

we are BSH

ANNUAL REPORT 2015
BSH HAUSGERÄTE GMBH



WE ARE ... BSH

The company remained on a strong growth track in 2015. The Board of Management sums up.

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... RESPONSIBLE

Climate protection, occupational safety, disaster aid: BSH takes its responsibilities to society seriously.

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... NETWORKED

The digital revolution: from home appliance production to app-controlled coffee machines, lots of things are getting easier.

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... CURIOUS

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... TRENDSETTERS

In technology, design, or a broad portfolio of brands – BSH focuses on consumers' needs.

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... DIVERSE
Entry-level programs, continuing education, working conditions that look to the future: BSH has a good deal to offer employees.

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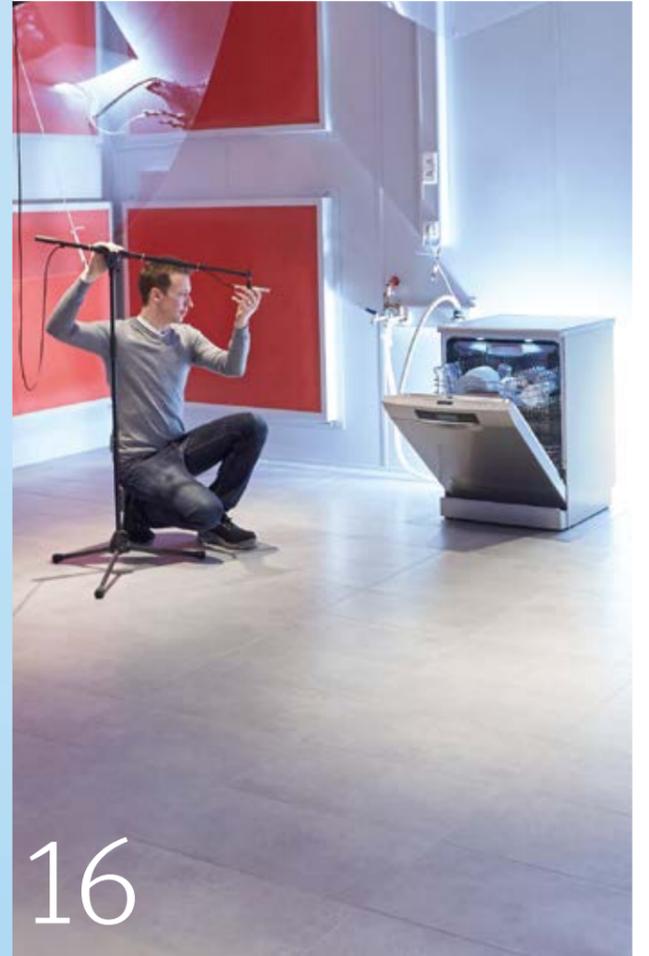
BSH's vision of a networked home and its consistent focus on the consumer helped the company remain on a strong growth track in 2015. The Board of Management sums up and explains what BSH is expecting in the future.

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China tops the list of major carbon dioxide polluters. But people are looking hard at how to change. Here BSH is setting high standards in environmental protection and efficiency. In up-to-date factories it produces appliances that are easy on the environment.

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BSH's development laboratories are building the appliances of the future. Yet it's been a long time since the product was the only focus here. Consumers are the yardstick we measure by. They test how easily and intuitively a cooker or dishwasher works, and have an important influence on user-friendly design.

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Perfectly networked: everything needs to go smoothly and fast, from single production parts to shipping a washing machine out into the market. That's why BSH operates seven main transshipment hubs in Europe alone. The Nauen delivery center, in Brandenburg, Germany, is an important hub.

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What makes BSH an attractive employer? Four employees report on the experiences they've had with the appliance manufacturer in a variety of locations around the world – and tell of diverse entry-level programs, continuing education for managers, and working conditions that fit older employees' needs.

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Using a smartphone while you're out to turn on the washer or take a look inside the refrigerator: more and more appliances are networked via the Home Connect platform and can be controlled with a single app – making consumers' housework easier.



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It's not just Bosch and Gaggenau that are on a success track in the American market. In Thermador, BSH is taking a lead with a local brand, as well. We explore why this iconic U.S. brand is so successful here.

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»BSH was the right choice«

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BSH worldwide

Excellence, fairness, entrepreneurial initiative – it's common opinion that Guiding Principles include one thing above all: the obvious. Can strengths, values, and strategies that look like everyone else's really be a basis for orientation and provide guidelines for day-to-day operations? BSH's Guiding Principles go further, and work out what makes this leading home appliance manufacturer really unique – providing goods and services for customers all over the world, as well as acknowledging a responsibility to the environment and to society.

The consumer tops the list. The goal of improving consumers' quality of life is what guides our actions at every level. It's for that goal that we apply our technological lead, improve and network our products and processes, and apply the full power of our brand portfolio.

The stories in the 2015 Annual Report make clear that our Guiding Principles' aspiration isn't just for show – it's a promise we keep. With a global team that's extraordinary in the very best sense: a byword for expert knowledge, reliability, and entrepreneurship, diversity, and healthy curiosity. Together, we want to be the consumer's first choice – no matter where, in which product group, or in what price segment.

BSH is well on its way toward achieving that goal. In 2015 we once again clearly outperformed the market's growth rate, and generated revenues of substantially more than EUR 12 billion for the first time. The resulting margin enables us to keep investing in innovation, production capacity, and sales strength out of our own resources – and always with our focus on the consumer. At the same time, we know that a market leader isn't measured by size alone. That's why we'll continue to grow responsibly just as we've done before, as a manufacturer that conserves resources, as an employer that earns the staff's trust, and as a reliable partner. That remains our essential core in all our brands and locations: We are BSH. ■



An online version of the BSH Annual Report 2015 is available at report2015.bsh-group.com.

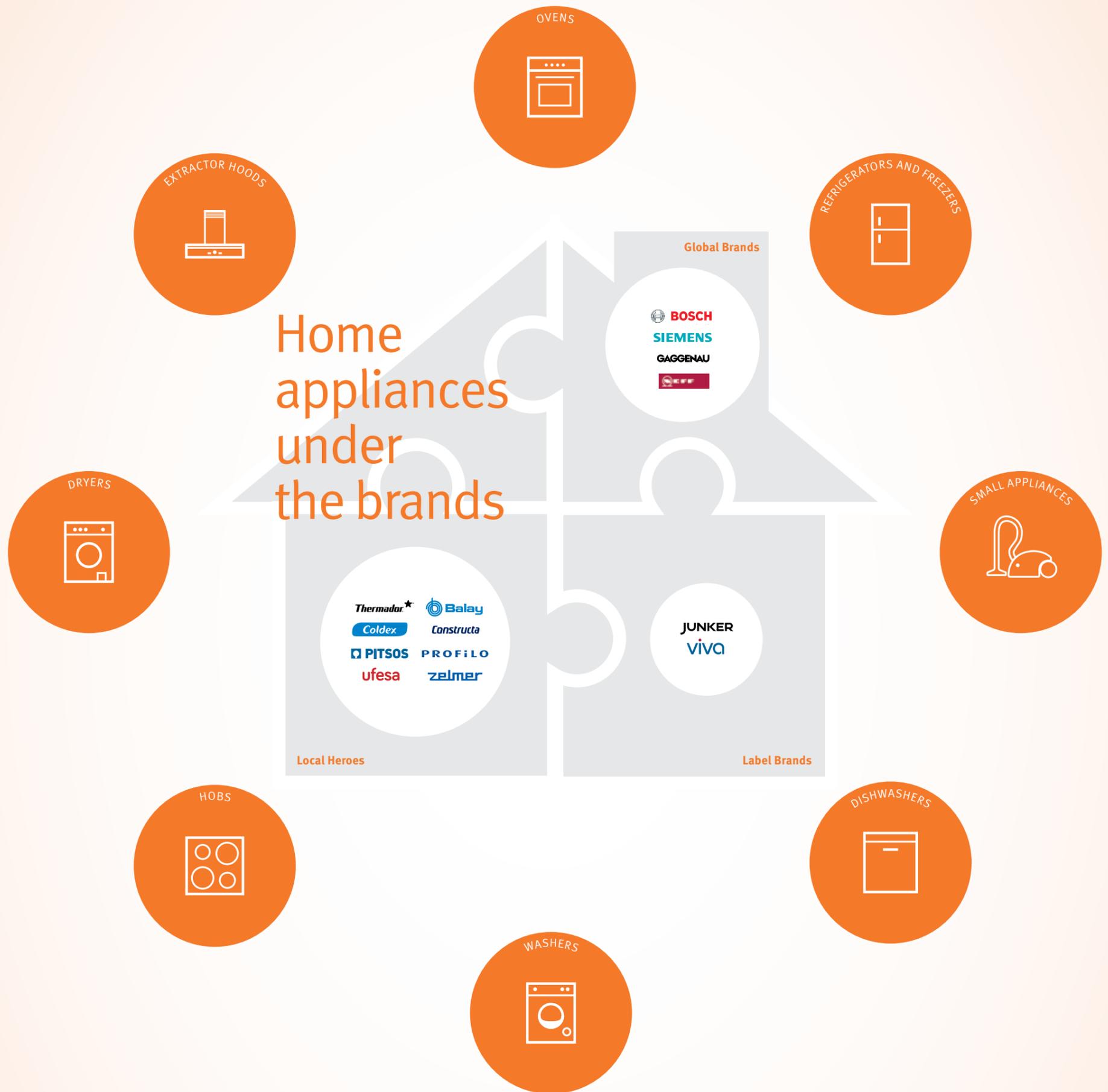
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BSH Hausgeräte GmbH
Carl-Wery-Straße 34
81739 Munich, Germany
Tel. +49 89 4590-01
Fax +49 89 4590-2347
www.bsh-group.com

Media contact:
Corporate Communications
Tel. +49 89 4590-2809
Fax +49 89 4590-2128
corporate.communications@bshg.com

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Home appliances under the brands



BSH Hausgeräte GmbH is the largest home appliance manufacturer in Europe, and one of the industry leaders worldwide. Its product portfolio spans the entire spectrum of modern household appliances. It includes everything from stoves, ovens, extractor hoods, dishwashers, washers, dryers, refrigerators, and freezers to small appliances like vacuum cleaners, coffee machines, electric kettles, irons, and hairdryers.

WE ARE ... BSH

BSH's vision of the networked home and its consistent focus on the consumer helped the company maintain a strong growth course in 2015.

Here the four members of the Board of Management sum up and explain how digital evolution will affect the home appliance market in the future.

Dr. Ottenberg, BSH appears to be getting used to annual revenue growth of around a billion euros. Do you think this trend will continue?

OTTENBERG: I'm certainly very pleased with the trend we've shown over the past few years. Raising revenues from 10 to 11 billion, and now from 11 to more than 12 billion in just three years is a performance record worth showing off. It indicates that we're firmly on track toward meeting our long-term revenue target of 20 billion euros by 2025. And we'll keep growing. But since market conditions all over the world are constantly changing, it's unlikely that every year we can see us grow as well as we have in the past few years.

Of course, 2015 was the first full year of operation under your new growth strategy. So is the strategy working out?

OTTENBERG: Our growth strategy is focused on the long term, and it will enable BSH to adjust to current and future challenges in our worldwide markets. I would never claim that our current success is due primarily to our new strategy – we're still in a transitional phase. Our success derives from the outstanding work that BSH – meaning of course our employees – has steadily put in all over the world. The new strategy is our way of making sure that the pattern continues into the future.

How did the year go, specifically?

NÄRGER: I can certainly say 2015 was a year of many challenges. There's no way for us to stay aloof from the generally unsettled global economic environment. That's why we're all the more pleased at having been able to report vigorous growth once again, and to break the 12 billion barrier. I'm especially happy that every region was able to contribute to our growth.

There's a great deal of talk about the slackening economy in China. Does that also affect BSH?

NÄRGER: There's no question that slower Chinese economic growth is also affecting the home appliance sector. But even with all the uncertainty, we grew significantly in China again in 2015, and expanded our market share even more. China will remain one of our major, important markets.

BSH is no longer announcing its profits. Why is that?

NÄRGER: We have no need to conceal our profits – quite the contrary. Profits did well, not least of all thanks to our strong revenue growth, and substantially outperformed last year's figure. The fact that we no longer release all our key figures has to do with the change in our ownership structure. Now that our long-standing shareholder Siemens has sold its holding to Bosch, we belong entirely to the Bosch Group. Bosch has a very long-standing policy of not releasing the profits for its individual companies. We're entirely willing to comply.



How is the cooperation with Bosch working out?

OTTENBERG: It's been very constructive and positive. As a mostly independent subgroup of the Bosch Group, we have the leeway we need to implement our strategy successfully. At the same time both sides are discovering that we have many factors in common – especially in terms of innovation. That's turning out to be particularly enjoyable. So we're profiting from each other, learning with each other, and working better and better together.

You've now revised the Guiding Principles and given it the title "We are BSH." That might be read as though you want to distinguish yourself from Bosch.

»Our success is founded on the outstanding work of our employees worldwide.«

DR. KARSTEN OTTENBERG
Chief Executive Officer

OTTENBERG: Just the contrary. In working on our Guiding Principles, we discovered how close together we are: the values that guide Bosch are also the basis for our own work. That's why the two Guiding Principles actually contain no differences in values. But with "We are BSH," we make it clear what's especially important to us, and what in turn makes us so special.

Why adopt new Guiding Principles at all?

OTTENBERG: For me, long-term strategy and the Guiding Principles are inseparable in terms of setting a framework and providing guidance. In our fast-changing world, every strategy has a limited shelf life, and we need to check regularly to see if it's still appropriate.

Our values, on the other hand, should be something durable. So our old Guiding Principles weren't wrong. What we've done instead is integrated and supplemented our traditional values and core messages in our new "We are BSH" Guiding Principles. We feel that with these new Guiding Principles, we're taking full account of our employees' desire for guidance.

A key point in both the strategy and the Guiding Principles is the focus on the consumers' needs. How have you progressed there?

GINTHUM: As far as we're concerned, focusing on the consumers' wishes has to be a permanent, never-ending mission. We have to ask over and over again how we can do an even better job of meeting consumer needs. Last year, we set up a User Experience lab in Munich where



»Sensor-controlled applications have immense potential for greater convenience, efficiency, and security.«

DR. MICHAEL SCHÖLLHORN
Chief Operating Officer

we align new products and projects quite systematically to consumer needs. We'll be extending that to all our regions.

Our new regional setup brings us closer to our consumers. That's important, because it's the only way we can find the right solutions for the consumers' needs. I think we're already very well positioned to accommodate regional needs and expectations, which can sometimes differ widely.

But the logical consequence of that is that BSH will have to become even more international, both in research and development and in production.

SCHÖLLHORN: We're already a company with a global footprint today. Yet while that was evolving, we were never interested in merely relocating production to the most economical locations – we wanted to establish a global setup that would fit our markets' needs. The best approach is when we can produce appliances for the local market in the region itself as much as possible.

To do that, we set a high priority on consulting local consumers when we develop new appliances. That information can benefit other regions as well, because we encourage extensive dialog among our units. So it might happen that a design that was specially tailored to consumer needs in one region could also become interesting for another region.

Could that mean that you might be relocating production to somewhere like Asia?

SCHÖLLHORN: That's not a question that has a general answer. It goes without saying that any production activity in the USA, Germany, or other European countries has to be competitive.

Conditions are constantly changing. That's why we have to continuously review our footprint and revise it when necessary. We do that with due deliberation, and we don't go running after every trend that relocates production to low-wage countries. But it's also clear that we need to expand our production where there's commensurate growth – for example, in the Asia-Pacific region and China.



Members of the Board of Management reveal which Home Connect functions are their favourites at report2015.bsh-group.com.

We know that many of our customers think it's a good thing that we also manufacture in Germany. For example, we've invested more than 5 million euros in our Bad Neustadt vacuum cleaner plant, especially in developing and producing an extremely energy-efficient vacuum cleaner fan. German engineering skills in development and production is still a feature with a lot of value – including in other countries.

You set yourselves a major goal in the area of resource efficiency for the end of 2015. Did you reach it?

SCHÖLLHORN: Right. In 2010 our corporate resource efficiency project set a goal to cut our specific energy and water consumption by 25 percent. We did achieve our goal, thanks to a worldwide effort. But that doesn't mean we've crossed the topic off the list. We've set ourselves ambitious new goals that we aim to achieve in phases by 2025. For example, we want to cut our water consumption by another 10 percent over the next five years.

BSH has a large portfolio of brands, starting with the Global Brands Bosch, Siemens, Gaggenau, and Neff and continuing on through the Local Heroes and Label Brands. How does that variety benefit the consumer?

GINTHUM: We know consumers have a wide range of emotions, lifestyles, needs, and attitudes. That's why customers have different expectations and assumptions when they choose an appliance. For some customers, quality is foremost, for others it's design or technical features. We've positioned our brands so as to provide the best possible coverage for our customers' varying preferences.

Our portfolio of brands provides a perfect fit for all of these different preferences and expectations.

Digital transformation is also a major topic in the home appliance industry. How far has BSH come with Home Connect?

OTTENBERG: Home Connect now enables consumers to control and manage almost the entire spectrum of their home appliances. Following our ovens and dishwashers, which have been very much in demand, we also introduced washing machines, washer-dryers, and refrigerator-freezer combinations in 2015, and we'll be putting them on the market in 2016. Our line has also included

»We grew vigorously again in 2015 and broke the 12 billion barrier.«

JOHANNES NÄRGER
Chief Financial Officer



networked fully-automated coffee machines since the beginning of this year. And in parallel, we're constantly expanding services and functions available on the Home Connect app. Here again, our focus on consumer needs is a key driver for innovation.

»Our regional setup brings us closer to our consumers.«

MATTHIAS GINTHUM
Chief Markets Officer



Digitalization seems to be the imperative of the moment. But what else is BSH working on?

SCHÖLLHORN: Last year we presented many innovations in our various product groups at the world's major trade shows. And of course, I'm not going to give away yet what we'll be presenting this year.

One area I find extremely intriguing is sensors. Sensor-controlled applications have immense potential for providing greater convenience, efficiency, and security to consumers. Real value-added. I'm thinking, for example, of the new kitchen sensors that we use in our induction cooktops and ovens, which make cooking, roasting, and baking easier – and in some cases even make it possible to guarantee good results. That's an important factor for many users. Or in vacuum cleaners, where sensors not only ensure consistently good cleaning performance but even detect what kind of floor is currently being vacuumed. Another area is sensors for detecting substances and food traces, which help improve washing processes and food storage. I think there will be a lot more work in this field, and in our parent company Robert Bosch we have a very powerful sensor manufacturer.

OTTENBERG: In addition to these very specific innovations that are close to the market, we're also hard at work on other ideas that focus on the future. Therefore we address current megatrends and their implications for our business. Digitalization and networking will remain very important topics for us. We're also engaging with issues that result from such problems as global urbanization and the rising number of megacities. And the Generation Y lifestyle and the desires of the fast-growing middle class in Africa, China and India, who are going to have enormous demand power.

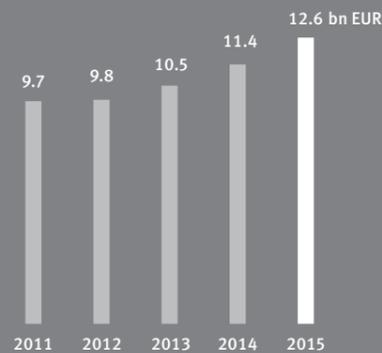
After looking further ahead, let's finish with a look at 2016. What do you expect this year?

NÄRGER: We'll remain on our profitable growth track again this year, even though the market environment is complicated.

BSH 2015 IN FIGURES

REVENUE

12.6 billion



With revenue growth of about 11 percent, to EUR 12.6 billion, BSH was even able to outperform the prior year's vigorous growth. A clear incentive for the years to come.

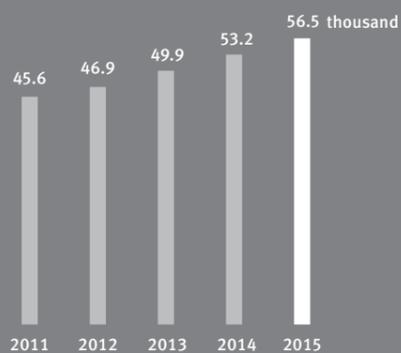
RESEARCH AND DEVELOPMENT

4%

Out of every EUR 100 of revenues, BSH spent EUR 4 on research and development. The increase from the prior year's 3.3 percent reflects factors like the company's investment in networked appliances.

EMPLOYEES

+3,300



At the end of 2015, BSH had a worldwide workforce of about 56,500 employees (including trainees). The increase especially reflects the reinforcement of the regions.

FACTORIES

41

41 production sites in Europe, the USA, Latin America, and Asia, and a strong network of nearly 80 sales, production, and service companies in around 50 countries are a strong foundation for BSH's customer-oriented business model.

BSH AROUND THE WORLD

2

The interplay of four Global Brands, eight Local Heroes, and two Label Brands guarantees a broad presence in a wide range of price segments and regions – making BSH the world's number two in the appliance sector.*

BSH IN EUROPE

1

BSH remained Europe's largest home appliance manufacturer once again in 2015 – and consolidated its market position further, in part with highly regarded product innovations.

RESOURCE EFFICIENCY

20 million

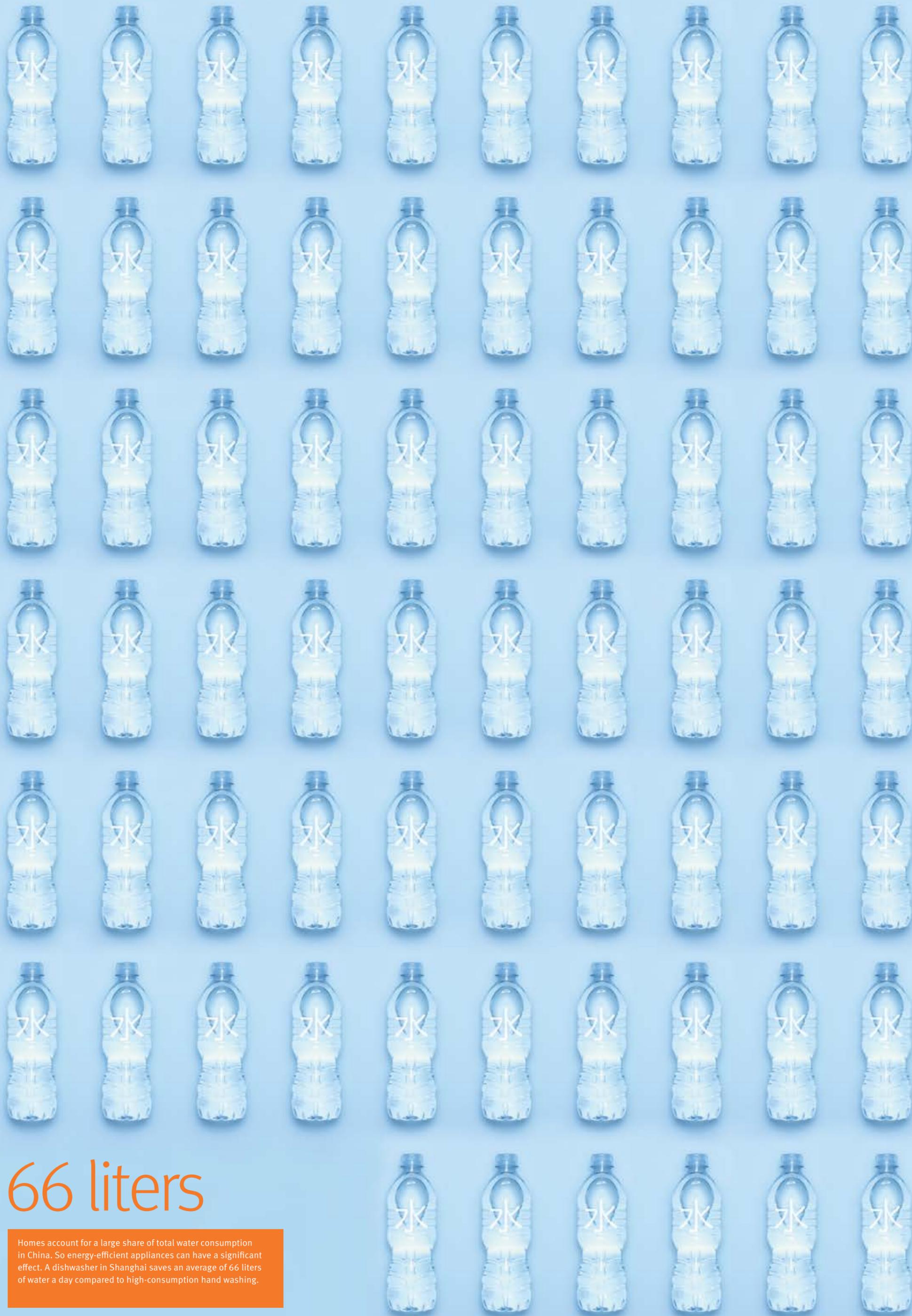
BSH's future energy costs each year will be EUR 20 million less than they were in 2010. A sign of the success of the company-wide project "Resource Efficiency 2015".

INVESTMENTS

500 million

In 2015, BSH invested a total of over EUR 500 million in expanding and modernizing its locations. Solid support for future growth.

* MDA & SDA, excl. A/C.



66 liters

Homes account for a large share of total water consumption in China. So energy-efficient appliances can have a significant effect. A dishwasher in Shanghai saves an average of 66 liters of water a day compared to high-consumption hand washing.

WE ARE ... RESPONSIBLE

China's environmental problems are vast. But the world's largest economy is on its way to becoming green. BSH has been setting standards in environmental protection and efficiency in China for many years – not just with its products, but also with ultramodern factories.

Elmar Stumpf has already shown a number of times that he's especially endowed with motivation and stamina. As a student, he distinguished himself through his grades and also as a pianist in the German "Youth Plays Music" competition. As a doctoral candidate, he was one of the inventors of the plant oil cooking stove with which BSH experimented in the early 2000s as a safe, healthy alternative for people in developing countries to use for cooking instead of open fireplaces. And for his job as Head of Product Marketing and Management for cookers in China, he learned to cook according to all the rules of Chinese cuisine. But the task the 46-year-old took on in 2012 posed a special challenge, even for him: how do you take control in a market that doesn't even exist yet?

What we're talking about is dishwashers. Strictly speaking, they've been available in China for some time. But for many years they were few and far between, and no one actively advertised them. "You can honestly say we created that market," Stumpf recalls. By the time he was appointed Vice President Dishwasher China, the initial hurdles had already been overcome, thanks to his work in collaboration with Franziska Ritz and other colleagues. They had converted the internal

organization to the cause and had launched educational campaigns. "After all, there were hardly any dealers who really understood what a dishwasher was supposed to be good for," Ritz says. It used to be that the appliances were almost always installed only as part of residential construction projects – and then they sat unused. BSH decided to send trainers to selected homeowners to train them. "And the idea of generating word-of-mouth in that way caught on," she happily reports.

Dishwashers help save water

As a next step, the BSH experts countered the assumption – widespread not only in China – that dishwashers consume more resources than washing by hand. A practical study conducted with the All China Environmental Federation and major-name universities proved the opposite in 2014. Even in Beijing – where the population is already especially conservation-conscious about water because the resource is so scarce – washing by hand uses an average of four times more water



DR. ELMAR STUMPF has been with BSH since 2003. In 2009 his work for the company took him to China, where he has been Vice President in charge of the dishwasher unit since 2012. Previously he worked for the Product Division Cooking.

than a dishwasher. "Because household consumption represents a large fraction of total water consumption, our products can make a substantial contribution toward solving a serious problem faced by all of northern China," Stumpf emphasizes. And the situation for hygiene is no different. In Shanghai, the study found



A study in Shanghai looked at dishes that had been washed by hand. The researchers found the "diarrhea germ" *E. coli* on nearly one in every five plates. Washing in a dishwasher kills almost a hundred percent of these bacteria.

the "diarrhea bacterium" *E. coli* on almost one in every five plates studied – but a dishwasher kills almost one hundred percent of these germs.

Facts like these are meeting with ever-increasing interest in China. The members of the younger middle class in particular, who are always online, very carefully watch the news on all aspects of the environment and health on microblogs and in chat forums. The problems that the world's largest CO₂ emitter has with air pollution in particular can't be overlooked. But just as great are the logical consequences that society has been deriving. At the end of November 2015, for example, 2,100 factories were forced to close. Even the biggest critics are now impressed: "The road away from coal is going to be long and challenging, but it has started," Greenpeace Asia found in 2014. At the UN Climate Conference in Paris, China recently showed that it is willing to play a constructive role. The Chinese authorities became important allies some time ago for companies that operate responsibly. And not just because they're increasingly scrutinizing production

»Our products
can make a substantial
contribution toward solving
serious problems.«

DR. ELMAR STUMPF
Vice President Dishwasher BSH China

»We act sustainably on principle. That's part of our culture, and I'm very proud of it.«

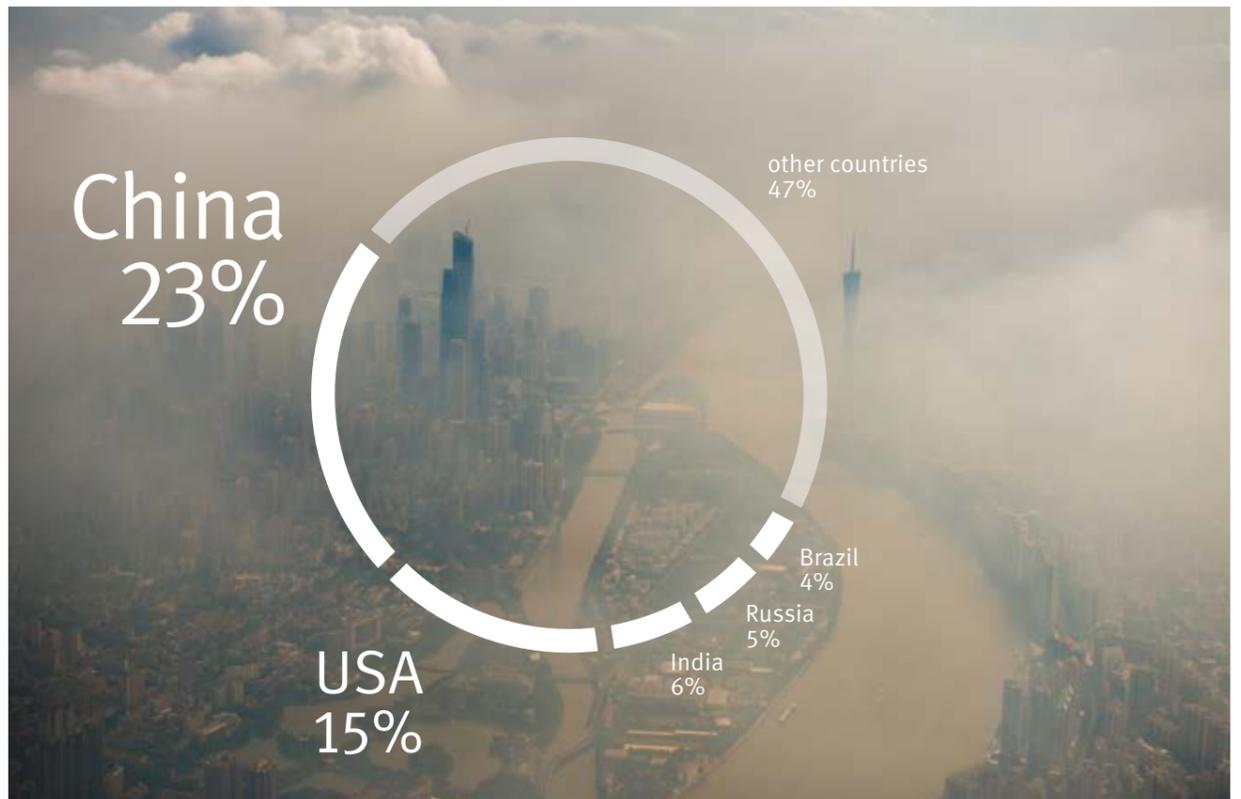
DR. XIAOTIAN ZHOU
Senior Vice President BSH China

conditions. "At BSH, you can be sure that it won't be just the products that are manufactured sustainably. That's part of the brand's identity," says Stumpf. Which is also why no BSH sites were among the factories forced to close at the end of November.

BSH: standard setter for environmental protection in China

Dr. Xiaotian Zhou, Senior Vice President at BSH China, also knows that these developments aren't mere happenstance. Just for one example: after inspecting the paint system at the Wuxi plant, the environmental agency declared that it had never measured such good exhaust-gas values before. And in 2014 the Nanjing site was honored as an "outstanding company" in an Energy Measurement Audit. "In home appliance production, BSH is setting standards for efficiency and environmental protection throughout the country," says Zhou. "But for us, those efforts aren't just about competitive advantages. They're a matter of principle. Sustainability is a part of our corporate culture – and it's everyday practice for every employee." Consumers are also getting the message: the company sold just over 100,000 dishwashers last year, more than 90 percent of them via the retail channels.

That's one reason the bar that BSH China is setting itself in building the new Home Appliance Park in



The five biggest CO₂ emitters: China's economy generates almost one-quarter of the world's greenhouse gas emissions (23 percent). U.S. industry emits 15 percent of the world total. They are followed by India (6 percent), Russia (5 percent) and Brazil (4 percent).

Chuzhou is so high. The company will be investing EUR 215 million in the site by 2020. Production of up to 600,000 dishwashers a year is to begin here early in 2018. Once it's finished all the product areas combined will cover an area of 1 million square meters, making it BSH's largest production facility anywhere in the world. And it will also make a major contribution toward minimizing the company's ecological footprint. BSH's new resource efficiency program calls for consuming 20 percent less energy worldwide by 2025. Zhou and

his employees are confident that they can do even better than that. Especially efficient production machinery and exterior building walls that are insulated at least twice as thickly as the competition's factories are just a few of the significant details.

Energy standards for refrigerators

BSH China also continues to set new standards with its products. For washing machines alone, the company drastically reduced the machines' consumption of both energy (down 32 percent) and water (down 17 percent) between 2013 and 2015. And Zhou has no worries about the new energy standard that will take effect for refrigerators in China in September 2016 – even though it sets standards for Efficiency Class 1 that exceed even A+++ standard in Germany. The authorities assume that only a small percentage of all home appliances will achieve that standard – "but we plan to double our share of products at that level," Zhou announces.



DR. XIAOTIAN ZHOU is Senior Vice President at BSH China. In a video interview, he answers questions about environmental protection and tells why he's optimistic in spite of China's environmental problems.

All the same, arguments of ecological responsibility or economy won't conquer the Chinese home appliance market all by themselves – not even the dishwasher sector. Regionally customized features like dish and flatware baskets specially shaped for rice bowls and chopsticks, special washing programs, and Home Connect functions are only a few features among many. "If you want to be successful in China, it all has to come together," Stumpf explains.

BSH customer service plays an important role in this context. It not only provides training, it advises customers in advance about possible solutions right in their own kitchens – and will even lay water lines if necessary. It goes without saying that a BSH service technician will have all the necessary parts at hand, because this is another local characteristic that has been carefully analyzed. "In China, home repair is a job for professionals," Ritz says. And something else is different here than in many other parts of the world: in China, doing the dishes is often men's work. ■

You can find the interview with Dr. Xiaotian Zhou at [report2015.bsh-group.com](#).

BSH IN ... CHUZHOU

When Wolfgang Danzer first came to Chuzhou in 1996, the city still had a rural feel. Today the Head of Construction Department at BSH China can hardly recognize the place. "Chuzhou is a vibrant industrial city, much more Westernized than it used to be." And it's grown enormously. When BSH began making refrigerators here two decades ago, the factory was on the outskirts of town in Anhui Province. Now it's literally downtown. In 2013, the new refrigerator factory opened for business with a production capacity of more than 5 million refrigerators – BSH's largest production site in China to date. The company has invested EUR 90 million in the site.

Air conditioners and heat recovery

Now BSH is branching out into new dimensions yet again. It has invested a total of EUR 215 million in the Home Appliance Park. The cornerstone for the complex was laid on November 5, 2015, and the site will include not just two production facilities but also a warehouse and an office building. By 2020, the workforce is expected to grow from about 4,000 employees to around 7,500. Up-to-date air conditioning systems are also included in the equipment here – an important factor for employee health and comfort, given that outdoor temperatures in the summer can go as high as 40° C (104° F). And in winter, a heat recovery system will reduce heating needs to a minimum.



4.55 million residents

4,000 employees on-site

EUR 215 million investment volume (2015-2020)

Helping people

BSH Katastrophenhilfe e.V. collects money for aid projects.

80 seconds – that’s all it took to wipe out the lives of thousands of people. To destroy half a million houses and severely damage more than 250,000 buildings. To profoundly disrupt an impoverished country. When a severe earthquake devastated Nepal on April 25, 2015, BSH Katastrophenhilfe e.V. (English: BSH disaster aid association) launched a call for donations. It collected more than EUR 50,000 – and BSH Board of Management matched that amount. The money will go toward helping the aid organization humedica – long known to the charity as a trustworthy partner – to rebuild a healthcare station in Jalbire.

Every donation reaches its destination

The aid campaign for Nepal is just the latest example of a long-standing commitment from BSH employees and management since 1999. That year, the charity was founded by employees after an earthquake in Turkey. Since then, it



BSH Katastrophenhilfe e.V. supports the aid organization humedica, which is rebuilding a healthcare station in Nepal.

has collected more than EUR 3.5 million, all of which was used for medium- to long-term projects in areas stricken by natural disasters. Just recently, the association equipped an operating room at a hospital in the Philippines that had been destroyed by a typhoon in 2014. Every donation goes straight to the projects, and thus to people in need, with no deduction of administrative expenses. ■

A cool train

The “Train to Paris” sent a strong message in advance of the UN Climate Conference. One of those on board was BSH CEO Dr. Karsten Ottenberg.

U.S. President Barack Obama called it strong, climate researcher Hans Joachim Schellnhuber even called it historic, and German Federal Environment Minister Barbara Hendricks said, “We’ve made history.” No question, the climate protection agreement that 194 countries signed in Paris at the end of the 21st UN world climate conference in December 2015 is a breakthrough for climate protection.

Before the conference began, 12 German CEOs also sent a strong message. Along with the German Environment Minister, academics, and journalists, they boarded the “Train to Paris” in Berlin so they could discuss business-related opportunities for climate protection while they were en route. On board, Dr. Karsten Ottenberg emphasized that the topic is a priority at BSH. “Environmental protection is a fundamental principle of our business responsibility, and a driver for innovation,” the BSH CEO declared.

Reducing our footprint

BSH has been a member of the so-called Stiftung 2° since the beginning of 2014 – a climate initiative by

German CEOs named for the most important target for climate protection: keeping global warming to less than two degrees Celsius (35.6° F) above its preindustrial level. “We’re working together toward transforming society in the direction of greater energy efficiency and lower CO₂ emissions,” said Ottenberg. “We want to minimize our environmental footprint, but also enhance our competitiveness.” Just how, BSH has already demonstrated in recent years. For example, the company has helped make sure that today’s consumers have a broad range to choose from in innovative, high-performance, energy-efficient, and environmentally efficient appliances in all price categories.

Paris was only a way station for Ottenberg. Because there’s more involved: “In the home and home living,” he remarked, “the digital transformation especially offers a chance to control the entire household system energy-efficiently. Here BSH offers a pioneering solution, with Home Connect and network-ready appliances.” After all, not consuming energy in the first place is still the best way to protect the environment. ■

BSH keeps workers safe

The number of occupational accidents is to be reduced to three per million hours worked by 2018.

Götz Ebeling knows the exact accident figures. In 2015, BSH factories reported 4.3 accidents per million hours worked. The 2004 figure was as high as 12.9. But the latest drop is not good enough for the Senior Safety Engineer, who’s in charge of occupational safety at all BSH locations around the world. “Any accident is still one too many,” he says. That’s also the view of Board of Management member Dr. Michael Schöllhorn, who’s in charge of technology and production – he has declared a goal of reducing the accident rate to no more than three per million hours worked by the end of 2017. That’s a very ambitious figure for the home appliances industry.

With their eyes on that target, Ebeling and his colleagues have initiated a great many projects for all locations. A global process team deals with machine safety, and analyzes what increasing digitalization will mean for production – because introducing collaborative robot systems means running a new risk assessment. All over the world, the team explores production processes and

makes well-tested safety measures available to all locations. In Lodz, Poland, the production halls show locally based videos that point out how to be safe around forklift paths and remind workers to wear protective clothing. In La Follette, Tennessee, in the USA, a special program was introduced to enhance safety during machine repair and maintenance. And in Dillingen, Germany, occupational safety has now become an integral part of apprentices’ training.

Occupational safety depends heavily on employees’ being careful. But it also takes an effort from management. “It’s crucial to our success how managers view their responsibility,” says Ebeling. “Today’s management culture won’t work without a safety culture.” BSH has won extensive recognition for its commitment. The occupational safety management system has been certified also in Nanjing in China as in Traunreut in Upper Bavaria. And at the end of 2015, the Turkish government gave the BSH site in Çerkezköy an award for especially good occupational safety. ■

Less is more

The Group project “Resource Efficiency 2015” has saved EUR 70 million for BSH.

BSH intends to permanently shrink its environmental footprint. Besides energy-efficient appliances, it applies optimized production processes and buildings as an important lever for enhancing energy efficiency in this regard, as well. So in 2011 the company set itself an ambitious goal: to reduce specific energy and water consumption 25 percent from 2010 levels by the end of 2015. And it did indeed achieve its targets with a broad-based program at BSH sites all over the world.

That means that despite BSH’s vigorous growth, it eliminated about 60,000 metric tons of CO₂ and saved about EUR 70 million in energy costs over the past five years. The annual energy bill will be EUR 20 million lower every year from now on.

One factor for success was an approach that particularly involved employees, along with an analysis of all the company’s processes. More than 1,500 measures were put into action at a total of 30 sites all over the world. Focuses included especially energy-intensive processes like injection molding of plastics and surface treatments, as well as classic

600 m

Energy consumption was cut by 600 million kilowatt-hours in five years – roughly equivalent to the consumption of a city of 40,000 households.

measures for building optimization in areas like lighting, heating, and air conditioning.

In recognition of its comprehensive efforts, in 2014 BSH won Third Prize in the international Energy Efficiency Awards from the German Energy Agency, dena. Now the company is continuing the same policy in the “Resource Efficiency 2025” follow-up program, with the aim of cutting specific energy and water consumption by another 20 percent, besides other targets. ■

You can find two examples of the company’s conservation measures at report2015.bsh-group.com.

WE ARE ... NETWORKED

Home Connect – BSH’s digital platform transforms daily routine. In the house of the future, intelligent appliances will simplify housework. They can be controlled centrally with a single app on a smartphone, and offer entirely new opportunities for consumers.



Coffee machine Strong or weak? Lots of milk, or only a little? Cortado, flat white, black eye, cappuccino? The coffee machine of the future will be controlled with a smartphone. The days when you have to turn a lot of knobs will be gone. Now you'll be able to comfortably set the machine for your preferred kind of coffee without leaving your armchair, or brew a fresh morning cup while you're still in bed. Guests can choose their preferred specialties and store them in a playlist. The only thing you have to do yourself is put in your cup.



Washing machine Intelligent washing machines can be started from anywhere. You choose the right washing program on a smartphone, inputting not just the kind of laundry, but any special needs like removing grass stains or a hygienic wash for baby's laundry. The machines also use the right amount of detergent and start at the most economical time. That saves consumers electricity, water, and detergent.

BSH offers its consumers more and more appliances that are networked via the Home Connect platform. Want to check what's in the refrigerator or start the dishwasher while you're out? Get a notification on your smartphone as soon as the washing machine finishes, or heat up the oven on the way home? No problem. Home Connect now enables consumers to control all their home appliances conveniently and easily with a single app on their mobile device. User instructions are available in short videos, along with troubleshooting for minor problems.

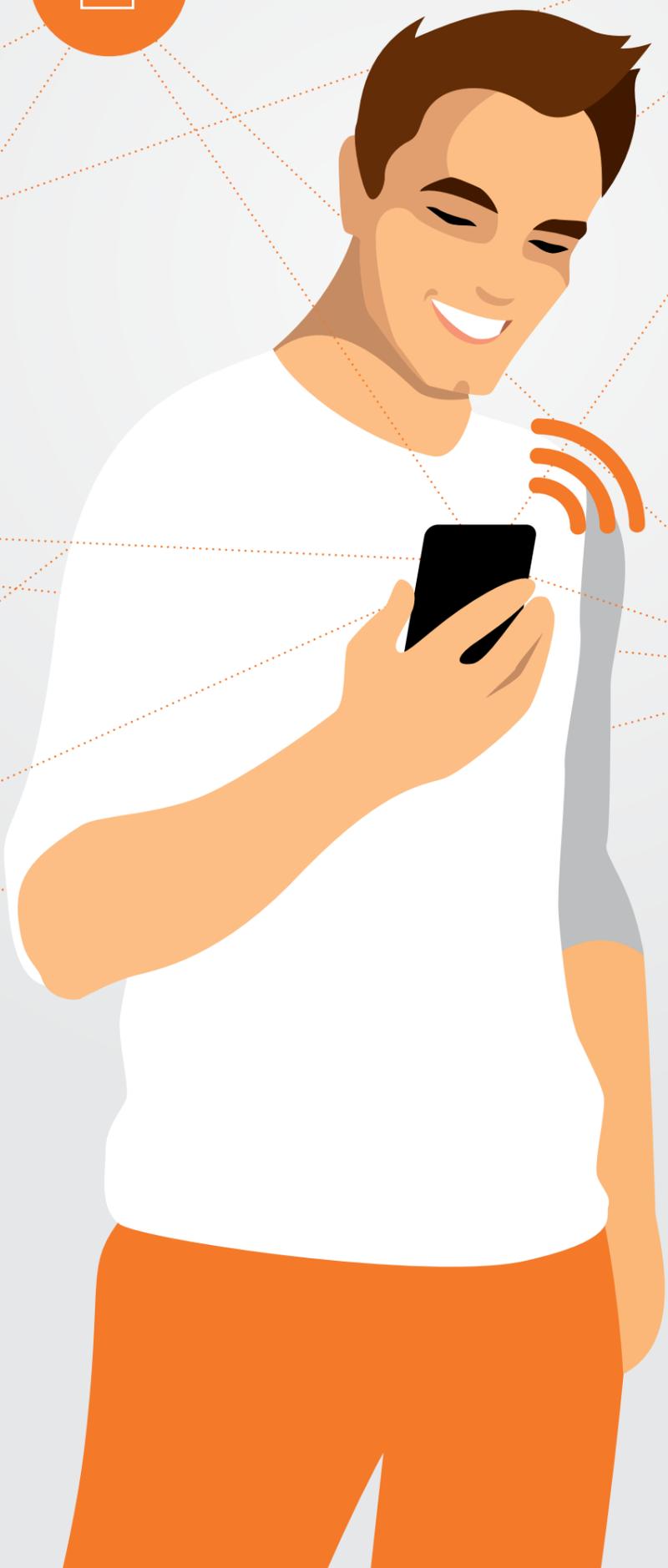
But BSH doesn't just offer intelligently networked appliances that you can control with the Home Connect app. It also plans to cooperate with other companies, which will greatly expand the spectrum of applications. Then consumers all over the world not only will benefit from easy operation, but also may be able to save on selected energy costs, or use an app to get recipes or find out about certain foods or various kinds of coffee.

The house of the future is still in its beginnings. But its possibilities are endless. Step by step, BSH is tapping Home Connect's potential for its consumers. Because they're the ones who will determine where developments will go next. ■

Oven If you want to try a new cake recipe, the Home Connect app can make suggestions. It goes without saying that the oven can be switched on remotely to preheat. Consumers who are especially safety-conscious can also check anytime, anywhere, whether the cooker is really turned off.



Dishwasher The new dishwashers are so quiet that BSH has equipped them with a visual indicator to show they're running. Networked with smart electricity meters, they only switch on when the building's own solar power installation is generating, or when the lowest electricity rates apply. The app can also send you a message when you need to buy new detergent tablets. As with all BSH appliances, the app will help out in case a problem develops. It can provide video instructions for simple repairs, or connect you with a customer service employee if needed. Any necessary spare parts can be ordered directly.



Refrigerator Each time the door is closed, a camera photographs the refrigerator's contents and sends the pictures to your smartphone. That way, a consumer at the supermarket can find out at a glance what else needs to be bought. Other scenarios are conceivable in the not-too-distant future. For example, refrigerators could be outfitted with odor sensors, so they can let you know whether various foods are just getting ready to eat or are beginning to spoil.

BSH employees tell you more about Home Connect in a video at [report2015.bsh-group.com](#).

Secure means secure – including in a network

Networked appliances will make life easier, according to 44 percent of respondents in a BSH study in Germany. And 63 percent of responding smartphone and tablet users would be interested in app features for a networked home. But as interest rises, so does the need for data security and privacy. Half of all respondents in the BSH survey were concerned about whether the data on their home WLAN would be secure.

That's why BSH sets special store on developing secure solutions that are specifically attuned to consumer needs. Appliances not only operate solely within an encrypted WLAN, but access to the app is secured by a password. In transmitting data, BSH relies on sophisticated encryption technologies – and it also has had the Home Connect system tested by IT security experts. The finished app was tested by the Trust IT Technical Inspection Association and designated a Trusted App.

The right connection

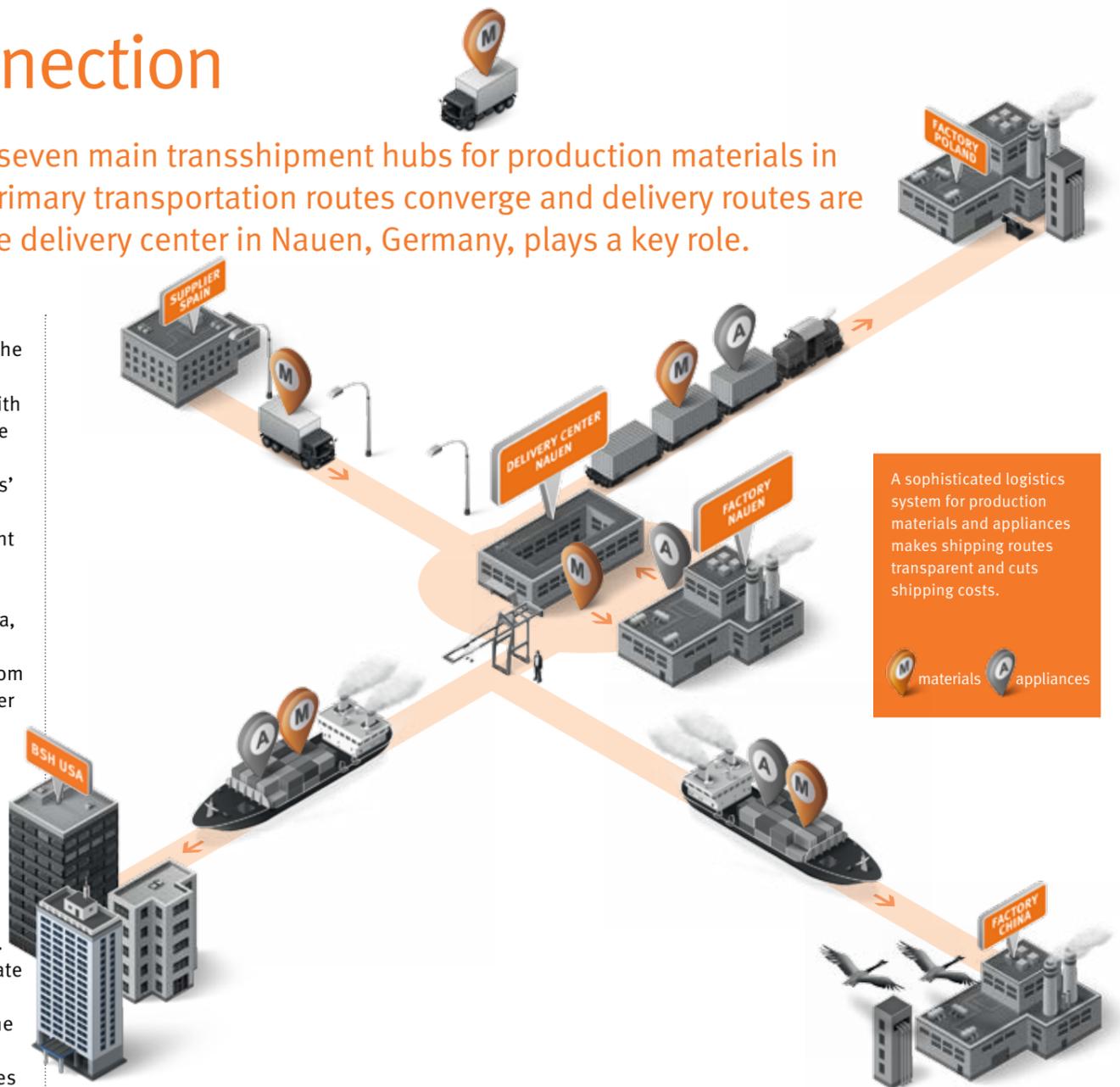
BSH's logistics network includes seven main transshipment hubs for production materials in Europe alone. This is where the primary transportation routes converge and delivery routes are organized more transparently. The delivery center in Nauen, Germany, plays a key role.

Things like hinges, inverters, and vibration absorbers travel a lot. By the time BSH's latest model washing machine is providing a consumer with clean wash, its individual parts have often traveled halfway around the world. They're produced in suppliers' factories in places like Spain and Portugal. A regional forwarding agent collects individual parts from more than 120 of these suppliers and carries them to the delivery center in Zaragoza. Here, about 250 kilometers west of Barcelona, is where BSH operates one of seven main transshipment hubs. At the hub, the small flows of materials from the region's suppliers stream together into a great river of small parts stacked on numerous pallets. Then it's onward by truck to Nauen, near Berlin – to the heart of BSH logistics.

Bundling deliveries means saving money

BSH is currently expanding its hub system, not just in Spain but throughout Europe. Four hubs in Germany, one in Spain, one in Poland, one in Turkey. Seven collection centers where employees consolidate the many individual parts from their region so they can be shipped onward. "We bundle deliveries for the long haul," explains Andreas Tonke, who's in charge of transport management at BSH. "That not only saves money, it ensures efficient, reliable delivery – not just to our own production facilities but to our commercial partners all over the world. And using transportation capacity better is also easier on the environment."

These flows of goods are then channeled onward to delivery centers like the one in Nauen. This small town in Germany is an important node in the BSH logistics network. The center supplies the adjacent washing machine factory with production materials and also warehouses finished appliances from that factory and other BSH plants as well. Nauen also serves as a hub for production materials that are to be consolidated and forwarded to other BSH factories. It already supplies two Russian plants and three in Poland; starting in July 2016, the sites in China, the USA, and India will be added.



A sophisticated logistics system for production materials and appliances makes shipping routes transparent and cuts shipping costs.

M materials A appliances

»The new logistics hub concept pools BSH material flows and therefore makes the material supply process smooth and transparent.«

ANDREAS TONKE
Head of Transport Management

"Until 2012, in Nauen we only handled receiving and shipping for finished appliances," explains Falk Engel, Head of Warehouse Administration for BSH at the Nauen site. "But now we have the hub function, not only for our Russian and Polish factories but also significant parts of the materials logistics for the Nauen plant, and we're in charge of making sure the factory gets supplied with materials as they're needed." It may sound like more effort, but it actually makes work procedures significantly easier: "We have an overview of the supply chains at all times, and if there's a problem we can intervene in time and divert the flows of merchandise if we need to," Tonke adds. Part of the reason this complex structure works so smoothly is a new software package that allows the staff to track goods in real time.

From Nauen to the world

The pallets with washing machine parts from Spain have now reached Nauen. The warehousing and logistics experts get straight to work, sorting the parts for their various addressees. Some pallets will go into containers for shipping by sea to Russia. Others will go by train to the plant in Poland. Only a small fraction will remain in Nauen, where the parts will be installed directly in washers. Shortly afterward, the finished appliances will be rolling off the production line. Next stop: Poland, China, or the USA. Three train shipments leave for Poland every week. Container ships take the washers to the USA and China. And there, thanks to Nauen's efficient procedures and pooled skills, the washing machines go into service after traveling halfway around the world – getting laundry spotless all over the globe. ■

About 18 kilometers from Germany's capital of Berlin, you'll find a significant node in BSH's worldwide logistics network. At the Nauen delivery center, BSH staff handles logistics not just for materials but also for finished appliances. In 2015, BSH shipped some 2.7 million major appliances out of Nauen, about 570,000 of the produced in Nauen itself, and the rest of the washers, dryers, dishwashers, refrigerators, and microwaves from other BSH production sites around the world. Nauen's ultramodern facility has space for up to 200,000 units of major appliances – meaning appliances the size of a washing machine. On top of that, every day 135 employees ship out up to 17,500 such appliances from the site's 64,000 square meters to more than 50 countries – by road, rail, or sea. Nauen can ensure that customers in Central Europe can be supplied within 48 hours.

BSH IN ...
NAUEN



600,000

of the 2.75 million major appliances shipped around the world from the Nauen delivery center were produced in Nauen.

Intelligent production

Companies' production lines are more and more often being shaped by digitalization – including at BSH. The production of the future is already running at various locations, and it brings a great many advantages.

It sounds like science fiction: machines organize tasks among themselves, supply chains coordinate themselves automatically, and raw products deliver their own production information to the machines that will complete them. The Fourth Industrial Revolution (Industrie 4.0) – the extensive digitalization of production – is under way. Including at BSH's site in Giengen, Germany.

A networked production line here, set up at the beginning of 2015, puts out around 350,000 refrigerators a year. "It's the company's most modern production facility," says Roland Weber, who's in charge of production planning. The machines are networked together, and they use information systems to monitor production. "We no longer have to hunt down just where a defect is," Weber explains. The result is more effective production. "Productivity has risen and we're producing more cost-effectively."

Digitalization enhances efficiency

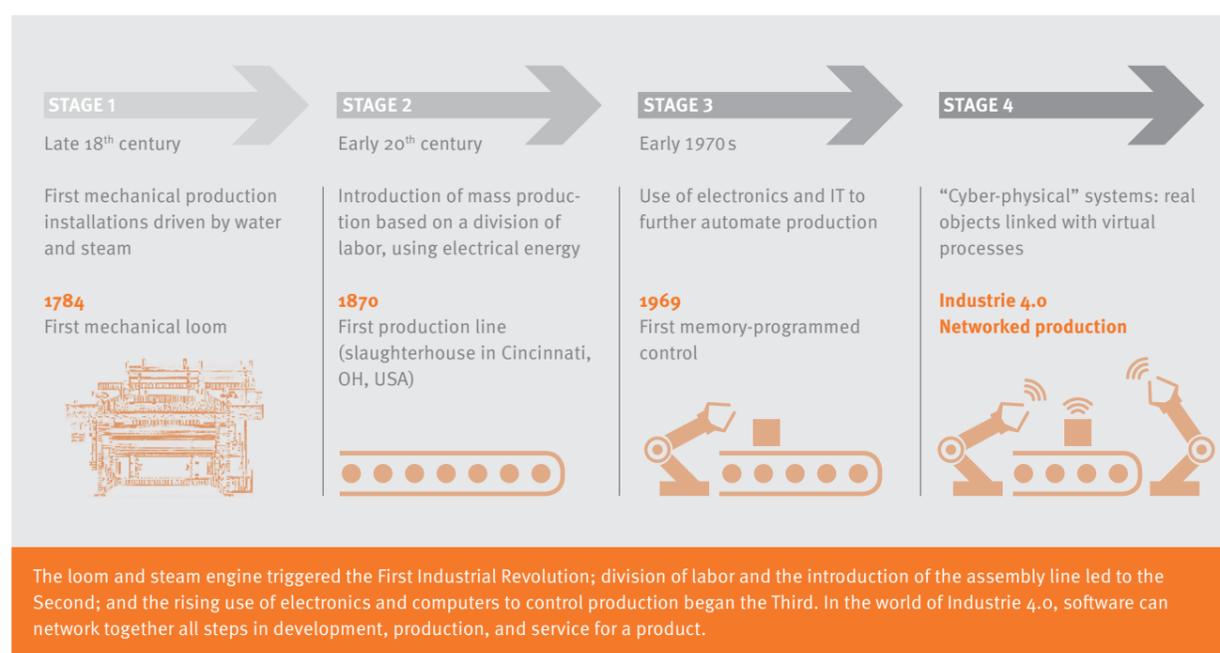
Giengen is just one example of how Industrie 4.0 is making factories at BSH more intelligent. Under the company-wide "I4.0@BSH" program, a number of measures are being tried out, initiated, and implemented. They include not only predictive recognition of maintenance needs for tools and machines, but also things like early detection of hidden energy losses. "All these measures have the common feature that they enhance efficiency at our factories. They improve machine utilization, reduce inventories, or speed up processes. So they contribute to our growth campaign,"

explains Dr. Juan-Ignacio Conrat, Head of Corporate Technology.

Industrie 4.0 also has advantages for customers. "We can respond faster to consumer needs," notes Jens Henneberg, who heads the Giengen site. This is possible thanks to a high level of automation and standardization in preliminary assembly. The parts that represent the differences between brands and types are only added in final assembly. In Esquiroz, Spain, BSH has been seeing how staff can profit from

intelligent factories. Here employees simply lay a gasket onto the necessary place in a refrigerator door. Collaborative robots then press the gaskets into the provided slot. The programmable machines thus take a burden off employees, who used to get shoulder trouble from this task. It also enhances their productivity and yields products with consistently high quality. This is yet another advantage for BSH and its employees. ■

You can find a film introduction to production in Giengen at [report2015.bsh-group.com](#).



24-hour customer service

The customer service units in the UK and Australia have been collaborating for a year now. It's a gain for both sides – and especially for the consumers.

When the washing machine or oven goes on the blink, it's an annoyance for any consumer. That's when you want fast help with no complications – even after business hours. Yet Australian customers often had

to put up with a long wait till the next morning. The little call center in Melbourne shut down at 6 in the evening – and because of different time zones, residents on the country's West Coast could get service only till 3 in the afternoon.

"We wanted to make our service better, and started looking around at outside providers," says Ulrike Ernst, who is in charge of BSH customer service in Australia. But then she got to talking with the BSH customer service team in the UK. In no time, she and her British colleague Brendan Bulfin had come up with the "Follow the Sun" project. The idea: when the Australian team goes off duty, the team in the UK takes over. That means that now BSH in Australia can offer 24-hour customer service five days a week. Real added value for the customers.

Building customer trust

The high-quality service that the BSH call center provides also includes working with the customer to troubleshoot problems. A number of issues can be resolved right over the phone. For others, the call center staff books a service visit. Customers can now also order cleaning products and spare parts anytime during the week.

The collaboration benefits both sides. The English team is already covering 50 percent of Australian customers' calls. And for its part, the Australian team supports their colleagues in the UK anytime there's an emergency – mostly online. "We get more and more inquiries via social media," Ernst explains. "We can help our UK colleagues get fast answers for their consumers even outside business hours – something that's extraordinarily important in this kind of media." So not having to bring in third parties in both countries not only saves money, but also builds trust with customers, who get their advice from seasoned, qualified BSH employees. "Customers know how valuable that is. We get very positive feedback about the quality of our advice," Ernst says.

That's a good foundation for the future. After all, the British/Australian call center will have a lot to do in the years to come: BSH is on an expansion course in the Australian market. Revenues have more than tripled in the past 10 years. Ernst foresees an optimistic future. Working with the customer service team 17,000 kilometers away in Great Britain, she soon hopes to be able to offer round-the-clock service seven days a week. ■

Ulrike Ernst explains how the cooperative arrangement works: [report2015.bsh-group.com](#).

Excellent after-sales service

* **Belgium:** BSH Belgium's after-sales service receives the "PREMIUM CONTACTCENTER 2015" seal of approval.

* **Germany:** ServiceRating rates BSH Hausgeräte GmbH with five crowns and an "excellent" test score for the fifth time in a row. Bosch places first in the "Best After-Sales Service – Major Home Appliances" study.

* **Poland:** BSH earns the star for service quality from Poland's "Jakość Obsługi" customer service quality program – for the seventh time.

* **Russia:** BSH after-sales service in Russia wins first prize in the Consumer Rights and Service Quality Awards.

* **Turkey:** After-sales service at BSH Turkey gets first prize in the "Most Creative Call Center Training" category for the 2015 "Call Center Awards".

* **UK:** BSH UK takes first place in the "Total Excellence & Quality Award (TEQ)".

“

The average age of a BSH employee in production in Germany today is 43.3. In 10 years' time, we expect our factories' share of workers over age 60 to nearly quadruple – a challenge we're prepared for, in part by way of the Group's project for 'Demographic Change in Production.' Here we look at our staff's age structure and test how we might adjust our working processes and organization to our employees' needs. That includes things like starting work later in the day, shorter blocks of work time, more breaks, and adjusting assembly line speeds.

Improvements in everyday working conditions provide a good foundation for staying fit in the long term. But it also goes without saying that employees have to take an active approach and adjust, too. That's why we're relying on distributing good information. Only those who attend to their health now will still be able to work until they retire, and to enjoy their 'third age' in good health.

»We take our employees' needs seriously.«

To evaluate how employees are taking to our approach, the Fraunhofer Institute is assisting with the pilot project and conducting regular surveys. The results show we're succeeding, but also have revealed that the staff have some ideas of their own. For example, many employees would like to see the workday end half an hour later so they can save up time credits. We'll analyze the results and see which ideas we should keep as they are, and which ones we need to revise.”



CHRISTOF ILG is a Group Leader in Assembly at the BSH dishwasher factory in Dillingen, Germany. From November 2014 to October 2015 he was in charge of the "Demographic Change in Production" pilot project. It covered 130 employees at one of the plant's seven production lines.

WE ARE ... DIVERSE

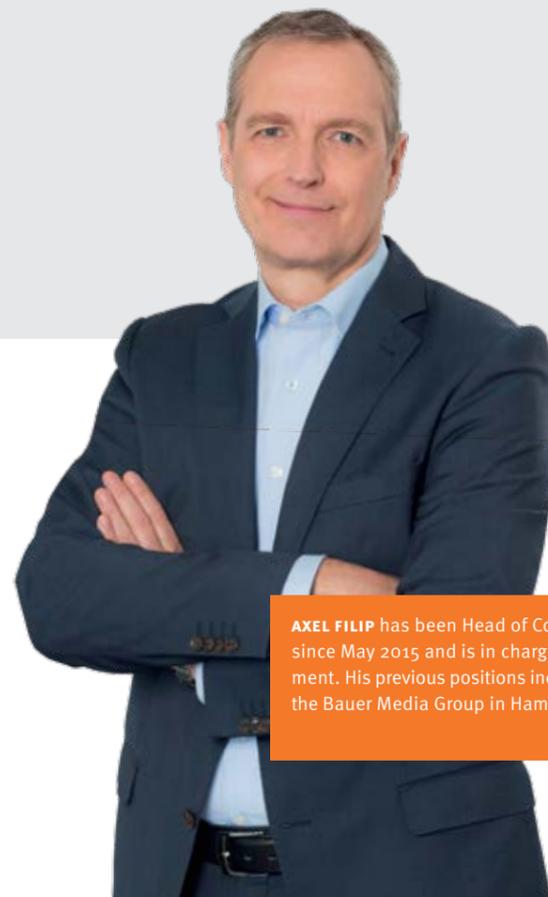
»An employee-oriented management culture«

Mr. Filip, you've been with the company since May 2015. What do you find exceptional about BSH as an employer?

AXEL FILIP: BSH is an impressive company, with highly motivated, loyal employees, and a fantastic welcoming culture. I've been especially impressed with how readily it allows people to change jobs between departments. Managers are willing to let other departments recruit talent from their own units, and employees have a strong interest in taking new jobs in-house. Those are signs of an employee-oriented management culture that benefits the company a great deal. Old-fashioned straight-line ascents up the management chain within just one field are rare at BSH. That makes it possible for people to expand their skills outside the box, and ensures that many of our colleagues have excellent networks.

What goal did you set yourself when you began your new job?

AXEL FILIP: I first talked with a lot of people, and took time to get to know BSH's culture and complex structure. I'd like to make sure, together with my colleagues in HR, that we detect talents early and put an even more international emphasis on our talent management. We want to establish BSH as an 'employer of choice' worldwide.



AXEL FILIP has been Head of Corporate Human Resources since May 2015 and is in charge of global personnel management. His previous positions included Head of Corporate HR at the Bauer Media Group in Hamburg, Germany.

Where do you see the challenges for BSH?

AXEL FILIP: We have to compete hard for the best engineers. BSH is a successful company, but we want to grow internationally. And if we're going to rise from a national league to the Champions League, we have to get faster, make decisions even more entrepreneurially, and learn to treat change as an opportunity.

How does the personnel market vary in various countries?

AXEL FILIP: Job markets differ completely. In Germany, graduating classes are getting smaller, society is aging, and too few young people are studying the sciences. China and Turkey, on the other hand, are young societies, and also differ significantly in things like motivation for changing to another employer and their orientation to hierarchies. That's why our local HR experts are always drawn from their local culture.

What are the aspects where BSH holds an especially strong hand in competing for talent?

AXEL FILIP: From making first contact, to screening, to interviews, to hiring – we're fast, and that's well received. So is our corporate culture, our many different career opportunities – including international ones – and our product portfolio. Other pluses are our company's sustainability and economic stability. We'll be reinforcing our contacts with key universities to make all these advantages even better known.



You can find out more about BSH as an employer at report2015.bsh-group.com.

“ Women in management positions are nothing unusual at BSH. But so far it’s been unique for a woman to hold a position as factory manager, combined with product manager, for an entire region. Yet that’s exactly my job for the Region T-MEA-CIS, which covers Turkey, the Middle East, many African countries, and Russia – a total of 87 countries.

»My supervisors have always supported me.«

My career has hardly differed at all from those of my male colleagues. I joined BSH after taking a degree in mechanical engineering. Since I wanted to get ahead professionally, I was very engaged right from the start. My supervisors have always supported me in my professional development. Women have the same opportunities as men at BSH. That’s something special, particularly in comparison to many other Turkish companies. Our society has very strong traditional roots, so it’s not the usual thing here for women to spend more time at work than with their families. So mothers face an especially big challenge.

That’s because to be successful, you have to invest a lot of time in your profession. Up to the management level, fortunately I was able to handle my work hours flexibly during the week. And my husband backed me up, and provided a lot of care for our daughter and son. In my current position as a factory manager I have to be present a lot more. But that’s not a problem now, because my children are almost grown up.”



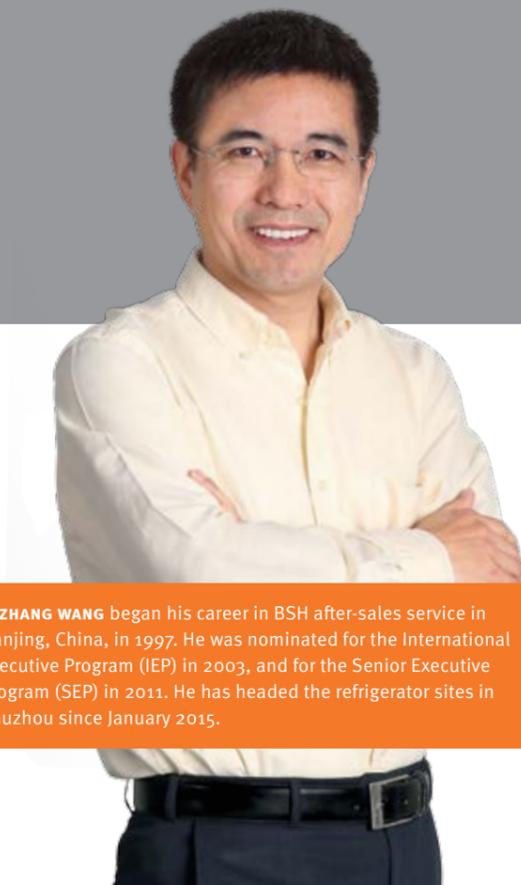
SÜREYYA OLAM heads the dishwasher plant in Çerkezköy, Turkey, and is also responsible for the Dishwasher Product Unit in Turkey, the Middle East, Africa, and Russia. She is the first woman to hold a position as both factory manager and production manager in this region.

“ I joined BSH in after-sales service in 1997 – and I wanted right from the start to advance and take on responsibilities. BSH has always supported me in that, and offered me lots of opportunities for development. Just as an example, residencies at corporate headquarters in Germany and at the New Bern site in the USA strengthened my language skills and helped me understand cultural differences better. Working in Munich also helped me understand a lot of processes more easily, and I made valuable contacts there.

To be successful in a management position at BSH, it’s important to try new approaches. The more diverse the environment, the more you’re forced to try unaccustomed ways, without ignoring cultural differences. BSH has a culture of encouragement where people get ahead. My boss nominated me first for the International Executive Program (IEP), and once I had completed that successfully, he named me directly to the Senior Executive Program (SEP). The SEP is specially intended for executives who head strategic business units.

»I have a chance to constantly prove myself.«

After I succeeded in that program, in 2015 I got the task of expanding the two refrigerator production plants in Chuzhou as the site manager. That’s a particular challenge for me, because these two sites account for about 50 percent of all of BSH’s business in China. But it’s an incredible opportunity.”



FAZHANG WANG began his career in BSH after-sales service in Nanjing, China, in 1997. He was nominated for the International Executive Program (IEP) in 2003, and for the Senior Executive Program (SEP) in 2011. He has headed the refrigerator sites in Chuzhou since January 2015.

“ BSH was my pick among top employers for my dual-track university studies at Ravensburg in Germany. It was important to me to work on international projects at a global company. It quickly became clear that BSH was the right choice. During the practical phases of my studies, I got insights into every major unit at the corporate level, and during my semester abroad I picked up experience at BSH’s site in Milton Keynes, England. That way – exploring sales, logistics, controlling, and much more – I found out what kinds of work I especially enjoyed. I also got to know a lot of colleagues. Now, if I have questions, I usually know the right person to ask personally.

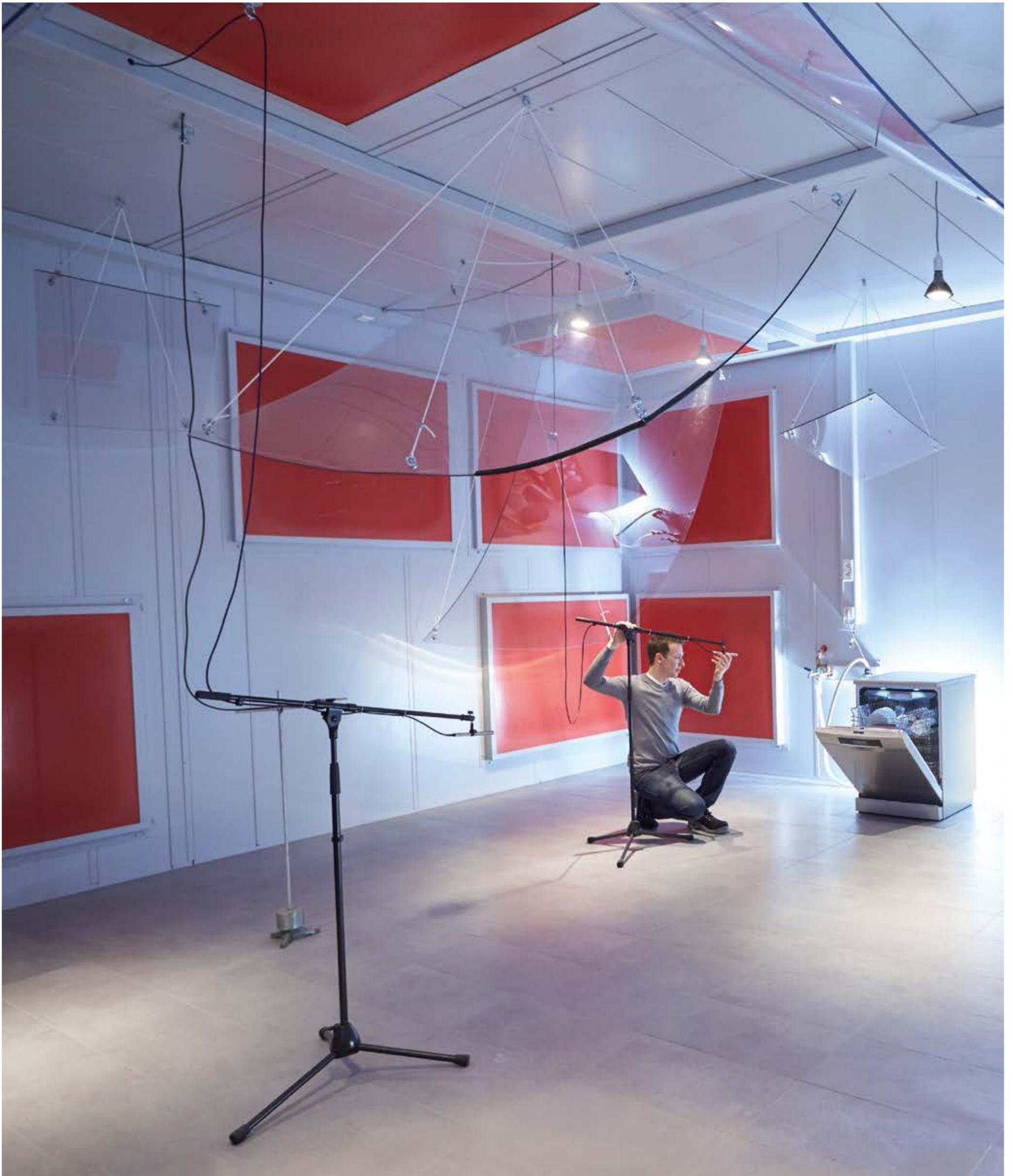
»BSH was the right choice.«

BSH took me seriously as a student and also let me work on my own projects. Talking with my fellow students, I quickly found out how diverse and varied training at BSH is. That was clear, in part, from the fact that I relocated 15 times in three years – but it was worth it every time.

Since taking my degree, I’ve worked for the Bosch brand at BSH as a marketing specialist, providing marketing support for Austria, Switzerland, all the countries east of the Adriatic Sea, and the Czech Republic. It’s an ideal entry point for me, because international communications are important to me. I also wouldn’t rule out living again in another country. But I need to get more experience in Germany first.”

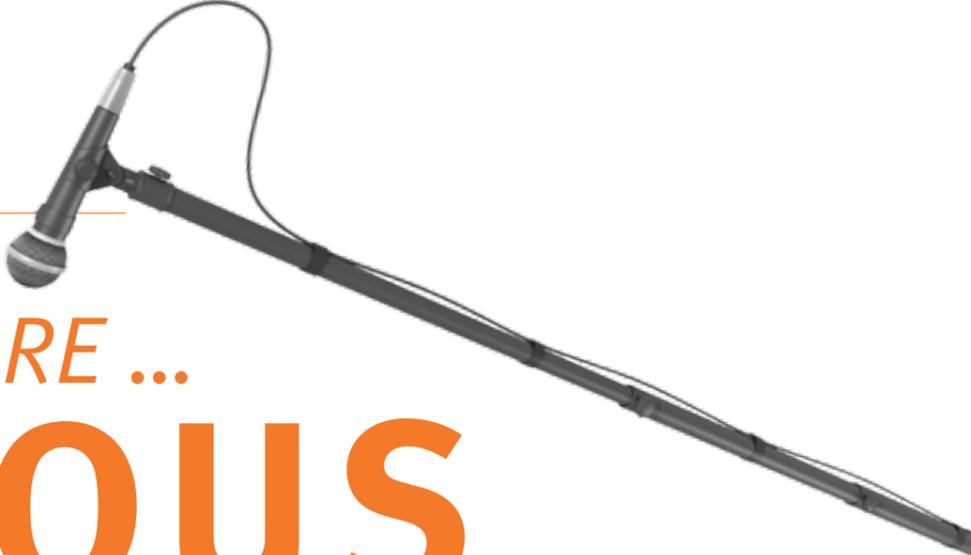


JULIA SEIFFERT had BSH to partner her in her dual-track course of study. She took alternating courses in theory and practice for three years. Today, she’s on international duty as a marketing specialist for the Bosch brand in Germany.



38dB

The acoustics lab is where appliances' noise emission and sound quality get assessed. Then ways are found to make them even quieter and ensure that any sounds they do make are pleasant. The results are worth noting. The Bosch SilenceEdition ActiveWater dishwasher, with an operating noise level of only 38 decibels, is not only one of the quietest dishwashers on the market, but gets excellent washing results without a peep.



WE ARE ... CURIOUS

How do our consumers behave? BSH teams from a wide range of fields are closely studying this question. Using state-of-the-art technologies, they are putting themselves in the place of the users – or even working with them directly. The resulting insights then flow directly into development of the appliances of the future.

The User Experience Laboratory at the BSH building in Munich is an austere space: a coffee machine, a refrigerator-freezer, white tables – in other words, an office environment. Except for those comic-like scribbles on the wall near the door, and the many connections for washing machines. And then there's the guy at the other end of the room. He's trying to entice a latte macchiato out of the coffee machine – strong and with extra milk. He has massive black glasses on his nose, almost like a night-vision apparatus. His finger circles the coffee machine's display, looking for the right buttons.

In the next room, psychologist Henning Brau is staring at a screen that shows exactly what the man next door is seeing through his glasses. Two yellow points show where the looker's gaze travels. If he pauses somewhere, the dots turn green. "That's how we test how the consumer perceives the display, and ultimately whether somebody can use the appliance we develop without having any trouble," explains Brau, User Experience Manager at BSH.

It's a typical test situation when BSH is developing new appliances and functions. Not just in Munich, but elsewhere in Germany and the rest of the world, BSH experts are at work at in-house laboratories, adding new developments to home appliances. And every function has to pass the test bench. Take dishwashers, for example: researchers at the dishwashing lab in Dillingen, Bavaria, in Germany, dirty up some 2,000 dishes and pieces of silverware every day with such things as spinach, egg, and hamburger. Then they put

the devices to work: "We study how thoroughly they clean, and how much energy they consume," says the lab's head, Heinz Heissler, because perfect washing results stopped being their only focus long ago. Consumers want dishwashers that consume little water and energy, and that run as quietly as possible. Quiet operation is an important selling point, because the trend toward open-plan kitchens continues unabated.

As quiet and simple as possible

That's exactly the feature that Andreas Hitzler and his colleagues are working on in the adjacent acoustic laboratory. They measure the noise made by newly developed dishwashers: "Our appliances are already so quiet that we have to give consumers a visual indicator that the machine's still running." All the same, the developers are still trying new insulation materials. Because the sounds of an appliance also play a crucial role with consumers, "Dishwashers should be quiet, and any noises they make should be pleasant. The door latch has to close with a solid, muted click," Hitzler explained. It may sound simple, but it's an extremely complicated affair. Because choosing insulation affects a dishwasher's energy consumption and drying capability – a real challenge for developers. If you choose better insulation to muffle the noise of all the water pressure that's needed for a good rinse, that increases energy consumption. To build the best possible appliance, various departments start working together at a very early stage of development, and remain in constant communication.

Yet it's not just colleagues that the developers coordinate with about new processes, materials, and designs. Consumers themselves are brought into the development

process at a very early stage. "Their impact on developing new products has increased immensely," Brau explains. "At our laboratories, we want to find out what added value we can offer them." After all, a perfect product shouldn't just perform basic tasks like washing dishes or clothes or refrigerating food. It should meet human needs for status, relaxation, and rest.

"Our aim is that consumers should start feeling good as soon as they decide on one of our products. They should find buying, installation, use, and even maintenance – if there's some kind of defect – a positive experience," is how Brau states BSH's aspiration. And that goes for consumers in all age groups. Younger people primarily prefer smart devices, like those that can be remote-controlled from a smartphone. But older people focus on functionality. It's not an easy task to build appliances to meet such different expectations.

The User Experience lab in Munich takes on just that challenge. They have a suit that simulates the typical problems seniors have. When you put it on, your visual field shrinks, you hear less well, and bending down is work. Fingertips are dryer, slicker, and less sensitive than you're used to. So everyday tricks become a problem: unwrapping a piece of candy, getting an egg out of the refrigerator, taking the silverware basket out of the dishwasher – everything goes more slowly and takes more effort. "We take all that into account," Brau says, "because our new developments are supposed to be right for every consumer." In situations like this, even apparently minor details can play a major role. "For example, older people with drier skin can find it harder to hold onto smooth things. We've found that products with a rougher surface can offer real advantages here."



3D

Stereo glasses and 3D simulation at BSH's Virtual Reality Lab help Martin Emila visualize things like a new washing machine that doesn't exist yet in real life. They help him look into the drum of the virtual model or get a photorealistic display of the controls' design.

»Consumers should feel good with our products. They should find buying, installation, use, and even maintenance a positive experience.«

HENNING BRAU
User Experience Manager



Some 800 employees at the BSH Technology Center for Laundry in Berlin have been developing washing machines and dryers for the world market since 2011.



352

Last year, BSH's User Experience lab in Munich tested how 352 test persons used appliances. The findings help optimize products and also reveal opportunities for innovations. Mirjam Blaum, Corporate Communications specialist at BSH, wears eye-tracking glasses for a test. The glasses help to tell what points consumers use for orientation when they work with an appliance.

Looking ahead to the future

If BSH designers, developers, or marketers want to look ahead into the future right now, they already have two places to go: the Virtual Reality Laboratory and the Model Department at Design Excellence. Martin Emila and his Virtual Reality team make products visible that don't even exist yet in reality. Of course, you can't put your hands on these appliances. But with stereo glasses and a 3D simulation, for example, you can already peer into the drum of a new washing machine or take a walk all around the washer. These projections look very real, yet they're nothing but computer calculations. The advantage: it's a fast way to test new ideas. "We're especially good at visualizing the appearance of entire appliances and individual components, or producing a photo-realistic look at the design of user-interface components," Emila explains. As at all BSH laboratories, here too feedback from consumers plays a major role. If a design turns out to be unworkable, it goes no further than the virtual model. That saves the developers valuable time and a lot of money.



2,000

Each day, the dishwashing lab at the Dillingen site tests more than 2,000 dishes and pieces of silverware for cleanliness after they come out of BSH dishwashers. They're smeared with oatmeal or spinach first. The results of the washing tests help BSH experts develop future generations of dishwashers.

If additional usability tests are necessary, Stefan Brunn and his team of model builders are on call. They make things like interface prototypes and product models. For that, they draw on modern rapid prototyping and 3D printing methods, as well as classic crafts techniques from painting to surface treatment. "Pooling capabilities for virtual product visualization and physical prototype construction in one place for all brands has made decision making much more efficient and effective," says Robert Gotschy, who is in charge of Design Excellence in Munich.

In the User Experience lab, the man with the glasses is now sipping his coffee. He's had no problem getting the desired extra milk to land in his cup – a sign that the coffee maker's design is self-explanatory and user-friendly. The developers will soon be asking him about the details. Curiosity is the foundation of good design at BSH. ■



2.4 GHz

To make sure a dishwasher can work perfectly even when other appliances are nearby, the laboratory tests electromagnetic compatibility – how an appliance reacts to a smartphone or WLAN. An antenna generates an electromagnetic field, for example at a frequency of 2.4 GHz that is typical of a WLAN. The blue foam pyramids absorb other interference and thus ensure a homogeneous test environment.

»Our appliances are already so quiet that we have to give consumers a visual indicator that the machine's still running.«

ANDREAS HITZLER
Dishwasher Acoustics Expert, Dillingen, Germany

Sharing knowledge and profiting together

Long ago big ideas stopped being a matter for the ingenuity of individuals working in isolation. Today they require team players. Cooperation, frankness, and fairness are business virtues now more than ever.

Where do good ideas come from? We all know the heroic fables – about Archimedes discovering the principle of buoyancy in his bathtub, and Newton discovering gravity when an apple fell on his head. As common as these tales of brainstorming and lone warriors may be, they don't have much to do with reality. "Innovation prospers when ideas can serendipitously connect and recombine with other ideas, when hunches can stumble across other hunches that successfully fill in their blanks," explains Steven Johnson in his book "Where Good Ideas Come From", an exciting search for the patterns behind innovation.

So it's no wonder that the day of the lone warrior is long gone. There's hardly a company now that develops ideas all on its own – in part because rising R&D budgets have been countered by sobering success rates: between 35 and 60 percent of new consumer goods will most likely be failures. So to minimize risk, companies – including BSH – have relied for decades on cooperating with suppliers, seeking out contacts with academia, founding joint ventures, and financing promising startups.

Trying out new forms in an exchange

Partnerships like these are more important today than ever. The pressure to innovate is greater and greater, product cycles are shorter, and products are more complex. That's especially a result of digitalization, which changes not only consumers' needs but also production techniques, communication patterns, and development processes. But to handle this increasing complexity, it's necessary to cross borders. That's why "open innovation" is the byword of the day. Whether it means involving outside partners in new developments even earlier than before, or trying out new forms of cooperation – for example, by inviting outside developers to take your own products apart and re-network them, as it was done at BSH's first Hackathon. And because "eureka!" moments are more likely to arise in a conversation – which may well be a matter of chance – than alone in one's office, open exchanges will have to be maintained even more in settings like projects, workshops, and events like the first BSH Venture Forum.

Yet the most important partner is the consumer. Instead of the makers wondering how to convince consumers with the latest product, today it's consumers themselves whose preferences and needs set the direction

where innovations look next. The megatrend in digitalization is also a defining factor. That's not just because, with options like 3D printing, technological it's no longer merely a utopian idea to involve consumers in developing prototypes. It's also because people who communicate privately in social networks and share their knowledge in forums are much easier to reach today.

Transparency and fairness are needed

But where to set the limits on openness? When does secrecy hamper the necessary speed of innovation? And when must intellectual property – the new currency in global competition – be protected? When should a company pursue new paths with its own resources – and when is it best to concentrate on core competencies? No doubt about it, the new openness poses new challenges for companies. And the qualities needed in the age of digitalization are certainly not primarily technical in nature. Instead, what's needed is transparency and fairness in arranging new partnerships, as well as the courage to try new ways of doing things. Sharing knowledge, profiting together – these are the ingredients for today's heroic accomplishments. ■

Developers' marathon

Could this be what the future looks like? The Hackathon at BSH makes the Internet of Things a living reality.

A big room in Berlin. Plain desks, modern laptops, and heaps of cables, mobile phones, and tablets. And in between, all sorts of home appliances. Young people in hoodies sit in front of their computers. Some are doing things to circuit boards. This is the site for a competition of a very peculiar kind: at BSH's invitation, developers from all over the world have arrived for the company's first Hackathon. In this developers' marathon they connect modern home appliances with smart sensors, thermostats, weather stations – or just a broom.

The young developers had 24 hours to invent new hardware and software solutions that might be useful in daily life. For most of these technology fans, it was the first time they'd ever dealt professionally with a dishwasher, cooker or refrigerator. The Internet of Things is becoming a living reality here. Because it's no longer just about controlling individual appliances with software. With good networking, they can intermesh like well-oiled gears and communicate with one another. "These creative hackers try to find ways for these things to be developed further for the consumers' benefit," says Mario Pieper, who is in charge of Corporate Digital Transition at BSH. "They test what happens when our appliances encounter other ones."

Ideas fizz in the creative atmosphere. One app playfully guides users on cleaning the house. Another converts a washing machine into a smart, peer-to-peer washing station. Guido Burger and Sascha Wolter were among those at the Hackathon: "We think this approach is just great. Can we do something that might benefit somebody in the end?" they wondered. Their "Blended"



The Smart Smell "sniffer" detects volatile organic substances from food even at low concentrations. That's a benefit to consumers – for instance when coffee beans are going stale and should be used up soon.

project – an app that assists the baking process all the way from the mixer through the oven to the dishwasher – ultimately earned the two-member team first place at the Hackathon.

Lots of ideas, exciting contacts

The two developers not only took home a prize, they made lasting contacts in Berlin. Four months later they were already back, presenting their next unconventional idea to BSH experts. "We went through the apartment and sniffed things – socks, bananas, salad, coffee," Wolter explains. That led to the "Smart Smell" idea, intended to detect even low concentrations of volatile organic substances from foods. After all, however enticing the perfume of fresh, ripe strawberries might be, they're often inedible as little as 48 hours after they were picked. That's something you can smell – but usually, unfortunately, only once the berries no longer taste good. A sniffer sensor in the refrigerator might warn about spoiled foods – or give the green light for

foods that may be past their sell-by date but are still good. Consumers would know when fruit, cheese, or coffee had better be eaten soon.

The smart sniffer sensor is just one example of the good ideas that can trace their origins to a Hackathon. But most especially, it shows why events like this benefit young developers and BSH alike. "It's exciting for us to see what others do with our networked appliances. The outsiders' viewpoint also kindles our own creativity," Pieper says. At the same time, young developers get a chance to have their ideas quickly checked out for how well they might get accepted on the market. Because there's hardly any other company in the world that understands consumer needs as well as BSH. Since all this fits together so neatly, consumers may soon be benefiting from the new partnerships. Pieper's summary: "If one of these ideas reaches the market in the next two or three years, that would be a really great success for us and these young developers both." ■

Toward chatting with a home robot

At the first BSH Venture Forum, developers and young entrepreneurs from all over the world take a look at the future of home appliances – and present solutions that would have seemed like science fiction even yesterday.

The days when Captain Kirk could impress people with his mobile Star Trek communicator on Starship Enterprise are long gone. Today all of us carry devices like that around in our pocket – our smartphones. But that's not even the whole story. Our streets are seeing the first self-driving cars. We talk to Siri and Google just as Iron Man did in the Marvel comics. Even the Hover Board from the classic film *Back to the Future II* will soon no longer be science fiction. "New technologies and innovative solutions are reaching the market at ever-shorter intervals, making our daily lives faster, better, and easier," says Dr. Kai Grassie, Head of Corporate Innovation at BSH. "And that development doesn't stop short at the appliances industry."

Open innovation

But what does that mean? Will we no longer wash our trousers in the washing machine or put leftover stew in the refrigerator for tomorrow? "Of course we will. Our appliances will still be performing their core tasks in the future," Grassie explains. "But they'll also offer services that fit with our digital world." Especially promising digital fields for the future include sensor engineering, robotics, and networking. These areas are looking to develop solutions that offer customers real added value. To get even faster at that, BSH relies on Open Innovation, thus combining in-house knowledge with the abilities of outside entrepreneurs and developers. "We've encouraged startups worldwide to bring us their innovative software solutions, components, and services. Fifteen companies from 10 different countries were especially convincing. So last October we invited them to the first BSH Venture Forum," explains Christian Beck, the project manager for the event.



Reminiscent of "EVE" from Pixar's film *WALL-E*: the knee-high "Keecker" robot, one of many ideas presented at BSH's Venture Forum.

Together into the future

The home of the future will organize itself, at least according to Stefan Witkamp. The cofounder of the Dutch company Athom presented "Homey" at the Venture Forum – a little ball that networks with the entire home via an app. Instead of operating each device or appliance with its own separate remote control as we do now, lights, alarm systems, the sound system, and more can all be controlled from one place – including by voice.

"Homey" is just one of many exciting ideas that were presented at the BSH Venture Forum and discussed

before a large group. "The audience included BSH colleagues from very diverse fields – from the Innovation Department, but also from sales, marketing, the product units, and design," Beck explains. After the presentation, each startup answered questions from BSH audience members individually. That also provided a chance to explore whether and how the two sides might conceive of working together – whether in a partnership, an ownership interest, cooperation on research and development, or investments.

Robots take over the house

The process of selecting the startups paid special attention to whether the solutions also extended beyond BSH's classic product areas. One example: the "Keecker," presented by Pierre Lebeau from Paris. This knee-high, egg-shaped robot moves freely through the home and combines a home cinema, a security system, and a measurement station all in one. And Keecker isn't the only example. Robots will relieve us in the future of burdensome housework. They'll think things out in advance, talk to us – and steadily become a bit more human. "We're more willing to accept a robot in the home if it can show emotions," explained EmoShape CEO Patrick Levy-Rosenthal from London, as he presented EmoSPARK: a cube that can respond with genuine feeling to more than 7 million direct questions. "When he says he's happy, he really sounds happy," Levy-Rosenthal adds.

Where the journey may go next

And it wasn't just the robots that were impressive. Cutting vegetables and looking for recipe ideas at the same time – directly on the kitchen counter? No problem, thanks to "Monster & Devices" from Poland. Their gesture-controlled solution makes any surface a touchscreen at the wave of a hand, where you can surf the Web, play games, paint, or write. Want to quickly check whether the steak is still fresh? You can find out for sure in seconds with the "Fresh Detect" measurement device. "Only innovation will keep us a convincing partner for our customers into the future," says Beck. "The various solutions at the BSH Venture Forum show where the journey might go next." ■

More impressions of the BSH Venture Forum are also available on video at report2015.bsh-group.com.

»We safeguard pioneering ideas«

New ideas are worth a lot, and have to be protected – Thomas Ulrich, Head of Intellectual Property at BSH and Dr. Bernd Gemünden, Chief Counsel Intellectual Property Laundry Care take care of just that.

How does the Intellectual Property Department work?

ULRICH: We're a global team of nearly 70 people – we have 30 experts working in Munich alone. There are two main areas of practice for our patent attorneys. We protect our own inventions with patent and other intellectual property rights, and we monitor what other rights might stand in the way of our developments. It's a bit like driving. If I can see an obstacle early enough, I have enough time to drive around it or to clear the road.

And how do you protect BSH's own innovations?



DR. GEMÜNDE: We already get involved while the product is still in development. We decide with our colleagues from the product units whether a patent should be filed at all.

For example, we decided in favor of this kind of safeguard for our baking sensor in ovens. We also got legal protection for our invention of activated oxygen technology for washing machines, which can remove odors from clothing without water – we applied for 25 families of patents on that innovation alone.

Why are some inventions covered by so many patents right away?



ULRICH: Worldwide patent protection is expensive, but solid protection is essential in global competition. That's why we try to decide early how important an invention might be, and how valuable to BSH.

You might say we look for and safeguard pioneering ideas. Then we carefully prepare the important intellectual property rights and apply for them in every country where we have active competitors. That way nobody can simply imitate our products, and we've safeguarded the results from our investments in new product developments. ■



*An
American
Icon*

WE ARE ...

TRENDSETTERS

BSH is home to such leading global brands as Bosch, Siemens, Neff, and Gaggenau. But it also has its Local Heroes – brands custom-tailored to the needs of consumers in each region BSH serves. The iconic Thermador brand in the United States is one such Local Hero. What makes it so successful?

America is the land of big brands: 44 of the world's 100 most valuable brands come from the U.S., driving consumer preferences around the globe. Take Apple, for example. The story of this multi-billion-dollar company began in a Los Altos garage in 1976. Today, Apple is the most valuable brand in the world.

And although Apple products cost more than competing products, the brand enjoys cult status. The same is true of Coca-Cola, currently the world's fourth most valuable brand, after Google and Microsoft. The soft drink was developed in 1886 by Dr. John Stith Pemberton, a pharmacist, as a tonic for fatigue and headaches. But it was Pemberton's bookkeeper Frank Robinson who made the brand famous, inventing the name Coca-Cola, designing the famous script still used today, and thus creating the unique Coca-Cola brand.

What Apple and Coca-Cola so clearly illustrate is that the success of big brands depends on more than just excellent products. Cult brands are able to create an emotional connection. They represent our wishes, our desires – they sometimes even give us a sense of validation. When a brand manages to create such a strong emotional bond with consumers, competitors have a tough time – especially in the U.S., where the competition is more intense than in Europe and consumers are more fickle. “The competitive environment in the USA is something unique – it's hard to compare it to other markets,” says Zach Elkin. And Elkin should know – after all, he's the Marketing Director for BSH's Thermador brand and watches over development of this iconic U.S. label from his offices in Irvine, California. “The biggest challenge is to make your brand a permanent fixture in the consumer's mind.”

»Engineers, designers, marketing specialists – together we visited dealers and designers across the country to ask them what they wanted and expected from the brand.«

ZACH ELKIN
Marketing Director for Thermador



Timeless design combined with innovative technology and high performance – the Pro Grand Steam cooker demonstrates the core features of the Thermador brand.

**BSH IN ...
IRVINE**

Leave the office and go for a quick surf or a drink on the beach – it’s all part of everyday life for employees at BSH’s U.S. headquarters in Irvine, California. But Irvine’s allure goes beyond the warm weather and nearby ocean. In 2014, the *Wall Street Journal* ranked the city number one in the United States for its job market, economic growth, and standard of living.

And FBI statistics show that Irvine has the lowest crime rate in all of America. So it’s no wonder that the city has repeatedly won the title of “most livable city” in California. Irvine’s history isn’t a long one by any standard. The city is actually quite young, planned and built by a private company in the 1960s. Today, it counts more than 200,000 residents.

Irvine is known internationally due largely to its universities, which enjoy an excellent reputation. Many high-tech firms are based here, and Los Angeles and Silicon Valley are not far away. A place where the living is good. Young families and university graduates are especially drawn to Irvine. Thermador and Irvine – the city and the kitchen appliance maker have been a successful team since 2011, when BSH moved its headquarters to the Californian coastal community. Today, Irvine is home to some 280 BSH employees in the Executive Office, Sales, Marketing, Industrial Design, Finance,



281

employees in Irvine

200,000

residents

Logistics, HR, and Customer Support units. BSH manufacturing plants in the United States are located in La Follette (Tennessee) and New Bern (North Carolina).

A focused approach with multiple brands

BSH’s multi-brand strategy is particularly well suited to the tough competitive environment for brands in the USA, because it makes it possible to address different consumer groups through different brands. “We need to ask ourselves what role our brands can play in consumers’ lives,” notes Dirk Dedekind, in charge of brand portfolio management at BSH corporate headquarters in Munich. The brand positioning models that

have been developed for each brand help fine-tune the brands’ core, their character, and their promise. This in turn makes it easier to leverage the various brands’ potential.

This has clearly been successful in the U.S. home appliance market. BSH brands define the premium segment of the American appliance industry. “Bosch, Gaggenau, Thermador – this troika has emerged as an outstanding brand portfolio with major growth

opportunities in the U.S. market,” according to Dedekind’s analysis. “Each brand tells its own story, and that story focuses on a very specific consumer group.” And with the long-standing American brand Thermador, BSH can also show success in the market with a local player.

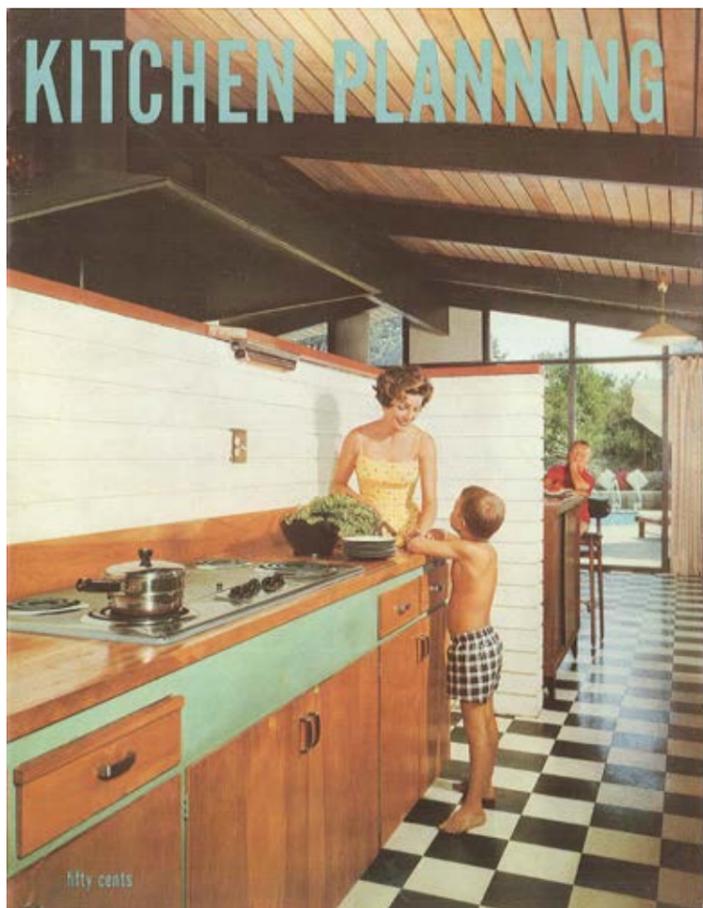
Thermador is BSH’s Local Hero in the United States. “The brand is an authentic representative of its country’s pride – it stands for innovation, performance, and timeless design,” Dedekind explains. Thermador has been meeting its customers’ high expectations for 100 years now. Founded in 1916, the company began manufacturing home appliances in the 1930s. The brand joined the BSH family in 1998. Over the past 100 years, Thermador has played a key role in modern kitchen design and functions, and its product innovations have proved its pioneering quality again and again – from the first built-in oven and the first cooktop more than 50 years ago, or the patented Star® burner that redefined gas cookers, all the way to the Freedom Collection, which includes the first full-surface induction cooktop and the first modular built-in cooling system. “As we grow our portfolio, we benefit tremendously from the strategic and technical capacities of BSH,” Elkin explains.

It is precisely this legacy of innovation, top performance and design that accounts for the brand’s cult status. Wide cooktops, gigantic grill stations, large star-shaped gas burners, French door refrigerators – all of it bears witness to a passion for cooking. You might say Thermador is a luxury sedan among kitchen appliances. Consumers – prosperous suburbanites with large families, lots of space, and a soft spot for tradition – are looking for high-tech opulence. “A Thermador kitchen is not a place where you’ll find novice cooks,” says Marketing Director Elkin with conviction. “It’s a kitchen for culinary enthusiasts.”



ZACH ELKIN joined BSH in 2005 and has been in charge of Brand Marketing for the Thermador and Gaggenau brands since 2008. He has 30 years of experience in home appliances.

1959



The Thermador kitchen planner has been helping real culinary enthusiasts plan their kitchens for decades.

2016



Convincing the right target groups

But to bring these pro-level cooks together with a Thermador range, you first need to convince a different target group. The stark difference between the U.S. and European home appliance markets comes into clear focus in sales and marketing. “More than 50 percent of all in-store decisions to buy are directly connected with a recommendation from a consulting kitchen designer,” explains Elkin. “Our job is to win those designers over.”

A “revitalization program,” launched by Elkin and completed in 2009, was tasked with keeping Thermador aligned with the changing expectations of consumers and, by extension, of those same designers. “With a team of 40 people – engineers, designers, marketing specialists – we visited dealers and designers across the country to ask them what they wanted and expected from the brand,” explains Elkin. The result was a wealth of feedback about how to optimize sales channels, focus market communications, and improve designs.

This year, on the cusp of its centenary, the Thermador brand is looking better than ever. The team in Irvine has done an outstanding job of really advancing Thermador’s positioning in the luxury market. “We’ve laid the groundwork for further growth,” concludes Elkin. And he’s confident: “The best is yet to come.” ■

More about the 100-year history of the U.S. brand Thermador: thermador.com/100years.

Distinctive. An exact fit.

BSH focuses its brands precisely on consumer needs.

What does the perfect home appliance look like? That's a question that can only be answered with another question: perfect for whom? Expectations about an appliance can vary considerably from one person to another. Quality-aware consumers particularly want appliances that are reliable. They appreciate innovation mainly when it makes housework easier. But there are also consumers who especially prize brand-new technical functions. And still others want an exclusive design and top-quality materials, to fit their lifestyle. BSH's brand family is as diverse as its consumers' needs. Whether superior quality, exclusive design or innovative functions, BSH is heightening its brands' individual profiles and highlighting their special strengths.

To do that, BSH listens carefully. What do various consumer groups around the world expect from their appliances? BSH ran studies on the question in 12 countries and surveyed more than 40,000 consumers. One result: there are some things that consumers expect from an appliance no matter where they are in the world. "We're using these findings to position our brands," says Dirk Dedekind, who is in charge of brand portfolio management at Munich corporate headquarters

and works closely with brand managers. "The better we know our brands' target groups, and the more clearly we distinguish them, the more exactly we can fit their needs and focus our brand messages accordingly."

Global consumer profiles, local product requirements

It's equally important to recognize differing local consumer needs within the global framework set by a given brand, and to serve those needs in the best possible way. The best example of this is the wok burner – a cooktop component that is as important in India as it is in China. Yet the requirements for the burner are very different. Chinese cooking calls for a very high burner output to sear food quickly. But Indian consumers want uniform heat distribution, which is important to get ideal browning on the country's typical chapati flatbread.

The combination of local consumer knowledge and higher-order brand features is essential to BSH's marketing strategy. It provides a basis for the project team in consumer segmentation to develop distinctive,

unique profiles. So Bosch is positioning itself even more solidly as an especially trustworthy brand whose appliances make people's lives easier. Siemens, on the other hand, appeals to consumers who set special store on innovative technology and high-quality design. Gaggenau offers its target group luxurious exclusivity, and Neff is the cooking specialist in the high-end built-in kitchen segment. That represents the strategic foundation for the work of mining brand potential. "But at that point the job is far from over," Dedekind points out. "Now the challenge is to really bring these brand profiles to life and tell a consistent story for each brand." ■



DIRK DEDEKIND is as Head of Brand Portfolio Management, the most important contact person for brand strategy at BSH corporate headquarters. Previously he has served as a Marketing Manager for India.

Never dry clean again

The innovative sensoFresh System in Siemens iQ700 washing machines removes odors from textiles while saving electricity and water.

Suits, coats, blouses, and fine-yarn clothing can't usually be washed in a machine. So they get hung out in the open air in the hope that unwelcome odors will dissipate. Yet that seldom works. Usually they have to go to the dry cleaner. But a world first, developed by Siemens, means that even fine, sensitive textiles can go into the washing machine at home. In the sensoFresh program, odors are eliminated without water. The system generates and

uses activated oxygen. "Activated oxygen has long been used successfully in professional dry cleaning, water treatment for swimming pools, and the automotive industry," explains Maximiliane Klinger, Project Manager in Marketing at BSH.

Normal oxygen gets converted into activated oxygen with sensoFresh. "We're just simulating nature," Klinger explains. "Activated oxygen also occurs in

thunderstorms, when the air carries a strong electrical charge." The oxygen is fed into the machine together with a cold mist. The mist makes the fibers in a fabric stand up, perfectly preparing the material for subsequent treatment. Odors are nothing but long chains of molecules attached to the clothing. The activated oxygen reacts with those chains, because it wants to get back into oxygen's normal form. That causes the odor molecules to split and dissolve. "The volatile odors are drawn out of the drum and absorbed by an activated charcoal filter," Klinger goes on to explain the last step in the innovative method. Then the activated charcoal filter simply regenerates itself. So the technique works as long as the washing machine does – without maintenance or replacing filters and cartridges. No matter whether treating kitchen odors, tobacco smoke, or traces of long storage, sensoFresh leaves laundry smelling fresh and clean.

More technology without more expense

Siemens washing machines with sensoFresh offer yet another advantage. Activated oxygen is also used in the Hygiene Mix washing program. In this case, the oxygen performs an additional function, not only removing odors but also destroying bacteria, fungi, and viruses even at low washing temperatures. This is a development inspired by consumers' desires. More and more people are washing their clothes at low temperatures, both for less wear on the fabric and to save energy. The Hygiene Mix washing program on the sensoFresh washing machine gets clothes clean and hygienic.

iQ700 washing machines with the sensoFresh System have been on the European market since March 2016. Bosch customers can get this innovative technology in Series 8 washers with the Active-Oxygen™ function. ■



You can find out more about sensoFresh in a video at report2015.bsh-group.com.

Form follows what?

What are the particular style elements that characterize the design of the Bosch brand? How can design contribute to the company's success? Or: what do you do when the ideas run out? These and other questions about all aspects of design are answered by members of the global Bosch Home Appliances Design Team – the award-winning Red Dot: Design Team of the Year 2015.



What does design mean to the Bosch brand?

Our customers buy our products for more than just their appealing exteriors. They have very high expectations about functionality and quality. So our design doesn't primarily emphasize the visual effect, but incorporates surprising simplicity and perceivable quality right down to the last detail. The award as Red Dot: Design Team of the Year showed that in terms of design, we're on an equal footing with strong global design companies from all over the world.

ROBERT SACHON, Vice President, Head of Global Design Bosch



The Bosch brand stands for quality and reliability. How is that reflected in design?

Design translates the term *quality* – which is an abstract – into a product you can experience with all your senses. In tactile terms, that's expressed by using high-quality materials, while precisely defined details and intuitive interfaces provide a visual expression of quality. The pleasant sound of any moving parts rounds out the product experience acoustically.

ALEXANDER MARSCH, Senior Designer



What are the particular style elements that characterize the design of the Bosch brand?

In designing products, we follow a family concept that's intended to reinforce the recognizability of all Bosch products. That involves the interplay of iconic style constants like the brand logo or the intuitive control ring, which establish the "face" of the new generation of built-in appliances, as well as other design features like minimum gap sizes, very small bending radii, and finely faceted design elements that demonstrate high-quality crafting and technical precision. These elements make our products unique.

ULRICH GOSS, Head of Design Cooking



How do you design in a team?

In our design strategy for the North American Region, we combine the best of both worlds. Our design team in Southern California works with the design team in Munich to blend the Bosch global design language with American design tastes and cultural needs for cooking styles, food preservation, and dish care. The end result is a holistic Bosch design that is adapted to perfectly fit our market.

GRAHAM SADTLER, Director Industrial Design, Region North America



Can any household afford good design?

We design for everyday life, not for museums. Our products combine aesthetics and innovative technology with user-friendliness, and thus make many people's daily lives easier. Our design philosophy appears in all of our products, no matter what their price.

NANCY NGUYEN, Senior Industrial Designer



Is it better to be beautiful or functional?

The saying "Form follows function" from the 19th century continues to be true today. The design derives from the function of the device and ideally reflects its quality and excellence.

THOMAS OTT, Head of Design Dish Care



Many designers from different cultures – is the team's internationality also reflected in its designs?

I think that a regional perspective helps build a comprehensive internationality of the brand. As a part of the Bosch design team, we designers in China offer an authentic understanding of regional needs and combine our know-how with regard to key design points with the Corporate Design. Under the umbrella of Bosch design philosophy, the key ideas are reinterpreted. For instance, exclusive glass designs and illuminated user interfaces are frequently found in Chinese products.

YAO XINGEN, Director of Industrial Design, Region Greater China



What do you do if you run out of ideas?

New ideas happen when they're least expected. Innovative things can especially happen by inspiration from some other side of life, like nature. That's why it's always a good idea to get a different perspective on things if you want to arrive at new ideas.

RAPHAEL KRUG, Graduate Designer



How important is design for home appliances?

An appliance's design and quality have to make customers feel enthusiastic and intrigued, and on a number of levels: functions have to be satisfying and product quality must be something you can experience. At the same time, the aesthetic effect has to arouse a certain desirability. After all, these are kitchen aids that should also be fun to use.

HELMUT KAISER, Director of Industrial Design, Product Division Consumer Products, Global



Has there been a refrigerator you just loved?

You come to love a product when it meets your needs not just functionally but on an emotional level. Our classic refrigerator managed through aesthetics to convey feelings like security, harmony and individuality. That makes a refrigerator a desirable design icon that has helped define the brand's image all the way down to today.

MAIKE KIRSCHBAUM, Designer Preliminary Development



Is there a moment when you know you've just designed something really special?

It's the market that always decides whether an idea is really great. But there are still those gripping moments when you sense that everything's coming together just right. An example: the design of our Color Glass Range, a series of appliances with colored glass fronts that combines the glass trend from Asia with the open kitchen in Europe, and has made us a trendsetter in colors and materials.

RALPH STAUD, Head of Design Refrigeration Bosch



Pen and pencil or right onto a tablet – what's the best way to scribble down a rough idea?

I come from a generation when computers first began being used in design, so I know the advantages of both. My first ideas are sketched out in ball-point. Then Photoshop et al., 3D modeling and VR tools have proved to be perfect for developing an idea further. That approach helps me produce and visualize concepts efficiently.

FLORIAN METZ, Head of Design Laundry Care Products Bosch



What contribution can design make to the company's success?

Design, the way it's taught and practiced today, involves more than just "making things pretty." Designers contribute to a company's short and long-term success by acting as generalists to combine all the various requirements into an overall experience, through creativity and an understanding of users, the brand, technologies, and trends.

ANDREAS SCHUESSLER, Head of Design Preliminary Development



How do you become a user interface designer, and how does the work differ from that of a conventional product designer?

There are courses of study in User Interface Design and Interaction Design that focus on designing digital user experiences. Product design primarily defines form, function and ergonomics, but User Interface Design concentrates on the user's interaction with the product and the design of the operating patterns and interfaces to make the experience of an appliance complete.

ANGELA NAEGELE, Senior User Interface Designer



How does digitalization affect design?

Design is significantly affected by two areas. One is how you operate something. Here the standard is clearly set by the smartphone. The other is that sensor engineering in our appliances and connectivity let us develop entirely new functions. How functions and operations are designed makes a lasting contribution toward defining a brand.

CHRISTOPH ORTMANN, Head of Design Interface Development

Milestones in the company's history

One of today's biggest home appliance manufacturers: BSH. A quick look at major milestones.

1967
Founding of BSH Bosch und Siemens Hausgeräte GmbH as a joint venture between Robert Bosch GmbH and Siemens AG

1972
Fully automatic washer/dryer



1972: The combined washer/dryer takes on the home laundry in Germany. It does more than wash, it includes drying cycles.

1976
The Greek brand Pitsos forms part of BSH

1982
The brand Neff forms part of BSH

1985
Aqua-Stop System for dishwashers (100% protection against water damage)

1987
45 cm dishwasher

1988
CLOU, the non-tipping pull-out oven shelf system

1988|89
The Spanish brand Balay forms part of BSH

1989
Launch NoFrost technology

1991
Corporate Environmental Protection department set up and first BSH Environmental Report published

1993
Discontinuing use of CFCs/HFCs in Europe

1994
Establishment of environmental management system and approval of a binding group-wide environmental policy

1995
The Turkish brand Profilo forms part of BSH

1996
BSH products manufactured and marketed in China

The Peruvian brand Coldex forms part of BSH

1997
Innovative vacuum cleaner motor design for improved energy efficiency and higher suction power

New freshness system with VitaFresh

1998
The Thermador brand forms part of BSH

1999
Steam oven with fixed water connection

Production of the country's first CFC-/HFC-free refrigerators in China

2000
Approval of globally valid occupational health and safety guidelines

Fully automatic dishwasher



1998: BSH acquires U.S. appliance maker Thermador. The brand clearly belongs to the luxury segment of the American market.

2002
SLIDE & HIDE®, the fully retractable oven door

2004
BSH signs the UN Global Compact

2005
Code of Conduct of the European Committee of Domestic Equipment Manufacturers CEC signed



1987: A space-saving alternative for any kitchen – BSH brings out the market's first dishwasher that's only 45 centimeters wide.

2006
Dishwasher with Vario-Speed (full performance at double the speed)

2007
New generation of fridge-freezer combination appliances with automatic defrost (NoFrost)

Exchange scheme for obsolete refrigerators in Brazilian shanty-towns

Power-saving compressor technology and aerodynamic systems integrated into vacuum cleaners

2008
Heat pump technology creates world's most energy-saving dryer

Intelligent Heater inside: the sensoFlow System guarantees maximum coffee indulgence, thanks to its ideal brewing temperature

World's most energy-efficient dishwasher, featuring Zeolith® drying system

Induction cooktop with LCD screen

Launch of the Energy Excellence Initiative: group-wide control of all marketing and sales activities related to energy efficiency

Balance calculation for BSH's corporate carbon-dioxide emissions

Introduction of Compliance Management



2002: The new Slide & Hide function lets the Neff oven's door slip out of the way to "hide" under the appliance, while the door handle rotates so it can "slide" in, too.

2012
BSH becomes part of the climate protection companies and will be the first company in Europe to receive CO₂ certificates for environmentally friendly freight transport by rail

Association of German Chambers of Industry and Commerce (DIHK) admit BSH to climate protection companies grouping

Dust separator system Cross-Flow™ in bagless vacuum cleaner Runn'n: for high performance and minimized maintenance

NoFrost fridges with 14% more capacity



2011: The new Siemens full-area induction cooktop with TFT display automatically detects a pot or pan's position, size, and shape.

2009
7 liter dishwasher
SensorBagless™ Technology in bagless vacuum cleaners ensures cleaning at always optimal performance level

2010
i-DOS automatic detergent dosing, precise-to-the-milliliter, reduces water consumption
Flexible induction cooktops

2011
New premium class washing machines and dryers

Full-surface induction with TFT Touch Display

Technology Center for Laundry Care opens in Berlin

Coffee Competence Center opens in Traunreut, Germany

2013
Launch Multidoor fridges in China
Opening of a slimline washing machine factory in St. Petersburg
Acquisition of Polish home appliances manufacturer Zelmer

2014
Dishwashers with easy glide racks on all levels

First connected appliances with Home Connect are launched

Technology Center for Dishwashers opens in Dillingen, Germany

2015
Bosch sole shareholder of BSH, BSH Bosch und Siemens Hausgeräte GmbH is renamed BSH Hausgeräte GmbH

Laying for the first dishwasher factory in China

BSH worldwide

- ✳ Corporate headquarters
- Subsidiaries/Sites
- Factories**
- 🍳 Cooking
- ❄️ Refrigeration/Freezing
- 🧼 Dishwashing
- 👕 Laundry/Drying
- 🏠 Consumer Products
- ⚙️ Motors/Pumps



As of March 2016

What guides us

What we want, and what drives us forward. What gets us ahead, and makes us unique. BSH's Guiding Principles summarize all of this, together with the fundamental values that we will continue to build upon. They offer clear guidance for our work, both in-house and outside – and will help us remain successful into the future. For customers, partners, and every employee anywhere in the world.



You can find our Guiding Principles at WeAreBSH.com.

<p>Our objective</p> <p>What we want to achieve</p>	<p>We improve quality of life across the globe with our innovative home appliances, exceptional brands, and superior solutions.</p>					
<p>Our motivation</p> <p>What drives us</p>	<p>We want to be first choice for consumers worldwide. We grow responsibly and contribute to protecting our natural resources.</p>					
<p>Our strategic focal points</p> <p>What will help us succeed</p>	<p>Be consumer centric</p>	<p>Leverage brand potentials</p>	<p>Push digital transition and user experience</p>	<p>Lead innovation and broaden portfolio</p>	<p>Drive operational excellence</p>	<p>Live authentic leadership</p>
<p>Our strengths</p> <p>What makes us unique</p>	<p>Exceptional people in a strong global network</p>	<p>Outstanding technology and quality</p>	<p>Unique brand portfolio</p>	<p>Trustful partnerships</p>	<p>Continuous improvement mindset</p>	
<p>Our values</p> <p>What we build on</p>	<p>Future and result focus</p>	<p>Responsibility and sustainability</p>	<p>Initiative and determination</p>	<p>Openness and trust</p>	<p>Fairness</p>	<p>Reliability, credibility, legality Diversity</p>