

Products and services  
for a future-fit society



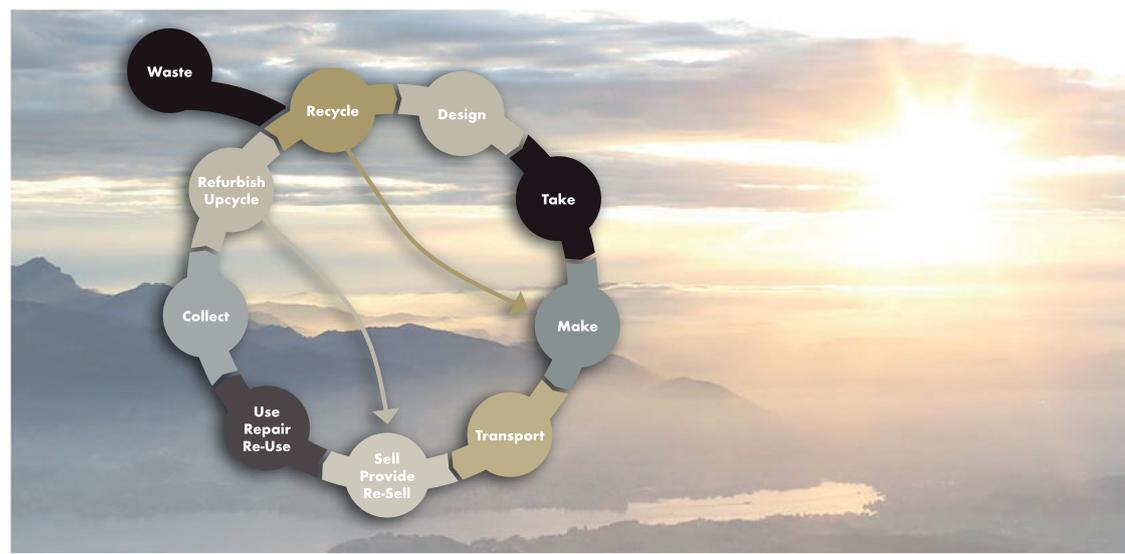
At V-ZUG the quality promise of our products and services is paramount. This responsibility does not simply end at the point at which an appliance leaves our factory with an A-rated energy label – our high quality standards play a vital role all along the line from procurement, development and production through to reuse or recycling. Our customers benefit from having resource-efficient, durable and user-friendly appliances. Before being shipped, machines undergo an average of 600 internal function and safety tests as part of our ISO 9001-compliant quality management system.

**Introduction of life cycle assessments**

V-ZUG’s even sharper focus on material topics and sustainability focus topics has added greater impetus to designing for circularity in product development.

We conducted life cycle assessments for a first batch of appliances during the reporting year, with all others being set to follow by 2023. We were also able to obtain some support for this from the Swiss Network for Resource Efficiency (Reffnet). Life cycle assessments enable us to express the emissions and resource consumption of our products with respect to their social and environmental impact as a single clear indicator (“Measurable environmental footprints”, page 28). These wide-ranging insights into the environmental footprint of our appliances are already flowing into our design and production processes, for example in the form of the new design principles and guidelines drawn up by our Development department together with external experts. In 2021, in collaboration with Lucerne University, we also created a model that quantifies environmental costs in addition to the production costs. As a result, we can bring more financial arguments to the table when discussing sustainability.

The circular economy – considering the entire life cycle



### **Alternative materials**

The use of alternative materials in end products is an important step towards achieving further progress in creating a circular economy. Thanks to close cooperation with suppliers, during the reporting year we succeeded in substituting a more environmentally friendly alternative for the new Excellence Line to replace a component made of conventional petroleum-based polycarbonate. This is a first step towards the wider use of regenerative, resource-saving materials in future (“Measurable environmental footprints”, page 29).

### **Improved circularity**

Durability and reparability are key aspects of designing circularity into our appliances. These are anchored in our high standards of quality – both for the appliances themselves and for the professional customer service provided over their entire lifespan. We ensure that any appliances our service technicians replace early are professionally recycled so materials such as steel or aluminium can be reused. Although the average recycling rate of large appliances and cooling appliances is already over 80 percent in Switzerland according to the SENS eRecycling Foundation, we are aiming to improve the recyclability of our products even further. We are consequently working closely with suppliers and specialist recycling firms. However, sending a returned, functioning machine to be recycled should always be the last resort. In our “Refurbishment for charity” project, in 2021 we therefore posed the question of how we could combine our charitable work with the goal of keeping our appliances in use for as long as possible (“Refurbishing appliances for a good cause”, page 66).

### **Exploiting digital solutions to create new services**

Becoming fit for the future also means exploiting the opportunities offered by digital technology to develop new business models. The V-Kitchen app shows that we can make a significant contribution to creating a sustainable society by motivating users to become more conscious consumers and adopt healthy eating habits (“A food coach for sustainable consumption”, page 30). As we are aiming to assume responsibility for the usage and environmental footprint of our appliances across their entire lifespan in future, we are also working on our “Clean & simple” business model that offers an alternative to outright purchase. V-ZUG launched its Product as a Service (PaaS) contract in a pilot project to equip one of SBB’s properties in Basel with washing machines and tumble dryers on a rental basis where the appliances remain in the ownership of V-ZUG. This service is primarily aimed at business customers such as facility management firms.

### Rescaled energy labels

On 1 March 2021, Switzerland adopted new, more stringent EU regulations for labelling the energy consumption of certain appliances. The new scale runs from A to G with the previous plus ratings (A+, A++, A+++) being scrapped. As a result of this rescaling, our washing machines, dishwashers, refrigerators and freezers will need to become even more energy-efficient. The new labels will make it easier for customers to compare products. For us the rescaling – to be rolled out over several years – will act as a further incentive. Thanks to the heat pump developed by V-ZUG, our premium models already reach the standard for an A rating on the new scale. Moreover, we are demonstrating what is technically possible and continue to optimize our products above and beyond the requirements for the official declaration programmes. Our customers will consequently be helping to protect the environment regardless of which model they decide to buy.

### Efficient use in the home

When it comes to sustainability, however, it is not simply the efficiency class that matters, but how a product goes on to be used in the home as the energy and water consumption of appliances is far higher there than during manufacture. Integrated EcoManagement encourages our customers to be eco-conscious by showing the predicted and actual energy and water consumption of appliances. The Eco option also enables them to quickly and easily reduce the environmental footprint of a standard programme.



**“We are trialling V-ZUG’s PaaS (Product as a Service) contract with SBB’s Real Estate division as an alternative to outright purchase. Usually the lowest price wins in conventional tenders, but often this doesn’t provide the desired level of quality and sustainability. For the fit-out of the 3Johann apartment building in Basel, V-ZUG remains the owner of the appliances and assumes responsibility for servicing, repairs and recyclability. Our tenants therefore benefit directly from the brand service provided by V-ZUG technicians.”**

Samuel Pillichody, General Project Manager, SBB Real Estate Development Central Region

# Targets, facts and figures

Targets	Baseline and target years	2021 results	Status	Key figures
Efficiency				
One appliance per product category in top 3 for efficiency (comparison site TopTen.ch)	Annual review	Ranking in the various product categories:  Washing machines: Energy: 1. / Water: 3. Tumble dryers: Energy: 1. Ovens: Energy: 2. Steamers: Energy: 2. Dishwashers: Energy: 1. / Water: 1. Fridge freezers: Energy: 3. Fridges with freezer compartment: not ranked Extractors/island: Energy: 1. Extractors/downdraft: Energy: 10. Extractors/flat: Energy: 3.  In top 3 in 10 out of total 12 categories – 83% attainment	On track	Ranking from comparison site TopTen.ch – in December 2021
Increase fleet efficiency of all appliances (energy and water) by 5%	2021; 2030	2021 is baseline year. Focus was on creating metric and calculating figures for the first time. Fleet efficiency/energy 2021: 225 kWh/year* Fleet efficiency/water 2021: 6830 l/year*  *Average V-ZUG appliance, across all categories	Initiated	Fleet efficiency: All appliances purchased multiplied by the respective annual energy consumption (acc. to energy label or, if not available, own calculation), divided by the number of appliances
All our current network-enabled appliances have extensive eco-functions/ services integrated	-; 2025	Current functions in 2021 (selection, not exhaustive): <ul style="list-style-type: none"> <li>▪ EcoManagement: Usage data displayed, predicted and actual values (multiple categories)</li> <li>▪ OptiDos washing machines: Optimized economical detergent dosage</li> <li>▪ OptiTime: If speed is not important. Long running time with maximum energy and water efficiency</li> <li>▪ SmartStart: Use of self-generated solar power</li> </ul> Eco-functions available – upgradable, with focus on digital technology	On track	Cannot be quantified – will continue to be stated qualitatively for time being

Targets	Baseline and target years	2021 results	Status	Key figures
Circularity				
Life cycle assessments for all appliances (one reference model per category)	-; 2023	Method established at company, planning to put resources in place in 2022, 2 of 11 categories done  Completed in reporting year: <ul style="list-style-type: none"> <li>▪ Adora V4000 washing machines</li> <li>▪ Adora V4000 tumble dryers</li> <li>▪ Various modules</li> </ul>	On track	No. of appliances (reference model) per category  Total categories: 11 (steamers, ovens, drawers, microwaves, Coffee-Centers, hobs, extractors, dishwashers, refrigerators, washing machines, tumble dryers)
Achieve 90% recyclability of appliances	Development projects; 2025	Method worked out in theory and validated with recycling company First major project using the method	Initiated	When developing new products. Recycling and reuse rate per anchor product
Reduce environmental impact by 5% (measured by Ecopoints)	Development projects; 2030	Method introduced. First major project using the method Specific unit created in Development department to support projects	Initiated	When developing new products compared with predecessor model
All appliances developed according to circular design principles	Development projects; 2030	Method worked out, being trialled in first major project	Initiated	Application of principles, success measurable as fewer ecopoints in life cycle assessment

Possible status: Achieved, On track, Delayed, Not achieved (if new target: Initiated)

**Table 3** Targets, results and status in relation to the focus topic "Products and services for a future-fit society"

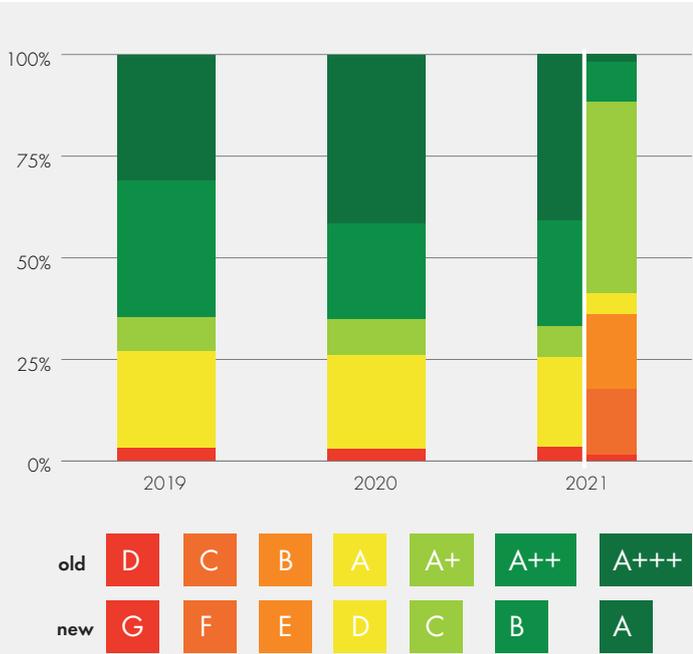


Fig. 4 Appliances supplied with label, by energy class

**V-ZUG appliances still in efficiency class A on rescaled energy label**

Up to and including 2021, around 97% of V-ZUG appliances had an energy efficiency rating of A or higher. Following the introduction of new, more stringent energy efficiency regulations in March 2021, the energy efficiency classes for washing machines, dishwashers and refrigerators were rescaled (2021: column on right). Even after this rescaling, around 58% of V-ZUG’s appliances still fall into the three highest efficiency classes A to C - an excellent achievement in the household appliance sector. There are also some types of appliance that are not given an energy classification (e.g. hobs and microwaves). The proportion of these products remains constant at around 18% of all V-ZUG appliances shipped.

**We are addressing the causes of faults**

The previously used “fault rate” quality metric has been replaced by the more meaningful “fault proportion” which includes all the problems found on installed appliances up until the end of their service life. Compared against the 2015 baseline year, this indexed indicator for long-term quality monitoring has steadily decreased to 76.5%. Every service case for a faulty appliance is logged by a V-ZUG service technician along with cause, diagnosis and action taken. The problems are tracked, analysed and processed appropriately by Product Quality Monitoring.

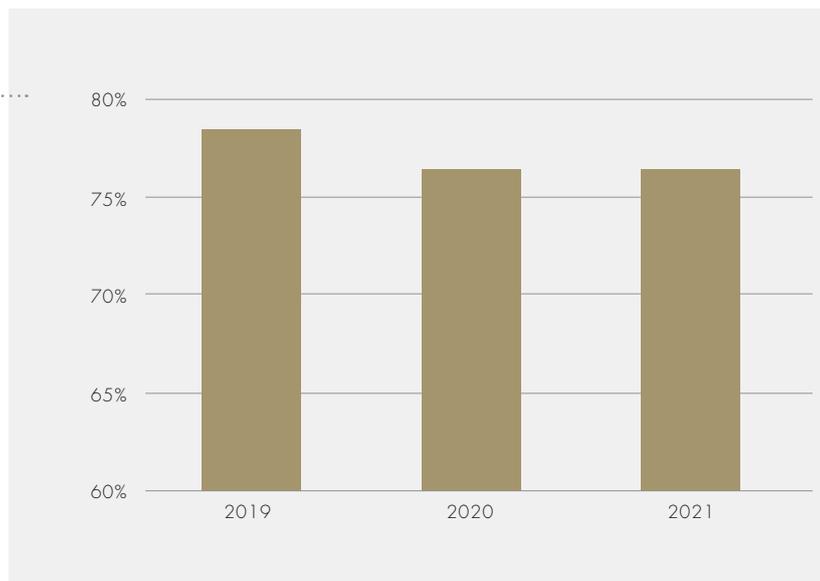


Fig. 5 Fault proportion for Switzerland (indexed to 2015 baseline = 100%)

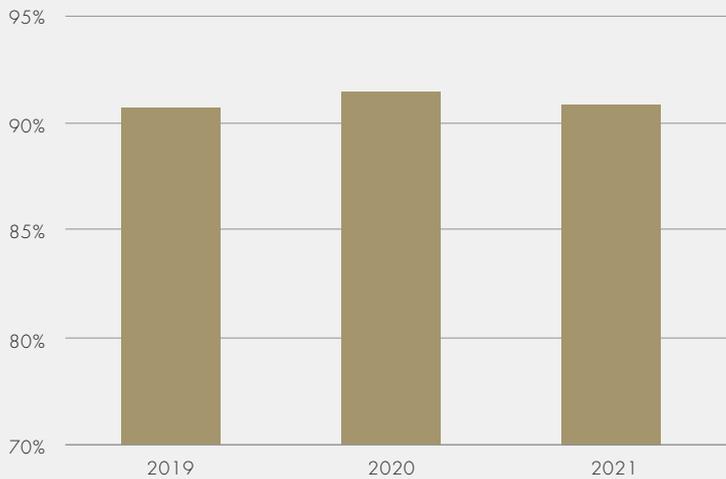


Fig. 6 First-time fix rate (Switzerland)

### First-time fix rate remains very high

The first-time fix rate for service visits in 2021 remained satisfyingly high at 90.9% (2020: 91.4%). If a fault occurs, our aim is to respond swiftly and, if at all possible, resolve the issue on our first visit. For customers, being able to successfully repair an appliance on the first service visit is very important. As well as investing in training and the systematic optimization of individual process steps, we also involve our service technicians in development projects so that we can continue to improve in this area.

### Customer satisfaction high despite a rise in response time

The pandemic and resulting steps taken to protect employees and customers proved challenging, particularly when carrying out servicing work. There were frequent staff shortages due to preventive measures such as quarantine and the shielding of particularly vulnerable people. This resulted in response times above the long-term average. However, the results of direct customer satisfaction surveys were encouragingly positive. We now measure customer satisfaction using the Net Promoter Score (NPS) metric and in 2021 our NPS was +80. This value provides a benchmark for customers' enthusiasm. All customers were asked to rate their experience immediately after a service visit.

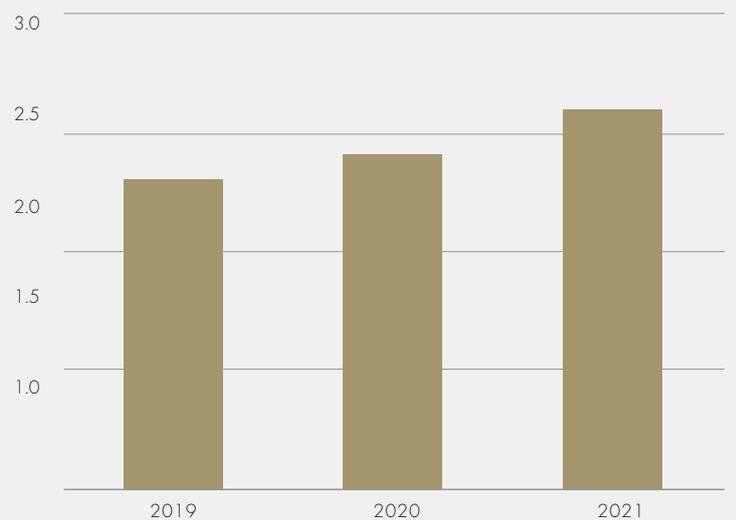


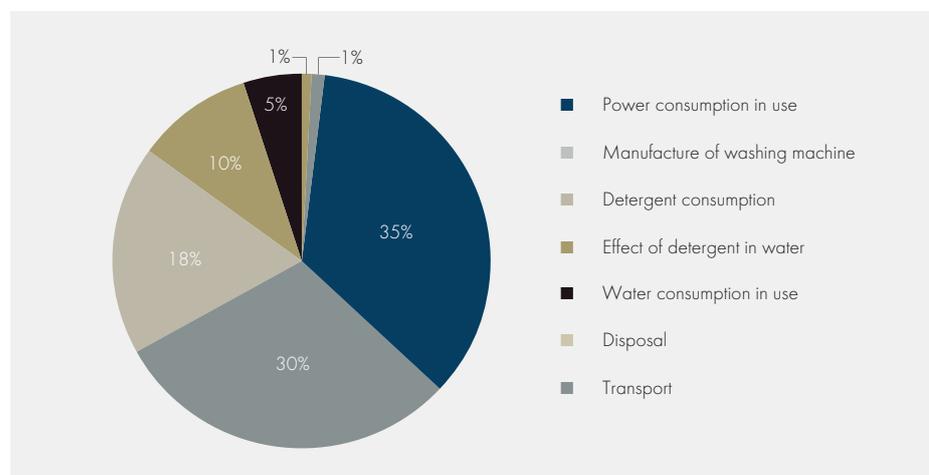
Fig. 7 Average response time in days (Switzerland)

# Measurable environmental footprints

“2021 was the first time we conducted a life cycle assessment for a washing machine and a tumble dryer ourselves”, says Ernst Dober, Head of Innovation Services & Technology at V-ZUG. The ecological scarcity methodology employed calculates the material and energy flows across the entire lifespan of a product – from resource extraction, production and use right through to final disposal. The 15 most important environmental impacts of a product are evaluated and expressed using a standardized metric known as ecopoints (EP).

This allows us to draw conclusions regarding the environmental impact of our appliances and review our associated sustainability targets. “Alongside functionality, market demand and costs, we take these life cycle assessments into consideration in our design and decision-making processes”, explains Dober. However, this also presents greater challenges to our development and production teams.

V-ZUG is planning to conduct life cycle assessments for all product lines by 2023. In order to balance the needs of performance and sustainability in development and production, designing appliance functions and ecopoints will be integrated in future. Dober adds: “In 2021, in collaboration with Lucerne University, we also created a model that quantifies the environmental costs of every appliance, in addition to the known production costs. This provides the necessary transparency and convincing arguments to underpin the business case for sustainable product development.”



**Fig. 8** Life cycle assessment for AdoraWash V4000 washing machine – percentage distribution of ecopoints (EP)

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# First trials with alternative materials

The use of sustainable materials in end products is an important first step towards creating a circular economy. This applies to plastics in particular as their environmental impact attracts criticism all over the world. "In our own interests we'd been looking for petroleum-free materials so that we can cut the amount of petroleum used in production", recalls Peter Vokurka, Senior Development Engineer and Project Manager Technology at V-ZUG.

In close cooperation with suppliers we succeeded in using an equivalent polycarbonate component in our kitchen appliances in which 60 percent of the petroleum is replaced by tall oil. This oil is derived from a natural resin that is a by-product of pulp manufacture for the paper industry. V-ZUG produces 80,000 of these new components a year which reduces the associated carbon footprint accordingly. However, as not many components are made of polycarbonate, this element represents only a small fraction of the plastic used.

Nevertheless, "The use of tall oil in one of our products is a major step forward for us", says Ernst Dober, Head of Innovation Services & Technology at V-ZUG. As a reward for using a bioplastic to help create a society fit for the future, the unit received a financial contribution from the company's internal carbon-offsetting fund. Dober is delighted: "This will allow us to invest in alternative materials in spite of the added costs at present. And higher volumes and better prices will open the door to even more applications in future."

Excellence Line steamer



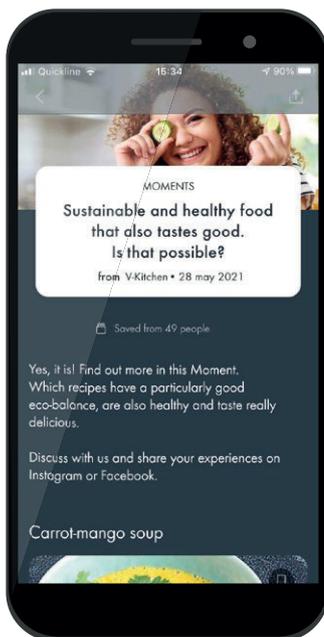
# A food coach for sustainable consumption



V-Kitchen helps to bring sustainable nutrition into the home: “The app inspires users to cook healthy, seasonal dishes and – by making better decisions about which ingredients to use – also indirectly helps to reduce food waste”, explains Thomas Schärli, Head of Business Ecosystems & Content Strategy V-Kitchen.

What’s special about V-Kitchen? Along with shopping lists, the app offers over 1000 recipes – some of which include facts on climate-friendly eating from the Eaternity Institute – plus a weekly planner and household tips, all in an easy to use, smartphone-friendly form. In addition, posts from fellow community members add even more diversity and encourage sustainable eating.

Launched in February 2021, V-Kitchen has been downloaded over 30,000 times and already has more than 7,000 active users. We are working with well-known Swiss names to ensure quality content on cooking, nutrition and sustainability. These include Annemarie Wildeisen, YouTube star Marcel Paa and highlights from “Cooking for less than 5 Swiss Francs”. Digital recipes from the Tiptopf cookbook are even exclusively available on V-Kitchen. Most read in 2021 were articles on superfoods and climate-friendly eating for a week. “In 2022 we want to find out more about how the V-Kitchen community uses our products and services over the appliances’ lifespan”, says Schärli. Only then will we be in a better position to take responsibility for how our appliances are used in future – and consequently do more good for the environment.



V-Kitchen app



**Contribution to SDGs 7, 9, 12 and 13**

V-ZUG offers its customers durable, resource-efficient appliances for the modern home. We are raising user awareness of environmental protection with specific functions, and making ecological housekeeping straightforward. At present, our key focus is on the recyclability of our products. Our aim is to manufacture products from materials and components that can be upgraded, repaired, reused,

refurbished or recycled. That way, our high-quality appliances will remain in circulation for longer and create long-term added value. Such circular approaches are necessary in order to make our economic system more resource-efficient and decouple prosperity from environmental degradation. V-ZUG is able and willing to proactively lead the way here.