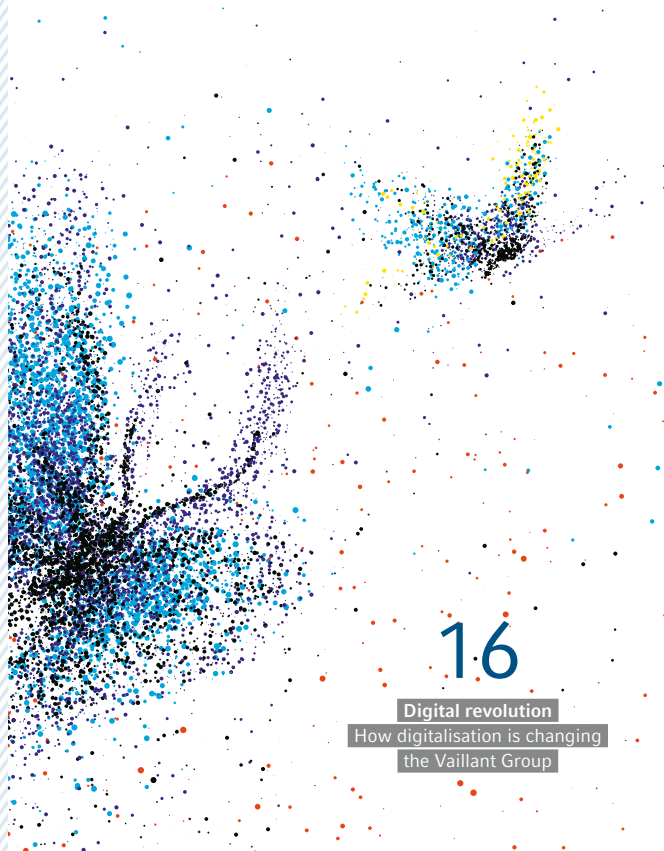


VAILLANT GROUP

ANNUAL MAGAZINE 2016





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Digital revolution
How digitalisation is changing
the Vaillant Group



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A look back
Events and highlights
from the last year



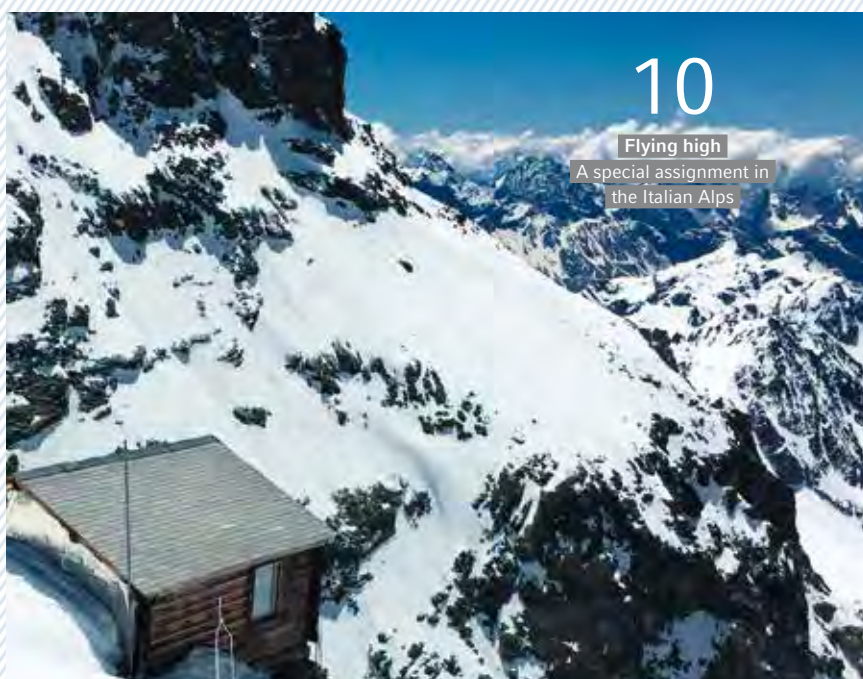
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in California



Dr Carsten Voigtländer
Chief Executive Officer

EDITORIAL

Dear reader,

Welcome to our Annual Magazine 2016. The past year presented our family business with a number of challenges. But it also brought us a great many successes and reasons to be proud.

Perhaps the one thing that really stands out when looking back over 2016 is the fact that it was a year of change and transformation for the Vaillant Group. Ambitious climate protection plans are placing new technological demands on the products of tomorrow, and rapidly advancing digitalisation has the heating technology industry fully in its grip.

With that in mind, this year's magazine will highlight several activities that reflect the different levels at which **digitalisation is taking place within the Vaillant Group** and the various forms in which it appears. Partnerships with start-up networks play a role here, as do new digital business models, modified work methods and a new way of thinking.

We will also look towards China, one of the most significant emerging markets for the Vaillant Group. Numerous **reference projects** bear witness to the dynamic development of our business here. We will take a closer look at **Beijing, Shanghai and Shenyang** and report on the increasing need for individual heating solutions and the growing popularity of the Vaillant brand among Chinese customers.

As seen every year, plenty of "small", often local, stories emerged in the big Vaillant world in 2016 – so many of which are worth sharing. Entertaining. Exceptional. Often thought-provoking. There were high-altitude escapades in the form of a **system swap** approximately 4,000 metres above sea level **in the Italian Alps**. And if that's not exciting enough, there were also far-flung adventures in California, where three **Amazons from France** called attention to places worthy of protection and the threat of climate change in their role as members of the Vaillant Green Team. Last but not least, we took to the stage to see our **stars in the spotlight**.

I hope you have an enjoyable read!

Best wishes,

IMPRINT

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A photograph of three young children standing in front of a dark wooden door. The child on the left is a girl with blonde hair, wearing a pink t-shirt, laughing with her mouth wide open. The child in the center is a girl with dark brown hair, wearing a pink sleeveless top, smiling broadly at the camera. The child on the right is partially visible, also smiling. The background is a dark, textured wooden door with a metal handle.

The warming effects of a smile

Our #vaillantsmile campaign launched at the start of 2016 aims to quite literally support social projects with a smile

You smile. We donate. The Vaillant Group is using the #vaillantsmile campaign to support global projects that focus on the development, schooling, training and soft skills of children in SOS Children's Villages. What makes this aid project so unique is its approach: Vaillant is collecting smiles across Europe and donating a fixed sum for each one. The current project is helping over 250 young people at the SOS Children's Village in Kigali, Rwanda, to obtain professional training. As more smiles

are collected during the campaign, more projects will have the chance to be implemented. The smiles are all counted at www.vaillantsmile.com and published in the form of photographs. The aim is to create a photo strip of smiles that brings people together and directly supports children. The #vaillantsmile campaign was first launched in Austria in January 2016 at the Aquatherm trade fair. Additional countries got involved over the course of the year, including Switzerland, the Netherlands and Spain. The campaign has been up and running in Germany since summer and Vaillant and SOS Children's Villages are still busy collecting smiles. #vaillantsmile is another building block in the long-term partnership with SOS Children's Villages. Vaillant has already equipped Children's Villages in Belgium, China, Croatia, France, Hungary, Poland, Romania, Russia and Ukraine with highly efficient heating technology.



Get involved now at
www.vaillantmile.com – after all,
 more smiles mean even more help!

Vaillant named one of Germany's best employers



Based on a recent survey, news magazine Focus determined the 1,000 best employers in Germany by taking a look at companies across 20 different sectors with over 500 employees. The Vaillant Group came tenth in the "Finished and Consumer Goods" category. The overall company ranking was based in part on the survey questions and votes cast by company employees themselves and partly on the employer ratings received by the companies on well-known Internet platforms.

In 2016, the Vaillant Group also received the Fair Company seal for the sixth time since 2010. The Fair Company initiative is the largest and best-known employer initiative in Germany for students and job starters. It awards its seal to companies that have a responsible and transparent corporate culture. The ratings provided by current and former interns are decisive for whether the seal is awarded. Companies that hold the Fair Company seal are able to offer students valuable practical experience by actively committing to quality standards and verifiable regulations. The initiative acts as a reliable compass for graduates looking for fair working conditions besides being an effective recruitment tool for companies. The trainees' feedback ensures transparency and credibility.



Webcast rather than classic press conference

The Vaillant Group turned to the Internet to present its latest round-up, becoming the first company in its sector to hold a purely online press conference

The Vaillant Group is taking on a pioneering role: it was the first company in the heating, ventilation and air-conditioning sector to exclusively transmit its annual press conference over the Internet in the form of an interactive webcast.

The contemporary digital format provided compact information to specialist and business journalists. During the live streams, attendees could use the chat function to send their questions directly to the members of the Vaillant Group Management Board and have them answered. The Web conference primarily focused on the general development of the business and the market as well as on the Vaillant Group's activities in the growth area of digital business. Connectivity, digital services, sales initiatives and the matter of Industry 4.0 were all further topics of interest. The webcast also looked at value creation through the structured analysis of product, process and usage data. The event was transmitted from the Vaillant expo brand experience centre at the Vaillant Group head office in Remscheid.

A new format: online press conference with a live chat function



127 kilometres through the Brazilian rainforest



Find out more in our online special at www.vaillant-group.com

Ambassadors' meeting

S.E.E.D.S.
Ambassadors

How can the Vaillant Group's sustainability strategy and S.E.E.D.S. sustainability programme be more firmly embedded into all areas of the company across all countries? By having members of staff in all central areas and sales companies who want to show their commitment to sustainability in their everyday working lives. This is how the idea of the S.E.E.D.S. Ambassadors was born. The first Ambassadors' meeting was held in Remscheid in 2016 with representatives coming from ten different countries.

To date, most Vaillant Group sustainability projects have been initiated by the team in the head office and then rolled out to the organisation. From now on, the divisions and countries are to keep their ears more firmly to the ground and launch their own initiatives to make the Vaillant Group even more sustainable. The S.E.E.D.S. Ambassadors will support this approach at local level. They will meet once a year and form a network for regularly sharing experiences and ideas.



Through the hellish jungle of Santarém

He's done it again: climate hero Friedhelm Weidemann has put on his running shoes in another distant destination on behalf of Vaillant. This time he crossed a rainforest in aid of the "Places worth protecting" campaign.

With Vaillant's support, the 57-year-old took on the Jungle Marathon through the Brazilian rainforest – billed as the world's toughest endurance race. Vaillant's "Places worth protecting" campaign aims to raise awareness of regions around the world that are threatened by climate change and to promote better environmental protection. To this end, Weidemann already ran a marathon through the Antarctic in late 2014. Now he's taken on the humid heat of the Brazilian jungle: 127 kilometres over four days through undergrowth, rivers and swamps.

Vaillant awards start-up grant

The Vaillant Group is helping Düsseldorf start-up Cognigy to develop innovative voice-control technology by providing it with a start-up grant

The business idea: technology for communicating with appliances and objects using naturally spoken language as well as an associated cloud-based sales and service concept. The Düsseldorf start-up is working on this with Vaillant's support. As part of the grant, Cognigy is invited to make use of the infrastructure and network offered by Cologne-based start-up forum STARTPLATZ. It will also receive advice and support from an experienced team of mentors comprising managers from various Vaillant Group divisions. The provision of the grant forms part of the heightened cooperation with start-ups and networks catering to new businesses. The Vaillant Group is also working with the Entrepreneurship Center at Ludwig Maximilian University (LMU) Munich. LMU EC is one of Germany's leading start-up ecosystems.

For more information, please also see our report from page 18 onwards.



The Skalica plant in Slovakia provides an authentic brand experience in the new visitor centre.

New visitor centre in Skalica

Since opening its doors in autumn 2016, the new visitor centre in Skalica has been welcoming guests with a comprehensive brand experience. The visitor tour has been completely redesigned and is dedicated to not just one but three brands from the Vaillant Group portfolio: Vaillant, Saunier Duval and Protherm. A short film presents fascinating insights into how the visitor centre was created. This is then followed by a plant tour. Some 1,400 customers and trade partners already visit the Skalica plant each year. The new visitor centre was modelled on the Vaillant expo brand experience centre at the company headquarters in Remscheid.

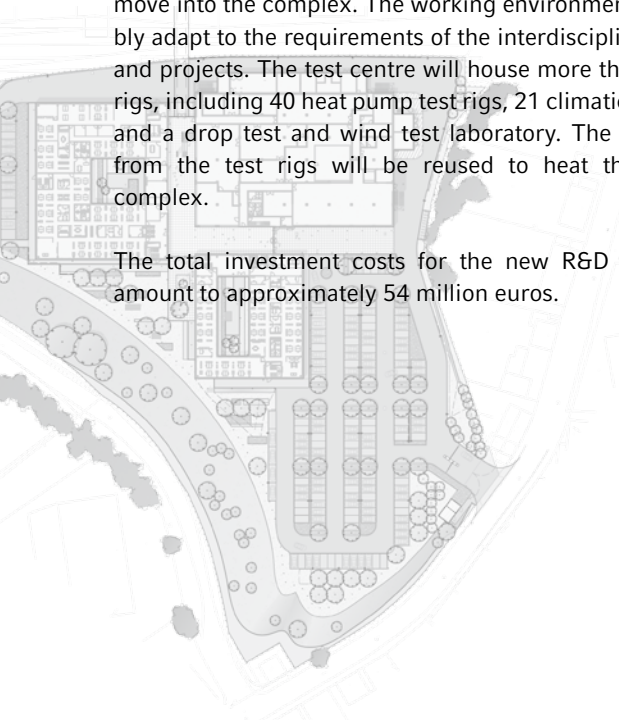


The foundation stone has been laid

The first milestone has been reached. The foundation stone for the new research and development centre was laid adjacent to the plant premises. The facilities will comprise a test centre with an area of 9,000 square metres plus two office blocks with a total floor space of 14,500 square metres. A glass atrium will connect the buildings with one another.

Upon completion, some 570 employees from all the departments involved in the product development process will move into the complex. The working environment will flexibly adapt to the requirements of the interdisciplinary teams and projects. The test centre will house more than 230 test rigs, including 40 heat pump test rigs, 21 climatic chambers and a drop test and wind test laboratory. The waste heat from the test rigs will be reused to heat the building complex.

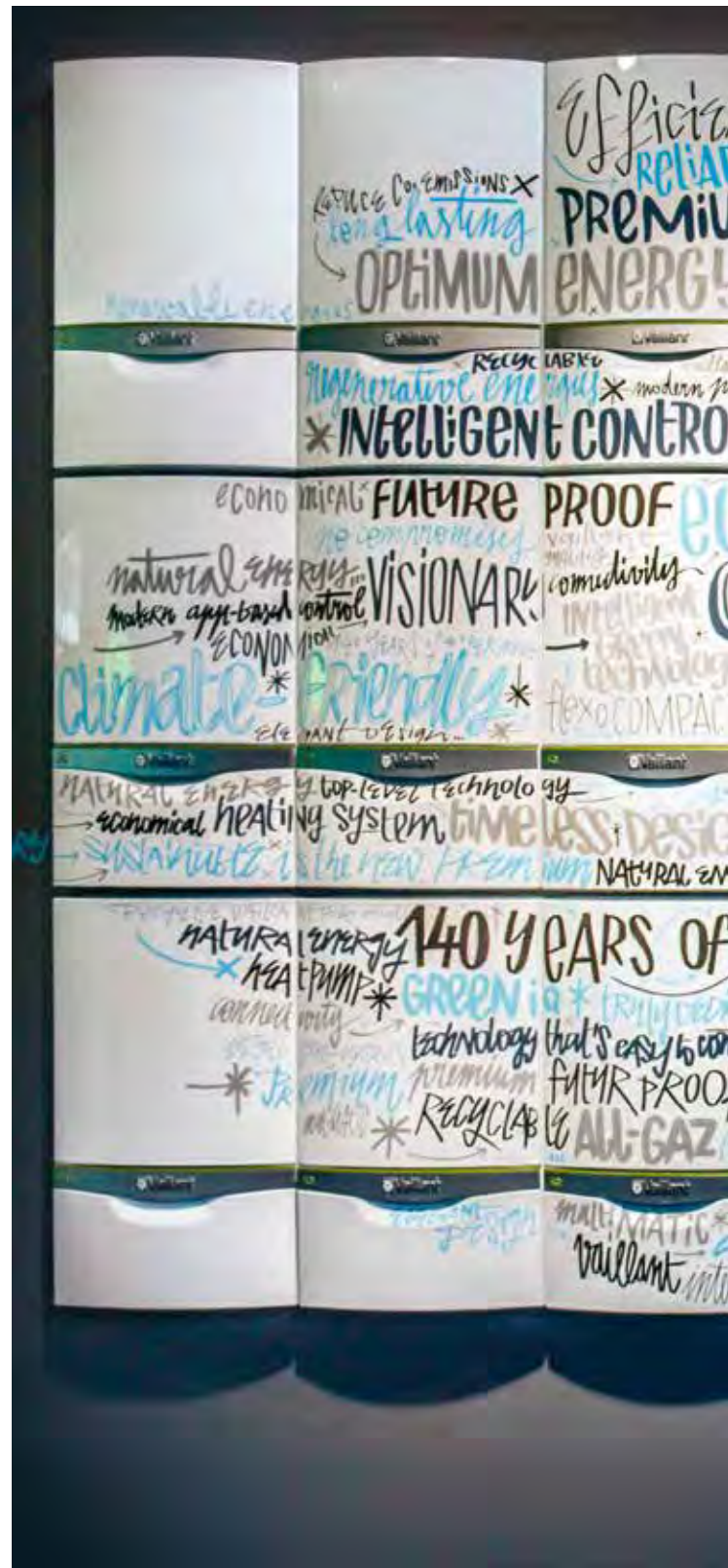
The total investment costs for the new R&D centre will amount to approximately 54 million euros.



Buying heating at the click of a button

Germany shops online – also for heating and hot water. Last year saw the introduction of the new HeizungOnline sales platform for Internet-savvy customers.

HeizungOnline, a new online sales and service concept jointly developed by Vaillant and trade partners, was launched in 2016. It is aimed at customers who want to quickly and conveniently arrange modernised heating systems, including their installation, over the Internet. In the first three months alone, the portal recorded 60,000 hits –



and this figure is continuing to rise. HeizungOnline covers all the steps involved in modernising a heating system: information collation and recording, quotation and installation. The aim is to help skilled technicians put together quotations and tap into additional new customer circles. The portal was developed at the suggestion of and in close cooperation with partners from the sanitation, heating and air-conditioning industry. In the second half of the year, the concept was also rolled out to several other European markets. The portal went online in the Netherlands in October and in Belgium just a short time later, in November.

For more on this topic, please turn to page 22.



Heating systems can now be modernised from the comfort of your own home with just a few clicks.

Artistic Vaillant trade fair stand in Belgium

Green intelligence meets modern design: this is how Vaillant presented itself and its Green iQ products in one of Belgium's largest art museums

In spring 2016, Vaillant exhibited at the Desco Expo – a trade fair for wholesalers in Belgium. What made this event so extraordinary was the fact that it took place in an art museum in Wijnegem, a venue known for the unique way in which it brings together ecology, technology and design. The artistic flair was also reflected in the design of the exhibition stands at the Desco Expo – and the Vaillant stand was no exception. This centred on a wall that displayed the fronts of 27 Green iQ ecoTEC exclusive appliances.

During the trade fair, prominent Belgian street artist Denis Meyers gave the appliances a personal touch, adorning them with terms relating to Vaillant and Green iQ. In line with the overarching concept of sustainability, Vaillant furthermore presented the Green iQ study in the exhibition catalogue. Following the trade fair, the artistically designed appliances were sold or donated for a good cause.



Live art at the Vaillant stand



Stunning panorama:
the Bernina Range with
the old hut down on the
mountainside

AT 4,050 METRES

FLYING HIGH

The steel blue sky stretches as far as the eye can see over the glacial landscape of the Bernina Range. The Piz Bernina soars up to almost 4,050 metres, closely rivalled by the Piz Palü, casting a silhouette onto this stunning scenery. A veritable feast for the eyes of alpinists on the border between Switzerland and Lombardy.

For centuries, the inhospitable, snow-topped mountainous universe surrounding the only 4,000-metre peak in the Eastern Alps has been both a source of fascination and a challenge: in 1850, surveyors undertook the arduous Dufour route to the summit of Piz Bernina to take the first official measurements of the previously unnamed summit, inscribing a height of 4,048.6 metres onto maps and their names into the history books.

Today the region attracts thousands of tourists who hike through the Bernina Range taking various routes, such as the Biancograt from Pontresina to Chiesa in Valmalenco. While the paths may vary according to ability and ambition, they nearly all have a spectacular stopping place in common: the Rifugio “Marco e Rosa”. Like an eagle’s nest, this Alpine hut perches on the mountainside at an altitude of 3,578 metres. No cable car, ski run or major hiking trail pass by this point. Visitors to the Rifugio have their sights set on just one goal: the Piz Bernina.

The Swiss supplying the building materials and the Italians responsible for construction

The construction of the mountain hut at the beginning of the 20th century so close to the highest peak in the Eastern Alps also sparked a fierce contest: in 1911, when the Swiss discovered that their Italian neighbours were planning the project, they resolved to beat them to it – spurred on by the good old Alpine sporting spirit, of course. However, the only stable foundation for the hut was on Italian soil, just a few hundred metres from the border. A solution was found worthy of Solomon himself: a binational joint venture with the Swiss supplying the building materials and the Italians responsible for construction.

Living on the edge

The “Marco e Rosa” hut as we know it today was rebuilt in the 1960s a few metres further up the mountainside. Larger, more comfortable and frequently modernised. It can accommodate 50 people, boasts Italy’s highest Internet connection thanks to satellite phone technology and is home to hut manager Giancarlo Lenatti, whose hospitality alone makes a trip to the Rifugio worthwhile.

The grey-bearded Italian has lived up here for some 20 years and radiates a calmness that stands in stark contrast to his past: praised by his guests today for his perfectly al dente spaghetti and ready to take on even the most vicious of weather fronts with his sturdy build and a glint of mischief in his eye, this man was one of the most daring extreme mountain climbers and skiers back in his youth.

A term that is still guaranteed to light up Giancarlo’s face is “steep skiing”: “After hours spent working up a sweat as I battled my way up walls of ice to a 3,000-metre peak, I’d finally

Transportation the Vaillant way: instead of the new heating unit being delivered by the installer in his typical green van, it came by helicopter.



Joining forces to conquer the mountain: Giancarlo Lenatti (3rd from the left) and the installation team delivering the new heating unit (bottom left).

Giancarlo is a “native of the mountains” – and can vouch for the excellence of Vaillant’s products: his gas-fired boiler served him faithfully for almost 20 years (bottom right).



buckle on my skis and then hurtle towards the valley plunging down virtually sheer slopes – that was my life!” When asked who was the best steep skier in his day, the man known on the scene as “Il Bianco” answers in a supremely confident air: “Me!” And immediately adds by way of explanation: “Because I’m still alive!”

These are not just empty words and he is not fishing for compliments. It’s simply how it is. It helps to know what extreme mountain climbers class as steep skiing. The Harakiri slope in Mayrhofen in Tyrol is said to be the steepest in the world. Unsurprisingly, it has been classified as a black piste and has a downhill gradient of 36 degrees. 36! This is just a warm-up for Giancarlo; to get a real kick it has to be more than 45 degrees. Over a run of several hundred metres, at the very least. Preferably passing through furrows, navigating sheets of ice, bumps and rocks and leaping over drops of several metres. “THAT is steep skiing,” says Giancarlo – and in the same breath, raves about the beauty of the mountains, which have come to be his world. Now that he has left life in the fast lane, as the manager of the “Marco e Rosa” hut.

Nevertheless, the 59-year-old still puts in a top performance when it comes to looking after his guests. In the smallest of spaces and sometimes under hazardous conditions, he is ready to meet any challenge. Even if he is short on supplies or suddenly “overpopulated”, he manages to conjure up a few extra mattresses and a tasty evening meal, helps mend damaged equipment or comforts climbers who have been forced to abandon their long-held dream of reaching the nearby summit after a sudden change in the weather.

Italy’s highest Internet connection thanks to satellite phone technology

Helicopter delivery service

Two things in particular are required to make all of this possible: an incredible inner calm and an equally incredible knack for organisation. As Giancarlo explains: “Dashing out to get extra supplies for the kitchen – that’s not an option for me!” Nor is a traditional delivery service, allowing you to order pizza, red wine or that urgently needed replacement part for building services simply by making a phone call. If something is broken or missing, acquiring the new part requires meticulous planning and organisation. This applies to both the photovoltaic system which supplies electricity and to the heating technology as well.

Marco Basla, Vaillant Communication Manager in Italy: “This is why, for example, Giancarlo operated the wall-mounted Vaillant boiler for heating and hot water all by himself for nearly 20 years. He serviced it regularly as well because even Vaillant can’t manage to transport its servicing vehicle up to nearly 4,000 metres. And not every technician can work at this altitude because for many people the air up here is far too thin.”

This pretty much sums up why Giancarlo Lenatti opted for Vaillant again when it became clear he would have to replace his boiler. To be more specific: he chose a wall-mounted combined device to generate heat and hot water, which could be installed in the kitchen with minimal effort.

It sounds simple, and it really is. It's all in a day's work for Vaillant, whether in Germany or Italy, France, Turkey or Great Britain. In hundreds of houses and flats. However, a mountain hut high up in the Alps is a whole different story! The very first question that arose illustrated the challenges involved in this

***"So, a helicopter
was our
only option,"***

*says Vaillant Italy's Sales
Director, Fabio Masseroli.*

team gazed out of the window, marvelling at the stunning sight of the sun-drenched vista of the snow-capped Alps.

A schedule determined by nature

How quickly conditions can change at this altitude, however, became clear during the first attempt at delivery. Winter arrived practically

overnight, bringing with it metres of snowfall and double-digit sub-zero temperatures. Replacing a heating system with a weather situation like that? Not a chance. How would our installer Mario Fomiatti get up the mountain? How would Giancarlo bridge the gap in supply? THAT wasn't something he



replacement mission: carrying over 40 kilos of technological equipment plus accessories and tools on one's back for ten to twelve hours up a mountain? Impossible. How about using a packdonkey? Not even the Italian military has one of those anymore. "So, a helicopter was our only option," explains Vaillant Italy's Sales Director, Fabio Masseroli, who joined forces with Area Manager Andrea Russo and Sales Representative Marco Bottoni to form the task force "boiler replacement at the Rifugio 'Marco e Rosa'".

In the end, everything ran as smoothly as a delivery with a servicing vehicle. Or nearly as smoothly, for the scale of the undertaking was quite a different one. With the sun beating down on Talamona airfield, the "Eliwork" pilot finally fired up the rotors of the "AS 350 Écureuil" and over 800 HP whisked the helicopter off into the sky – landing 45 minutes later on the tiny, crushed stone plateau next to the Rifugio. During the flight, the

was prepared to risk after all. And he actually managed to "keep alive" the old device for the entire winter. Until June of the following year. And then Mario was finally taken to the Rifugio by helicopter, equipped with all the tools and expertise needed to disassemble the old device and bring the new and far more efficient unit into service in the space of just a few hours.

What was the biggest challenge? Giancarlo and Mario laugh when asked this question: "Shovelling away the snow to clear the entrance to the Rifugio. Because there was still plenty of snow on the ground – towering over two metres. Covering every single metre of the path from the helicopter landing field to the door of the hut." Incidentally, they did all of this only to discover that it had snowed again in the evening – forcing them to postpone the return flight to the day after.



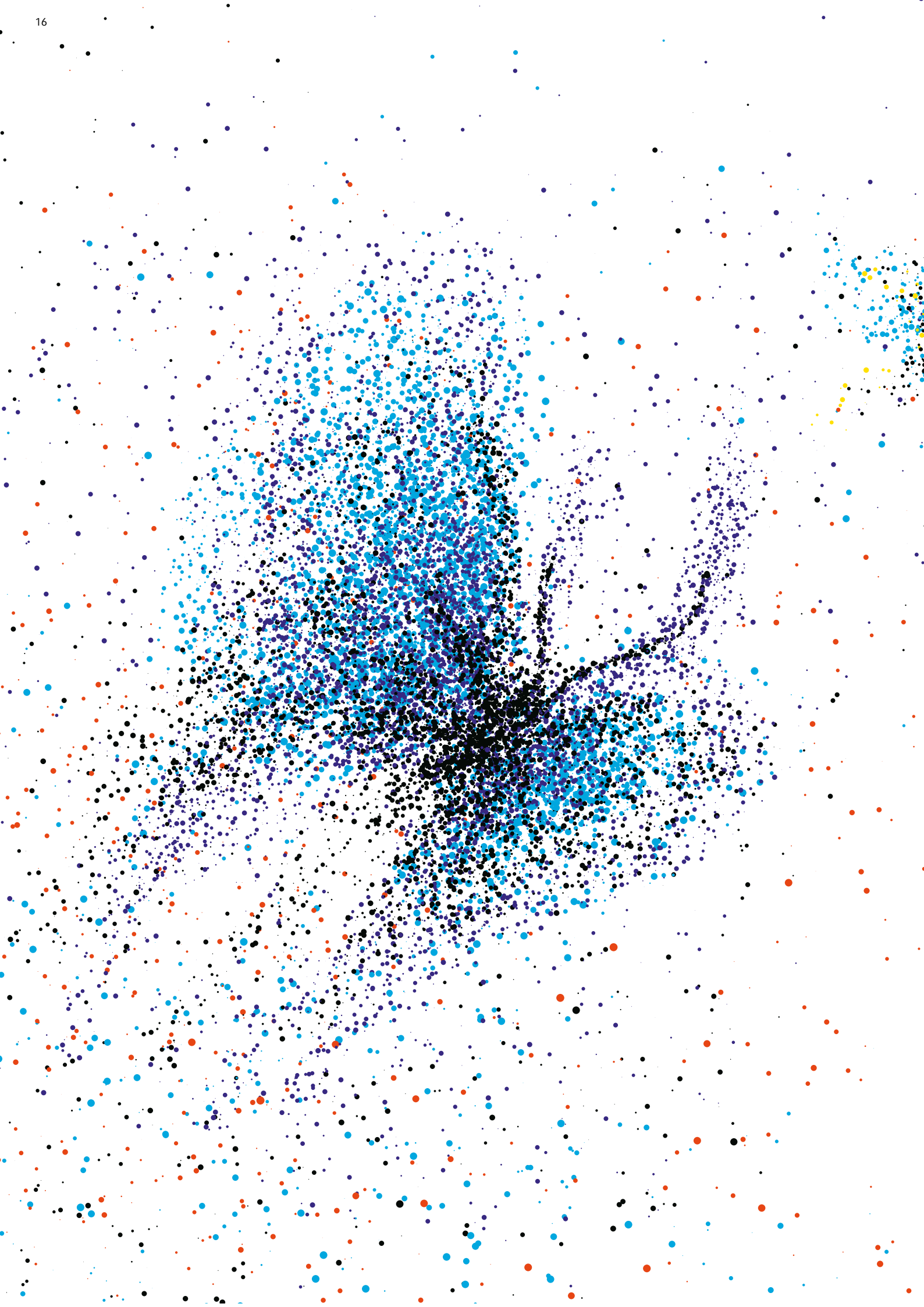
During the flight, the team gazed out of the window, marvelling at the stunning sight of the sun-drenched vista of the snow-capped Alps.

Mountain hikers arriving at the Rifugio "Marco e Rosa" are met by a scene that has an almost surreal feel to it: all of a sudden a wolf appears between the rocks (far left).

The Rifugio "Marco e Rosa" lies in the shadow of the Piz Bernina and is the third-highest mountain hut in the entire Alpine region (left).

Gazing into the distance: this view at "Marco e Rosa" is reserved for alpinists – or members of Vaillant's service team which organised the replacement of a heating unit at an altitude of almost 4,000 metres.





A decorative graphic consisting of a dense cluster of small, multi-colored dots (blue, yellow, black, red, and purple) in the top left corner, with a few scattered dots extending towards the center of the page.

The digital revolution

With change comes opportunity.
And challenges. As the digital revolution progresses, many things are afoot at the Vaillant Group: the company is developing with new partners, new business models, new skills, new technologies and new ways of thinking.

NEW PARTNERSHIPS

Networking in the start-up forum

For many companies, digitalisation means a culture shift. In order to gain new perspectives and ideas, people are increasingly looking towards the start-up scene and start-up networks.

“Do you want to sell sugar water for the rest of your life, or do you want to come with me and change the world?” This is the famous question Apple co-founder Steve Jobs posed to John Sculley, then Vice President of Pepsi. So many people dream of changing the world with an innovative idea – today, more than ever. But unlike in the stories we hear about Steve Jobs and Bill Gates, the new generation is no longer found cooped up in garages working on their latest brainwave. Today’s digitalised world requires everything to move quickly: it doesn’t take long for a cutting-edge innovation to become yesterday’s technology. This makes networking with others more important than ever.

STARTPLATZ offers a place to do just that. The third floor of the office complex in Cologne’s MediaPark has a young and trendy feel to it. Bright green walls, IKEA shelves in the co-working spaces, untidy desks, boxes – all in all, a creative chaos. You won’t find anyone here in a suit. San Francisco, Tokyo, London, Stockholm... the conference and “drop in, drop out” rooms are named after the world’s megacities.

The young entrepreneurs, most of whom are in their 20s, have plenty of opportunities to network: in the kitchen, in the communal area with its indispensable coffee machine or around the popular foosball table. During the post-lunch “rush hour”, there is often a queue for coffee – and conversations are bound to ensue while waiting. Regular BBQs on

the large sun deck with views over the MediaPark and Cologne’s rooftops as well as the monthly breakfast meet also provide excellent networking opportunities. And if that were not enough, numerous workshops are also held here.

Young people, an open atmosphere and lots of communication and interaction

Tom Focke spent a trial day working in Cologne on behalf of the Vaillant Group. The 36-year-old is a digital marketing manager and wanted to take in a little start-up air. “The people at STARTPLATZ are passionate about their ideas. You can really feel their sheer energy and dynamism. On the whole, they make up a very young crowd of digital natives,” summarises Focke. What he likes about STARTPLATZ itself is “the open atmosphere and the fact that people have a lot to say to one another”. He also comments that the whole setup is “very interactive”.

STARTPLATZ gives you a direct connection to the start-up scene

The offices are named after Cologne’s various districts. Tim Tressel can be found in Ehrenfeld. The 28-year-old is working with his co-founder to create a next-generation digital learning environment for schools. As the Web developer in the two-man team, Tim takes care of programming. The pair have been working on their idea at STARTPLATZ since January with the aid of a three-month start-up grant. The Vaillant Group has also provided similar funding in the past.



Sent to the start-up forum: Vaillant Group Digital Marketing Manager Tom Focke (centre)



Centrally located: the STARTPLATZ start-ups work in the heart of Cologne's MediaPark.

This was used to support Düsseldorf start-up Cognigy, which is working on voice-control technology that could potentially be used for voice-controlled heating systems.

Young entrepreneur Tim Tressel loves the communal co-working space: "There's a huge difference between sitting at home all day programming and doing it here in this environment. There are other people doing similar things here who often experience similar problems. You can have some pretty good discussions. You can also use new technologies that other start-ups are in the process of developing. It's hard to find an investor if you're completely unknown in the start-up scene. STARTPLATZ gives you a direct connection to this scene."

Just a few doors down, Trutz Fries, a 41-year-old family man, is hard at work. He has already experienced professional success, having worked as a managing director for four years. But he always felt the urge to "be the master of his own destiny", as he reveals during a conversation in one of the sofa corners. He was familiar with STARTPLATZ from his time as an employee. Even then, he thought the atmosphere of "creation and innova-

tion" was great for meetings. The benefits are clear to him. "The people who work here are people you can exchange ideas with."

Despite getting their heads down and working hard in the offices, people also make time to talk to one another – just like in any other office. Often about projects but equally often about everyday topics. Anyone looking for complete peace and quiet can find it in small cabins, where they can also make telephone or Skype calls. "Drop in, drop out" rooms are also available for longer discussions, while numerous conference rooms provide the perfect setting for meetings of all sizes.

**Broaden your
horizons and create
communication hubs**

A second start-up shares the office with Trutz Fries. They have several things in common. For one, both are developing Amazon-related ideas. "We discuss details with one another a great deal – and get far more from doing so than we would by working alone. We've even teamed up as partners a few times. This would never have happened if I didn't work here."

Close proximity and a philosophy of cooperation

Tom Focke is used to co-working spaces. The Vaillant Group has long since opted for open-plan structures and flexible working methods within its Digital Marketing team, which also shares its office with the IT department. After a day at STARTPLATZ, Focke is convinced of the merits of this concept. "Close proximities stimulate discussions." He explains that it is important to broaden your horizons and turn spaces into communication hubs, stating in summary: "When you have the strength of a company behind you, like we do, you can learn a great deal from the start-up scene. You can really benefit from exchanging ideas and creating a philosophy of cooperation."



AN INTERVIEW WITH LORENZ GRÄF ABOUT START-UP CULTURE AND ENTREPRENEURSHIP

How did you come up with the idea of STARTPLATZ?

Nothing like this existed when I first started out. When we established our company in 1999, there were few opportunities to discuss things with others. Start-ups didn't just happen to come across each other, nor did they actively meet up. I always wanted to develop a system for exchanging ideas, a networking environment that works as rapidly and rationally as in Silicon Valley. Networks built up around the basic principle of "How can I help you?" rather than "What's in it for me?" This is the kind of network we're trying to build at STARTPLATZ.

Did the STARTPLATZ concept break new ground or did you base it on an existing model?

I was already familiar with "Plug and Play" in Silicon Valley, which you could call the pioneer of co-working environments. I wanted to go one step further, creating a place where events, conferences and workshops could also be held. Furthermore, it was important to me that start-ups didn't just spend time with one another, but that they also met other people from beyond the start-up scene.

In other words, you wanted to create a co-working space and somewhere people can network?

Exactly. In a co-working space, you know exactly what everyone else is working on and can quickly link concepts. Many things result from spatial proximity alone. Google set a great example here in making sure that everyone has a kitchenette within 50 metres of their workstation. This then acts as a place where people meet. Our basic human needs are therefore exploited to support the flows of information within the company.

What are the most bizarre business ideas you've seen here?

I've stopped viewing ideas as bizarre as I'm often surprised by which ones turn out to be successful and which don't.

What do start-ups particularly value about STARTPLATZ?

I hope that they value the network. Start-ups and innovation teams alike underestimate the quality and benefits of a network to begin with.

How has the start-up scene changed in recent years?

The lean start-up method is a new way of doing things. This means taking an extremely flexible approach without a crystal-ball-based business plan. It's all about putting ideas into practice. Timescales are shorter; people look a quarter ahead, perhaps a year at most. Regardless of whether or not the start-ups



already know where they want to be in the long run, they start out by simply putting their business idea into practice.

What makes the difference between a successful and an unsuccessful start-up?

Passion and tenacity.

Has the image of start-ups changed?

The image of start-ups has changed dramatically once again, particularly in recent years. After the negative impact caused by the dot-com bubble bursting in the 2000s, a positive image is now being reformed. According to public opinion, we need more entrepreneurial spirit and innovation in Germany. Some people are even setting up companies just because it's "cool" to do so. But that's an approach that doesn't work, of course.

Would you say that the start-up mindset is very "here and now", even in large companies?

Yes, but a company isn't a start-up. Start-ups are looking for a business model, whereas companies are institutions that have found a business model and are executing it with particular suc-

"Companies and their employees can learn to approach problems in a straightforward manner, work flexibly using streamlined structures and have the courage to try new things."

Lorenz Gräf is the founder and Managing Director of STARTPLATZ. The 60-year-old expert in online interaction and communications is also a self-made entrepreneur and the founder and former chairman of Globalpark AG. In Cologne since 2012 and Düsseldorf since 2015, STARTPLATZ is a meeting point and accelerator for the start-up scene in the Rhine region.

cess. Despite this, they still have to remain innovative. This is why I firmly believe that ten to twenty per cent of a company should be based on innovative structures like those found in a start-up.

Can you give us an example?

A more network-like organisation with very, very flat hierar-

chies. One where the highest paid person's opinion doesn't really determine whether a product will be built or how it will look. These decisions should be taken by the specialists who know both the market and the product. People lower down in the company must be given far more scope to make decisions.

When doesn't this kind of approach work?

It won't work for companies that don't adopt it in full. It requires a complete cultural shift that has to be fully understood and implemented from the most senior to the most junior levels.

Why are companies increasingly copying start-up methods?

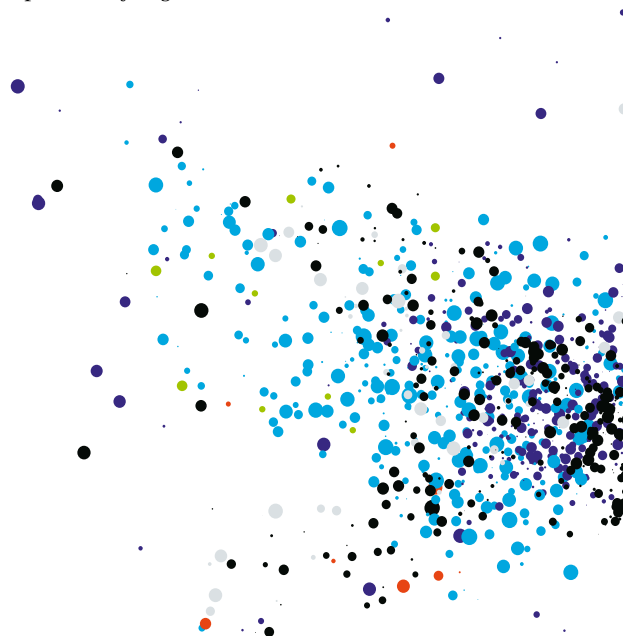
The Internet has led to far greater levels of competition. Customers have more ways of finding out about products, including in the B2B sector. Users have far more knowledge than in the past. Technology is naturally also developing and the boundaries between sectors are also starting to blur. Companies that previously operated in completely different sectors might suddenly find themselves competing against each other. Large companies are beginning to realise that they need to act more quickly.

What can start-ups learn from traditional companies?

The immediate advantage for start-ups is quite simply the colossal network expansion – a huge number of sparring partners they can talk to about their project. By looking at companies, start-ups can also see how sales and success work and how processes can be standardised effectively.

And vice versa?

Companies and their employees can learn to approach problems in a straightforward manner and work flexibly using streamlined structures. It's also important that people have the courage to try new things without being ruled by the fear of failure. This culture of simply going ahead and trying things shouldn't become part of a company's core processes, but start-ups can definitely teach companies to sometimes consider things that were previously regarded as taboo.



NEW BUSINESS MODELS

Breaking new ground

Buying a heating system online? What once seemed far-fetched is now possible in today's digital era. In 2016, the Vaillant Group developed HeizungOnline (HeatingOnline), a Web portal and an app to help trade partners meet evolving customer requirements. A new business model that offers added value.

Folker Natelberg is on the motorway, travelling from the North Sea coast in Lower Saxony to the conference of German Vaillant expert partners in Dortmund. He is making the most of the journey and his hands-free set: "Both the supply structure and purchasing behaviour are changing. More and more products and services are being sold online." Folker Natelberg is the Managing Director of Natelberg Gebäudetechnik, a building technology company that employs around 150 people. His motivation is to look forward, focus on the future and always stay one step ahead.

"At one of the expert partner focus groups, we made a point of asking whether Vaillant was staking its claim in the online world. In the group discussion, we realised that this question was more urgent than we thought. We couldn't afford to let this development pass us by and instead wanted to play an active role in driving it forward," explains Natelberg. "We noticed that many players – manufacturers, wholesalers, new platforms – were trying to get something off the ground and set up new online sales channels." Vaillant reacted quickly. "The topic was already on our agenda. There had been projects in this area in various markets since 2015," Nicole Dunker, Head of Marketing at Vaillant Germany, points out.

For Natelberg and his fellow expert partner Thilo Dreyer, this is a step that needs to be taken. "The customer structures have changed. There are some customers who we can no longer reach via traditional channels," says Dreyer, who runs Dreyer Gebäudetechnik, a building technology company based in the metropolitan region of Nuremberg. "We are talking about particularly attractive customer groups who have a different approach to decision-making and who are used to researching and buying online."

"We worked very closely with our expert partners to develop HeizungOnline," reports Dunker. In March 2016, the portal finally went live. It comprises an app for trade partners and a website that lets end customers order their heating system in three steps. First of all, they answer five questions about their house or flat and then receive a personalised quote by e-mail that shows them the price including installation costs. Secondly, a Vaillant trade partner carries out

an on-site check and then installs the new heating system.

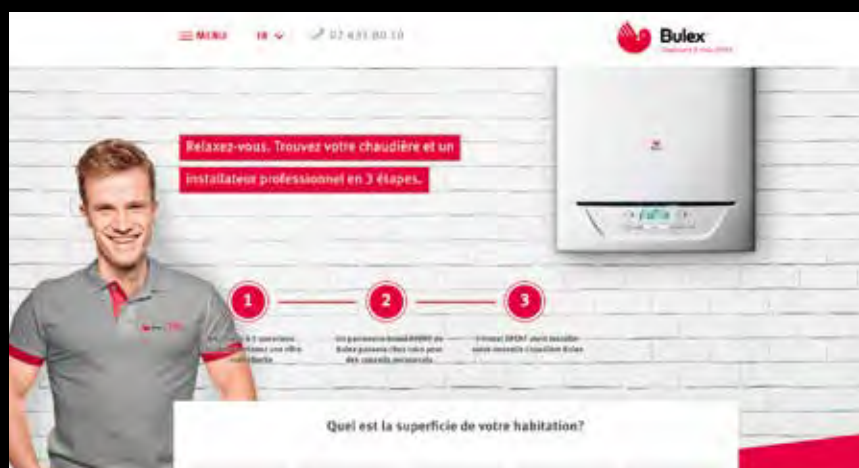
This is the idea behind HeizungOnline – or HeatingOnline, as the project is known outside Germany. The portal was launched in the Netherlands in October, with Belgium following suit in November. Although the basic idea is always the same – five questions, three steps – there are considerable differences when it comes to the business model. Sabine Ryheul, Marketing Director at Vaillant Belgium, explains the approach taken in her country: "Once the customer has chosen a system and indicated two possible dates for an on-site visit, our own call centre chooses the nearest installer from our Instal XPERT network, who carries out the on-site visit and, if the customer signs the contract, also handles the installation." For Ryheul, it made sense to go with Bulex: "We want to break new ground and become better known by end customers. What's more, the model is a perfect fit with Bulex and the target group. The brand is synonymous with straightforwardness and seamlessness: 'Relax, it's a Bulex.'"

**Five questions, three steps –
this is the idea behind
HeizungOnline**

A different model is used in the Netherlands. Although Vaillant is the contractual partner, only one product is offered via the portal (and is offered on an exclusive basis): the Vaillant ecoTEC exclusive. "We have two main objectives: we want to strengthen the position of our trade partners whilst removing this top product from the price pressure that prevails here in the Netherlands," explains Paul de Bruin, Commercial Director Vaillant Group Netherlands. "We do, however, want to offer other products via the platform in the near future." This is also the case in Belgium and Germany. Here, the plan is to offer heat pumps and systems alongside the gas-fired condensing boilers.

There are big differences between the models in the three markets. "For this initial phase, we have deliberately decided to try out different things, tailored to the conditions of each market, with the sales companies," says Thorsten Günnewig, Project Manager of HeatingOnline. Each market operates in accordance with its own needs. The wider the spectrum, the

The appearance differs from country to country depending on market requirements.



identify a product and its associated price indication. The Dutch, in particular, have had a positive experience: 90 per cent of products sold through Heating-Online in the Netherlands have been sold via the app rather than via the platform.

Folker Natelberg sees the app as an asset. "Nowadays, customers want a quote as quickly as possible. Using the app, my employees can use the system in the presence of the customer and therefore make a transparent offer." Thilo Dreyer wants more: "Here, I would like to see further improvements and more modification options, such as the integration of subsidies."

*Step by step
from e-commerce today
to e-business tomorrow*

"There are still plenty of opportunities," believes Günnewig. "We want to expand the app module by module. It harbours the potential to digitalise entire business processes – from product selection and installation aids through to maintenance information and much, much more." A further leap into the future – from e-commerce today to e-business tomorrow.

more insights we gain to help us enhance our offer. "With every visit to the site, we learn more about the customers and their needs," adds Dunker. The insights are continuously built into the system. In Germany, more and more trade partners are being integrated and trained. "This is a big challenge, and a rethink is needed in the industry. We are working with our trade partners, developing e-learning op-

portunities, training courses and much, much more."

They are being developed for the app, for example, which is a key component of the system. "It's the nerve centre, where the system configuration intelligence lies," says Nicole Dunker. Using the app, trade partners can answer the five questions together with the customer and

Professor Tobias Kollmann holds the Chair for E-Business and E-Entrepreneurship at the University of Duisburg-Essen and has conducted academic studies on the Internet, e-business and e-commerce for over 20 years. As a co-founder of AutoScout24, he is a pioneer of the German Internet start-up scene and electronic marketplaces.

"Classic small and medium-sized enterprises as well as industrial companies need to re-interpret partnerships."



PROFESSOR TOBIAS KOLLMANN ON DIGITAL BUSINESS MODELS AND SALES PLATFORMS

Professor Kollmann, what do you yourself buy online?

Almost everything! From everyday consumables to electronic goods and furniture. I'm a very enthusiastic online shopper.

Would you say that there are areas for which e-commerce isn't yet or will never be relevant?

In this regard, we've developed the 3B model by analysing the provider's ability to digitally describe the product, the consumer's ability to virtually assess the product and the electronic consulting activities involving both online parties. Our findings have shown that most products are now suitable for the Internet. Ultimately though, it's consumers who decide what can and cannot be sold via e-commerce.

Why can companies no longer afford to ignore the Internet as a sales platform?

Whatever the product and whatever the sector, the Internet is a constant opportunity for businesses to foster their success through information, communications and transactions. This applies to not only the acquisition of new customers but also to the retention of existing customers and the re-acquisition of former ones. The reason for this is clear: customers want digital contact and companies have to adapt to this mindset whether they want to or not.

The digital markets are full of disrupters. What is the best way to deal with them?

There is only one solution: do things yourself! Horse-drawn carriage owners didn't invent the car. Disruptive innovations

usually come from new market players rather than established ones. This particularly applies in the field of digitalisation. One key piece of advice is to look at which start-ups are currently being financed in Silicon Valley and how their business models will affect your sector. If you can foresee them having a significant impact, there is only one thing for it: do what they are doing yourself – and quickly!

What opportunities are offered by the new digital business models?

When it comes to digitalisation, there is only one way to go: forwards. You have to actively seize the opportunities and possibilities offered by the digital economy and be the first to make effective use of them. This is the only way to master the digital revolution and remain a key market player long into the future.

How can we get partners on board, e.g. in the field of sales?

When it comes to the Internet, it is all about relevant coverage. The size, diversity and flexibility of the range of products and services offered are key to the success of dedicated online platforms. It is far harder to expand these on your own than with the speed and stability possible when collaborating with partners, especially in the B2B area. Classic small and medium-sized enterprises as well as industrial companies therefore need to re-interpret partnerships. Not just between one another, but also with small start-ups that know how to develop online platforms. Otherwise, also in Germany, an Alibaba will soon come around the virtual corner as a major B2B platform with such broad customer coverage that our individual SMEs have little choice but to use it.

NEW TECHNOLOGIES

Rethinking the way we think

The digital revolution has an impact on all areas, introducing new technologies and demanding new skills and a change in culture, which is transforming the company at its core. The new 3D printing centre is a good example of this.

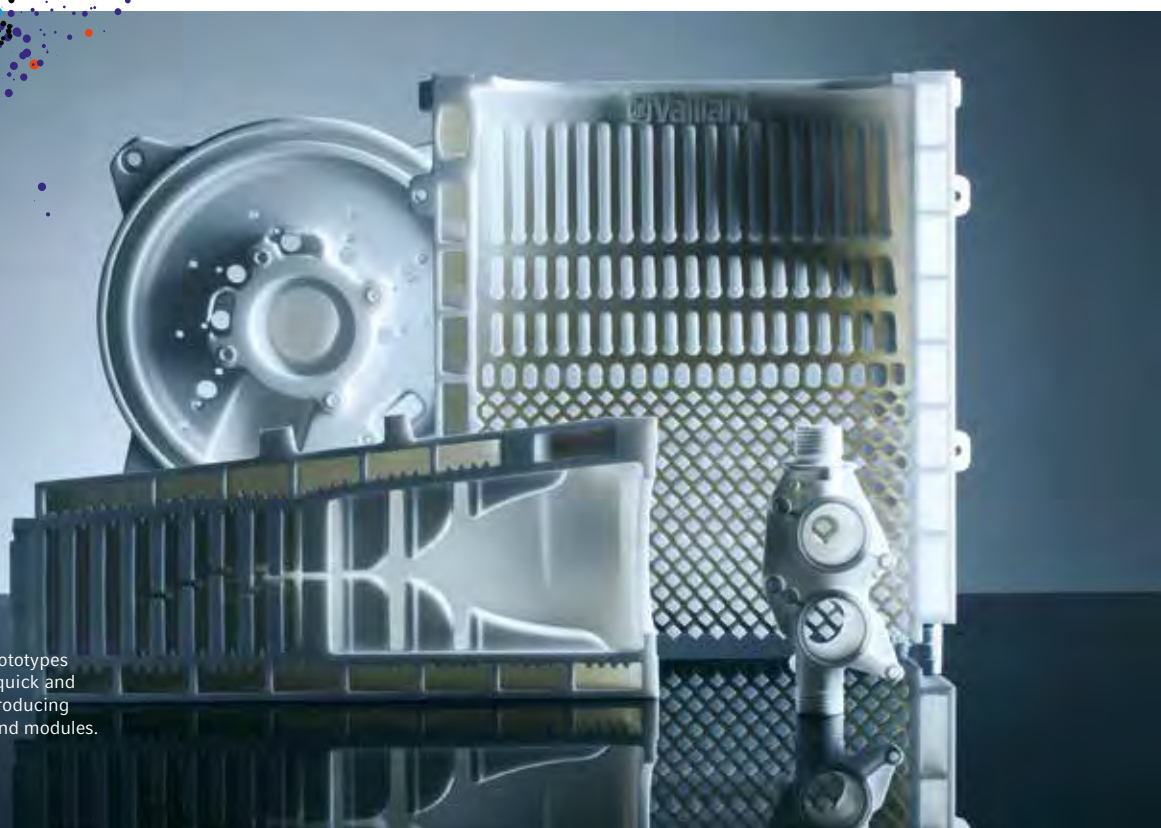
Thomas Brinkbäumer is impressed. He has been for years. By the possibilities presented by 3D printing. “3D printing allows you to create geometries that can’t be produced using tools: curves in a solid body, bionic structures, i.e. structures modelled on animals or plants,” says the Head of Prototyping and goes on to explain: “This is all made possible by the structural composition of different layers in 3D printing.” Another major advantage is that no tools are required at all. “Just data. That’s why creating prototypes using 3D printing is faster, requires less refinishing and results in better quality.” 3D printing is also an interesting solution for spare parts: instead of keeping extensive stock in storage or the costly and time-consuming process of reproducing them, certain parts could simply be printed out in future.

3D printing is nothing new. The Vaillant Group has used this procedure for over ten years. However, the new 3D printing centre, which is now officially open for business at the company headquarters, is equipped with new hardware that considerably broadens the options available. Designers have been cautious about using these machines in the past, partly because 3D printing was expensive and the selection of materials was initially limited. The machines in the 3D printing centre can process plastics using various procedures. By joining forces with specialised partners, however, it is also possible to use other materials, such as synthetic resins, ceramics and metals.

“We’d like to motivate our designers to make much greater use of these options and introduce the procedure to more teams,” says Arnd Beitzer, R&D Manager, who works together closely with Brinkbäumer. This cooperation is essential: ultimately, we’re not just dealing with a new printing procedure here – it’s a new way of thinking. “The designers’ job is to create products that are ready for manufacture. Now there are other options. They no longer have to think about whether a component can be produced in a certain way. The question they should ask instead is: what design will best serve the purpose? Because it’s possible to produce anything.” Although the result is reviewed in terms of functionality and the cost-benefit trade-off, the engineers can use the optimal outcome as their starting point. “This changes the process, the way of thinking,” says Beitzer.

All this involves doing a lot of persuading. Beitzer and Brinkbäumer set off to canvass the teams. “We always need something with us to show them. This wins them over and then we notice how the ideas start to take shape,” Brinkbäumer reports. “To speed up this process, we removed some bureaucratic hurdles; no permits are required. We did this so that our staff could just give the technology a try,” explains Beitzer. Developing a new way of thinking requires the right framework – infrastructure, time and a fresh mindset.

The development of prototypes using 3D printing is a quick and cost-effective way of producing complex components and modules.



NEW COMPETENCIES

"For me, the digital transformation is not a revolution. It's an organic, evolutionary process."

DANIEL GAMBAL
Product Manager Digital Ecosystems

The brains of the business

Digitalisation is infiltrating every area of the company. But this won't simply happen overnight. Everyone has to do their bit. Lots of small steps take us a long way.



"As electronics developers, digitalisation is simply part of our day-to-day work."

TORSTEN STEVENS
R&D Manager Controls (left)

PETER HOLSCHBACH
Project Manager Systems,
R&D Electronics Development (right)



"I look after our dual-degree students and see how intensely this generation uses and is involved with the digital world."

CAROLINE VOGT
Manager HR Development



"To stay abreast of the latest technology, we have to properly qualify our employees."

RAIMUND HEUSER
Chairman of the Joint Works Council



RAISE THE CURTAIN AND LET THE SHOW BEGIN



Our products are usually found hidden away in a cellar or out of sight in a utility room. But for us they're the stars of the show. They supply hot water, room heating and cooling – with optimum efficiency. With such a broad portfolio, the Vaillant Group brands have every need covered, with solutions in the form of individual appliances, systems and compact CHP units, for flats, single- and multi-family houses, right through to commercial properties. We draw on both classic and renewable energy sources here, placing ever greater emphasis on the latter. Our products deliver a strong performance and are highly innovative – which is why they are now being presented in the main hall of the Ruhrfestspielhaus festival hall in Recklinghausen. It's show time for our stars!



THE CLASSICS CLEAN AND EFFICIENT

Up to
70
per cent of domestic electricity
can be generated using
a CHP station

The clear favourites: our gas-fired condensing boilers. These classics are great all-rounders; absolutely efficient and completely reliable. Whether floor-standing or wall-hung, with or without a water storage tank – they meet their user's needs, no matter how straightforward or complex. The selection is huge, with products that are kind on the purse strings and the environment. The combined heat and power appliances are a little larger by comparison, but also offer additional value. Alongside heat they generate electricity, making the homeowner less dependent on electricity prices.

Vaillant

ecoPOWER 4.7

Around
1
million compact condensing
appliances were produced
by the Vaillant Group
in 2016



Condensing technology
accounts for more than

30

per cent of the Vaillant
Group's turnover



Around

70

per cent of the turnover
from renewable energies
comes from
heat pumps



HEAT PUMPS

THE NEW CHAMPIONS
**GREEN AND
SUSTAINABLE**

Heat pumps provide
up to

75

per cent of the energy
supply from the environment
for free



Free, environmentally friendly, inexhaustible – heat pumps extract energy from the air, earth or groundwater and transform it into heat, even when ambient temperatures are low. This is based on the pressure-cooker principle: heat pumps use a compression process to raise the temperature to a high enough level to heat the building. They are able to provide not only room heating and hot water: when the system is reversed, they can also cool. Offered under a range of brand names, the Vaillant Group has more than 100 different variants of heat pumps that can harness any environmental heat source whatsoever. And as electricity is increasingly generated using renewable energy sources, heat pumps are more environmentally friendly than ever before!

The product
portfolio comprises
more than

100

variants of
heat pumps



Around
20

per cent of fuel costs can be
reduced by incorporating
renewable energies



The Vaillant Group
manufactures around
140,000
square metres of solar
collectors per year

THE ORCHESTRA PERFECTLY ATTUNED

Together they put on their best performance. Modern heating systems work with each other to best meet demands – with a view to individual needs and the type of building. This enables renewable and classic energy sources to be combined together. Solar thermal installations produce heat; photovoltaic systems electricity. The energy they generate can be parked in storage tanks until needed. Controlled ventilation systems with heat recovery ensure a pleasant room climate without losing energy. Intelligent control technology assumes the role of conductor in guaranteeing the interaction of all the individual components in the cluster. Gas-fired condensing boilers with solar support and heat pumps with ventilators are preferred system solutions. These can even be powered using a clean source generated from their own photovoltaic installation.



Around

60

per cent of the hot water
supply in a system can be
provided by solar energy

Some
50,000
operating parameters can
be remotely determined

CONNECTIVITY AND DIGITAL SERVICES

THE CONDUCTORS INTELLIGENT AND INTERLINKED

They look smart and rather discreet. But a huge amount of intelligence goes into these small, elegant boxes. The controls can convert every single comfort preference into heat and efficiency: for a snug, warm bathroom in the morning and a cosy temperature in the evening, all the while saving energy in between. Attuned to your personal schedule; intuitive and easy to use. Apps enable users to notify the control of spontaneous weekends away without having to return home. The connectible, Web-enabled control units offer added value, for example through remote-controlled operation monitoring and system diagnostics.

Connective products
and services have been
introduced in

30

countries



Over
30,000
connective
products sold

THE BEST CREW COMPETENT AND RELIABLE

The Vaillant
Group trains around

75,000

installer partners
each year

Sales of services
and spare parts
account for around

20

per cent of the Vaillant
Group's total turnover

It wouldn't be possible without them: the photo crew



A performance can only ever be as good as the people behind the scenes. Installers and customer service staff ensure that the appliances perform as best they can. The Vaillant Group services start with the installation and end with a system swap – and are available along the entire product life cycle. If desired, the service desk can also monitor the heating system remotely and spot any issues before the homeowners themselves. This involves not only the specialists from the factory service centre, but also the installers working with our trade partners. They are provided with technical support if necessary and receive regular training.



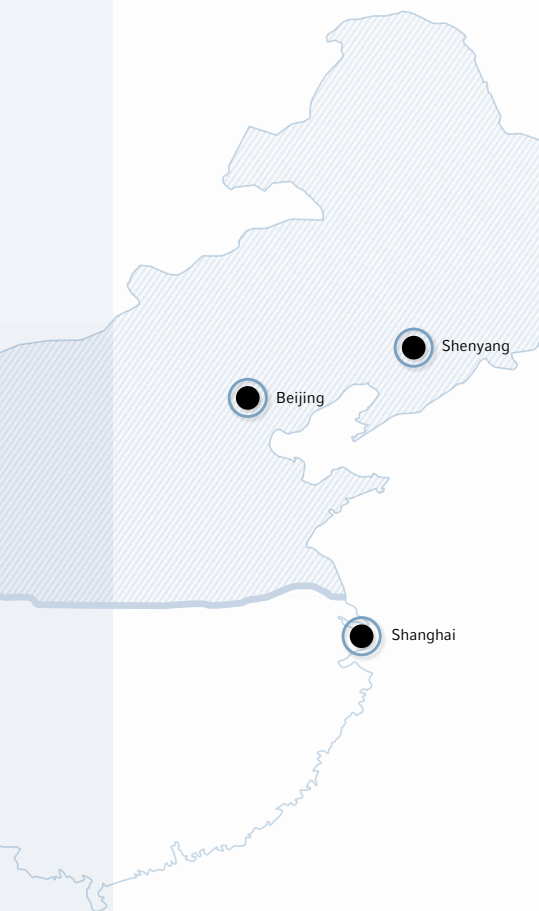
Around

4,300

Vaillant Group employees
work in customer service



Wang Dongqing (left), General Director of Shanghai Yi Dong HVAC Equipment Engineering Co., Ltd., sees great potential for energy-saving condensing technology in the southern Chinese market.



Finding warmth in China

The Qinling Mountain Range and the Huai River geographically separate the north and the south of China. The Qinling-Huai Line also marks a peculiar divide over home heat. While the north has been enjoying the comforts of public heat supply since the 1950s, an estimated 800 million southerners have been left in the cold despite often freezing wintertime temperatures. Over the past years, as more and more southern families are installing their own indoor heating equipment, the boundary line has begun to disappear.

● Beijing

Upwind and upstream



Offering all-round childcare, the Beijing Venus Kindergarten in the heart of the popular Beijing district of Shunyi Mapo New Town is a sought-after facility for many young parents. The timetable even includes English lessons. After all, this is an international nursery. Beijing Venus Kindergarten is also known for the good quality of its air – thanks to modern technology from Vaillant.



Since the days of old, the people of Beijing have been calling the northern part of their city “upwind and upstream”. Originally, this was a reference to the geographical layout of Beijing. The terrain is high in the north and low in the south, waters of the rivers run naturally southward. The expression is still used today, but today hardly anybody uses it for its literal meaning anymore. “Upwind and upstream” has taken on a more comprehensive connotation. Today it’s a statement about Beijing’s north being more developed than its south. It refers to the better part of town, where life is more comfortable, where one hopes to move to some lucky day, if fortunes are good.

One of these “upwind and upstream” places is the lively urban district of Shunyi, not far away from the Olympic park, a legacy of the 2008 summer games hosted in China’s capital. Noticeably, Shunyi’s streets and public spaces are rich in lush greenery, which is one of the reasons for its popularity. The district is a hot spot for real estate upstarts. Here, you’ll find Beijing’s most exclusive residential properties, modern architecture and urban landscaping. As such the neighbourhood attracts residents who want a new quality of life, and who can afford it. Shunyi residents aren’t just “rich” people in the ordinary sense of the word. They are the capital’s upper middle class, who have participated in China’s economic rise of the past two decades. They are often well educated, open-minded and worldly. There is an openness to change and an eagerness to try new things.

Located in the central area of Shunyi Mapo New Town, Beijing Venus Kindergarten is a much sought-after address. Private schools and day-care centres have become ever more popular among urban parents in recent years. “This, actually, is the kindergarten’s new site,” explains Xu Ying, the 33-year-old principal of Beijing Venus. She is proud of her job. “Its construction was only finished a few months ago.” Moving a kindergarten to a new location, one would imagine, normally affects the student body. But not in this case: “Beijing Venus has managed to retain 80 per cent of its children. Moreover, we have been attracting many new children since then,” says Xu Ying.

The structure now occupied by the kindergarten was originally a commercial building. So some refitting and refurbishment had to be done before moving in. The works also included the replacement of the clumsy and ancient heater, oversized for future needs and unreliable due to age. “In the beginning,” remembers Xu Ying, “we just wanted to exchange it with a heater that would take up less room. So we expressed to a partner of the company Vaillant that we required a comfortable, environmentally friendly and safe new appliance.” The installer company Beijing Dewei Juxing Technology Co., Ltd., a partner of Vaillant North China, came up with the solution: they proposed the installation of a wall-hung condens-

“You can tell that more and more people are placing importance on eco-conscious lifestyles.”

Lin Sen

Beijing Dewei Juxing Technology Co., Ltd.

ing boiler. “With this system, we didn’t need a large space or a special room for the equipment,” explains Lin Sen. As the Executive Manager of Beijing Dewei Juxing Technology Co., Ltd., he was re-

sponsible for the planning and installation of the new system at Beijing Venus. “With a compact unit, we were able to satisfy the needs of the whole kindergarten,” he says. The condensing boiler uses precise temperature control to preserve heat at night and maintain a constant temperature setting during regular daytime business. “Not to mention, the condensing technology is much more efficient and saves a lot of energy,” Lin Sen points out.

Taking a deep breath

Another issue of pressing concern – infamously problematic in modern Beijing – is the preservation of good air quality. Everyone knows that in the past few years, Beijing’s commonly erupting smoggy days are making people grow weary. Looking for good, clean air, people have even begun to move away from the city. For many, however, that step is not really an option. Their work and life is centred in the city, they cannot turn their backs easily. Xu Ying has a clear opinion on the subject: “Pollution reduction is a very complicated long-term project. It’s not possible to expel the smog in the short term. So improving the air quality inside the houses is the only alternative. Nowadays, Chinese people are really placing high importance on air quality.”

Lin Sen and his team were able to offer a solution for this as well: an integrated ventilation system with both a heat recovering and cooling function. The system was specially designed for the requirements of the kindergarten. The air ventilation guarantees a healthy room climate for the children and staff inside the building. Even on the days when Beijing’s smog becomes critically heavy, going off the charts with an outside particle pollution of 2.5, inside the kindergarten everybody is still breathing clean air. “This is making more than a few parents sigh with relief,” Xu Ying knows from experience, “and it has increased the kindergarten’s popularity in Shunyi greatly. There are many parents whose reason for choosing us is just because of the healthy air.” Recently, the project even obtained public recognition by receiving the 2016 Elite Award for the housing industry.

Of course, from Vaillant’s perspective, the project not only increased the kindergarten’s popularity but also boosted Vaillant’s local reputation. “Near here, there are several new housing communities that families are moving into. They have contacted us to install condensing boilers and ventilation systems. We already have a long waiting list,” says Lin Sen. And he sees a trend. “You can tell that more and more people are placing importance on eco-conscious lifestyles,” he says, “more and more families in Beijing choose household heating systems.” The market is growing fast.



Inside Beijing Venus Kindergarten, children and staff always breathe healthy air.



● Shanghai

Below the line

Vanke Emerald Riverside. The nine apartment buildings in the heart of Shanghai offer wrap-around glazing and pure luxury. The panoramic views of the city are naturally a part of this, but the development is also pioneering in terms of its heating: Vaillant supplied it with 300 heating systems that use condensing technology.

During the winter in Shanghai, it is rare to see any sunlight. And even when there is sun, it is usually weak or hardly noticeable. The season, understandably, is not held in great favour. When people mention winter in Shanghai, they will often use words like “horrific”, “dreadful” and “awful”. Quite literally, winter here means a prolonged time of harshest cold. Because of its location south of the Qinling-Huai Line, Shanghai belongs to the area in China without central heating. As a result, individual heating appliances are traditionally more common in this region of China.

Ms Zhang Chunyu, a middle-aged woman and head of a company, is looking out over the slowly moving Huangpu River below. Propped against her new home’s window, she is holding a cup of hot coffee in her hand. Quietly she says, “Having a warm home is more important than anything else.”

Ms Zhang Chunyu owns an apartment in a housing community called Vanke Emerald Riverside. The property was developed by China’s largest real estate company. The community is located on the north Bund, adjacent to Changyi Road and Minsheng Road, across from the river. Looking out to the west, you are able to see Lujiazui peninsula and its financial district. Nine glass canopy apartment blocks are dotted in a line; each home is able to enjoy a 270-de-

gree panoramic view over Shanghai. Zhang Chunyu’s apartment in building No. 9 is on the far side of the street, so she enjoys the unimpeded scenery of the Huangpu.

“Most people who live here are successful entrepreneurs, business owners or executives of corporations,” Emerald Riverside’s Property Manager Mr Wang knows. “Their reasons for choosing Emerald Riverside are manifold. Some like the location, others the green environment, but a common demand is always that their homes should be warm in winter.”

The possibility to turn the heating on as one fancies – not necessarily a standard of living for everybody – has become a must-have item for up-market residences in Shanghai. But Vanke Emerald Riverside stands out even further because it features an advanced underfloor heating system.



A private heating system is a must when fitting out high-end Shanghai apartments today.

Wang Dongqing has nothing but great things to say about the advantages of floor heating: “Using floor heating increases personal comfort. It gives you the great sensation of having warm feet but a cool head. It’s good for children and the elderly. And the air flow helps to decrease dirt and dust circulation.” She is the General Director of Shanghai Yi Dong HVAC Equipment Engineering Co., Ltd., the company responsible for installing Vanke Emerald Riverside’s heaters. “We came across loads of different heating brands in



the early days up until we met Vaillant,” she remembers. “After that we never switched to another brand again. We’ve been doing projects for over ten years now.” Vaillant’s sales service is held in particular high esteem. “It is in an entirely different league to that of other brands, which is extremely important for large-scale projects like this,” says Wang Dongqing.

The “big white hare”

Wang Dongqing and the company she works for are in contact with almost all of China’s up-market housing developers. During the past 40 years of China’s opening, she has seen a growing number of people coming to private wealth. This is especially pronounced in Shanghai. Since the early days of China’s reform and economic growth, Shanghai has been one of the forerunner cities and an important market for Vaillant water heaters. Due to a long tradition, the image of the Vaillant logo is well recognised here. The “big white hare”, as it is called, has given the older generations of Shanghai warm memories. In an age when goods were scarce, the “big white hare” water heaters provided countless city households with the same warmth and comfort that people in Europe enjoyed. Successively over the past decade, Vaillant’s wall-hung boilers have also begun entering Shanghai’s households, redefining the city’s temperature. Shanghai’s winters, it seems, have started becoming mellower, inside at least.



Thanks to it being fully equipped with condensing technology, Vanke is helping to promote customer awareness.

“Renting a house in Shanghai with a wall-hung boiler is between 1,000 and 2,000 Renminbi more expensive than renting a regular house,” Wang Dongqing explains. Again the Vanke project is in the vanguard, as she continues to describe. It is the housing company’s first community to have condensing boilers in every flat. “I believe this will surely lead China’s up-market housing industry into a green frenzy.”

Unlike Europe, where non-efficient technologies have already been banned from the market in favour of energy-saving and more environmentally friendly products, condensing technology is only beginning to gain recognition in China. Many families are now learning about its benefits. Prestigious lighthouse projects such as the Vanke development promote customer awareness. “We’re not only working with the high-end housing developers in this way, we are also working closely with many other real estate brokers. Nowadays, developers aren’t just relying on low-price competitiveness anymore when choosing their partners, they’re looking for product quality, after-sales service, and they are

placing greater importance on the demands of the future homeowners. The potential of condensing boilers in the southern Chinese market is huge, we have currently just won over another project in an upscale housing community. They’ve chosen Vaillant’s condensing boilers too,” smiles Wang Dongqing. There’s no doubt, if Vanke is any indication of what is to come, then condensing technology represents the future of building supply.

Shenyang, the cultural and economic centre of the northeast, is China's winter city, they say. The warmest average temperature you can hope for during the cold season is around -10 degrees Celsius. Easily, the lowest average temperatures can reach below -20 degrees Celsius. Children cannot play outside anymore, they instead like to sit by the window, frosting the glass with their breath so that they can "draw". Most activities cease at this time of the year. It's as if the whole city has entered a state of hibernation.

At first sight, even the university, usually filled with youthful vigour, is no exception. Heading down to Shenyang Institute of Technology, you find many students have gone on their seasonal break. The athletics tracks lie empty, there isn't anyone to be seen on the avenues or boulevards. Everything is vacant and quiet. "We had the first snow of the year a few days ago," the dean explains. "Everyone is hiding indoors," he says, leading the way to the gymnasium.

Shenyang Institute of Technology is located in Shen-fu City near Shenyang. It's a full-time undergraduate school which focuses on training advanced application-oriented students and vocational trades. Currently, over 10,000 attend the college. The building structure encompasses some 320,000 square metres.

Whoosh! Upon opening the door to the gymnasium, a wave of hot air escapes from the inside. On the basketball court, two teams are engaged in a fierce battle. In the stands up on the podium, friends and supporters cheer and shout. The boisterous scene provides a stark contrast to the dormant campus outside.

"We don't use central heating here," the dean points out. "It's not appropriate, and it's too wasteful," he claims. In the Shenyang region, however, centralised district heating is the norm and the primary means to keep buildings warm at night-time. But not during the day, when temperatures are centrally lowered and classes and lectures are held. "When the school listed their demands for improvement, we recommended the use of condensing boilers," says the man in charge of the project, Liu Shidi, General Manager of Liaoning Dengke

"Eventually, Vaillant's solid reputation won them over and convinced the school."

Liu Shidi

Liaoning Dengke HVAC Engineering Co., Ltd.

HVAC Engineering Co., Ltd. Initially, the school reacted a little reluctantly to the proposal. Vaillant's condensing boilers were not very familiar to them and they had never come across this sort of heating before. Their worries concerned the running costs,

safety and maintenance of the heaters. "But eventually we were able to convince them. Vaillant's solid reputation won them over," he remembers.

Condensing technology on a grand scale

The Shenyang Institute of Technology project is one of the largest condensing boiler projects that Vaillant China has realised to date, with an area covering a total of 100,000 square metres' worth of buildings, and a total of ten boiler rooms. The required temperatures vary from building to building. Heat losses differ depending on the individual insulation. For a project as big as this, concealment of the installation and piping was an additional requirement. Hardly any of it is visible on the whole campus. The condensing boilers should save the institute both space and energy, that was the promise. Liu Shidi did the maths. After installing the new units one year ago, the college managed to cut its costs by some 40 per cent. The efficiency improved and the maintenance requirements decreased significantly. And several former engineering rooms could be converted into new classrooms.

According to Liu Shidi, the project is a special reference, but the use of condensing boilers is a growing trend in the Shenyang region as well. In his opinion, this

is due to three main reasons: condensing units are more efficient than either big boilers or central heating, they are compact, and they are very safe. At the college, all of these benefits continue to pay off. Maybe the city has entered hibernation with the grip of the cold and dark season, but inside Shenyang Institute of Technology feet are kept warm and spirits run high throughout it.



Vaillant heating appliances reduce annual energy consumption by about 40 per cent.

● Shenyang

Say goodbye to hibernation



The Shenyang Institute of Technology is a further major project for which Vaillant is supplying condensing technology. The institute has a footprint of 100,000 square metres and requires some 80 systems in ten heating technology rooms. Contrary to standard practice in the region, the higher education institute is not connected to the district heating network.





AMAZONS IN CALIFORNIA

Unbelievably challenging, unbelievably beautiful and unbelievably hot: the Raid Amazonas. Soizic Deveau, Grace Séguret and Awena Béliard are ready to take on the adventure after having signed up to this extraordinary competition held exclusively for women. The 2016 event takes them to California, to places that are particularly striking yet equally under threat. It isn't just about the challenge for the three women but also about raising awareness of the environment and of "SOS Children's Villages worldwide".



All videos and photos of the Vaillant Amazons can be found at www.thegreen.team

Three Amazons from the Loire-Atlantique department in western France? Doesn't sound quite right. Yet somehow it works. Soizic Deveaux, 35 years old: "I have two children; I'm a mother, a professional and a partner. I decided it was time to have a little adventure, do something for me. A truly extraordinary adventure." Held in a different country every year, the Raid Amazones offers exactly that, shining the spotlight on particularly beautiful parts of the world that are especially worthy of protection. Soizic, who works as a purchaser, finds her fellow Amazons at Vaillant in Grace Séguret (40), Customer Service Manager, and Awena Béliard (40), IT Project Manager. Together, the women want to raise awareness of the threatened region and of "SOS Children's Villages worldwide".

18 February 2016

The team is complete

Time to start training. Awena turned her life on its head. "I stopped smoking and started getting active." The three refer to themselves as "Rêve de Dunes" and throw themselves into training – individually and together.

8 June

They are sat in a boat –

and paddle for the first time. Nine kilometres to begin with.

18 June

Awena, Grace and Soizic

take part in the run for "SOS Children's Villages worldwide" held in Sainte-Luce-sur-Loire.

21 June

Draw your bow!

Archery. None of the three had ever picked up a bow and arrow. There's an archery club in Grace's home town of Vertou. The chairman trains the team himself.

11 September

Test run – Trail de Pont Caffino

Awena and Grace test their limits with the Trail de Pont Caffino. Awaiting them is a mix of running, canoeing, orienteering and mountain biking.

8 October

Canoeing from Pornic to Noirmoutier

The Atlantic! Awena, Grace and Soizic venture out into the ocean and canoe twelve kilometres from Pornic to the Noirmoutier island. "We wanted to do some training in difficult conditions," reveals Grace.

12 November

Departure

The adventure begins; they're making the jump from Atlantic to Pacific. A nine-hour time difference and 25 degrees Celsius – from Nantes in the west of France to the City of Angels, Los Angeles.





13 November

Register, medical checks, shake off the jet lag

14 November

Pioneertown Mountains Preserve – ten-kilometre cross-country run

The competition is on for the 255 women, who represent a total of 99 teams. The scenery is from another world, another time. Rocks and desert as far as the eye can see; sand and heat. The magnificent landscape completely passes Awena by: she's so focused on the track and on not stepping on one of the snakes native to the region. Then the heat hits her and she's forced to take a break. She drinks and looks around, marveling at the scenery; she even takes a few photos. The landscape helps her bounce back in the second part. The three women cross the finish together – before freezing in the air-conditioned bus that takes them to the scenic Wild West setting of Pioneertown.

15 November

Anza-Borrego Desert State Park – 28 kilometres of mountain biking

The temperature soars. Especially when mountain biking in Anza-Borrego Desert State Park, the largest in California. A 28-kilometre stretch in California's blazing sun with temperatures of over 40 degrees Celsius. Grace is anxious: mountain biking is her weakest discipline. And then there's the unfamiliar terrain: deep sand. It requires a completely different approach. Grace comes off her bike on more than one occasion while Awena gets backache as her handlebars are set too high. But, needless to say, they battle through together just as they do in all their competitions. The "Rêve de Dunes" team only works as one. They don't get a chance to take in their surroundings, despite cycling through one of the few remaining untouched desert ecosystems, rich in flora and fauna.

16 November

Salton Sea – 15 kilometres in the canoe, archery

The next competition venue is another very special location: Salton Sea, 66 metres below sea level, covering an area of almost 1,000 square kilometres. It was once the Californian Riviera, a paradise for migratory birds, fishing enthusiasts and weekend trippers; an oasis for people looking to wind down. But the glory days are over. Agricultural fertilisers are causing the lake to become too salty; there's a lack of water inflow. In fact, Salton Sea is now so salty that even saltwater fish no longer survive. The beauty of the landscape, with its pastel-coloured glow in the early morning, instantly mesmerises Awena, who grabs her camera to capture the moment. "By the end, my skin was covered in a layer of salt and my lips were burnt," reports Soizic. They were well prepared for the competition, but are disappointed with their ranking. A passable archery score in the afternoon provides no consolation.

17 November

L.A. treasure hunt

A change of scenery: a treasure hunt in the metropolis that is L.A. The three women, now in a team with five other participants, have no problems answering a few questions on culture, mainly related to Hollywood. The friends are excited to see Hollywood Boulevard and the famous Chinese Theatre; they stumble across Spider-Man



GREEN TEAM – SUPPORTING THE CLIMATE THROUGH SPORT



Soizic, Grace and Awena form part of the Vaillant Green Team. Through their extraordinary sporting achievements, members of the Green Team raise awareness of places threatened by climate change. Vaillant initiated the Green Team campaign in the knowledge that effecting an energy revolution does not just come down to politics. As a manufacturer of resource-efficient technology, Vaillant feels obliged to stand up for climate protection and environmental conservation: state-of-the-art heating technology represents one of the greatest areas of leverage in the fight against climate change. Around 40 per cent of energy is consumed in buildings, of which around 90 per cent is used to generate hot water and domestic heating.



and Iron Man, and pay a visit to Venice Beach. But they are irritated by the contradictions and extremes found in the city: its staggering size, the luxury Disney-style villas on the one side and the homeless on the other.

18 November

Triathlon – Lake Perris

Lake Perris really is a true beauty. Created as a reservoir in the mountains, it provides a water supply to the dry coastal regions and is also a local recreational area. “The nature was just so unbelievably beautiful,” says Grace. Still, the triathlon in the morning packs a punch: bike and run, then canoeing and finally orienteering. The first discipline really pushed the Amazons to their limits: one bike for three Amazons means one person cycles while the other two run – in turns, of course. In the end they have their moment of glory, although they are the final competitors to cross the finish line.

19 November

Joshua Tree National Park – 13-kilometre cross-country run

Soizic and Grace have to up their game on the last day; they are tired and stressed. Awena still has the first trek on her mind, which didn’t go well for her. In the end, however, they are surprised by their performance. “We were given such a boost by the amazing scenery in Joshua Tree National Park,” says Soizic. The kilometres flew by and it wasn’t long before they suddenly found themselves crossing the finish line – hand in hand.

Joshua Tree is one of the most well-known national parks in the US, thanks in part to its distinctive trees and rock formations. It is located in southern California, between the Mojave and Colorado

deserts. The landscape is shaped by drought, yet it appears to open up to a paradise in the form of Palm Springs. This is where the Amazons spend their evening. They enjoy a stroll between the green gardens of the villas with their swimming pools. “Then all of a sudden this artificial paradise just stopped. We literally found ourselves standing at the gateway to the desert, with the buzzing of air-con units behind us,” remarks Awena.

A ceremonial dinner is held in the evening and medals are handed out. Grace, Soizic and Awena are proud: “We achieved all of our goals: we went on a truly remarkable adventure, we finished the competition together, we had fun – and we weren’t last,” says Grace.

They are now back to reality. They will never forget their achievements, their experiences: these special places, beautiful yet under threat. Grace and Soizic can’t wait for their next adventure. Awena is staying true to her new lifestyle and still goes swimming several times a week. “Not because it’s fun, but because it’s important for my health.”

Sport for life, bicycles for SOS Children’s Village in Marly

The Raid Amazones is not just about sport, but also about charitable commitments. Grace, Soizic and Awena have combined their participation in the competition with a bicycle donation to the Marly SOS Children’s Village back home in France – with the full support of Vaillant. This makes sense to the three Amazons. At the end of the day, sport for them means more than just movement: “It represents values such as courage and respect,” highlights Grace. The commitment to “SOS Children’s Villages

worldwide” is important to them. That’s why they took part in another race in June 2016, also for SOS Children’s Villages. The official handover of the eight bikes is a momentous occasion for the Green Team. “We’ll talk about the fact that we really fought to overcome this challenge. That you can do a lot if you want and truly believe in something. That the world is beautiful but also faces a lot of threats. Everyone can see this, everyone can do their bit.”



TOTAL COMMITMENT TO SOS CHILDREN’S VILLAGES

Sport as a common thread: once a year, Vaillant Group employees in France take part in a charity run for SOS Children’s Villages and invite the children to join them. The French sales company donates five euros to the charity for every kilometre covered. The run forms part of a larger commitment stemming from the Vaillant Group’s partnership with SOS Children’s Villages. The Vaillant Group provides efficient heating technology to the organisation free of charge. Furthermore, the company, employees and partners show their dedication to the cause through fundraising campaigns and by providing early career assistance.



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