



Swiss perfection for your home



# Sustainability Report

2017 / 2018



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# Editorial



Ladies and Gentlemen,

Let me ask you a question: have you embraced World 4.0 yet? We are in an age of upheaval, of digital transformation. For you and for me, but also for us as a society and, indeed, for V-ZUG as an employer of over 1,700 people, this puts us on a path of change along which lie many opportunities and challenges that are exacting and rewarding in equal measure.

The impact of digital transformation on all levels and areas of our business is illustrated in this Sustainability Report 2017/2018 which, as of this year, covers the reporting period from 1 July to 30 June and now also includes our production facilities in Changzhou (China) and V-ZUG Cooling Technology Ltd in Arbon (Switzerland).

Digitization is changing our technological capabilities at an astonishing pace and we are investing heavily in developing digital solutions, products and business models. Already, for example, the V-ZUG app allows you to send recipes straight from your smartphone or tablet to your steam cooker or oven and automatically create shopping lists.

However, because of these new possibilities, many of our employees are experiencing big changes to their accustomed roles. This can be unsettling, which is why we help them to engage with these changes in a positive way. Investing in the skills of our employees across all ages, and in a corporate and leadership culture that is fit for the future, is absolutely essential to our long-term success. Our HR strategy is geared around employees' individual strengths, homing in on and promoting their personal and professional skill sets. Managers play a central role in this, as they too must adopt an agile and professional response to this cultural shift.

Every single one of our products is the result of a lengthy development and quality assurance process. In both of these areas, Artificial Intelligence (AI) is becoming increasingly important, and we are investigating its potential applications. Theoretically, for example, it is already possible for us to use AI in the cloud to clarify, in a matter of seconds, whether a spray arm in a dishwasher is working properly – an important step towards remote diagnostics.

We are intent on driving forward digital innovation in Switzerland. As President of the “Innovationspark Zentralschweiz” (Innovation Park Central Switzerland) innovation lab, I also personally champion the “open innovation philosophy”. With partners from business, academic institutions and the public sector, we address specific problems. Right now, for instance, we are developing the “Kitchen of the Future”, transforming the kitchen into a household's power hub.

An enormous energy hub at our Zug site is also on the cards. On 8 May 2018, the city parliament of Zug unanimously approved the Technology Cluster Zug (TCZ) zoning plan. The development of our original site into an urban centre for technology and innovation has thus overcome another major hurdle. Going forward, the Multi Energy Hub, as it is known, will supply the site with CO<sub>2</sub>-neutral heating, cooling, electricity and biogas.

So, as you can see, there are exciting times ahead. I hope you find this insight into our sustainability efforts over the 2017/2018 period both informative and fascinating.

Warm regards,

A handwritten signature in black ink, appearing to read 'D. Hoffmann', with a stylized flourish at the end.

Dirk Hoffmann  
CEO, V-ZUG Ltd



**V-ZUG**

at a glance

## Company profile

As a successful Swiss company with a long tradition, V-ZUG Ltd has been developing, producing and distributing high-quality and resource-efficient appliances for the kitchen and laundry room, at its Zug site and elsewhere in Switzerland, for more than a century. As the Swiss market leader for household appliances, we have built our reputation on our outstanding service and support as well as pioneering innovations, thanks to which we have maintained and repeatedly demonstrated our technology leadership. With our premium range, we are pursuing selective growth in around 20 countries on four continents.

Our company was founded in 1913 as Verzinkerei Zug and, today, is a wholly-owned subsidiary of Metall Zug Ltd. Together with its foreign subsidiaries, the operationally independent companies V-ZUG Cooling Technology Ltd, SIBIRGroup AG and Gehrig Group Ltd, V-ZUG Ltd forms the Household Appliances division of the Metall Zug Group (see Fig. 1).

Metall Zug Group Zug				
Household appliances	Infection Control	Wire Processing	Medical Devices	Corporate
V-ZUG Ltd Zug	Belimed AG Zug	Schleuniger Holding AG Thun	Haag-Streit Holding AG Köniz	Metall Zug Ltd Zug
V-ZUG Cooling Technology Ltd (CH) V-ZUG Australia Pty. Ltd. (AU) V-ZUG Europe BVBA (BE) V-ZUG (Shanghai) Domestic Appliance Co., Ltd. (CN) V-ZUG (Changzhou) Special Components Co., Ltd. (CN) V-ZUG Hong Kong Co., Ltd. (HK) V-ZUG Singapore Pte., Ltd. (SG) SIBIRGroup AG (CH) Gehrig Group Ltd (CH) Hildebrand France S.A.R.L. (FR) V-ZUG Infra Ltd. (CH)	Belimed Sauter AG (CH) Belimed GmbH (DE) Belimed GmbH (AT) Belimed SAS (FR) Belimed B.V. (NL) Belimed d.o.o. (SI) Belimed Ltd. (UK) Belimed, Inc. (US) Belimed Medical Equipment (Shanghai) Co., Ltd. (CN) STERIFAST Sterilization & Disinfection Systems, Lda. (PT)	Schleuniger AG (CH) Schleuniger GmbH (DE) Schleuniger Test Automation GmbH (DE) Schleuniger, Inc. (US) Schleuniger Japan Co., Ltd. (JP) Schleuniger Trading (Shanghai) Co., Ltd. (CN) Schleuniger Machinery (Tianjin) Co., Ltd. (CN) adaptronic Prüftechnik GmbH (DE) DiIT GmbH (DE)	Haag-Streit AG (CH) Haag-Streit Deutschland GmbH (DE) Haag-Streit Surgical GmbH (DE) Haag-Streit UK, Ltd. (UK) Haag-Streit Holding U.S., Inc. (US) Haag-Streit USA, Inc. (US) Haag-Streit Far East Ltd. (CN) Spectros Ltd (CH) HS DOMS GmbH (DE) IPRO GmbH EDV für Augenoptiker (DE) Möller-Wedel GmbH & Co. KG (DE) MÖLLER-WEDEL OPTICAL GmbH (DE) Möller-Wedel Verwaltung GmbH (DE) Möller-Wedel Beteiligungen GmbH (DE) OptoMedical Technologies GmbH (DE) Clement Clarke (Holdings) Ltd. (UK) Clement Clarke International Ltd. (UK) John Weiss & Son, Ltd. (UK) Reliance Medical Products, Inc. (US)	V-ZUG Realty Ltd (CH) MZ Infra Ltd (CH)

Fig. 1 Operational structure of the Metall Zug Group (as of March 2018)

## Key figures

Financial	
EBIT, in CHF millions (Household Appliances division*)	Gross sales, in CHF millions (Household Appliances division*)
<b>2016/2017:</b> 70.4	<b>2016/2017:</b> 588.5
Change: -13.9%	Change: +2.9%
<b>2017/2018:</b> 60.6	<b>2017/2018:</b> 605.5
Quality	
Appliance faults, under warranty, in percent, 2015/2016 = 100%	Rate of faults repaired on first visit, in percent
<b>2016/2017:</b> 101%	<b>2016/2017:</b> 89.8%
Change: -2.6%	Change: -
<b>2017/2018:</b> 98%	<b>2017/2018:</b> 89.9%
Environment	
Appliances supplied with energy efficiency label A or better, in percent	Energy consumption within V-ZUG per appliance produced, 2015/2016 = 100%
<b>2016/2017:</b> 77.7%**	<b>2016/2017:</b> 107.4%**
Change: - **	Change: - **
<b>2017/2018:</b> 80.4%	<b>2017/2018:</b> 106.3%
CO <sub>2</sub> emissions, energy direct and indirect, in tCO <sub>2</sub>	
<b>2016/2017:</b> 3,896**	
Change: - **	
<b>2017/2018:</b> 3,718	

\* As no individual EBIT figures are published for V-ZUG Ltd, the figure for the whole Household Appliances division is shown here.

\*\* The values for 2016/2017 relate to V-ZUG in Switzerland, excluding V-ZUG Cooling Technology (Arbon) and the production of semi-finished products in Changzhou (China) and, as such, cannot be directly compared with the figures for 2017/2018 (which include Arbon and Changzhou).

Employees	
Number of employees	Absenteeism rate due to work-related accidents, in percent
<b>2016/2017:</b> 1,558**	<b>2016/2017:</b> 0.18%**
Change: - **	Change: - **
<b>2017/2018:</b> 1,777	<b>2017/2018:</b> 0.24%
Number of employees	Absenteeism rate due to work-related accidents, in percent
<b>2016/2017:</b> 1,558**	<b>2016/2017:</b> 0.18%**
Change: - **	Change: - **
<b>2017/2018:</b> 1,777	<b>2017/2018:</b> 0.24%
Society	
Number of supplier audits (quality, environmental and social standards)	
<b>2016/2017:</b> 45**	
Change: - **	
<b>2017/2018:</b> 33	

\* As no individual EBIT figures are published for V-ZUG Ltd, the figure for the whole Household Appliances division is shown here.

\*\* The values for 2016/2017 relate to V-ZUG in Switzerland, excluding V-ZUG Cooling Technology (Arbon) and the production of semi-finished products in Changzhou (China) and, as such, cannot be directly compared with the figures for 2017/2018 (which include Arbon and Changzhou).

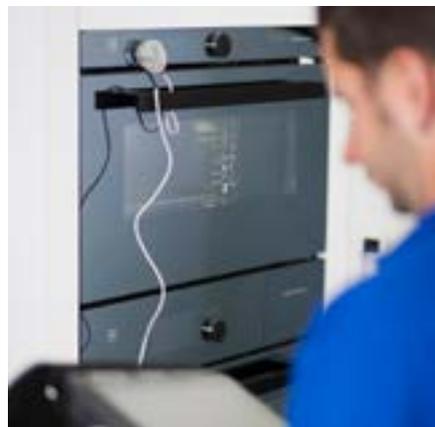
## Products and services

With over five million appliances currently in use, today half of all Swiss households have at least one V-ZUG appliance in operation. Our legendary premium Swiss quality means durable products and impeccable service throughout their lifetime. Often, our products outlive our guaranteed spare part availability of up to 17 years so that, even today, it is not uncommon for us to repair appliances from the last century.

### The world of **food** and **enjoyment**



### The world of **fabric care**



## Services

## The world of food and enjoyment

We offer solutions for the routine storage and preparation of foods. Our products and services are designed to make our customers' lives more pleasant. The new Party programme, for example, transforms the AdoraSL into the perfect host, providing guests with freshly-washed wine glasses in just 11 minutes. And because not every day is the same, or our eating habits can suddenly change, V-ZUG Home enables you to send recipes straight to the appliance and impress your guests with fresh inspiration.



Ovens and cookers



Steam cookers and combi-steam cookers



Microwaves



Warming and vacuum drawers



Hobs



Range hoods



Dishwashers



Refrigerators and freezers

## The world of fabric care

Using advanced technologies, V-ZUG offers gentle solutions for fabric care. The Adora and Unimatic lines for private houses and apartment blocks have been renowned since the 1950s for their quality and long service life, and boast unbeatable environmental credentials, with the lowest energy and water consumption. What's more, since 2017 the Adora has been capable of learning and, along with V-ZUG Home, can adapt to your changing needs.



Washing machines



Tumble dryers



RefreshButler

An environmental leader thanks to **efficient use of energy** and **water**.

## Services

We personally advise our customers on their purchase and on the use of our appliances. We are particularly proud of our service technicians, who achieve the fastest response times and the highest success and satisfaction ratings among our customers throughout Switzerland when called out to repair faults or provide other services.



Service and repair



Personal advice

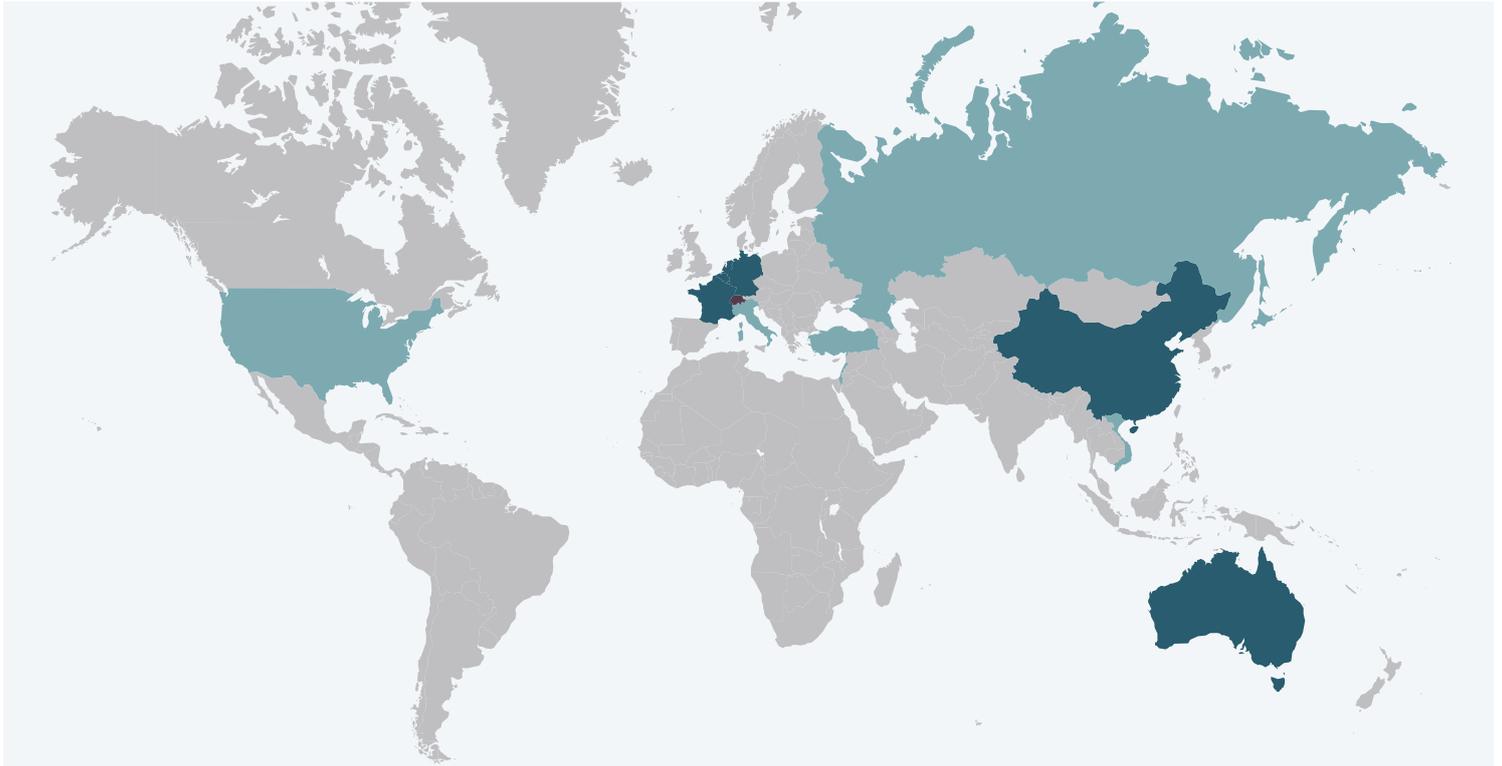


Troubleshooting service and warranty



Laundry and cooking advice

Fast **nationwide**  
**response time** and high  
**satisfaction ratings.**



## Markets

In Switzerland, V-ZUG has its head office in Zug, which is home to its administration, development, production and logistics as well as a showroom and advice centre (ZUGORAMA). We support our trading partners and customers with another nine ZUGORAMAs across Switzerland and the densest customer service network with 16 service centres. Abroad, V-ZUG operates in 20 countries. The key markets are Australia, Belgium, China and Hong Kong, Germany, France and the USA.

V-ZUG partner/distributor
V-ZUG subsidiary
V-ZUG headquarter

Fig. 2 Markets

## Strategy and priorities

The future development of our business will be shaped by the three megatrends of globalization, digitization and demographic change (see Sustainability Report 2016/17). We exploit the opportunities presented by globalization in our purchasing activities, with international supply chains and by producing our own semi-finished products such as heat pumps and fans in Changzhou. Swiss premium products, reliable, individual solutions and close customer proximity are the foundations of our profitable growth. Our customers reward this with great brand loyalty and rising market shares. Alongside this, however, we are successfully expanding our own brand business abroad, particularly in the European markets and in China and Hong Kong. Sales on the Asian market doubled in the 2017 financial year compared with the previous year.

As a Swiss manufacturer with a history stretching back more than a hundred years, we believe in Switzerland as an industrial location. We are securing our future in Switzerland, and in Zug in particular, by systematically transforming four aspects of our business: range, production, space and culture.

**V-ZUG** –  
**Swiss-made**  
 for an **enjoyable**  
 life.

Our brand promise



Digitization is changing our technology ecosystem at an astonishing pace. We see these developments as a major opportunity to push technological boundaries when developing digital solutions, products and business models. Digital applications such as V-ZUG Home bring a new dimension to our appliances, offering our customers individual, easier-to-use solutions. Digitization is also opening up new ways for us to cooperate faster and more efficiently in our production activities and develop new products and solutions (see [Innovation](#)).

However, if we are to take our outstanding track record of innovation forward into the era of Industry 4.0 and achieve profitable growth in the long term, we must remain successful on the employee market and invest in our employer brand, in the skills of our employees of all ages (lifelong learning) and in modern working conditions and flexible working models (see [Employees](#)). This cultural transformation will be one of the biggest challenges of the next few years.

At the heart of our sustainability drive are four medium to long-term ambitions which permeate all seven core components of our strategy and the four priorities of innovation, quality and environment, employees and society.

Priorities	Ambitions
<b>Innovation</b>	We maintain our Swiss market leadership and selectively expand abroad. As a Swiss manufacturer, we supply premium household appliances and digital solutions for an enjoyable life. To this end, we systematically invest in digitizing our solutions and processes.
<b>Quality and environment</b>	With the new Multi Energy Hub on our main site in Zug, which is undergoing development to create the Technology Cluster Zug, we are substantially increasing the amount of energy we obtain from renewable sources. After 2020, our production at the Zug location will be CO <sub>2</sub> -neutral and self-sufficient.
<b>Employees</b>	We shape our leadership and learning culture in a way that enables our employees to take advantage of the opportunities of the digital age.
<b>Society</b>	By transforming the space at our head office and creating the Technology Cluster Zug, we are actively contributing to Zug's sustainable progression as a business location into an urban centre for technology and innovation.

The following chapters provide information about our activities and results in these four areas.

## The V-ZUG strategy house

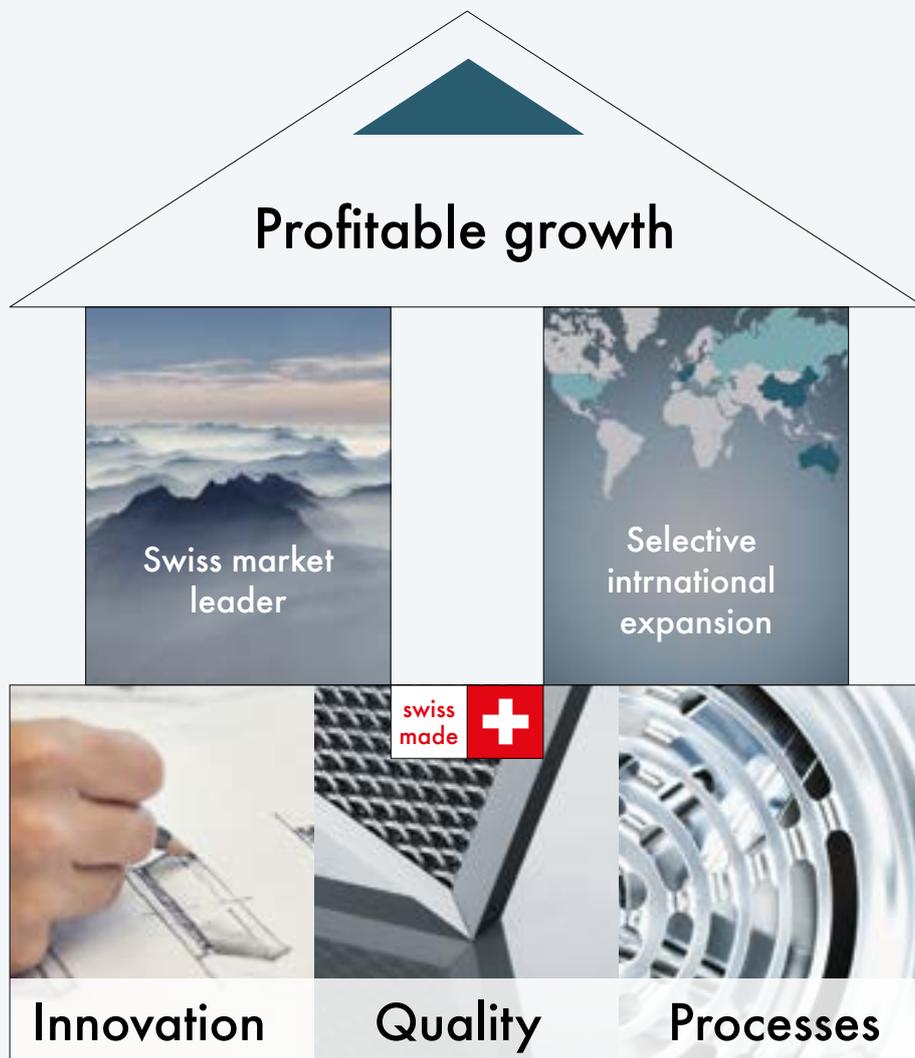


Fig. 3 The V-ZUG strategy house

A modern, high-ceilinged interior space, likely a living or dining area, featuring a prominent wooden ceiling with a grid pattern and recessed lighting. A dark, wide mezzanine level is visible above. The lower level includes a kitchen island with a dark countertop and a light wood base, surrounded by white bar stools with black legs. A dining table and white chairs are partially visible in the foreground. Large windows with light-colored curtains are on the left, and a large, textured spherical object is mounted on the mezzanine. The overall aesthetic is clean, minimalist, and contemporary.

**Innovation**

For us, **sustainable** products are **those** that are not only **state-of-the-art**, but also have a **long service life**.

Electrical appliances for cooking, laundry, drying, freezing and refrigerating account for 9.2% of electricity consumption in Swiss private households and 2.5% of Switzerland's total energy consumption (Swiss Federal Office of Energy, 2016). Given that half of all Swiss households have at least one of our appliances, we shoulder a heavy responsibility.

With our high-quality, user-friendly and innovative household appliances, we are helping people to live and do business in a more resource-efficient way. For us, sustainable products are those that are not only state-of-the-art, but also have a long service life. In spite of constant technological advances and our maintenance services, we don't want our appliances to need replacing overnight. However, technological innovations and a superior service with spare part guarantees of up to 17 years are not enough, in themselves, to reduce the environmental footprint of our appliances. Therefore, we also actively influence our customers and their usage patterns: sales advice, product information and user guidance, as well as our Customer Service, are all crucial.

Hence the solutions born of our commitment to methodical design thinking are the result of a structured, participatory process, starting with customer-oriented idea generation and gathering, followed by evaluation and prioritization of ideas and ending with focused implementation. Besides the classic development engineers, this process involves numerous parties within and outside V-ZUG, including Marketing and Service employees, customers, universities, associations such as Minergie Switzerland, architects, kitchen designers, installers, top chefs and even competitors. In our innovation process, the network formed by these various parties and needs is vital to generating good ideas for commercial success.

Sustainability, or rather its specific manifestations, is the common theme of our six fields of innovation: resource efficiency, health and safety, excellence, intrinsic value, individualization and simplicity.



Simplexity is derived from the contradictory terms simplicity and complexity and involves seeking a balance between the growing functionality of our appliances and the personal satisfaction of consumers. In other words, we make the appliances easier to operate while at the same time increasing their potential applications by making them largely automated. We also actively inform users about energy consumption and make them aware of (more) resource-efficient programmes. For us, excellence is not just about the speed of our customer-oriented processes, but also about market leadership in resource efficiency. Rather than focusing our efforts in this area on individual appliances, we look at our entire range and the related services.

The ability to retrofit our appliances that are already on the market increases our scope to exploit digitization. One example is the V-ZUG app, which enables users to send new recipes straight from a smartphone or tablet to the appliance, automatically create a shopping list or order missing ingredients via service provider Bring!

## Facts and figures



Fig. 4 Appliances supplied by energy efficiency classes

### 80% in energy efficiency class A or higher

Around four out of five appliances sold in the reporting year satisfy or even exceed European energy efficiency class A. Of the appliances we manufacture ourselves, 100% have the label A, A+, A++ or A+++.

The appliances in class C are hoods, usage of which is relatively low compared with other household appliances.

These ratings are all the more gratifying when you consider that there is no official European energy efficiency classification for one in seven appliances sold (16.6%), for example hobs, warming drawers, CoffeeCenters, microwave appliances and range hoods. Moreover, not every appliance category can be awarded a classification higher than A (i.e. A+ to A+++).

### Sales of new products

31.6% of total sales (01.2017-06.2018) were generated with products launched in 2017 and 2018.

### Dishwashers more economical than ever

Our drive for efficiency is exemplified by the energy and water consumption of Adora dishwashers. Compared with 30 years ago, our appliances use 72.5% less energy and 87% less water. In 2014, we became the first manufacturer to incorporate a highly efficient heat pump in the Adora SL WP dishwasher, which slashes electricity consumption by nearly half compared with conventional dishwashers.

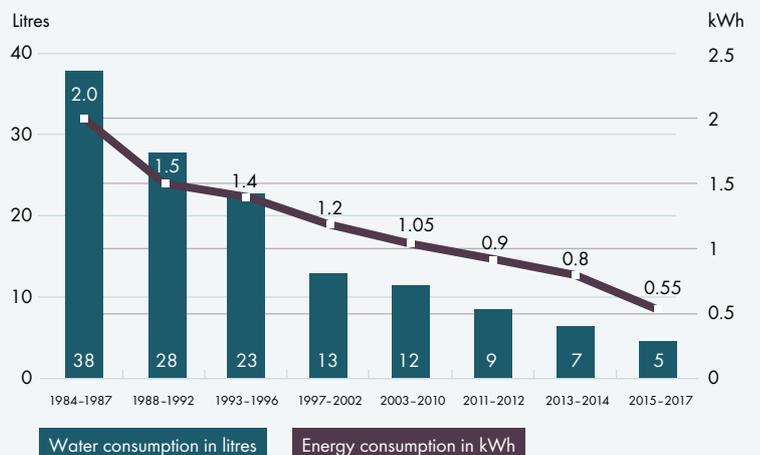


Fig. 5 Energy and water consumption of Adora dishwashers (1984 to 2017)

## Refrigerating with 40% less energy

“For us, innovation means engaging in experiments and allowing space for ideas which, on first sight, do not seem immediately feasible”, explains Stephan Keller, Head of Development. A good example is the idea of a refrigerator which, by using anergy, consumes 40% less energy than conventional appliances. In principle, a refrigerator works in the same way as a heat pump, but in reverse. Whereas a heat pump extracts heat from the exterior and emits it into the house as heating energy, a refrigerator extracts the heat from its interior and releases it externally. The smaller the temperature difference between the cold interior and the comparatively warm exterior, the less energy is required to extract the heat. The project is based on the idea of using anergy, i.e. previously unused low-temperature heat, for this. Low-temperature heat of around 0 to 10 °C in the household is channelled along a network of pipes and is used by the refrigerator to attain its constant ideal temperature of 4 to 5 °C. The small temperature difference drastically reduces energy consumption by around 40%. What sounds like pie in the sky today may make V-ZUG a pioneer tomorrow: although anergy networks are still few and far between in Switzerland, they are likely to prove pivotal in implementing the Energy Strategy 2050. With this conviction, we are currently working with our Lausanne-based partner GEFISWISS on a pilot project to investigate both technological and financial feasibility.

## New heights with Zephyr

Reflecting our long-term commitment to the Zug production site, we are investing heavily in new buildings and modern technologies in order to significantly increase our output per area unit. The key improvements will be the reduction of stocks to speed up throughput times along the entire value chain and a vertical factory structure over four floors, which enables us to reduce V-ZUG's ecological footprint. We are currently planning three new buildings within the site. The start of construction on the first sub-project “Zephyr Hangar” in 2018 was a big step towards achieving our vision. By adopting the verticalization approach and optimizing production processes, we can more than double production per square metre. The clock is ticking: we want to start operating the new sheet metal presses in the new building as early as 2019. The presses, which function according to the principle of servo transfer technology, are capable of pressing seamless sheet metal parts from strip material and boast significantly greater productivity and energy efficiency (consuming up to 40% less energy). Replacing the old machines is a complex undertaking and the timetable is in step with the introduction of new product lines, in order that we can perfectly align product design, manufacturing design and process design.

## METUS decision-making tool

Our products are becoming more complex by the day. On the one hand, their operation must be increasingly intuitive, yet at the same time consumers expect the appliances to offer an ever-greater range of programmes and additional features. For a new V-ZUG product to be successfully launched on the market, achieving the greatest possible degree of standardization is now becoming a commercial imperative. We acquired METUS to enable us to fully analyse and evaluate all the cost factors. With the aid of the software package, we are optimizing the modular potential of all new projects. METUS models a product, complete with all its dependencies, identifies cost drivers such as colourways or whether an appliance has automatic door-opening and, in this way, helps us make product and portfolio decisions.

At V-ZUG, the method is used during the early project phase to reliably ascertain the drivers of different options such as appliance height or facing material of the outer door, build customized units (modularization) such as the "door" with its sub-modules "door handle" or "door inner section" and, in the process, sustainably illustrate efficiencies. This approach is supplemented by software-based requirements management and the use of reference models to calculate target costs. Based on a reference range, V-ZUG will in future reduce the number of parts by 30 to 40% while more than doubling the theoretical variety of options.



A scenic mountain landscape featuring a rocky riverbed in the foreground with white water rapids. The river flows through a dense forest of evergreen trees. In the background, there are large, rugged mountains with some snow patches under a clear sky.

# Quality and environment

# Reliability, durability and unsurpassed comfort of use.

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The combination of motivated, highly qualified employees and up-to-the-minute technology is what enables us to produce the legendary V-ZUG quality. Our products are synonymous with reliability, durability and unsurpassed comfort of use. Thirty years ago, we were the first in the industry to establish certified quality management in accordance with ISO 9001. Today, we use an integrated quality management system to manage the quality of our products and services which, in addition to ISO 9001, also covers the areas of environment (ISO 14001) and occupational safety (OHSAS 18001) and impacts not just on the head office, but also the showroom, advice and service centres. The locations in Arbon and Changzhou are also certified to ISO 9001.

Quality has many aspects: the most important one is and will remain the quality of the household appliances themselves. Before an appliance leaves our factory in Zug or Arbon, it must pass an average of 600 function and safety tests. Only then can we be certain that our products live up to our promise of "Swiss perfection for your home". Our understanding of quality also embraces process convenience, i.e. the extent to which our appliances make the daily lives of the people who use them easier and enable an enjoyable lifestyle. One facet of this is that our appliances must support healthy cooking and hygienic washing, be quiet and economical in operation and be easy to use. Our advice and maintenance services are also crucial to quality. Our Customer Service handles around 1.5 million customer enquiries a year, which equates to more than 4,000 a day. Every single one is an opportunity to persuade our customers of the quality of V-ZUG appliances. In addition, around 400 service technicians go out on call for V-ZUG on a daily basis. Working from 16 service centres in Switzerland, they advise and supply our customers, install new appliances or repair faults or breakdowns, be it in an apartment block in the city or a cabin on a remote mountainside. For us to produce appliances of the desired quality, this requirement must also be writ large in our purchasing. Our definition of quality also extends to integrity in regard to environmental and social standards, so we set clear requirements for our suppliers and audit compliance.

When one of our appliances has provided many years of service and needs to be replaced, we contribute to this through our involvement in the SENS foundation. To protect the environment and enable the reuse of raw materials, SENS joins forces with manufacturers, importers, retailers, collection points and recyclers to facilitate the professional disposal and recycling of electrical and electronic appliances.

## Facts and figures

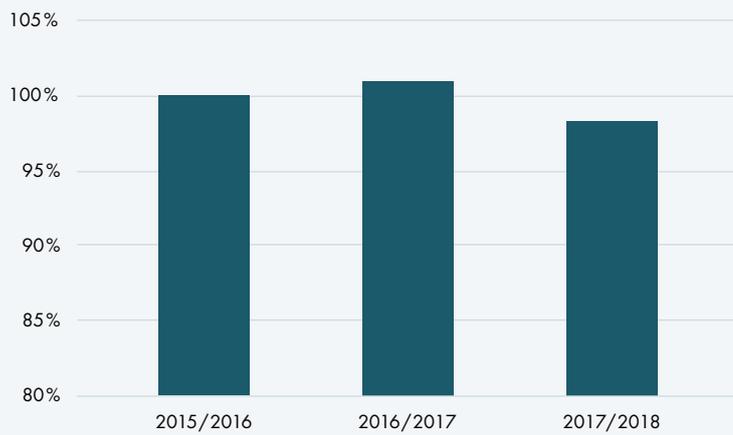


Fig. 6 Incidence of faults (Switzerland), indexed to 2015/16 situation

### Fewer faults: more satisfied customers, lower costs

For our customers, faulty household appliances are a nuisance. For us, they also have financial implications: repairs and maintenance services which we carry out under warranty or as a goodwill gesture incur quality-related costs. To counter this, we continuously invest in optimized products and manufacturing and logistics processes. Compared with 2015/16 we have reduced the number of faults during the reporting period by 2%, which in turn has lowered our quality-related costs and increased the number of satisfied customers.

### Our service – consistently high calibre

If a fault does occur, our aim is to respond swiftly and, if at all possible, resolve the issue on our first visit. Speed of response and successful repair on the first visit are therefore crucial statistics for our service and support. Over the last three periods, we have reduced our average response time from report to repair by 7%. The rate of faults repaired on the first visit over the same period was around 90%. In other words: in nine out of ten cases, we were able to solve the problem on the spot.

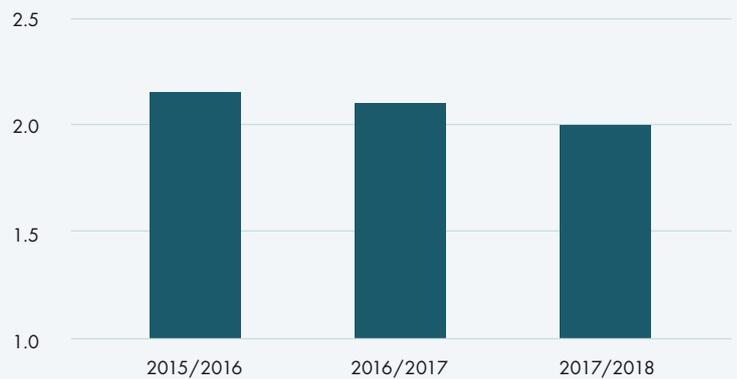


Fig. 7 Average response time from report to repair, in days (Switzerland)

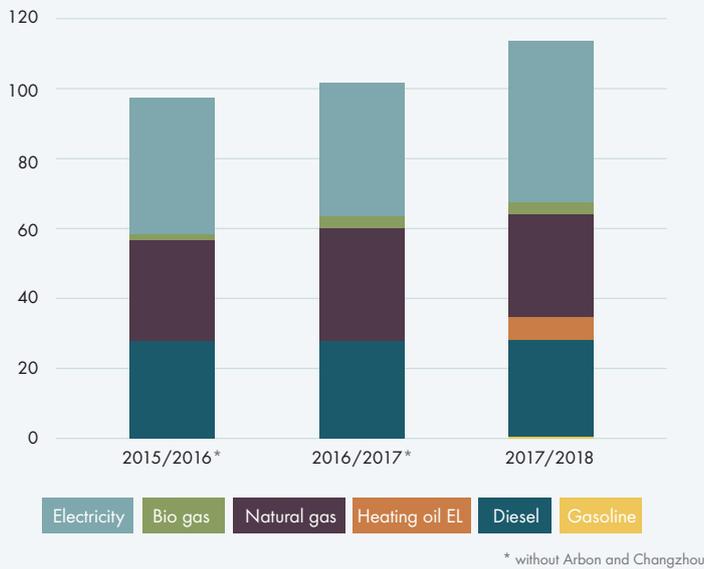


Fig. 8 Energy consumption within V-ZUG by energy sources in TJ

### Rise in absolute energy consumption

In 2017/18, absolute energy consumption within the organization was 113.2 terajoules (96.9TJ excluding Arbon/Changzhou). That figure is made up of electricity (40.6%), natural gas and biogas (29%), diesel (24.3%) and petrol (0.04%) for our own fleet of vehicles (including trucks), and heating oil (6%). Energy consumption has therefore risen by 11.4% compared with the prior period. If we exclude Arbon/Changzhou, consumption is down around 5% compared with the period 2016/17.

### CO<sub>2</sub> emissions also up

In 2017/18 our business activities caused a total of 4,781 tonnes (3,707 t excluding Arbon/Changzhou) of energy-related CO<sub>2</sub> emissions. These are comprised of diesel (42.4%), natural gas (34.4%), heating oil (10.4%) and petrol (0.1%). Electricity accounts for 12.7%. At the Zug site, electricity (which we have sourced entirely from Swiss hydroelectric power since 2014) causes zero emissions. CO<sub>2</sub> emissions have therefore risen by 22.7% compared with the prior period. If we exclude Arbon/Changzhou, emissions are down 4.7% compared with the period 2016/17.

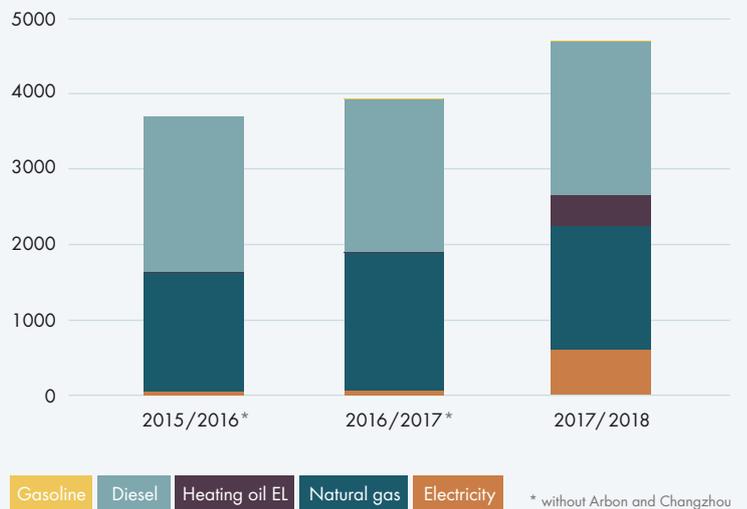


Fig. 9 Direct site emissions (Scope 1; electricity, gas, heating oil EL) and direct off-site emissions (Scope 2; diesel in tonnes of CO<sub>2</sub>)

## In it for the long haul

Everybody's talking about Industry 4.0, artificial intelligence and machine learning, including us, given their relevance to the digitization of our processes and products. For example, an "Idefix" is in operation on the production line for our combi-steam cookers. This is a driverless transport system that we are currently testing. Put simply, Idefix independently transports parts from A to B. Rather than doing this in a straight line, it takes a longer, apparently circuitous route. The purpose is to gather valuable experience for a point in the future when we deploy driverless systems in production. Recently, we tested acoustic sensors in combination with artificial intelligence (AI) in our quality inspection activities: a microphone attached to the dishwasher door records noise during the wash cycle and the AI in the cloud clarifies in a matter of seconds whether the spray arm inside the appliance is working properly. Even though these and other technologies are not (for now at least) financially viable, we are gaining valuable insights which will be a big help to us later on, for example in remote diagnosis of faults in dishwashers. The objective is to organize production and services more efficiently.

## More refrigeration with less energy

Just a stone's throw from the vast lido in Arbon where thousands of visitors go to cool off each summer, our refrigeration technology is a year-long focus for us. Since 2013 we have been producing our range of refrigerating appliances in the premises of the former Arbonia-Forster-Holding. In order to do this even more efficiently in future, last winter we upgraded our thermoforming unit. As the name implies, this unit uses heat as well as a vacuum and pressure to mould the interior containers for our refrigerators. "Thanks to the new unit, we can dismantle our two old units – the new one is faster and more efficient in many respects", explains Max Herger, CEO of V-ZUG Cooling Technology Ltd. As well as being twice as fast, the new technology also makes for a more precise and stable forming process. This in turn enables us to use thinner plastic plates and therefore less material. Plus, because the unit requires significantly less energy to generate the same heat output, we save a lot of energy. Max Herger is very pleased with the results of the first six months: "We expect an energy saving of 20% or 138,000 kilowatt hours a year compared with the old units; this will make the investment worthwhile in the future, and not just in financial terms", he is pleased to report.

**Energy savings**  
of **20%** or **138,000 kilowatt**  
**hours** per year.

Thanks to a new thermoforming unit



## Increasing **energy efficiency** and steadily reducing our **CO<sub>2</sub> emissions** .

Target agreement with the Confederation

### A far-sighted investment

Together with other companies in the Metall Zug Group, we have signed a binding target agreement with the Confederation for our Zug and Arbon sites, to the end of 2020. In this agreement, we voluntarily commit to increasing energy efficiency and steadily lowering our CO<sub>2</sub> emissions. In return, we will be exempted from the national CO<sub>2</sub> levy on fuels. In Arbon, we will exceed the targets agreed for 2020, so we can use the leeway this creates to generate CO<sub>2</sub> attestations. For the Zug site, we have repeatedly made a public commitment to carbon-neutral production after 2020. We are sticking to this target, even though it is likely that we will not achieve the agreed reductions by 2020. Paradoxical though this may sound, from the perspective of the Metall Zug Group it is entirely consistent and logical: instead of buying more biogas in the here-and-now to achieve the reduction targets, we are paying an annual fine to the Confederation and a levy to the Metall Zug Group. In 2018, the Group introduced an internal CO<sub>2</sub> levy of CHF 120 per tonne at its subsidiaries for their carbon footprint (heating and motor fuels). These funds are paid into an internal fund which is available for energy efficiency projects, most notably the Multi Energy Hub (MEH) on our main site ([see Society](#)). Thanks to these investments, the MEH is likely to be phased in from 2020 onwards, enabling both our production facility in Zug and the technology cluster to benefit sooner from a carbon-neutral energy supply.

A man in a dark blue polo shirt and white work gloves is focused on working on a piece of industrial machinery. The machine is grey and has several colorful wires (yellow, red, blue) connected to it. A white label with a barcode and the text "ID 2148" is visible on the machine. The background is a blurred factory floor with other workers and equipment. A white rectangular box is overlaid on the image, containing the word "Employees" in black text.

**Employees**

The V-ZUG family is made up of around 1,700 specialists who work for the company in Switzerland (approximately 1,500) and in another 20 countries on four continents. Our ability to deliver premium products and services relies on highly-motivated and professional employees. We offer employment opportunities to people from all kinds of professional groups and with many different levels of qualification. This ranges from trainees (we are currently training 77 apprentices in 11 professions for V-ZUG and another 16 from external companies) and unskilled employees, right through to doctoral graduates. We deliberately cover the entire range of ages, from 16 to 65. This mix is both challenging and enriching.

We endeavour to create a working environment in which employees feel safe and comfortable, which means offering fair and regulated working relationships, a health management system ("Vitality"), high standards of occupational safety (according to OHSAS 18001), a wide range of education and training opportunities (V-ZUGacademy) as well as diversity and equal opportunities. Our principles are laid down in documents such as V-ZUG's HR Policy and the Management Guidelines. Our HR department is operationally responsible for all personnel services and works with various specialist groups, such as the business partners, to deal with employee health problems. Meaningful key figures, which are published in an internal annual report on quality, the environment and occupational safety, along with a risk report and employee surveys are the tools we use to review and monitor all employment-related aspects (see [Facts and figures](#)).



For us, the reporting period was dominated by the implementation of medium-term measures for and with employees (to 2022). The focal points of these measures are:

- The **values and leadership culture** is better aligned with the new work environment and employees' changed expectations. Our newly-launched competency model is designed to equip our employees and managers with the skills to cope with the new challenges of the World of Work 4.0 (see [Fit for the digital transformation](#)).
- As an **attractive employer**, we regularly update our working conditions so that our current and potential employees are clear about what we offer and what we expect. In 2017, for example, we switched to annual working time and our female employees have the backing of the V-ZUG Women's Network.
- **Nurturing and retaining employees:** at the start of 2018, the internal range of training courses offered by the V-ZUGacademy was further developed and aligned with the new competency model. As part of our "vitality" programme, we have adopted a number of initiatives designed specifically to promote and maintain the health and safety of our employees. New forms of cross-functional cooperation and a number of interesting open innovation projects offer employees novel opportunities for personal development.

## Facts and figures

### The international V-ZUG Family is growing

In the 17/18 reporting year, 1,777 people were employed at V-ZUG (Zug, Arbon and Changzhou). The majority (84%) of our employees work full-time at V-ZUG. In Switzerland, 18% of employees are aged under 30, 51% between 30 and 50 and 31% over 50. We deliberately cover the full range of ages from 16 to 65. Furthermore, V-ZUG is actively involved in the awareness campaign "Age has potential", run by the Canton of Zug.



Fig. 10 Employees by employment contract

### Women still significantly under-represented

In the last few years, the female share of the workforce has been just shy of 21%. We would like to make the professions that are represented and taught at V-ZUG more attractive to women, by offering taster courses for school students, flexible working hours and part-time jobs. Women are also under-represented in executive roles, 16% of which are held by female employees. The aim of the V-ZUG Women's Network is to promote and strengthen women. We arrange external audits of equal pay (most recently in 2016) and our certificate in accordance with L&M-Aba-24® confirms the non-discriminatory remuneration of our employees.

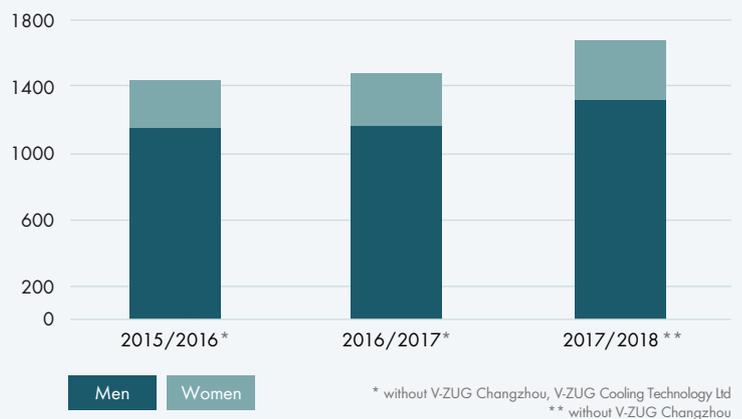


Fig. 10 Number of women and men

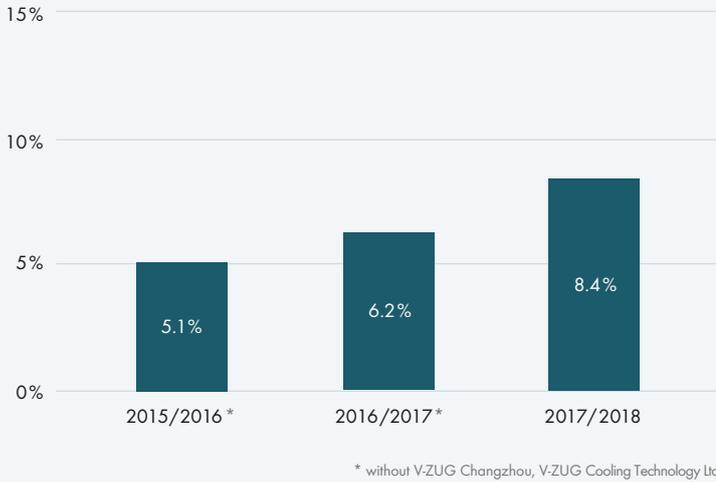


Fig. 12 Staff turnover, voluntary and involuntary (excluding retirements and fixed-term contracts)

### Low staff turnover

In 2017/18 we welcomed 167 new employees to V-ZUG and 143 people left our company in the same period. This equates to a turnover rate (excluding retirements) of 8.4%. Taking account of the extended reporting framework, turnover has risen by 2% compared with 16/17.

### Slight fall in work-related accidents and absenteeism rate

We recorded 98 work-related accidents at V-ZUG during the reporting period. Around 50% of those accidents counted as minor accidents, bruises, cuts etc., which entail absence of less than three days. There were also 236 leisure accidents. The absenteeism rate, i.e. hours lost as a percentage of all hours worked, was 0.18% in the reporting year (2016/2017: 0.24%). Minor accidents most commonly occur in production and service and are mainly due to carelessness or stressful situations. Occupational safety is and will remain one of our key quality concerns, as work-related accidents are a cause of both physical suffering and financial costs. Therefore, we remain committed to targeted information and training to raise awareness among our employees and encourage them to take personal responsibility.

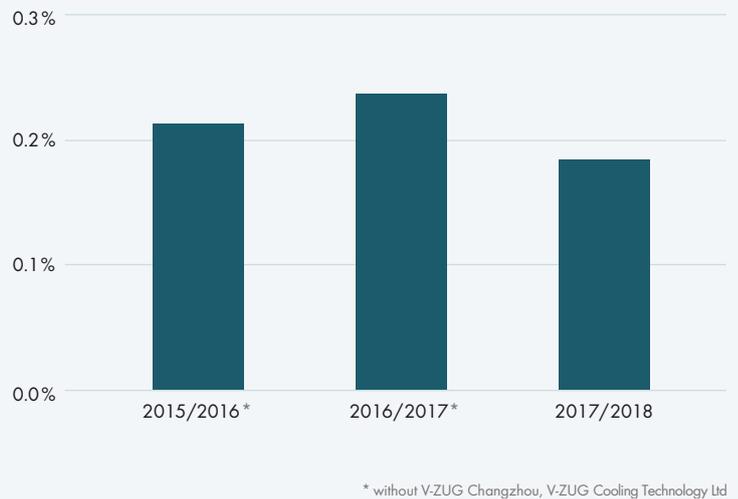


Fig. 13 Absenteeism rate due to workrelated accidents

Slight increase in hours lost

Hours lost due to work-related and non work-related accidents as well as illness have increased only marginally in Switzerland (excluding V-ZUG Cooling Technology) by +1.6%. Including Changzhou and V-ZUG Cooling Technology, a good 80% of all hours of absence were due to illness in 2017/2018. Whilst hours lost due to illness increased compared with the last reporting year, hours lost due to leisure accidents continued to decrease, by a gratifying 24% - even allowing for the extended reporting framework.



Fig. 14 Absenteeism rate by cause (WRA: work-related accidents; NWRA: non work-related accidents)



## Fit for the digital transformation

Digital transformation is not only changing customers' needs and our product range, but also the world of work and job experience of our employees and managers. Our future success hinges on our employees' ability to respond positively to these changes and be agile in the increasingly flexible and networked world of work. Therefore, we launched our new competency model at a management event in December 2017. Our aim is to develop a common understanding of the skills and contributions required in order to be successful in this dynamic world – whether as a company or as an individual on the job market. This much is already clear: in future, personal skills such as a lifelong willingness to learn, joined-up thinking or the ability to handle complexity, uncertainties and risks will become far more important. Line managers have an important role to play here. "Our managers are called upon to lead their employees out of the stable era of industrialization and the traditional culture, into the digital transformation. That's not easy", says Rolf Jenni, Head of Human Resources. "To provide them with the best possible support and firmly establish our forward-looking competency model within the company, since May 2018 we have been running training for all managers and teaching them the skills they need to mentor employees in a changing world."



Our **managers** are called upon to lead their **employees** out of the **stable era** of industrialization and the traditional culture, into **the digital transformation.**

## Mental health is not taboo

Dissatisfaction, stress or a poor work/life balance affect our well-being and, in the worst case, can even make us ill. These were the findings of a health survey of our employees in March 2017. Because of this, we have defined mental health as one of three prevention priorities. Mental stress or illness are still widely regarded as a taboo subject, which often hinders the recovery of the people affected and makes early detection harder. With the "Deine Psyche - kein Tabu" (Your mind is not a taboo) campaign, which is being run by Zug-based foundation Werner Alfred Selo Stiftung, our aim was to break this taboo. Over a ten-month period we spotlighted this issue. In November 2017, for example, we ran the mood barometer "How are you today?", which encouraged all managers to talk more in their teams about each other's state of mind and mutual expectations. The survey conducted to evaluate the campaign produced a mixed picture: although it succeeded in highlighting the issue, the respondents felt there was still a lot of room for improvement in terms of openly addressing mental health and expectations, both with line managers and within the team. Fabian Britschgi, Head of Health Management at V-ZUG, is confident that the campaign was the first step in the right direction: "In our daily casework we are noticing that managers are responding more sensitively to signs of mental stress. Their understanding of mental illnesses has improved and there is far less prejudice." To encourage even greater understanding of the issue, V-ZUG has incorporated mental health in its management training courses. Appraisal interviews, which have been overhauled for 2019 and will place a greater focus on each individual's state of mind and individual skills, provide an important forum for discussing mental health.

## Back to working life!

Physical impairments cannot always be prevented. That's why it is important to us that we support the people affected and work with them to find a solution. To this end, in 2017 V-ZUG further optimized its Care Management and appointed an additional specialist. Managers have an essential role to play here: together with the people affected, they discuss the ways in which they may be hindered in performing their role and identify the action that can be taken. Depending on the situation, they are supported by the HR Business Partners or Health Management. They all share a common objective: to help people return to their accustomed role. "In the vast majority of cases, we are able to do this. Sometimes adjustments are necessary, which might mean tweaking the job profile or providing training in additional skills for the people affected", says Fabian Britschgi, Head of Health Management. Only rarely are people unable to return to their accustomed role, despite the best efforts. Experience has taught us how valuable support and reintegration are. "We have been able to reintegrate two thirds of people affected by physical impairments at V-ZUG. Of them, over 92% are in their original role, adjustments had to be made for 8% and we were able to find a solution outside the company for 6%" Britschgi sums up.



**Society**

Since Verzinkerei Zug was founded in 1913, the history of the city of Zug has been intertwined with that of our company. As a family-run Swiss industrial company with a history stretching back over 100 years, we are more than just an economic player or an employer; we are a part of society. Over our company's long history, we have formed sustainable relationships with our immediate neighbours, civil society organizations and the municipal authorities. We participate in local and regional initiatives and associations covering the issues of water consumption, energy efficiency and healthy eating. We support cultural and charitable organizations in Zug and give the outside world an insight into what we do by holding open days and giving guided tours. V-ZUG's terms of employment explicitly allow the performance of public duties. This close-knit network of contacts is a cornerstone of a business-friendly climate that will continue allowing us to compete on the international stage and take the "Swiss Made" label out into the world from our base in Zug.

Our fundamental values, which have been enshrined in the Metall Zug Group Code of Conduct since mid-2016, lie at the very heart of everything we do as a business and in society: sustainable and long-term value creation, excellence and integrity in our business operations. The Code applies to all employees and directors. Employees have a duty to report to their line manager or the in-house legal department any matters which appear to be contrary to our fundamental values or specific principles, such as anti-bribery rules. Crucially, any such reports are treated in confidence. Employees who report in good faith a potential violation of the Code of Conduct need have no fear that reporting their suspicions will have negative repercussions for their employment at the company. We also uphold these fundamental values and principles in our dealings with suppliers.

## Intergenerational project gaining momentum

On 8 May 2018, the city parliament of Zug unanimously approved the Technology Cluster Zug (TCZ) zoning plan. The development of our original site into an urban cluster for technology and innovation has thus overcome another major hurdle. As an anchor user, we initiated the TCZ but we need more companies, start-ups, institutions and uses so that, by 2040 and beyond, a networked and innovative biotope can emerge which will be a source of new impetus for us as an industrial company and will boost the profile of the city of Zug as a business and technology base. V-ZUG Realty Ltd plays an important role in this structure, since it is responsible for the development of the entire site. In addition, together with WWZ Ltd, it is working on the energy supply of the future. The site will one day be supplied by the "Multi Energy Hub" (MEH) with CO<sub>2</sub>-neutral heating, cooling, electricity and biogas. "We completed the preliminary project for this in the spring of 2018. The conclusion was that the MEH is feasible from a structural, financial and energy perspective", says V-ZUG Realty CEO, Beat Weiss. The power needed for heating and cooling will be obtained from groundwater wells that were constructed during the reporting period and from the lake water from the WWZ's Circulago district heating system. Lastly, gas boilers with biogas are available to accommodate peaks in demand and PV units on roofs

and frontages for electricity. V-ZUG Realty is also breaking new ground in its cooperation with the city of Zug: “We report annually on key sustainability figures which demonstrate that the TCZ is developing in line with our common targets. Even this is groundbreaking”, Beat Weiss proudly states.

## Innovation park as V-ZUG laboratory

Based loosely on Samuel Beckett’s famous words, “Try again. Fail again. Fail better”, members of the Innovationspark Zentralschweiz are following the “open innovation” philosophy, according to which the fast creation, testing and production of prototypes is paramount. Last year, the association, which is an important innovation lab for us headed by our CEO Dirk Hoffmann, further enhanced its reputation. At the Suurstoffi site in Rotkreuz, partners from business, academia and the public sector are working together on concrete problems in the three innovation fields of Digital Planning and Building, the Internet of Things, and Energy and Sustainability. We are, for example, working with partners in the home technology sector to develop the kitchen of the future, which will double as an energy hub. The work of an interdisciplinary team which, in a very short time, developed an app which connects household appliances with your smartphone and enables customers to use applications ranging from recipe suggestions to ordering items, is already complete. The Innovation Park is expected to finally move from pilot to operational phase in January 2019. In future, it will help us break out of our existing silos and completely rethink products and solutions.

Try again.  
Fail again.  
**Fail better**



# GRI index

This is V-ZUG's sixth sustainability report. It covers the period from 1 July 2017 to 30 June 2018 (with a reporting date of 30 June 2018) and deals with the main economic, environmental and social impacts of V-ZUG's business operations. The management approaches described in the four sections on our priorities include V-ZUG Ltd with its head office at the Zug site, V-ZUG Cooling Technology Ltd with head office in Arbon and the foreign subsidiaries, in particular V-ZUG (Changzhou) Special Components Co. Ltd., west of Shanghai. Unless otherwise indicated, the key sustainability figures refer to the Swiss production sites in Zug and Arbon and those in Changzhou. They cover the period from July 2015 to June 2018 (three years). However, key figures for Arbon and Changzhou are only available from the period 2017/18. Therefore, the figures for 2017/18 cannot be directly compared with the prior-year periods.

This report has been prepared in accordance with the GRI standards. As part of its continuous strategy process, V-ZUG also takes account of the various factors involved in the cross-sectoral issue of sustainability, monitors current and new trends and works out solutions to challenges or new opportunities. The key figures, activities and impacts discussed in this report are selected on the basis of the 2014 relevance matrix (see [Sustainability Report 2014](#)) and on a series of interviews with V-ZUG managers over the period from June to August 2018.

We regard this report as essential to a constant and systematic dialogue with our various stakeholders, the purpose of which is to provide greater transparency about our sustainability performance and enable our stakeholders to verify and assess our claims.

## General standard disclosures

Indicator	Description	Comment/reference
<b>Strategy and analysis</b>		
GRI 102-14	Statement from the company's senior decision-maker on the importance of sustainability for strategy and the organization.	see Editorial
<b>Organizational profile</b>		
GRI 102-1	Name of the company	V-ZUG Ltd
GRI 102-2	Key brands, products and services	see Products and services
GRI 102-3	Company's headquarters	Zug, Switzerland
GRI 102-4	Name and number of countries in which V-ZUG operates or has significant operations	see Markets
GRI 102-5	Ownership and legal form	Company limited by shares under Swiss law, wholly owned by Metall Zug Ltd
GRI 102-6	Markets served	<p>V-ZUG has its own sales companies or branches in Australia, Belgium, China, Germany, France, United Kingdom, Hong Kong, Ireland, Israel, Lebanon, Luxembourg, Malaysia, the Netherlands, Norway, Russia, Sweden, Singapore, Ukraine and the USA. Including its home market, Switzerland, around 20 markets are currently served.</p> <p>Types of customers and beneficiaries: V-ZUG's products are sold on the one hand through the trade. The trade sells them to installers and presents them in various settings, including showrooms where end consumers can obtain information about the products. In addition, V-ZUG operates 10 display showrooms and advice centres across Switzerland, where the products are sold directly to end customers. The primary customer groups, beside pure commercial firms and kitchen designers, are property management companies and real estate owners and their agents (such as architects and general contractors).</p>

Indicator	Description	Comment/reference
GRI 102-7	<p>Scale of the company</p> <p>(number of employees; total number of operations; net sales; total capitalization broken down in terms of debt and equity; quantity of products and services provided)</p>	<p><b>Number of employees:</b> 1,777 (30.6.2018)</p> <p><b>Number of operations:</b> 33</p> <p><b>Net sales:</b> not disclosed</p> <p><b>Total capitalization:</b> not disclosed</p> <p><b>Quantity of products and services provided:</b> not disclosed</p>
GRI 102-8	<ul style="list-style-type: none"> <li>▪ Number of employees by employment contract and gender</li> <li>▪ Number of permanent employees by employment type and gender</li> <li>▪ Total workforce by employees and personnel bound by instructions and by gender</li> </ul>	See Employees
GRI 102-41	Percentage of total employees covered by collective bargaining agreements (CEA)	All employees in Switzerland are subject to the collective employment agreement (CEA) of the Association of Swiss Engineering Employers (ASM). The current CEA was revised according to schedule on 1 July 2018 and is valid for five years, until 30 June 2023. The employers' associations Angestellte Schweiz, Unia, Syna, Swiss Association of Commercial Employees, Schweizer Kader Organisation (SKO) and the ASM are involved as negotiation partners.
GRI 102-9	Description of the company's supply chain	V-ZUG buys directly through its suppliers.
GRI 102-10	<p>Significant changes to the size, structure and ownership of the company</p> <ul style="list-style-type: none"> <li>▪ Changes of location or changes in business operations</li> <li>▪ Changes in the structure of the supply chain</li> </ul>	See GRI index
GRI 102-11	How is the Precautionary Principle (the handling of potentially negative impacts on the environment) applied at the company?	The Precautionary Principle is enshrined in V-ZUG's ethical principles and management guidelines and is monitored by an integrated management system (quality, environment, occupational safety). The certifications to ISO 9001/14001 and OHSAS 18001 also contribute to the Precautionary Principle, in the shape of preventive measures within the company's operations.
GRI 102-12	List of externally-developed economic, environmental and social charters, principles or other initiatives to which the company subscribes, or which it endorses	<p>V-ZUG is committed to the following partnerships:</p> <ul style="list-style-type: none"> <li>▪ Chairmanship of the Innovationspark Zentralschweiz association</li> <li>▪ Leading partner of MINERGIE® Switzerland (voluntary)</li> <li>▪ Cooperation with the Foundation aha! Swiss Allergy Centre</li> <li>▪ Member of the executive board and Chair of the "Technology &amp; Industry" committee of the Zug Chamber of Commerce</li> <li>▪ Member of the executive board of tfz (Technologie Forum Zug)</li> <li>▪ In its production, the company works with the zuwebe sheltered workshop, enabling people with disabilities to integrate into the work process</li> </ul>

Indicator	Description	Comment/reference
GRI 102-13	Membership of associations and national or international advocacy organizations	V-ZUG is a member of, among others, SWISSMEM, the Swiss association of the mechanical and engineering industries, and is represented on its executive committee.

#### Identified material topics and boundaries

GRI 102-45	<ul style="list-style-type: none"> <li>List of all entities included in the company's consolidated financial statements.</li> <li>Disclosure of the companies covered by the sustainability report.</li> </ul>	<p><a href="#">See Company profile</a></p> <p><a href="#">See GRI index</a></p>
GRI 102-46	<ul style="list-style-type: none"> <li>Process for defining the report content and the topic boundaries.</li> <li>Implementation of the reporting principles for defining report content.</li> </ul>	The sustainability topics relevant to V-ZUG were identified with the assistance of an external consultant and were prioritized and passed at the meeting on 6 March 2014 with the company's management and Board of Directors, on the basis of a presentation.
GRI 102-47	List of all the material topics identified in the process for defining report content.	<ul style="list-style-type: none"> <li>Economic performance</li> <li>Materials</li> <li>Energy</li> <li>Products and services</li> <li>Emissions</li> <li>Transport</li> <li>Employment</li> <li>Customer health and safety</li> <li>Occupational health and safety</li> <li>Training and education</li> </ul>
GRI 102-48	The effects of any restatements of information given in previous reports, and the reasons for such restatements	The report structure has been altered. The changes and the reasons behind them are explained in the Editorial.
GRI 102-49	Significant changes from previous reports to the list of material topics and topic boundaries	The report structure has been altered. The changes and the reasons behind them are explained in the Editorial.

#### Stakeholder engagement

GRI 102-40	List of stakeholder groups engaged by the company (e.g. civil society, customers, employees etc.)	V-ZUG's key stakeholder groups are: customers, employees, investors, suppliers, retailers, trade unions, authorities, media and stakeholders from the research and education sphere.
GRI 102-42	The basis for identifying and selecting stakeholders with whom to engage	The key stakeholder groups were identified based on the external relationships maintained by the various departments. For example, the HR department is responsible for current employees, but it also engages with future employees through recruitment events. The Purchasing department is actively engaged with our suppliers, while the Sales department and the Marketing department are responsible for sales to retailers and tradespeople as well as for informing them about new products.

Indicator	Description	Comment/reference
GRI 102-43	The company's approach to stakeholder engagement (including frequency of engagement by type of stakeholder group) and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	V-ZUG's stakeholders are engaged as follows: <ul style="list-style-type: none"> <li>Customers: customer surveys, customer contacts (around 300 service technicians in the field service and customer service); to avoid misuse, free appliance demonstrations are also offered by V-ZUG customer advisors; customer magazine ("Zuger Röteli"), open day and guided tours of the Zug production site</li> <li>Employees: Employee survey, employee magazine "BLUEline" and online platform "BLUE-Online"</li> <li>Investors/shareholders: Family company</li> <li>Suppliers: Supplier audits</li> <li>Retailers: annual product presentation and 15 symposia per year</li> <li>Trade unions: within the context of the collective employment agreement (CEA)</li> <li>Authorities: Involvement as an energy consultant in the Zug Energy Network</li> <li>Media: Information provided by Head Corporate Communications &amp; Investor Relations</li> <li>Research and education: Activity on the board of the Innovationspark Zentralschweiz association, lecturing activity by senior executives, participation in working groups with educational institutions, advisory board of WERZ competence centre for energy and resource efficiency in Zug</li> </ul>
GRI 102-44	Key topics and concerns that have been raised through stakeholder engagement, and how the company has responded to those; disclosure of the stakeholder groups that raised each of the key topics	None.

#### Reporting practice

GRI 102-50	Reporting period	July 2017 to June 2018, reporting date: 30 June 2018
GRI 102-51	Date of most recent previous report	May 2018 (report on calendar years 2016 and 2017; the reporting periods for the previous and current report therefore overlap (2nd half of 2017)).
GRI 102-52	Reporting cycle	Annual. From 2018, always published in the autumn; <a href="#">see also Editorial</a>
GRI 102-53	Contact point for questions	Dirk Hoffmann, CEO, <a href="mailto:info@vzug.com">info@vzug.com</a>
GRI 102-54 to 56	Claims of reporting in accordance with the GRI Standards	V-ZUG's 2017/2018 Sustainability Report was drawn up in accordance with the GRI standards. This index contains references to the corresponding information and data in the report. The report has not been externally audited.
GRI 102-56	The company's policy and current practice with regard to seeking external assurance for the report	No external assurance

Indicator	Description	Comment/reference
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Governance

<p>GRI 102-18</p>	<ul style="list-style-type: none"> <li>▪ Governance structure of the company (including committees of the highest governance body)</li> <li>▪ List of all committees responsible for decision-making on economic, environmental and social topics.</li> </ul>	<p>The management's operational leadership structure is divided into the following positions:</p> <ul style="list-style-type: none"> <li>▪ CEO: Quality, HR, Strategy &amp; International Markets</li> <li>▪ Commercial department including Finance and IT</li> <li>▪ Research and Development</li> <li>▪ Operations: Production, Logistics and Purchasing</li> <li>▪ Marketing: Sales on Swiss market, global marketing and global service</li> <li>▪ Business Development: Digital business development, Sibir, Gehrig</li> </ul> <p>Committees responsible for decision-making on environmental and social topics:</p> <ul style="list-style-type: none"> <li>▪ Sustainability conference at Management and BD level</li> <li>▪ Committee of Internal Auditors Quality, Environment and Occupational Safety</li> <li>▪ Legal Compliance Committee</li> <li>▪ Management strategy meetings (2 × p.a.)</li> </ul>
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Ethics and integrity

<p>GRI 102-16</p>	<ul style="list-style-type: none"> <li>▪ Description of the company's values, principles, standards and norms of behaviour (Code of conduct and ethical code)</li> </ul>	<p>V-ZUG's key mission statements, codes of conduct and principles are:</p> <ul style="list-style-type: none"> <li>▪ the terms of employment (TOE)</li> <li>▪ Annex 1 to the TOE (ethical principles)</li> <li>▪ the HR policy of V-ZUG Ltd</li> <li>▪ the Management Guidelines of V-ZUG Ltd</li> <li>▪ ISO certificate 9001 and 14001 (including annex)</li> <li>▪ OHSAS certificate 18001 (including annex)</li> </ul> <p>"Ethical Principles" ethical guidelines (annex to the V-ZUG Ltd Terms of Employment)</p> <ol style="list-style-type: none"> <li>1. Compliance with laws and standards</li> <li>2. Autonomy of decisions</li> <li>3. Incorruptibility and anti-bribery provisions</li> <li>4. Impartiality and fairness</li> <li>5. Observance and preservation of human rights and dignity</li> <li>6. Observance and preservation of property of V-ZUG Ltd and of third parties</li> <li>7. Confidentiality and ban on the use of insider information</li> <li>8. Avoidance of conflicts of interest</li> <li>9. Protection of natural resources</li> </ol>
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## Specific standard disclosures

Topic	Indicator	Description	Comment/reference																								
<b>Economy</b>																											
Economic performance	GRI 103-1 to 3	Management approach disclosures	See Company profile, Key figures and Strategy and priorities.																								
	GRI 201-1	Direct economic value generated and distributed	Financial key figures cannot be published, due to their relevance to the stock market. We refer to the 2017 Annual Report of Metall Zug Ltd.																								
<b>Environment</b>																											
Materials	GRI 103-1 to 3	Management approach disclosures	See Quality and environment																								
	GRI 301-1	Materials used by weight or volume	<table border="1"> <thead> <tr> <th></th> <th>Unit</th> <th>2017/2018</th> </tr> </thead> <tbody> <tr> <td>Iron</td> <td>1,000t</td> <td>6.37</td> </tr> <tr> <td>Stainless steel</td> <td>1,000t</td> <td>1.53</td> </tr> <tr> <td>Aluminium</td> <td>1,000t</td> <td>0.14</td> </tr> <tr> <td>Non-ferrous metal</td> <td>1,000t</td> <td>0.06</td> </tr> <tr> <td>Oils, fats, lubricants</td> <td>1,000t</td> <td>0.03</td> </tr> <tr> <td>Hazardous substances</td> <td>1,000t</td> <td>0.44</td> </tr> <tr> <td><b>Total</b></td> <td><b>1,000t</b></td> <td><b>8.58</b></td> </tr> </tbody> </table>		Unit	2017/2018	Iron	1,000t	6.37	Stainless steel	1,000t	1.53	Aluminium	1,000t	0.14	Non-ferrous metal	1,000t	0.06	Oils, fats, lubricants	1,000t	0.03	Hazardous substances	1,000t	0.44	<b>Total</b>	<b>1,000t</b>	<b>8.58</b>
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GRI 302-1	Energy consumption within the organization	See Facts and figures																									
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GRI 302-5	Reductions in energy requirements of products and services	See Facts and figures																									
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Topic	Indicator	Description	Comment/reference
Emissions	GRI 103-1 to 3	Management approach disclosures	See <a href="#">Quality and environment</a>
	GRI 305-1	Direct GHG emissions (Scope 1)	<p>For Scope 1, the following emissions were taken into account:</p> <ul style="list-style-type: none"> <li>▪ direct emissions of greenhouse gases from all sources that are owned by V-ZUG or are controlled by V-ZUG. The following processes do not take place at V-ZUG and have therefore been excluded: combustion processes, such as flaring of gaseous waste substances</li> <li>▪ emissions from combustion processes and sources in accordance with the reported direct primary energy.</li> </ul> <p>Thus far, direct non-energy greenhouse gas emissions have not been taken into account. These include, for example, coolants which escape into the atmosphere during production.</p> <p>See <a href="#">Facts and figures</a></p>
	GRI 305-2	Energy indirect GHG emissions (Scope 2)	<p>For Scope 2, the following emissions were taken into account:</p> <ul style="list-style-type: none"> <li>▪ Indirect greenhouse gas emissions resulting from the generation of purchased electricity at the head office in Zug (Scope 2). This corresponds to the reported energy consumption.</li> </ul> <p>See <a href="#">Facts and figures</a></p>
Products and services	GRI 103-1 to 3	Management approach disclosures	See <a href="#">Quality and environment</a>

## Society

Employment	GRI 103-1 to 3	Management approach disclosures	See <a href="#">Employees</a>
	GRI 401-1	Total number and rate of newly hired employees and staff turnover	See <a href="#">Employees</a>
Occupational safety	GRI 103-1 to 3	Management approach disclosures	See <a href="#">Employees</a>
	GRI 403-2	Work-related accidents, work-related illnesses and lost days	See <a href="#">Facts and figures</a>

Topic	Indicator	Description	Comment/reference
Training and education	GRI 103-1 to 3	Management approach disclosures	See Employees
	GRI 404-2	Programmes for skills management and lifelong learning	<p>As a tool for enhancing employability, professional development is in the interests, and is the responsibility, of both V-ZUG and its employees. As such, it is encouraged. Employees have the right, on request, to be released from their work for professional development within or outside the company, provided certain conditions are met. V-ZUG will pay all or part of the costs of the further training on request. There is a welfare fund for social hardship cases.</p> <p>For more information see Employees.</p>
Supplier social assessment	GRI 103-1 to 3	Management approach disclosures	See Quality and environment and Society
	GRI 414-1	Percentage of new suppliers that were screened using social criteria	See Quality and environment and Society
Customer health and safety	GRI 103-1 to 3	Management approach disclosures	See Quality and environment and Society
	GRI 416-1	Percentage of significant product and service categories whose impact on health and safety is assessed	<p>All operating instructions for our appliances contain information on safe use, proper disposal of packaging materials and of the appliance, as well as tips for saving energy (and water, in the case of washing machines). Our appliances satisfy standard IEC 60335-1 (Safety of electrical appliances for household use). Furthermore, our appliances also satisfy the RoHS and the WEEE directive of the EU. For the WEEE directive, this means in particular that all V-ZUG appliances are labelled according to the standard and the operating instructions contain information about proper disposal.</p> <p>In addition, in the installation instructions for the appliances, which are aimed directly at tradespeople, we describe what needs to be taken into account when installing our appliances for them to function as well as possible, with maximum energy efficiency.</p>
	GRI 416-2	Total number of incidents of non-compliance with regulations and voluntary codes concerning customer safety	No incidents in 2017 or 2018.

