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VAILLANT GROUP

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SUSTAINABILITY REPORT

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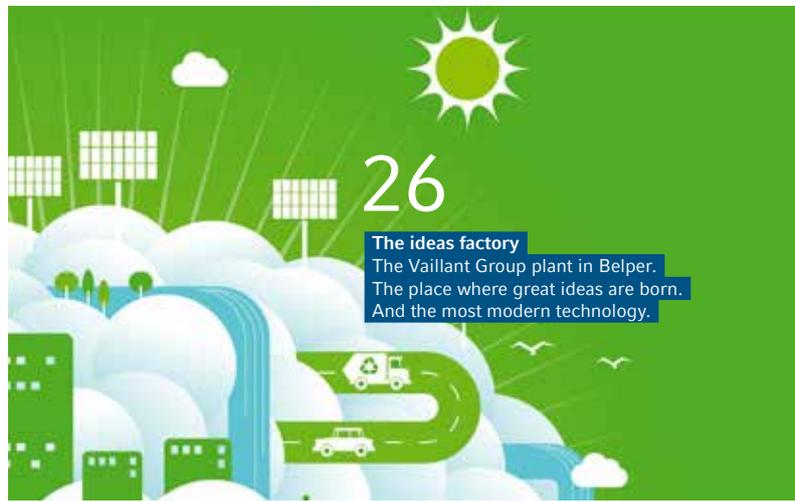
TWOTHOUSANDFOURTEEN

FUTURE

8

This is just the beginning

More sustainable, more efficient, more intelligent than ever. Meet the new generation of devices: the Green iQ devices.



26

The ideas factory

The Vaillant Group plant in Belper. The place where great ideas are born. And the most modern technology.



34

On the right track

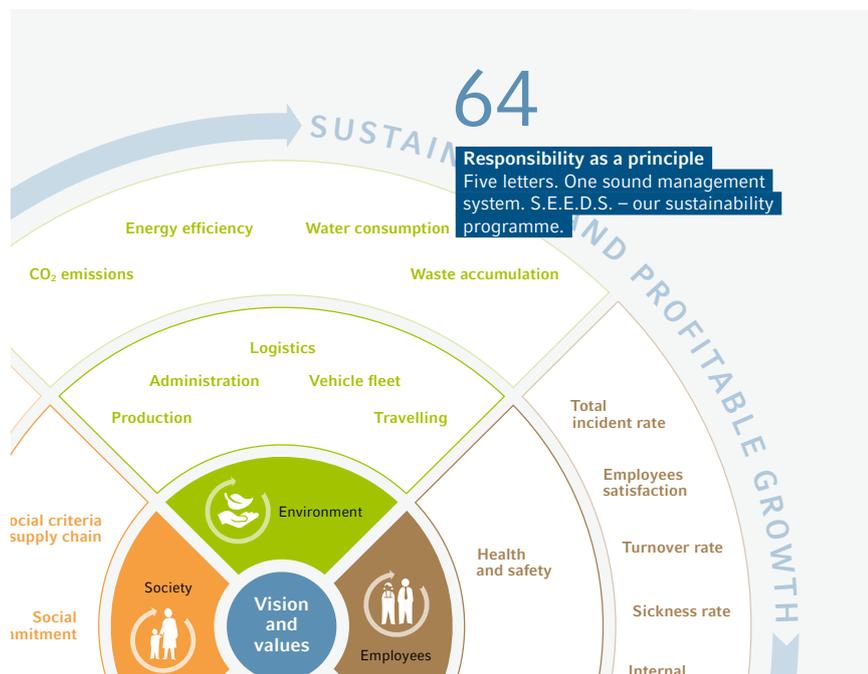
How do new employees evaluate the Vaillant Group after the settling-in phase is over? We decided to find out.



50

In the warmth of the family

Vaillant gives warmth. Heating technology for SOS Children's Villages: a heart-warming story.



-46%

water consumption/
unit produced

70

In black and white

We measure our sustainability performance using reliable key performance indicators. Transparently and Group-wide.



Dr Carsten Voigtländer, Dr Dietmar Meister, Dr Norbert Schiedeck

Ladies and Gentleman,

If you want to lead the way, you have to take the first step. If you want to shape the future of heating technology you have to have a clear goal. Especially if you are moving towards even greener products that combine efficiency and intelligent features with ease of use and responsibility. And especially if you are on the path to becoming a sustainable, future-oriented and yet profitable company that thinks in terms of generations rather than quarters.

This year we have come a lot closer to this future. With **Green iQ (p. 8)** Vaillant has unveiled a new generation of appliances that are consistently eco-friendly, intelligent and efficient at the same time. The Green iQ products are the result of a far-reaching requirement for sustainability that applies to all departments of the company. Of course, this also applies to how we manufacture our products. The Vaillant Group plant in Belper, for example, does not just consider itself a production site for modern heating technology, but also a real **ideas factory (p. 26)** that benefits from the commitment of every single one of its employees.

This commitment shows that the Vaillant Group is an attractive employer with meaningful jobs to offer. But what do applicants and new employees really think about our family-owned company? And what role does sustainability play in their decision to work for us? Their honest, uncensored **views (p. 34)** are of great value as they have given us the impetus to make things even better.

A success story that took root in Battonya, Hungary, in 2011 has now grown into a global partnership that has a special place in many of our employees' hearts. Vaillant is providing heating technology products to **SOS Children's Villages (p. 48)**. It is a heart-warming story.

This selection of projects illustrates how our strategic **sustainability programme (p. 62)** is really shaping the Vaillant Group. The company's environmental footprint is shrinking as our portfolio becomes increasingly future-oriented. We want to keep making our products more sustainable and to integrate the concept of sustainability into all of our business processes and decisions. To achieve this we have set ourselves ambitious targets that we aim to meet with vigour and passion. The Vaillant Group has a market position as a driver of responsible economic activity. This is not least thanks to authentic and open communication that does not just celebrate successes but also identifies challenges. This is made possible by transparent **key figures (p. 68)** and real stories written by the family-owned Vaillant Group.

Read on and be a part of it.

Dr Carsten Voigtländer
Chief Executive Officer
Managing Director
Sales & Marketing

Dr Dietmar Meister
Managing Director
Finance & Services

Dr Norbert Schiedeck
Managing Director
Technology

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Founded in Remscheid **140 years ago**, the Vaillant Group today supplies innovative hot water, room heating and cooling solutions and services to people in more than **60 countries all over the world**. Our company develops highly efficient products that save energy, conserve resources and enhance people's quality of life. Over **12,000 employees** work to achieve this – with great passion.

THE VAILLANT GROUP

Last year was full of anniversaries: 140 years of Vaillant, 80 years of Bulex and AWB, and 60 years of DemirDöküm. So there were more than enough reasons to celebrate together, remember our roots and look to the future. Last year's motto was "140 years of Vaillant. 140 years of responsibility for the world of today and tomorrow." To celebrate the anniversary year, the Vaillant Group held the Vaillant World Cup with its employees and went on tour with a roadshow that visited customers, trade partners and colleagues across the whole of Europe: a hare travelled the continent together with an exhibition that allowed visitors to experience the past, present and future of the Vaillant brand, before inviting them to design their own vision of the future in the Vaillant Future Studio.

Innovation as standard

It was 1894 when Johann Vaillant patented his gas-fired bathroom boiler. Six years before the Eiffel Tower was built. In doing so, he revolutionised German bathrooms: instead of people having to carry out the arduous task of heating the bath water in a kettle over a coal-heated stove, the bathroom boiler now heated the water in a closed system. The history of the company is full of innovations, such as the first central heating boiler, which Vaillant unveiled in 1924. And the Group is still writing history today. For example, in the spirit of Johann Vaillant, the company has in recent years developed the world's first zeolite heat pump, Europe's first micro-combined heat and power system (micro-CHP system) for detached houses, and fuel cell heating.

The company is still entirely family-owned – and therefore not only committed to real ingenuity in

engineering but also to values such as reliability and responsibility. The family-owned company now provides highly efficient technologies, products that use renewable energies and individually combinable systems in over 60 countries. And it does so via eight different brands, all under the umbrella of the Vaillant Group.

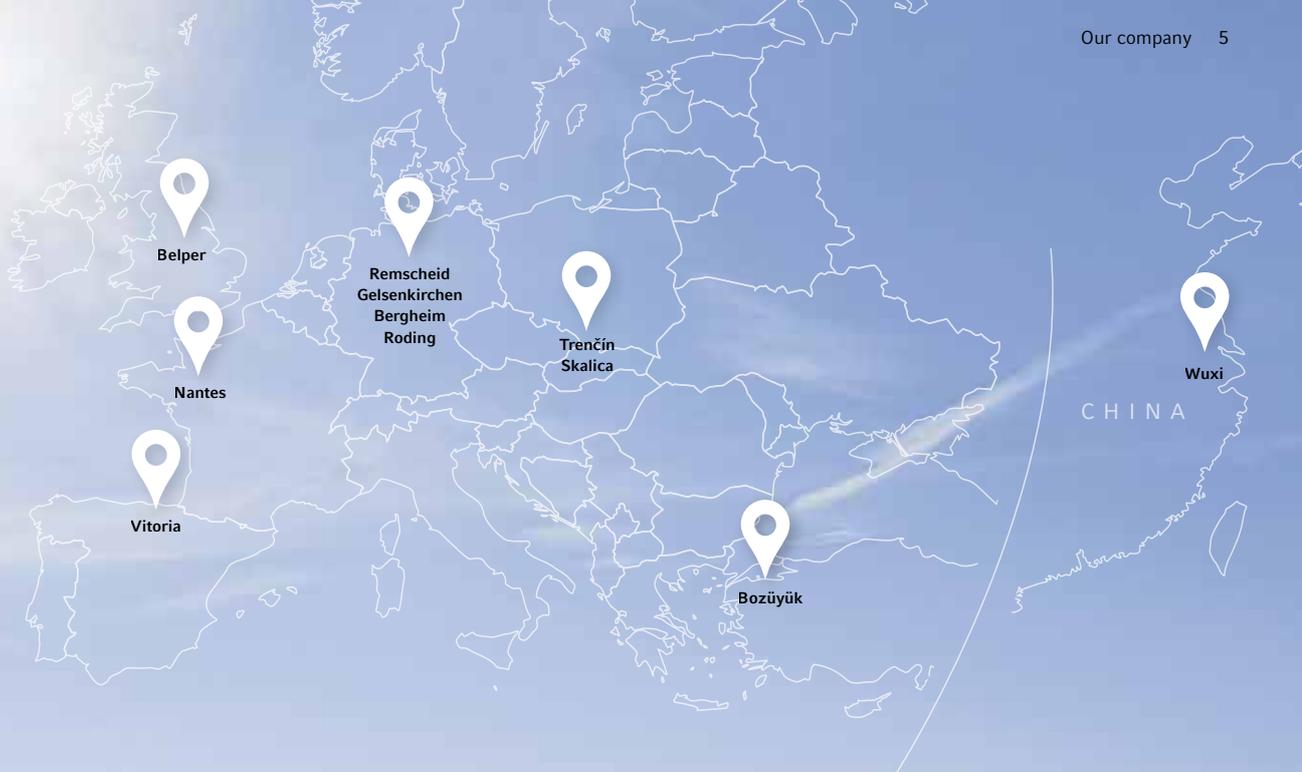
Our potential is our responsibility

The Vaillant Group's core business is the most powerful instrument for promoting the success of the energy revolution, meeting the UN climate targets and tackling global resource conflicts. More than 40 per cent of all primary energy within the European Union is used in and for buildings. And of this, the lion's share – around 90 per cent – is needed to heat homes and provide hot water. This offers huge potential – to make savings and therefore to conserve resources and protect the environment. And it entails great responsibility, too.

Conserving resources every step of the way

This is the Vaillant Group's guiding principle and it is also reflected in the international network of eleven production and development sites spread across six European countries and the People's Republic of China. The company's sites are structured on the basis of combined competencies. Expertise and the production of specific components are focused at selected sites and centres of expertise for individual technologies are created – including in the development departments. Teams of experts make new product generations more efficient than ever. Johann Vaillant would have been pleased about that because he is the one who set his company on its future-oriented path: "Be innovative, listen to your customers and always keep learning," he said.

Vaillant Group
production and
development sites



1874

Johann Vaillant lays the foundation stone for today's Vaillant Group, which is still 100 per cent family-owned.

2001

Vaillant takes over the British Hepworth Group. The brands of the new group continue to be marketed separately.

2007

The Vaillant Group acquires the majority interest in Turkish heating and air-conditioning specialist Türk DemirDöküm Fabrikaları.

2011

ecoPOWER 1.0, the first micro-CHP system for detached and semi-detached houses, receives the German Sustainability Award as the most sustainable product.

2013

S.E.E.D.S. is selected as one of the top three sustainability strategies in Germany within the scope of the German Sustainability Award.

2015

Green iQ is the first label in Germany for high-quality, sustainable products that are networked in a future-oriented way.



BRAND VAILLANT



BRAND GROUP
SAUNIER DUVAL



Heating, air conditioning and renewables – the Vaillant Group's **eight brands** offer a **full range of heating, ventilation and air-conditioning technologies** and thus the perfect systems to meet almost any requirements. In doing so, we are committed to efficient products that can be intelligently controlled so as to make the most of **the power offered by renewable energies**.

A SMART FUTURE

With eight brands under one umbrella, the Vaillant Group guarantees that it can provide the best solution to meet almost any needs. The Vaillant Group's traditional brand Vaillant stands for premium products, for the highest standards of innovation, ease of use, design, sustainability and efficiency. It offers a wide portfolio of different product versions.

The Saunier Duval brand group, with its seven brands – Saunier Duval, AWB, Bulex, DemirDöküm, Glow-worm, Hermann Saunier Duval and Protherm – makes up a significant part of the Vaillant Group's product range. It specialises in products for the high-volume mid-range price segment. The Saunier Duval Group's brands are characterised by intelligent, simple and reliable heating technology. And, of course, the same high standards of quality, safety and efficiency apply to all Vaillant Group products.



Efficiency that meets all needs

The Vaillant Group offers an extremely broad range of products: from floor-standing or wall-hung gas-fired condensing boilers, solar panels, photovoltaic systems, air or geothermal heat pumps and combined heat and power systems for detached, semi-detached or multiple-dwelling houses through to water storage tanks, ventilation systems and control units.



Heat from the sun, the air and the earth

By using energy-saving individual units and systems that are based on renewable energies, we are already able to vastly reduce primary energy consumption. For example, heat pumps that use heat from the air or the earth can be combined with collectors for photovoltaic or solar thermal energy and supplemented with water storage tanks for peak periods.



The perfect combination

The products in our range are both well designed

and effective. A heating system must meet the customer's needs optimally in order to use as little energy and release as little CO₂ as possible. The Vaillant Group is therefore committed to providing a range that is based on efficiency and allows products to be flexibly combined. The more individual and tailored the heating system, the greater the importance of an intelligent control unit. After all, it is about making the individual components work together as efficiently as possible. This also includes an intuitive control unit that meets the standards of today's users.



Safely and intelligently networked

The multiMATIC control unit and the associated smartphone app provide users with a quick and simple introduction to smart device management. For example, they let you switch on the heating in your bathroom at home while you're still in the office, or switch off your heating when you have already set off on holiday. And with profiDIALOG our service partners can identify and deal with a problem online before the user has even reported it. It's that smart.



Providing the best support

Our services cater to the entire product life cycle. These range from commissioning new systems and maintaining existing systems through to providing technical support for installers and specialist partners. An extensive network of skilled technicians and service employees in more than 60 countries ensures that our products operate economically and emissions are kept low. That is why we work closely together with our partner technicians, providing them with in depth-training and technology courses.

This is how we are paving the way to a future in which heating is carbon-neutral. We have also set ourselves ambitious milestones: by 2020, efficient and renewable technologies should account for 80 per cent of our product revenue. These are the standards against which we measure ourselves.

GREEN iQ

This is
just the
beginning





FIT FOR THE FUTURE

High quality, low highly efficient, use of renewable energies and are produced in an eco-friendly way.

ZUKUNFTSSICHER

Zukunftsfähige Lösungen werden besonders effizient, Altsysteme regenerieren Energieverluste und sind umweltfreundlich produziert.

iQ

Vaillant

Exc
Can be
efficien

DER NEUE
Ausschließl. Blick
von nachhalt. auf
Upgradefäh.
Effizienz

At first glance, these items might not look too different to the others in our portfolio. They are all white and box-shaped. But these devices with the little green logo are in a class of their own. No other Vaillant appliance has ever been this green, and no product has ever been more sustainable, efficient and intelligent all at once for the entire duration of its life cycle. Meet the new generation of devices: the Green iQ devices.

The appliance looks pretty much as you would expect: white with a simple shape. Only a small green logo and a green line on the front suggest that there is something special about it. “The ecoTEC exclusive might look unassuming, but it really does have a lot to offer,” Heinz-Jörg Brecker, group R&D Manager for Wall-Mounted Devices, says with a smile. He is one of the creators of the newest addition to the Vaillant product family, which now boasts a highly efficient range: Green iQ. The name says it all. Green and intelligent – these are the main features of the new product range. “It was determining the environmental impact of the existing range of gas-fired condensing boilers that really set the ball rolling,” says Brecker. Three years ago, an in-depth study into the efficiency of the Vaillant ecoTEC gas-fired condensing boiler was conducted. The total CO₂ emissions caused by the device over the complete product life cycle were recorded – and an

idea for a new product was born. It was decided that a green range should be created. A range that would satisfy strict, clearly defined environmental criteria as well as monitor and consistently reduce CO₂ emissions over the complete product life cycle. It was a unique idea in the heating technology industry.

A CONCEPT BASED ON WHAT CUSTOMERS WANT

It was decided that the new range should be based on customer requirements. For that reason, a project team made up of people from various departments was put together. It included employees from the areas of research and development, quality assurance, market research, design, marketing and sustainability – the idea being that a diverse team would be able to make the vision of a completely green heating device a reality. The first challenge was to make others within the company aware of the issues at stake and gain acceptance for the

project. This was a very demanding task for all colleagues involved. A few even considered giving up because the obstacles seemed insurmountable at times. It was about much more than a green device. It was about implanting a “green gene” in the company’s DNA. “We really had to work hard at persuading people,” remembers Brigitte Kruse, Head of Sustainability Management and a driving force behind the project. But at the very highest level of the company, the Management Board, the idea of a green product line was given top priority from the moment that the first project outline was presented. And the plan was to unveil the first completely green heating unit at the ISH fair in 2015.

MARKETING GREEN SOLUTIONS

Sustainability was established as an integral component of the Vaillant brand core. This laid the foundations for a real green revolution



Green iQ is shorthand for a range of extremely environmentally friendly and efficient products that must meet the highest sustainability standards over their entire product life cycle – from the initial stage of development to being recycled after use. They also have intelligent communication interfaces.

within the company. “We wanted to create a label that would immediately make it clear that we had taken customer requirements into account,” says Dr Johannes Rath, who was responsible for the project’s marketing strategy. Colleagues from the market research department identified these requirements by conducting extensive studies in several countries. Now a small green logo alerts customers to the fact that they are looking at the most sustainable, efficient and intelligent Vaillant product – one that was designed to meet their requirements. And, according to the international survey, consumers are prepared to pay more than usual if it is really worth it. Green is the new premium.

It didn’t take long to convince Vaillant’s employees that going green is worthwhile. Not only in development and marketing but also in the production of the new green product line, which had to meet strict sustainability requirements. “Saving energy starts at the plant, with efficient means of production and environmentally friendly manufacturing processes,” says Elmar Bossmann, who, as Head of Industrial Engineering at the Vaillant Group plant in Remscheid, was responsible for explaining these sustainability criteria to the employees. “With the Green iQ label I know straight away that the product fulfils the highest sus-

tainability standards throughout the entire value chain – from the initial design phase to its disposal. Development, production, distribution and disposal: we have really done all we can to ensure that saving resources is uppermost in everyone’s mind at Vaillant,” he explains.

GREEN PRODUCTS THAT DO NOT SCRIMP ON STYLE

Presentation is everything. That is why design played a key role in the development of the new Green iQ range. After all, there is a reason why Vaillant has won over 50 design awards in the past. The process of creating the new green product range aimed to be as sustainable as possible. “We had to rethink how we approached the design aspect, too. Our choice of materials, the way we processed them and the longevity of the de-

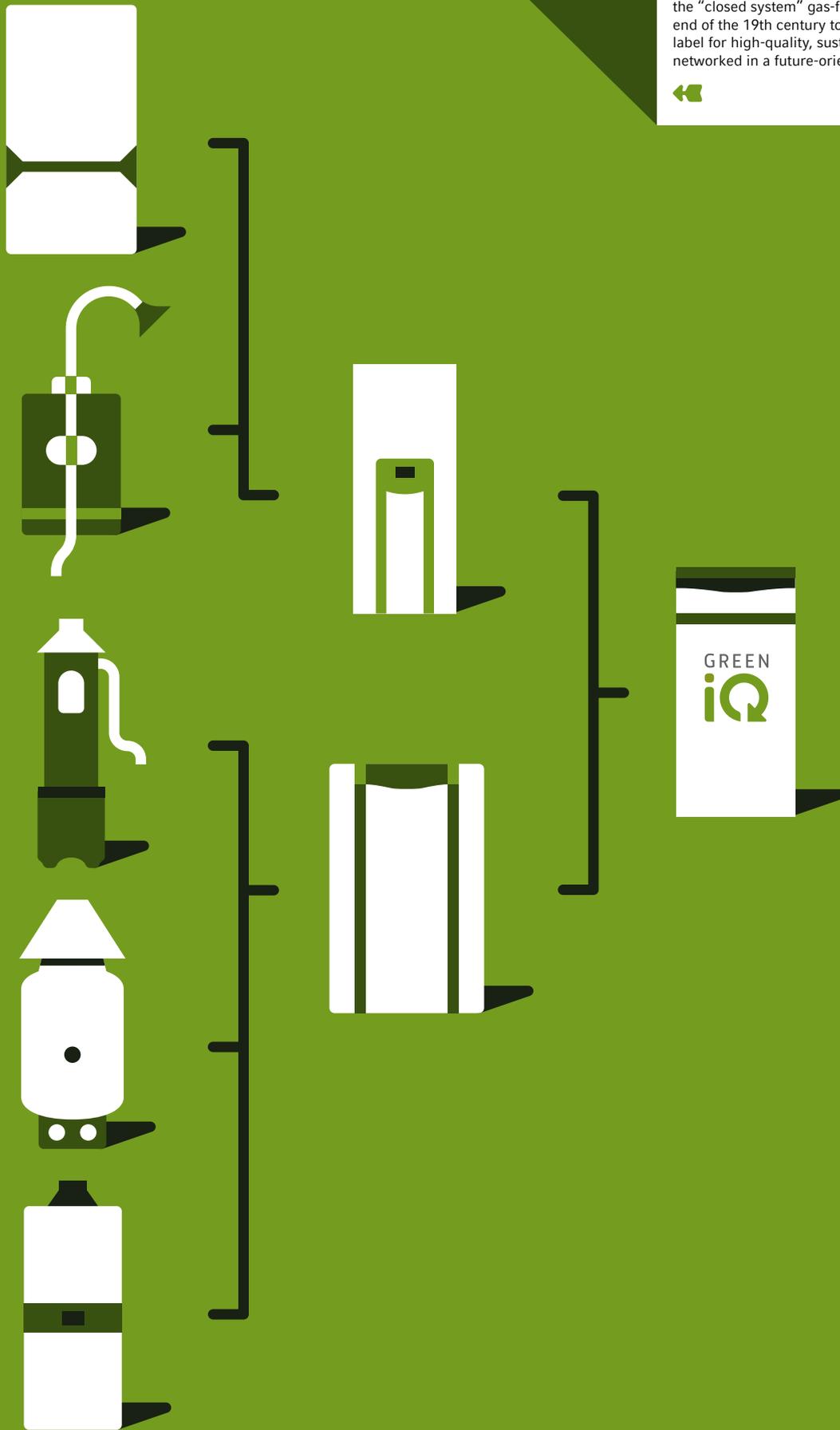
sign were all scrutinised,” reports Tim Richter, Head of Group Design. The aim was to have a streamlined production process without any unnecessary procedures – so it could not include galvanisation or metal processes. A small Green iQ logo made of full-colour plastic was chosen on purpose in order to avoid unnecessary painting. It is welded on to the device ultrasonically – it does not get any more eco-friendly than that. The kinds of glue, paint, plastic and metal that are used are important, but sustainable design is no longer just about swapping harmful substances and materials for eco-friendly ones. “Creating a product that can be used easily and intuitively is a major challenge in this job,” says Richter. This means a device with no hidden buttons, a self-explanatory design and a smartphone app that is so simple even a child could use it. And the Green iQ



All Green iQ products are WLAN-compatible and feature integrated interfaces. In addition to an intelligent control unit, this also enables remote troubleshooting of the appliances by skilled technicians. What is more, the appliances can be controlled via smartphone from almost anywhere in the world. This turns heating systems into social networks.



140 years of preparation for our greenest heating system. With hindsight, the Green iQ range is a logical consequence of a company history characterised by innovation and entrepreneurial spirit. From the "closed system" gas-fired bathroom boiler at the end of the 19th century to Green iQ, Germany's first label for high-quality, sustainable products that are networked in a future-oriented way.



project was no different: one of the development team's key recommendations was that the design team simplify complex processes to make them customer-friendly. Once again, customer needs were a driving force for product development: for the first time the option to control devices via a smartphone or tablet would be offered for free. Another customer requirement was an easy-to-use heating control system for which the user would not have to read an instruction booklet as thick as a telephone directory beforehand. The result: a simple mechanism for remote control via smartphone which also offers potential for saving energy. The app explains heating settings in simple terms – information that only skilled technicians understood in the past. “The owner of the heating system can now optimise its settings easily and conveniently.” says Richter cheerfully. Richter has a good reason to be happy, since he also reached a further milestone: a limited edition Green iQ ecoTEC exclusive; the company uses it to commemorate its founder and his many achievements. The front of the device bears Johann Vaillant's first patent drawing for the “closed system” gas-fired condensing boiler and his signature. This edition is limited to 1,874 items – the number represents the year in which the company was founded.

A GUIDE TO ONE OF THE MOST SUSTAINABLE PRODUCTS AVAILABLE

“With Green iQ we have managed to create devices that are both efficient and intelligent. “Green” refers to their high levels of efficiency, while “iQ” refers to the fact that the appliances and system components are intelligently networked,” explains Sven Hanfland, Project Manager for the ecoTEC exclusive. “But it also points to the fact that different environmentally friendly heat sources can be used flexibly, such as air, geothermal energy, groundwater, biogas and sunlight,” adds his colleague Markus Hiegemann, Project Leader for heat pumps at Vaillant. The two engineers helped develop the first devices from the new sustainable product range.

NEW STANDARDS FOR THE WHOLE COMPANY

“It was worth it,” sums up Marion Storch, who monitored the project for the Vaillant Group's sustainability management team. “The Green iQ products are precursors to an even greener Vaillant world. They have created a new awareness of environmental issues within the company and are symbolic of the integration of sustainability criteria throughout the product life cycle,” says the engineer. Fixed criteria are used to check the products' energy efficiency levels – which are particularly high – as well as the responsible selection of materials and suppliers, environmentally friendly production processes and the use of resources after the products' end of life. “In this way we have created sustainability standards for our research and development work that will influence all of the future Green iQ products,” reports Storch. The next products in the series are already being planned and are set to be unveiled to the market in 2017. Green iQ – this is just the beginning. The intelligent way to a green future

Going green the smart way – the Green iQ campaign

The campaign should be as sustainable and intelligent as Green iQ products. The Green iQ communication campaign is slightly humorous and is aimed at quality-conscious and environmentally aware end customers. It includes slogans such as “We turn your heating system into a social network” and “140 years preparing for our greenest heating system”. The most important message is that sustainability is smart, sustainability is efficient and sustainability is possible without making sacrifices. Due to the unique nature of the Green iQ concept it was possible to occasionally depart from the “Vaillant green” colour that is an integral part of our corporate design.

The campaign motifs are consistent with the Green iQ motto “Going green the smart way”. The headings and the campaign motifs were also designed accordingly: a smartphone that looks like a boiler or a family tree comprised of different Vaillant heating devices.

Get acquainted with the first devices

The first three products from the new Green iQ range are the ecoTEC exclusive wall-hung gas-fired condensing boiler and the flexoTHERM and flexoCOMPACT heat pumps. Just like the other products in Vaillant's Green iQ range, ecoTEC exclusive also sets new standards in terms of efficiency, sustainability and connectivity. An integrated Internet interface and an intelligent service concept are both fixed features. The ecoTEC exclusive can also be fully powered using bio-natural gas alone. Green iQ mode ensures that the appliance will always be running as efficiently as possible. A new, Web-enabled control unit is integrated into the appliance, enabling the user to control the heating easily via the free multiMATIC smartphone app. Skilled technicians can manage, troubleshoot and complete parameter control for the appliance online. The ecoTEC exclusive has been given an A+ system label for efficiency in combination with the multiMATIC 700 control unit concept. Its new all-gas system ensures the optimal combustion result while the new all-gas sensor makes automatic adjustments in line with the type of gas. The carbon monoxide (CO) content of the flue gas and the combustion quality are continuously monitored and optimised. As a result, the ecoTEC exclusive is already equipped to make the transition from low-caloric gas to high-caloric gas, which is set to be installed in numerous homes in western Germany from autumn 2015 onwards. The mixture of gas and air is intelligently managed to ensure that the system reaches a high modula-

tion range of up to 1:13. The system is therefore adapted to the current demand so that it can work as efficiently as possible.

The new flexo heat pump range consists of a single heat pump for all energy sources and modules for the different types of heat source (air, water and geothermal), making installation far simpler. "The very quiet exterior unit in the new air-water heat pumps can even be installed in terraced housing without any restrictions. The new multiMATIC 700 system control unit is used in all appliances, enabling heat pumps to be operated via smartphone. In combination with the multiMATIC control unit, the flexoTHERM is even likely to be awarded the highest energy efficiency class, A+++, in future.

The first three products from the new Green iQ range are the ecoTEC exclusive wall-hung gas-fired condensing boiler and the flexoTHERM and flexoCOMPACT heat pumps. Additional devices will follow. Going green the smart way.



Just like the other products in Vaillant's Green iQ range, ecoTEC exclusive also sets new standards in terms of efficiency, sustainability and connectivity.





The new flexo heat pump range comprises a uniform heat pump for all sources of energy, and modules for air, water and geothermal heat sources.



ON THE WAY TO BECOMING
THE GREEN INDUSTRY LEADER

Top-level talk

Sustainability management has top priority within the Vaillant Group. Dr Jens Wichtermann (left) is Director of Corporate Communications, Sustainability and Politics. He reports directly to the CEO, Dr Carsten Voigtländer. We talked to both of them about the sustainability programme S.E.E.D.S., which is now in its fourth year, and its initial successes, current challenges and targets.

Sustainability is becoming an ever greater buzzword. Does speaking about sustainability become tedious after a while?

Voigtländer: Not at all. Sustainability is an intrinsic part of our tradition and our strategy, and it is also reflected in our products – for us, its significance is set to keep growing. Due to the high degree of relevance, Jens Wichtermann, as the director for the topic of sustainability, reports directly to me.

Wichtermann: In the last four years we have managed to anchor sustainability awareness firmly in the organisation thanks to the clearly defined targets in our S.E.E.D.S. sustainability strategy. With our small, multidisciplinary team of specialists led by Brigitte Kruse, we are trying to speak the language of each individual department. But we have not reached our goal yet. We have to keep giving people a nudge in the right direction, encouraging them to join forces in a bid to shape processes, and sometimes we even have to pester them.

Doesn't it annoy people if the topic of sustainability is mentioned at every opportunity?

Wichtermann: Let's put it this way: there are definitely fewer sceptics than there used to be. It's true that our role occasionally requires us to make a nuisance of ourselves. We have to address difficult issues. Here is an example: two years ago the sustainability management team initiated a plan to design and produce devices that meet our strict sustainability requirements over the whole product life cycle. This challenged established processes and ways of thinking and at first some people didn't like it. But we didn't give up and our multidisciplinary team managed to implement this flagship project within two years. It was a quite a feat of strength, made pos-

sible by all of the departments involved working closely together.

Voigtländer: The result is the Green iQ range. It is something we are very proud of and we intend to build on it. During development, we integrated sustainability criteria into our processes. We want to continue down this path. We want to be the industry leader in terms of sustainability.

Apart from the Green iQ flagship project, how far along is the Vaillant Group in terms of meeting its S.E.E.D.S. targets?

Voigtländer: We have been very successful in some areas. They include water consumption, which we have reduced by 45 per cent since 2010, overall energy consumption and accident prevention. The number of work-related accidents was already very low, but we managed to reduce it even further. And we are five years ahead of our United Nations Global Compact targets: 100 per cent of our standard suppliers already meet the Global Compact criteria.

Wichtermann: In the area of waste we are at the same level we were in 2010. It is better than in 2011, but we are not satisfied yet. The topic has turned out to be extremely complex. We must continue to work on it and look for new solutions and as an international company we must do so across all countries and sectors. There is potential in the area of HR, for example. Here we have only been able to fill 51 per cent of management positions internally, but we are aiming for 75 per cent.

Voigtländer: To meet this particular target we have focused on the management development programme my Way. Our efforts will quickly start to pay off. We provide jobs with green added value – our em-

“It's true that our role occasionally requires us to make a nuisance of ourselves.”

Dr Jens Wichtermann

ployees can make a considerable difference in the fight against climate change.

When you think back over the past twelve months, which of the company's sustainability measures springs to mind first?

Wichtermann: It might sound strange, but it's actually a solar module. There was a team in-house that completely revamped the solar module – it's absolutely exemplary, especially in terms of sustainability. And they did it of their own accord. That shows that people are really taking notice of our initiative and acting on it. When the project manager presented the new design to the sustainability team they were delighted.

Voigtländer: There were a few things, first and foremost the Green iQ line, which we used to raise the bar for intelligent and sustainable products in the sector. I'd also like to mention the B.A.U.M. environmental prize for the sustainability team. The team has initiated huge changes within the company in just a few years. And there was the flood relief project organised by our colleagues in south-eastern Europe. In Croatia, they joined forces with specialist retailers to help almost 200 people affected by the floods; namely, by helping them on the way to fully functional heating. Vaillant provided replacement parts free of charge and the partners inspected all devices and, if necessary, cleaned and repaired them for free. This was a great help to many people as it meant they could remain in their homes. This was not part of a special programme or based on a certain target – it was just an example of our company spirit in the region. That is what we stand for.

“We provide jobs with green added value – our employees can make a considerable difference in the fight against climate change.”

Dr Carsten Voigtländer





The product development department is paving the way for products that are more and more environmentally friendly. The engineers must adhere to strict sustainability criteria which are examined every time a new milestone is reached.

PRODUCT LIFE CYCLE

A new beginning

The Vaillant Group aims to ensure that its products are sustainable: from their creation, throughout their use and at the end of the product life cycle. Used materials are not considered waste; they are seen as valuable resources. The Vaillant Group aims to close the cycle of materials, giving these resources a new beginning. This poses a lot of challenges.

Strategy must be based on facts. In a market research study in 2014, the Vaillant Group asked customers for the first time what was important to them regarding sustainability. After all, resources are only being used sustainably if the products really meet customers' needs.

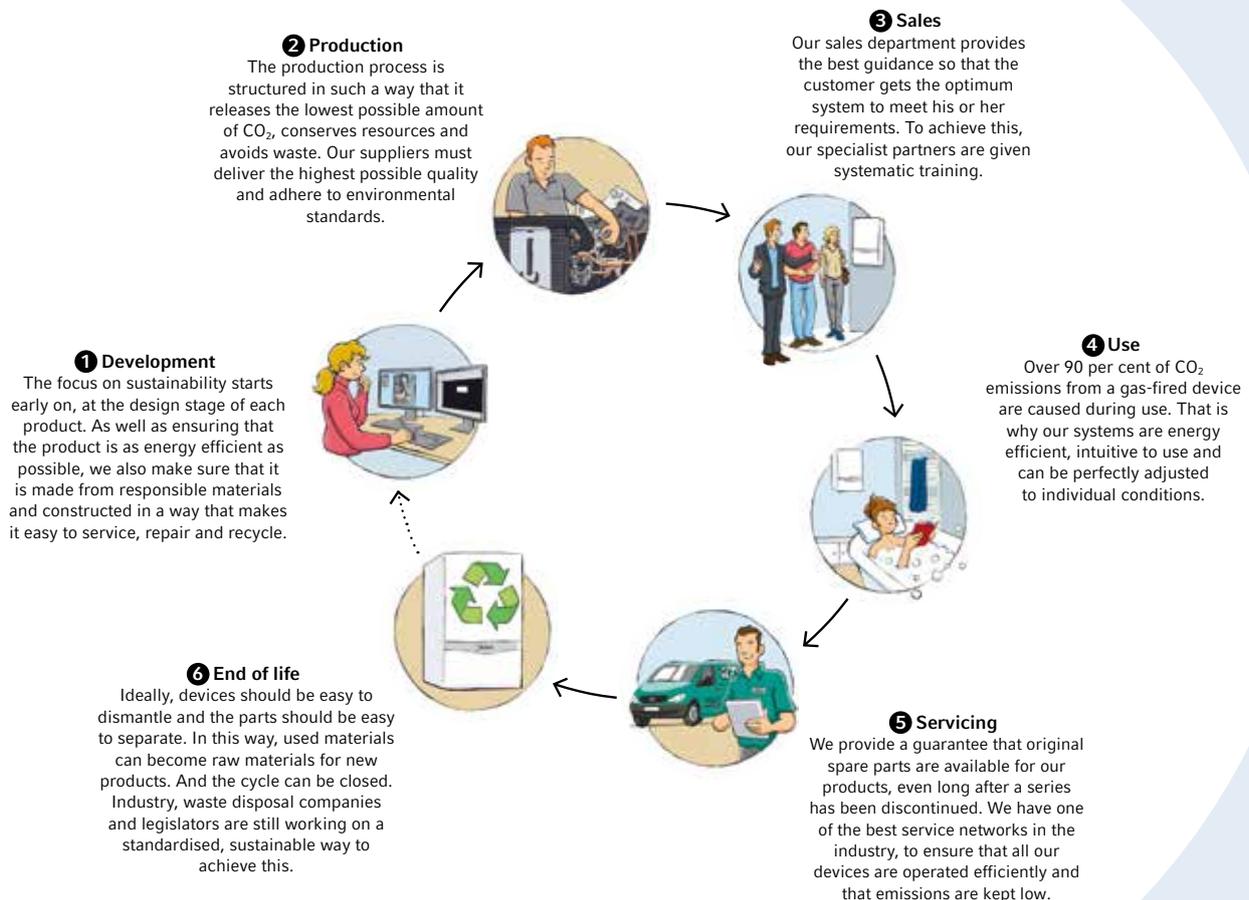
For that reason, the Vaillant Group takes a holistic view of the product life cycle. The cycle of materials covers the development of a product, its use and its end of life – and then the cycle begins again. In between the stages there are a lot of details, processes, responsibilities and challenges that must be taken into account. The system must be completed and optimised and green criteria must be integrated into the development process. In this way the Vaillant Group can ensure that its engineers take sustainability aspects into account at every stage of the life cycle.

For example, the development and sustainability management teams are currently working together on a tool to help calculate recyclability, which will be useful for selecting materials. "This kind of thing cannot be bought ready-made. We have to develop it ourselves so that it meets our own specific needs," explains Marion Storch, the sustainability team's engineer. Choosing the right materials is crucial. "For us, good materials are ones

that can be reused, don't contain any harmful substances and can be sourced from suppliers who are committed to the UN Global Compact, just as we are, which means that their manufacturing processes also fulfil social criteria."

Making the life cycle of a high-tech product completely sustainable and thus closing the cycle is a real challenge. It is particularly difficult when the Vaillant Group is not the only party involved. And when the focus is on how to close resource cycles, there are usually several parties involved. In Germany, for example, stakeholders include many waste disposal companies as well as manufacturers, specialist partners and policymakers.

And a company that does business internationally must deal with different framework conditions in different countries. Although the WEEE Directive for electrical and electronic equipment is a legal act of the EU, it is transposed into national law differently in different countries. "For example, the question of which devices are covered is answered differently depending on the country," says Storch. There is still no sustainable pan-European solution for gas-fired boilers, for example. But that does not prevent the Vaillant Group from taking action. "Of course, we take back old equipment and make sure that it is disposed of correctly," says Storch.



PRODUCT DEVELOPMENT

Rethinking everything

It should have just been a routine project. The basic product in the solar module range was going to be redesigned. But Project Manager Stefan Bott and his team questioned everything, resulting in a radical rethink – and a more sustainable product.

1 ROUND GAUGES

Elegant and expressive: they show the most important information – flow and return temperatures and system pressure.

7 SAFETY VALVE

Protects and discharges: the valve reacts to problems, whether they involve system errors, extreme temperatures or excessive pressure.

2 SHUT-OFF BALL VALVES

Just turn once: the shut-off ball valves close the solar circuit. Now parts can be exchanged securely.

3 INSPECTION GLASS

Designed with the customer in mind: the inspection glass has a coloured marker that shows at a glance whether the system is working properly.

4 AIR EXHAUSTER

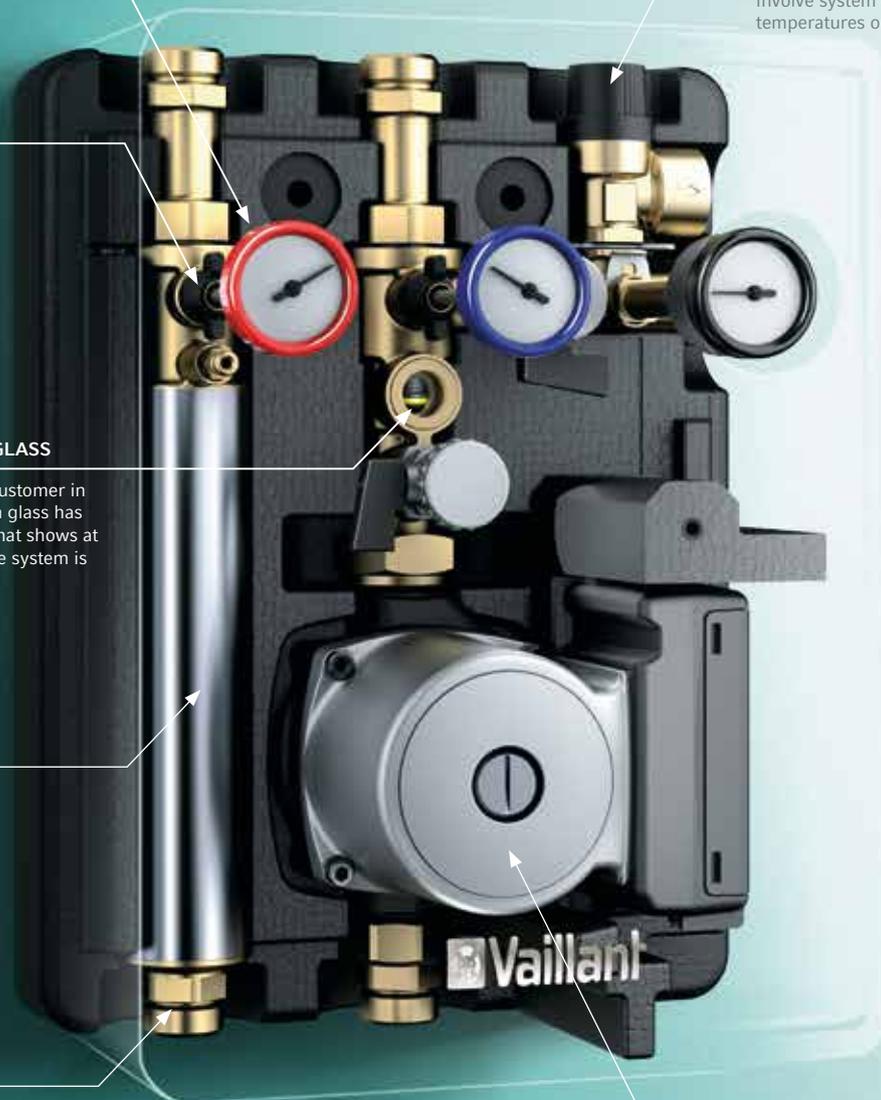
Permanent and efficient: it ensures that unwanted air is removed from the solar circuit. The expander technology makes it particularly efficient.

5 GRAVITY BRAKE

Clever and versatile: it protects against overload and damage from pressure surges and prevents energy loss in the return flow.

6 SOLAR PUMP

Less is more: the new pump delivers twice as much power using half as much energy.



Even before its market launch in July 2015 the new solar module auroFLOW VMS 70 had already won a few awards. They include design prizes such as the Red Dot Design Award and the iF DESIGN AWARD. But the really fascinating thing about the solar module – which connects the heart of every solar energy system, the solar cylinder, collectors and heating circuit – is not easy to see.

It is the device's inner qualities that are the most impressive – and the fact that it does without certain things. For example, it does not come with a 26-page user manual in 25 languages. Devices of this kind tend to have multilingual instruction booklets. But Bott and his team asked themselves whether it was really necessary to use so much paper and whether there was a better alternative. They found that there was indeed a better option. "We decided on a set of image-based instructions. Together with the department responsible for user manuals, we developed a universally understandable language based on pictures and colours." This system works in all countries. It is simple, clear and environmentally friendly. Only about four-and-a-half pages are required for the necessary safety explanations. If all 25 language options are taken into account, this works out as a saving of 555 pages – per device.

And that is just one example. "We really looked at every aspect and questioned everything," says Bott. Not every idea was an immediate success, however. In some cases, potential new solutions were met with resistance. Take, for example, the type plates that are attached to every device and must adhere to the national standards of the respective country. Attaching the locally correct type plate involves a great deal of effort, which costs time, money and energy. For auroFLOW VMS 70 a uniform solution has been introduced for the first time. It consists of a booklet that must only be attached to the device once and consists of pages bearing the type plates for all the



reddot design award



In 2015 the solar station auroFLOW was awarded the Red Dot Design Award and the iF DESIGN AWARD for excellent product design.

The system's casing is revolutionary and very stylish. It is made of expanded polypropylene, does not contain any materials that are damaging to the environment and is completely recyclable.

different countries. It can simply be opened at the relevant page.

"It took a lot of work to convince people," says Bott. "But it's been worth it in the long run." The 31-year-old has worked for the Vaillant Group for six years. He even carried out his dissertation project for his mechatronics degree at the Remscheid plant. "I love developing new things," he explains, smiling. "I'm not the kind of person who can just sit back and tolerate things if I think they can be improved."

The auroFLOW VMS 70 solar module was completely redesigned and has a lot of new features. The pump, for example, is twice as powerful as that of the previous model and uses half the energy. Just one type of screw was used on purpose, so that the installer only needs one screwdriver. This makes installation and maintenance much easier.

The system's casing is revolutionary and very stylish. It is made of expanded polypropylene, also known as EPP. It does not contain any elements that are harmful to the environment, protects the components inside, is insulated, is cheap to make and is completely recyclable. And since the front panel is not stuck down or screwed on but simply has a clasp, the EPP and the metal of the panel can easily be reused when the time comes.

Bott's project list includes the names of more than 50 colleagues. They all helped him to come up with the best possible ideas. "We examined every component, right down to the smallest part, and our colleagues from the purchasing department collected RoHS (Restriction of Hazardous Substances) certificates from all suppliers. If a supplier was unable to produce one, then we looked for another supplier," explains the Project Manager. The RoHS guarantee that the parts – and thus the device – are free from dangerous substances such as lead, mercury, cadmium and flame retardants in plastics.



This means that the devices are well conceived on the inside, but they also need to be delivered in one piece. This is where the packaging comes in. The entire solar module fits into a small box that does not need an extra layer of shock-absorbent packaging, since the EPP casing already forms a protective shell. "Our colleagues from the packaging department spent a long time fiddling about with materials and conducting tests. They simulated dozens of falls," reports Bott. "It was very time-consuming work." They could have just used an existing packaging system. But it was worth thinking outside the box.

CONNECTIVITY

HEATING TO GO

In March 2015 the multiMATIC and eRELAX apps were showcased at the sector's largest trade fair in Germany. They are allowing Vaillant to consistently pursue its digital strategy and offer its customers an easier and more efficient way to use their devices.





The multiMATIC app communicates wirelessly with the new multiMATIC 700 control unit and can also control more complex heating systems with several elements.

It is now possible to turn the heating up or down with the tap of a finger, no matter where you are. This is all thanks to the new free multiMATIC and eRELAX apps. They will be available for Android and Apple devices from summer and autumn 2015, respectively, and will make life much simpler for users. With their clear interfaces and intuitive handling, these apps could not be easier to operate.

"We looked at other apps and start-ups to get some ideas. We decided that the apps should be very user-friendly. Anyone who is comfortable using a smartphone will find the apps really easy to use," explains Christian Broos, Product Manager for Apps and Controls.

They store three basic profiles: at home, night and away. Users can programme their weekly rhythm with these modules with minimal fuss. They can ensure that there is enough hot water for a shower in the morning and that energy is saved while they are not at home. The house can then be made nice and warm again in time for when they get home in the evening and the heating is then turned down at night.

The settings can be adjusted intuitively at the touch of a button and modified to deal with specific situations – even if the user is out and about. "The classic situation is when someone has

gone away for the weekend and after they've set off they realise they've forgotten to adjust the heating at home. So they grab their mobile, open the app, change the settings and that's it," explains Broos. "To be honest, I was always too lazy to go down into the cellar and reprogramme my heating system if I was going to be away for a couple of days." But the heating controls are not just in the house any more. Users can now take them out: heating to go.

The multiMATIC app for Vaillant devices works with the new multiMATIC 700 control unit and can also be used to control more complex heating systems with several elements, such as heat pumps or solar thermal systems with gas-fired condensing boilers. It can also be used for different systems, e.g. those at home and those in a holiday property. The app can also be used by several members of the family. Secure Internet access is provided by the Internet communication module VR 900, which comes pre-installed in the Green iQ devices. For many Vaillant systems manufactured after 2013 it can be retrofitted.

The eRELAX app for Vaillant products, which is also available for the Saunier Duval brand group under the name Migo, controls simpler heating systems, such as a single gas-fired condensing boiler in a flat. It works in a similar way and also has an energy

meter. A simple eBUS module that works as a gateway to the Internet and communicates via a secure server can be retrofitted for most devices.

"The aim of these apps is to make it as easy as possible for users to optimally adjust their heating to their lifestyle and thus save energy," explains Broos. The project team carried out systematic research into requirements and habits in different countries so that they could take this information into account when designing the apps.

In the case of one installer in Great Britain, for example, the intuitive controls were of particular importance when it came to end users. Both benefit when small tweaks, such as an increase in the temperature of water for domestic use, can easily be carried out by the user themselves as this avoids incurring additional call-out fees or the need to arrange a new appointment. One end customer from Germany suggested a feature that was then incorporated into the app without delay. As an employee who works shifts, it would be a huge relief for him to be able to create and save his own programs for early, late and nights shifts and activate them before the week commences with a simple tap.

"These products allow us to pursue our digital strategy consistently. We are now expanding the platform systematically. There will soon be additional exciting new applications." Intelligent, convenient solutions that make saving energy easier than ever.

But the heating controls are not just in the house any more. Users can now take them out: heating to go.

EXPERT PARTNERS



FACING THE FUTURE TOGETHER

A partnership requires give and take. The idea is that both parties pool their strengths so that together they can achieve more. Rolf Edeling GmbH, based in Burgdorf (near Hanover) is a Vaillant expert partner. Company boss Olaf Edeling and his wife, Tina, are involved in the sustainability workshop programme.

At first there was some scepticism. The Vaillant Field Service Manager had suggested that Olaf Edeling take a look at the new premium partner programme, not least because both parties had a shared interest in efficient products and renewable energies. Olaf Edeling had a look, gave it some thought and made a decision: “Yes, we’ll do it! It’s something new, a new way of looking at my trade and a fresh perspective for my company and for me personally.” The partner programme, which was launched in 2008, was designed as a way of strengthening

ties between Vaillant and selected specialist partners. The scheme requires the specialist partners to communicate their needs and experiences directly and commit themselves exclusively to Vaillant. In return they are invited to attend workshops and given support in the areas of business and personal development.

“It’s a real partnership involving give and take,” stresses Olaf Edeling. He and his wife believed that the programme could offer them a lot of opportunities for development. “Above all I could see possibilities in areas that are outside my

specialist field of supply engineering – in marketing and HR, for example.”

Tina and Olaf Edeling decided to get involved in the sustainability workshop programme. “It took a while for us to really grasp the concept of sustainability. But we quickly caught up. And we soon realised that sustainability is a key concern for the future,” says Tina Edeling. “Energy costs, for example, are going to become more and more of a burden for customers.” For that reason, the Edelings have used the knowledge they have

“We want to develop alongside our employees. We place great importance on training and continuing professional development.”



“It took a while for us to really grasp the concept of sustainability. But we quickly caught up.”

gained from their partnership with Vaillant to pursue a strategy that involves highly efficient technologies and renewable energies.

The participants of the sustainability workshop meet several times per year. Brigitte Kruse, Head of Sustainability Management, always comes along too. Her aim is to communicate the idea of sustainability to the specialist partners and get them interested in the issue. After all, they represent the brand in their dealings with end customers. In addition, she also tries to make it clear that company responsibility for mankind and the environment does not end at the factory gates – it also plays a role in the relationship between Vaillant and its partners. For that reason, Kruse uses the sustainability workshops to pass on news from Vaillant. She also follows and adds to the

discussions on sustainability and makes a note of the expert partners' suggestions, so that they can be communicated to other people within the company or in other workshops. In addition, she helps to implement efforts to increase sustainability in the partner companies, e.g. by providing tips and instructions so that they can work out their carbon footprint.

“The workshops provide us with very valuable input,” says Olaf Edeling. The interaction between participants is honest and very useful. “There isn't any competitiveness.” Vaillant expert partners have to meet strict requirements. In order to be accepted into this group, the specialist partners must undergo a certification process. The process was developed in cooperation with the Fraunhofer Institute. It is structured as follows: there is an initial candidacy year, followed by a

development year and then certification, which is valid for two years. After the two years are up the partners have to be re-certified. The certification process uses a points-based system that takes into account marketing and sales activities, qualification and development, and company organisation.

Rolf Edeling GmbH has certainly developed as a result of the expert partner programme. “We realised that we had to work on the company as well as in the company,” says Olaf Edeling. A lot of progress was made, especially in 2014. The Edelings and their 32 employees worked together for a long time to develop a mission statement.

Olaf Edeling learned to delegate responsibility and trust and support his employees more. The company was restructured – team leaders, project managers and a customer service agent were appointed. “Even I need to be replaceable so that I can go on holiday, or in case I fall ill,” he says. This is not always easy to accept, nor is the fact that he sometimes has to take a break from his busy work schedule to go to a workshop. The couple usually attend workshops together. “Whenever I find it hard to switch off from everyday work issues, my wife reminds me why we're doing this,” he says with a grin. Tina Edeling joined the company in 2010 and is responsible for marketing and HR. “We want to develop alongside our employees. We place great importance on training and continuing professional development,” she points out. In 2015 they took a further step forward and introduced structured appraisals in order to achieve a sustainable level of employee retention.

Olaf Edeling's aim is to turn the traditional company, which he took over from his father, Rolf, into a modern supply and system technology business. He has already had some success, for example, in the area of recruitment, which has become increasingly difficult for companies specialised in plumbing, heating and air-conditioning technology. “We have had a better response recently. Word seems to have spread that we deal with more than just gas, (waste) water and heating,” he says. Thanks to the expert partner programme, both companies, Edeling and Vaillant, are well on their way to preparing themselves as best they can for the future – together.

SUSTAINABILITY AWARD

Belper

Welcome to where great ideas are born. From the hearts and minds of our people: *The ideas* factory

The Vaillant Group's UK plant in Belper was recently presented with a Sustainable Manufacturing Award by the leading trade magazine *The Manufacturer*. The Belper employees are delighted but do not intend to rest on their laurels. They plan to continue down this successful path and meet new objectives.

The Vaillant Group plant in Belper, England, has enjoyed a series of successes in recent years, achieving zero landfill waste in 2011 and winning the National EEF/ENER-G Sustainable Manufacturing Award in 2013 and the Manufacturer Award for Sustainable Manufacturing in 2014. As a result, the plant has been named the most sustainable production facility in the UK. "There was a lot of competition for this award," explains Plant Director Dr Jan Borkowski. Other contenders for the prize, which was awarded by the leading trade magazine *The Manufacturer*, included large international high-tech companies.

"We are delighted that we won, and the entire team is proud. But more than anything, it has motivated us to continue

down this path and work consistently," stresses Borkowski. Health, Safety and Environment Manager Allan Harley adds, "Receiving our second sustainability prize a year after having won the first demonstrates one thing above all: sustainability. It has become part of the culture in Belper."

The plant is investing a great deal in the 2020 S.E.E.D.S. targets. "There is still a lot of work to be done. Lots of individual measures still have to be put into place, and we still need to ensure that everyone gets involved and contributes their ideas," says Harley. The statistics are impressive. Compared to 2010, water consumption has been re-

duced by 64 per cent, energy consumption by 16.6 per cent, CO₂ emissions by 16.3 per cent and waste generation by 28.7 per cent.

In 2014, for example, the procedure for powder coating was redesigned and a heat recovery system was introduced. The team implemented the plans, which were based on extensive data analysis, within four months. The results speak for themselves: the statistics and the working conditions have been improved.

"It's an environmental measure, of course, because it lets us save a great deal of energy. And that has an impact on business, in turn, since it saves us money.

But it can also be considered an occupational safety-related move, because it has really improved the working conditions for our employees." The waste heat is now used for heating or cooling according to requirements. This ensures that the room temperature is kept at a com-

We are delighted that we won, and the entire team is proud. But more than anything, it has motivated us to continue down this path and work consistently.

Dr Jan Borkowski,
Plant Director Belper



We have improved safety year on year and the plant has become a better place to work.

*Allan Harley,
Manager Health, Safety
and Environment*

comfortable level for the employees, who used to have to put up with high temperatures in the summer. "It's superb. It really has transformed our working environment," says Team Leader Mark Kinsey.

The Belper team is also proud of the achievement of having zero work-related accidents at the plant, a target that was met in 2014. And the good news doesn't end there: in October 2014 an objective occupational safety inspection was carried out at Belper. Since then, the plant has been OHSAS 18001 certified, just like the Vaillant Group plants in Skalica and Remscheid.

"We have improved safety year on year and the plant has become a better place to work," says Harley. Risks have been eliminated systematically. Some areas of the plant harbour more risks than others, explains the occupational safety expert. They include pressing and powder-coating, where employees work with metal or chemical substances, and areas in which vehicles such as forklift trucks are used. The employees were given training in line with requirements. "We specifically adapted the training and ensured that the rules and descriptions, which were often complicated, were made easier to understand," comments Harley.

He adds that it is important to enable employees to recognise risks and actively take steps to avoid them, rather than simply reacting to them. The aim is for every employee to feel responsible and able to flag up and describe problems. In addition, there is now a health and safety team, which comprises ten employees.





They are from different departments within the plant, including four from manufacturing.

The company has invested a lot into training this team. In 2014, the ten team members received health and safety training over a twelve-week period for two hours at a time. "These people are extremely important, as they are our disseminators," stresses Harley. Because no matter how successful the plant is, there is one thing that should always be taken into account. "We must talk about safety at work and keep drawing attention to it. Communicate, communicate, communicate." This does not just apply to the topic of safety in the workplace. The jury from *The Manufacturer* praised the "commitment throughout the plant and the level of communication".

However, communication is not a one-way street. "We place great value on encouraging all our employees to share their ideas," points out Borkowski. He considers the plant an ideas factory as well as a boiler factory. This idea is visible to everyone in the newly designed entrance area, where a sign reads: "Welcome to where great ideas are born. From the hearts and minds of our people."

The Plant Director and his team are working towards this vision. VPS – the Vaillant Group Production System – plays an important role here. It is based on seven simple, clear, easy-to-understand

Collective intelligence

The Vaillant Group Production System – VPS for short – has been setting standards in production since 2012. It helps to continually improve production and is based on seven principles. They provide a simple, clear, easy-to-understand framework. It has been in place at all sites since 2014.

"VPS is about more than just saving time and resources. It is also about every single employee taking responsibility," says VPS Coordinator Daniel Kramberger. "VPS does not just aim to meet economic targets and achieve environmental objectives by conserving resources. As is the case with S.E.E.D.S., an essential aspect of VPS is valuing our employees."

The success of VPS depends on the employees; their knowledge and ideas are invaluable to the company. They know their jobs and workflows best. They are the experts here. A good example of this is an initiative that was run at the Skalica plant: in April 2014, the team started to actively gather ideas. By the end of the year, 104 ideas had been collected. "We are delighted about this, because it is really useful," says Kramberger. "It's important to get the employees on board, take their suggestions seriously, give them direct feedback and celebrate our successes together."

principles that function as guidelines for everyone working in production. "There's the principle 'Be motivated – enjoy your work': all of our employees know that they are making a difference." Harley, who is also VPS plant coach, is convinced that VPS, the Spirit corporate values and S.E.E.D.S. all work together in harmony – very much in keeping with the corporate strategy. "Of course, it took a while for it to become embedded in the culture. But it's paying off." The health and safety team training was also aligned with VPS and Spirit.

Harley has found that walking around the plant now takes him a lot longer than before. "I'm always being stopped. It's because the employees want to speak to me and share their ideas." Mick Burman, for example, suggested that the pallets on which the metal sheets are delivered for pressing be returned to the steel trader so that the pallet wood can be reused. And Ian Measures

suggested that a protective film be applied to the barcode-scanner lenses. This saves on resources. The Belper team is now looking for protective film for the large touchscreens used in production.

The team intends to continue down this path and has its sights firmly set on the next milestones. "We intend to meet and exceed the S.E.E.D.S. targets as soon as possible," says Plant Director Borkowski. "In addition, we want to further reduce our energy consumption and, ideally, generate our own energy to cover our consumption." The first two steps in this direction have already been taken. The Belper plant is participating in an energy-monitoring scheme. "And in summer 2015, the first photovoltaic panels will be installed on the plant's roof."



Serial winner: after having won several awards since 2011, the Belper plant was also named the UK's most sustainable production facility in 2014.

We place great value on encouraging all our employees to share their ideas.

*Dr Jan Borkowski,
Plant Director Belper*

ENERGY MONITORING

All in the name of green manufacturing

The Vaillant Group plant in Gelsenkirchen kicked off a new project in 2012 by installing an online energy-monitoring system. It records electricity, gas and water consumption in real time, issues incident warnings and makes it possible to analyse all of these consumption patterns accurately. The aim is to use as few resources as possible. The Gelsenkirchen project was such a success that the system is gradually being introduced at other locations – always customised to meet the requirements of the respective plant. It was recently rolled out at the Remscheid and Belper plants.



2.8

million crates could be filled with water saved at the Remscheid plant since 2010.

Every month, one employee at the **Remscheid** plant has to carry out a task that usually takes more than a day: he reads 172 electricity, gas and water meters and adds the readings to a list. The figures are then transferred to an Excel table. Environment Manager Arnold Steckel uses the data to analyse energy consumption patterns, come up with ideas for improvements and implement these ideas. Energy monitoring has been conducted at the Remscheid plant for around 20 years. However, "the procedure is time-consuming, prone to errors and static," explains Steckel.

But this is about to change. In 2014, 152 meters for the new online energy-monitoring system were installed. A further 26 will be added in 2015. This particular Vaillant Group plant is

6



is the height in metres of the pile of waste, if it were spread across the area of a tennis court, which we have avoided at the Remscheid plant since 2010.



1,700

years of energy consumption for a family of four – that's how much energy we have saved at the Remscheid plant since 2010.

complex as it has been extended several times. The system is not yet fully operational, but as soon as the overhaul of the IT systems in the production department has been completed, it will be possible to transfer all the data safely.

Steckel is very much looking forward to using the new energy-monitoring system. "The system itself will not save us a single kilowatt hour of electricity. It is a tool and we have to actually use it." It makes data available that can be analysed for different areas and time periods – and in much more detail than was previously the case. In addition, it makes it possible to monitor consumption in real time. Steckel's main priority is to determine standby power consumption and scrutinise the data for the air compressors.



Remscheid

In Remscheid, 152 electricity, gas and water meters were installed in the plant and offices in 2014. In 2015, a further 26 will be added. From the end of 2015, the online energy-monitoring system will be fully operative.

18



is the height in metres of the pile of waste, if it were spread across the area of a tennis court, which we have avoided at the Belper plant since 2010.

1.5



million crates could be filled with water saved at the Belper plant since 2010.

The energy-monitoring system has been in operation in **Belper** since late 2014. It provides data on electricity and gas consumption from the production department, the spare parts warehouse and the main building. The system is not used to monitor water consumption, since this is already very low at the Belper plant. At the moment, 28 meters are being used. Since the system is modular, it can be extended as required – for example, when the plant gets new production lines.

“We are collecting data first,” says Health, Safety and Environment Manager Allan Harley. “Previously, we had to wait for monthly bills to arrive, but now we can determine the exact levels of consumption in different areas.” The first large-scale projects are planned for 2016. They will be defined for the individual departments and implemented there. One of the first projects will be to calculate the additional energy costs incurred by extra shifts. “They represent hidden production costs. It is important to know what they are so that we can make decisions.”

The system has already yielded some initial results. “One example: we now know that when nobody is working in pressing, no energy is consumed in that area. The standby effect is virtually non-existent. In the past, someone could have thrown a party and we wouldn’t have noticed.”

years of energy consumption for a family of four – that’s how much energy we have saved at the Belper plant since 2010.



380



Belper

In late 2014 the energy-monitoring system at the Belper plant went live. In late 2015 and early 2016 it will be extended. The team is currently working to define initial projects and objectives, on the basis of the results that have already been collected.

1.6



is the height in metres of the pile of waste, if it were spread across the area of a tennis court, which we have avoided at the Gelsenkirchen plant since 2010.

“We quickly managed to cut consumption significantly,” explains Chris Scheibe, Industrial Engineering Manager at the **Gelsenkirchen** facility. The first measures involved tackling areas of high consumption: lighting, compressed air and heating. In addition, water consumption was halved in the first year of energy monitoring – from 19,000 cubic metres to 9,500 cubic metres. In 2014 the plant cut electricity consumption by 2.37 GWh to 7.92 GWh – a saving of well over 20 per cent. The plant was rewarded for its achievements during the first few years with a “Best Practice Energy Efficiency” label from dena, the German Energy Agency.

“Now it is time to carry out the more detailed work, which can be more difficult.” In 2014 the office lighting system was renewed and LED work lamps with movement sensors were installed in the manufacturing department. They switch themselves off automatically when the workstation is not in use. “We are currently putting more effort into raising awareness among employees,” explains Scheibe. The plant’s success now depends on them and their behaviour. For this reason, an environmental awareness event is held every summer. At the 2014 event, the main topic was energy efficiency. “The maintenance department set up an energy-saving table for us. The employees can connect devices such as kettles to it. The table shows where energy is being wasted.” It might be a laborious task, but it is worthwhile – even at plant level.

690



thousand crates could be filled with water saved at the Gelsenkirchen plant since 2010.

740



years of energy consumption for a family of four – that’s how much energy we have saved at the Gelsenkirchen plant since 2010.



Gelsenkirchen

It was the Gelsenkirchen plant that pioneered the energy-monitoring system. It has been in operation there since 2012 and has since been extended. It was so successful that it was later introduced in the Remscheid and Belper plants.



*“It should be possible to
achieve work-life balance
at all stages in life.”*

EMPLOYEES' VIEWS

On the right track

The Vaillant Group has set its sights on becoming the employer of choice. What do applicants think about the company? What role does the topic of sustainability play in their decision to work here? And how do new employees rate the Vaillant Group after the settling-in phase is over? We decided to find out.

Melanie Kathke, 29, Service Operations Consultant, with the Vaillant Group since September 2014

I grew up near the Vaillant Group's headquarters in Bergisch Gladbach. For that reason I feel a connection with the region and I wanted to come back and find a job here after I finished my studies. I had a look around to see which employers in the area I might be interested in working for. It was important to find a company that shares my values.

Having worked for various joint-stock companies as an intern, I hoped that a job with a family-owned company would be different. I hoped that the company would have a less short-term focus and that employees would be treated more like valued individuals. And it really is like that: the atmosphere here is much friendlier and more open. What's more, I was instantly given the chance to support the Green iQ project, which is one of the most exciting initiatives in our industry. I believe that digitalisation and the possibilities offered by connectivity in the area of services are fascinating topics. There is huge potential there. Every kilometre

that the customer service agents don't have to travel – thanks to remote servicing – saves on resources and protects the environment.

Of course, nobody's perfect, and some improvements could still be made. A family-owned company should make it easier for its employees to plan their lives together with their employer and achieve the best possible work-life balance during the various phases of their lives. Take the concept of lifelong flexitime accounts, for example. There are always phases where people work a lot. That could be balanced out if they took a break at other times in order to recharge their batteries. The day-care centre in Remscheid is a good initiative but I think more could be done here as well – for example, there could be family rooms so that in an emergency employees could take their child to work with them. Or telecommuting could become an even more acceptable option. I think it would also be good if the canteen sourced some products locally and tried to use more organic ingredients.

And responsibility is an important point for me: a company must take on responsibility for its activities – from production

to operations to waste disposal. And for its employees and people who live nearby.

I see that often here, both on a large scale and on a smaller scale. For example, our department decided to get socially involved and do something similar to the SOS Children's Villages partnership, but with a local focus. In the end I found a children's home in Solingen that takes in children and teenagers who cannot stay with their families. After speaking with the manager, we decided to organise a trip to the Odysseum adventure museum in Cologne and we collected money to pay for it. Since the museum has science-related exhibitions, we managed to create a few fun links between the initiative and our company. It was a great day. The three of us from Vaillant who attended saw how pleased the 15 children and teenagers were that someone had shown an interest in them. We were really moved by this and it gave us food for thought. We are trying to set up a long-term partnership with the children's home – very cautiously, taking into account the children's needs.

Tim Richter, 41, Head of Group Design, with the Vaillant Group since June 2014

After I had worked in China for eleven years I wanted to return to Germany, preferably to work for a family-owned company. I was looking for an employer who could offer me what I wanted for the next stage of my career and I searched for quite a while. The Vaillant Group job ticked all the right boxes. I wanted to design long-lasting products and work for a company that thinks in the long-term – one that thinks sustainably. In this respect, sustainability played a role in several different senses. Heating and climate systems are an ideal field, of course. The company's technologies are exciting and future-oriented. The systems have a long product life span, so the design must be just as sustainable and long-lasting.

After I had been here a while I really began to appreciate the company's employee policy. I met a lot of colleagues who had been working here a long time, were very content and identified with the company. But, on the other hand, the infrastructure at the Remscheid plant isn't as good as it could be. Some parts of the building are really old and there are lots of long corridors, especially in the production area.

I would like to see a bit more willingness to take risks with premium products and innovation. From my point of view, as a designer, I think we need to take things a bit further, be braver and take a more future-oriented approach.

Take our fuel cell system, for example. It's a really advanced product, but from a design perspective it isn't clear that this

is a flagship technology. We could emphasise this; we could highlight how innovative it is. That would mean improving the product's appearance, but also how the user interacts with it. We are working on this. Because design is like an ambassador for a brand. We communicate the brand's values through design. We designers aren't just here to make things look pretty. We bring specialist technical expertise to the table and our ideas combine the requirements of the development department and those of the manufacturing department.

Of course, we industrial designers always have environmental topics on our agenda as well. Even during our studies we are encouraged to design products that are environmentally friendly and socially responsible. Design must be long-lasting and sustainable. The user must enjoy having the product around for a long period of time. But there are many more additional aspects that are important for our work. They include materials and their composition: we don't want valuable resources to be lost in the end; we want them to be reusable. We also research materials that could potentially be interesting for us in the future. When I'm given a design order, I also think it is very important to talk to the customer about how the product should be constructed and how it will be operated.

In my view, the Vaillant Group is well on its way to becoming a green company. The cornerstones are there, in terms of strategy, projects, products, staff management and communication. We're almost there. We just need to be a little braver, a bit more radical in a couple of areas in order to redefine and anchor our position as a really green company. I'm sure the design department can make a contribution to this goal.



“In terms of being a really green company, the Vaillant Group is almost there. We just need to be a little braver, a bit more radical in a couple of areas.”



“ We could make more of an effort to spread the word to the general public about our sustainability efforts in Poland. ”

Anna Augustyniak, 34, Marketing Specialist, with the Vaillant Group Poland since February 2014

I did a lot of research into the Vaillant Group before I applied: I learnt about its vision, values, attitudes towards customers and employees, products, customer feedback and I even read Polish- and English-language press coverage of the Group. I have twelve years' work experience and was previously employed by a large Japanese company in the heating and air-conditioning technology sector. I like technical products, especially in the areas of heating and ventilation. They are things we really need and they define our everyday lives. People tend to hold on to these products for a long time; they're not passing fads that are here today and gone tomorrow.

My tasks as a Marketing Specialist are quite varied. There are twelve of us in the team. I am responsible for product communication, print and online advertising, search engine marketing, market research and events. I'm always in close contact with our product managers. I immediately felt at home here and I like the atmosphere in our team. I'm happy with what I'm doing. The employees in the Polish sales company are valued. You can see that this is reflected in the budgets for things such as workplace

safety, health services and team activities.

When I decided to take the job with the Vaillant Group, the idea of sustainability didn't feature as a criterion. It's not a very popular term in Poland. Sustainability isn't really a big thing there. Only a few companies are interested in it and they are mostly in the food sector. But I live in Warsaw, a buzzing capital that has changed a lot in recent years. There's a young, urban generation here that is searching for a healthy lifestyle that makes a healthy work-life balance possible. These people do think about the products they consume. They consider a product's energy efficiency and other advantages, as well as the company's reputation. I see that reflected in my friends' behaviour; they research very thoroughly. I think that environmental aspects, above all, are growing in importance and a trend is developing here.

But in spite of all this, there is not much of a focus on sustainability within our industry in Poland. More attention is being given to the green aspects of products, though, in terms of energy efficiency or the use of renewables. I have learnt a lot about sustainability from the Vaillant Group – what it means and what it involves – by reading publications, intranet articles and project e-mails.

Sustainability is becoming increasingly important for my work in marketing. The Vaillant Group is well positioned in this respect. Our products are efficient, low in emissions and innovative. The Vaillant Group is very good at communicating its sustainability efforts – particularly within the company itself. In Poland, I'd like to see the company make more of an effort to spread the word to the general public, particularly regarding environment and society. We could use this topic to differentiate ourselves from the competition even more in the Polish market – by advertising our sustainability messages via different channels, for example.

I think it's very important to have an employer that is involved in social projects and thus demonstrates an interest in social responsibility as well as business – it shows that the company has a heart. I am responsible for the partnership with SOS Children's Villages in Poland and I keep in contact with the organisation. Our partnership involves exchanging out-of-date heating equipment for new, efficient systems and it helps the villages to reduce their heating and energy bills. My parents brought me up to help other people. It feels good to know that the company I work for has the same approach.

Michael Zeddies, 44, Head of Group Production Engineering, with the Vaillant Group since June 2014

Before I took this job I worked for a US shareholder-owned company and before that I was employed by two family-owned companies. There is a noticeable difference between the two ownership structures. That's why, this time around, I consciously looked for a company that was backed by its owners. My experience has shown that this kind of company model is more sustainable – this kind of firm takes a different and more sustainable approach to defining its strategy for the future. This applies to topics such as corporate culture, in particular the way in which employees are treated and products.

To be honest, the sustainability programme didn't really play a major role in my decision to work here. S.E.E.D.S. wasn't really on my radar. After my interview I came back for an induction visit and was given a quick tour of the Remscheid plant. That was when I noticed that the company places great importance on ergonomic workstations. And the production department seemed modern and lean. The idea of lean structures isn't necessarily something you'd associate with sustainability straight away, but, of

course, lean production is about conserving resources as well as saving money.

As time went on, it became increasingly clear to me that the sustainability programme S.E.E.D.S. constantly provides inspiration, especially for measures that save resources. Off the top of my head, there's the energy-monitoring system, the photovoltaic installations and the lighting management scheme. A very positive thing about sustainability initiatives is that if something is done to make manufacturing more sustainable, it can have a knock-on effect on other return on investment targets too. I had never seen that at any other company before. You can see it with energy recovery systems, for example. In the Vaillant Group we are always being encouraged to consider "green" aspects like this.

However, in my area – production organisation – I must say there is a focus on lean production because it can optimise costs and efficiency. Sustainability-related aspects do also play a role – a minor one. But it's something we plan to give more attention to. We need to take the next step here and link "lean" and "green". The challenge is to make sustainability a major aspect alongside lean production.

The Vaillant Group is managed sustainably, particularly in the area of human re-

sources, and my first impression was correct. The focus on workplace ergonomics in the production department is exemplary – and money has also been spent in this area. In the area of employee development and training opportunities – particularly for high-potential employees – the Vaillant Group is already far ahead. I feel that employees are valued here.

In order to really be a green company, sustainability must be integrated into all aspects of our work; we need a green corporate culture. This involves setting standards that are followed and respected by everyone, although management has the special task of acting as a role model for this culture. Culture is more than just one initiative or a series of individual attempts. It means taking into account green aspects for every decision – it's not just something that is nice to have. The Vaillant Group is moving in the right direction in this respect. But there is still plenty left to do to achieve an overall green culture. One example is the fleet of company cars. I have the impression that Vaillant has too few environmentally friendly cars on the road. If we want a really green, responsible company, this must change.



“In the production department we need to take the next step and link 'lean' and 'green'.”

“The Vaillant Group’s sustainable approach was definitely an important criterion for me.”

Dr Frank Steineke, 45, Head of Human Resources for Central Europe, with the Vaillant Group since July 2013

I was initially contacted by a headhunter. As is the case with all queries of this kind, I researched Vaillant online to find out about the company and the position. I didn’t find anything negative. The reports were positive. I quickly found out about the S.E.E.D.S. programme, since it was mentioned quite prominently and authentically. It was obviously one of Vaillant’s areas of focus. I was impressed that a traditional company – a family-owned company – was paying so much attention to the topic of sustainability.

When I came to make a decision this was definitely an important criterion, because sustainability is relevant to the employees and to society. Since I was considering a leading HR role with Vaillant, it was very important that the company demonstrate an interest in these topics. I hoped that it would be possible to really make a difference here in the area of HR. I had worked in companies that focused on other issues. And it showed – for example, the budgets for HR work were not always available. I expected things to be different at Vaillant. And they were. The

employee policy topics that we deal with in my department can only really be addressed because they are part of the strategy and are considered an important investment in our sustainability as a high-tech company.

When I started, the Hoppelhasen day-care centre had just been built, the health centre had been opened and a talent management process had been launched. These are all things that I believe are necessary for sustainable HR: ensuring that our employees stay healthy and that they have opportunities for development – if they want them. And I was quickly asked to develop an HR strategy based on the company strategy. This showed me that the topic of HR is considered essential and the company recognises that it can only be successful if it invests in its employees.

There is still quite a bit to do before we can say that the company is completely sustainable. In the HR department we are currently working on a new car policy that rewards employees when they choose a particularly energy-efficient model. In addition, we still produce a considerable amount of waste in the offices; I’d like to see a completely paperless office. Perhaps we’ve reached around 60 per cent. They do say the last part is always the most painful.



Sustainable HR: what does that mean for you, Mr Steineke?

Above all it is about ensuring that our employees like working here. That is described in one of the S.E.E.D.S. objectives: to be an employer of choice. A huge challenge for us in this area is demographic change, which is much more far-reaching than the threat of a shortage of skilled workers you often hear about.

To what extent does demographic change pose a challenge?

We want solutions so that employees want to continue to work for our company until they are 67 or older – and are actually able to do so. Our industrial jobs can be so physically demanding that it really is not possible for people to keep doing them until they are 67 or older. But in our manufacturing planning we are looking at a new system that takes into account ergonomic aspects when planning production lines.

Are there any further aspects?

Yes, quite a few. There's the topic of employee development. A lot has happened in this area, thanks to the training programmes myWay, myAcademy and myChoice. We are working on establishing staff management programmes that are geared to the different phases of the employees' lives in order to better support them. It would involve working-time models, including a model geared to different life stages for employee benefits. It would cover various areas, such as mobility, family, continuing professional development and pension schemes. But unfortunately it is too early to provide any details.

Have employees' expectations of their employer changed?

Yes, definitely. Alongside the "traditional" expectations – money, a good career and the opportunity for promotion – employees' requirements now include a job that is meaningful and enjoyable and allows for a reasonable work-life balance.

PORTRAIT

Here to stay

Dr Andree Groos began his career at the Vaillant Group in 2002 as an Assistant to the Management Board. He was 28 and had just completed his PhD. His career path is both unique and exemplary. And thanks to targeted support from Vaillant Group managers he is now Managing Director of Vaillant Germany. In October 2015 he will become Vaillant Group Managing Director for Marketing, Sales and Service.



Things moved quickly after Andree Groos applied to Vaillant: "I was handed my employment contract straight after the second interview. This mentality of getting things done and making clear and quick decisions is typical of the Vaillant Group," he explains. At the Vaillant Group's headquarters in Remscheid he had the opportunity to prove himself right from the very beginning.

Since he joined the company in 2002, the Vaillant Group has experienced huge growth. Yet despite its current size, the hands-on company culture has still been retained, says Groos. When he joined the company, there was a great sense of a new beginning among those who worked there: the takeover of the Saunier Duval brand group had only just been completed and there was a strong push for internationalisation. "I find it fascinating that, even today, the new corporate direction

has not affected the company's strong local roots." Groos quickly worked his way up the ladder in the Vaillant Group. "Right from the outset, I was given the opportunity to take on responsibility – for example, through special tasks or within

It is no accident that one of the aims of S.E.E.D.S. is to be an employer of choice. The Vaillant Group feels a sense of responsibility towards its employees and supports every one of them. This includes enabling them to take on responsibilities at an early stage and to undergo continued professional development and training measures in order to boost their careers or personal development.

the scope of demanding projects. As the company is centrally managed here in Remscheid, you can quickly make a name for yourself." Without having to worry about making mistakes. The company places great importance on the idea

that people learn from their mistakes, reports Groos, and he has experience of this himself. "Of course, you should try to only make each mistake once," he laughs.

Although Groos' career progression is a particularly spectacular example, supporting and promoting young talent is something the company does systematically. There is a range of individual training measures available for junior colleagues. As a young assistant to the management, Groos also benefited from these.

There is a tradition of recruiting managers from the company's own ranks. The management development programme myWay involves providing specific training for management staff, whether they are executives, specialists or project managers. The Vaillant Group aims to recruit 75 per cent of its managers internally.

The Vaillant Group also provides support to employees in more senior positions: "I still make regular use of the coaching sessions for managers. I always benefit from that." Groos' personal development has taken him from a job as assistant to the management, via various management positions, to his position as Managing Director of Vaillant Germany. He has held this position since 2009. In 2010 he increased his scope of responsibility once more. He took on the additional role of Regional Director of Sales, Marketing and Service for Central Europe and in October 2015 the next step will follow: he will become Vaillant Group Managing Director for Marketing, Sales and Service. His successor – the new Managing Director of Vaillant Germany – will be Dr Tillmann von Schroeter, who has been with the Vaillant Group since 2006.

Dr Groos has now been with the company for well over a decade, thus complying with the rule of thumb: those who come to the Vaillant Group stay here. Work anniversaries, including 25th and even 40th ones, are almost an everyday event.

After more than 140 years as a family company, continuity is part of the Vaillant Group's DNA. It is a family-owned business with employees from successive generations and practised values such as entrepreneurship, trust, integrity and passion. It is traits like these that make the Vaillant Group a community.

Groos has long settled into his new home town, even though it was not easy at first. "I have a passion for skiing and in Innsbruck, where I did my doctorate, I could be on the slopes in virtually no time at all. It's not as easy here in the Bergisches Land region as it was in the Alps," he says. But he has found a new passion: "Here in Bergisches Land I've discovered

mountain biking. With its low, forest-covered mountain ranges, the region is almost made for this sport."

The father of three values his daily routine. After he has taken his children to school, his working day begins at 8.30 a.m. with a management team meeting. His first appointments are usually at 9 a.m. He regularly travels to Austria, Switzerland and Scandinavia. His role also requires him to represent the company by giving lectures at universities and taking part in discussions and debates. The main topics are climate protection and sustainability.

"Sustainability is a core objective of the Vaillant Group. It is a theme that can be seen in all of our activities and it defines our products – by which I mean the entire life cycle of every product. As I feel very strongly about this topic, I am even more committed to it. Our products not only fulfil the basic need for heat and hot water, they do far more – for example, by helping to protect the environment with their high efficiency and sustainable production."

Of course, sustainability is about far more than just environmental protection; it also means taking responsibility for society and for employees. One example of this is the company's family-friendly stance: young parents can reduce their working hours in a flexible way, take time off or leave their children in the Hoppelhasen day-care centre, just a short walk from their place of work.

As a father, Groos appreciates the structures and programmes that are in place, but also the small details: "The company does little things for families that are great. It hires a theatre in Remscheid every year and throws a Christmas party for employees with children. And every baby born to a Vaillant employee receives a cuddly toy hare." The Vaillant Group is a family company in every sense of the word.



DAY-CARE CENTRE

In October 2013 the Hoppelhasen day-care centre opened its doors for the first time. The Vaillant Group spent around half a million euros on completely modernising a former kindergarten, transforming it into a wonderful place for children to learn and play.

HOPPING
HARES
AND BERGISCH
LIONS



Feeding time at the day-care centre



The Hoppelhasen centre (German for “hopping hares”) is now staffed by seven educators. They are responsible for two groups, each comprising 15 children aged from six months to six years. There is a lot of demand for places, since the centre has several advantages in addition to being close to Vaillant’s Remscheid headquarters: long, flexible opening hours, child-care during the holidays and a comprehensive programme of activities all year round. But what do the children who attend the centre think of it? Is there anything they like about it in particular? We asked two experts: Paul Schulz, aged five, Facility and Exterior Area Manager at the centre, and Mina-Lieselotte Thomas, aged two, Head of Music and Motion.

It is 7.40 a.m. Paul Schulz watches from his car seat as his mother manoeuvres the car into a parking space in front of the day-care centre. “Yes, this is a good spot. I’ll be able to see our car from the play area.” Paul’s mother usually leaves her car in front of the centre in the mornings, since she works very close by. “With the hares,” as the five-year-old tends to say.

When his mother says goodbye, Paul calls after her: “Come a bit later today. I want to play football afterwards and go on the tricycle!” As Petra Schulz, who works in the Vaillant Group’s strategy department, sets off on the five-minute walk to her office, Paul gets ready for an exciting day. Because he is one of the oldest children, he is allowed to start the morning by helping to set the table for breakfast. Half an hour later the 15 children from the “Hasenhütte” group (German for “rabbit hutch”) are sitting together and talking about their plans for the rest of the day. At the subsequent management meeting outside there is a lot to get through. As is the case every day, the swings, climbing frame and slide all need to be checked for proper functionality. In the middle of the play area there is a statue of a Bergisch lion that needs to be climbed on and fed. The mud facilities also need to be tested. And then there’s the kitchen garden that was recently planted behind the centre: it needs to be tended to by the responsible project managers. In addition, of course, the group needs to make time to exchange ideas with the 15 children in the other group, which invariably leads to a stimulating discussion. At 11.15 the staff take all the children back inside and many activities have to be put on hold until the follow-up meeting that afternoon.



"I like music and
I like dancing
even more!"



Paul is looking forward to lunch. "There are often things I've never had before. I like trying them and I usually like the taste," says the five-year-old. "And we mainly eat fruit and vegetables from here. They're growing outside right now." At 12.30 the lunch break is over and the younger Hoppelhasen members' scheduled power nap begins. For Paul and the older children it's time for some creative work. "We usually do something quiet like painting or crafts – I'm good at that. Or we try out a new game." When the youngest children have woken up again, they all go outside, even if the weather is bad.

"I think it's good that we have really little ones in our group who we can help, because there are lots of things they can't do as well as the big ones," says the young manager. The operating company, KitalConcept, follows a "family structure" which focuses specifically on mixed-age groups. It lets the older children take on responsibility and gain self-confidence, while the younger children can watch and learn.

Like two-year-old Mina-Liselotte, for example. She has attended the centre since she was eleven months old. When it's time to go outside, she insists on putting on her coat



➤
Putting work
equipment to
the test

“I’m already big and I like helping the little children.”



and shoes herself, just like the big children. She is already quite good at it, but process optimisation is occasionally necessary, for example, when her left shoe ends up on her right foot. She is also part of the team of auditors responsible for checking that the mud facilities are up to standard. Most days she throws herself into this work – quite literally – much to the delight of her mother, Katja Üffing-Thomas, who works in the products and services department at Vaillant Germany’s sales company and often has to wash three sets of Hoppelhasen workwear in the evenings.

Mina loves going on the swings and her favourite activity is playing football with the bigger boys. As a left-footed player, she always ensures that the games are full of surprises. But Mina gives highest priority to her music garden workshop, which takes place every two weeks. The children are encouraged to develop their awareness of music and use instruments. “It’s really fun because I like the sound of the music and I love moving,” says Mina (or words to that effect). After so much hard work, the two-year-old likes to take advantage of the opportunity to take a daily power nap after lunch – but only if she doesn’t have a high-level technical discussion scheduled with a colleague.



SOS CHILDREN'S VILLAGES



In the warmth of the family

At the SOS Children's Villages, children and teenagers are given a new home – and the feeling of security that they need. As a heating technology partner, the Vaillant Group ensures that the villages are well heated. This year the company was mainly active in its home country, equipping three Children's Villages in Germany with heating systems.

↳ Growing up full of fun: sister and brother Tamara and Luca live in the SOS Children's Village in Worpswede.

→ In the last 50 years, 400 children have grown up in the village.



Luca and Tamara are making pots. Deep in concentration, the three-year-old and his five-year-old sister squeeze the damp clay into shape. Finished. Now it's time for them to wash their hands. Nadine Polenz turns on the tap. "Warm!" Luca exclaims happily as he tries to scrub his hands clean.

Warmth is important, but it is not something all children can take for granted. Luca and Tamara live in the SOS Children's Village in Worpswede. Like the other 65 children and teenagers who currently live here, they cannot be brought up by their families for various reasons. Trained educator Polenz has taken on the role of their mother at the village. The village is divided into household groups: small family-like units in which the young residents receive the warmth and security they need. 400 children have already grown up in the village, which is near Bremen.

As old as the village

In 2015 the village is celebrating its 50-year anniversary. That is how old the buildings and facilities are; the boiler that was in use until recently was installed in 1987. The village's heating system desperately needed to be updated – and that is where the Vaillant Group came in. The company replaced the old heating system and its two completely outdated oil boilers with a modern, highly efficient gas-fired condensing boiler cascade. This work was all performed within the scope of Vaillant's partnership with SOS Children's Villages Worldwide, which has been in place since 2013. Worpswede is the third SOS Children's Village in Germany that Vaillant has





equipped with new heating technology. But the Vaillant Group has also delivered on its promise in other countries, providing new, urgently needed systems in France, Belgium, Croatia, Poland, Romania, Russia, Hungary, Ukraine and China as an exclusive heating technology partner.

Taking on social responsibility

For the Vaillant Group this is a matter close to the company's heart: "In the areas where we do business we would also like to take on social responsibility," explains Dr Andree Groos, Managing Director of Vaillant Germany. In Germany, the existing systems are to be replaced by energy-efficient heating technology by 2018.

"We aim to use our technology and our expertise to make a difference. We want to make a contribution – and do more than just hand over a cheque. Here, in the SOS Children's Villages, we can help," stresses Groos, who travelled to Worpsswede in person to learn more about the village and meet its young residents.

No money for a new heating system – until now

The manager of the village, Joachim Schuch, was delighted with the new heating systems. "The heating systems could be regarded as a symbol of what the SOS Children's Villages do: we radiate warmth." The systems urgently needed to be replaced but money was too tight because the organisation is funded by donations. "We simply didn't have any spare money for the equipment we so desperately needed."

The new heating systems were installed by the specialist partner company Henning Meyer, which is based nearby in Lilienthal. In the deep of winter the family-owned company installed the state-of-the-art system at the Children's Village without the residents even noticing what was going on. The Henning Meyer team were happy to do without a profit margin on this occasion. As a regional company, they wanted to make their own contribution to the children's charity.

A partnership that radiates warmth

"Of course, all the employees were enthusiastic about the project. Our compa-

ny has even had a trainee who grew up in the Worpsswede Children's Village. Our suppliers are also committed to helping SOS Children's Villages and some of our industrial customers have already partnered with the organisation.

When we were asked whether we could help, we didn't need to think twice. We jumped on board straight away," explains company boss Henning Meyer.

Andree Groos is delighted at how the project has turned out: "The great thing about this partnership is that it's not just with the Group: our partners, including both specialist companies and wholesalers, are also involved." The company Henning Meyer provided an enormous amount of support. Their job involved connecting five ecoTEC exclusiv boilers in a cascade to a local heating system for all 16 houses. In order to save on resources, only as many devices as are needed are switched on, and they are selected at random.

Every child should grow up as part of a family

The first SOS Children's Village was founded in Imst, Austria, in 1949. Hermann Gmeiner, a medical student, came up with the very simple but significant idea that "Every child should grow up as part of a family – loved, respected, supported and protected." First of all many thousands of children orphaned during the war were given a new home and a new family in the SOS Children's Villages. Nowadays the villages take in children from broken homes or from families that need help, as well as people with disabilities who want to live independently.

Over the past 50 years, the work in the SOS Children's Village in Worpsswede has changed a great deal, as have the requirements for space and equipment. "Our work has been transformed just as much as the image of the family in society has. There used to be twelve traditional families in the village, but today there are just nine. But now we also have other structures, such as assisted living and household communities, in which we provide specific therapies as well as love and security," explains Schuch.

↳ Bring on the water: Luca helps clean up and is grateful for the warm water.





↑ Sweet gift: at the celebration to mark the official handover of the new heating system, Dr Andree Groos (fourth from left) presented the children with a Vaillant hare and a boiler-shaped cake.



The Vaillant Group actively supports SOS Children's Villages around the world

The Vaillant Group's partnership with SOS Children's Villages Worldwide is in place in all the countries where the Vaillant Group operates. Last year, too, our national sales units provided support, swapping outdated heating equipment for modern, highly efficient systems. In Romania and Poland, for example.

And our first project in China has now been completed. In November – just before winter set in – the 17 houses in the SOS Children's Village in Chengdu were fitted with heating systems. In addition, as part of the roadshow to celebrate the 140th anniversary of the Vaillant brand, the employees collected books for SOS Children's Villages. These were handed over personally by Country Director Weidong Wang in Lhasa, Tibet, the day before the new branch office was opened.



For the children, the SOS Children's Village has become a home – some of them are there temporarily, while others stay until they are 18 years old.

Excitement in House 9

Tamara and Luca have found a new home in the Children's Village family in House 9, where they live with Ann-Kathrin and Jaqueline, their village "mother", Nadine Polenz, and her own daughter, Nalia. This week has been quite exciting. Two days before the new heating system was officially switched on, it was Mothers' Day. The children made a present for Polenz, took her breakfast in bed and put on a show for her. It was natural that they would want to celebrate with her. After all, "Nadine is here for us every day," says Jaqueline. Polenz has worked as an SOS Children's Village mother for a year. Mothers' Day is very gratifying for her. "On days like this I get a lot back from the children," she says. Her work is challenging, tiring and has its ups and downs. "The children that live here have often had very difficult experiences. Conflict, sadness, anger, aggravation – it's all magnified for these children," explains the 30-year-old.

She would like to remain village mother until the youngest child – Luca – has grown up and moved out, so that the children do not have to cope with another broken family. Polenz also believes that it is important to teach the children that they can make something of their lives. "I was adopted myself. I went to a Hauptschule [a school which takes pupils up to lower secondary education and gives them a school leaving certificate] then I had a baby at 17, but I still managed to make something of my life," she says proudly.

Support that has a lasting effect

Transitioning to adulthood is not easy for the teenagers from the SOS Children's Village. The Vaillant Group would also like to help in this area, since the partnership is about much more than just heating technology. Groos: "We would like to help the teenagers by giving them the opportunity to do internships or traineeships. The employees have had a lot of ideas, such as providing help with job applications. We have noticed increasingly that employees are keen to get involved and even give up their free time to do so. A movement has really developed within the company and lots of people have joined in." As long-term partners.



→ Serial efficiency: the specialist partner Henning Meyer carried out the professional installation of a cascade of five ecoTEC exclusiv gas-fired condensing boilers.

↓ The heating system now serves all 16 buildings at the SOS Children's Village in Worpswede.





“Helping to give children a better future – for us, that is key”

Frederik Lippert, Senior Manager Corporate Communications, is responsible for the Group-wide partnership with SOS Children's Villages Worldwide.

→Mr Lippert, how did the partnership between the Vaillant Group and SOS Children's Villages Worldwide come about?

←We were looking for a flagship project in the area of social commitment that was in line with our CSR strategy when we received a report from Hungary. Our colleagues there had provided help to the SOS Children's Village in Battonya when its heating system broke down just before the weather got cold in autumn 2011. Our colleagues responded quickly and organised everything. The project was a great success – so much so that we had the idea of turning this one-off event into a larger project. We then held talks with the organisation, sounded out joint targets and, finally, signed a five-year contract.

→What exactly does the partnership entail?

←The partnership is based on two pillars. The first of these is a Group-wide agreement that makes us the number-one partner for the provision of

heating technology. The national sales companies implement the agreement in their own countries in the form of local projects. The focus is always on heating technology. However, we can offer other forms of support as a second pillar, too. We do not want to work on a one-off project that is just a flash in the pan; instead we want to use well-established technological support to lay the foundations for a long-term partnership.

→How does the partnership fit in with the Vaillant Group's CSR strategy?

←It fits in perfectly. In our core business, we can provide support with our products and expertise so as to specifically promote climate and environmental protection. Our CSR strategy defines target groups, fields of action and tools for social engagement. As a family business, the Vaillant Group consciously focuses on families as well as educational and social institutions. SOS Children's Villages Worldwide meets our mandatory eligibility criteria perfectly.

→What are the next steps for the project?

←The next large-scale projects will be in Italy, Poland, Russia, France, Hungary, Macedonia and Spain. People in the different countries come up with a lot of their own ideas, too. For example, they include job-application training for teenagers living in the SOS Children's Villages or sponsored runs and other leisure activities.

→Where exactly do these ideas come from?

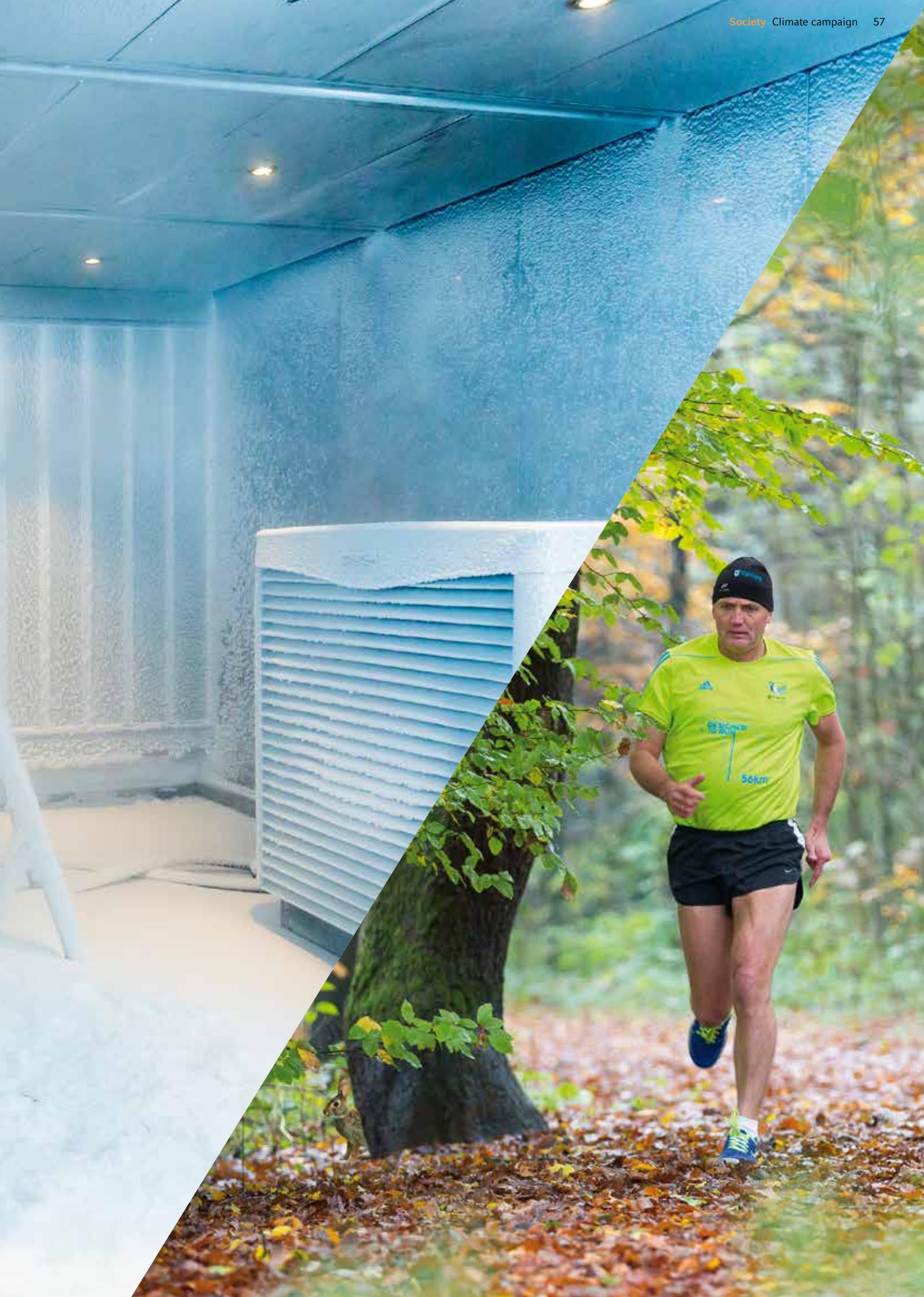
←The great thing is, they come from all over the place. We're realising more and more that this strategic decision to support the SOS Children's Villages has really hit the mark. That applies to our employees, but also our specialist trade partners – in all countries. The Vaillant Group is a traditional family-owned company, just like most of our specialist trade partners. That is why we are so willing to help children and contribute to giving them a good future. For us, that is key.

CLIMATE CAMPAIGN

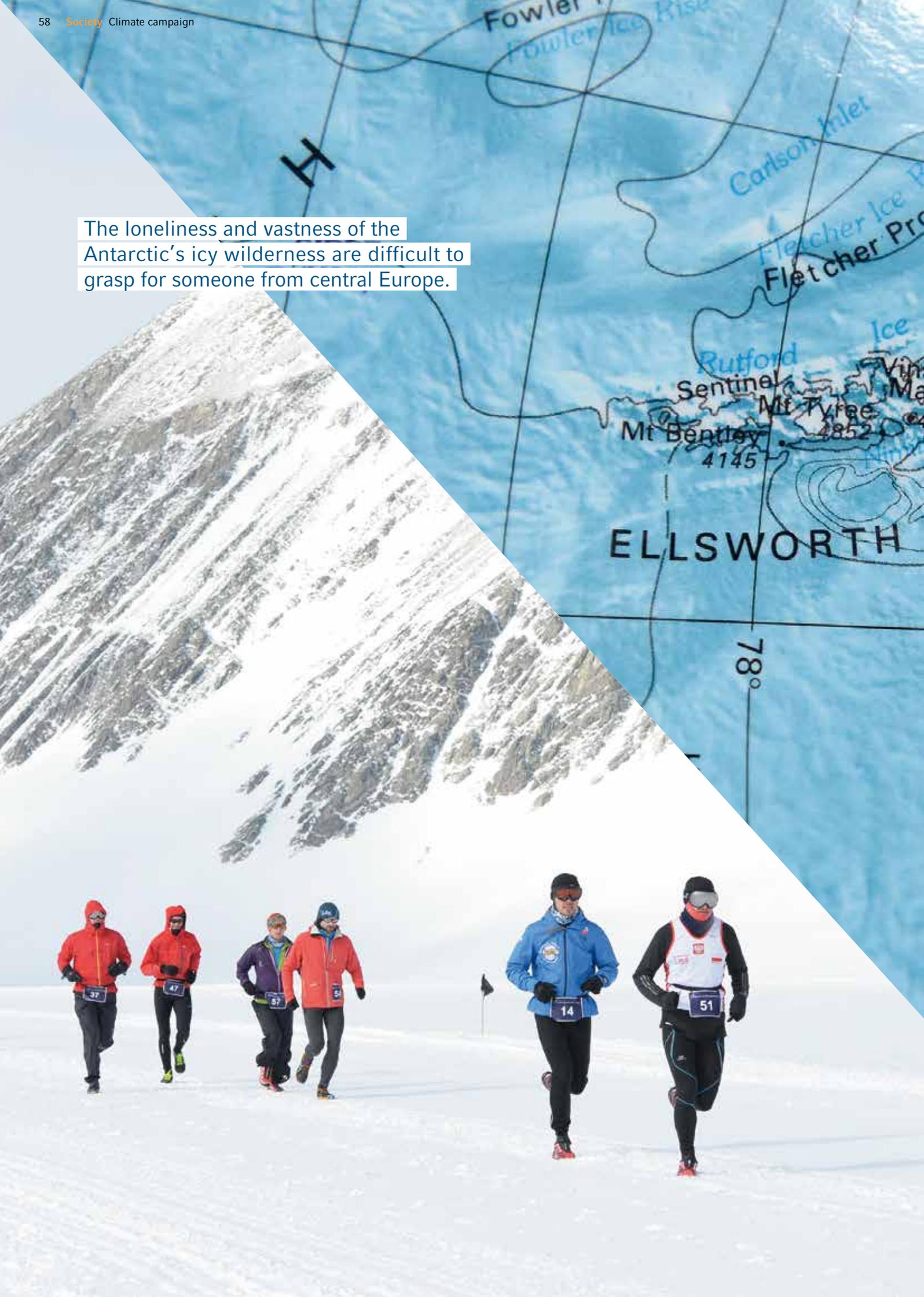
THE MILLION- MILE MAN

You have to do crazy things to stand out – with this in mind the Vaillant Group sent the German ultrarunner Friedhelm Weidemann to Antarctica as part of the Vaillant initiative “Places worth protecting”. Amid temperatures of $-20\text{ }^{\circ}\text{C}$ the experienced marathon runner battled icy fall winds and frozen sweat in his shoes. His mission? To draw attention to one of the most beautiful and at-risk parts of the world.





The loneliness and vastness of the Antarctic's icy wilderness are difficult to grasp for someone from central Europe.





YOU ARE HERE

He feels as though the roar of the plane's engine is still ringing in his ears. The contrast between his noisy journey and his current surroundings could hardly be greater. There is absolute silence here – no cars, no birdsong, no children's voices. Just nature and endless space. Weidemann is completely overwhelmed when the plane drops him off at the 79th parallel south. He is immediately captivated by the uniqueness of the landscape. He says he feels like an "ant on a lonely planet." The loneliness and vastness of the Antarctic's icy wilderness are difficult to grasp for someone from central Europe.

Biting wind and icy temperatures

Nine kilometres further, at the foot of the Union Glacier, is where the Antarctic Ice Marathon will start, in the coldest, windiest and also sunniest place in the

world. It is almost 1,000 kilometres from here to the South Pole. It is not the place for people who like to sit at home playing FarmVille on Facebook or only run indoors on a treadmill. For several days the run is postponed due to bad weather and wind speeds of up to 80 kilometres per hour. But at least Weidemann has some time to get used to the special conditions in which he will be competing. They are certainly unusual: at the end of the race the participants must bring every scrap of paper, every morsel of leftover food and even the waste water from the showers and toilets and any dirty snow back with them. It must not be left in Antarctica. And, unlike at most marathons, the participants will not be leaving piles of paper cups, banana skins and energy bar wrappers in their wake. "Everything – and I mean everything – will be transported back to the mainland afterwards," explains Weidemann. He is running to prevent cli-

mate change and his environmental footprint also has to be as small as possible.

Frozen toes and eternal happiness

After five days of waiting it is finally time to get started. At 2 p.m. local time the starting shot is fired for the world's coldest marathon. The sun is shining and the camp is fairly quiet. But there is a freezing wind blowing outside. Weidemann has to deal with a headache, frozen toes and the fact that there are no cups to drink from at an unmanned refreshment stand. After he has run half of the course he has to change his clothes – otherwise the frozen sweat from his own body will inevitably lead to a dangerous case of frostbite. Even if it is not easy to drink in this weather, he is obliged to take in fluids every seven kilometres in order to prevent dehydration. That is because he is still sweating – even at -20°C . After almost six and a



As a heating technology specialist, Vaillant considers itself part of the solution to global climate problems. After all, efficient heating technology is one of the biggest levers in the fight against climate change.

half hours, Weidemann is the 18th runner to cross the finish line. He doesn't care that he will now have to thaw his frozen toes in a warm bath. Hours later he still cannot quite believe what he has achieved. He keeps repeating one phrase: "Amazing!" Even for a hardened runner like Weidemann the feeling after a race is incredible. "That was definitely the slowest, but also the most beautiful marathon that I've ever run," he says. "It's difficult to think of many other places where it is more obvious what a great responsibility we have for this planet."

Running around the world

Weidemann has clocked up an impressive number of miles on foot: to date he has completed 279 marathons and ultramarathons. He is a father and has run 6,000 kilometres with a jogging buggy alone. Bad weather, steep inclines and dark tunnels do not faze him at all. In

the past he has run 82 kilometres through the Moroccan desert, run a course with over 8,000 meters of elevation gain at the Grand Raid de la Réunion and crossed Death Valley in California when the outside temperature was 53 °C. He completed the Elbtunnel Marathon, the world's only underground marathon, took part in the Empire State Building Run-Up and won a place in the Guinness World Records thanks to the marathon he ran on the QE2 ocean liner. His ultimate goal is to join the Seven Continents Club. Its members have run marathons on all of earth's seven continents. Since last November he has had the sixth continent on his list.

Saving Antarctica from the basement

As a heating technology specialist, Vaillant considers itself part of the solution to global climate problems. After all, ef-

ficient heating technology is one of the biggest levers in the fight against climate change and the effort to reduce CO₂ emissions. In Germany alone over 70 per cent of the 17 million heating appliances are outdated. This means that almost three out of four boiler rooms have the potential for highly efficient climate protection measures to be carried out. That is why Vaillant launched the "Places worth protecting" initiative last year. The aim is to make people realise how much we risk losing through climate change, thus raising awareness of the great importance of highly efficient technologies for the future of our planet.



It is like a family. Everybody makes their own contribution and is allowed to bring their own strengths to the table. People do not always agree with each other and sometimes they argue vehemently about what the best course of action is. This is how the new corporate film portrays the Vaillant Group and its members. As a family company. The idea behind the film is to describe what the Vaillant Group, which has been family-owned since it was founded, is really like.

Over the centuries it has grown and become a modern, international high-tech company. The corporate structure is sophisticated, comprising eight brands, and the products are made using state-of-the-art technology. The company can

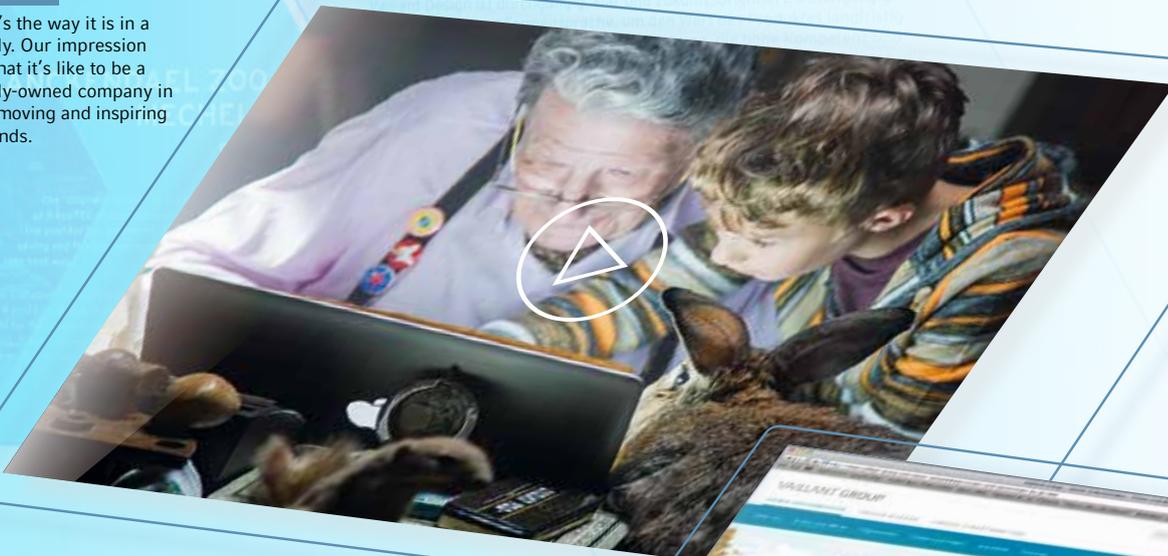
be described using facts and figures, but it is the people and their stories that truly bring the company to life – both for our members and the outside world.

These people’s motivation and enthusiasm also shine through on the new Vaillant Group website, which was completely revamped in 2014. The website is a source of sound technical information about the company structure and brands, but the primary function of this central digital platform is to be a tool for awakening people’s interest in the company, its values and its topics. To do this we use authentic stories that incorporate multimedia: from the team of developers that see the world through a green lens to the British production employee who shows a great deal of sensitivity in his work. We

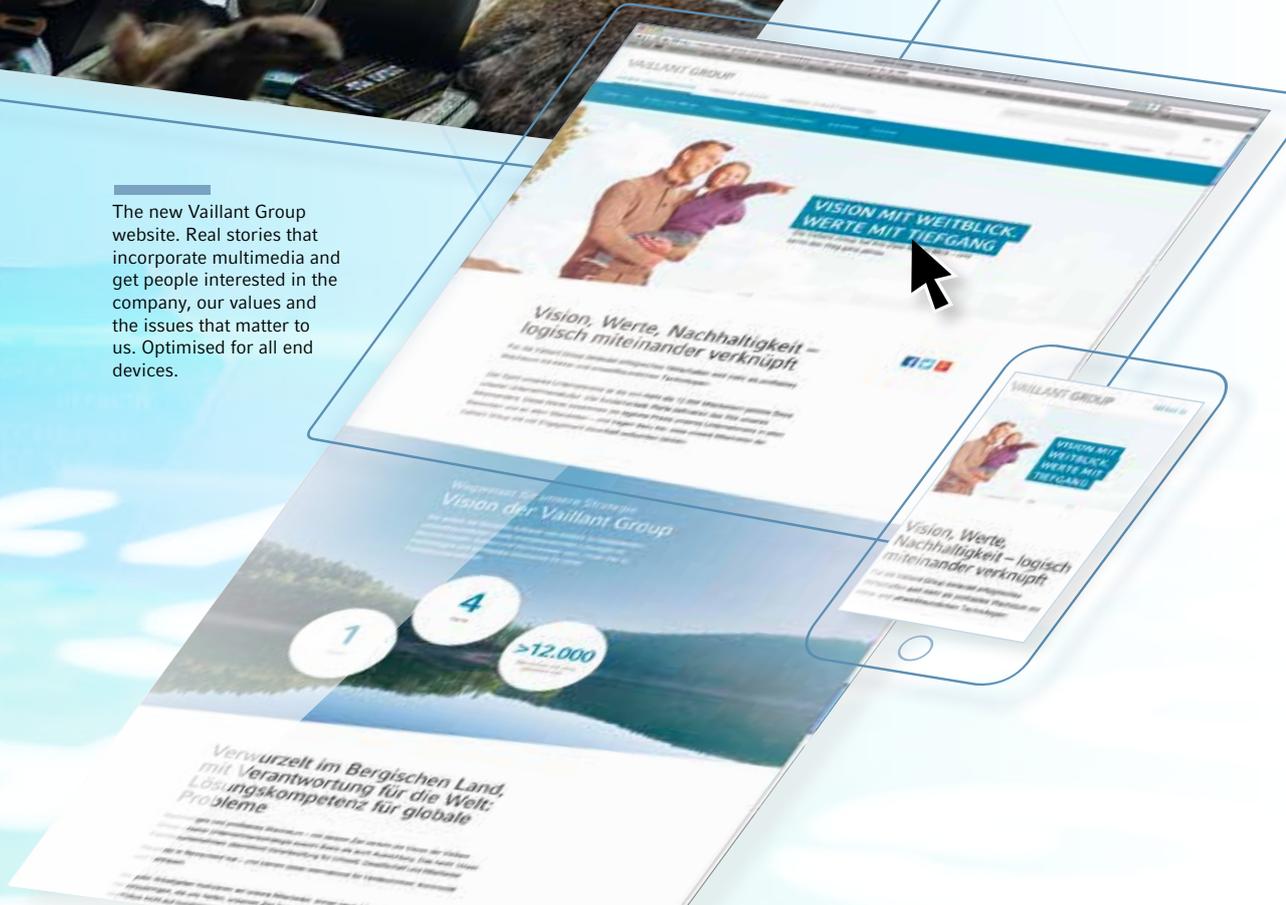
do this so that sustainability is not just a buzzword, but something that can really be experienced and understood.

The Vaillant expo, the brand experience centre for Europe’s most well-known heating technology brand, is another way of capturing people’s imagination and explaining the brand’s development, its values and its technologies. Employees provide a personal introduction to the brand. Visitors are invited to join in at numerous points, thus casting aside their role as mere onlookers to become a part of the Vaillant expo. We also invite you to learn about Vaillant’s history and catch a glimpse of the heating technology of the future. Because the expo, which opened in April 2015, is not a museum. It is part of the family.

That’s the way it is in a family. Our impression of what it’s like to be a family-owned company in 400 moving and inspiring seconds.



The new Vaillant Group website. Real stories that incorporate multimedia and get people interested in the company, our values and the issues that matter to us. Optimised for all end devices.



The Vaillant Group has combined all its sustainability activities into one **strategic programme**. Under the name **S.E.E.D.S.**, we set binding, verifiable targets in the following fields of focus: Environment, Employees, Development & Products, and Society. We develop **specific measures based** on these targets and continuously monitor the results. **Transparently and Group-wide.**

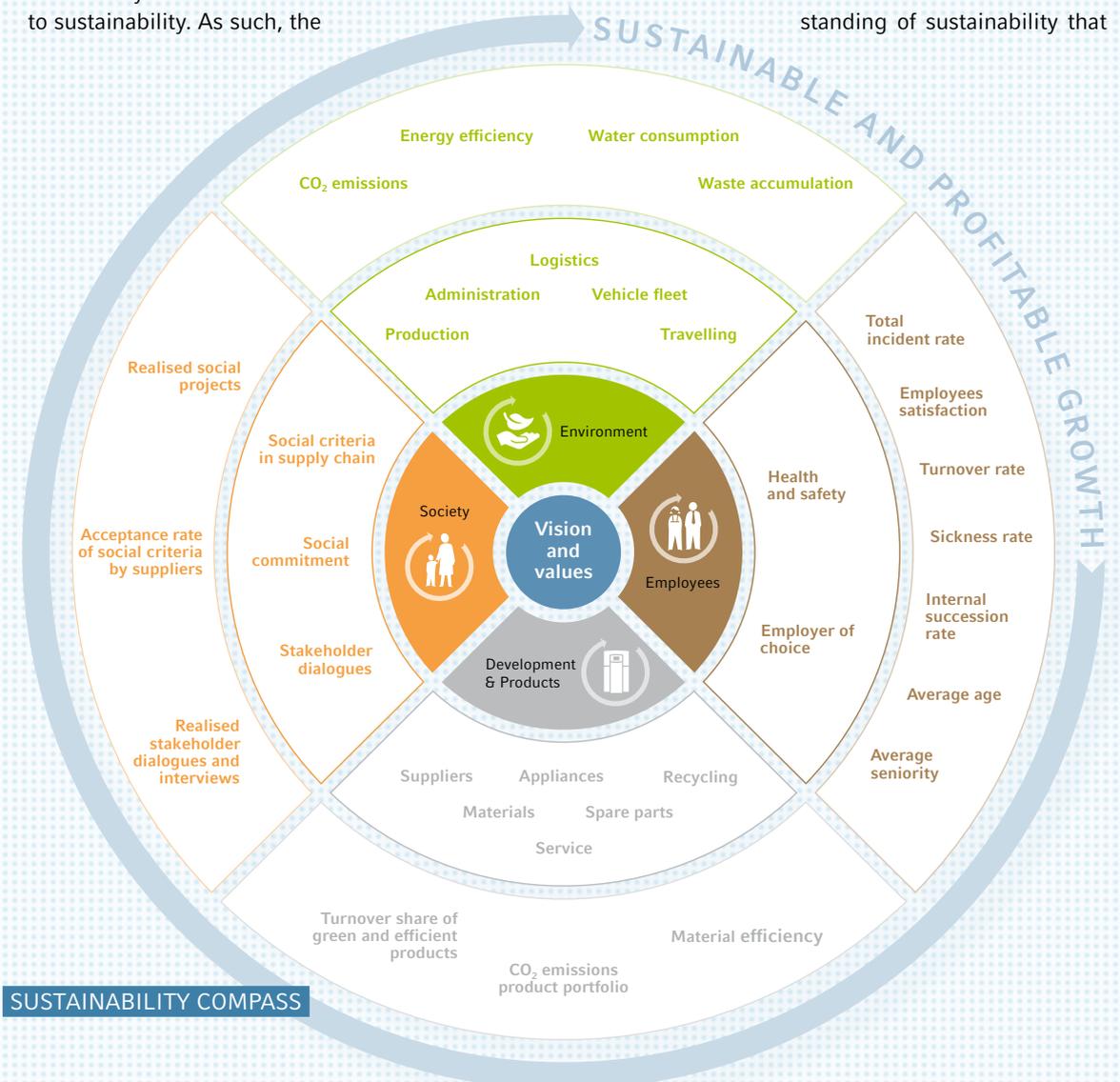
RESPONSIBILITY AS A PRINCIPLE

For a high-tech company that develops environmentally friendly, highly efficient heating technologies, addressing the complex subject of sustainability seems a logical step. Our customers, in particular, have clear-cut expectations regarding the energy and resource efficiency of our devices. However, the guiding principle of sustainability means more than just marketing particularly energy-efficient products. It dictates that the strategic and operational decisions taken by a company must always consider factors related to sustainability. As such, the

basic question must always be asked as to what direct and indirect effects a decision will have on people and the environment – now and in the future.

Sustainability programme

S.E.E.D.S., which stands for Sustainability in Environment, Employees, Development & Products and Society, identifies the strategic areas of focus that the family-owned company is focusing on to make its vision of sustainability a reality. These fields are defined on the basis of a broad understanding of sustainability that





S.E.E.D.S.-PROGRAMME



Strategic sustainability programme

Sustainability in
Environment
Employees
Development & Products
Society

SUSTAINABILITY BODIES

addresses the main challenges in our core business. In this regard, the Vaillant Group's sustainability management department makes an important contribution to ensuring the company's success in the long term. The department is part of Corporate Communications, Sustainability Management & Politics and reports directly to the CEO of the Vaillant Group. The team sets sustainability targets in close consultation with the Management Board and the individual operational units, systematically monitors their progress and provides impetus for improving company-wide sustainability performance. In addition, the Group-wide environmental management system is also controlled centrally from here.



ment team forwards these to the specialist departments and initiates and manages the sustainability activities. The department provides support for the regular Vaillant Group Sustainability Forums – the environment forum, occupational safety forum and regional forums. They discuss issues concerning resource-optimised production processes, occupational safety measures and programmes in the different markets. In addition, sustainability-related topics are also presented and discussed within other specialised committees.

Sustainability bodies

Several sustainability bodies are involved with implementing and developing the Vaillant Group sustainability strategy. As the most important body, the Vaillant Group Sustainability Board meets once a year. This is made up of the Management Board members, the sustainability management team and key senior management representatives. This Board discusses and makes all strategic decisions in the field of sustainability. The sustainability manage-

Global Compact

"As a family-owned company, we understand how important it is to commit to sustainable business practices. For this reason, we would like to take this opportunity to once again declare our commitment to the Ten Principles of the United Nations Global Compact. Every year, we use this sustainability report and detailed documentation that we publish online to report on the progress that has been made in implementing these principles into everyday practices along the entire value chain."

The Vaillant Group Management Board

Making an international **high-tech company** like the Vaillant Group **more sustainable** is an ambitious task. That is why we drew up challenging sustainability targets that we aim to achieve by **2020** – targets that require us to **make a real effort**. We have put in place a targeted **process based on key figures** in order to manage our performance.

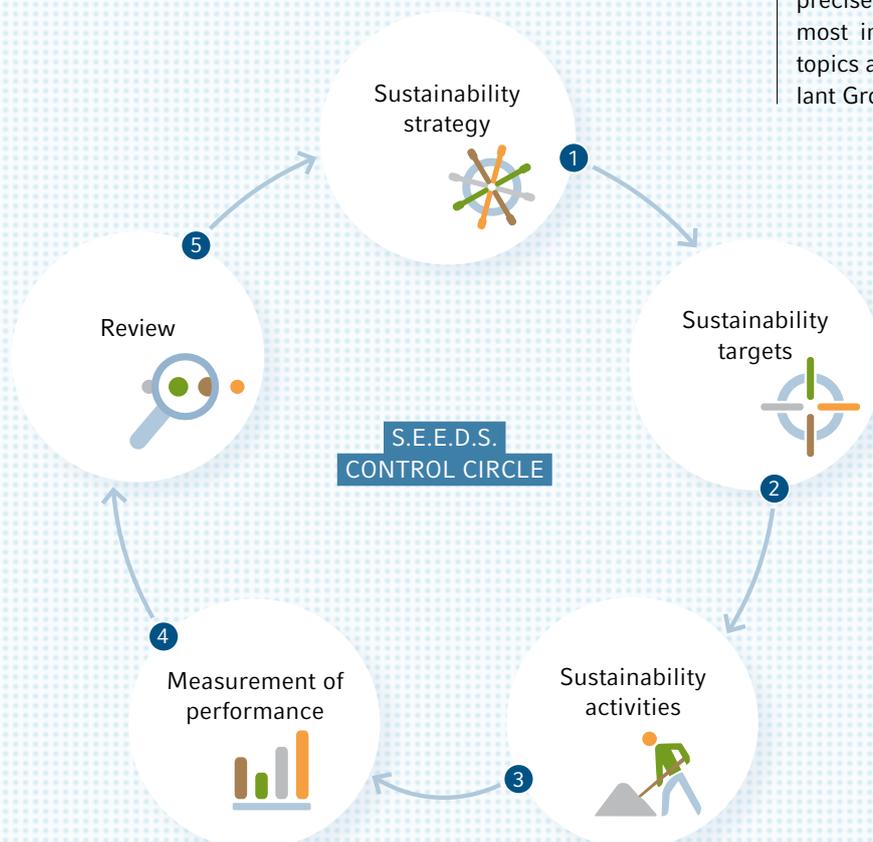
METHOD IN OUR SUCCESS

Management approach
We manage our sustainability performance using an established approach: the classic control circle applied to corporate management systems. On the basis of the sustainability strategy **1**, binding and verifiable targets **2** are set for all four fields of focus in the S.E.E.D.S. programme. For example, reducing CO₂ emissions by 25 per cent in the field of environment. In order to meet these targets we then implement operational measures **3** in all relevant areas of the company. In order to test how effective these measures are, key performance indicators (KPIs) and a target figure **4** are established for all targets. Every quarter, we survey all relevant data on a Group-wide basis to calculate the individual KPIs. These are brought together in a central control tool, the Vaillant Group Sustainability Scorecard. When inter-

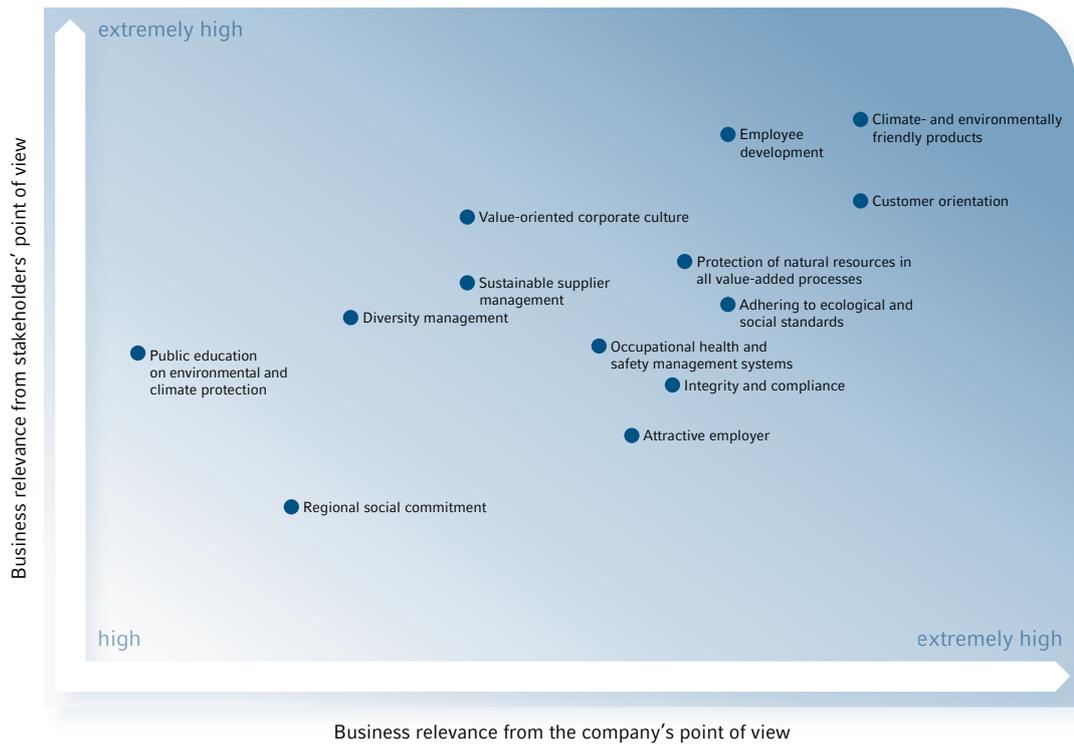
preting the figures, we take into account specific factors such as changes to production capacities and current production volumes. By comparing figures from the same period in the previous year against the long-term targets during the annual review **5**, we are able to gain an accurate picture of the current state of our sustainability performance.

Materiality matrix

There are few business-related topics that affect more areas than sustainability does. This means that we do not only need a clear strategy whose success is measured against binding targets. We must also be clear about which areas of activity are particularly important – from the point of view of both the company and its stakeholders. As part of a materiality analysis we carried out a systematic survey of customers, partners, suppliers, employees, owners and other relevant stakeholders and thus defined precisely the sustainability-related topics that are most important for our business activities. These topics are aggregated into fields of focus in the Vaillant Group materiality matrix.



MATERIALITY MATRIX



Systems and processes

Driving these topics forward in an international company requires a common language in the form of processes. This is because Group-wide processes are needed to lay down standards that ensure sustainability aspects are taken into account throughout the value chain. There are four major processes within the Vaillant Group. The first is the Group Development Process (GDP), which starts at the product development stage and covers the entire product life cycle. The Group Production Process (GPP) describes production steps in a standardised manner. The Group Market Process (GMP) addresses customer requirements and retention. Last but not least, the Group Service Process (GSP) describes the activities of our service technicians and specialist partners.

To manage company performance in terms of environmental protection, workplace health and safety and quality, the Vaillant Group uses differentiated management systems that are determined by standards valid throughout Europe. The Vaillant Group regularly commissions independent institutes to audit the application of these standards as part of a "multi-site certification process". All of our production and development sites have been certified as compliant with quality standard EN ISO 9001 and environmental standard EN ISO 14001. And we are just as ambitious when it comes to workplace health and safety. Steps are currently being taken to certify our workplace health and safety measures Group-wide as compliant with the international standard OHSAS 18001. Our plants in Remscheid, Belper and Skalica are already certified.

SYSTEMS AND PROCESSES



In the **spring of 2011**, the Vaillant Group set itself the first binding, **verifiable targets** in all fields of focus within the **S.E.E.D.S. programme**. These goals are an indication of the direction we shall be taking **until 2020**. Until then we are resolved to be transparent – not only about where we are on track, but also about where we need to become even better. More **detailed key figures** relating to sustainability can be found on the pages that follow.

OUR SUSTAINABILITY TARGETS



Development & Products

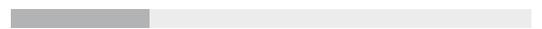
Our goal is to offer our customers energy-efficient and environmentally friendly products throughout the entire product life cycle – from development to purchasing, production and use, and all the way to service and recycling.

80

% Turnover of high-efficiency products



–15 % Greenhouse gas emission of the product portfolio



+15 % Material efficiency



Go-ahead 50% of target value achieved Target achieved



Environment

Protecting the environment and resources is an important part of the Vaillant Group’s sustainability strategy. We aim to use resources responsibly, to consistently lower CO₂ emissions, prevent negative influences on the environment and actively use opportunities for improvement.

-25

% CO₂



+20 % Energy efficiency



–20 % Water



–20 % Waste



Go-ahead 50% of target value achieved Target achieved

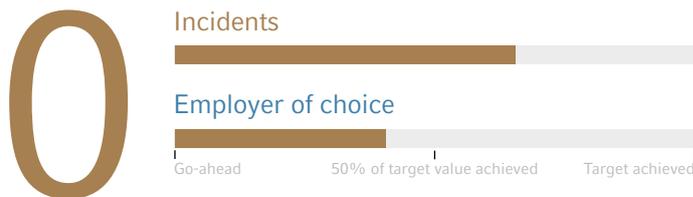
Sustainability

Sustainability is an integral part of our corporate culture and strategy. Our goal is to take a leading position in key sustainability areas and to serve as a role model.



Employees

Our employees form the foundation and the soul of the Vaillant Group. We pursue the goal of being the employer of choice for job applicants and current employees.



Society

The Vaillant Group acknowledges its social responsibility. The company makes an active contribution where it operates, for social progress and the welfare of people.



*Our target to assign 80 per cent of our total purchase volume to suppliers that recognise the Ten Principles of the UN Global Compact was already reached in 2012. We have already managed to meet the next target – 100 per cent – which was originally set for 2020.

All percentages refer to the 2010 reference year and are dependent on volume.

This sustainability report provides comprehensive and transparent information about the alignment of the company with the guiding principle of sustainable, responsible business practices

ABOUT THIS REPORT

SCOPE OF THE REPORT

This report contains information about the strategic direction of the Vaillant Group's sustainability management. The report discusses Group-wide developments in the S.E.E.D.S. programme's four fields of focus. The target readers of this publication include customers, partners, suppliers, employees, owners, media representatives and other interested stakeholders.

MATERIALITY AND INCLUSION OF STAKEHOLDERS

When we were planning the report's contents, we took into account feedback from different groups of stakeholders gathered from various forums for dialogue. In addition, we used a materiality analysis of internal and external reference groups to identify and evaluate sustainability topics that are important for our business activities.

REPORTING PERIOD AND DATA COLLECTION

The last sustainability report was published in 2014. The reporting period for all of the key performance indicators in the current report covers the 2014 calendar year from 1 January 2014 to 31 December 2014. The editorial deadline for reports on matters related to sustainability was 31 May 2015.

All production-relevant figures relate to the Vaillant Group production plants in six European countries and China. Figures were collected via a written survey filled in at our main sites and managed centrally. It should be noted in regard to the key indicators presented that they concern both absolute and relative figures. This allowed us to account for all factors feeding into them, e.g. expansion of our production capacity.

GLOBAL REPORTING INITIATIVE (GRI)

Our reporting on the Group's sustainability performance has been adapted to the internationally recognised standards of the Global Reporting Initiative (GRI). An external audit of the Vaillant Group's adherence to the GRI in its reporting has neither been conducted, nor is it planned.

GLOBAL COMPACT

The Vaillant Group is a member of the UN Global Compact. This report includes accounts of the progress we have made in our efforts to implement the pact's Ten Principles (Communication on Progress). You can find a systematic overview of our initiatives in this area, updated annually, at www.vaillant-group.com.

PRINT AND ONLINE

The sustainability report has been published in German and English. Further to the hard copy, a PDF version is also available at www.vaillant-group.com. In case of doubt, solely the German version published in printed form is binding.



-5%

Waste/unit
produced



-46%

Water consumption/
unit produced

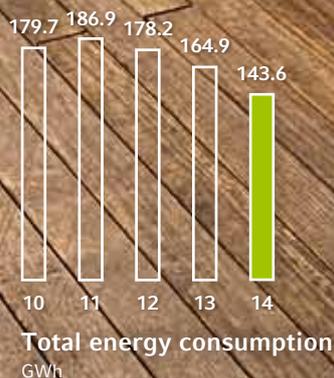
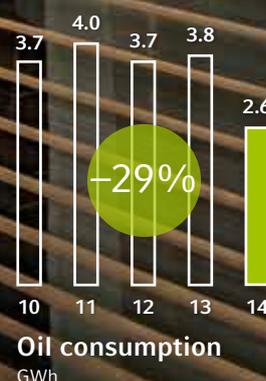
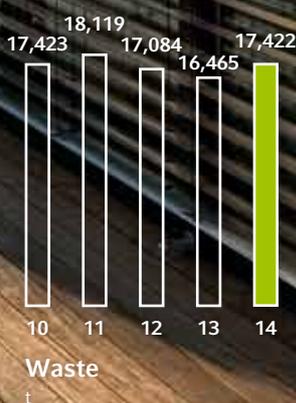


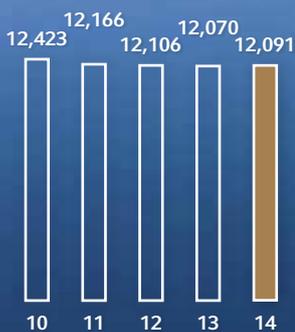
Sustainability key figures

The Vaillant Group lists all key figures relating to sustainability on an internal scorecard so we can manage our activities in this field. As we are constantly working to improve the quality of data and make our figures more meaningful by successively expanding their scope, changes may have been made to the previous year's figures since the publication of last year's report. The percentage development specified relates to the reference year 2010.

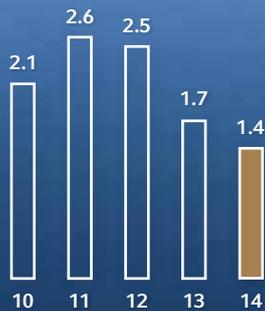
-20%

Total energy
consumption/
unit produced

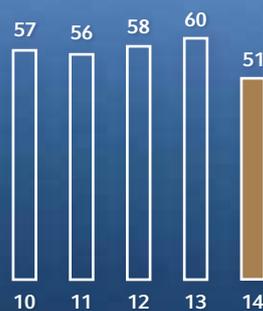




Employees
Headcount



Accidents at work
per 100 employees

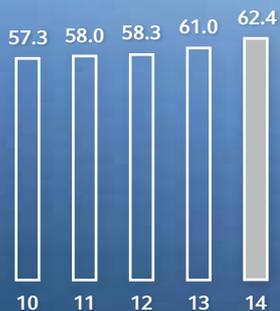


Management positions filled internally
%

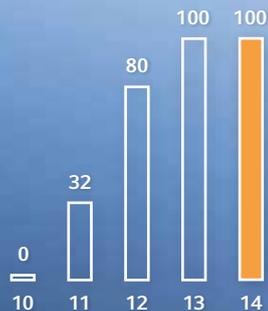


Markets with the greatest share of renewable energies in sales
%

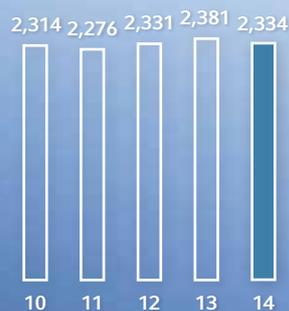
* Compared to 2011



Efficient/renewable technologies – share of overall sales %



UN Global Compact purchase volumes %



Sales in millions of euros



EBIT in millions of euros

A SUSTAINABILITY REPORT WORTHY OF ITS NAME

As well as dealing with the topic of sustainability, this report has also been **produced sustainably in terms of printing**. The paper is made **100 per cent from recycled material** and has been given the EU Ecolabel, Blue Angel certification and FSC approval. The inks and all other consumables such as printing plates are either based on **renewable raw materials** or are recyclable. Our printing contractors use **green electricity** and reuse **the heat from the printing machines** for heating purposes. In addition, we are increasingly using the **Internet** to distribute this report. And we **save further resources** by also publishing a condensed sustainability brochure which is specifically intended for our customers. Finally, the CO₂ emissions that inevitably do result from the production of this sustainability report are offset via **certified schemes**.

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Deutscher Nachhaltigkeitspreis
Deutschlands nachhaltigstes Produkt 2011



DEUTSCHER NACHHALTIGKEITSPREIS
Top 3 Deutschlands nachhaltigste Zukunftsstrategien (Korona) 2013



reddot design award

DESIGN PLUS



Renewables Awards



With Green iQ, your heating

becomes a social network.

Enjoy the new standard in sustainability, connectivity and convenience. With Green iQ by Vaillant.

The good feeling of doing the right thing.



Because  Vaillant thinks ahead.