

VAILLANT GROUP

Sustainability Report 2017

# taking *care*...





... of a better  
*climate.*

Inside each home and  
the world around it.

# AT A GLANCE



Visions pave the way for the future. In our case for a green future, where cosy warmth and hot water will some day be generated completely free of CO<sub>2</sub> emissions.  
**Welcome to the Vaillant Group (p. 6)**



A turning point in history marks the start of a new era. Just like in the French capital in 2015: the era of decarbonisation.  
**From Paris to the future (p. 8)**



Form follows function. The Chicago School slogan has rarely been interpreted as clearly as in the Green Living Space, a minimalistic approach to future living.  
**Not a question of size (p. 12)**



Authentic and to the point. CEO and Sustainability Director come together to discuss our sustainability performance and their ambitions for the S.E.E.D.S. programme.  
**Top-level talk (p. 18)**



Truly green products are only possible if we pay attention to every detail. We did just that together with three of our suppliers. Why? To become even more precise.  
**Even more precise (p. 22)**



Telling it as it is: how did the Sustainability Ambassadors get on in their first year? What worked well, what less so? We caught up with them to find out.  
**The Ambassadors (p. 24)**



Photos that tell a cautious tale of childlike ease and vulnerable humanity. Invaluable insights into the everyday lives of SOS Children's Villages all around the world.  
**Young lives (p. 28)**



80, sprightly, seeks ... Åke Siikavuopio from the bitterly cold village of Naimakka, north of the Arctic Circle, didn't want to feel cut off any more. Then he had a brainwave.  
**Northern star (p. 38)**



Heraclitus once said "To teach is to spark a fire, not fill an empty vessel." He would have certainly been a proud patron of the Junior Uni in Wuppertal.  
**We can't let talent pass us by (p. 44)**



Every sustainability strategy is built up around its goals. The more binding and ambitious, the more plausible. But also the more difficult to achieve. And that's fine by us.  
**Our sustainability targets (p. 54)**



Key performance indicators quite literally give an indication of performance. In this magazine we'll be looking at our performance so far as a sustainable company.  
**In black and white (p. 56)**

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## Dear reader,

The Paris Agreement negotiated in 2015 marked a world first when nearly all of the countries around the globe made a binding agreement to limit global warming to below two degrees.

As a provider of highly efficient heating, ventilation and air-conditioning technology, we can contribute towards achieving this goal by providing energy-saving, intelligent solutions that rely more and more on renewable energy sources. This is also reflected in our vision “Taking care of a better climate. Inside each home and the world around it” as well as in our strategic orientation (p. 8). In 2017, for example, we set up a stand-alone business unit for heat pumps and renewable energies, which will accelerate the expansion of our heat pump portfolio. We are also investing in the innovative strength of the company by building a new research and development centre at our headquarters in Remscheid.

In order to anchor sustainability more broadly across the Vaillant Group, we have appointed a number of S.E.E.D.S. Ambassadors (p. 24). The commitment shown by these colleagues, who are driving sustainability forward in their respective markets and departments, is now starting to bear fruit.

Finally, a look at our sustainability targets (p. 54) shows that, in many respects, we are on the right track to attaining our ambitious targets. We will continue to show tenacity as we work towards making our family-owned company, our supply chain and the life cycle of our products and services even more sustainable.

Join us as we move forward.



**Dr.-Ing. Norbert Schiedeck**

Chief Executive Officer  
Managing Director Technology



**Dr Stefan Borchers**

Managing Director  
Finance and Services




**Dr Andree Groos**

Managing Director  
Sales, Marketing and  
Service

Brands of the  
Vaillant Group

 **Vaillant**

 **Saunier Duval**

 **awb**

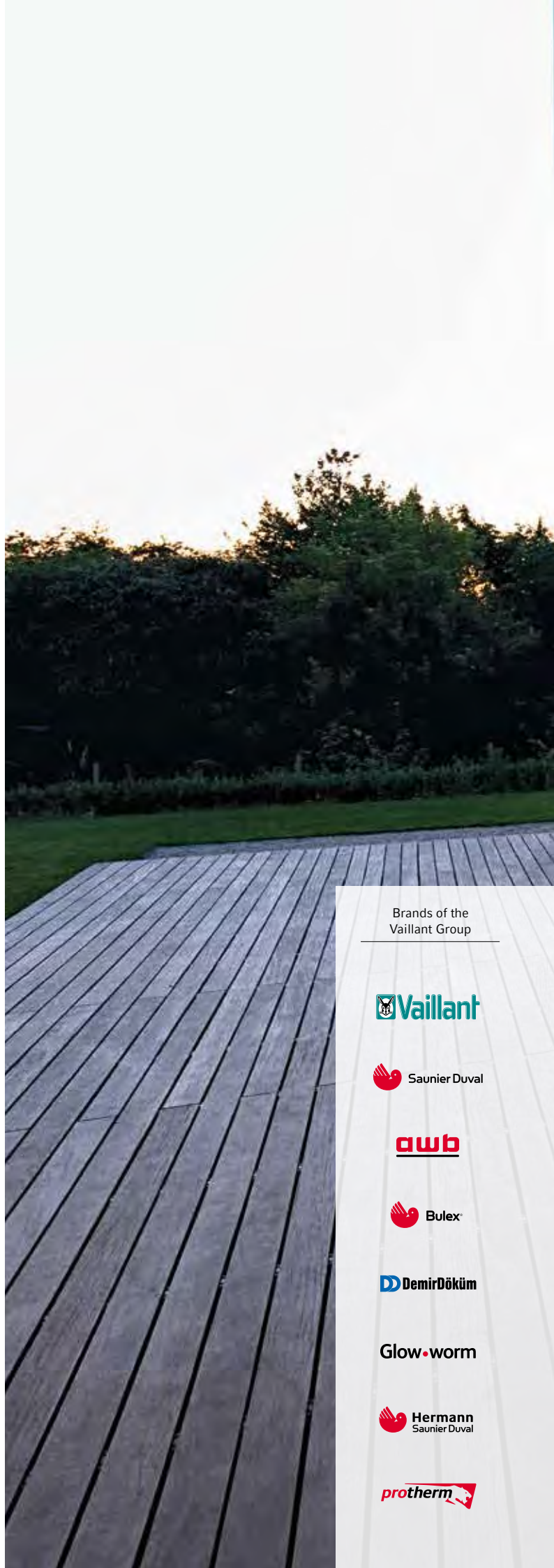
 **Bulex**

 **DemirDöküm**

**Glow.worm**

 **Hermann  
Saunier Duval**

 **protherm**



# WELCOME TO THE VAILLANT GROUP

The Vaillant Group is a global market and technology leader in the fields of heating, ventilation and air-conditioning technology. Sustainability is inherent in the identity of the family-owned company, which received the 2015 German Sustainability Award as Germany's most sustainable large company. Our approximately 13,000 employees around the world do their bit to keep the company sustainable. Many of them work within an international network of ten production and development sites spread across six European countries and the People's Republic of China.

They all strive to achieve the same vision: "Taking care of a better climate." Despite being reworded in 2017, the Vaillant Group's vision has applied ever since Johann Vaillant established the company in 1874. Vaillant has been converting energy into warmth for people since day one. We specialise in heating, ventilation and air-conditioning technology – some of the most critical factors in the energy revolution. In the European Union, more than 40 per cent of primary energy is used in and for buildings. As a result, the company, which is 100 per cent family-owned, is focussing on the areas in which it can make the biggest difference: helping meet climate targets through intelligent products and solutions for heating and hot water. "Taking care of a better climate. Inside each home and the world around it" is both our ambition and responsibility – for the sake of millions of people's homes and the global climate.

The Vaillant Group's eight brands offer an extensive range of heating, ventilation and air-conditioning technologies. The long-established Vaillant brand represents innovative and efficient products, intelligent control systems and optimum service, or in other words the highest standards when it comes to a future-oriented approach, user friendliness, design, efficiency and sustainability. With Green iQ, a product range has been brought to market that stands for even greener technology and intelligent networking.

The Saunier Duval brand group (with its brands Saunier Duval, AWB, Bulex, Glow-worm, Hermann Saunier Duval and Protherm) and the DemirDöküm brand make up a significant part of the Vaillant Group's brand portfolio. The brands cater to the needs of the high-volume mid-range price segment and are characterised by intelligent, simple and reliable heating technology.

*One company, eight brands, around 13,000 employees and one vision: "Taking care of a better climate."*

DECARBONISATION

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# FROM PARIS TO THE FUTURE

*The 2015 Paris Agreement marked a turning point in history. For the first time ever, the world's nations undertook to actively combat climate change. A liveable future in 2050 has to be a decarbonised one.*

## THE AGREEMENT

On 12 December 2015, the nations made a common pledge in the form of the Paris Agreement: an agreement aimed at limiting global warming to under two degrees, or 1.5 degrees if possible. Legally binding, transparent and with a defined control mechanism: a world first. Only if this proves successful can we prevent the most severe damage from being caused by global warming. It is high time. The lives of billions of people are at stake. Climate change is causing the sea level to rise and threatening coastal areas and islands; entire swathes of the planet are in danger of becoming uninhabitable and infertile. The Paris Agreement sets out its targets clearly: by 2050, the amount of gas emissions that are harmful to the climate may not outweigh what the earth is able to absorb or transform.

## THE MISSION

Zero CO<sub>2</sub> – that is the aim. The agreement is all about achieving decarbonisation, little by little, by the middle of the century; about moving away completely from fossil fuels in future. The task is

enormous, but so is our responsibility, especially considering that more than 40 per cent of primary energy consumed in the EU is used in and for buildings. The core business of the Vaillant Group offers a huge amount of leverage for the energy transition. Heating, cooling and ventilation have to be made more environmentally friendly. Efficient gas-fired condensing technology, heat pumps that are not dependent on fossil fuels, solar technology that produces energy and hot water, storage tanks and intelligent control units will all help make this happen.

## OUR CONTRIBUTION

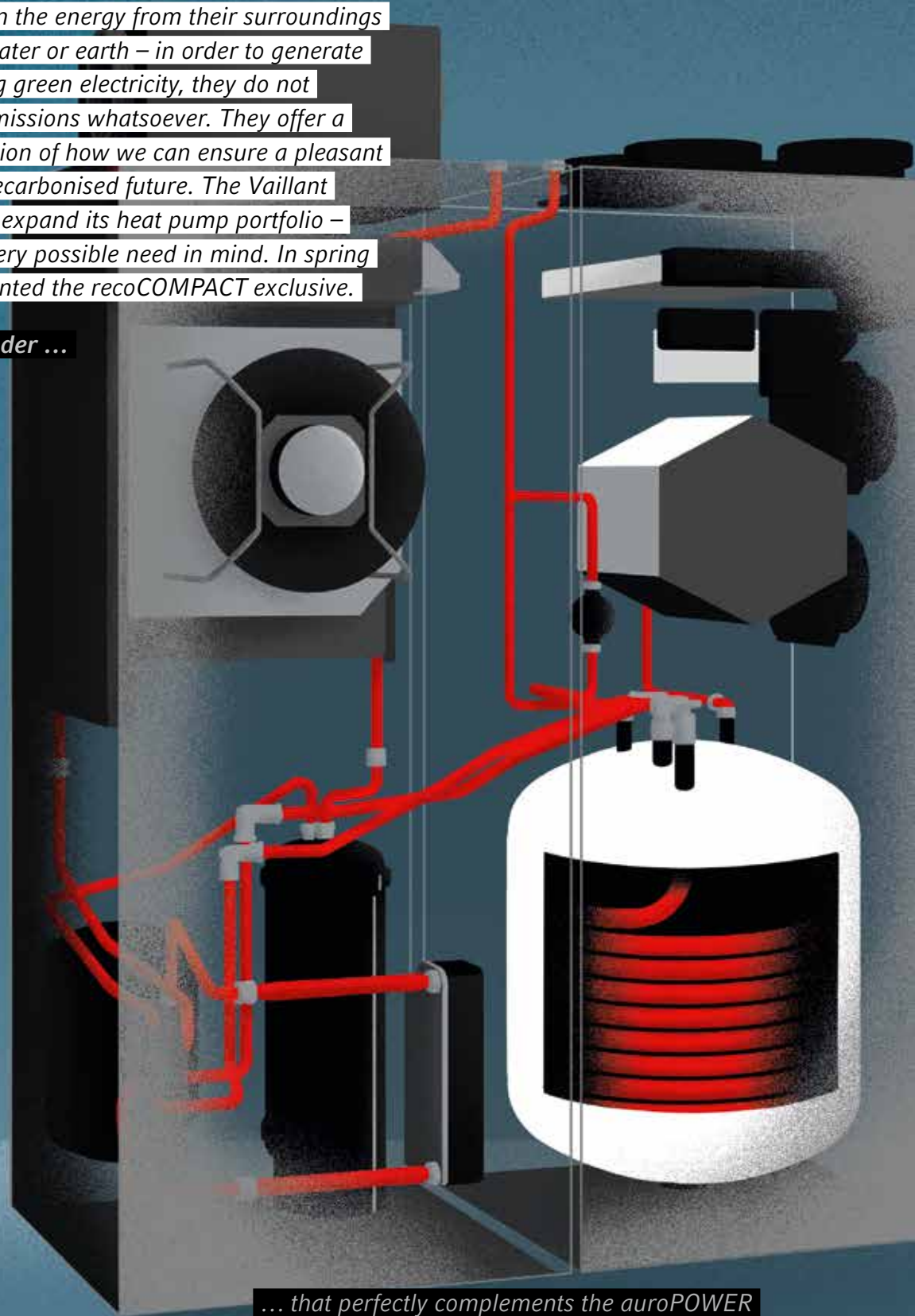
We have to consider the products offered by the Vaillant Group and also its vision: "Taking care of a better climate. Inside each home and the world around it." Until decarbonisation has been achieved in full, highly efficient gas-fired condensing technology will make a valuable contribution towards reducing CO<sub>2</sub> emissions. At the same time, the Vaillant Group is advancing its business with heat pumps, which draw on their surroundings, whether the earth, brine or air, to heat and cool. In 2017, the compa-

ny set up a stand-alone business unit for heat pumps and renewable energies, where know-how and expertise are pooled together, making the company even better and quicker at what it does. At the headquarters in Remscheid, the business unit works closely together with all the relevant areas such as research and development, production, and quality. The heat pump product portfolio is being expanded in 2018; gaps are being filled. The new research and development centre, which is currently under construction, will enable the developers and engineers to work even more closely together under one roof. Laboratory and test rig capacities are being expanded so as to allow every conceivable heating system to be tested under real-life conditions. The Vaillant Group is working on diminishing its carbon footprint also with its partners, such as component suppliers. Moreover, it is an active participant in the German dialogue forum *Wirtschaft macht Klimaschutz*, which connects German businesses as they seek to strengthen their climate protection measures. The road to a decarbonised future can only work if we move along it slowly – and together.

# recoCOMPACT exclusive

Heat pumps draw on the energy from their surroundings – i.e. from the air, water or earth – in order to generate heat. Operated using green electricity, they do not generate any CO<sub>2</sub> emissions whatsoever. They offer a solution to the question of how we can ensure a pleasant room climate in a decarbonised future. The Vaillant Group is working to expand its heat pump portfolio – with pretty much every possible need in mind. In spring 2018, Vaillant presented the recoCOMPACT exclusive.

**A real all-rounder ...**



... that perfectly complements the auroPOWER photovoltaic system. By drawing on its green electricity, it can heat and cool besides providing ventilation and hot water. Completely free of CO<sub>2</sub>.

## 1 **MODERN-DAY POWERHOUSE**

*All-in-one and highly compact: the recoCOMPACT exclusive is the modern-day powerhouse for the home, featuring an integrated heat pump and ventilation as well as an extra-large hot-water storage (225 litres). The compact construction reduces the installation surface to the smallest area possible, especially as the system can be positioned just ten centimetres from the wall.*

## 2 **QUICK INSTALLATION**

*Plug and play: the recoCOMPACT exclusive is pre-installed, meaning it can be assembled and put into operation by two people in just a day. As it can be maintained from the front, it also saves the technician time – and the customer money.*

## 3 **REAL GREEN iQ**

*Especially efficient, sustainable and intelligent: the recoCOMPACT exclusive is so efficient that it has been awarded the A++ efficiency label. It therefore also meets the high standards of our Green iQ label. The multiMATIC control unit is easy and intuitive to use, also remotely in the form of an app. Very smart.*

## 4 **A BREATH OF FRESH AIR**

*Well-equipped: the integrated ventilation system recoVAIR not only supplies the building with fresh air; its heat recovery also makes it particularly efficient. It takes a whole 98 per cent of the heat from the outgoing air, which it directs to the heat pump for further use.*

## 5 **THE NEIGHBOURS' FAVOURITE**

*Pssst: the recoCOMPACT exclusive is super quiet – in fact, it's one of the quietest models of its class. Even when the demand for heating is high, the noise level remains low. The heat pump works at just 45 dB(A) in night mode. And as it is assembled entirely indoors, the neighbours won't be disturbed by the device or the noises it makes.*



NEW WAYS OF LIVING

# Not a question of size

*Smart and green:*  
prefabricated house manufacturer SchwörerHaus has grouped together with Vaillant, IKEA and Gira to turn its mini-house concept into a green living space.



**F**ifty square metres can feel so big. The Green Living Space at Hannover's FertighausWelt, a permanent exhibition area showcasing the latest prefabricated house designs, is full of surprises. Guido Schäfer has worked for SchwörerHaus for 18 years now, advising people on how to turn their dream home into a reality. "The Green Living Space is something different," he says. "It really gets people talking." Next door, in the 211-square-metre single-family house, all kinds of technical questions are asked: which windows, which roof, efficiency values, heating system? Living, reinterpreted.

"It's a proper home," remarks Carola Kochner. She has assisted the Green Living Space project on behalf of SchwörerHaus together with partners IKEA, Gira and

### How much space do you need to live well?

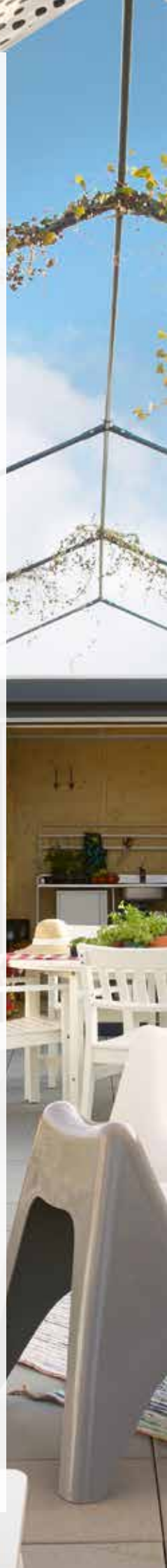
Just a few hours after arriving on site, the mini-house can be moved into. Schwörer can also take care of the interior construction, such as the bathroom, kitchen or built-in cupboards, in its own plants in advance. A little under 50 square metres. "A happy home doesn't need any more space," Kochner is convinced. The prefabricated-wooden-house manufacturer has been producing the Flying Spaces for eight years now.

Michael Haas, Country Marketing Interior Design Leader at IKEA Germany, has transformed one Flying Space into a Green Living Space. Energy self-sufficient and with a garden up top. His inspiration came from a construction trailer belonging to the hero of a German children's TV series from the 1980s. Peter Lustig, the protagonist in "Löwenzahn", has a roof terrace on top of his trailer. "It looked like so much fun.



Vaillant. "People can live in a Flying Space, the living module, on a permanent basis. It has all the trademark features of a Schwörer house: well-insulated walls and triple-glazed windows, for example. It will last 100 years or more." What makes the Flying Spaces so special is that each unit, measuring no more than 14.5 by 4.35 metres, is made entirely in the plant and delivered fully constructed by lorry – hence the maximum dimensions. Thanks to its compact size, however, an entire Flying Space can be relocated in one go.

I always wanted to have something like that as a kid," reminisces Haas. What has emerged is a luxury version of Peter Lustig's trailer. With oak parquet, smart-home technology and Vaillant photovoltaic modules integrated into the façade that supply green energy. The roof terrace is an outdoor living room complete with gas grill and a garden shed, where ingredients and dishes can be stored. The drinks are kept chilled in the fridge as there is, of course, a power and water connection. Strawberries, Siberian maples and magnificent, pink-coloured hydrangeas grow in the raised beds. A little oasis of comfort with space to have friends around for a big barbecue.









### **Filling gaps instead of building on green areas**

It's a charming idea. The cosy atmosphere can even be felt in the show home park, right next to the autobahn. The mini-house undoubtedly has appeal. "You can see it from the autobahn. Some visitors have even made a spontaneous visit after spotting it," reports Schäfer. The master carpenter is extremely knowledgeable and enjoys talking about the house. He helps people imagine the various possibilities it offers: building a residential community for senior citizens from Flying Spaces, for instance. Everyone would have their own area and also a communal one. If someone decides to move away, they can do so easily thanks to the modules' flexibility. Whether a home for one or two people, attached next to or on top of another single or double module, pretty much anything is possible.

The mini-houses are a great way of filling in gaps. In terms of space and society. The number of single-person households is growing in Germany, as is the housing shortage in cities. The mini-houses could be placed on top of existing houses or in vacant lots, making them perfect for filling empty spaces. Despite the many possibilities, Schäfer knows that certain preconditions still have to be met; distances to other properties stipulated in building regulations have to be observed. He hopes that construction laws and approval practices will adapt with the changing needs.

### **Energy self-sufficient with good insulation and photovoltaics**

So far, the concept has mainly caught the imagination of people over fifty. It promises relief and freedom. Guido Schäfer assures that the Flying Space can be made energy self-sufficient. "The insulation is really good, which means energy consumption is extremely low." The façade of the Green Living Space is fitted with eight of Vaillant's auroPOWER photovoltaic modules, posi-

tioned vertically. They are embedded into the façade.

"We got together and looked for a technical solution that would appeal to customers both in terms of energy use and overall design. The VPV-300 panels are new. They are completely black and have an extra-flat frame. Thanks to their modern design and efficiency, they fit perfectly with the idea of the Green Living Space," explains Andreas Seber, who looks after SchwörerHaus in his role as Key Account Manager for prefabricated houses at Vaillant Germany. There's a close relationship with SchwörerHaus. "We share the same passion for innovative and sustainable products. The Green Living Space project therefore presented a good opportunity to establish new, flexible solutions that are efficient, resource-conserving and therefore sustainable."

The auroPOWER inverter converts the power gained from the photovoltaic system into usable household electricity with barely any loss – for optimal output. In the bathroom, a Vaillant electronicVED exclusiv is practically invisible, hidden away behind a hatch. The fully electronically controlled continuous-flow water heater provides a sufficient amount of hot water for the house.

"We also wanted to appeal to a younger target group with the project. To young people who do not want to feel stuck in a flat they've bought but want to be surrounded by greenery," explains Kochner. Describing the current living trends, a study conducted by trade fair centre Koelnmesse and the Association of the German Furniture Industry noted that living will become more intelligent, mobile and sustainable in future.

"Our society is transforming and will become more mobile; living situations are changing – this necessitates flexible housing solutions," explains Johannes Schwörer, Managing Director of SchwörerHaus. The modular, mobile mini-house concept with its forward-looking technology is perfect for our times.





# TOP-LEVEL TALK

Seven years ago, the Vaillant Group formulated its targets for 2020 with the S.E.E.D.S. sustainability strategy. What has already been achieved and where do we go from here? Dr.-Ing. Norbert Schiedeck, Chief Executive Officer and Managing Director Technology, and Dr Jens Wichtermann, Director Corporate Communications, Sustainability & Politics, discuss these questions.

**Dr.-Ing. Schiedeck, you have been Chief Executive Officer since May 2018. In your opinion, how significant is sustainability for the Vaillant Group?**

*Dr.-Ing. Schiedeck:* Sustainability is important across many areas of the Vaillant Group: it helps us stay competitive, it is sought after by customers and legislators, and resources such as energy and raw materials are precious. This is also reflected in our new vision "Taking care of a better climate. Inside each home and the world around it". This corporate vision is our response to changing markets and competitive conditions. At the same time, it is very much rooted in our values, our position as a family-owned company and, of course, our expertise. It addresses social developments, new technological challenges and environmental policy goals.

**Many countries rewrote their climate objectives in the wake of the Paris Agreement. How does this affect the Vaillant Group?**

*Dr.-Ing. Schiedeck:* Decarbonisation and thus electrification is gaining ground. For us as a traditional manufacturer of gas-fired heating devices, this is a challenge, but one that presents an enormous opportunity. We want to excel equally with our gas-based and electricity-based solutions. We are focused on working towards this goal, hence setting up a separate business unit for heat pumps and renewable energies in April 2017. We are developing our portfolio in

this area; in 2018, we will bring not one but three new heat pumps to market.

*Dr. Wichtermann:* As a globally active company, we have to deal with a high number of laws and regulations. We want to be able to anticipate changes to the law that concern the environment early on. But we are not satisfied with merely meeting legal regulations and customer requirements; we want to surpass them – make our customers happy and put ourselves ahead of the competition. We can see that the decision to integrate sustainability aspects into our processes and develop them in the organisation has already paid off in various respects.

**Can you give us some examples?**

*Dr.-Ing. Schiedeck:* Take the UK's Modern Slavery Act, for instance, which demands that companies explain what they are doing to combat forced labour, slavery and human trafficking in the supply chain. The Vaillant Group signed up to the UN Global Compact in 2011. In turn, we have also had our suppliers pledge their adherence to the Ten Principles of the Global Compact that concern human rights, labour standards, environmental protection and the fight against corruption. We also check adherence to these principles during our audits and are working on reviewing the supply chain in greater detail. In our first statement regarding the Modern Slavery Act last year, we were able to declare that we are taking a stand against forced labour, slavery and human trafficking with our procurement processes.



**SUSTAINABILITY IS IMPORTANT  
ACROSS MANY AREAS OF THE  
VAILLANT GROUP.**

Dr.-Ing. Norbert Schiedeck



**THE 6 GREEN RULES  
SHOW THAT SUSTAINABILITY  
PAYS OFF.**

Dr Jens Wichtermann

*Dr Wichtermann:* The 6 Green Rules have also proven to be beneficial. They help us integrate sustainability criteria into product development. The data we collect here are required, for instance, for the Environmental Product Declaration, which is already being requested as part of public tenders for new builds in France. The 6 Green Rules have also helped us meet the audit requirements for the new edition of environmental management standard ISO 14001 – for instance with regard to the newly introduced environmental impact assessment that looks at a product throughout its entire life cycle. This sends out a very clear message: sustainability pays off!

#### **How do the 6 Green Rules benefit colleagues in product development?**

*Dr.-Ing. Schiedeck:* The 6 Green Rules are a useful resource for our engineers and developers as they provide them with reliable, measurable criteria. This is also why we developed the 6 Green Rules and integrated them into the product development process.

*Dr Wichtermann:* The E-Learning Program was also well received. The Sustainability Management team and Jochen Paulus, the Sustainability Ambassador for Development, are responsible for the program and coach the teams. A final report is drawn up on

every project for the Sustainability Management team.

#### **When drafting the S.E.E.D.S. sustainability strategy in 2011, you set a number of targets for 2020. How happy are you with what has been accomplished?**

*Dr.-Ing. Schiedeck:* We are on track to achieve our goals in the Environment field. In the Development & Products focus field, on the other hand, we want to progress even more quickly and further increase the proportion of turnover derived from highly efficient products. That goes in particular for heat pumps.

*Dr Wichtermann:* Also in the field of Employees we haven't yet reached what we set out to do, for example in terms of employee satisfaction. By adapting the format of our employee survey, we are expecting to receive feedback that is better suited to pinpointing specific measures.

#### **What are your plans beyond 2020?**

*Dr.-Ing. Schiedeck:* We are working on further developing the strategy. The topic of decarbonisation is sure to play a significant role here. It is too early to reveal any details, but it's safe to say that the essence of S.E.E.D.S. will remain intact.

#### **DR.-ING. NORBERT SCHIEDECK**

Chief Executive Officer  
Managing Director Technology



#### **DR JENS WICHTERMANN**

Director Corporate Communications,  
Sustainability & Politics



# EVEN MORE PRECISE

The 6 Green Rules ensure that sustainability criteria such as recyclability and the carbon footprint of materials are taken into consideration during the product development process. However, we are lacking the data to quantify these criteria for components that are bought in from outside. A pilot project under way with select partners hopes to help change this and make it easier for developers to work with the 6 Green Rules.





What makes up a gas-fired condensing boiler? How much of which materials are used? And how do these materials affect recyclability? The 6 Green Rules demand answers to these questions. In order to provide them, we first need to know everything about the materials used in a product. The 6 Green Rules are there to make sure sustainability is considered from the get-go, from the birth of a new product through-out its use and as far as the recycling of its various parts. The criteria for the 6 Green Rules are firmly integrated in the development process.

“But we don’t have any data for the parts we buy in,” explains Marion Storch, engineer in the Vaillant Group’s Sustainability Management team. Until now, the developers have relied on educated guesswork when noting the materials and quantities used in components such as pumps or fans. In some cases, e.g. with the Green iQ products, they have also disassembled the parts and weighed the materials in order to guess their carbon footprint and recyclability as best as possible. “That turned out to be neither particularly efficient nor as precise as we would have liked,” says Marion Storch.

This led the Vaillant Group to ask three of its suppliers back in autumn 2017 whether they would be prepared to disclose the lists of materials used in some of their components. The suppliers had previously taken part in a survey on the topic of sustainability, where 99 per cent of them said they took sustainability into account and 81 per cent said they would be open to a cooperation with the Vaillant Group regarding the development of sustainable products.

“This willingness to cooperate gave us a clear signal. We contacted partners who supply us with high numbers of components. One manufactures pumps, another fans and the third gas fittings,” reports Marion Storch. The feedback from the suppliers was positive. The pump manufacturer, for instance, subsequently sent us bills of materials for four different pumps that are installed in over 500,000 Vaillant Group devices every year.

“We entered the data into our database in order to ascertain the recyclability and carbon footprint of these materials using our tool,” explains Jochen Paulus, Senior R&D Manager System Products and Sustainability Ambassador for Development. The tool and the database are currently undergoing development. “We are in the process of creating a comprehensive and user-friendly database that will enable the developers to access all the information they need at the click of a button. Everything we are doing now is working towards this goal,” says Jochen Paulus. “We want to expand our data pool and also continue to improve the process for our developers.” The data collected in the pilot project with these three partners are helping us define the structural requirements of the new database.

The aim is to ultimately have a database in which the materials used in the purchased components are precisely recorded together with exact information on their weight. “This will allow us to provide extremely specific, transparent information on the recyclability of our products and on the carbon footprint of the materials used,” says Marion Storch. This database will then be integrated into new Product Lifecycle Management software – bringing us one step closer to implementing the 6 Green Rules.



**SIMONA PETROTTA**  
Assistant to Group Director  
Human Resources, 35 years old

# The Ambassadors

The main aim of the S.E.E.D.S. Ambassadors is to strengthen the sustainable mindset in their division by using their knowledge and keeping their eyes and ears open. Their first year is up – *time to find out how things are going.*

**Mr Heuser, how was your first year as S.E.E.D.S. Ambassador? How would you sum it up in three words?**

*Raimund Heuser:* Fun, relevant and colleagues. The best example of this is the Spare Cents initiative for SOS Children's Villages. It was fun, relevant and we managed to get a lot of colleagues involved.

*Simona Petrotta:* That was a great campaign. Raimund Heuser and my colleague Samantha Stella had the idea to

drum up more support for the Spare Cents initiative on behalf of SOS Children's Villages at the plant party in summer. Colleagues are able to donate the spare cents shown on their wage slip – so the amount after the comma – to SOS Children's Villages.

**How did you do this, Mr Heuser?**

*Heuser:* We used the back of the ticket to the plant party in Remscheid to raise renewed awareness of the campaign. Before that, around 200 employees had

signed up in Germany; that figure has now increased to almost 500. This meant we were able to more than double the number of sign-ups.

**And how was your first year as S.E.E.D.S. Ambassador, Ms Petrotta? Also in three words please.**

*Petrotta:* That's difficult. Surprising, short, not entirely satisfactory.

**And why is that?**

*Petrotta:* We first focused on ourselves as



a department that had undergone restructuring. Questions came up such as how do we interact with one another? How can we deal with the lack of space and our resources in the long term? We spent a lot of time simply talking to one another and making people more aware of sustainability.

**How about you, Mr Heuser: what did you experience during your first year as S.E.E.D.S. Ambassador?**

*Heuser:* There were many things, big and small. I worked a lot with the HR department, also closely with Ms Petrotta. A new works agreement will be released which lays down some new rules for the employee survey and management feedback. It's all about seizing on feedback from colleagues with a view to the long term, so using the outcomes to make improvements: to the managerial style, to working conditions ... The agreement was a long time in the making; it will now – in summer 2018 – be approved. I'm also pleased that we've been able to provide water dispensers for our colleagues in Production.

**True, but that's something you did in your role as chair of the works council and not as S.E.E.D.S. Ambassador.**

*Heuser:* Of course. But it's my role as ambassador that gets me thinking about sustainability.

**What made you take on the role of S.E.E.D.S. Ambassador to begin with? Does it need someone from the works council?**

*Heuser:* There was no question about it for me; it was a logical step in terms of the subject matter. A lot of things I deal with as chair of the works council are linked to sustainability: colleagues, occupational safety and environmental protection.

**What do you have in mind for your next year as S.E.E.D.S. Ambassador, Ms Petrotta?**

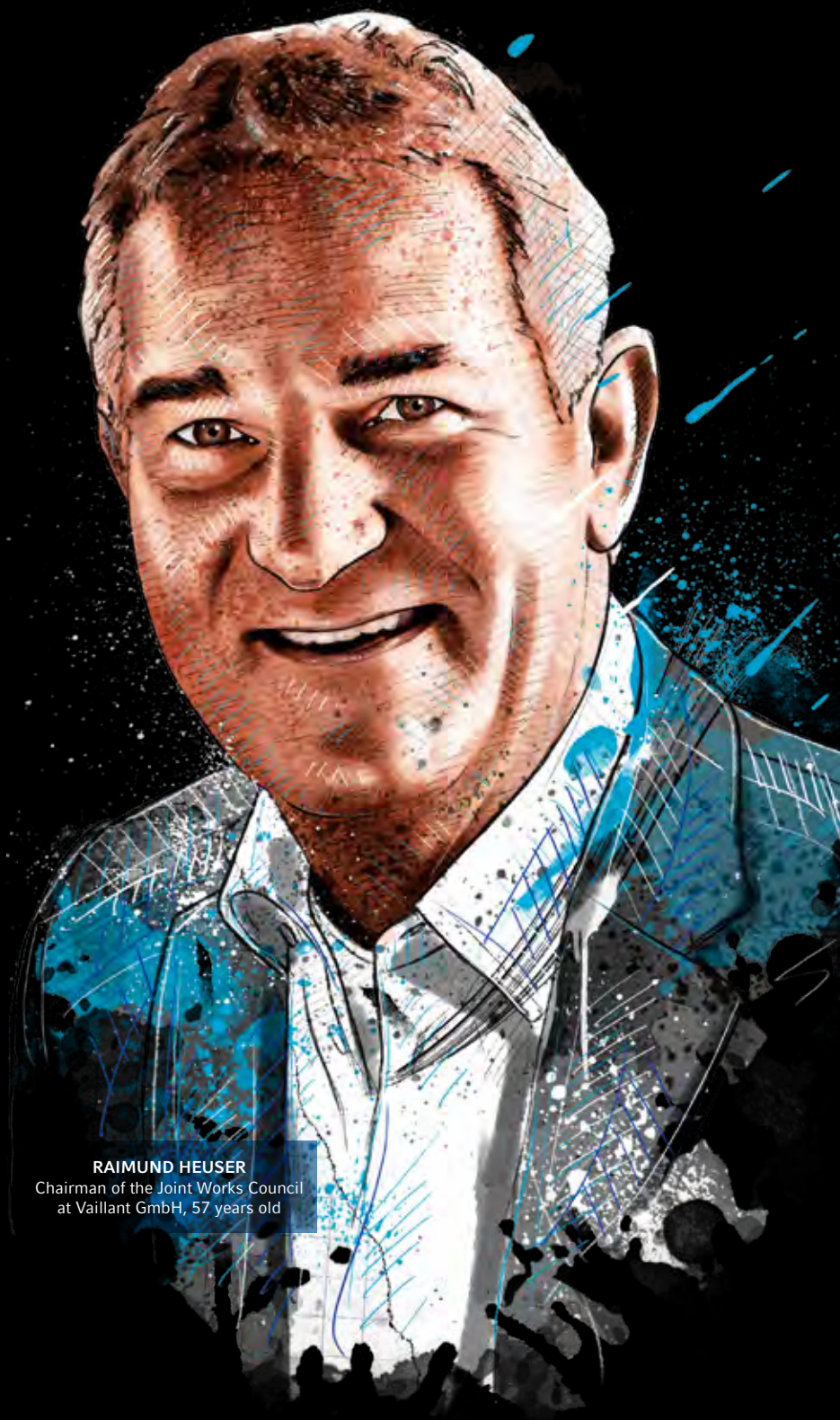
*Petrotta:* There are many potential projects in the pipeline. Most of them aren't yet definite. We are working on various ideas as a department. It is important to me that we handle our resources efficiently and are able to achieve as much as possible with the projects.

**And what do you have planned for the future with S.E.E.D.S., Mr Heuser?**

*Heuser:* One of my top priorities is to reduce the number of people on sick leave. We are going to set up a health panel soon together with our health management team. In future we want a regular supply of fresh fruit to deter colleagues from reaching for a chocolate bar when hunger strikes, but rather for an apple or banana.

**You talk a lot about health ...**

*Heuser:* Yes, it is one of the most important topics – also from a sustainability perspective. At 49 years, the average age of employees here in Remscheid is high. We're bound to see a lot of health issues come up. We want to help our colleagues stay healthy and ensure good, improved workplaces that are also set up in an age-appropriate manner.



**RAIMUND HEUSER**  
Chairman of the Joint Works Council  
at Vaillant GmbH, 57 years old



**MARCO BASLA**  
Head of Communication  
Vaillant Italy, 49 years old

**Mr Basla, how was your first year as S.E.E.D.S. Ambassador? How would you sum it up in three words?**

Commitment, creativity and continuity.

**What made you take on the role of S.E.E.D.S. Ambassador?**

In Italy we have plenty of good reasons and strong arguments for sustainability and S.E.E.D.S., which we have now rolled out in Italy with our own, country-specific programme. Everything the Vaillant Group has done so far and everything the S.E.E.D.S. programme has in store gives us a huge competitive advantage. Vaillant is extremely strong in Italy when it comes to eco-friendliness and sustainability. And we will continue to get even stronger thanks to this focus on sustain-

ability. It was important for me as a communicator to be part of the project, part of the story that we believe in and want to tell. I'm therefore happy to be a S.E.E.D.S. Ambassador and project manager for S.E.E.D.S. in Italy.

**What have you done in your role as S.E.E.D.S. Ambassador so far?**

To begin with, we implemented measures to turn our building into what is known as a "nearly-zero-energy building". For example, we changed our lighting over to LED and installed a photovoltaic system.

**What else do you have planned?**

We are still very much focused on reducing our carbon footprint: the switch

to LED lighting is ongoing and we want to maintain an electric vehicle fleet. We have already thought about where this would make sense.

**These are all things that would fall into the S.E.E.D.S. focal area Environment. What about the other areas?**

In the Products focus field, we want to encourage people to swap their heating units for more efficient heating technology, i.e. gas-fired condensing boilers, heat pumps and technologies that use renewable energy. We are making huge investments to get our message across, to tell people that you can save energy, save money and help protect the environment and the climate.

**How are you going about that?**

We have put together a detailed concept and are not afraid to explore new horizons. We work together with bloggers, for example, and have just exhibited at Milan Design Week for the second time. We want to put across how a green approach can be integrated into everyday life, for instance with "The green evolution" app, which playfully encourages people to make changes to their daily behaviour.

**And what about the focal areas Society and Employees?**

We have to do even more here. We want to keep improving our work environment and employee benefits for our staff, besides becoming more flexible in terms of working hours and celebrating our successes together. And of course we also want to expand the global partnership with "SOS Children's Villages worldwide" to Italy.

**What do you want to achieve next year?**

We want to keep doing what we're doing: reducing our carbon footprint, promoting a green, climate-friendly approach to everyday life, marketing our efficient products – especially heat pumps – and becoming more active in the focal area Society. We see S.E.E.D.S. as a journey, a path dotted with milestones. It's not about to end tomorrow; it will simply wind on and on.

**Mr Gertz, how was your first year as S.E.E.D.S. Ambassador? How would you sum it up in just three words?**

Informative, ambitious and quite tricky. Before I took over the role of S.E.E.D.S. Ambassador from a colleague in spring 2017, I had never come into contact with the Sustainability Management team. It's an interesting task, but my work as S.E.E.D.S. Ambassador is secondary to my actual job, which makes it difficult to dedicate enough time to the various topics it involves.

**How do you approach these topics?**

Very systematically. Together with Sustainability Manager Jens Schulzeborgmühl, I went over the topics with an eye to their potential, scope of influence, opportunities and risks. This analysis incidentally came with an added bonus. When it was time to submit an opportunities and risk assessment for our certification in line with environmental management standard ISO 14001, I was able to draw on my previous analysis to answer the auditor's questions.

**What have you already managed to do this year?**

We were able to do quite a lot, for Italy for example, where we are now using transport service providers that have more eco-friendly lorries. Besides this, we are in the process of switching to LED lighting in our central warehouse in Neuss, resulting in a saving of around 1,000 megawatt hours of electricity. We are tackling topics that will bring about long-term benefits, which need a little longer to put in place.

**Can you give us an example of a long-term project?**

Including our external service providers in our environmental reporting, for instance. We want to collect environmental data, e.g. on electricity and water consumption, even CO<sub>2</sub> emissions in the case of transport companies, and then incorporate them into the key figures matrix, evaluate them alongside our own figures and take them into consideration when making decisions. Another example concerns packaging materials. As part of our product creation processes, we are already working on reducing the need for product packaging to a

minimum. A before-and-after comparison will help us comprehend our progress here.

**What do you have in mind for the future?**

The greatest leverage is also the most difficult to address, this being the various transport options. We can really reduce CO<sub>2</sub> emissions here, for instance by taking a multimodal approach, i.e. using different means of transport such as ships, trains and lorries rather than lorries on their own. This tends to take longer,

which is why we have to be able to anticipate our needs even better. This will be made possible with a new planning tool. Furthermore, we will also ask warehouse operators to acknowledge the UN Global Compact, just as we have done with our suppliers. This is fairly straightforward and a good example of what the S.E.E.D.S. Ambassador programme can achieve. Before being involved in the programme, we were completely oblivious to the fact that we should be including warehouse operators in our commitment to the UN Global Compact.



**TORBEN GERTZ**  
Logistics Development  
Manager, 37 years old

# Young lives

The SOS Children's Villages offer children a place they can call home, in over 570 children's villages across 135 countries. Pictures from all over the world give an insight into these young lives.



# C

Children play and go to school, they laugh, watch television, get tired, want to be held and cuddled. The photos from the SOS Children's Villages give a true reflection of what life is like for these children. The clothing and furnishings might appear exotic as the children live in all kinds of countries: in Haiti, the Philippines, Guinea, Bosnia-Herzegovina and Syria. But the details tell of a normal childhood, with cuddly toys and modelling clay in bright yellow tubs. The pictures convey a feeling of security; some show a zest for life, others seem much too serious.

The photos were taken in homes and buildings run by "SOS Children's Villages worldwide". The aid organisation provides support wherever children need it. It could be that their parents simply need help or are no longer around, or due to poverty, war or environmental catastrophes. These pictures are therefore not your usual family snaps, but depict the lives of children who have experienced existential crises. Photos that speak volumes, without the need for words.

These insights are quite unique: a little glimpse behind closed doors. The homes offered by SOS Children's Villages provide a safe place where the children can feel secure. The Vaillant Group has had a strategic partnership with "SOS Children's Villages worldwide" since 2013. "The pictures give an impression of the homes offered by the organisation to children who need them. They give a sense of the space and an idea of the children's lives there," explains Frederik Lippert, Senior Manager Corporate Communications, who is responsible for the partnership with "SOS Children's Villages worldwide" on behalf of the Vaillant Group.

The Vaillant Group and "SOS Children's Villages worldwide" have maintained an international partnership since 2013. The family-owned company has already supported the children's charity in around 20 countries. First and foremost by supplying highly efficient heating and hot-water technology, but also through social activities.

***Because every child deserves a warm home.***





SOS Children's Village Kankan  
GUINEA













SOS Children's Village Tacloban  
PHILIPPINES



Naimakka Sweden  
68°39'31\"

# Northern star

Vaillant recounts an extraordinary story: Åke Siikavuopio lives in the very north of Sweden, in a cold and lonely place not far from the Finnish border. Åke is the only inhabitant of Naimakka, where he looks after the local weather station. One day, the 80-year-old Swede came up with an idea that made his weather station all cosy and warm – and also attracted a few visitors. *All thanks to a heat pump.*



*The Swedish outdoors is such a unique, vast expanse that it makes us humans feel very small.*







Åke Siikavuopio, 80 years old, is the sole inhabitant of Naimakka. The village is located 235 kilometres north of the Arctic Circle, where winter nights last an eternity and the summer knows only the light of day; where the Swedish outdoors is such a unique, vast expanse that it makes us humans feel very small. Temperatures are known to plummet to  $-40$  degrees, even  $-50$  in extreme cases. Our northern star, Åke, knows all there is to know about temperatures as he looks after a weather station he took over from his father.

Any visitors have to arrive by boat in summer and by snowmobile in winter as the one and only road does not quite reach the twelve huts in Naimakka. The closest place to go shopping is 55 kilometres or just under three hours away: with its 17,000

inhabitants, Kiruna is Sweden's northern-most town. This makes Ole the reindeer Åke's sole companion.

Åke is the real deal: gaunt with distinct facial features, a little stubble on his face and alert, light-blue eyes. He has his own view of the world, life and nature. And he really does exist, just like Naimakka and the weather station. Åke recently became the star of a Vaillant campaign. He had a domed canopy erected over his weather station and a heat pump installed inside. As a result, he managed to record a snug 21 degrees with the main weather centre.

This got people talking – about Naimakka, about the heat pump technology and about Vaillant. The flexoTHERM exclusive is able to generate heat even under the most unfavourable climatic conditions. Åke received visits from meteorologists from Sweden and Germany, who were looking to get to the bottom of the strange weather phenomenon of 21 degrees in the Lappish winter.



Swedish weather expert Lasse Rydqvist was the first person to visit Åke's tent. "I found him in the woods, he looked a little lost," says Åke. He took him to the weather station on his snowmobile, where they chatted over steaming cups of coffee. Meteorologist Alexander Hildebrand visited from Germany and filmed two videos in Naimakka for his blog "Alex extrem". Another two bloggers from China even came to visit Åke. Some impressive photos were taken that capture the area's fascinating nature and Scandinavian attitude towards life, also proving that the heat pump

technology can be relied upon to work even under harsh conditions.

This is the key message the campaign wants to get across, a message which has since been picked up on by many national sales companies: "We are telling Åke's story in Belgium as a way of increasing awareness of heat pump technology," reports Yannick De Mol, Product Manager at Vaillant Belgium. "At the end of the day, if it works in one of the coldest places in Sweden, it's going to work in Belgium." De Mol explains that the Belgians are yet to embrace heat pump technology, to develop awareness of and trust in this kind of technology.



Technology that can reliably supply houses with heating, cooling and domestic hot water; that can also be expanded with photovoltaic systems and battery storage into a heating system.

The technical stress test north of the Arctic Circle verifies the reliability of the system and is symbolic of the trust placed in the power of nature and how much it is appreciated. Åke lives in and with nature. He hangs up reindeer meat to dry in a smoking hut – just like the generations that went before him. In his 80 years on the planet, he has learned how to read and respect nature; he sees how climate

change is also having an impact on Lapland, threatening local animals and plant life. But he is very much living in the here and now. He keeps in touch with his son and grandson by making video calls. High-speed Internet comes as a given throughout Sweden, even in remote areas like Naimakka.

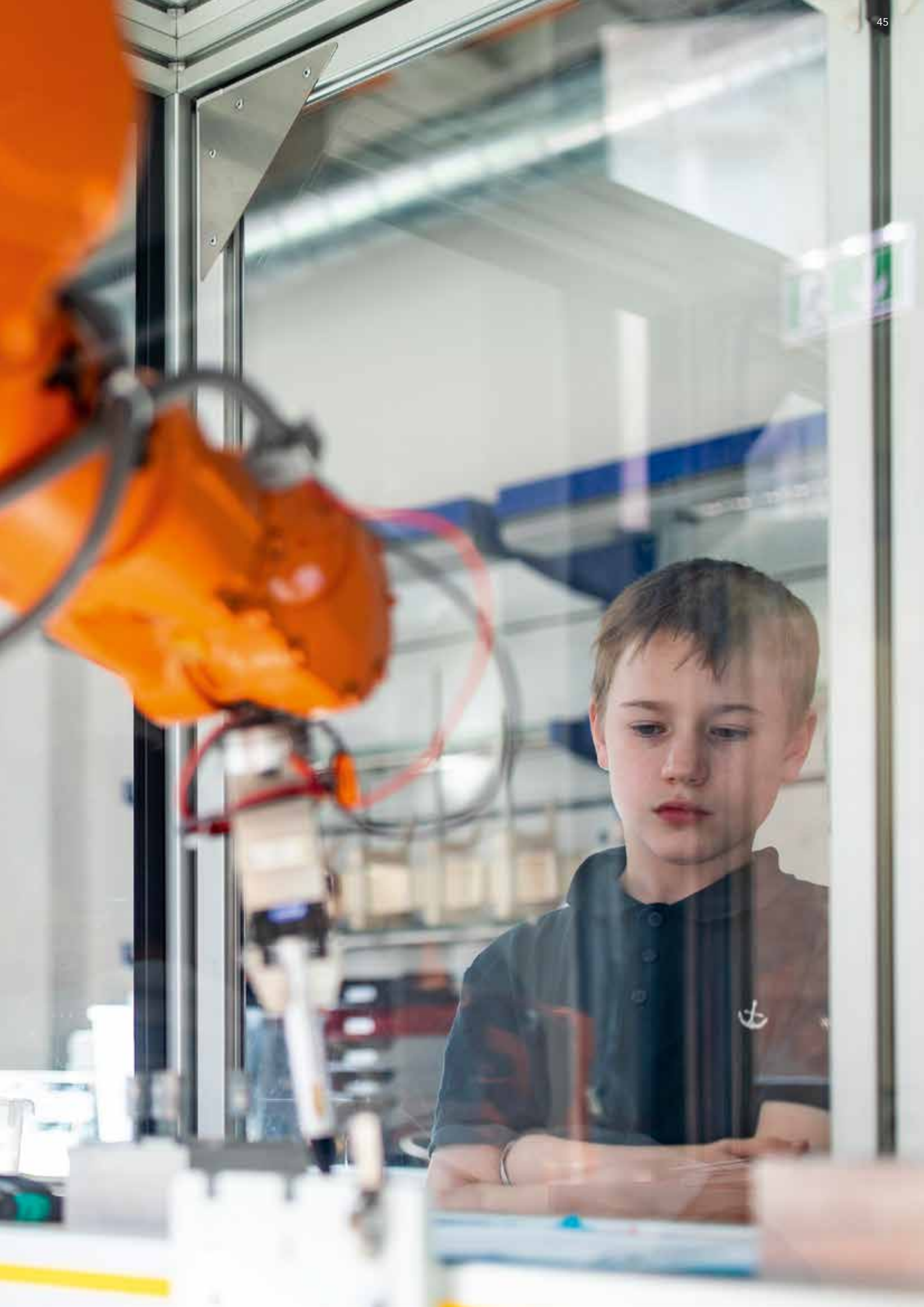
On his Facebook page, "Life of Åke", Vaillant gives Åke another channel through which to share details of his life. He talks about Sweden and its nature, about the weather and climate, and about friendship and worldly wisdoms. Since being launched in spring 2017, the campaign has reached around 150 million people for Vaillant. **Pretty cool.**



*In his 80 years on the planet, Åke has learned how to read and respect nature; he sees how climate change is also having an impact on Lapland.*

# WE CAN'T LET TALENT PASS US BY

Wuppertal's Junior Uni takes a playful and practice-oriented approach to imparting knowledge and expertise as it invites children, teens and young adults to delve deep into a range of subjects. There is nothing else like it in the whole of Germany.





## WARM – WARMER – WARMEST

Vaillant Group engineers Lars Brandes and Claudia Michalik inspire the scientists of the future as tutors at the Junior Uni.

# T

The Vaillant Group recently teamed up with the Junior Uni, offering the hands-on course “Warm – warmer – warmest”, which ran for several weeks. Vaillant Group Innovation Engineers Lars Brandes and Claudia Michalik tutored on the course, teaching four- to six-year-olds how temperature, heat and energy affect their everyday lives. And their very young students were unable

to contain their excitement as they were wowed again and again – while making their own thermometers or when conducting spectacular experiments with bubbling water volcanoes.

**Lars:** It was a colleague that got Claudia and me thinking about tutoring courses at the Junior Uni. I was on board from the beginning as I’d taught at the Junior Uni before and had enjoyed every minute of it.

**Claudia:** I had only tutored at “proper” university. The Junior Uni was therefore something completely new for me. But I was curious about working with children and signed myself up right away.

**Lars:** Claudia and I devised our concept for the courses together. We wanted the children to explore various effects and phenomena linked to heat and cold by experimenting and making their own observations, enabling them to then recognise them in their everyday lives. By doing this, we are able to pique an interest in natural science early on. There is of course a completely different set of

criteria to consider for children of this age compared with teenagers who are about to sit their A levels.

**Claudia:** The initiatives are designed to impart knowledge in a really playful and exciting way that holds the children’s focus even during later classes from 4.30 p.m. to 6 p.m. Dramatic experiments such as the bubbling water volcano are therefore perfect. We also leave it up to the children to decide what objects they want to learn more about. We also went on little excursions. The children had selected objects and buildings that they then looked at through a thermal imaging camera. Everyone was fully focused on the task at hand.

**Lars:** There was one class we did that was particularly funny, when we created portraits using the thermal imaging camera. The children got to see themselves in vivid colours.

**Claudia:** As in all of the experiments, the children were pretty excited to use the camera; we had to calm them down at first. But it wasn’t long before using



the device felt completely natural to them. This was one of the educational goals of the course: approaching scientific topics and experiments in a natural and creative way.

**Lars:** We also wanted the children to be respectful when interacting with one another. I think that worked out really well. If anything, the children never ceased to amaze us. They were able to take on board an awful lot, partly because we kept going over the effects together and because we drew a picture after each experiment to remember our observations.

**Claudia:** By the end of the course, most of the children were able to independently describe the key effects of the movement of water molecules, the expansion that comes with heat and the way a thermometer works. It was so impressive.

**Lars:** Who even came up with the idea to make a thermometer?

**Claudia:** The self-built thermometer was of course a really important part of the course. We wanted the children to make

something themselves. Something they could be proud of that would take pride of place in their room at home.

**Lars:** It's a perfect souvenir that they can always pick up and use, hopefully for years to come.

**Claudia:** It was a wonderful moment at the end of the course when the children were stood in front of us with their thermometers and attendee certificates, pleased as punch but sad that the course was over. That's when you know that all your efforts have really paid off!





Every semester, the Junior Uni offers a broad spectrum of courses. Its course “With industrial robots in the creative workshop” teaches future generations how to turn creative ideas into reality with the help of an industrial robot. Course participants aged eleven to fourteen think up quirky designs and write programs that the robot then uses to engrave doorplates.

Young student Nikias is reading the message on the robot’s input panel out loud: “Type mismatch in row 537.” On the other side of the robot’s transparent protective cage, tutor Patrik Hagemann, a 23-year-old computer science and physics student at the University of Wuppertal, sits in front of the control unit. “We’re almost there!” he replies. Patrik scrolls to the program line containing the wrong character. “Can you give me write access?” calls Patrik from around the corner. Nikias understands the question right away. He learned early on that Patrik can only edit the protected program once he has unlocked it.

Nikias presses the panel’s touchscreen. “Write access granted,” he says like an IT pro. Patrik places the cursor over the error and presses the delete button. “Now we’re good!” The defect has been remedied. Nikias checks the screen display. There are no more error messages. “All good, we can continue,” says Nikias. He presses the play button to activate the program. The robot arm immediately moves into the starting position. The steel hand holding the fat felt marker resembles a pair of tongs as it moves the tip of the pen around the piece of paper. Robbie is now drawing

the lettering, just like Nikias programmed it to do.

### **Seven students, two tutors and Robbie**

The writing task with the felt marker is a test run. As soon as the result is perfect, it is time to start working towards the actual goal and highlight of the course: engraving a metal doorplate. The seven junior students, tutors Patrik and Tobias, and Robbie the robot are a well-tuned team by the sixth and final class of the course “With industrial robots in the creative workshop”.

Christos, Erich, Jakob, the two Joshuas, Kim and Nikias have long since learned how to turn their design ideas into reality using the robot. Each student has written their own program that enables Robbie to etch beautiful, unusual, and certainly unique lettering on a doorplate.

It has taken several weeks to reach this point.

### **Sense of achievement is key**

The main task at the beginning of the course was to increase the children’s confidence around Robbie. His size may be a little modest compared with that of the enormous robots used on industrial production lines, but Robbie is still an awe-inspiring machine. Under the care-

ful guidance of the two tutors, however, the children quickly got to know Robbie. After the first class, the young participants had already acquired a basic understanding of how the robot works and what it can do.

Next up was the programming language and basic theory. It wasn’t long before the young students were having aha moments, with the astounding realisation that science and creativity have a huge amount in common – and it’s really fun to find out about and also apply the practical sides of maths and physics.

Not least, the seven children learned how to interact responsibly with machines and computers and how to work productively in a team. They saw that they truly can achieve something by applying their knowledge. This sense of achievement changed their attitude towards knowledge and learning for the better – a lasting benefit, also for their remaining school years.

### **400 courses with 4,500 places**

The Junior Uni in Wuppertal has been captivating the minds of children and teenagers for ten years now. Focused around learning, experimenting and researching, the programme has a strong appeal, as verified by the ever increasing demand. The Junior Uni covers five subject areas and now offers 400 cours-





## The Junior Uni at a glance

Congratulations, Junior Uni! This unique university for children and adolescents is turning ten this year.

The only educational centre of its kind in Germany, this privately funded institution has already filled more than 60,000 places on courses in natural science and maths, technology and engineering, economics, humanities and social sciences, and art and culture.

The programmes are geared towards children, teenagers and young adults aged between four and twenty years. The junior students not only get to expand their knowledge here; they also discover the joy of learning and gain courage for their future.



es and 4,500 places every semester. Around 150 tutors from science and business are committed to teaching the future generations.

From Monday to Saturday, morning to evening, and even during the school holidays, there is plenty going on at the Junior Uni in the Unterbarmen area of Wuppertal. The colourful building with its unusual architecture is located right by the Wupper river. The suspension railway stop just a few steps from the building is named after the Junior Uni.

Up-and-coming researchers can find out how to build a rocket in the course “Higher, faster, further”. Young students can gain deeper insights into the physics of playing football in the course “Kicks with physics”. Anyone with a penchant for nature and environmental protection can take part in the course “Microcontrollers in the know!”, where teenagers aged 14 and above use state-of-the-art analysis technology to examine the water in the Wupper river. “Recording in progress!” is one of the courses on offer from the field of humanities and social sciences, where the junior students produce an audio book.

### Fully concentrated and on task

Back to the class with Patrik, Tobias and the seven boys: while Patrik and Nikias are preparing the robot to engrave the doorplates, the six other boys gather around tutor Tobias, a 24-year-old mechanical engineering student from Wuppertal University.

Tobias and the children are checking all of the other programs with an eye to their operational fitness. The boys are fully concentrated. No-one is paying any attention to their smartphone or gazing out of the window. On the contrary: the interest is genuine, the fascination immense. It would be difficult for the boys to pay the two tutors a better compliment.

The junior students are, of course, full of anticipation about engraving their doorplates, which they also want to take home with them to proudly present them to their parents, siblings and friends before fixing them to their doors.

Nikias has now undone the screws on the robot’s claw, removed the pincer hand and replaced it with a support ele-

ment, where the blank doorplates will later be held in place. Nikias inserts the four screws and fastens them tight using a hex key. Patrik conducts the test. He nods, satisfied. “That’s good! Perfect.”

Once the boys have checked the programs, Tobias saves the source codes to a USB stick. Patrik and Nikias grant Tobias access to the robot’s control unit so the young tutor can transfer the programs over.

Kim is the first student to have a go. He places his blank doorplate on the support. Tobias closes the transparent door of the protective cage and hands the operating panel to Kim, who starts the program with the play button. The robotic arm moves the blank doorplate on the etching machine. The buzzing sound is like something you might hear at the dentist’s. After less than a minute, the doorplate is finished and the robot returns to its stand-by position. Patrik opens the protective cage and Kim is excited to take his doorplate. He is grinning from ear to ear. Another young technology enthusiast with a new-found thirst for knowledge thanks to Wuppertal’s Junior Uni.

# RESPONSIBILITY AS A PRINCIPLE

The Vaillant Group has combined all its sustainability activities into one strategic programme. Under the name S.E.E.D.S., binding, quantifiable targets have been set 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.

**F**or an industrial 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, sustainability means more than just marketing particularly energy-efficient products. It dictates that the strategic and operational decisions taken by a company must 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.

## Sustainability programme

S.E.E.D.S., which stands for **S**ustainability in **E**nvironment, **E**mployees, **D**evelopment & **P**roducts and **S**ociety, identifies the strategic areas of focus that the Vaillant Group is pursuing in order to implement its sustainability strategy. These fields are defined based on a broad understanding of sustainability that addresses the main challenges in our core business. In this regard, the Vaillant Group's Sustainability Management department makes a contribution to ensuring the company's success in the long term. The department forms 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.

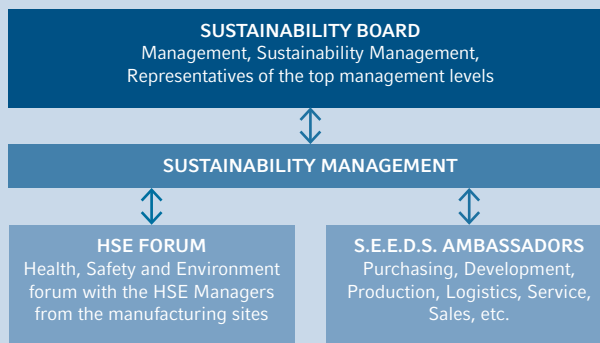
## Global Compact

"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 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*



### SUSTAINABILITY MANAGEMENT ORGANISATIONAL STRUCTURE

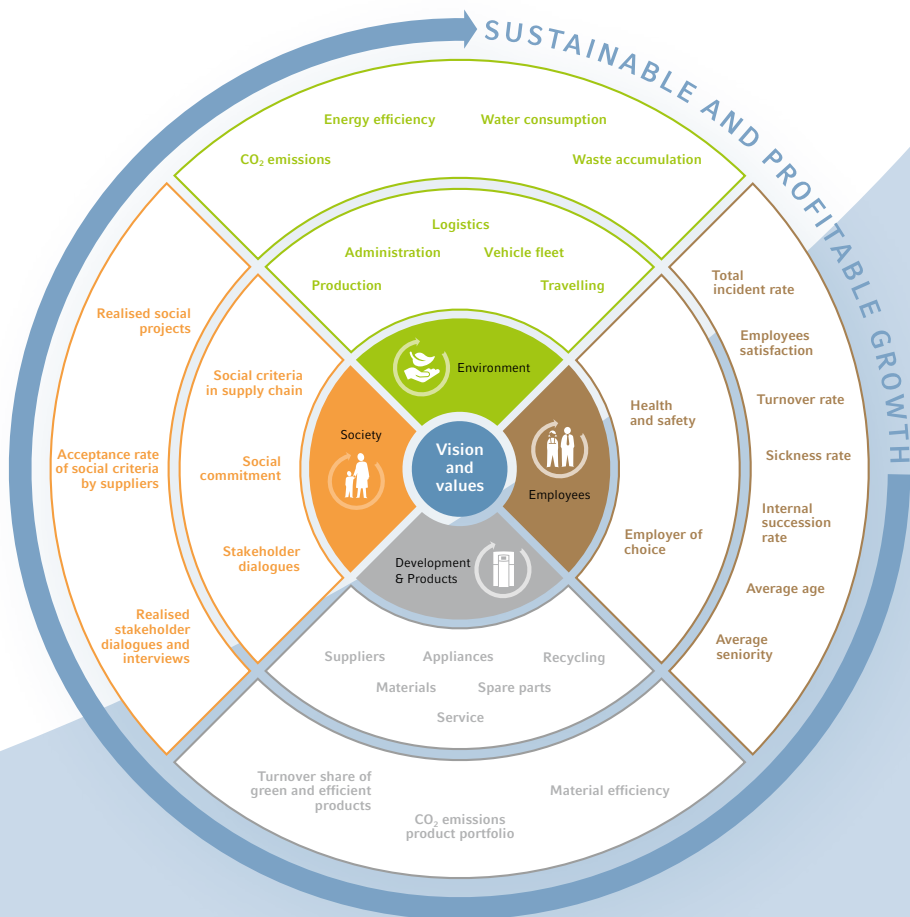


### STRATEGIC SUSTAINABILITY PROGRAMME

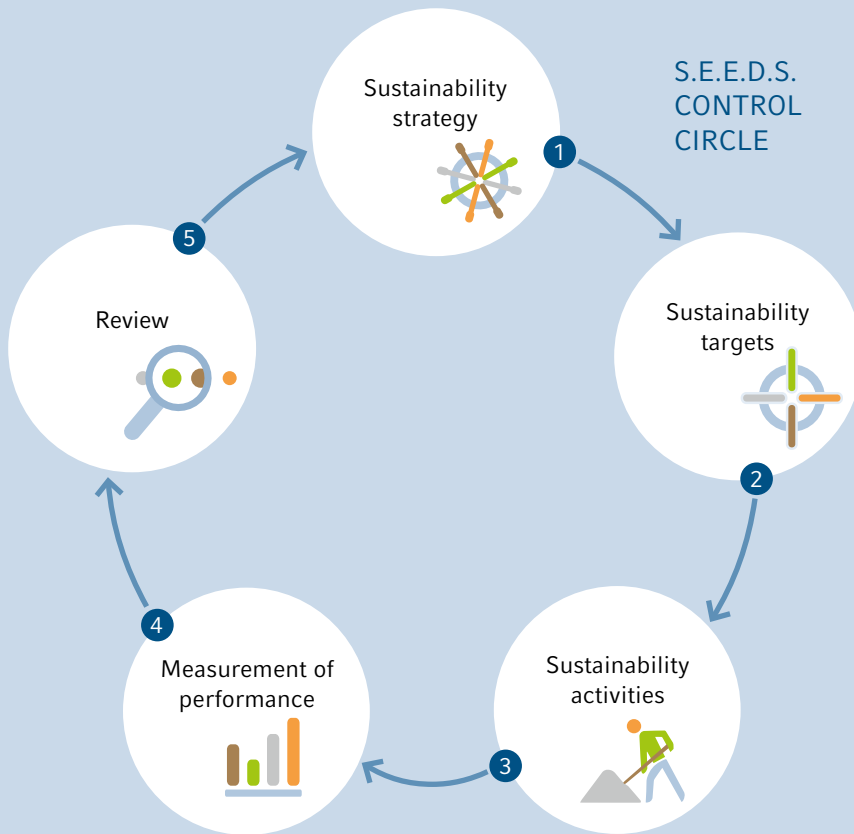


**S.E.E.D.S.**

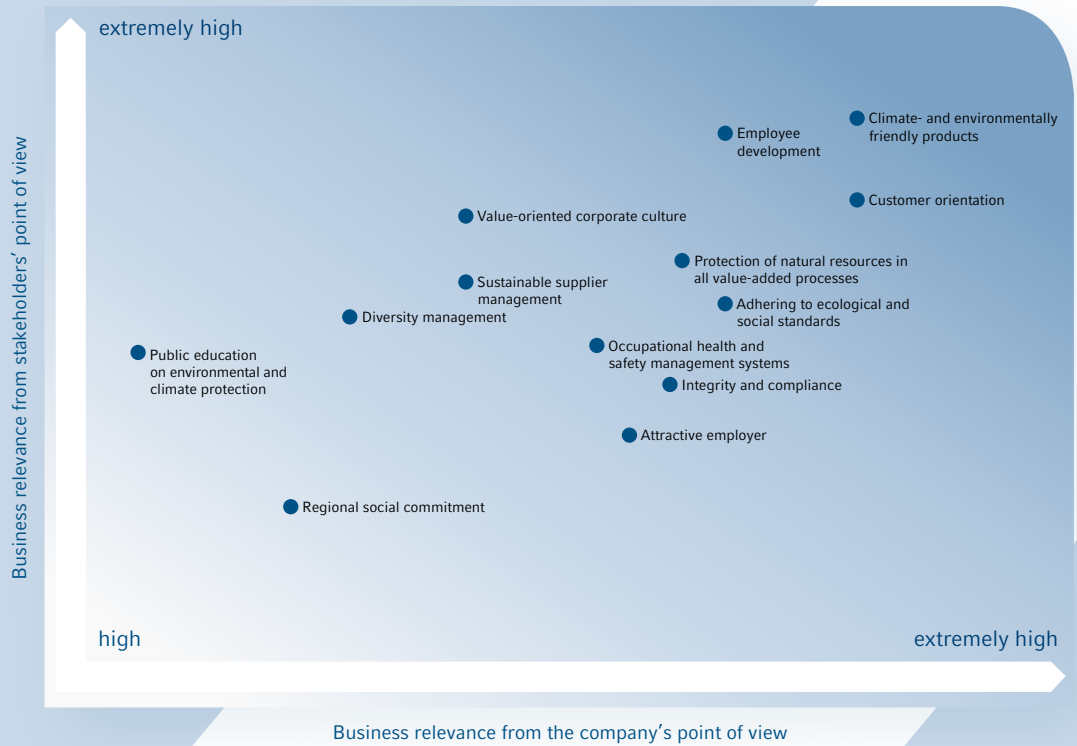
Sustainability in Environment, Employees, Development & Products, Society



### SUSTAINABILITY COMPASS



**MATERIALITY MATRIX**



# METHOD IN OUR SUCCESS

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

## 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 CO<sub>2</sub> 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 interpreting the figures, we take into account specific factors such as changes to production capacities, current production volumes and production minutes. 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 precisely

defined 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.

## 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 three processes that affect product development and consider the phase from product strategy to market launch. The topic of sustainability is inherent in all of these processes.

To manage company performance in terms of environmental protection, occupational 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 DIN EN ISO 9001 and environmental standard DIN EN ISO 14001. And we are just as ambitious when it comes to workplace health and safety. All of our production and development sites have already been certified to international standard OHSAS 18001. The next step is to be certified in accordance with health and safety standard DIN EN ISO 45001, published in 2018, which is set to take place in autumn 2018.



# OUR SUSTAINABILITY TARGETS

In spring 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.**

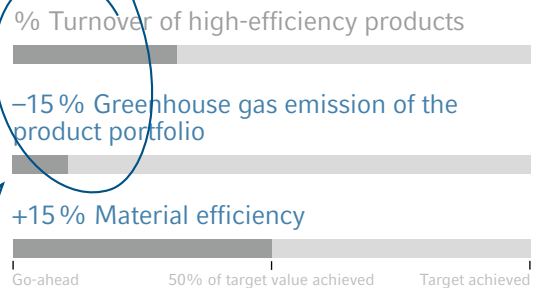


## Development & Products

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.

We are not yet satisfied with this development. One of the reasons why the portfolio share remains too low is the growing Chinese market. In line with the local market environment, the company sells, for the most part, non-condensing heating appliances that are less efficient than condensing boilers. Having said that, these non-condensing heaters still offer greater efficiency than the old Chinese systems.

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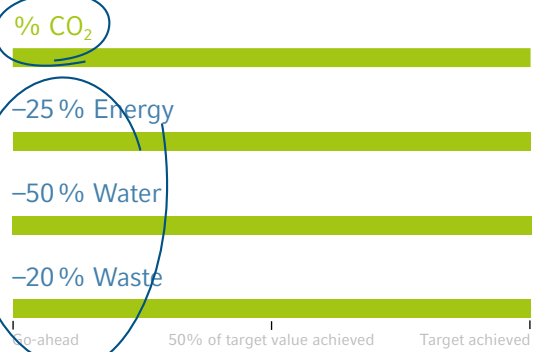


## Environment

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 CO<sub>2</sub> emissions, prevent negative influences on the environment and actively use opportunities for improvement.

Switching the German sites to green electricity has had a noticeable impact here. Without this switch, CO<sub>2</sub> emissions would have been around 12,900 tons higher.

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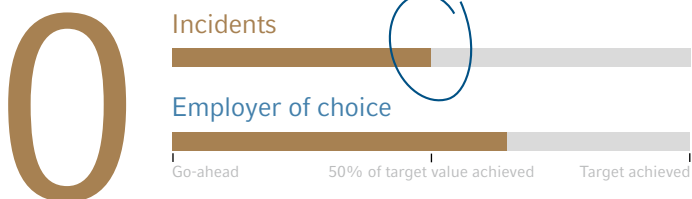
With regard to the environmental performance indicators, the S.E.E.D.S. management system is proving its worth. For instance, production volume has increased more than consumption figures.

The Vaillant Group has a very firm footing with regard to occupational safety. Communication campaigns aimed at specific target groups and the systematic OHSAS certification are paying off.



### Employees

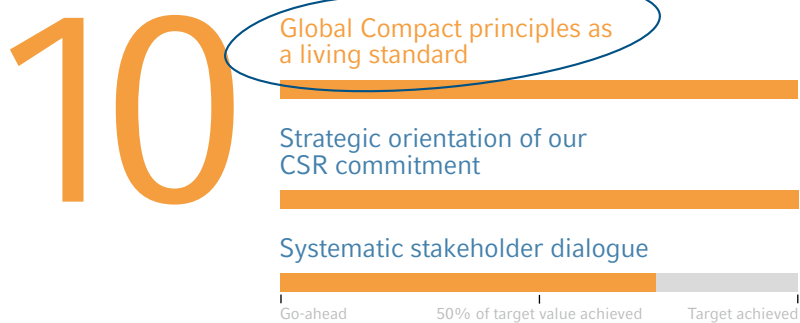
Our employees form the foundation and the soul of the Vaillant Group. We pursue the goal of being the employer of choice for job applicants and current employees.



Recognising the principles of the UN Global Compact forms an integral part of our purchasing terms, which apply to all standard suppliers. Verifying adherence to these principles was made an integral part of the supplier audits this year. Our internal auditors will receive special training here in autumn 2018.

### 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.



## ABOUT THIS REPORT

### Scope of the report

This report contains information about the strategic direction of the Vaillant Group in terms of 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 planning the report's contents, we took into account feedback from different groups of stakeholders gathered from various dialogue formats. 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 2017. The reporting period for all of the key performance indicators in the current report covers the 2017 calendar year from 1 January 2017 to 31 December 2017. The editorial deadline for reports on matters related to sustainability was 31 May 2018.

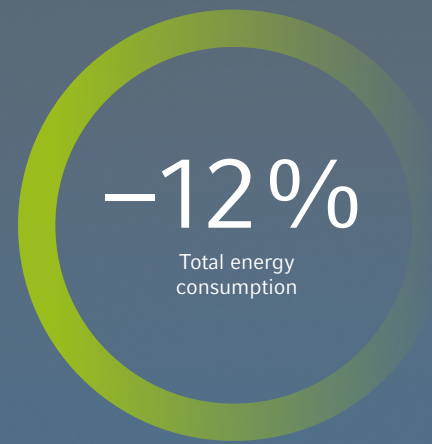
All production-relevant figures relate to the Vaillant Group production plants in six European countries and the People's Republic of China. Figures were collected via a written survey filled in at our main sites and managed centrally. It should be noted in regard to the key indicators presented that 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 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](http://www.vaillant-group.com).

### Print and online

The sustainability report is published in German and English. Further to the hard copy, a PDF version is also available at [www.vaillant-group.com](http://www.vaillant-group.com). In case of doubt, solely the German version published in printed form is binding.



## IMPRINT

### Published by

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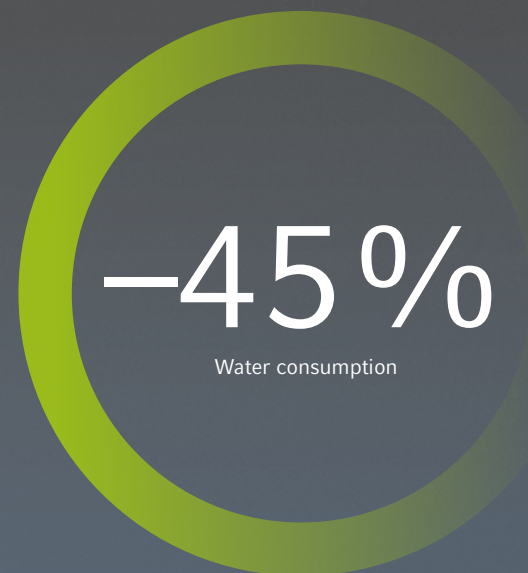
### Printing

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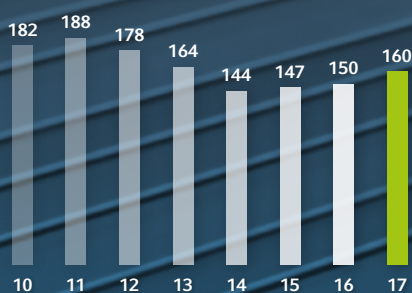


## SUSTAINABILITY KEY FIGURES

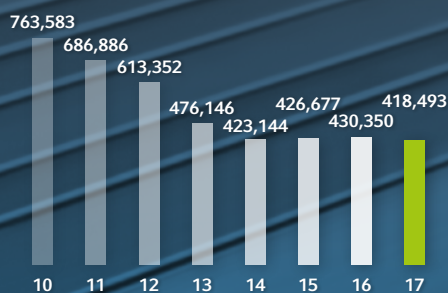
# IN BLACK AND WHITE



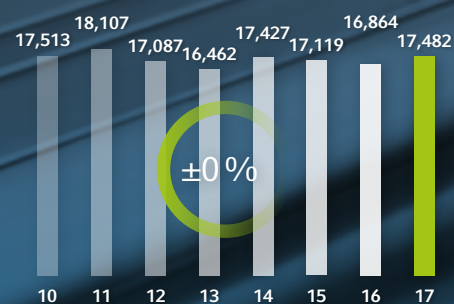
The Vaillant Group lists all key figures relating to sustainability on an internal scorecard so we can manage our activities in this field. As we are constantly working to improve the quality of data and make our figures more meaningful by successively expanding their scope, changes may have been made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



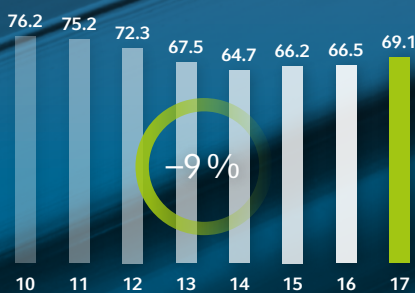
**Total energy consumption**  
GWh



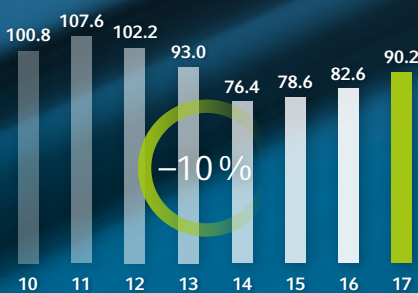
**Water consumption**  
m³



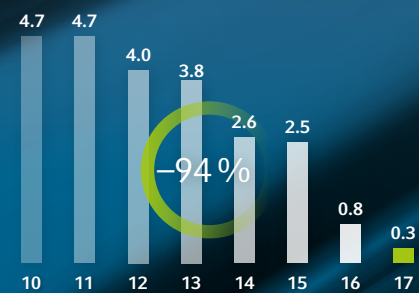
**Waste**  
t



**Electricity consumption**  
GWh



**Gas consumption**  
GWh



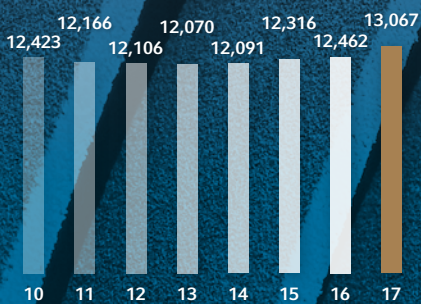
**Oil consumption**  
GWh

-50%\*

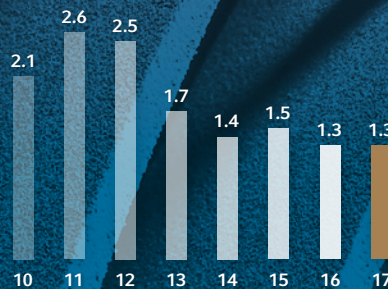
Accidents at work

+2%

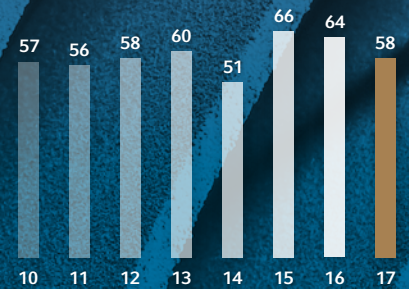
Management positions filled internally



Employees  
Headcount



Accidents at work  
per 200,000 hours worked



Management positions filled internally  
%

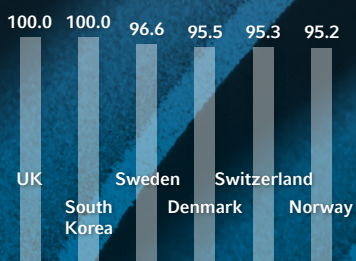
\*Per 200,000 hours worked, compared to 2011

# +14%

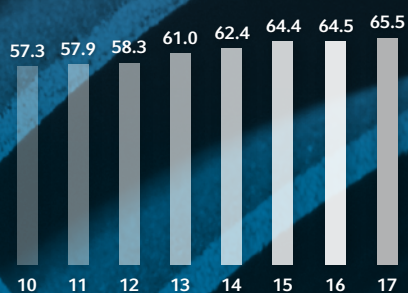
Efficient/renewable technologies – share of overall sales

# 2.4

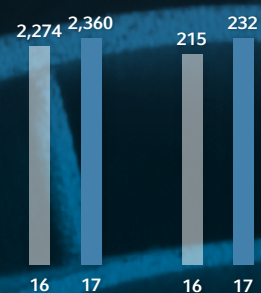
Billion euros net sales



Markets with the greatest share of renewable energies in sales  
%



Efficient/renewable technologies – share of overall sales  
%



Sales  
in millions of euros

EBIT  
in millions of euros

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. We intentionally avoid using environmentally damaging cover finishes such as film lamination or soft-touch or UV coating. 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. Finally, the CO<sub>2</sub> emissions that inevitably do result from the production of this report are offset via certified schemes. The sustainability report is therefore exactly what people should expect from a sustainable report:

## ink on paper

