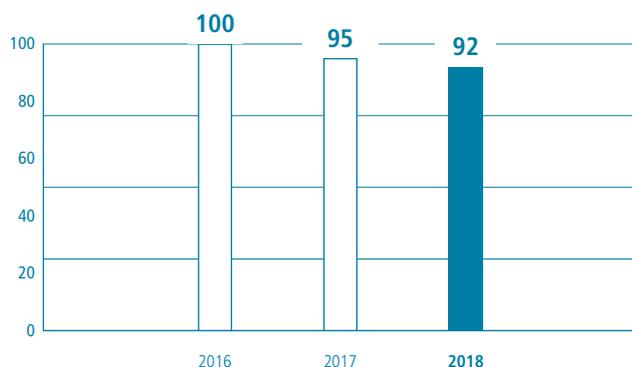
in GWh	2016	2017	2018
Electricity consumption	586	601	608
Natural gas	75	75	71
Steam, heat	42	39	35
Fuel oil	7	6	5
Total	710	721	719

Siltronic purchases electricity from the public grid. About 55 percent of the electricity is consumed in Germany. According to the Federal Association of the Energy and Water Industry (BDEW), 38 percent (previous year: 36 percent) of the electricity consumed in Germany from public grids has its origin in renewable sources, which mainly includes wind, biomass and solar.

Energy consumption per square centimeter of wafer manufactured describes the energy intensity of our products (the forms listed in the table 'Energy consumption' are used to calculate energy consumption). The following table illustrates that we were able to lower the energy intensity significantly since 2016.

Energy consumption per sq cm wafer surface

in %



In order to reduce energy intensity, projects are being initiated and executed to lower the specific electricity consumption. Sustainable changes were achieved in recent years especially through improvement projects in the areas of heat recovery, adjusting water temperatures for cooling and other process optimizations.

The 'efficient use of energy' performance indicator is reported to the Executive Board on a regular basis and ambitious targets are determined annually. Together with the production volume this is the basis for us to calculate absolute savings in MWh for sites and production lines.

Siltronic pursues the strategic target of reducing its specific energy consumption by an average of 1.5 percent per year. On this basis and using planned production volume, we calculate absolute savings targets in MWh for the sites and absolute targets for the production areas.

Numerous energy efficiency measures have contributed to meeting the 2018 target, resulting in a total sustainable reduction in electricity consumption of 15.7 GWh per annum and an equivalent value of EUR 1.2 million. The annual target of 1.5 percent was met.

The Company's energy management system is certified in accordance with ISO 50.001 2011 at the Burghausen and Freiberg sites.

Management of waste

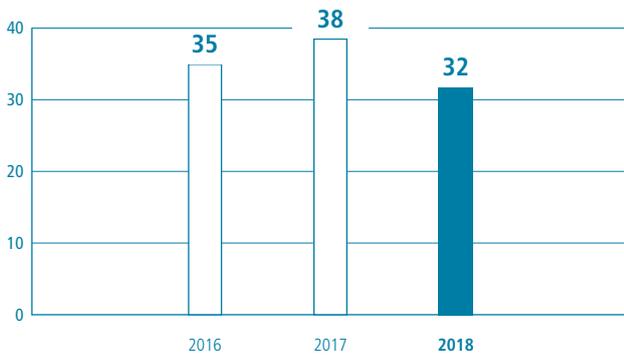
In order to reduce packaging waste, we have taken an initiative many years ago together with our customers and introduced two recyclable types of reusable packaging which are the 'Hybox' and the 'FOSB'. As multiples of FOSBs can be stacked in a Hybox, an FOSB forms the inner reusable packaging and the Hybox the outer reusable packaging solution. Since both types of reusable packaging impact customers' production processes, customers first need to agree to the use of the Hybox and the FOSB.

Over the years, we have nearly always been able to convince customers of the benefits of this form of packaging wherever the use of the Hybox was technically feasible. Through this reuse concept we reduced the transport of packaging by around 488 tons and the waste by about 977 tons in comparison with carton packaging.

Our main focus in reusable packaging is the use of the FOSB. The percentage of multiple use of the FOSB for packaging purposes is one of the five non-financial performance indicators that are regularly reported to the Executive Board.

Share of wafer area in reusable packaging

in %

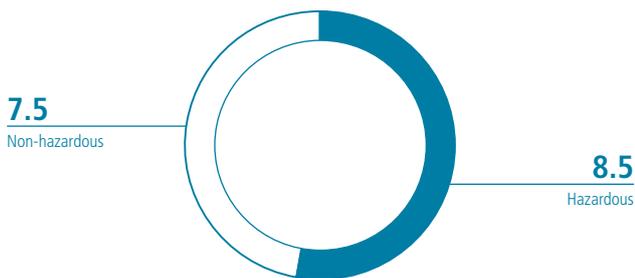


The target for 2018 was to achieve a percentage of 35 percent. This target was not met because the acceptance procedure to introduce a type of FOSB at one major customer was slower than expected.

With regard to waste, the disposal of hazardous material is also a significant factor. The composition of waste and the disposal channel were as follows in 2018:

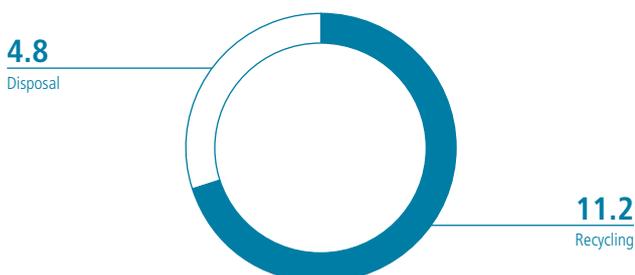
Composition of the waste GRI 306-2

in 1,000 t



Disposal type GRI 306-2

in 1,000 t



Disposal routes as well as the classification of waste into the categories 'dangerous' and 'not dangerous' are based on local legal or quasi-legal regulations.

A total of 38 percent of the waste is caused by Siltronic AG.

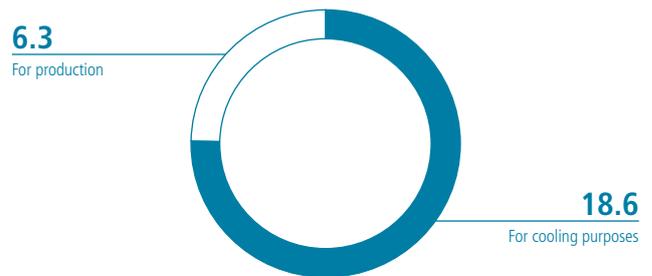
Management of water

Water is primarily used in our manufacturing process for cleaning and cooling purposes. We endeavor to protect natural water resources and use them as sparingly as possible. The definition of the World Business Council for Sustainable Development and our risk assessment using the Global Water Tool® defines Singapore as a water shortage area. We are therefore under an obligation to use water especially carefully in our Singapore location. For that reason we operate our own water treatment plant in Singapore. In the year 2018 we were able to realize major improvements to the treatment of waste water and water retaining.

The water recycling rate in the group stood at 38.2 percent in 2018, following 35.5 percent the year before.

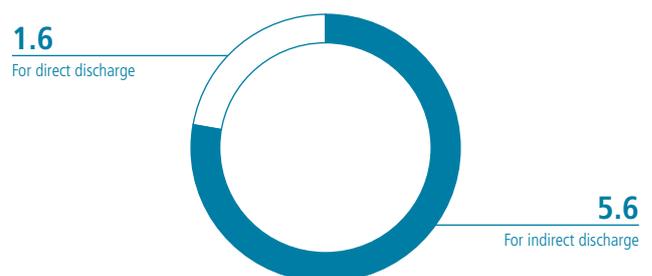
Use of water

in million m³



Discharge of waste water (without cooling water)

in million m³



Germany accounts for about 86 percent of water use and about 58 percent of waste water (excluding cooling water).

In order to use water more than once, we add water used in a production process to other processes as far as possible. In 2018, the volume of water recycled this way amounted to 2.4 million m³, compared to 2.2 m³ million the previous year.

Environmental protection measures

Environmental related investments totaled approximately EUR 4.6 million in 2018 (previous year: EUR 3.6 million). We allocate these investments according to typical environmental aspects, out of which EUR 1.9 million refer to water, EUR 1.5 million to air and EUR 1.2 million to climate protection.

Our site in Portland is located in an area that has been used by industry for around 100 years. Due to detected contamination in the soil and the adjacent river, authorities have imposed requirements for monitoring and eliminating environmental pollution. As the owner of a property that has been contaminated and borders the river, Siltronic has been subject to specific environmental regulations in Portland for many years. In order to fully meet these requirements, we employ an employee who is solely responsible for implementing the environmental regulations. This measure ensures that the necessary coordination with the authorities takes place, formalities are fulfilled, qualified service providers are assigned and the remediation is coordinated.

Emission of greenhouse gases

The groupwide carbon footprint is an essential instrument for improving climate protection. In addition to direct greenhouse gas emissions in accordance with Scope 1, we also determine indirect emissions from the purchase of energy in accordance with Scope 2 and report these emissions as part of the assessment by CDP. In 2018, we evaluated additional indirect emissions along the value chain for the first time and measured them for individual categories. We will continue to calculate the relevant Scope3 emissions in 2019 and thereafter report them.

Greenhouse gas emissions (in t CO₂ equivalents)

Description in accordance with the Greenhouse Gas Protocol, causes and main sources		2017	2018
Scope 1 Direct emission	Natural gas, fuel, climate-impacting gases	12,512	11,952
Scope 2 Indirect emission	Electricity, steam	268,528	268,208

The collection methodology complies with the guidelines of the GHG Protocol for the chemical industry. The calculation includes all Group entities. To calculate greenhouse gas emissions, we use current emission factors from DEFRA, EPA, UBA and the IPPC report AR5 for Scope 1 and from IEA for Scope 2.

Other greenhouse gases besides CO₂ make up a marginal part of Scope 1 emissions. Nevertheless, we are continuously working on more effective use and substitution with gases, which have a lower greenhouse effect.

Our activities to reduce Scope 2 emissions focus on increasing the efficiency of energy use.

As a result of our measures to increase the efficiency of energy use in particular, CO₂ emissions per wafer area produced, Scope 1 and 2, have fallen by a medium single-digit percentage compared with the previous year.

In addition, we motivate our employees to leave their cars at home. At the Burghausen site, we have been using commuter buses for shift workers for more than ten years. At our site in Portland, Oregon, USA, we grant our employees subsidies for public transport tickets, and in Singapore Siltronic offers shuttle buses from the plant to various city districts.

Other air emissions

NO_x emissions amounted to 104 tons in 2018 and NMVOC to 57 tons. Ozone-depleting substances are used negligibly in production. Emissions of SO_x, POP (persistent organic pollutants) and PM (particulate matter) are irrelevant as to their quantities.

Influence of climate change

The demand for wafers is mainly driven by demand in the fields of mobile communication, computers and servers, data storage on local devices and in the cloud, automotive electronic components, and industry in general. We do not view our business model as being negatively impacted by climate change. On the contrary: without semiconductor components and therefore wafers, electric mobility would not be possible, the feeding in of electricity generated by solar installations and wind farms unthinkable, and a great many smart ways of reducing power consumption unfeasible. Moreover, storing data on semiconductor components consumes less electricity than other forms of electronic data storage. [GRI 201-2](#)

5. Personnel aspects

Section 289c para. 2 number 2 of the German Commercial Code, UNGC



Headcount and personnel planning strategy

On December 31, 2018, Siltronic Group employed 3,914 people, 61 percent of whom were employed by Siltronic AG in Germany, 29 percent in Asia, and 10 percent in the USA.

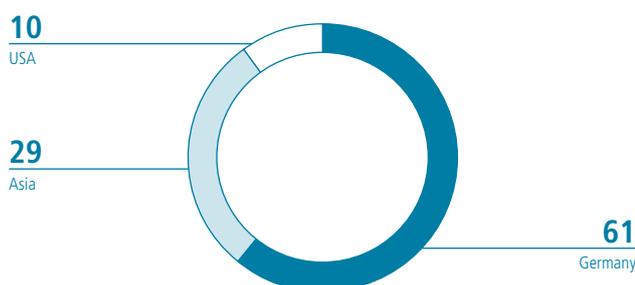
Headcount as at December 31, 2018 [GRI 102-8](#)

	Men	Women	Total	Employees in the Group
Germany	1,889	482	2,371	61%
Of which on permanent contracts	1,888	480	2,368	
Of which on temporary contracts	1	2	3	
Singapore and other Asian countries	801	329	1,130	29%
Of which on permanent contracts	801	323	1,124	
Of which on temporary contracts	0	6	6	
USA	292	121	413	10%
Of which on permanent contracts	292	120	412	
Of which on temporary contracts	0	1	1	
Employees in the Group	2,982	932	3,914	100%

3,502 worked full-time and 412 part-time. Of the part-time workers, 54 percent were women, and 100 percent of the part-time workers were in permanent employment. [GRI 102-8](#)

Breakdown of employees by region (excluding temporary employees)

in %



As demand in the semiconductor industry has historically shown considerable ups and downs and as we are required to cope with these changes, we pursue a flexible strategy in our personnel planning. The strategy includes covering a certain percentage of our personnel requirements in production with temporary staff, which also protects the core workforce. If a pronounced upturn in demand leads to production peaks, we employ temporary staff. Conversely, if personnel cost cuts become necessary due to a market downturn, we initially reduce the number of temporary workers. If that measure proves insufficient we stop renewing fixed-term contracts, as a second stage. In a third step, we consider introducing reduced working hours for staff in areas particularly impacted by a downturn.

In order to respond promptly to any significant changes in demand, the personnel requirements resulting from incoming orders are continuously compared with current and future staff levels. Any measures planned to substantially increase or reduce the number of employees are discussed by employer and employee representatives in a structured process.

On December 31, 2018, Siltronic employed a total of 715 temporary workers (534 men and 181 women). The last time Siltronic needed to reduce working hours was in 2012. [GRI 102-8](#)

Relationship with employee representatives and employees' rights

The Siltronic Group cooperates with employee representatives in a spirit of goodwill, while regular meetings between employer and employee representatives are convened.

Our workforce has always been highly unionized, particularly in Germany. Since employees are not required to report union membership, and as it is inadmissible for employers to ask, we do not know how many of our employees are union members. Sixty-one percent of employees work in units covered by collective agreements. This relates to the employees in Germany. **GRI 102-41**

If an employer's collective bargaining agreement is in place, Siltronic is obliged by the employment contract to treat employees as if the respective collective bargaining agreement were applicable – regardless of their membership in a trade union.

At sites that do not have an established employee representation, there are employees who act as contacts for employee issues.

In addition to remuneration and working time, essential employee rights in Germany include the right to parental leave or maternity leave. Naturally, German Siltronic employees make use of this right: As of December 31, 2018, 12 women and one man were either on maternity or parental leave.

Siltronic regularly informs the workforce about current developments that could have an impact on the business performance. Employees are comprehensively informed of any significant operational changes in a timely manner. Siltronic hereby complies with the respective national and international information requirements.

Diversity and equal opportunity

Siltronic operates in Europe, North America, and Asia and therefore in a culturally diverse environment. Siltronic AG, the largest of the Group's companies, employed people of about 30 different nationalities during the year under review.

One focus of our efforts is to leverage the existing diversity of modern society and, with this in mind, Siltronic AG has appointed a woman as Diversity Officer. The diversity of the workforce and its wide range of skills and talents also provides an opportunity for innovative and creative solutions. Among other factors, diversity includes gender, nationality, ethnic origins, religion and

disability. The combined management report comprises information to employees with disabilities.

We reject discrimination or degradation on the basis of gender, race or ethnic origin, religion or belief, disability, sexual orientation or age. These principles apply throughout the Group and are set out in writing as part of our corporate culture. Employees can report potential discrimination to their managers, to the compliance officers, the works council, the personnel department, or to an ombudsman. The complaint will be reviewed and the complainant informed of the outcome.

All employees at the German locations are required to familiarize themselves with the General Equal Treatment Act (AGG) through e-learning training. The training course is applicable to all hierarchy levels.

Our long-term goal is to raise the level of diversity in Siltronic's workforce, also by increasing the percentage of women in management positions. At the end of 2018, two of 17 positions one level below the Executive Board and two of 36 positions in the second management level were represented by women. The Corporate Governance Report provides more information on the proportion of women.

The table below shows the percentage of men and women at management level at Siltronic AG:

Headcount as at December 31, 2018

	Men	Women	Total
Employees in the Group at management level	49	4	53
<i>In percent</i>	92	8	100
Of which first level below Executive Board	15	2	17
<i>In percent</i>	88	12	100
Of which second level below Executive Board	34	2	36
<i>In percent</i>	94	6	100

We have defined mid-term goals for the percentage of women for the first and second level below the Executive Board. Until the end of June 2020, the percentage of woman should be at least 18 percent in the first level of management and at least 8 percent in the second level.

Advanced training and demographic trends in Germany

Competent employees keep the company both innovative and competitive. We encourage our employees in Germany to keep learning throughout their lives and retain a flexible attitude towards change, as we believe that we all need to be prepared for longer working lives in order to cope with the demographic change. To enable employees to make the most of their potential, Siltronic offers a wide range of opportunities for further development. The training measures relate to personality, management, and social competence as well as technical expertise.

Employees and their managers discuss development measures at least once a year in a performance review, regardless of hierarchy level, gender, or location.

At the end of 2018, the average age of the typical employee was 44 years. The following table shows the age structure of Siltronic employees worldwide.

Age structure as at December 31, 2018

	Male	Female	Total
Under 30 years of age	15 %	18 %	16 %
30 to 50 years of age	48 %	53 %	49 %
Over 50 years of age	37 %	29 %	35 %
Total	100	100 %	100 %

In 2018, some 20,000 e-learning courses were provided and around 1,900 employees attended seminars, further education or similar events.

Remuneration and equal pay

In order to attract new employees and retain existing ones, both of which we require in order to ensure a successful future, we need to offer competitive levels of remuneration. In addition to their basic salary with vacation and Christmas bonuses, employees in Germany receive variable remuneration if the company achieves certain defined financial targets. This voluntary payment benefits both employees paid according to standard tariffs and those who are not. There are also variable remuneration components for those employed by foreign subsidiaries.

In addition to the fixed salary and the variable pay, remuneration includes various other benefits that extend beyond the statutory minimum requirements, regardless of whether an employee works full-time or part-time. In Germany, the most important company benefits include in particular the company pension scheme, partial retirement programs, bus subsidies, anniversary bonuses, canteen subsidies, and preventive health care programs. Company pension plans and health insurance are provided in the USA.

The notes to the group financial statements comprises information on personnel cost and retirement benefits.

Fluctuation can be seen as a sign of how well we succeed in retaining employees and being attractive to new employees. In 2018, 601 employees were hired, of whom 231 were in Germany and 370 abroad. These hires accounted for 15 percent of the workforce as of the balance sheet date. 291 employees left the company. This corresponds to 7 percent of the workforce as of the balance sheet date. Germany was affected in 40 cases and other countries in 251 cases. Fluctuation was low in Germany and the USA and regionally typical higher in Asia.

We regard it as important to treat temporary workers fairly. We pay at a minimum the wage defined under the collective agreement on industry surcharges for temporary employment in the chemical industry (TV BZ Chemie). In addition, there are workplace, shift, and other voluntary allowances, which can vary according to business and location. In addition, Siltronic meets the requirements for an equivalent wage in accordance with the German Temporary Employment Act (AÜG). Temporary workers have received a variable pay equal to the employees of Siltronic AG in Germany in 2018 for the year 2017. The payment was based on the financial performance of the company.

Occupational health and safety

Responsibility towards the entire workforce in the field of occupational health and safety plays a major role at Siltronic and is primarily reflected in extensive preventive measures. Secondly, the Executive Board receives regular reports on the development of accident figures, which are a non-financial indicator, as well as on any relevant occupational accidents and related corrective measures. Special attention is given to injuries involving chemicals. The target figure for injuries involving chemicals is 0.

With our safety program, we work continuously to improve safety standards within the working environment. Key measures include the appointment of safety officers, safety inspection tours, training courses, talks with operating staff, and emergency drills, all aimed at identifying and avoiding unsafe activities – whether when operating equipment, handling chemicals, in the workplace, in the office, or on the way to work. The occupational health and safety standard OHSAS 18001 has been defined as a group-wide standard. Despite these measures, however, accidents still occur.

The following table shows the development of accident figures, which the Executive Board has defined as an indicator, and on which it receives regular reports.

Number of work accidents per 1 million working hours

	2016	2017	2018
Work accidents ¹⁾	3.3	1.9	1.9
Injuries involving chemicals	2	1	0

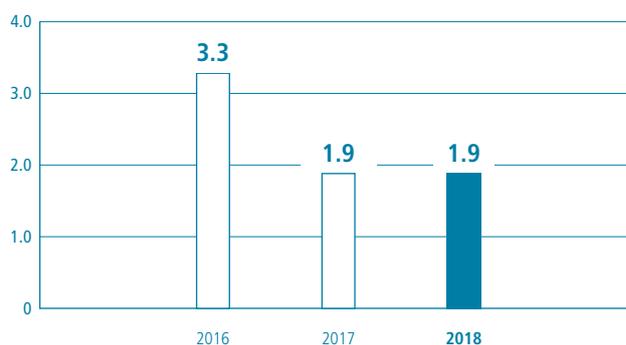
¹⁾ Accidents are counted in the statistics if the employee involved is unfit to work for at least one day. The statistics include work accidents involving temporary staff.

The targets for 2018 were 1.8 for occupational accidents per 1 million working hours and 0 for injuries involving chemicals. The number of occupational accidents exceeded the self-imposed target to a negligible extent, and the target for injuries with chemicals was reached. There have been no fatal or serious accidents at work in recent years.

The number of accidents has decreased in a comparison over a number of years but is still not satisfactory. As the accidents are essentially behavior-induced, we have launched initiatives that specifically address this cause.

Accidents at work¹⁾

Number of accidents per million working hours



¹⁾ Loss of one or more working days

We also run awareness raising campaigns on the subject of stumbling, slipping and falling, a program for reporting safety-critical situations, and measures for onboarding new employees as our internal statistics show a higher accident risk in the first few months for this group. With this in mind, 2018 saw the launch of the new "GEFAHRRA^{DT}" safety concept.

Under the GEFAHRRA^{DT} concept, employees are made aware as far as possible of accidents that have actually happened at the very location, along with safety-critical situations and their causes of accident, as well as measures planned and implemented to avoid accidents in future. The overall concept is aimed at systematically improving our culture of safety.

Employee satisfaction

An employee survey was conducted in March 2018 at the German sites under the slogan of "Your Opinion Counts". Compared with the previous survey in 2015, participation rates increased by 10 percentage points to 69 points of employees. The findings of the survey were very positive overall. With a view to increasing employee satisfaction, we plan to concentrate primarily on the areas of idea management, feedback and management behavior.

6. Supply chain

UNGC, Sustainable Development Goals



Supplier relationships

In 2018, our purchasing volume totaled almost EUR 728 million. We cooperate with more than 3,800 suppliers worldwide, nearly 300 of whom constitute some 90 percent of our purchasing volume. The volume purchased in Europe accounts for around 64 percent, just under 28 percent is sourced from Asia, and North America accounts for 8 percent. The most important supplier is Wacker Chemie AG, which not only supplies us with the raw material polysilicon, but also provides a variety of on-site services at our plant in Burghausen under the terms of a service agreement. Furthermore, suppliers of electricity and equipment are particularly important. [GRI 102-9](#)

We strive to ensure that our suppliers act responsibly with regard to working conditions, ethical standards, safety standards, and the management of local resources. One of the key measures we have enacted is to ensure that our suppliers commit, within the framework of our general procurement conditions, to comply with the principles of the UN Global Compact and the Responsible Care® initiative. However, should we detect any violations of these regulations within the framework of our cooperation, we discuss these observations with the relevant suppliers and demand improvements.

Our expectations of suppliers' careful and sensible treatment of their employees and the environment are also documented in our Code of Conduct.

Conflict minerals

Siltronic AG does not source any conflict materials (gold, tantalum, tungsten, tin) from mines in conflict areas (§1502 Dodd-Frank Act).

Siltronic limbers up to be "Fit for the NAP"

The Company is participating in the qualification offensive of the German network of Global Compact in the context of the Business and Human Rights National Action Plan (NAP).

Sustainability with regard to customers

Technical progress and innovation in the interaction between Siltronic and many of its customers is of great significance, due to the fact that technical progress in the semiconductor industry is advancing quicker than in many other industries. The technical advancement that semiconductor manufacturers are achieving is above all evident in the fact that electronic circuits are becoming more compact. Smaller circuits make semiconductors more efficient and they consume less electricity at the same time. This development can only be maintained if wafers meet more sophisticated physical and chemical specifications. Our customers set the pace of development. In order to satisfy their expectations, we have spent between five and seven percent of our sales on research and development in recent years.

As previously mentioned in the waste management section, we have worked for years to convince our customers to use reusable transport packaging and our efforts have been successful.

In our dealings with customers, we commit ourselves to respecting the freedom of association, to the abolition of all forms of forced labor, the abolition of child labor and the avoidance of discrimination.

7. Social responsibility and social aspects

Section 289c para. 2 numbers 3/4/5 of the German Commercial Code



For Siltronic, sustainability also means transparency and openness in the sense of corporate citizenship. This begins with a good relationship with our neighbors and speaking openly about what happens within the plant, as well as addressing questions posed by the public worldwide. This is the only way to create the spirit of social trust that companies need in order to be economically successful. With these points in mind, Siltronic assumes social responsibility, particularly in the regions near its various locations. Our concepts in this respect extend beyond the above-mentioned global initiatives RBA and the United Nations Global Compact:

Combating legal violations, particularly corruption and bribery

According to the Corruption Perception Index of Transparency International (CPI), Siltronic operates predominantly in countries with a medium to low risk of corruption.

We resolutely oppose any form of transgression or violation of the law. Irrespective of the national probabilities of occurrence, our compliance system described above is designed to avoid, prevent, identify and sanction compliance violations in form of corruption, fraud, infringements of competition rules, and other manifestations of white-collar crime, in every market in which we operate.

Employees are required to report any violations they observe to their managers, compliance officers, the works council, or the responsible members of staff in the personnel department. Moreover, both employees and third parties can anonymously report violations of legal regulations to an external ombudsman, who has been appointed by Siltronic. The Company investigates every reasonable suspicion, examines the case and defines measures to remedy any weaknesses identified. It also takes any disciplinary measures deemed necessary. The Chief Compliance Officer reports to the Executive Board of Siltronic AG on a monthly and ad-hoc basis. [GRI 102-17](#)

Employees who have contact with business partners are required to complete an e-learning course on compliance. Furthermore, all employees in sales and marketing are required to undergo online training courses on antitrust law. [GRI 102-17](#)

Human rights

Our four production sites are located in highly developed industrialized countries, where there is a low risk of human rights violations compared to less developed nations. A certain degree of risk, however, does remain. Since we want to actively fight human rights violations within our company as well as in the upstream and downstream supply chain, we have taken measures to identify possible contraventions.

Via our Code of Conduct, we explicitly endorse the ten principles of the United Nations Global Compact initiative. The first two principles of the Global Compact deal with upholding human rights and the exclusion of human rights abuses. Based on the first principle of the Global Compact “support for human rights” and the second principle “exclusion of human rights abuses”, Siltronic implements the following measures in particular:

- Siltronic does not purchase materials, goods, or services from suppliers or service providers who do not undertake to uphold human rights. We implement this aim by requiring suppliers and service providers to accept our relevant purchasing principles.
- We train our employees at specific seminars to ensure compliance with internationally proclaimed human rights.
- If we become aware of potentially critical aspects with regard to human rights, we analyze them. Should a situation turn out to be critical in the face of analysis, we take action.
- In our dealings with customers, we commit to upholding human rights and to excluding any abuses thereof.

Non-profit purposes and corporate volunteering

Employees within Germany participate in the cent donation program organized by the Wacker Relief Fund in which employees consent to having their monthly salary rounded downwards to the next lower amount in euros. These remaining cent amounts are then donated. Every year, Siltronic employees at the Freiberg site take part in the Nepal run in the autumn. The charity run that is organized from a school close to Freiberg collects money to fund the construction of schools in the Gati region of Nepal. In addition, Siltronic AG has made a donation.

In 2018 in Singapore, Siltronic supported the building of reefs in the sea to create a coral habitat.

At our Portland/USA location, our employees organized a charity campaign in 2018 to help those affected by the consequences of hurricane "Florence", with the Company doubling the funds donated by the employees.

Our employees have supported needy families in the region of Portland for more than 20 years.

In addition, Siltronic supports local schools and educational institutions.

Relationships with associations and with politics

We are committed to responsible behavior towards political parties and non-governmental organizations. We represent our political interests in accordance with the standpoints we have publicly expressed. Our approach to politics is based on factual considerations, and we are open to dialog with all democratic parties. Any donations made to political parties require the approval of the Executive Board of Siltronic AG.

We do not hold special positions in any association or organization in which we are a member. Siltronic has not participated in legislative procedures. **GRI 415-1**

Taxes

In the reporting year, Siltronic's effective income tax expense amounted to EUR 105.1 million.

In each tax jurisdiction where a subsidiary or a permanent establishment gave rise to a tax obligation, significant expenses were incurred for effective income tax (in relation to earnings before taxes).

Dialog at regional levels

At all locations, we maintain regular exchanges with the authorities in the field of environmental protection. In acknowledgement of this commitment our manufacturing company in the United States has been awarded the "Gold Compliance Award for No Pretreatment Violations" and the "Gold Sustainability at Work Certification Bureau of Sustainability" from the city of Portland, Oregon.

Partnerships and membership in associations and initiatives

We have taken part in the following initiatives:

- CDP Climate change, Water Security (Investor, Supply chain)
- UN Global Compact (member since 2017), Peer-Learning Group Climate strategy, program "Fit for NAP - National Action Plan Economy und and human rights"
- Charta of Diversity
- Responsible Business Alliance



United Nations Global Compact

Siltronic is a member of the Global Compact and hereby reports on its progress. [GRI 102-12](#)

Principles	Relevant headings in this report	Measures implemented (key examples)
<p>Human rights</p> <p>Principle 1: Support of human rights</p> <p>Principle 2: Exclusion of human rights abuses</p>	<ul style="list-style-type: none"> • Corporate ethics at Siltronic • The impact of ethical principles on the organization of Siltronic • Human rights 	<p>Siltronic does not purchase materials, goods, or services from suppliers or service providers who do not undertake to uphold human rights. We implement this aim by requiring suppliers and service providers to accept our relevant purchasing principles.</p> <p>We train our employees at specific seminars to ensure compliance with internationally proclaimed human rights.</p> <p>In our Code of Conduct we explicitly commit ourselves to all ten principles of the Global Compact.</p> <p>In our dealings with customers, we commit to uphold human rights and exclude any abuses thereof.</p> <p>We participated in the qualification program Fit for NAP of the German Global Compact Network</p>
<p>Labor standards</p> <p>Principle 3: Uphold freedom of association</p> <p>Principle 4: Eliminate all forms of forced and compulsory labor</p> <p>Principle 5: Abolition of child labor</p> <p>Principle 6: Elimination of discrimination</p>	<ul style="list-style-type: none"> • Corporate ethics at Siltronic • Relationship with employee representatives and employees' rights • Diversity and equal opportunity • Sustainability with regard to customers 	<p>We have taken steps to ensure that an employee can turn to authorities for information on violations of the Labor standards. Apart from their manager employees can report to compliance officers based at the various locations, the personnel department, and an external ombudsman.</p> <p>We will punish proven misconduct according to its degree of severity.</p> <p>Some 62 percent of employees work in units that have independent employee representation.</p> <p>As a supplier to the electronics industry, Siltronic observes the code of conduct set out by the Responsible Business Alliance RBA.</p> <p>In our dealings with customers, we commit ourselves to respecting the freedom of association, to the abolition of all forms of forced labor, the abolition of child labor and the avoidance of discrimination.</p>
<p>Environmental protection</p> <p>Principle 7: Precautionary environmental protection</p> <p>Principle 8: Initiatives for greater environmental responsibility</p> <p>Principle 9: Development and diffusion of environmentally friendly technologies</p>	<ul style="list-style-type: none"> • Environmental protection measures • The impact of ethical principles on the organization of Siltronic • Dialog at regional levels • Influence of climate change 	<p>Worldwide certification of our environmental management system according to ISO 14001 and the energy management system at the German sites in accordance with ISO 50001.</p> <p>Implementation of defined non-financial performance indicators aimed at reducing the specific use of raw materials, specific energy consumption, and increasing the utilization rate of reusable packaging that can be reused to package wafers.</p> <p>Annual preparation of a sustainability report that is subject to an external audit (non-financial report).</p> <p>Our technologies form the basis for manufacturing smaller and more energy-efficient components in the modern world of electronics. That way, we contribute towards preserving precious resources and reducing carbon dioxide emissions worldwide.</p>
<p>Anti-corruption</p> <p>Principle 10: Measures to fight corruption</p>	<ul style="list-style-type: none"> • Corporate ethics at Siltronic • Combating legal violations, particularly corruption and bribery 	<p>Regular training courses</p> <p>Setting up of a compliance</p> <p>In dealing with our customers, we are committed to taking measures designed to combat corruption.</p> <p>Appointing of an external ombudsman</p>

Report of the independent auditor for the purpose of obtaining limited assurance regarding the separate non-financial report

To the Supervisory Board of Siltronic AG, Munich

We have performed an independent limited assurance engagement on the combined non-financial report („Report“) of Siltronic AG, Munich, („Siltronic“) and the group according to §§ 315b and 315c in conjunction with 289b to 289e German Commercial Code (HGB) for the business year from January 1 to December 31, 2018.

Responsibility of the legal representatives

The legal representatives of Siltronic are responsible for the preparation of the Report in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB.

This responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the Report and the use of assumptions and estimates for individual disclosures which are reasonable under the given circumstances. Furthermore, this responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Report in a way that is free of – intended or unintended – material misstatements

Independence and quality assurance on the part of the auditing firm

We are independent from the company in accordance with the requirements of independence and quality assurance set out in legal provisions and professional pronouncements and have fulfilled our additional professional obligations in accordance with these requirements.

Our audit firm applies the national statutory provisions and professional pronouncements for quality assurance, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors („Institut der Wirtschaftsprüfer“ or „IDW“) regarding quality assurance requirements in audit practice (IDW QS 1).

Responsibility of the auditor

Our responsibility is to express a conclusion on the Report based on our work performed within our limited assurance engagement.

We conducted our audit work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): „Assurance Engagements other than Audits or Reviews of Historical Financial Information“ published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that the Report of the entity for the business year [Kategorie] has not been prepared, in all material respects, in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB. We do not, however, provide a separate conclusion for each disclosure. In a limited assurance engagement the evidence gathering procedures are more limited than in a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The choice of audit procedures is subject to the auditor’s own judgement.

Within the scope of our engagement, we performed amongst others the following assurance procedures:

- Inquiries of personnel on corporate level, who are responsible for the materiality analysis, in order to gain an understanding of the processes for determining material sustainability topics and respective reporting boundaries of Siltronic
- A risk analysis, including a media search, to identify relevant information on Siltronic sustainability performance in the reporting period
- Reviewing the suitability of internally developed reporting criteria
- Evaluation of the design and implementation of the systems and processes for determining, processing and monitoring disclosures relating to environmental, employee and social matters, respect for human rights, and combating corruption and bribery, including the consolidation of the data
- Inquiries of personnel on corporate level who are responsible for determining disclosures on concepts, due diligence processes, results and risks, for conducting internal controls and consolidation of the disclosures
- Evaluation of selected internal and external documentation
- Analytical evaluation of data and trends of quantitative information which are reported by all sites for consolidation on corporate level
- Evaluation of local data collection, validation and reporting processes as well as the reliability of reported data based on a sample of the site in Singapore
- Assessment of the overall presentation of the disclosures

Conclusion

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Report of Siltronic for the business year from January 1 to December 31, 2018 is not prepared, in all material respects, in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB.

Restriction of Use/Clause on General Engagement Terms

This report is issued for purposes of the Supervisory Board of Siltronic AG, Munich, only. We assume no responsibility with regard to any third parties.

Our assignment for the Supervisory Board of Siltronic AG, Munich, and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/liblaab_english.pdf). By reading and using the information contained in this report, each recipient confirms notice of provisions of the General Engagement Terms (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the General Engagement Terms with respect to us.

Munich, March 1, 2019

KPMG AG Wirtschaftsprüfungsgesellschaft

Hell ppa. Graff