KÄRCHER

makes a difference

Sustainability report

AN OVERVIEW

BE THE DIFFERENCE

www.kaercher.com/CSR

Sustainability reporting
This is Kärcher's third sustainability report. It covers fiscal years 2016 and 2017. The data for the respective reporting year is always collected at the end of the previous year and relates to the Kärcher Group's worldwide production and logistics sites. The sales companies are not included in the data (exception: employees). The reporting is based on the guidelines of the Global Reporting Initiative (GRI). The next sustainability report is scheduled for 2020. You can find further information about the company and the sustainability of Kärcher online at https://www.kaercher.com/int.

CONTENTS

4
Introduction
by Hartmut Jenner

6
Company profile
Kärcher at a glance

8
Conversation
Markus Asch, Dieter Grajer and Christian May

12
Sustainability management
Progress report

14
FOCUS 1
Responsibility for nature, culture and society
14 To protect monuments and historic buildings
16 Time for appreciation
18 BE THE DIFFERENCE – worldwide examples of Kärcher's social commitment

25
FOCUS 2
Responsibility for supply chain and products
26 Under the CSR microscope: Kärcher Professional
28 Gentle and environmentally compatible down to the last detail: our consumer products
30 Efficient, economical, sustainable: Cleaning on Demand
32 An eye on the environment – from conception to the finished product
34 Every measure counts – saving resources at our sites

36
FOCUS 3
Responsibility for employees
37 9,836 votes for the future
40 Innovation Lab

20
Sustainability in numbers

42
Insight
Kärcher's garden

DEAR READERS,

We are delighted that you are interested in Kärcher and our commitment to sustainability. Our planet's resources are finite. We must protect them, and so we have committed to concrete targets in our Vision 2020. Sustainability is not a product of chance but the result of conscious decisions. It starts with the development of the product and continues through production and the supply chain to correct disposal. It does not end at our factory gates. Sustainability also affects our responsibility as a company to our employees, customers, business partners and society. Our constant mission is to shape upcoming changes and to work together with all those involved to this end. In our sustainability strategy we made significant progress in 2017, from energy efficiency to social standards, and we have already reached 89 per cent of Vision 2020.

For this Swabian family business, the image of the honest merchant is our company maxim and guiding principle. Virtues such as long-term economic success, integrity, reliability and modesty, in addition to the exceptional quality of our products, have gained us the trust of our customers over decades. Last year we turned over EUR 2.5 billion, the highest sales in our company history.

At the end of 2017 we had 12,304 employees in 67 countries worldwide, more than ever before in the history of Kärcher. Thanks to our extraordinary corporate culture, our employees are committed and motivated people who underpin the unique innovative power of Kärcher and who successfully sell our products worldwide.

An important project in 2017 was the worldwide employee survey, which provided important insights and starting points for further improvements. Since last year, employees from various disciplines have been spending three-week periods working together on different innovations in our brand new Innovation Lab. The healthy economic situation has also enabled us to support a large number of different projects and to get involved socially. For example, we expanded our financial and technical support for SOS Children's Villages worldwide.

And, together with the Global Nature Fund and the Federal Ministry for Economic Cooperation and Development, Kärcher has continued its extensive green filter plant project. In addition we carried out numerous restorations of architectural monuments: in 2017, Kärcher cleaned mausoleums at the Green-Wood Cemetery in New York, the Votive Church in Vienna and the historic town church of St. Marien in Wittenberg. Under the motto "Time for appreciation" we also promoted the "Thank Your Cleaner Day" initiative, which highlights the often unrecognised work of cleaners around the world.

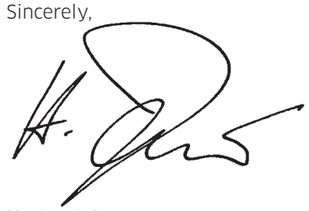
» *Sustainability is not a product of chance but the result of conscious decisions.* «

Hartmut Jenner

In addition to innovative technologies and products, Kärcher has always focused on its customers: they are also a central factor for sustainable corporate development. To get the best for our customers in the future, we need to tackle and use the opportunities of an increasingly digitised world in the interest of consumers. A Chinese proverb says: "When the wind of change blows, some build a protective wall and the others, windmills". In our case this means: cleaning goes digital. In the future, "Cleaning on Demand" will enhance our fleet and facility management systems Fleet and Manage. Cleaning on demand is based on specific requirements and will make cleaning more efficient, economical and sustainable. And on the way, we will continue to optimise our product development processes and make them more environmentally friendly. We are committed to the goals of our Vision 2020 and to the agreements of the Paris Climate Agreement of 2015. This is important because we are convinced that we all hold the future in our own hands to a great extent.

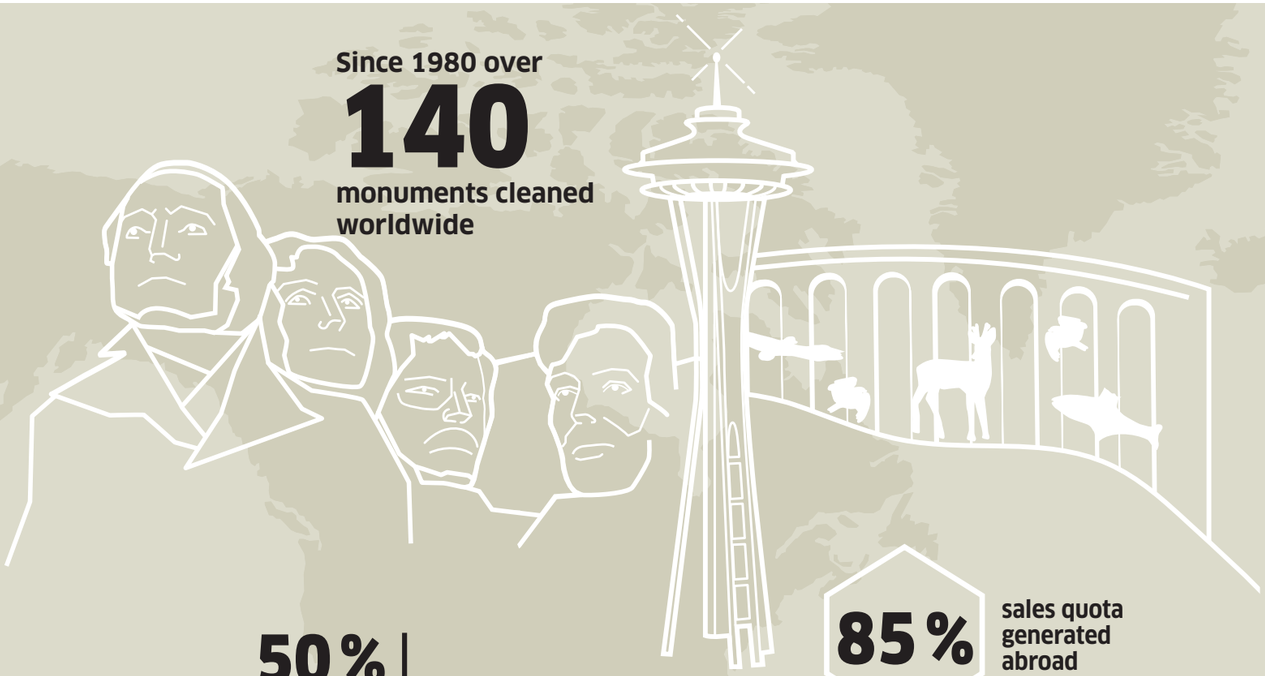
In this report, you will read about how we have progressed in the past two years on our way towards our Vision 2020, which topics we are particularly interested in and what we are doing for the future. We look forward to your continued critical and constructive support along the way.

Sincerely,



Hartmut Jenner
Chief Executive Officer and
Chairman of the Management Board

KÄRCHER AT A GLANCE



Since 1980 over
140
monuments cleaned worldwide

50 %
sales share – Professional

50 %
sales share – Home & Garden

85 % sales quota generated abroad

2.5
billion euro turnover

3,000
machines currently in the programme

90 %
less than 5 years

602
active patents

1935
establishment

family business

> 50,000
service support points

19
production sites

headquarters
in Winnenden

110 Kärcher companies

in **67** countries

5
logistics sites

> 40,000
trading partners

40 %
employed in Germany

2015
11,333
employees worldwide

2017
12,304
employees worldwide

9.4 years
average length of time with company

Markus Asch
Deputy Chairman of the Management Board
and Managing Director Professional Channels

Dieter Grajer
Managing Director Operations

Christian May
Managing Director Retail Channels

» *Sustainability must permeate a company to make an impact.* «

ALL OR NOTHING

Corporate social responsibility is omnipresent today, but it is lived at different degrees of quality and intensity. Markus Asch, Dieter Grajer and Christian May explain why Kärcher is serious about this and point out the consequences of consistently sustainable conduct, from product development to packaging to resources and the environment.

What does sustainability mean for you personally?

Markus Asch, Deputy Chairman of the Management Board and Managing Director Professional Channels:
Sustainability is the DNA of our family business. I am firmly convinced that through its entrepreneurial vision and technological skills, Kärcher must and will be a role model here.

Christian May, Managing Director Retail Channels:
For me, sustainability means living in harmony with the environment and society. Every single one of us can contribute something every day by constantly questioning our actions.

Dieter Grajer, Managing Director Operations:
Sustainability is our responsibility towards future generations and, at the same time, it is the foundation for a successful future.

How convincingly does Kärcher live its CSR strategy?

Christian May:
Let's go back a step: what do we do? Our company offers cleaning solutions for end-customers and industry. These naturally consume water, electricity, detergents etc.

However, our devices also make a major contribution to preserving the value and longevity of buildings or machines, which is itself an important contribution to sustainability.

If we look at the processes of a company, it is clear that sustainability really needs to permeate a business to make an impact.
In the development of our consumer products, we focus on two topics: material reduction – in other words less consumption of plastic or aluminium – and the energy efficiency of the devices themselves. In addition, as a globally active company, we are increasingly aligning all our products to regional market needs. Customers in Asia have different requirements than in Europe, and in the US it looks different again. If we have the right products for each market, we can manufacture "Local for Local" and do not have to ship our devices halfway around the world.

Markus Asch:
Material reduction and energy efficiency are also major trends in the field of professional equipment, but a third focus is the health of the professional user. For example, a filter cleaning system for construction site vacuums which we developed in 2007 is standard today. It protects the operator against the dust that occurs during work.

In 2017, the EASY!Force gun improved usability for operators of high-pressure cleaners, as has been scientifically proven in an investigation by the University of Aachen.

Because of the ergonomic design of the handle, significantly less strain is placed on the hands and back.

"We aim to launch technologically sustainable innovations long before a standard is introduced." **Markus Asch**

"It's not just about making our existing business sustainable; it's also about developing sustainability as a business model." **Christian May**

"Sustainability is our responsibility towards future generations and, at the same time, it is the foundation for a successful future." **Dieter Grajer**

CO_2 is another topic we address for building service providers with our eco!zero programme. After a long search, we have found an established partner so that, on request, our customers can improve their CO_2 balance.

Dieter Grajer:
Sustainability is also a wide-ranging topic in cross-departmental functions. In purchasing, we have extended our supplier auditing to include strict social and ecological criteria. From an overall cost perspective, it sometimes makes economic sense to pay a higher purchase price, all other things being equal. As part of organising production in accordance with the "Local for Local" concept addressed by Christian May, we have further regionalised purchasing. In China, we already procure 90 per cent regionally, in Europe, 70 per cent. This reduces unnecessary effort and resource consumption in transport and logistics.

Another effect of this strategy is that we secure workplaces in the respective region and, unlike others, do not relocate manufacturing to a supposedly favourable location.

One last area is production itself: this includes, among other things, continuous optimisation according to lean criteria, i.e. the avoidance of any kind of waste and the reduction of energy consumption.

Sustainability costs money. How important is the return on investment in addition to ecological or social aspects?

Markus Asch:
We aim to launch technologically sustainable innovations long before a standard is introduced. For example, we set standards in terms of energy efficiency or performance adjustment on the one hand which benefit the economic success of our company on the other. As a member of the VDMA's Blue Competence Initiative, we want to go beyond company boundaries in embedding the opportunities of sustainability in people's minds: material efficiency, resource-saving production, durable products – this all makes sense economically.

Christian May:
Many of our commercial partners attach great importance to CSR aspects today. They place the greatest demands at a social and ecological level. They visit our plants and ask for detailed information – and rightly so. It is important that we can convince them of our merits.

Dieter Grajer:
Ultimately, you must aim for sustainability, but in a few years you need a return on investment. Let's take a look at our Bühlertal factory: here we introduced an energy management system and eliminated high-energy consumers. In plastic injection moulding, for instance, the drives are 33 per cent more economical. That makes ecological sense and the investment pays off quickly.

When you look at your business: where can opportunities for sustainable action be found, perhaps in places where they wouldn't normally be expected?

Dieter Grajer:
One very exciting aspect is in-house energy production according to ecological criteria. Even in purchasing, there are more possibilities than you might initially imagine: we want to reduce the number of suppliers and rely on more intensive cooperation – this also allows us to influence technological progress, for example in plastics production. One final example, which probably everyone recognises from the private sector: how often do you get products sent in packaging that is too big and feel annoyed about it?

We have had size-optimised packaging for a long time, but we are currently introducing a new load planning tool for more loading density in trucks and containers. This ensures no wasted space, and we only use the transport we really need.

Looking at your portfolio: what if Kärcher did not develop its products with an eye to sustainability?

Christian May:
Take our Full Control high-pressure cleaners. Instead of the straightforward 150 bar pressure, as in the past, which the user adjusts by moving closer to or away from the object, you can now select the right pressure depending on the task.

The number of devices sold in 2017 will save enough water to fill 140 Olympic swimming pools and enough electricity for 124 circumnavigations of the globe by car.

Innovations are also bringing great benefits in the field of material reduction: with our new generation of window cleaners, we have been able to save on plastics in the gram range per machine. The savings amount to more than 350,000 kilograms of material per year, thus saving six million kWh of electricity in plastics production.

Markus Asch:
We swept the professional sector in 2012 with our eco!efficiency label for dry vacuum cleaners before the market was acutely aware of the energy efficiency issue. We saved 40 per cent of energy with practically the same performance, i.e. 98 per cent, which would otherwise have been consumed.
Our mid-range high-pressure cleaners, introduced in 2018, clean the same surface area around 15 to 20 per cent faster than the previous models and with comparable results thanks to minimised pressure losses. The machines therefore have shorter operating times or achieve more in the same time with corresponding consequences for resource consumption.

Kärcher is on its way in many areas. Where will future priorities lie?

Dieter Grajer:
In the coming years, the first step will be to align our objectives with the UN's Sustainable Development Goals. We will interview all stakeholders within the company, identify where we stand and consistently develop our topics and goals.

Christian May:
One focus will be on new business models because in times of digitisation we cannot miss any opportunity. It's not just about making our existing business sustainable; it's also about developing sustainability as a business model.

Markus Asch:
Of course, the issue of innovation is also important. For example: as a plastics-intensive industry, we are currently focussing on using less material and on recycling plastic for reuse in-house if possible. In 2017 we reached a quota of 9.5 per cent, equivalent to 121 million 1.5 litre PET bottles. If you line up these bottles end to end, that corresponds to well over 10,000 kilometres.

For the future, we are thinking about alternative materials. Who knows, maybe there will be a compostable high-pressure cleaner one day.

89 % already achieved — **VISION 2020**

01

RESPONSIBILITY FOR NATURE, CULTURE AND SOCIETY

Committed to success. This is all the more true in a world in which the idea of social commitment is often forgotten. As a family company, we want to take responsibility. Whether it is in SOS Children's Villages, in historical buildings or in water protection: with our cleaning technology, expertise and donations, we are committed to a clean environment and supporting people who need help.

We take responsibility: for the environment, for our products, for the supply chain, for the company, for society and for our employees. In 2017, we continued to drive these six action areas in our sustainability strategy - from energy efficiency to social standards.

WHAT DID WE WORK ON?

- From the "Sustainability Excellence" programme adopted in 2014, eight of the 14 overall goals have now been fully implemented.
- Environmental and social standards are now firmly established in the supply chain – all our top dealers and forwarders have been audited by Kärcher. "In 2017 alone we evaluated 1,671 suppliers online. In addition to the audits carried out on-site, this is another approach to ensuring global standards", says Andreas Mayer, Head of Management Systems and Sustainability.
- The energy management system according to DIN EN ISO 50001 has been successfully introduced in all German plants. In 2018 it will be extended to sites in Italy and Romania.
- The analysis of energy consumption showed a savings potential of several hundred thousand euros and 4,500 megawatt hours per year – equivalent to the average needs of a whole municipality. The initial measures, such as energy-efficient refurbishment or conversion to LED lighting, have already been implemented.

WHAT'S NEW?

- An analysis of the United Nations Sustainable Development Goals (SDGs) with regard to our ability to support these goals. Now we have to define specific fields of action. For this we conducted worldwide surveys at Kärcher and workshops at management level. For 2019, an external stakeholder survey is planned.
- We are involved in the newly founded "Corporate Responsibility" working group of the German Engineering Federation (VDMA).
- We are working with EcoWebDesk, the environmental management software that enables us to obtain worldwide sustainability metrics faster and with higher quality.
- Since mid-2017, we have been asking which sustainability topics are relevant for us beyond 2020 and how we can implement sustainability even more intensively in the company and its processes.

» *A very exciting phase with many opportunities to go in new directions and try things out.* «

Andreas Mayer, Head of Management Systems and Sustainability

To underline our commitment, we signed the "Paris Pledge for Action" in early 2016. We are committed to global climate protection with the aim of limiting global warming to below 2°C.

TO PROTECT MONUMENTS AND HISTORIC BUILDINGS

Kärcher has cleaned over 140 monuments worldwide since 1980 as part of its cultural sponsoring programme. The cleaning equipment manufacturer works closely with the owners of monuments, restoration experts and art historians and is continuously developing new environmentally friendly and monument-specific cleaning methods.

The famous **Hermannsdenkmal** is sublimely located above the Teutoburg Forest and is visited by more than 500,000 visitors each year. However, biological pollution and environmental influences have left their mark on Germany's tallest statue over the years. Therefore, in the autumn of 2016, the Kärcher cleaning team ascended on lifting platforms and used the surface-friendly steam setting of their hot water high-pressure cleaners, to leave Hermann looking his best for the first time in many years.

After two years of preparation, they were finally ready in the spring of 2016. For their first Taiwanese cleaning project, the Kärcher cleaning experts travelled to one of the country's most important fortresses. **Fort Anping** in the city of Tainan is 400 years old and until recently was heavily overgrown with substance-damaging algae, fungi and lichen. Without using chemical additives, Kärcher has removed impurities with only hot steam and minimal pressure, thus extending the life of the cultural site.

The **Viennese Votive Church** is one of the most important neo-Gothic religious buildings in the world. For the refurbishment of its central tower, a cleaning solution was needed which would preserve the protective basic patina of the lead roofing but would also carefully remove the harmful black patina. Kärcher's dry ice blasters performed impressively in test cleaning and so they were supplied to the commissioned industrial climbers, together with the necessary dry ice, as part of a cultural sponsorship project.

Another cleaning project in the spring of 2017 took the Kärcher team to the well-known **Green-Wood Cemetery** in New York. Three of the many ancient mausoleums were so heavily covered with lichen, algae and moss that the underlying marble surfaces were already showing initial damage. A combination of hot water high-pressure cleaners on the steam setting and low-pressure particle blasting yielded the desired gentle cleaning solution.

The largest spherical building in the world is the **Ericsson Globe** in the centre of Stockholm. The event auditorium is located on a fast and busy road, which has left its mark on the pale façade after 27 years. Time for a thorough initial clean with hot water high-pressure cleaners from Kärcher! During the work, in spring 2016, particular attention was paid to ensuring that dissolved particles did not enter the surrounding rivers and oil residues were collected using filters and disposed of properly.

The **Riga railway station** represents an important transport hub in Moscow. Kärcher cleaned the richly detailed façade of the station reception building for the 180th birthday of Russian Railways. Within two weeks, 4,000 m² of brick and plaster were restored gently to their original state using portable, petrol-driven cold water high-pressure cleaners.

TIME FOR APPRECIATION

Imagine coming to your office to see the waste bin overflowing. The toilets have not been cleaned, the floors have not been vacuumed. Coffee stains adorn the meeting table, and the windows are dirty. It would certainly look bad, and it would make a bad start to the day. But the fact that, day after day, there are people making sure that our public spaces, offices and hospitals are clean and hygienic, and how important this is for our society, is hardly considered. Time for a thank you.

Thank Your Cleaner Day: 17th October 2018 and 16th October 2019

How it all started
Thank Your Cleaner Day initiative began four years ago in New Zealand. Lillian Small, Chief Executive Officer of the local Building Service Contractors Association at that time, explains the motivation: “The cleaning industry is often invisible to those who benefit from the services provided and the cleaning staff themselves is often not appreciated. Even in the media there were very few positive stories or reports and although building service contractors work is highly professional and inseparably linked with today’s society it is undervalued.” For this reason, Small started Thank Your Cleaner Day to change the perception and raise awareness of professional cleaning services. In order to be able to address the topic globally, Lillian Small sought a cooperation partner which was anchored in the cleaning industry – and found it in Kärcher.
Marc Van Ingelgem, Executive Vice President Global Sales Management, explains the reasons behind the company’s support for the initiative: “This is not about us at all, but rather the cleaners and the cleaning industry. The companies and their employees deserve recognition for the hard work they do. Thank Your Cleaner Day is a great concept that Kärcher is happy to support because we see how it makes a difference.”

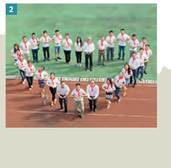
A simple thank you can achieve a lot
In the participating countries, Kärcher subsidiaries around the world work together with the Building Service Contractors Associations or individual providers to raise awareness for Thank Your Cleaner Day. “The building service contractors work with their customers to identify the best way to achknowledge the cleaners on site for the day. On this day a combination of small and large activities take place within businesses to recognise the cleaners. In this way it is possible to reach both the public and cleaners,” explains Van Ingelgem.

Thank Your Cleaner Day conquers the world
So far, the response has been very positive internationally. Kris Cannon-Schmitt, Marketing Manager Professional for the USA at Kärcher, says: “We contacted about 600 building service contractors and received a lot of enthusiastic feedback. According to some of our partners, there has never been an initiative like this for their industry before.” Something similar happened in Argentina and Chile, says Ivan Villamil, Kärcher Regional Marketing Manager for South America: “Above all, we have received really lovely feedback from cleaners who have found the appreciation through Thank Your Cleaner Day to be something special.”
In addition to general activities, there have also been events such as a joint breakfast, a barbecue or a round of cupcakes for the cleaning staff.
Year after year, additional countries join in, to the satisfaction of initiator Lillian Small: “It makes me very happy that the campaign now has the global success that it merits and is continuing to grow.”

» *It makes me very happy that the campaign now has the global success that it merits and is continuing to grow.* «

Lillian Small, initiator of Thank Your Cleaner Day

BE THE DIFFERENCE – GLOBAL EXAMPLES OF HOW KÄRCHER MAKES A SOCIAL CONTRIBUTION ON A LARGE AND SMALL SCALE



Our commitment to SOS Children's Villages

1 – 17 The equipping of more than 50 SOS Children's Villages in Bosnia, Chile, China, Estonia, Kazakhstan, Croatia, Latvia, Lithuania, Macedonia, Poland, Romania, Serbia, Sri Lanka, Hungary, Uzbekistan, Belarus and Cyprus with a total of 131 Kärcher devices.

Social contribution from Kärcher subsidiaries

1 Brazil, clean-up of a park in São Paulo
1 Brazil, fountain clean-up on the Ramos de Azevedo Plaza
2 China, clean-up of a nursing home in Shanghai
2 China, Kärcher China is involved with a football team for disadvantaged children
2 China, clean-up of a school
3 Ecuador, clean-up of the football stadium in Ecuador
4 Georgia, supporting a subway clean-up operation in Tbilisi
4 Georgia, clean-up of the Vazha Pshavela memorial in Tbilisi
5 Greece, big clean-up operation in Athens for the 25th anniversary of Kärcher Greece
6 Hong Kong, Kärcher Hong Kong supports charity event for people with disabilities
6 Hong Kong, clean-up project in a kindergarten in Hong Kong
7 Israel, equipment delivery to the Holy Sepulchre in Jerusalem
8 Caribbean, equipment delivery to the Caribbean island of St Martin after Hurricane Irma
9 Kenya, sponsoring of a basketball court for orphanage in Kenya
10 Moldova, Kärcher Moldova donates two Window Vacs as part of "World Breastfeeding Week"
11 Norway, donation of pumps to security projects of the Norwegian Fire Brigade
12 Russia, Kärcher Russia is the main sponsor of the "Veloparad"
13 South Africa, green filter facility inaugurated in South Africa
14 Thailand, equipment donation to flood victims
14 Thailand, support of clean-up work in orphanage
14 Thailand, equipment donation to Buddhist temple and school for orphans
15 Czech Republic, five sweepers for Prague social project
16 Turkey, clean-up of retirement home
16 Turkey, clean-up of animal shelter in Istanbul
17 Ukraine, clean-up at the opera house in Odessa
17 Ukraine, church in Kiev is cleaned
18 USA, clean-up of Des Moines City Hall
18 USA, clean-up operation at Second Presbyterian Church in New York

Social contribution from Kärcher production sites

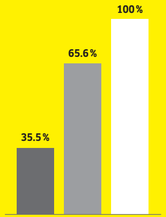
1 Brazil, donation of all old electrical appliances to digital inclusion projects for the socially disadvantaged
2 China, participation in physical education at migrant schools: support of the major CSR project "More Than A Market"
3 Germany, practical work experience at Kärcher for teenagers with disabilities through multiple collaborations
3 Germany, work experience for refugees to support integration into the German labour market
4 Italy, donation of computers to schools
5 Mexico, high-pressure cleaner donation to Mexican Civil Protection
6 Romania, participation in major road clean-up operation
7 USA, USA employees provide over 1,200 hours of work in various charity projects

KÄRCHER SUSTAINABILITY IN NUMBERS

ENERGY

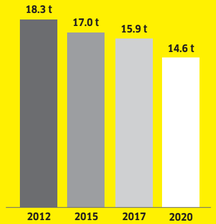
AIM: –20 %* | VISION 2020

Target achievement



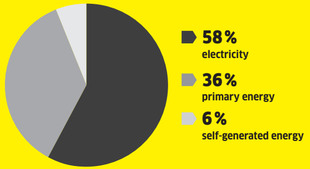
as a percentage of the target value

CO_2 emissions



tons of CO_2 per EUR 1 million turnover

Total energy consumption 2017



- 58 % electricity
- 36 % primary energy
- 6 % self-generated energy

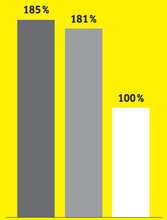
CO_2 savings: 2,751 tons of CO_2** › **This equates to:** 2,807 flights from London to New York***

* Compared to 2012 ** In the period 2016–2017 *** CO_2 emissions per single flight from London Heathrow to New York JFK per person: 0.98 tons

WATER

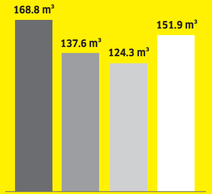
AIM: –10 %* | VISION 2020

Target achievement



as a percentage of the target value

Water consumption



Cubic metres of water per EUR 1 million turnover

Water saving: 33,278 cubic metres of water** › **This equates to:** 237,700 baths***

* Compared to 2012 ** In the period 2016–2017 *** For baths with a capacity of 140 litres

WASTE

Waste volume

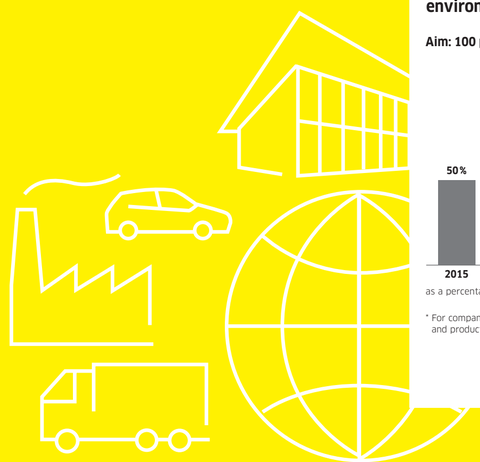
tons per EUR 1 million turnover

Types of waste

- 23 % metals
- 16 % wood
- 34 % paper, cardboard, cardboard packaging
- 9 % plastic
- 18 % other

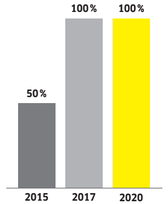
Savings of plastic waste: 35 tons* › **This equates to:** 1,204,152 PET bottles

* In the period 2016–2017



Determination of worldwide environmental standards*

Aim: 100 per cent by 2020



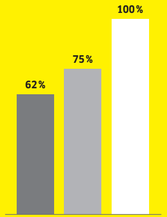
as a percentage of the target value

* For company vehicles, buildings, machinery and production facilities

PRODUCT ENERGY EFFICIENCY

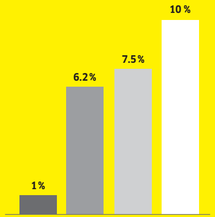
AIM: +10 %* | VISION 2020

Target achievement



as a percentage of the target value

Energy efficiency**



in weighted per cent

Energy savings: 22,128,000 kWh*** › **This equates to:** 5,409,067 households

* Compared to 2010 ** Energy efficiency improvement in per cent weighted by sales share *** In the period 2016–2017

Sales packaging

ø 80 % of material waste paper

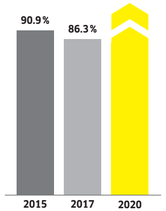
95 % of packaging paper-based

100 % RECYCLABLE

Organic or recycling plastic content

Aim: +400 per cent by 2020*

Tons of recyclate per ton of plastic



as a percentage of the target value

In 2017, the total amount of plastic has risen disproportionately to the share of organic or recycled plastic. We need to compensate for this increase by 2020.

* Compared to 2012

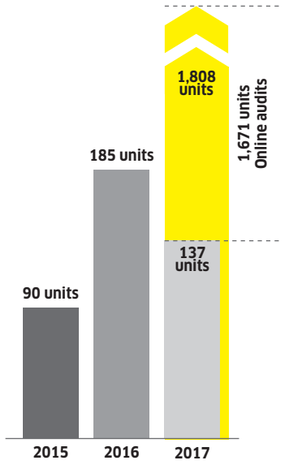
Sustainable supply chain: freight forwarders and Kärcher Centres

Aim: 50 per cent of Kärcher Centres and freight forwarders to be audited

as a percentage of the target value

Sustainable supply chain: suppliers

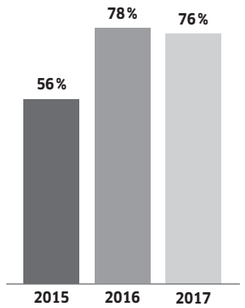
Sustainability audits of suppliers



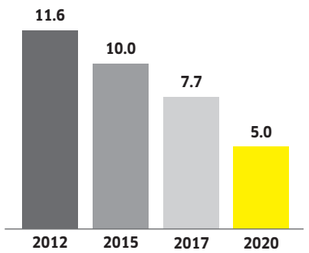
number of performed audits

Reduction of occupational accidents

Aim: < 5 occupational accidents per 1 million working hours*



as a percentage of the target value



number of accidents at work per million working hours

* Compared to 2012

02

RESPONSIBILITY FOR SUPPLY CHAIN AND PRODUCTS

Our planet's resources are finite. At Kärcher, we make every effort to preserve them and we make sure that our suppliers do the same. We regularly check our suppliers' quality, environmental and safety standards. The target: to recycle as much as possible with our innovative cleaning solutions, to avoid potentially hazardous substances as far as possible, to eliminate child labour and unfair wages and thus to convince even the most critical of consumers.

UNDER THE CSR MICROSCOPE

Kärcher Professional: sustainability and efficiency features at a glance

EASY!Force high-pressure gun
Its revolutionary concept allows fatigue-free working, even during long-lasting operations. The ergonomic benefit: the recoil force of the high-pressure jet is used to reduce the holding force to zero for the user. Confirmed by an independent body: strain-related pain in the back, fingers and palms (RSI syndrome) is reduced.

Hot water high-pressure cleaners
The burners of the hot water high-pressure cleaners are particularly efficient and environmentally friendly – as has been confirmed by EUnited Cleaning. Kärcher is the world's first cleaning equipment manufacturer to receive such certification.

Wet and dry vacuum cleaners
With our wet and dry vacuum cleaners with automatic (cyclical) filter cleaning, the suction power remains constantly high, even with large amounts of micro-particles. The effective suction reduces the fine dust load while working and protects health.

Steam cleaners
Our steam cleaners work without chemical cleaning agents and are particularly economical and hygienic: they are proven to remove 99.999 per cent of bacteria.*
The eco!efficiency setting gives quiet and energy-saving operation.

Dry vacuum cleaners
All Kärcher dry vacuum cleaners work with a maximum of 850 watts. The eco!efficiency models are even more economical: they represent 40 per cent energy savings with excellent cleaning performance.

Battery-operated dry vacuum cleaners
Our powerful vacuum cleaners work at reduced energy levels in the eco!efficiency setting. This extends the running time and reduces the volume.

Gantry car washes
Water savings are a given with the CWB 3 gantry car wash. Thanks to the standard water-saving function, only 20 litres of fresh water are needed for a vehicle wash. This conserves natural resources and reduces operating costs.

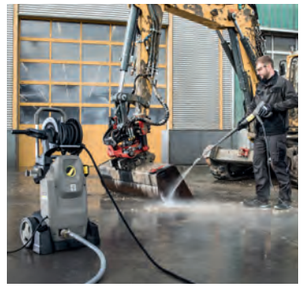
Water recycling
In the WRB Bio biological water recycling system for gantry car washes, water is treated using microorganisms. Up to 98 per cent freshwater savings with relatively low investment costs is hard to overlook.

Air treatment
Our AF 100 and AFG 100 models provide pure, fresh air in enclosed spaces. Many complaints and problems caused by fine dust, germs and similar impurities are effectively reduced.

* According to prEN 16615, PVC floor, device: SGV (floor nozzle, 30 cm/s, 1. Steam, 2. Steam suction, setting 3), test bacteria: Enterococcus hirae ATCC 10541

Scrubber driers
The B 40 W, B 60 W and B 80 W are compact walk-behind models. They have the EUnited Cleaning Association certificate for highly effective cleaning with low water and low energy consumption. In eco!efficiency mode, they consume 30 per cent less electricity and 40 per cent less water.

Sweepers
Dust levels should be kept as low as possible while working to minimise health effects. For outdoor work, we have developed a water spray system which is mounted above the side brushes and which dampens the dust. To minimise dust in the indoor working environment, there are fitted covers made of PVC-coated linen fabric.



Cold water high-pressure cleaners
In the middle class, we have newly developed 3-piston axial pumps with considerably reduced flow and pressure losses. This reduces energy consumption and, at the same time, improves the cleaning performance by about 20 per cent.

Industrial vacuum cleaners
The high-efficiency IE2 motors of our mid and super range IVRs provide more suction power than conventional motors with comparable input power. This significantly reduces the power consumption of the machines, which are designed for continuous daily operation.

Water treatment
Our WPC 100 RO compact water treatment plant prepares perfect drinking water with the help of reverse osmosis. This natural process, with no chemical additives, is considered the most environmentally friendly and effective method of water treatment. In use, the plant produces around 70 per cent less waste water than comparable equipment.

Municipal technology
The "Healthy backs project" has recognised our municipal sweepers and implement carriers for their good ergonomics. Particularly noteworthy were the ergonomically designed driver's cab and the quick-change concept for the replacement of the attachments, which requires no manual cranking, sliding or adjustment. The MIC 42 municipal machine is the first machine in this class to meet the top STAGE V emission standard. It is designed for use in inner-city environmental zones.

Detergents
Our CarpetPro carpet cleaners are phosphate-free and not harmful to health. Many car wash detergents are aseptic-based for quick and complete separation in the oil separator. All our industrial grade cleaners are nitrilotriacetate and solvent free.

Water dispensers
Water is prepared at maximum food grade quality in our WPD water dispensers. They work extremely economically with a unique filter and hygiene concept. Handling and transport costs are significantly lower than when using canteens or bottles.

GENTLE AND ENVIRONMENTALLY FRIENDLY TO THE VERY LAST DETAIL

Sustainable examples of our consumer products

Pressure washers water intake
Our mid and top range pressure washers can draw in water from alternative sources such as rain barrels or cisterns. This saves precious drinking water.

Drip hoses
With the Kärcher drip hose, as part of the Kärcher Rain System®, the water drips evenly out of the hose over the entire length and ends up exactly where it is needed. Hedges and bushes are irrigated particularly efficiently. Good for the environment: like all our garden hoses, our drip hose is cadmium, barium and lead free.

Detergents
For over 30 years, we have been developing and producing highly efficient, application-specific and environmentally compatible detergents. They are all biodegradable and thus reduce waste water pollution.

Pressure washer efficiency
The dirt blaster gives Kärcher pressure washers extra removal power and cleaning efficiency. Regular test findings: with the dirt blaster, our devices save up to 50 per cent of energy and water compared to other models. The test design was supported and verified by the Fraunhofer IPA.

Pressure washers
Our mid and top range pressure washers are equipped with water-cooled motors. Before the water is used for cleaning, it flows around a cooling circuit in the motor housing. The result: compact motors with greater performance and longer life.

House and garden pumps
Our BP booster pumps pump rainwater and groundwater out of barrels, cisterns and wells wherever needed. This allows resource-conserving and economical garden irrigation as well as contributing to the domestic water supply, for example of toilets and washing machines, without consuming drinking water. The multi-stage pumps require less motor power for the same flow rate than conventional jet pumps, which saves 30 per cent of energy.

Multi-purpose vacuum cleaners
Our WD series multi-purpose vacuum cleaners are equipped with energy-efficient motors, modern floor nozzles and flow-optimised vacuum design. They are demonstrably more powerful than their predecessor models and with reduced power consumption.

Floor cleaner
The FC 5 is an extremely low-water cleaner. For an apartment measuring around 60 m², the floor cleaner requires only 600 millilitres of water. For cleaning with mop and bucket, however, at least 5 to 10 litres are needed.

Steam cleaners
Our steam cleaners clean without chemicals and remove 99.99%* of all common bacteria on hard surfaces in the bathroom, kitchen or living room.

* Thorough cleaning with the Kärcher steam cleaner removes 99.99 per cent of all common household bacteria on common household hard surfaces.

Window vacuums
As a responsible and socially committed company, Kärcher supports the work of numerous charitable organisations. To raise awareness of the subject of early detection as part of breast cancer screening, we have created an exclusive, pink-white special edition of the WV 2 Premium Window Vac.

EFFICIENT, ECONOMICAL, SUSTAINABLE

Kärcher Cleaning on Demand, first presented as a concept at the Cleaning Industry World Congress 2017 in Berlin, will enhance our fleet and facilities management systems Fleet and Manage in the future. The biggest potential of the platform is enabling building service providers to work more efficiently and provide more transparent services. Sustainability is an added bonus but will be equally welcome.

Real benefits, not empty promises: what Cleaning on Demand does.
Goodbye working to plan, hello data-driven work processes (see box): demand-oriented cleaning lets you avoid unnecessary expenditure and identify upcoming requirements. Of course, cleaners can already decide whether and how intensively a room needs cleaning. "With Cleaning on Demand, however, you can ensure continuous standards across all employees, for example, even with changing personnel or new buildings," explains Dr Friedrich Völker, Project Manager Aftermarket & Services Digital Products. "Travel time is pared back because ideally I don't need to go and check – I have the information I need on my Cleaning-on-Demand system." This advantage will be particularly attractive for large buildings with unpredictable visitor frequency, for example at airports, office buildings or department stores. "Estimated on the basis of pilot projects, it is possible to save around ten per cent of your working time, plus the operating time of the machines," says Dr Völker.

» *Estimated on the basis of pilot projects, it is possible to save around ten per cent of your working time plus the operating time of the machines.* «

Dr Friedrich Völker, Project Manager
Aftermarket & Services Digital Products

What more do you need? Maximum transparency and new tariff models.
Cleaning on Demand shows where cleaning is needed and the systems provide data on how intensive the cleaning has been. This significantly greater transparency allows new tariff models to be developed. "Evidence of cleaning performance is a forward-looking concept," says Dr Friedrich Völker. "Sensors can measure and show what jobs have been done, to what quality and, e.g., bill according to basic and add-on tariffs. Feedback systems also show customer satisfaction in representative areas. This makes the cleaning service dynamic. It can come out of hiding and take its place as a key service."

Sustainability as a side effect: less of everything, almost always.
The potential savings in terms of sustainability are many and varied. Resources such as water, electricity or detergent are one essential aspect. However, consumables such as squeegee lips, brushes and pads for the machinery fleet, as well as the machines themselves, are also significantly less exposed to wear, depending on the situation.
"In combination with Kärcher Fleet, even maintenance does not take place until it is needed," explains Dr Völker in relation to the link with the fleet management system.
In practice, the actual level of savings achievable can only be quantified after the introduction of the first Cleaning-on-Demand systems. Dr Völker: "Let's assume that working hours are only reduced by one per cent. In this case, based on the average office space in Germany, we will be able to reduce our electricity consumption by 194,000 kWh, as well as reductions of 4,576,000 litres of water and 46,000 litres of detergent." On-demand cleaning is therefore a pioneering combination of economics and sustainability.

Smart data as a key: know what is needed
For Cleaning on Demand, the key factor is smart data, or rather smart working with data. Certain systems for data collection which indirectly indicate the utilisation and thus the degree of pollution can already be found in most buildings. These include lighting, heating and lift sensors. Alternatively or additionally, it is conceivable to use special sensors which determine only data relating to the need for cleaning – for example the dust concentration in the air. This information can be bundled on a single platform and made usable for cleaning service providers.

AN EYE ON THE ENVIRONMENT – FROM CONCEPTION TO THE FINISHED PRODUCT

Kärcher is not only a byword for innovative cleaning solutions but also sets standards in the area of sustainability in the cleaning market. Let's look at what this means in everyday life, based on the example of the product development process of a high-pressure cleaner.

The Kärcher 2020 sustainability targets for products*

- **10 %** increase in energy efficiency
- **100 %** sustainable sales packaging
- **80 %** waste paper content
- **400 %** more recycled plastics

* compared to 2012

The current Kärcher standard for environmentally friendly products

We are stricter with our products than we need to be according to legal regulations: for example, since 2009 certain plasticisers, so-called phthalates, can no longer be included in Kärcher equipment (official ban from 2019). We have also imposed binding limit values for PAHs (polycyclic aromatic hydrocarbons) for Kärcher products which are not affected by the legal requirements.

Specification vs technical specification

The specification is a kind of wish list for future products. It describes, for example, a cleaning problem and ideas for its solution. In the concept phase, the specialist departments check these wishes and ideas and develop suggested solutions. The final technical specification includes the product plus solutions with binding, measurable values.

What is a Quality Gate?

This is a kind of stocktake in the product development process: have all tasks been carried out and targets met? For example: has market research been carried out for the planned product and is the result acceptable? Has the environmental checklist been completed? Is there an opinion from the environmental department? Without passing a Quality Gate, the next project phase cannot be started.

Product Management (PM) is planning a new high-pressure cleaner.

PM works on and reviews certain sustainability issues, including: energy efficiency, packaging, components, environmental regulations in sales countries, disability, and senior-friendly product features.

Environmental experts create checklist in the specification:
Can energy efficiency, reparability or recyclability be improved? Is lower water consumption possible?

Environmental experts advise:
Which are the particularly important issues for the new product? Which environmental regulations and trends are relevant? Which aspects do we need to examine now?

Checking of the machine concept for feasibility.

Release of specification and machine concept; Quality Gate 1.

The PM decides whether improvements can be implemented, e.g.: are they technically feasible? Do they fit the market requirements?

Environmental experts prepare an "Environment" statement for the high-pressure cleaner and release it or request further environmental improvements.

Environmental experts advise as required

» Our sustainability team develops environmental specifications for Kärcher equipment, such as a company standard for components. We regularly participate in expert forums and working groups to stay abreast of environmental and sustainability trends. We pass this knowledge on to our specialist departments and make recommendations. In addition, we help the purchasing department to obtain and evaluate supplier statements and the sales department with compliance with environmental regulations. «

Axel Leschtar, Specialist Environment and Energy

PM draws up a specification which finalises the machine properties.

Quality Gate 2

Environmental experts prepare an updated "Environment" appraisal and grant approval or request essential environmental features.

EVERY MEASURE COUNTS – SAVING RESOURCES AT OUR SITES

ENERGY SAVINGS EXAMPLES

Converted to the annual energy consumption of an average 4-person household (4,500 kWh). All savings relate to the 2016–2017 reporting period.

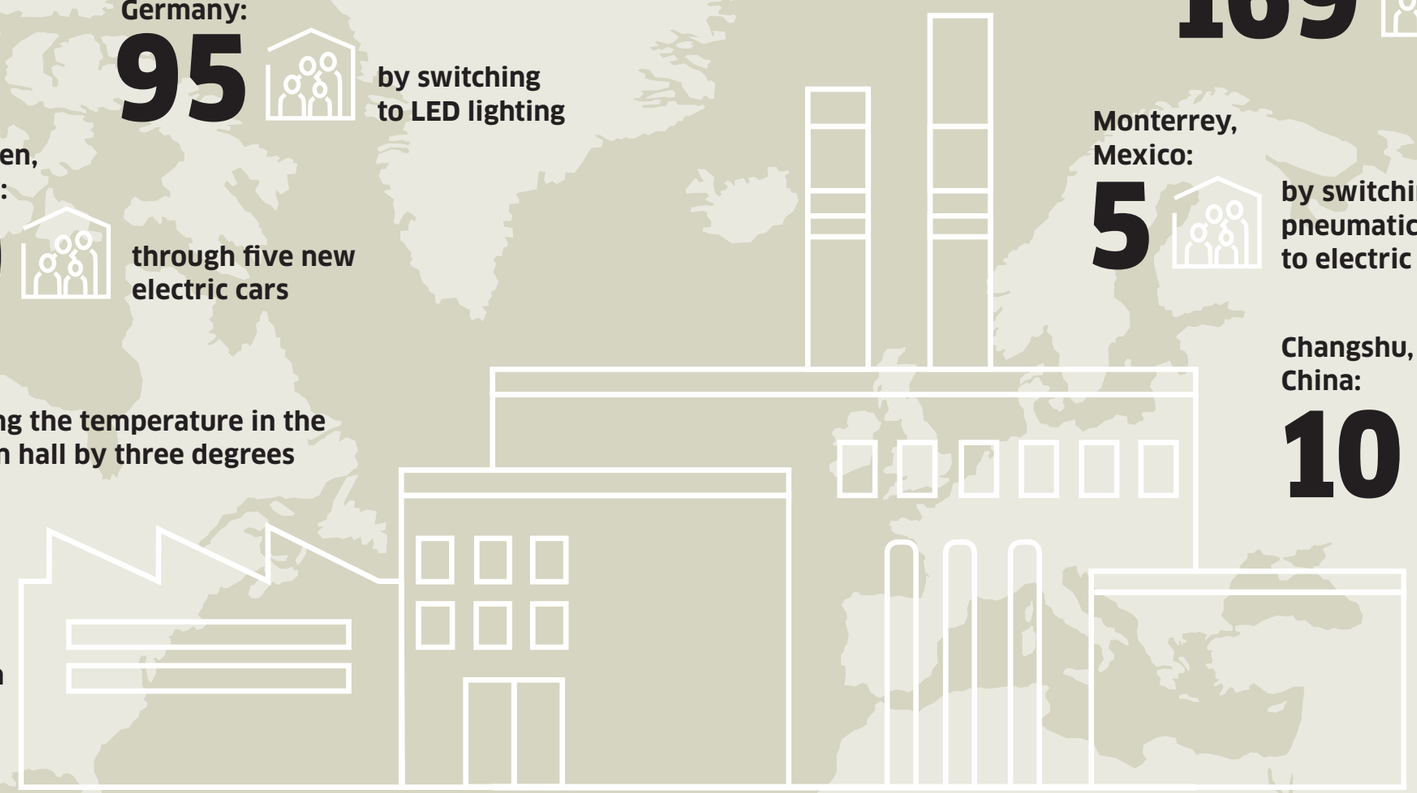
Winnenden, Germany:
95 by switching to LED lighting

Winnenden, Germany:
10 through five new electric cars

Winnenden, Germany:
13 by reducing the temperature in the production hall by three degrees

Obersontheim, Germany:
43 through base load optimisation in the factory

Obersontheim, Germany:
16 by optimising the on and off times of the conveyor systems



Quistello, Italy:
169 by optimising two injection moulding process steps

Monterrey, Mexico:
5 by switching from pneumatic screwdrivers to electric screwdrivers

Changshu, China:
10 by an optimisation measure on an injection moulding machine

Vinhedo, Brazil:
2,875 Family meals by reducing leftovers in the canteen

03

RESPONSIBILITY FOR EMPLOYEES

What is the success of a company based on? We believe it's the employees. That's why Kärcher stands for a people-oriented corporate policy and open communication. We want to create the best possible working environment – be it through flexible working hours, numerous opportunities for further development, subsidised childcare, help with integration after illness or company sports.

9,836 VOTES FOR THE FUTURE

A complete success which sets an important course: the Kärcher employee survey in May 2017 was well received and provided important insights: how do the people at Kärcher feel about their employer? What is going well, where is there room for improvement? The management asked, the company responded – with enthusiasm.

What do you do if you want to reach 12,000 employees across the world in one fell swoop?

First of all, you think carefully and develop a procedure that takes all eventualities into account. In the run-up to the Kärcher employee survey, this task is carried out by the team headed by Christoph Pajonk, Head of Culture Excellence & Employee Surveys: the questionnaires have to be translated into 30 languages, the different time zones play a crucial role in sending the access link by e-mail, and where the surveys are sent by post, a three-week lead should cushion any possible delays at customs.

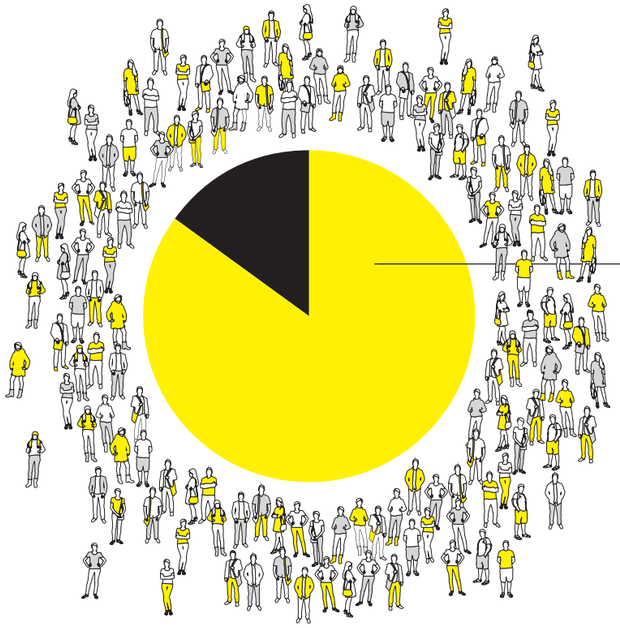
And in fact the questionnaires were available to every employee in the Kärcher world just in time for the beginning of the survey. Now they just have to answer – and they are: 9,836 employees take part. A complete success, according to Christoph Pajonk, also considering that the worldwide survey is a first for Kärcher: "For the first time in the company's history, we interviewed all employees in the Kärcher Group at the same time.

The response rate of 86 per cent shows that we have reached our employees all around the world – and that our results are meaningful."

86 %

Impressive response rate
A staggering 9,836 employees worldwide participated in the employee survey.

And their responses are not only meaningful but also significant. One value that stands out is the sustained commitment of the workforce.



85 %

Sustained commitment
85 per cent of all Kärcher employees have a sustained commitment to the company, which means they identify with the company and are more than averagely motivated. For example, 83 per cent of employees would recommend Kärcher as an employer.

There are more strong figures to confirm this:

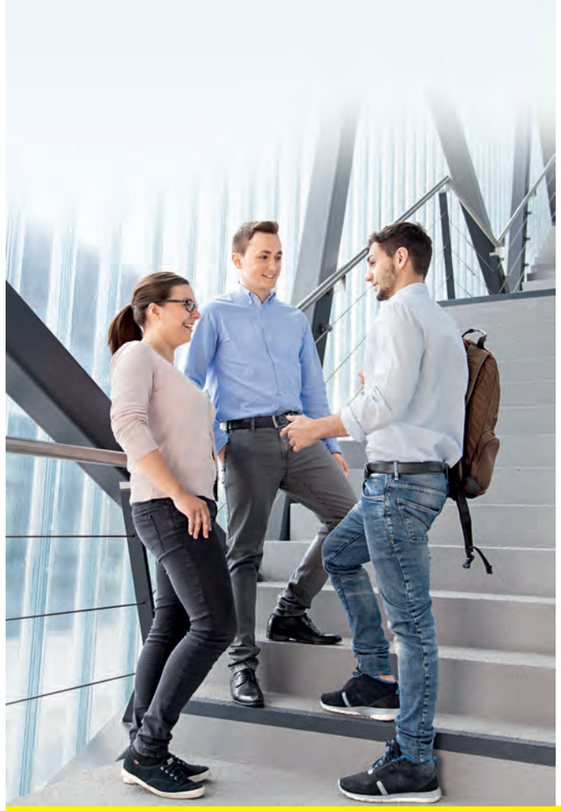
93 %
firmly believe in the products and services that Kärcher offers.

90 %
are proud to work for Kärcher.

90 %
of employees are willing to go beyond the normal limits to ensure that Kärcher is successful.

An aspect that is probably also related to the social commitment of the company:

86 %
think that Kärcher takes responsibility for society and community.



A unique Kärcher spirit becomes clear with these high identification values – and this gives Rüdiger Bechstein, Vice President Human Ressources, great cause for satisfaction. “Of course we are delighted that the employees like working for Kärcher and identify so strongly with the company. Especially in comparison with other companies, we have done exceptionally well here.”

Bechstein emphasizes that a worldwide survey of this size for a company is not a matter of course. “There are not many medium-sized companies that would do this so professionally. But for us, it was important to make this a comprehensive project. The results are not an end in themselves – our main aim is to identify areas of action.”

The findings, according to the head of HR, must be translated quickly into actions – a process that is already in full swing: executives around the world have been trained to discuss the results with their teams in workshops and to define steps together. Challenges are also being tackled at company level – for example, in the areas of openness and the dissemination of information. “In my company, the employees are very well and promptly informed about all matters that affect them” – only 59 per cent agreed with this statement in the survey. The global initiative “Coffee break with …” has been designed to address this area. Here, the chairman of the management board Hartmut Jenner takes time out for a chat.

In a small group, employees can talk to him about current issues.

Cross-site and cross-departmental collaboration also needs reinforcement: 47 per cent of respondents indicated that the overall information exchange works well – a value which has potential for expansion. This is helped by the Employee World Meeting: employees from all over come together to work out approaches for better cooperation.

Thus, the results of the survey find their way into Kärcher everyday life and trigger changes there. Head of HR Rüdiger Bechstein knows the value of such insights into the inner workings of the company.

» *For me as head of HR, this kind of survey is a gift. When we see where we can do better, we can do something about it.* «

Rüdiger Bechstein, Vice President Human Ressources

Our aim is to improve things in the long term and to keep drawing new ideas from regular surveys.

A PLACE FOR EXCITING NEW BUSINESS AREAS AND PERSPECTIVES

A touch of Silicon Valley at the Kärcher site in Winnenden: in the Innovation Lab, employees from different disciplines work together on different innovations. The teams are not only developing new products and services but also the whole business model.

Katja Räntzsch actually works in the field of operations at Kärcher. But while working in the Innovation Lab, she has taken on completely new tasks: Räntzsch and her teammates work out a complete business project during their three-week Innovation Sprint, doing everything themselves. They have to research the needs of potential customers and develop possible solutions and business models.

The aim is to get a real start-up success up and running. With the Innovation Lab at Kärcher playing the role of a start-up centre, company start-ups, which extend beyond Kärcher's actual business area, are expected to emerge from the promising ideas. In the process, a wide range of different topics is addressed, in which sustainability issues also play a role. Katja Räntzsch, for example, focuses on the subject of mobile hygiene. She is convinced of the initiative's approach: "It is incredibly motivating to take part in a focused examination of a problem, discuss it with the customer and see promising concepts arise within a very short time," she says about her experience.

To be part of this process, she applied for one of the innovation challenges and made it into the team together with a colleague from product management and a colleague from the purchasing department. This heterogeneity is standard in the lab: "Whether they are from project scheduling, HR or technology – every employee can become part of a project team. It is important to be willing to go in new directions," explains Simon Blaschke, Head of Innovation and Technology Management.

The team make-up is a success factor – the right balance of open-ended work and targeted support of one another. Dr Max Hartmann, Head of the Innovation Lab, explains: "The teams are not on their own, but are supported in the form of mentoring. The focus here is on innovation and creative methods as well as pointing out new paths."

The teams are supported during their Innovation Sprint, at the end of which the decision is made as to whether the project should be pursued or not. However, success is not measured by the visible result alone. The lab is not only intended to open up new business areas but also to promote worldwide entrepreneurial thinking in the culture of Kärcher.

It is also of central importance that the participants take something away for themselves. Graduate psychologist Johanna Sieveking, Head of Strategy at the advertising agency Jung von Matt, knows how rewarding it can be to break out of familiar working patterns: "If people are allowed to turn their attention to new fields of work, it opens up new perspectives and also manifests itself in their own activity through increased motivation, identification and the application of new patterns of thinking," says Sieveking.

This aspect makes the work of the Innovation Lab even more valuable and makes participation even more attractive. Interest in the innovation challenges is on the increase. Many are keen to try out as start-up pioneers and take their new-found entrepreneurial spirit back into their departments.

» *If people are allowed to turn their attention to new fields of work, it opens up new perspectives and also manifests itself in their own activity through increased motivation, identification and the application of new patterns of thinking.* «

Johanna Sieveking,
graduate psychologist and strategy consultant

A 1,200 m² employee nature garden with local plants and materials has been designed at the Kärcher headquarters in Winnenden to demonstrate key values of the company: a down-to-earth attitude and reliability.

And we want you to have more nature at home! Just cover the attached flower seed card with soil and keep it moist. We wish you every success!

IMPRINT

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