KRONES Group

# Non-financial Report **2021**

KRONES

# Performance **2021**

- Operational emissions (Scope 1 and Scope 2) were down 21% year-on-year in the reporting period. On our way to our climate target of an 80% reduction between 2019 and 2030, which has been validated by the Science Based Targets initiative, we have already achieved a reduction of 32% as of the end of 2021.
- The greenhouse gas emissions from our products in use at our customers' plants throughout their entire life cycles increased 19% between 2020 and 2021. Because downstream emissions were back to the level of the base year 2019, we have to focus even more on the energy efficiency of our machines and lines in the future.
- In our supply chain, we generated six percent less greenhouse gas emissions in 2021 than in the previous year.
- Water consumption and hazardous waste generation increased year-on-year across the group.
- Our goal is to give between 0.01% and 0.02% of our prior-year consolidated revenue back to stakeholders each year in the form of charitable donations and sponsoring. In 2021 we exceeded that goal with a total value of 0.024.
- Both the rate of workplace accidents and associated lost days were down year-on-year in 2021.
- The share of women in management positions was slightly positive, while the percentage of female employees overall has been flat.

| Indicator | Unit | 2021 | 2020 | Change |
|---|---|---|---|---|
| Decarbonisation: Greenhouse gas emissions, Scope 1 | t | 18,085 | 18,634 | –3% |
| Decarbonisation: Greenhouse gas emissions, Scope 2 | t | 16,070 | 24,859 | –35% |
| Decarbonisation: Greenhouse gas emissions, Scope 3 downstream (products) | t | 395,051 | 331,907 | +19% |
| Decarbonisation: Greenhouse gas emissions, Scope 3 upstream (supply chain) | t | 611,776 | 654,029 | –6% |
| Resource conservation: Water consumption | m³ | 183,534 | 158,524 | +16% |
| Resource conservation: Hazardous waste | t | 1,657 | 1,579 | +5% |
| Community engagement: Expenditure for charitable contributions and sponsoring | € | 803,880 | 619,861 | +30% |
| Employee satisfaction: Participation in continuing education opportunities (rounded) | Absolute | 45,900 | 46,200 | 0% |
| Occupational safety: Workplace accidents per 1 million hours worked | Rate | 8.78 | 9.66 | –9% |
| Occupational safety: Lost days due to workplace accidents per 1 million hours worked | Rate | 162.9 | 211.79 | –23% |
| Diversity: Share of women (employees covered by and exempt from collective agreements) | % | 15.9 | 15.8 | +1% |
| Diversity: Share of women in management in general | % | 10.4 | 10.1 | +3% |

The indicators presented here relate to the Krones Group, but only make up part of all sustainability-related figures we track for Krones AG and the Krones Group. The percentages marked in green show a positive change with respect to sustainability, while those marked in red show a negative change.

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Our development

# What **makes us** Krones

Krones can look back on 70 years of stability and continuity. Despite crises, we have maintained a robust capital structure and a high level of liquidity. Throughout our company's history, generating profits has never been an end in itself. Instead, it has always been done with an eye to a sustainable goal: To invest in the company and in continuously growing its strengths. And, ultimately, to preserve our employees' jobs.

What makes us unique are the stable training and employment opportunities that we offer in selected regions around the world. People from a wide range of backgrounds and lifestyles enjoy our appreciative corporate culture. More than 100 sites around the world make up our corporate network, which is characterised by healthy growth and stability. That, in turn, allows us to guarantee fast, responsive service everywhere in the world, to ensure the smooth operation of thousands of customer plants. And last but not least, we are pursuing an ambitious climate strategy whose effectiveness has been scientifically validated by the Science Based Targets initiative. Sustainable value creation and transparent reporting have long been part of our company strategy, since before it was required by law.

That's the framework in which Krones operates, our skin if you will. What has grown within it are 70 years of technical expertise, experience, and continued technological development.

Our development

# What we have **accomplished**

Here are some of our accomplishments to date:

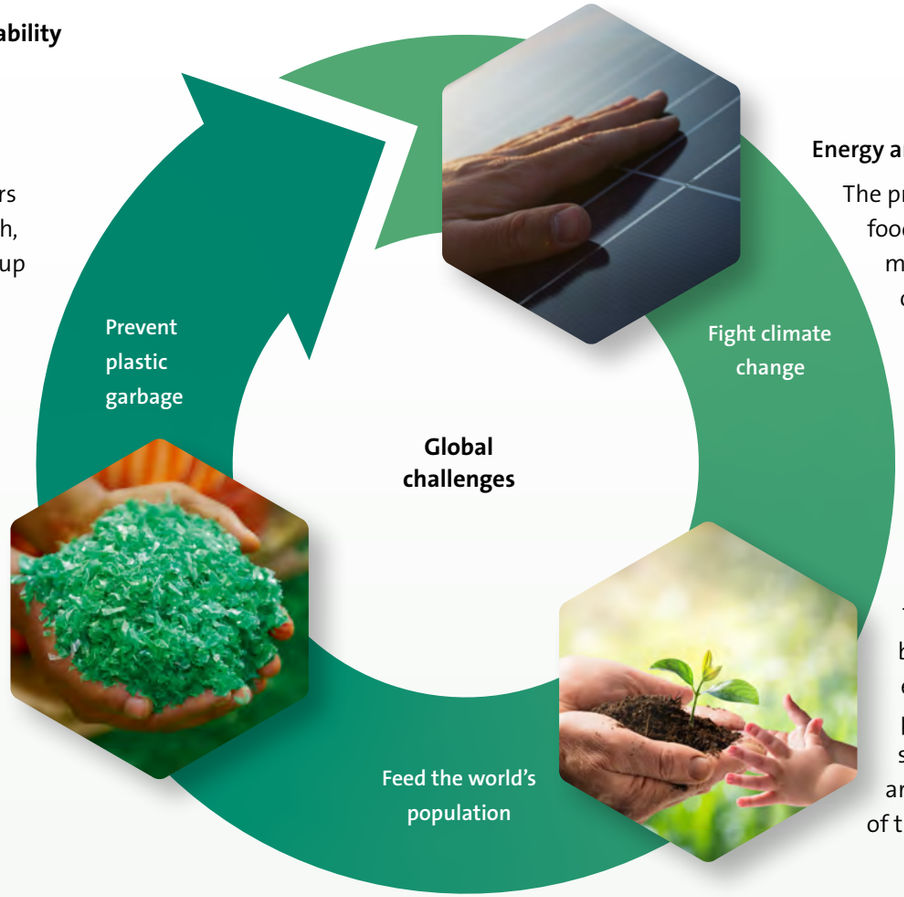
- Thanks to our comprehensive technological foundation, our customers can profitably produce **high-quality, affordable food and beverages** for a growing population.
- We have an energy and media-efficient **enviro product range** in our portfolio that covers all production steps.
- We offer our customers **environmentally friendly, resource-saving packaging innovations** that are also optimised for recycling.
- Unlike our competitors, we develop and deliver **closed-loop systems for PET and polyolefin**.
- Our machines and lines prevent **material, water, and food** waste.
- We support the establishment of **climate-friendly production plants** with practicable concepts for sustainable energy supply.
- We develop **digital solutions** along the entire value chain. With our **Krones.world portal**, we offer our customers various digital services that we are continually upgrading and expanding.

# How we are helping **our customers** make the **transformation to sustainability**

**Our goals as an enabler of sustainability for our customers**

### Sustainable packaging

A large share of beverage containers on the market is made of PET, which, in a worst case scenario, can wind up as garbage in the world's oceans. Krones contributes to a sustainable packaging economy. Our lines can handle all types of sustainable packaging. Virgin materials – including those from bio-based sources – as well as up to 100 percent recycled material can be processed without loss of efficiency. In addition, we offer dedicated lines and solutions for PET recycling and are doing our part to close the loop.




### Energy and media efficiency

The production, packaging, and filling of liquid foods and beverages uses a lot of energy and material. Krones helps bring energy and media consumption to the lowest possible levels. We deliver to customers energy-efficient, resource-friendly production systems that optimise and reduce consumption of energy, water, and other media and recycle these resources.

### Zero waste production

The production process for liquid foods and beverages generates valuable waste. Krones enables customers to achieve zero waste production. The system generates no waste streams because raw materials and supplies are used or reused completely in the making of the end product.

Our development

# What we **still need**

If you want a future, you have to be sustainable – in all respects. We strive for that with our innovative power, performance, team spirit, and attitudes.

That last word – attitude – refers to the solid values we live by, both within the company and in the broader global context. But that doesn't mean clinging to outdated traditions. To remain committed to values and let go of habits that no longer serve takes courage and a willingness to sometimes take the more difficult path. And it is the fact that Krones offers us a firm, unwavering foundation, that enables us to blaze new trails and continue to evolve.

"We have to act now and set the course, so that future generations can have a secure, affordable food supply – that is produced in a way that is as environment and climate friendly as possible."

Christoph Klenk, CEO

# Letter from the Chairmen

*Volker Kronseder*
*Chairman of the Supervisory Board*

*Christoph Klenk*
*Chairman of the Executive Board*

**Dear Readers,**

2021 was a busy and challenging year. While the progress of vaccination campaigns had us feeling hopeful that things would soon return to normal, the omicron wave put a damper on that. Despite the continued difficult economic reality, our customers have largely been able to overcome the financial challenges from the COVID-19 pandemic and are moving forward with renewed energy. At Krones, that meant full order books in 2021 and high capacity utilisation in all business units.

And yet, we now face many new problems that are either direct or indirect results of the COVID-19 pandemic: A tight competitive environment, rising material costs, and major supply bottlenecks require reasoned planning in full awareness of risks – in other words, economic sustainability at its best. The real challenges, though, are not the short-term obstacles but rather the bigger ones at the global level. Human-caused climate change is transforming the planet in a way we have never seen before. Plastic garbage is threatening life on land and in the world's waters. Food waste is deepening the divide between rich and poor and threatening development in many countries.

In this context, our customers in the food and beverage industry are increasingly making sustainability a top priority – and demanding that we actively contribute to the effort. As a technology group, we see ourselves first and foremost as an enabler of sustainability. New solutions in strategic areas such as whole-line thinking, digitalisation, and sustainability make it possible for our customers to produce, fill, and package their beverages and liquid foods more safely, more efficiently, more sustainably, and ultimately more profitably.

Whether climate change, plastic pollution, or food waste – Krones has solutions to offer right now: Energy efficient machines from our enviro sustainability programme, lines for recycling PET, and pasteurisation technologies for increasing the shelf life of foods are just three examples. In the future, we will continue to steadily expand our portfolio of technologies and systems that help solve these global challenges.

At the same time, we are stepping up our activities and initiatives aimed at gradually making our value creation more sustainable. For us, this is clear: We can only achieve our financial targets if we systematically pursue the sustainability targets that we have set for ourselves through 2030 – in every respect, from the environment to social impact to responsible governance.

The Krones Group will only remain successful in the future if we conduct our business sustainably. In this document, we report on the progress we have made on this path in 2021.

Volker Kronseder
Chairman of the Supervisory Board

Christoph Klenk
Chairman of the Executive Board

# Our business model

## Business model, business areas, and organisational structure

Krones offers machinery and systems for bottling and packaging and for beverage production. Innovative digitalisation and intralogistics solutions round out our portfolio. Krones' customers include breweries, beverage producers, and companies from the food, chemical, pharmaceutical, and cosmetic industries. Services are an important part of Krones' business model. The company maintains service centres and offices around the world. More information about Krones' business model can be found in the group management report beginning on page 43 of the Annual Report.

## Major markets and competitive position

Customers in the beverage industry account for most of Krones' revenue. The remaining revenue comes from business in non-beverage sectors (food, dairy, chemicals, pharmaceuticals, and cosmetics). Krones is heavily export-oriented, generating almost 90% of revenue outside Germany. The regional breakdown of revenue is well balanced overall. Krones generates around 52.3% of its revenue in industrialised countries and around 47.7% in the rapidly growing emerging markets.

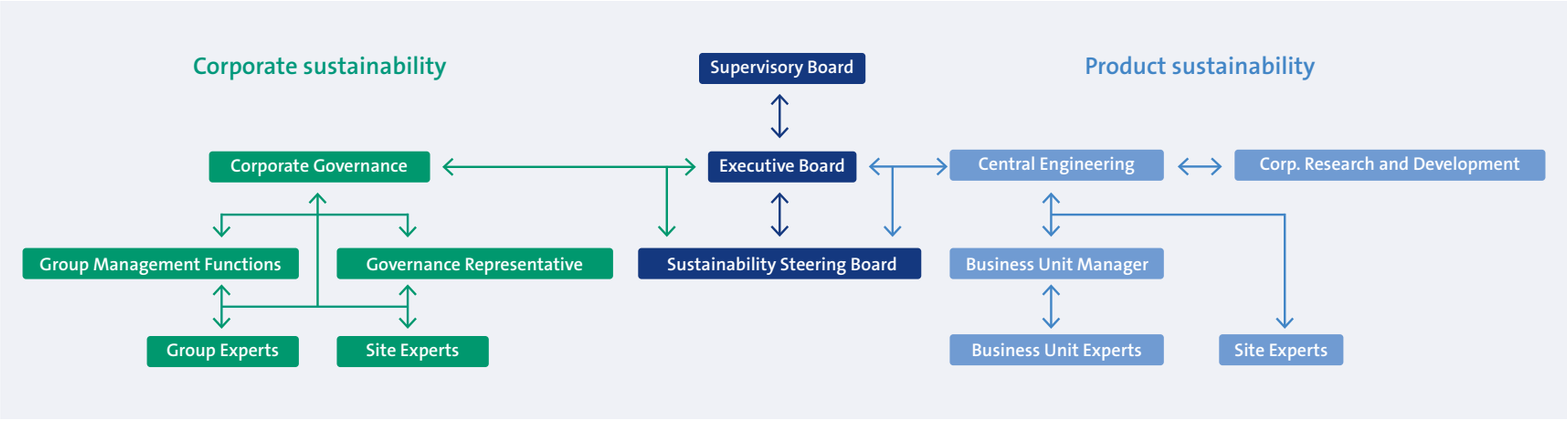
Besides a few large companies that are part of a corporate group, Krones competes with a number of companies that offer only individual bottling and packaging products. Most of our main competitors are based in the euro area. Chinese manufacturers have primarily competed with Krones for orders on their home market. With our global service portfolio, which enables us to provide fast service to customers on-site, Krones is truly a full-service supplier and thus in a very strong position competitively.

# Our approach

As a systems supplier to the food and beverage industry, the Krones Group is committed to delivering efficient, environmentally friendly technologies for producing safe, high-quality beverages. Consumers are making sustainability part of their buying choices more than ever before, and so our customers depend on us to provide sustainable solutions for their production operations.

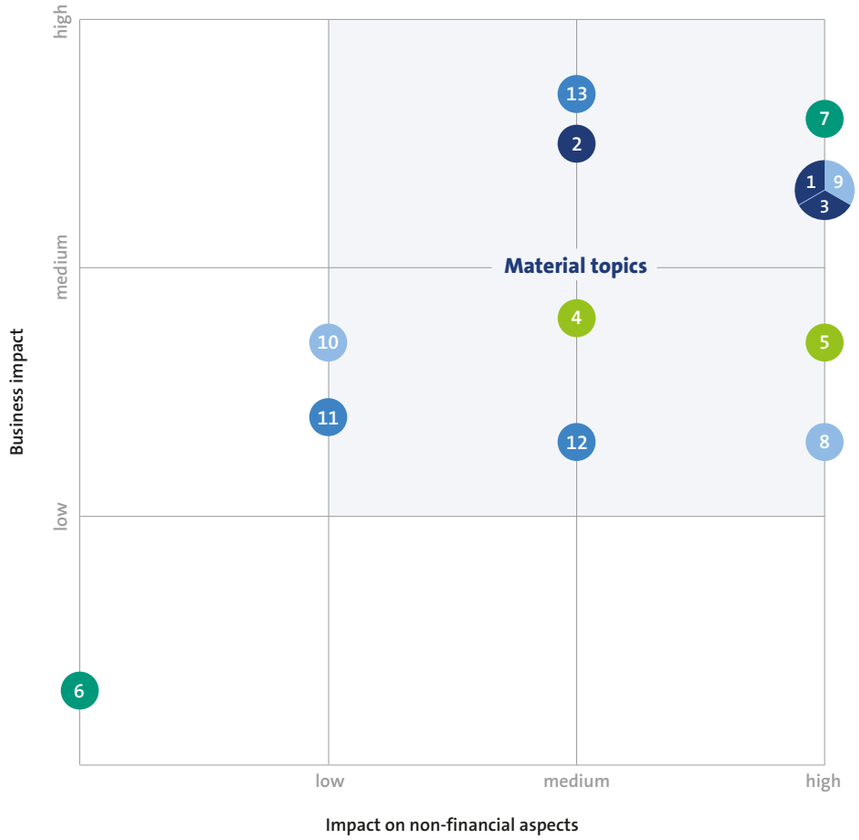
We are a machinery and equipment manufacturing group focused on innovative solutions and high-performance technologies. We work continuously to improve the efficiency, longevity, and eco-friendliness of our products and services. We are also increasing the sustainability of our own operations and value creation processes. We firmly believe that our consistent approach to sustainability will help us tap into new opportunities for growth.

To integrate sustainability into the development of both our company and our products, two separate teams serve as central coordinating bodies for the entire group: All product-specific sustainability questions come together in Corporate Development, while all company-specific ESG (Environmental, Social, Governance) aspects are managed centrally by the Corporate Governance team. The Sustainability Steering Board advises both of these teams and manages all sustainability issues across the Krones Group's entire value chain. In it, management representatives from central departments along our value chain (including Purchasing, Research and Development, and Sales) consult on our strategic alignment with respect to sustainability and develop recommendations and decision-making materials for the Executive Board.



# Our topics

The materiality matrix serves as the fundamental guide for sustainability management within the Krones Group. The matrix applies equally to Krones AG. It is based on a groupwide materiality analysis conducted in 2019 and identifies the key areas of activity with respect to sustainability. The analysis largely follows Global Reporting Initiative criteria and the definition of materiality under Sections 315b III and 289c III of the German Commercial Code (HGB).




Representatives of top management and key stakeholders – including management, trade associations, and employees – evaluated an extensive list of topics and categorized them in clusters. The UN Sustainable Development Goals (SDGs) served as a frame of reference. The 2019 materiality analysis and the resulting matrix were approved by the Executive Board. The analysis is reviewed every three years. In addition to that review process, we continuously track changes in the importance and relevance of existing and future sustainability topics for our business and our stakeholders internally.

**Market**

1 Product sustainability
2 Innovation
3 Customer matters

**Employees**

8 Employee satisfaction
9 Health and safety
10 Diversity

**Environment**

4 Decarbonisation
5 Resource conservation

**Ethics**

11 Compliance
12 Human rights
13 Sustainable supply chain

**Society**

6 Community engagement
7 Data protection

# Our goals

In 2020, analogous to the material sustainability topics, Krones developed and adopted new goals for the company's sustainable development through 2030. Unless noted otherwise, the goals use the year 2020 as a baseline and apply across the group. Quantitative goals on which no group data is available for the baseline and current years will be presented in this report using Krones AG data and indicated as such. The goals are to be reviewed as needed based on new materiality analyses, legal and regulatory requirements, and stakeholder interests.

## Ethics

- Pursue a zero-tolerance policy with respect to compliance and human rights violations.
- Increase the material efficiency and sustainability of our raw materials.
- Evaluate 100% of our critical suppliers against sustainability criteria.

## Employees

- Motivate our employees to do their best work by offering an attractive working environment with plenty of opportunity for personal development.
- Step up our efforts to promote diversity in our workforce.
- Reduce the number of work-related accidents and resulting lost days by 30%.

## Market

- Bring our products' energy and media consumption to the lowest possible level.
- Enable our customers to achieve zero waste production.
- Contribute to a sustainable packaging economy.

## Environment

- Reduce our corporate carbon footprint (scope 1 and scope 2) by 80% (baseline: 2019).
- Reduce our product carbon footprint (scope 3) by 25% (baseline: 2019).
- Reduce both hazardous waste generation and drinking water consumption by 10%.

## Society

- Give 0.01% to 0.02% of our prior-year revenue back to stakeholders in the form of charitable donations and sponsoring.
- Ensure the confidentiality, availability, and integrity of our employees' and business partners' data.
- Establish a state-of-the-art IT security architecture for all KRONES products.

# Our influence on SDGs

The United Nations Sustainable Development Goals (SDGs) are considered the most important set of global targets for sustainable development. The 17 goals were published in September 2015 as part of the UN's 2030 Agenda. They articulate the key challenges and resolutions of a global sustainability policy and thus serve as a guide for the sustainable development of society, culture, and economy.

Because it is part of global value chains, the Krones Group also influences economic, environmental, and social developments – sometimes directly and materially and sometimes only indirectly and to a small extent. In our most recent materiality analysis, we made the impact on SDGs a key factor. We held a stakeholder workshop with representatives from administration, trade associations, academia, and our employees in which we discussed the global SDGs on which the Krones Group is already having an impact and which ones will need to be addressed in the future. The results of the workshop were part of our materiality analysis and have also been incorporated into our strategic planning of sustainability-related activities.

# Our network

We believe that we are stronger when we work together. Therefore, the Krones Group has been a member of the UN Global Compact since 2012. We collaborate with companies within our industry under a variety of sustainability-focused project groups of the German Engineering Federation (VDMA) and are an official partner to the VDMA's Blue Competence Sustainability Initiative. Our climate strategy 2030 has been officially validated by the Science Based Targets initiative. In addition, in 2021 we joined the Business Ambition for 1.5°C. We ensure transparency towards customers, investors, and analysts by participating in recognised ratings and audits.

We use the feedback we receive from the annual assessment of our sustainability performance by external rating agencies to further optimise our structures, processes, and actions. We improved our CDP Climate Change score from D to C year-on-year. Our EcoVadis Scorecard rating, on the other hand, declined from gold to silver status. For us, one thing is clear: The realignment of our sustainability strategy in 2020 was the first step towards ensuring the Krones Group's sustainable development. We aim to be a leader in sustainability. And we aim to make that apparent in our future ratings.

***We are part of***

BLUEcoMPETENCE Alliance Member
Partner of the Engineering Industry Sustainability Initiative

WE SUPPORT UN GLOBAL COMPACT

***We are taking action in***

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

BUSINESS AMBITION FOR 1.5°C

***We report to***

ecovadis

CDP
DISCLOSURE INSIGHT ACTION

Sedex Member

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# OUR SUSTAINABILITY

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# Product sustainability

## Goals

- Bring energy and media consumption to the lowest possible levels: Deliver energy-efficient, resource-friendly production systems that optimise and reduce consumption of energy, water, and other media and recycle these resources.
- Enable our customers to achieve zero waste production: The system generates no waste streams since raw materials and supplies are used or reused completely in the making of the end product.
- Contribute to a sustainable packaging economy: Our lines can handle all types of sustainable packaging. Virgin materials – including those from bio-based sources – as well as up to 100 percent recycled material can be processed without loss of efficiency.

We firmly believe that our industry can only remain viable for the long term if it relies on sustainable solutions. For this reason, we have designed the structures and goals of Krones' innovation process to yield a product portfolio that is geared towards sustainability.

As such, our topics of focus with respect to product sustainability are:

- Energy and media-efficient machines and lines
- Systems and technologies that prevent waste of raw materials, water, and food
- Solutions that promote a circular economy, including closed-loop systems
- Environmentally-friendly packaging concepts
- Solutions for producing climate-friendly beverages and food products (e. g. plant-based milk alternatives)

## Organisation

Product sustainability touches on many aspects ranging from design, development, and engineering to the manufacturing and installation of our products. At the heart of these processes, two key roles coordinate product sustainability: Corporate Research and Development and enviro. Strategic portfolio planning and the continued development of new and existing Krones products fall under the purview of Corporate Research and Development. Environmental compatibility is one of four key value drivers under which development projects are initiated and prioritised. The enviro sustainability programme (see below), which uses a certified management system to systematically guide the entire product development process in a sustainable direction, identifies and drives product-relevant sustainability factors.

## Actions and processes

**Energy and media-efficient machines and lines**

For many years, our enviro sustainability programme for machinery and equipment has been a cornerstone of our product sustainability. It was developed in collaboration with TÜV SÜD and focuses on energy and media consumption and the overall eco-friendliness of Krones machines, lines, and solutions. The related processes are laid out within the enviro management system.

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To ensure that new developments are guided by the principles of environmental sustainability, we make enviro part of the product development process right from the beginning. Ongoing development projects are managed by way of milestones so that enviro requirements are incorporated into the decision-making process.

Before a Krones machine can bear the enviro label, its energy and media efficiency and environmentally friendly operation must be proven in a prescribed, well-documented testing procedure. To ensure objectivity, a mandatory benchmark has been defined for each enviro-relevant aspect of a product, such as compressed air consumption or environmental friendliness. The benchmark criteria are to ensure that the enviro products conform at least to the EME (Energy and Media Efficiency Environmental Sustainability) standard defined by TÜV SÜD.

The enviro management system and the associated testing procedure have obtained third-party verification from TÜV SÜD. To maintain the certification, the system must pass an external monitoring audit each year. Complete recertification must be done every three years. We most recently obtained recertification in 2021.

**Circular economy and environmentally friendly packaging**
We have been a member of the European Circular Economy Stakeholder Platform since 2020. This joint initiative of the European Commission and the European Economic and Social Committee (EESC) brings together companies and initiatives that seek to promote a circular economy in Europe. In joining the platform, Krones has entered into a voluntary commitment to several qualitative targets. The specifics of these targets and the actions we are taking to achieve them are described in the following overview:

## rPET compatibility

**Goal**
By 2025, it will be possible on all new PET bottling lines to handle bottles made of up to 100 percent high-grade recyclate without any impairment to production quality, efficiency or efficacy.

**Actions**
Already today, Krones PET systems are able to produce and process bottles containing up to 100 percent recycled material while meeting customer requirements. The Canadian water bottler Ice River Springs is among the customers who are already using this capability.

In order to dispel the reservations sometimes expressed in the industry against using rPET, we conducted a series of scientific tests analysing, among other things, the working properties, quality, and food safety of various virgin and recycled materials. We compiled the results in a 2021 white paper that is publicly available on the corporate website.

## Plastic-free secondary packaging

**Goal**
By 2022, Krones will offer alternative secondary-packaging solutions containing no single-use plastics whatsoever for all multipack formats in common use.

**Actions**
Today, packs of cans or PET bottles are often held together with shrink wrap or plastic rings. The latter have been banned in some maritime regions because they pose a threat to wildlife when disposed of improperly.

With LitePac Top, we offer an environmentally friendly alternative to both of these packaging types. It is a cardboard clip that was developed in cooperation with Karl Knauer KG and requires less energy and material to manufacture

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than shrink film. It can also be made of recycled materials. To cover the widest possible range of applications, we added several variants to the LitePac Top series in 2021.

## Support for recyclable packaging design

**Goal**

Krones uses its technological expertise to support clients in designing forms of packaging that are optimally suited for recycling.

**Actions**

Besides the technologies for manufacturing and processing recycled material, we also offer a range of supplementary services. For example, we employ a team of specialists to address every issue relating to both design from recycling and design for recycling. The material and design experts in our PET Packaging Development department engineer material-saving, recyclable packaging – both on a contract basis for customers and for our own research purposes.

As part of our enviro Design programme, we evaluate packaging innovations from our own development on the basis of objective criteria that have been determined in collaboration with TÜV SÜD. The aim is to minimize the various environmental impacts of food and beverage containers, not only reducing greenhouse gas emissions but also preserving ecosystems and biodiversity.

We also offer our customers objective advice about which packaging variant is the most sustainable for their applications. The toolset we use includes a software-based solution that allows us to compare the environmental impacts of and establish meaningful environmental performance reports for individual packaging solutions.

## Changing over from linear production to circular economy

**Goal**

Clients get the support they need in order to also achieve optimum results on existing lines when handling recycled and/or renewable materials.

**Actions**

We would like to give our customers easier access to the multitude of options for achieving sustainable production that promotes a circular economy. For this reason, in 2021 we launched a sustainability consulting service that is both holistic and solution-independent. Typical customer concerns that our consultants address include realizing energy and media savings in production, finding grants for renewable energy, recycling wastewater, or making their operations carbon neutral.

As a member of the Association of the Beverage Machinery Industry (ABMI), we are also active in a dedicated sustainability working group, whose clearly defined goals include promoting the principles of a circular economy in the food and beverage industry and developing and implementing a common, standardised approach to reducing emissions in our sector.

In order to increase the potential for returnable PET containers, we are currently running a research project in collaboration with Alpla. As of this writing, returnable PET containers are considered a niche topic worldwide. In particular, producers of sensitive beverages like juices and milk shy away from this container type due to hygiene concerns. That is why we launched a series of objective tests in our development plant, analyzing the interaction of different bottle designs and cleaning processes. Among the findings: If the right parameters are selected – in particular, for caustic concentration, temperature, additives, and mechanical impact – it is possible for temperatures around 60 °C to be sufficient to reliably remove even dried-on protein, fat, and starch residues from containers. Further microbiological tests are currently underway to obtain absolute certainty.

## Permanently attached closures

**Goal**

Equipment is already available that enables tethered caps (i. e., closures permanently attached to the bottle) to be used.

**Actions**

Under the EU's Single-Use Plastics Directive, from 2024 onwards, single-use plastic bottles in the EU must have caps that remain connected to the container after opening. In order to prepare ourselves and our customers for this requirement, we have run experiments in our development plant in cooperation with cap manufacturers, in which the various tethered cap options were assessed for whether they can be processed on Krones equipment. The tests showed that we can fully meet the tethered cap requirement with our current portfolio. The first beverage plants are already being retrofitted with the necessary technology. In addition, we are actively encouraging our customers to switch over to bottles with a shorter and therefore less material-intensive neck finish when making the necessary conversion to tethered caps.

We have also compiled the most important information about the EU directive and our recommendations for action in a white paper and made it publicly available on our website.

## Sustainable labelling

**Goal**

For optimum recycling results, Krones' portfolio includes packaging solutions where labels can be removed from the empty container without any problems. The long-term goal is to recycle the labels together with the containers – or do entirely without a separate material for container decoration.

**Actions**

We offer a variety of solutions for implementing material-saving bottle decoration and labelling. For example the Contiroll can handle extra-thin labels with a thickness of less than 20 micrometres without difficulty and sleeves as thin as 35 micrometres – and in some cases perhaps even thinner.

Customers who would like to do without additional materials entirely can decorate their containers using direct printing technology from our subsidiary Dekron. The advantages of direct printing are many: With it, you can not only implement completely new design possibilities but also personalize the decoration of individual containers within a batch. Moreover, the printing inks can be completely removed from containers in the recycling process, leaving no residues.

## Investing in recycling

**Goal**

Upgrading Krones' solutions for material recycling of packaging plastics (solid/flexible, PET, polyolefin, and PS) is further progressed by continually investing in the relevant research and development projects.

**Actions**

In the summer of 2021, our updated recycling pilot plant went online at our Flensburg site. With an investment of roughly 600,000 euros, we were able to expand the output capacity on the pilot bottle washer and the integrated Krones MetaPure W washing module. It is now also possible to run tests on not only PET but also polyolefin (PE/PP) and various film materials on the recycling system. The goal is to optimise Krones recycling technology for use in other industries, such as furniture and automotive manufacturing.

We developed HydroCircle as a means to integrate the circular concept into our recycling system. This wastewater treatment system continually removes impurities or substances that could impair recycling results from recirculated wash water. That ensures not only consistently high process quality but also considerably lower water consumption. The same treatment system can be applied not only to recycling but also to other water-consuming process steps in beverage filling.

## Beyond PET packaging

**Goal**

Above and beyond conventional PET solutions, Krones is proactively pursuing development projects connected with disruptive technologies that take beverages to the consumer in innovative ways (e.g. packaging-free solutions, paper bottle).

**Actions**

Krones' Innovation Lab is especially engaged with this field. However, for competitive reasons, we are unable to disclose details about ongoing research projects.

**Zero waste and climate-friendly beverages and foods**

One of the latest product innovations aimed at preventing material waste is the Linatronic AI empty-bottle inspector. In general, the empty-bottle inspector serves to detect defective or soiled containers and remove them from the container stream before they reach the filler. For various technical reasons, a significant number of containers are erroneously rejected. A major reason for this is conventional systems' inability to distinguish between actual soiling and water droplets or bits of foam that might cling to the bottle after cleaning. In contrast, Linatronic AI is the first empty-bottle inspector in the world to employ deep learning software to automatically detect and classify anomalies. As a result, the number of false rejects can be reduced to a minimum (just 0.2 to 0.1 percent).

Krones has offered a comprehensive concept for an energy-self-sufficient brewery for several years now: The Brewnomic concept consists of multiple components that can be used individually and are constantly being further developed and added to. Under a current development project, we are working on a procedure to prepare organic waste products from the brewing process for use as high-quality raw materials elsewhere. The goal is to extract the proteins contained in spent grains and use them as an ingredient for producing plant-based drinks.

Other departments are also exploring the trend towards climate-friendly milk alternatives. In particular, the milk experts at our subsidiary Milkron are working hard to more closely align our existing solutions for beverage production to the needs of this segment.

## Results

We are currently working to integrate our subsidiaries' products into our performance indicators. Initial analyses are already complete. The next step will be to adapt our internal processes accordingly. In connection with our climate goals, we have introduced two new performance indicators to track carbon emissions resulting from our supply chain and our products (see "Decarbonisation," page 34).

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# Winning over the beverage industry for rPET

***Quite a lot of experts at Krones have made it their mission to answer this question: How can product packaging be designed for sustainability, produced with a minimum of resource consumption and upcycled after use?***

One of those experts is Aurelie Börmann. She is a chemical engineer and has been taking part in an interdisciplinary research project at Krones, examining the material properties of recycled PET. The goal is to gain objective and above all verifiable insights into the differences between virgin and recycled PET when each of these is used in beverage packaging. In conjunction with the in-house recycling pilot plant at our Flensburg facility, the project team conducted an extensive series of trials, putting 14 different PET types under the microscope: three virgin PET and seven rPET types, plus four blends, each consisting of 50 percent virgin and 50 percent recycled material.

**rPET cores highly in terms of bottle performance**

Based on a predefined set of criteria, the individual materials were analysed in regard to both their processability and the quality and product safety of the blow-moulded bottles. The biggest difference between virgin and recycled PET was in terms of visual appearance: The preforms and bottles made of recycled material had a somewhat darker, slightly greyish hue. In regard to their technical characteristics, by contrast, there were no deviations. “Be it material distribution, top load, burst pressure, or thermal stability, the performance of the bottles made of rPET was just as good as that of virgin-PET bottles,” explains Aurelie Börmann. rPET even proved to be more energy-economical in the stretch blow-moulding process since the darker colour improves the material’s heat absorption. “This effect is sometimes deliberately induced for virgin PET, by adding soot particles,” says plastics expert Aurelie Börmann. “rPET inherently possesses this beneficial property.”

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# Winning over the beverage industry for rPET

To obtain clarity about both product and consumer safety, the bottles were also examined for substances that are subject to binding limits in the EU because they can migrate from the bottle wall into the beverage. The values measured objectively demonstrate that there is no basis in fact for a certain prejudice that crops up occasionally: “Every now and again you hear someone say that an increasing proportion of rPET would go hand in hand with a rise in acetaldehyde,” explains Börmann. “This most definitely turned out to be a myth.”

Even though the series of trials was a strictly internal Krones project, the research team will be pleased to share the results obtained with anybody interested from the industry. The most important results and facts have been published in a white paper that is freely accessible. The detailed expertise of Aurelie Börmann and her team members is also regularly much in demand at consultancy meetings and for specialist presentations. “We’re very pleased to note that the interest in rPET and sustainable packaging is steadily picking up speed,” she emphasises. “So we are always available to answer any questions that arise on the topic.”

**Looking at polyolefin and film**

Incidentally, the same applies for the Krones recycling pilot plant since what has so far only been known to a few insiders is this: The experimental plant in Flensburg not only does work for Krones’ R&D but also conducts material tests commissioned by clients. To keep up with increasing demand, the pilot plant last year underwent basic modernisation and upgrading. The MetaPure technology of the latest generation installed there now also makes it possible to test washing processes with relatively large quantities of material – not only for PET but for polyolefin and films as well.

*Plastics expert Aurelie Börmann*

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# Innovation

## Goal

Develop products and services that contribute to an industry that is sustainable in all respects and for all stakeholders

As a technology group, we work on incremental innovations and disruptive ones alike. The former optimise and complement our existing portfolio while the latter open up new paths for our customers to remain successful in the long term. Our own success depends on us not only delivering goods to market but, much more so, actively shaping the market with solutions and services that merge sustainability with profitability. To promote this development, we are focussing our current innovation efforts on two areas:

**Entire systems that …**

- Further reduce both resource consumption and the share of non-value-creating elements in beverage production
- Expand the scope of application of our technologies to environment- and climate friendly product innovations (e.g. plant-based milk alternatives)
- Enable our customers to achieve efficient, low-maintenance, and flexible value creation

**Digital solutions that …**

- Bring more transparency and security into the value chain
- Expand the options for influencing production flows and outputs
- Give our customers smart, predictive, self-optimising systems

## Organisation

Germany is the Krones Group's development and innovation headquarters. The Corporate Research and Development department there develops our overarching innovation strategy, which applies to Krones AG as a whole and also serves as an important guide for development work performed by subsidiaries.

Strategic and operational responsibility for innovation lies with the Head of Corporate Research and Development, who reports directly to the Executive Board. Because innovation is so critically important to the Krones Group, defining our innovation strategy and tracking its implementation is done in close collaboration with the entire Executive Board. The Krones Innovation Board, which meets every two months, serves as the central platform for this collaboration.

In addition, issue-specific innovation boards have been set up to address the areas of focus within our development strategy. An example of this is the weekly digitalisation board, which consists of a technical group and a market group and is tasked with steering the relevant business activities so that they yield practicable, profitable solutions for our customers. The board reports directly to the CEO and the Executive Board member responsible for digitalisation.

We are currently developing an international governance structure to further decentralise innovation work within the group. The corresponding organisational units at our sites in India, China, and Czech Republic already have the necessary specialists in place. Another innovation hub is currently being established in Italy.

## Actions and processes

**Innovation process: Value drivers and R&D programme**

The innovation process at Krones is continuous and takes a top-down approach. Based on global megatrends and the resulting challenges and opportunities for our customers, we have defined twelve value drivers that can be grouped into four key categories: safe and secure, affordable, flexible, and environmentally friendly.

Since these value drivers reflect our customers' priorities, they lie at the centre of all our activities. They serve us as both a catalyst and a corrective: A catalyst because we derive new development projects directly from them; a corrective because we continually review and prioritise all potential and ongoing projects aimed at further development within our existing portfolio against these value drivers.

As a whole, our innovation process is aimed at advancing innovative end-to-end solutions. For this reason, we have bundled development projects that are complementary in terms of customer benefit into overarching R&D programmes. This promotes continuous, interdisciplinary exchange between the individual project teams and embeds their work in a broader thematic context. The R&D programmes currently underway are outlined in the following overview:

| Title | Goal/results |
|---|---|
| **Sustainable plastic packaging** | Solutions for a more sustainable use of plastics; environmentally friendly packaging innovations |
| **High performance flexibility** | Machines and lines that combine high performance with the utmost flexibility for users |
| **Lean glass system** | Compact, resource-saving, efficient end-to-end solutions for filling beverages in glass bottles |
| **Advanced aseptic** | Systems that enable safe filling of sensitive beverages with low resource and operator inputs |
| **Flexible can line** | End-to-end solutions for can filling that feature especially high levels of hygiene, sustainability, and flexibility |
| **Digital ecosystem** | Integrated ecosystem for smart, connected production |

**Innovation network**

Krones' Innovation Lab is located in the immediate vicinity of both the University of Regensburg and the East Bavarian University of Applied Science (OTH). The proximity to students and researchers at two universities enables us to build an innovation network that extends beyond the Krones Group and provides valuable input from the outside. Most of the Innovation Lab staff are students in a diverse range of specialisations: Within the context of internships, student traineeships, and thesis-writing projects, they explore topics of the future that are relevant to Krones, scout technologies, and sketch out potential change scenarios for our markets and products.

Our subsidiary Syskron is our main driver of innovation when it comes to digital integration. Agile structures and flat hierarchies give Syskron employees the freedom they need to experiment with new technologies and progressive ideas, including cloud-based services and technologies relating to the Industrial Internet of Things (IIoT). In this way, new digital solutions emerge that can then be integrated into the core activities of the group and ultimately benefit our customers.

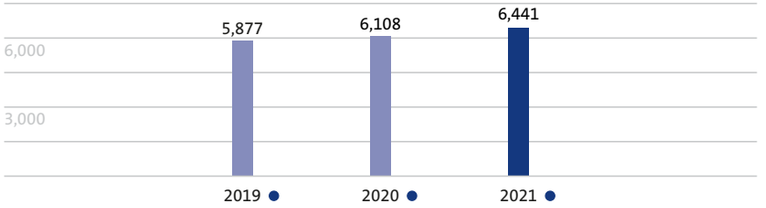
## Results

As a result of our ongoing innovation process, we were able to bring a series of new products and solutions to market once again in 2021. More information about the specific sustainability performance of selected innovations can be found in the Product Sustainability section of this report (see page 17). A complete overview of current innovations can be found at *krones.com*, under "Products/Innovations".

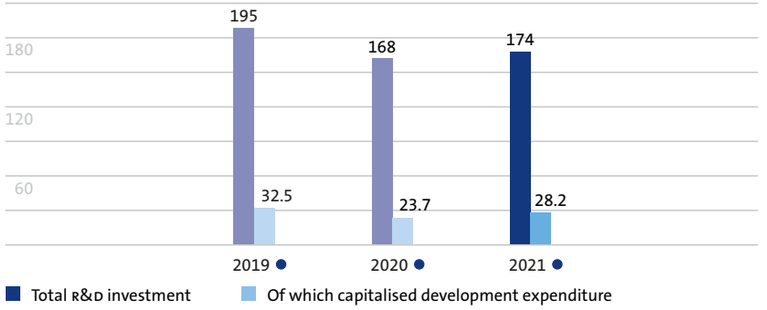
When it comes to further developing existing systems, we reached an especially important milestone in 2021 in the field of aseptic technology: In cooperation with our partner Toyo Seikan, we subjected the Krones Contipure AseptBloc DN to a technical assessment, in which all of the technologies it employs were examined for their suitability for the Japanese market and, adapted wherever necessary. The result of this complex process is an end-to-end solution for aseptic filling of sensitive beverages that meets the stringent requirements of Japanese beverage producers and is now in use at the first local customer's plant.

Our innovative performance was recognised by an independent body in 2021: In collaboration with the business magazine CAPITAL, the strategy and management consulting firm Infront conducted a study analysing digital transformation in the biggest German companies. In it, Krones ranked second in the machinery manufacturing category and thus earned the honour of "Champion of digital transformation".

Krones AG – Number of registered patents and utility models




Krones Group – Expenditure for research and development (€ million)

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# Digital transformation at Krones

***Digital technology has been a hot topic for years now, though its depth and strategic weight have changed significantly over time.***

Back in 1994, Krones developed digital process control systems as a solution for customers, and in 2017 the company presented itself as a digital pioneer at the drinktec trade fair, with concrete solutions that would enable Krones' customers to use digital technologies to make their production even more efficient, flexible, and error-free. But with all the progress, these solutions were still only that: individual solutions. In Krones' Research and Development, in the technical departments, and at Krones' subsidiary Syskron, a great deal of emphasis was placed on flexibility and agility in recent years, to quickly develop digital solutions aligned to the markets' needs. And they've been successful, as evidenced by examples like the Krones.shop, which has since been rolled out worldwide, the established IIoT platform with its services, and the AI-based empty-bottle inspector Linatronic AI.

**Champions of digital transformation**

Since 2021, Krones has been further advancing the digital transformation with strategic decisions that lay the groundwork for systematically evolving the company – where digital innovation is no longer a niche topic but rather part of our core business. The success of measures and developments to date was confirmed in September 2021, when Krones was ranked among the "champions of digital transformation" by the business magazine CAPITAL and the strategy and management consulting firm Infront.

The launch of Krones.world in mid-2021 exemplified this integration and centralisation of digital topics for customers in our product portfolio: The portal will become the central access point for all customised digital solutions that can support the entire machine lifecycle. In Krones.world, customers will have an easier time finding the right services from within the Krones Ecosystem – and will be able to use data-driven knowledge to make their production even more efficient.

**Reorganisation with far-reaching implications**

What was at first developed by dispersed teams to address the latest trends is now being consolidated and will, in the future, be further developed with these teams' combined strength. This strategic realignment is also reflected in a far-reaching evolution of our organisation. As of January 2022, all activities and resources relating to digital innovation and automation across the group are now bundled under the name Krones.digital – an interdisciplinary department whose employees work together to build customer solutions across departmental and national boundaries. Krones will also create additional jobs for Krones.digital, hiring experts in automation technology, network technology, and software development worldwide. Thanks to the resulting synergies and combined strength, Krones will be able to even more effectively drive the development of solutions and business models that will enable customers to exploit the full potential of digital data.

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# Customer matters

## Goal

Deliver good quality by continually optimising our processes and products and providing the best possible customer care, ensuring fast, individualised service. Our commitment to quality and the work of our customer service team are directly reflected in our key financial performance indicators such as order intake and consolidated revenue. More details about these figures can be found on page 46 of our Annual Report.

Our customers' success is the benchmark against which our company is measured. We want to help companies in the food and beverage industry produce high-quality consumer goods. To accomplish this, we supply them with everything they need for their value creation – from the systems engineering to individual services all the way through to digital solutions that will make their operations fit for the future.

Just as with our technologies, we also aim for sustainability in our collaboration with their users. We maintain partnerships with our customers, many of which go back several years or even decades and span generations. In everything we do for and with our customers, we strive to achieve the desired level of quality, maximum profitability, and minimum risk – for everyone involved.

## Organisation

Quality Management and Sales are the two main interfaces in the many subprocesses involved in meeting our customers' needs. Quality officers in the respective organisational units promote a focus on product quality throughout the group. The overarching organisational and content-related coordination and governance is handled centrally by Corporate Quality Management. In order to serve our customers in the various regions of the world with flexibility and swiftness, we transfer considerable responsibility to the group's individual sales divisions and regions. Overarching strategic management is the purview of General Sales Management and Marketing, which in turn reports directly to the Chief Sales Officer.

## Actions and processes

**Quality guidelines**
Corporate Quality Management establishes binding governance and guidelines for the group. To ensure that the quality specifications are implemented, Corporate Quality Management, in collaboration with the heads of Quality in the product areas, carries out regular audits and initiates appropriate measures when things get off track.

**Quality measures**
Personal feedback – from our customers and from our employees – is an important source of quality-related insights. This information is systematically incorporated into product development through defined processes. Regular processes are in place for analysing tips and occurrences and for determining appropriate measures. Milestone meetings ("Activity Groups" for research and development and product maintenance) are used to ensure improvement and compliance with product quality specifications.

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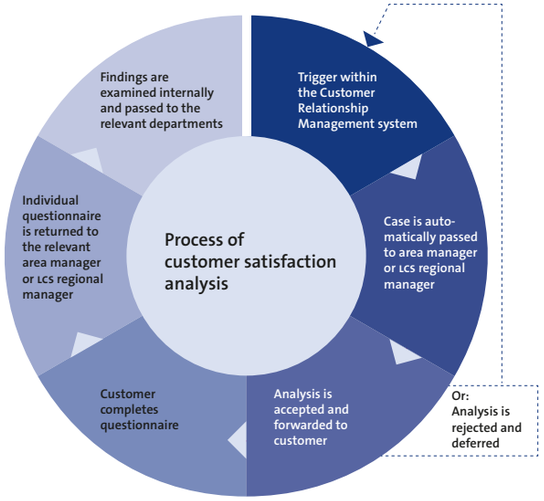
In addition, a number of systematic tools and methods are used along the entire value chain to ensure and optimise product quality. These include:

- Continuous Improvement Process (CIP) at all production sites
- Error messaging system along the entire value chain
- Ideas management system for all Krones AG employees
- Regular quality circles
- PDCA (Plan, Do, Check, Act) in product-relevant and other selected administrative departments
- Feedback process along the entire value chain
- Quality gates and work orders in project handling and execution
- Across-the-board product and process audits (in planning: 360° on-site audit)
- Monitoring based on quality indicators (e.g. quality gates)
- Establishment of a groupwide quality management report and a new quality culture




As part of our supplier management process (see page 71), we continually assess the quality of incoming products and systematically implement optimisation measures if our quality specifications are not met. In addition, the supplier management system will in future be structured more globally.

**Customer satisfaction analysis**

We use questionnaires to determine how well we have met our customers' expectations: Through parameters like satisfaction, loyalty, and project fulfilment, we can generate an individual satisfaction index for each customer with a system of categorisation that uses traffic light colour coding. The process for the analysis is clearly structured and automated by way of our customer relationship management (CRM) system. The analysis process begins the moment a new machinery or retrofit project is completed:

The results of the individual surveys benefit not only our Sales organisation but also – and especially – the respective project managers and persons responsible within the group. The Lifecycle Service (LCS) area managers and regional managers pass the information gained from the surveys to the persons responsible for the respective projects at our offices and subsidiaries and to colleagues in the Product Lines. Corporate Quality Management then incorporates any quality-related findings into our many optimisation measures for product and process quality.

## Results

For our management of product and project quality, Corporate Quality Management, in collaboration with the heads of Quality in the product areas, collects and analyses a variety of quality metrics and uses them as the basis for developing new and existing processes and products.

In our customer satisfaction analysis for 2021, we received a total of 275 completed feedback surveys from customers (previous year: 411). That is a response rate of 8.4 percent (previous year: 10.6).

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# Japan, we are ready!

***Krones and the Toyo Seikan Group have teamed up for a strategic partnership – working together to take the Japanese aseptic market by storm.***

With equipment installed in more than 400 customer plants around the world, Krones is the most successful provider of aseptic technology in the beverage industry. As of today, that is. But this is a market of ambitious competitors and demanding clients. First-rate technology is not enough in this environment, and hasn't been for some time now. You also need a well-honed strategy to maintain clients' loyalty. And Japan plays a key role in that.

**From Japan to the world**

"Japan is by far the most demanding aseptic market in the world," says Dr. Sven Fischer, head of Research and Development at Krones AG. "Success there has a powerful impact in all other regions." But breaking into the Japanese market is anything but easy – particularly when vendors have to overcome a language barrier and a distance of thousands of kilometers to connect with potential customers. To help in both regards, Krones has linked up with a strong regional partner, Toyo Seikan.

The company was founded in Japan more than a hundred years ago and has become established as a leading provider of packaging solutions in the country. Toyo Seikan's products – especially cans, preforms, and PET containers, are used throughout Japan's beverage industry – even by many of our biggest key accounts' regional licensees. Toyo Seikan is also active in the engineering of aseptic systems and is therefore deeply familiar with Japanese customers' specific needs.

**The partnership is already bearing fruit**

Krones benefits from this collaboration in two ways. First, Toyo Seikan's specialist and regional expertise enables us to tailor our aseptic solutions precisely to the needs of this market. And second, Toyo Seikan provides local support for sales and service operations relating to all aspects of Krones aseptic technology.

Although this partnership is still young, it has already passed the big test: The first joint project came in the midst of the coronavirus pandemic, with all of the attendant challenges. "Despite all of the difficulties, the line for a leading Japanese tea brand was commissioned and passed the final acceptance test," says Gero Friedrich of Krones' East Asia Sales team. "The second order is already in processing – and we are optimistic that many more will follow."

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# Decarbonisation

## Goal

Reduce the Krones Group's corporate carbon footprint by cutting Scope 1 and Scope 2 greenhouse gas emissions by 80% by 2030. Lower the group's Scope 3 emissions by 25 percent by 2030, with a focus on shrinking our product carbon footprint. Both targets use 2019 as a baseline. Above and beyond these goals, we aim to make our own business processes climate neutral in the long term.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

As a group that generates greenhouse gas emissions all along its value chain, we are obliged to do our part to prevent climate change. To fulfil this responsibility, we formally communicated new climate targets in 2020, under which we aim to substantially reduce both direct and indirect emissions by the year 2030. When defining the respective reduction targets, we opted to use absolute figures that are independent of revenue.

The climate strategy includes all material production sites of the Krones Group worldwide and was validated as an objective, *Science Based Target* in a process conducted by the initiative of the same name.

## Organisation

The reduction targets were adopted by Executive Board resolution. Overarching coordination is the responsibility of an interdisciplinary project group made up of representatives from Corporate Governance, Corporate Development, and Corporate Production and Logistics. In monthly meetings, the progress of ongoing measures is analysed and further steps are defined. Reporting to the Executive Board is done on an ad hoc basis. For the groupwide implementation of the climate strategy, the project group works closely with experts from the production sites and subsidiaries worldwide. Data collection and implementation of measures are the local responsibility of the international sites involved, while data validation and coordination of measures are carried out centrally.

## Actions and processes

**Environmental and climate policy and internal SOPs**

To firmly establish our priorities with respect to environmental and climate protection within our operations both strategically and organisationally across the Krones Group, we defined and published a groupwide environmental and climate policy in 2021. The new policy document makes the strategic alignment of our environmental and climate management transparent for all external stakeholders and defines a clear framework for everyone involved within the Krones Group.
An internal set of standard operating procedures (SOPs) based on the new environmental and climate policy defines the environmental standards, topics of focus, and respective goals, processes, and responsibilities within the Krones Group. Our aim is to guarantee implementation of the standards in everyday production processes and projects and thus to ensure environmentally friendly production at all sites and subsidiaries and to contribute to continually improving environmental

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protection. The environmental and climate policy and corresponding SOPs serve as internal rules and are based on the Krones Code of Conduct as its underlying policy document. Energy management at the German production sites of Krones AG is also ISO 50001 certified.

**Reporting and analysis of environmental and climate risks**

As part of our group climate strategy, our handling of environment and climate-related risks also plays an important role. We have developed a process that is linked with the existing Enterprise Risk Management and ensures that we systematically record and assess risks to the company arising from environmental factors (outside-in) and the potential negative impact the company can have on the environment and climate (inside-out). Although the financial risk assessment always covers one year, medium and long-term risks and impacts are also reported, recorded, and managed within this process.

A further building block of our risk analysis is the database-supported assessment of emissions from the upstream supply chain, which was done for the first time in 2021. With it, we have identified the greenhouse gas hotspots within our supply chain and can use that information to take targeted, risk-managed measures. More information about our supply chain risk analysis can be found in the “Sustainable supply chain” section of this report, beginning on page 71.

Our next step will be to examine climate-specific scenarios and, based on this, develop a low-carbon transition plan for the Krones Group that helps give the Krones climate strategy additional relevance.

**Reducing Scope 1 and Scope 2 emissions**

The measures aimed at reducing direct and indirect energy-related greenhouse gas emissions can be divided into three main action areas: energy efficiency, own generation, and energy procurement.

With a newly constructed central power plant at our Neutraubling site that is connected to our combined heat and power (CHP) plant, we have established an internal district heating grid. This makes it possible to efficiently supply the connected production halls with heat, cooling, and compressed air. Because the system is also connected to the municipal district heating grid, any surplus thermal energy from our production operations can be fed into it.

Intelligent energy management, sustainable energy supply, and the expansion of our own renewable power and heat generation capacities support our efforts to reduce energy-related greenhouse gas emissions. We have made generating our own electricity from renewable sources a priority in our company climate strategy and are currently looking into suitable concepts.

Because Krones AG currently still purchases conventional electricity on the market, we have been actively exploring options for sourcing green electricity since adopting the new climate strategy. We see this as a major lever for reducing our Scope 2 emissions. In 2021, the decision was made to switch to green power for all electricity needs for Krones AG production plants as of 2022.

**Reducing Scope 3 emissions**

Following an analysis, we determined that the biggest share of our Scope 3 emissions stems from the downstream value chain. For that reason, we are focusing our efforts to reduce Scope 3 emissions on optimising our own products. Although we have already achieved substantial and consistent results under the enviro program, we do not want to leave the remaining potential for reduction untapped. You can read more about this in the "Product sustainability" section beginning on page 17.

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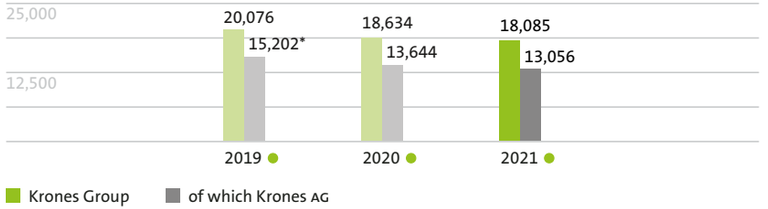
As of 2021, we are also taking a closer look at our upstream supply chains. We ran a database-supported analysis based on monetary purchasing figures to identify the biggest drivers of emissions in our supply chain. In our next step, we will develop appropriate measures to reduce emissions here, too. We have already begun talks with some suppliers to find a practicable approach that will lead to the desired results. More information can be found in the "Sustainable supply chain" section of this report, beginning on page 71.

## Results

Having had our climate strategy validated by the Science Based Targets initiative in 2020, we joined the Business Ambition for 1.5 °C Campaign, an initiative led in partnership with the UN Global Compact, in September 2021. The prerequisite for joining the campaign is to publicly commit to helping to limit the global temperature rise to 1.5 °C.

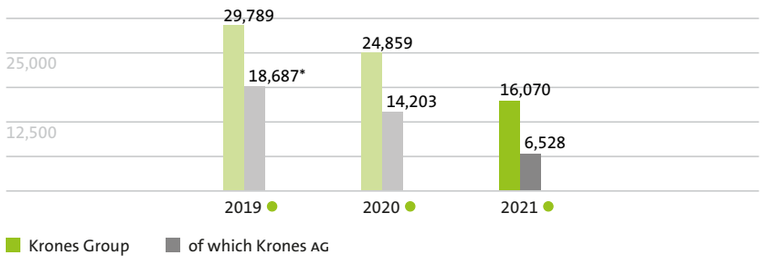
To more transparently track and strategically evaluate our progress in the area of product sustainability, we began reporting a new performance indicator to the Executive Board in 2021 that reflects the emissions resulting from our customers' operation of our equipment. Average consumption values for electrical and thermal energy, based on an assumed annual operating output, serve as the basis for these extrapolated figures. To date, we have included all complete and partial lines from Krones' portfolio as well as Steinecker brewhouses. We are currently preparing to add more Krones Group products.

Krones Group – Greenhouse gas emissions, Scope 1 (metric tonnes)




*The figure differs from the one printed in our 2019 Non-financial Report because of a change in calculation methodology from lower heating values (LHV) or net calorific value to higher heating values (HHV) or gross calorific value, the inclusion of Scope 1 vehicle emissions, and the adjustment of the scope to include all production locations.

Krones Group – Greenhouse gas emissions, Scope 2 (metric tonnes)




*The figure differs from the one printed in our 2019 Non-financial Report because of the adjustment of the scope to include all production locations. The emissions are measured using the market-based method. Wherever market-based emissions factors were not available for certain locations, we have used the generally recognised location-based emission factors.

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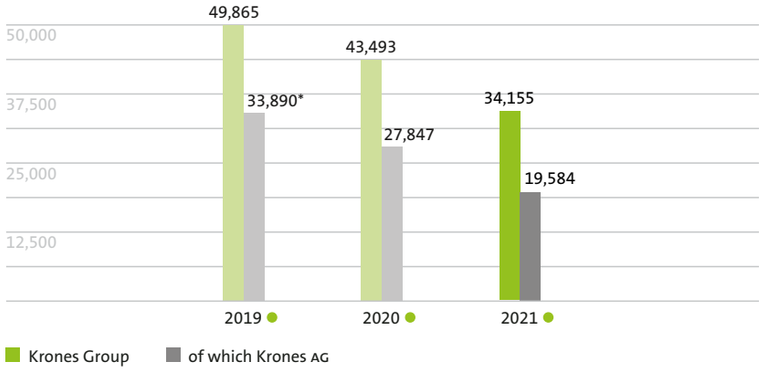
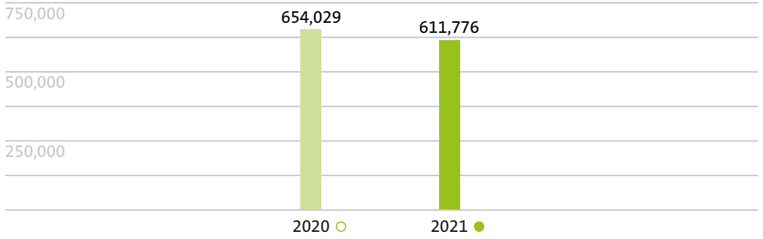
## Krones Group – Greenhouse gas emissions, Scope 1 and Scope 2 (metric tonnes)



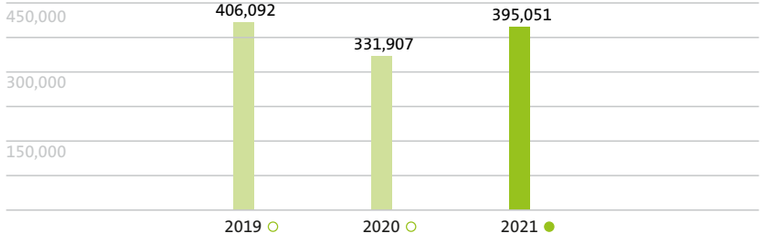

*The figure differs from the one printed in our 2019 Non-financial Report because of a change in calculation methodology from lower heating values (LHV) or net calorific value to higher heating values (HHV) or gross calorific value, the inclusion of Scope 1 vehicle emissions, and the adjustment of the scope to include all production locations.

## Krones Group – Greenhouse gas emissions, Scope 3, from the upstream supply chain (metric tonnes), (Scope 3 categories 1-6 per GHG Protocol)



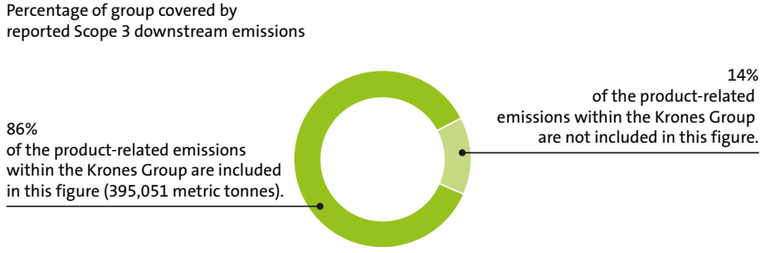

*The Scope 3 greenhouse gas emissions reported here are based Krones AG orders and Steinecker GmbH brewhouses. The calculation of the emissions is based on specific country factors from a generally accepted database.*

## Krones Group – Greenhouse gas emissions, Scope 3, from the use of our machines and lines (metric tonnes), based on one year (Scope 3 category 11 per GHG Protocol)




*The Scope 3 greenhouse gas emissions reported here are based on all orders for emissions-relevant machines and lines that are handled through Krones AG's ERP system. The figure also includes the product-relevant emissions of Steinecker GmbH. According to our extrapolation, the calculated emissions cover 86% of the total product-relevant Scope 3 greenhouse gas emissions within the Krones Group (see chart below). The calculation of the emissions is based on emissions factors from a generally accepted database and our own assumptions and extrapolations.*

## Krones Group – Greenhouse gas emissions, Scope 3, from the use of our machines and lines (metric tonnes), in 2021 (Scope 3 category 11 per GHG Protocol) ●

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# Every kilogram counts

***Effective climate protection means reducing $CO_2$ emissions across the board. There is potential for savings almost everywhere – including at Krones. The following examples show where that potential lies and how Krones intends to tap it.***

**Energy efficiency**

When it comes to our own climate performance, measures aimed at enhancing energy efficiency are a top priority because they help us prevent emissions from our production operations. The absolute and percentage reductions shown in the table below relate to improvements over the base year 2019 that were made under our climate strategy actions and help us review the efficacy of measures in the respective categories. The emissions reduction reported here was calculated using country-specific emission factors.

| | 2020 | | 2021 | | since 2019 | |
|---|---|---|---|---|---|---|
| | Savings (kWh) | Savings (metric tonnes $CO_2$) | Savings (kWh) | Savings (metric tonnes $CO_2$) | Cumulative emissions reduction (metric tonnes $CO_2$) | % |
| Increase in efficiency | 764,790 | 298 | 462,881 | 183 | 481 | –1.4 |

**Green power**

In an effort to promote the wider use of renewable energy, all Krones AG plants will be supplied with green power as of 2022. That is expected to reduce carbon emissions by around 5,000 tonnes annually based on the Scope 2 figure for 2021.

**E-mobility**

In 2022, we will put 95 charging stations for electric vehicles into operation at our main facility in Neutraubling. Of those, 85 have been installed in a new parking garage and will be available for both company vehicles and employees' personal vehicles as well as for visitors. The other ten will be located directly on the plant premises.

**Greater energy efficiency in our products**

It's not simply the manufacture of Krones products that generates emissions but rather their operation at our customers' plants. For this reason, we are continually evaluating and optimising our entire portfolio with respect to potential energy savings.

In 2021, we celebrated the 10th anniversary of EquiTherm, an energy recovery system for breweries. Krones subsidiary Steinecker took the occasion to make converting to the system even easier: As of 2022, every brewhouse that leaves the Steinecker plant is already fitted to accommodate EquiTherm as standard equipment. For customers, that means if they don't buy the energy recovery system when purchasing a new brewhouse, they can still buy and install it later with very little additional cost or effort.

The Contiform stretch blow moulder is one of the most-sold products in Krones' portfolio – and so it's a product with great potential for reducing customers' energy consumption. To leverage this potential, we've been continuously improving the machines' components and processes. The most recent optimisations – some of which became available in 2021 – include improved heating technology featuring lower energy consumption, a more efficient compressed air recycling system, and several digital features that improve processes and thereby reduce energy and media consumption.

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# Resource conservation

## Goal

Reduce both hazardous waste generation and drinking water consumption at our production sites by 10% by 2030.

Conserving resources and closing loops: With our media-efficient products and technologies, we are already contributing to the sustainability of our customers' production. But our own operations also consume water and generate waste. Since we work almost exclusively with high-quality materials whose waste can be profitably reused or recycled, it only makes sense to do just that with any waste generated from such materials.

Therefore, our sustainability strategy does not take a one-size-fits-all approach to all types of waste but rather focuses on reducing waste that bears significant potential risk to humans and the environment – that is, in particular, hazardous waste. On the topic of resource conservation, we also strive to continuously build water-saving production processes. Our focus here is on protecting the drinking water supply, which has become a particularly precious resource in times of climate change.

## Organisation

Coordination of water and waste targets across the group is the responsibility of Corporate Safety and Security, which oversees environmental management within Krones AG. Responsibility for helping us meet our goal lies with the management of the respective production sites and subsidiaries. Site experts work in close cooperation with the group experts from Corporate Safety and Security to ensure the implementation of productive actions that will lead to the desired results.

## Actions and processes

**Realigning our external certification**

For Krones AG, certification of the environmental management system under ISO 14001 was a long-established practice. It served external stakeholders as credible evidence of our efforts towards good stewardship of natural resources. As part of the realignment of our sustainability strategy in 2020, we took a long hard look at this practice and intentionally let the ISO certification of Krones AG and some of our international sites expire in 2021. After reviewing the process, we are now working to develop a new environmental management strategy. Our aim is to establish external certification as the minimum standard for environmental management in our production sites across the group.

**Environmental and climate policy and internal SOPs**

To firmly establish our priorities with respect to environmental and climate protection within our operations both strategically and organisationally across the Krones Group, we defined and published a groupwide environmental and climate policy in 2021. The new policy document makes the strategic alignment of our environmental and climate management transparent for all external stakeholders and defines a clear framework for everyone involved within the Krones Group. An internal set of standard operating procedures (SOPs) based on the new environmental and climate policy defines the environmental standards, topics of focus, and respective goals, processes, and responsibilities within the Krones Group. Our aim is to guarantee implementation of the standards in everyday production processes and projects and thus to ensure

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environmentally friendly production at all sites and subsidiaries and to contribute to continually improving environmental protection. The environmental and climate policy and corresponding SOPs serve as internal rules and are based on the Krones Code of Conduct as its underlying policy document.

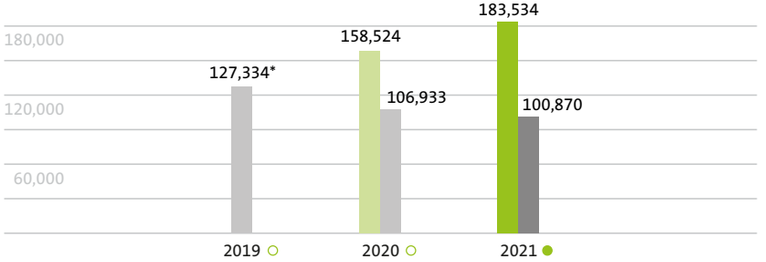
**Groupwide rollout of data collection**

Although the COVID-19 pandemic hindered face-to-face meetings between our sites and subsidiaries worldwide once again in 2021, we continued with the groupwide rollout of our data collection process for resource conservation. We identified internal experts for water and waste management and trained them in the groupwide guidelines and targets. Alongside environmental policy and guidelines, fact sheets about specific figures serve as a central guide for gathering, collecting, and consolidating data. So far, the Sustainability Team, Group Experts and Site Experts have focused their collaboration on establishing the basic principles for transparent, continuous monitoring of ongoing measures and milestones reached.

## Results

As in the past, the focus with respect to resource conservation in 2021 was on the groupwide rollout of data acquisition processes and the establishment of fundamental goals, processes, and responsibilities through the new environmental and climate policy.

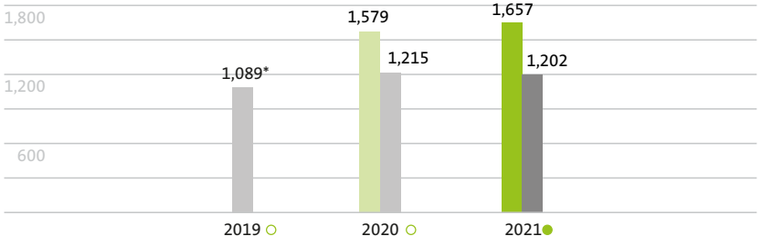
Krones Group – Water consumption (m³)




* The Krones AG figure from 2019 cannot be compared with the figures from 2020 and 2021 because the scope was expanded from drinking-water consumption only to all water withdrawals (mains/drinking water, groundwater, surface water, seawater, industrial water).

*The figures presented here relate to the operation of machinery and equipment as well as buildings at Krones AG sites. In collecting this data, we have included 100% of consumption by our own buildings. Leased buildings are only partially included since some are leased at a flat rate and these buildings are generally shared with other users.*

Krones Group – Hazardous waste (metric tonnes)




* The Krones AG figure from 2019 cannot be compared with the figures from 2020 and 2021 because the scope was expanded from a European definition of hazardous waste to an international definition that includes additional types of waste.

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# Community engagement

## Goal

Give between 0.01% and 0.02% of our prior-year consolidated revenue back to stakeholders each year in the form of charitable donations and sponsoring.

The Krones Group maintains over 100 sites around the world and is thus an integral part of many local communities. The cities and counties in and near which our plants and sales offices are located are the lifeblood of our business activities. That is why we support clubs, organizations, events, and initiatives that pursue charitable purposes local to our sites in Germany. Our sites and subsidiaries outside Germany also have the freedom to actively support their local communities.

Our charitable giving and sponsorship strategy is laid out in our groupwide charitable giving and sponsorship policy and aims to

- Ensure that funds contributed achieve the greatest possible benefit to the respective beneficiaries and
- Support projects that are aligned with the company's values and interests.

## Organisation

The Corporate Governance office bears overall responsibility for and handles the central organisation and documentation of our charitable giving and sponsorship activities. Within Krones AG, the charitable giving and sponsorship committee serves as the central decision-making and advisory body for contributions. For handling donation requests, the committee consists of seven members, one each from Corporate Governance, Communication, Executive Assistant, Financial Accounting, Purchasing, Human Resources, and Sales.

In other Krones Group companies, plant or company management serves as the central decision-making body. Contributions are granted in accordance with a clearly defined, transparent process. The respective decision-makers review all requests for their merit in accordance with the charitable giving and sponsorship strategy, which in turn is based on the binding charitable giving and sponsorship policy. The policy is also an integral part of Krones' anti-corruption programme.

## Actions and processes

**Sponsorship priorities**

In general, Krones' engagement focuses on three areas:

- Education, science and research
- Culture and sports
- Social welfare and the environment

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Recipients of charitable contributions – whether monetary or in-kind donations – may be individuals, groups of individuals, or organisations. However, Krones does not support political parties or political organisations. Preference is given to supporting projects and organisations in which Krones employees can be actively involved or which have a regional relevance to one of the company's sites.

Our support of athletics is also based on a very conscious, targeted selection process. For us, providing financial support purely for the image is not an option. Instead, we only support those clubs and events that meet at least one of the following criteria: They have a charitable goal in addition to the athletic one; they provide an appealing option for Krones employees to participate; or they have a positive impact on one of the action areas (see Materiality analysis on page 12) that we ourselves are focusing on as part of our sustainability strategy.

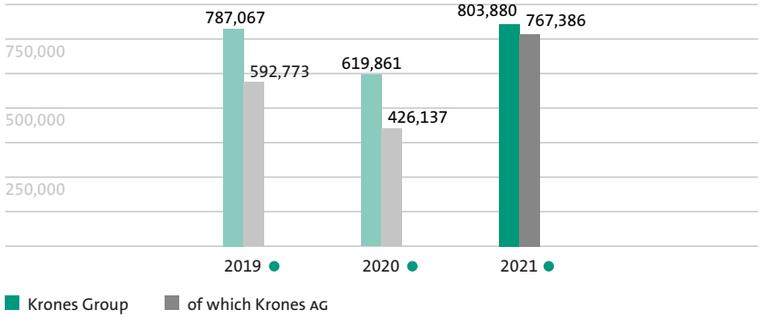
Sponsorship activities cover the same areas as our charitable giving, but with the addition of events that are relevant to our business.

**Controlling and monitoring**

We regularly review and assess sponsorship activities to determine whether and to what extent they served the expected purpose. The review consists of media analyses and surveys that are specifically designed for employees, customers, and event organisers and are distributed to a random sampling of respondents after Krones-sponsored events. Our aim is to clearly and transparently document the concrete benefits of the sponsorship activity – for the recipient and for Krones. Due to COVID-19-related restrictions, 2021 was the second year in a row that the number of sponsorships was lower than it had been before the pandemic. The same is true about the volume of potential activities for evaluation.

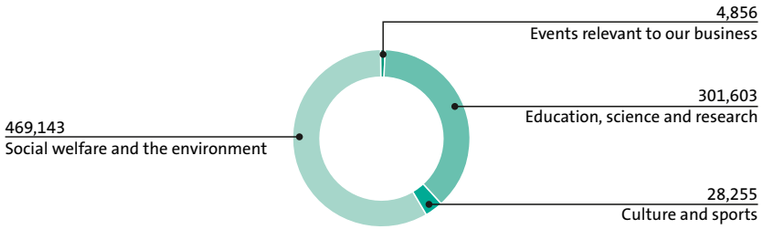
## Results

Krones Group – Expenditure for charitable contributions and sponsoring (€)




Our goal is to give between 0.01% and 0.02% of our prior-year consolidated revenue back to stakeholders each year in the form of charitable donations and sponsoring. In 2021 we reached that goal with a total value of 0.024.

Krones Group – Expenditure for charitable contributions and sponsoring, by area (€)

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# Pragmatic community support and active inclusion



***The WICOVIR project is aimed at detecting early-stage COVID-19 infections at schools and childcare facilities. Krones donated to the project 300,000 PET tubes and the pooling stations needed for collecting samples.***

As part of the debate surrounding the reopening of schools and childcare facilities during the pandemic, a practical solution emerged from a Regensburg model: WICOVIR stands for "WHERE IS THE CORONAVIRUS?" and is a pool-based screening program developed by the Science and Innovation Campus Regensburg (WECARE) in collaboration with experts from Erlangen and Vienna. The objective was to detect infection in large groups of people relatively quickly and cost-effectively. The process involves a two-stage testing system, in which samples from as many as 30 persons from a single class or group are first pooled and tested. The second stage – depooled testing of all individuals' samples – only takes place if a pool tests positive.

Time is the critical factor here. Instead of swabbed samples, the test uses gargle fluid recovered after the individuals gargle tap water in the morning. The gargle test is easy to perform, even on younger children. Samples are collected, pooled, and tested in schools, and any positive test results are available the same day. "This procedure allows us to bypass long laboratory wait times," says Prof. Dr. Michael Kabesch, who is a full professor at Regensburg University, a specialist in paediatric medicine, chief medical director of the St. Hedwig Clinic in Regensburg, and director of WECARE. "We're also able to avoid chains of infection, which arise primarily from asymptomatic spread within classrooms."

At Krones AG, like so many other companies, the burden on families of school closures can only be lifted by reopening schools and childcare facilities. That, in turn, requires practical options for testing, which is why the company contributed 300,000 PET preforms as tubes for catching the gargle fluid and 2,000 pool stations that were specially manufactured for the project at headquarters in Neutraubling.

***Doing meaningful work and being valued at work: People with disabilities find it more difficult to get these basic needs met. To help change that, Krones supports projects like the hotel INCLUDIO, which was opened by the Order of St John (Johanniter).***

For many of the approximately 11 million people living with disabilities in Germany, travel presents significant challenges – in Regensburg, too. That's because, until recently, there were no hotels in the region that could provide accessible accommodation to a group of travellers with disability.

The Johanniter hotel INCLUDIO was opened in 2021 to fill this gap – as an inclusive space where people with and without disabilities alike can come together and enjoy the amenities equally. The hotel is designed to be entirely accessible and includes on-site nursing service and is thus able to meet the individual needs of vastly different guests. INCLUDIO also values diversity and inclusion when it comes to its own employees. At least 40 percent of the people employed there live with disabilities.

For Krones, this hotel offers an appealing means to hold inclusive meetings and conferences or accommodate business travellers – with or without disabilities – just a few kilometres from our business premises. The company donated 10,000 euros to the hotel after its opening.

# Data protection

## Goals

- Ensure the confidentiality, availability, and integrity of our employees' and business partners' data by installing centralised management systems for information security and data protection that are aligned with international standards and assigned local responsibility.
- Establish a state-of-the-art IT security architecture for all Krones products that conforms to current and future regulations, represents the current state of the art, and meets customers' requirements.

Protecting personal data as well as information and information-processing systems is a key concern for Krones. Every one of our employees strives and is obligated to maintain seamless information security that is in keeping with the latest state of the art across our entire organisation – for internal data and systems and for the products and services we deliver to our customers. That is essential to our ability to ensure uninterrupted operation of our own IT and to maintain the trust of our business partners along both the upstream and downstream supply chains. These partnerships are an action area to which we are devoting increasing attention.

Management systems for information security and data protection that are aligned with international standards form the basis from which we intend to achieve our goals. While their strategic definition and content are determined centrally for the entire group, responsibility for their operational implementation rests at the local level, with the individual group companies.

## Organisation

Strategic and operational responsibility for data protection and information security is bundled in the role of Corporate Data Protection Officer and Corporate Information Security Officer, who reports directly to the CEO. In regions where additional data protection officers are required by law, that role has been established in the respective subsidiaries. These officers know the group's core data protection requirements as well as the laws and regulations of their respective regions. In addition, all departments within Krones AG that regularly handle personal data and all subsidiaries have their own data protection coordinators. We have also established a comprehensive network of local accountability to further ensure information security. Specifically, this network consists of local information security officers in the individual regions and companies. To enable effective exchange among them, we have launched a Cyber Security Conference that convenes at least once per quarter.

## Actions and processes

**Guidelines and certification**

The EU's General Data Protection Regulation (GDPR) serves as the main regulatory basis for our data protection efforts. The provisions of the GDPR are reflected in the Krones Group's corporate data protection policy and complemented by additional local rules and regulations for the individual countries. Data sharing within the Krones Group is governed by a contract system that applies across the group.

We also have established a groupwide information security policy. It builds on ISO 27001 and serves as the foundation for the company's efforts to protect all information above and beyond the requirements of the law, especially our own business secrets and sensitive information from and about our business partners. Both policies are subject to regular review and updated as needed.

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In order to increase information security relating to products in a targeted, systematic manner, the centralised, interdisciplinary Product Security Incident Response Team (PSIRT) has formulated eight cybersecurity principles, which are applied to new Krones products and services.

In addition, the PSIRT publishes the latest security advisories on a dedicated landing page within the corporate website. These advisories provide information about possible security gaps that affect products, solutions, or services from Krones and offer guidance for remedying them. Customers can also request that the security advisories be sent to them directly by email.

Krones' Information Security Management System (ISMS) is ISO 27001 certified for all IT services that are provided centrally for the group. The certification and associated audits are being expanded in stages. Besides the entire Krones AG organisation and the two companies in Franklin, Wisconsin (USA), and Bangalore, India, the Krones Center in Bangkok, Thailand, is also among the certified locations. Next in line for ISMS certification is the Center in São Paulo, Brazil. The implementation project for that is already underway. Steinecker GmbH, of Germany, which was newly established in 2021, has also already been integrated into the certification.

**Continuous improvement process**

A continuous process for systematically improving information security within the group is an integral part of the Information Security Management System (ISMS). It includes regular penetration and vulnerability testing as well as annual risk analyses, each with an internal and an external audit. The latter is performed by TÜV SÜD and is necessary in order to maintain ISO 27001 certification.

The analyses and audits cover actual incidents as well as potential risk events. Existing security policies are reviewed for their effectiveness and adapted or added to as needed. Changes or additions may relate to all factors – human, organisational, and technical – and can therefore range from employee awareness campaigns to fundamental changes to our IT infrastructure. Besides the periodic audits, a groupwide whistleblowing system serves as an important means to identify and counteract potential security risks on an ongoing basis.

## Results

As described above, ISMS certification processes are underway for the Center in São Paulo and Steinecker GmbH.

We are also on track for setting up our Security Operation Center (SOC). Now that the necessary personnel has been recruited, the Center has commenced regular operation. It serves as both an internal and external IT security service provider, detecting and analysing internal and external anomalies and verifying actual risks. In this way, threats arising from data leaks or identity theft can be detected and eliminated at an early stage. Given the enormous relevance of these actions, more personnel will be added to the SOC team in the coming year.

Our technical security audits also made good progress. Penetration testing was carried out on our Industrial Internet of Things (IIoT) platform and other selected internal systems that are accessible from outside. An action plan was developed to address the identified vulnerabilities. The plan has been coordinated internationally with the relevant departments and is currently being implemented.

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# Agile software development

***In-house service provider for digitalisation specialists: The IM Software Engineering department provides the entire Krones Group with centralised services and standardised tools for their day-to-day work.***

From the control systems in Krones lines to IT for warehouse logistics to automating our own production and assembly operations: Many of our technical departments develop and program digital solutions. "In the past, they've all gone out themselves and looked for the various tools they need," says Adalbert Andreas Antkowiak, Head of IM Lab, Digital Work and Engineering. But for more efficient, Agile software development, increased standardisation, and reduced administrative effort, it is essential that the departments work together on a shared platform. "We want everyone to work in the same environment, for stronger collaboration. Azure DevOps in the Microsoft cloud was a big step in this direction," says Antkowiak. Some 600 users are already working within this platform – including team members from Research and Development, Information Management, and Lifecycle Service – in 14 Azure DevOps organisations and more than a hundred team projects.

**A versatile cloud solution**

"Azure DevOps was originally meant to manage the software lifecycle. But it also enables us to do much more within the Agile environment, like Agile project management, product development, and so on," explains Robert Wulf, one of the team members responsible for the platform. His colleague Michael Buchner continues, "We migrated the Team Foundation server that was launched in 2015 to the Microsoft Azure cloud using Azure DevOps Services. By implementing Microsoft's cloud-based solution, we're able to reduce operating expenses and facilitate collaboration with external partners."

**More sharing and greater transparency**

A significant benefit comes from the fact that the tools and solutions are highly integrated. Collaborative functions make it easier for distributed teams to do their work more efficiently. Change tracking, an open team culture, and the option to check a project's status at any time all make for greater transparency. Buchner is convinced that "Everyone benefits from using a shared environment instead of different siloed applications. Team members can help each other and increase the extent to which solutions can be reused while also enhancing efficiency within the group."

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# Employee satisfaction

## Goal

Motivate our employees to do their best work by offering an attractive working environment that we continually improve, with a focus on working hours and on promoting personal development and good health and well-being. We enable people at Krones to use their potential and further develop their capabilities – with a view to both current and future responsibilities. Our aim is to promote independent, solution-oriented action that contributes to the company's success and to employees' personal development.

The Krones Group's human resources strategy aims to maintain consistently high levels of competence, motivation, and qualification among employees. From our perspective, that requires three essential elements: recruiting the right people, gaining the loyalty of high performers and high potentials, and providing sustainable, purposeful training and development opportunities.

Like the previous year, 2021 posed particular challenges for our human resources policy. Where we had seen sharp declines in order intake in 2020, the second year of the pandemic had the opposite effect on our business. The gradual loosening of COVID-19 restrictions in many countries in which our customers are active and the resumption of international travel resulted in higher demand for our products and services. And although this development was certainly a welcome one, it nevertheless had a serious impact on our HR management. Where the pandemic had compelled us to significantly reduce capacities in 2020, we now found ourselves trying to fill a large influx of orders to the satisfaction of customers and the market with limited resources.

## Organisation

The Krones Group consists of many individual companies that operate in very different regions of the world, each with a unique set of challenges. Thus, the individual companies must have sufficient strategic and organisational freedom to align their human resources management with their needs and adapt to local circumstances.

At the organisation's core is Krones AG, which charts the course for the overarching human resources policy across the group and defines the key features of external employer branding and internal corporate culture. Overall responsibility lies with the Head of Human Resources and Social Affairs, who reports directly to the CEO.

To ensure regular communication with and among the subsidiaries worldwide, a global HR network was established in 2021. It consists of the respective HR managers for the regions and members of the HR steering committee at Krones AG. The members of the network meet by video-conference at least quarterly to discuss current issues as well as the overarching alignment of the group's HR strategy.

## Actions and processes

**Recruiting the right people**

Krones AG uses a wide variety of channels to engage with potential applicants. Besides the corporate website and social media activities, these include in particular collaboration with schools and universities as well as participation in recruitment fairs. Thanks to a meticulous hygiene and safety policy, we were able to hold our "Training Day" again in 2021. Students and their parents were invited to tour the training centres in Neutraubling and Nittenau and learn more about the vocational and university programmes Krones offers.

Since 2021, a newly established HR network has been fostering increased sharing and cooperation between Krones AG and the subsidiaries under the heading of employer branding. Unified outreach materials and standardised selection processes for upper-level management worldwide are two examples of our efforts to standardise HR actions and processes across the group. To ensure that processes can be streamlined, processing times kept short, and actions aligned with their respective target group and site, the group companies largely manage their recruiting activities independently.

For example, our site in South Africa has had success using the local recruiting platform PNET in the last four years, and our Chinese subsidiary is increasingly using the regional social media service WeChat and also maintains a partnership with the Wuhan Brewery School. Meanwhile, Krones Inc., in the USA, is deeply involved in the local social and business communities in Milwaukee – including as co-founder of the Franklin Business Park Consortium and as a member of the board of the Master Brewers Association.

The workforce reduction in 2020, combined with the increase in order intake in 2021, posed considerable challenges for both HR management and recruiting. In particular, we sought to fill key vacancies through internal job postings.

Even though we don't have much need for external recruiting right now, we still need to be perceived as an attractive employer among highly qualified professionals. For that reason, we continue to invest in clearly positioning our employer brand in external communications.

**Gain the loyalty of high performers and high potentials**

The work culture within the Krones Group is based on the fundamental values of fairness and appreciation, which is manifest in many actions. Within Krones AG, these range from the framework collective agreement for the metalworking union, which Krones applies in the form of a recognition agreement with the metalworkers' union, to the many and diverse benefits offered to employees.

Flexible working hours and use of – sometimes temporary – part-time employment enable employees who need to care for children or other family members to reconcile family and work.

Given our positive experience with it so far, we intend to further integrate mobile working into our regular routines even after the physical distancing requirements prompted by the pandemic are lifted. That is why, in July, we adopted a revised company agreement on mobile working, under which up to 50 percent of work within an organisational unit can be done remotely as the individual tasks allow. The company agreement also grants additional freedoms with respect to workplace, permitting mobile employees to spend up to 25 working days per calendar year in EU countries outside Germany.

Following Krones AG's example, the subsidiaries also endeavour to ensure that their organisational culture and the benefits they offer are based on appreciative, fair, and motivating principles. For example, our Taicang location recognises the achievements of its workforce in regular, elaborate employee appreciation events. Krones Inc. in the USA supports employees who pursue a university degree by reimbursing tuition expenses.

**Training and continuing education**

Because of the high expectations Krones has of its employees, needs-based staff development programmes are a high priority. That begins with vocational training and carries over across each employee's entire career.

As an international technology group, we operate in an environment characterised by constant, increasingly rapid change. In order to meet these changes proactively, we continuously review, adapt, and expand our entire range of professional development opportunities against both current and future needs.

The vocational training options available at Krones AG include business and industrial and technical fields as well as a dual course of vocational training and university study, trainee programmes, and our Profil 21 course. The latter is designed for individuals who are just getting started in their careers and who are especially interested in entering the challenging field of global service. Besides the traditional vocational training, this course also includes further qualification to the master craftsman level. The first graduates of the new Profil 21 variant completed the programme in 2021.

We also significantly expanded our established trainee programme in 2021, rolling it out to other departments in addition to Sales. The structure and content were designed to enable participants to take on a position of responsibility in their field upon completion of the programme.

We also offer training at our sites outside Germany, in Wuhan, China, and Nairobi, Kenya, where Krones is also currently involved in the construction of a vocational school. Given the successful launch of training programmes that combine vocational or professional schooling with practical, on-the-job training following the German model at several Krones sites worldwide, we implemented the same model at our newly opened plant in Debrecen, Hungary, in 2021.

In the area of continuing professional development, we've seen rising need for training opportunities that are accessible from any location and can be done on a flexible schedule. For that reason, we now offer a broad range of virtual courses. Besides traditional e-learning, these also include online classes in which the content is presented live, with the instructor available for questions and discussions.

Our professional development programme for management employees also specifically addresses the current reality, for instance with a training course dedicated to remote leadership. The course content is available as "learning nuggets" in the form of short videos that can be accessed quickly and easily around the clock. In addition, those interested can join scheduled virtual Q&A sessions to speak with a specialist on the topic.

The challenging state of affairs right now has made the professional development programme for management employees all the more relevant for us. Therefore, we have set up a central budget for this purpose, to provide the departments with needs-based training opportunities. The feedback we have received from the organisational units on these offerings and particularly from participants themselves shows that the topic of management development is met not only with great acceptance but also with active interest within the company.

At the international level, we focused on advancing three key themes in 2021. One was moving our professional development programme for management employees to a virtual platform, with offerings for new and experienced leaders and corresponding assessment and development centres. Other international priorities were the training programmes in project management and service. The trainings for these target groups were created in close collaboration with the respective departments and subsidiaries. That has allowed us to respond very specifically to the needs of the different regions. In 2021, we relied on a virtual format for these training courses, with which our experience was positive.

## Results

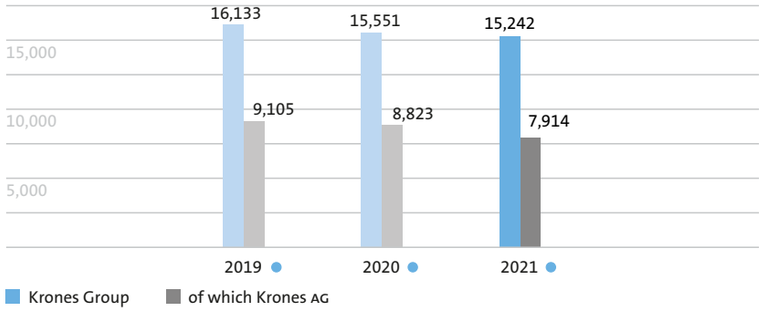
In order to prepare our HR department for the future, we launched a dedicated strategy development process in 2021. In it, the first step was to take a close look at the external environment in which we operate. We will then analyse and evaluate the internal situation within the group. Once we have defined the main strategic action areas, we will use them to formulate concrete measures and projects and plot their implementation on a timeline. The aim is to develop a sustainable strategy that meets the requirements of the entire group and takes into account the different regional perspectives of the individual subsidiaries. Because of this, all members of our international HR network are involved in the process.

Particularly with respect to digitalisation and automation, our workforce needs will continue to grow appreciably for the foreseeable future. That is why, in 2021, we stepped up our efforts to promote digital competence. In our Smart IT Education 4.0 programme, every career field for which Krones offers formal training can in future be combined with an additional IT qualification. We have also planned additional re-skilling measures in the fields of automation and digitalisation for employees in our engineering departments as well as a specific training for Industry 4.0 professionals. The latter is geared towards specialists from the shop floor environment and is currently still in the pilot phase.

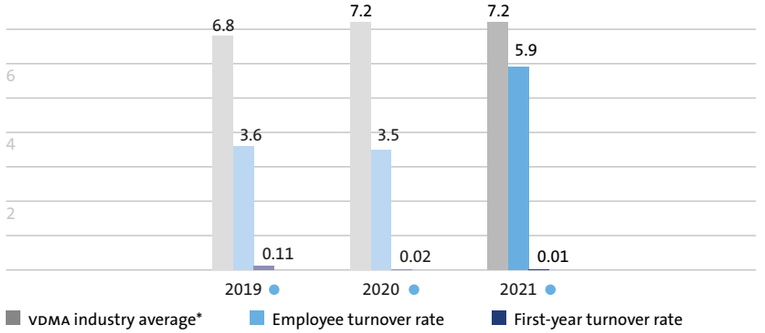
In the area of management development, a programme that was individually designed for the Nittenau plant in 2021 deserves special mention. The programme aims to support managers through the strategic and organisational realignment of their site. One of the methods involves peer mentoring groups. The managers come together for regular meetings in which they discuss overarching issues as well as topics and problems from day-to-day operations. This format gives participants the opportunity to critically reflect on their own actions and to find solutions to different challenges through mutual consultation. To help the participants get used to this method, the discussion sessions were initially organised and guided by an external facilitator. Now that the procedure has become established, the managers continue to hold regular peer mentoring group meetings on their own.

As a technology company with a claim to innovation leadership, we are also examining closely the various concepts that fall under the heading of “new work”. Examples of specific measures we have developed and implemented are the expanded options for mobile working (see earlier in this section) and the introduction of shared desk models. The latter began as pilot projects in selected organisational units and will now, based on the overwhelmingly positive experience, be expanded to additional business units as needed. These measures are supported by investments in the renovation of buildings and the updating of office and IT equipment.

## Krones Group – Employees
(employees covered by and exempt from collective agreements)

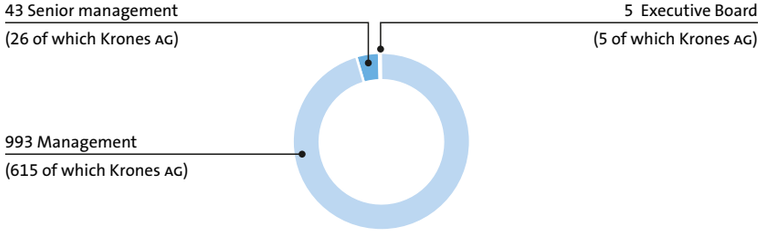



## Krones AG – Employee turnover and first-year turnover
(%, employees covered by and exempt from collective agreements)

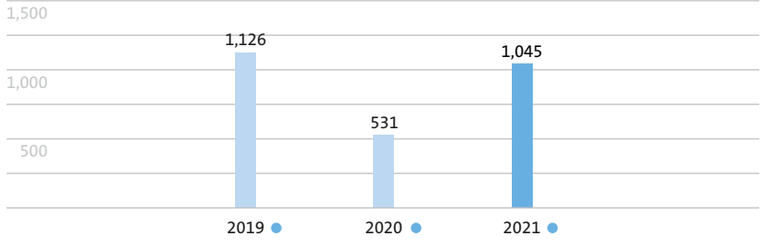



*The German Engineering Federation (VDMA) measures average employee turnover among companies in the machinery sector on a three-year cycle. The figures above are based on the 2020 measurement.

## Krones Group – Management structure in 2021




## Krones AG – Temporary workers

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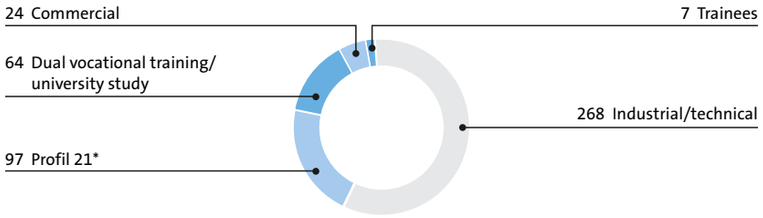
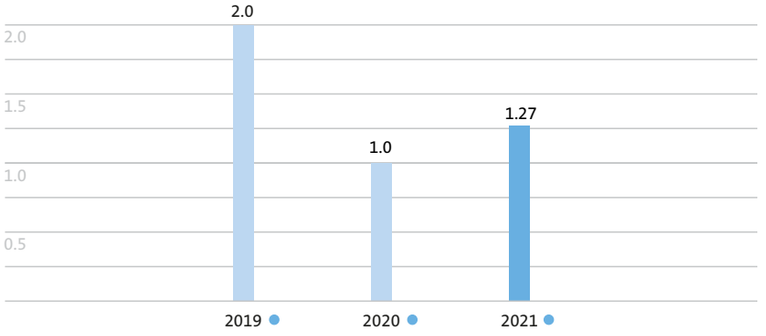
## Krones AG – Vocational training participants by field in 2021

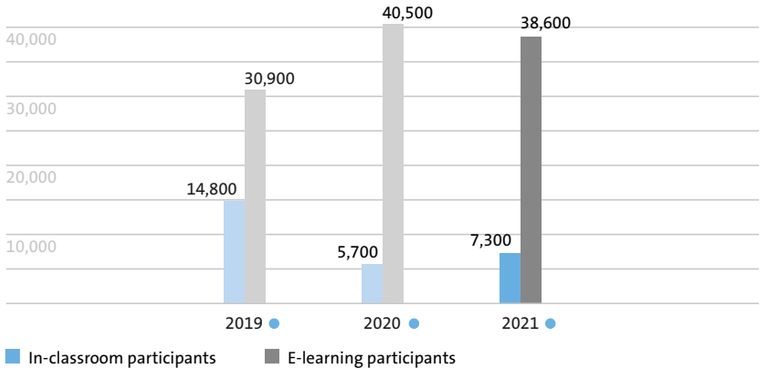



*Profil 21 includes both professional and technical training which gives graduates two separate qualifications at both the journeyman and master craftsman levels.

## Krones AG – Expenditure for training and continuing education (€ million)




## Krones Group – Participation in continuing education opportunities (rounded)

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# Dual vocational training in Nairobi



*The Krones Center in Kenya relies on young, locally trained technicians. In order to ensure they have the best possible qualifications for their job, Krones provides support in various ways, including funding for the construction of a vocational school in Nairobi.*

Krones began training mechatronics technicians locally in Nairobi back in 2015 in partnership with Coca-Cola Sabco and Nairobi Bottlers Limited.

In all over the past six years, 31 trainees have earned a certificate from the German Chambers of Commerce Abroad (AHK) in this way, which opens doors to opportunities on the international labour markets. However, many program graduates needn't spend much time looking there, since they are directly hired by Krones or one of the programme partners. "The programme gives us better trained people who bring with them a great deal of practical experience," reports Henning Post, who is responsible for the company's development and the Academy in East Africa.

There was one important difference between this programme and the German model on which it was based: Since there was no vocational school in the region at the time of the programme's inception, it was only possible to do two years of purely practical training. In 2020, the theoretical portion could finally be added. The groundbreaking for the construction of the vocational school took place in February 2020, and the first cohort – twelve trainees – began the dual vocational training in October of the same year, despite the coronavirus pandemic.

**International teacher exchange**

In order to give the mechatronics technicians the most well-rounded education possible, participants are given experience on a broad range of practical tasks, including in the fields of electrical work, inspection, and filling technology. Learning modules on all aspects of electrical work are a particular focus for Krones.

The instructors themselves also enjoy a great deal of support. For example, last year Krones invited 14 incoming instructors for the Nairobi vocational school to Germany, where they were able to gain pedagogical insights from colleagues at both the Berufliches Schulzentrum Kelheim vocational learning centre and the training centre at Krones' headquarters.

The dual vocational training programme in Nairobi has quickly made a name for itself. Spots in the programme are highly sought after, and more and more young Kenyans are applying. "I knew immediately that this type of training would be right for me," says Mary Maina. She completed her training in 2019 and has been working as a service technician for inspection technology for Krones ever since – quite happily, as she explains: "I feel like I have been well prepared for any challenge or task that comes my way and I'm excited to see what lies ahead."

# Health and safety

## Goal

Reduce both the number of work-related accidents and the number of lost days following workplace accidents per one million hours worked within the Krones Group by 30% by the year 2030 (compared with the base year 2020).

Within the Krones Group, three departments are responsible for the health and safety of our employees: Occupational Safety Management, Occupational Health Management, and the in-house medical service. The goal is to promote employees' health and thus their ability to perform their work, to prevent work hazards, and to keep the number of work-related accidents as low as possible. The underlying strategies rely heavily on prevention. We must be proactive, identifying potential risks and hazards so that we can develop and implement effective countermeasures.

## Organisation

**Occupational safety management**

At Krones AG, the Head of Corporate Safety and Security leads our occupational safety efforts. In organisational terms, this role is subordinated to the Head of Human Resources and Social Affairs. However, with respect to occupational safety management, it reports directly to the CEO.

**Occupational health management**

Health management is part of the HR Health Management organisational unit, which is also subordinated to the Head of Human Resources and Social Affairs. The team plans actions and coordinates the interdisciplinary collaboration between HR, the in-house medical service, Counselling Service, the Occupational Safety and Health team, Works Council, and the company health insurance fund (Krones BKK). Our activities are currently still focused on Krones AG sites.

## Actions and processes

**Occupational safety management**

The concrete process steps involved in ensuring occupational safety are based directly on the needs of the respective sites and departments. These needs are determined based on regular workplace inspections and continuously updated hazard assessments. The continuing COVID-19 pandemic required a constantly changing set of suitable safety measures once again in 2021. These ranged from preventive measures such as shift models that reduce contact to complex evacuations. The latter served to safely return field service employees to their respective home countries or, in the case of infection, to bring them to a suitable medical care facility. In all of Krones' pandemic management, ensuring the health and safety of our employees has been our number one priority. Without exception, any business interests that conflict with that goal, such as continuing to implement customer projects on site, were relegated.

For Krones AG, certification of the occupational safety management system under OHSAS 18001/ISO 45001 was a long-established practice. It served external stakeholders as credible evidence of our efforts to ensure occupational safety. As part of the realignment of our sustainability strategy in 2020, we took a long hard look at this practice and intentionally let the ISO certification of Krones AG and some of our international sites expire in 2021. After reviewing the process, we are now working to develop a new occupational safety strategy. Our aim is to establish external certification as the minimum standard for occupational safety management in our production sites across the group.

When conducting workplace inspections and preparing and updating hazard assessments, the occupational safety specialists work closely with managers and, if necessary, additional employees. The resulting measures are systematically documented and continuously tracked. Their status is regularly reported to management. In the course of the COVID-19 pandemic, we limited the frequency and depth of inspections to the legally mandated minimum. However, they remained just as systematic as ever. When in doubt, we erred on the side of caution to prevent infection: Inspections and similar appointments were and continue to be conducted in person only when they can be done under compliance with preventive measures.

The following processes and preventative actions applied across the company:

**1.1 Consistent communication**

As in the previous years, pre-committees were formed in 2021 in addition to the Workplace Safety Committees that are required by law. In the pre-committees, the Workplace Safety Specialists bring together the managers and Safety Officers directly responsible for various areas within the company to discuss matters relating to employee safety and health and to resolve any issues that arise. The Workplace Safety Specialists then bring selected topics and ideas from these meetings to the respective Workplace Safety Committees.

**1.2 Machine safety**

Our occupational safety management includes two preventive process steps to ensure the safety of production machines that are purchased new. First, through defined minimum requirements that are integrated as mandatory criteria in the centralised technical specifications that our Purchasing department uses as the standard for ordering; second, through rigorous safety testing that all newly purchased production machines must undergo before they are put into operation.

**1.3 Groupwide rollout**

As part of our efforts to reach our 2030 sustainability targets, our occupational safety management is being rolled out successively to the entire Krones Group. In 2021, the Site Experts from the international sites and subsidiaries were trained in the processes for gathering, collecting, and consolidating data. We will build on that, gradually expanding the cooperation between central occupational safety management and the local experts in order to establish an even more effective system of preventive and corrective measures.

**Occupational health management**

Developments in the world of work such as demographic change, longer working lives, and rising expectations of employees' flexibility and ability to work under pressure present new challenges for companies and their employees. Our occupational health management programme aims to maintain and improve the physical and emotional health of our employees, which in turn helps improve performance, motivation, and productivity.

### 2.1 Status quo analyses

Krones AG's health management policy is based on the PDCA (Plan, Do, Check, Act) cycle, which uses two main data sources: detailed analysis of employee disablement and needs analyses based on employee surveys. Together, the cumulative results of the analyses serve as the basis for developing targeted health interventions. In that way, we are able to ensure that our occupational health management activities are aligned to best meet our employees' needs and the needs of the organisation.

In keeping with legal mandates, psychological stress is taken into account separately in hazard assessments. Because it can arise in many areas within the company, our first task is to obtain the most complete picture we can about current stressors at Krones. The aim is to identify those factors that could lead to mental illness as a result of permanent negative stress in order to then reduce them as much as possible.

To this end, we designed the "Creating healthy work environments" ("Gesunde Arbeit mitgestalten") programme. It includes preventive measures as well as a communication campaign aimed at promoting an intentional, unbiased approach to this often taboo subject. The kickoff for its implementation took place in the Nittenau plant in 2021: In an anonymous online survey, employees were encouraged to rate their work environment as relates to psychological stressors. These subjective assessments served as a basis for us to establish risk indices and develop appropriate measures. In addition, all participants received feedback on their individual results so that they could reflect on their personal stressors.

Initial results from the surveys are already available, and we are currently working on translating the subjective individual assessments into overarching conclusions about the stress situation and deriving appropriate measures. After the initial positive experience in Nittenau, we will also roll out the programme to the other German plants.

### 2.2 Promoting good health and preventing illness

Courses and training on promoting good health and preventing illness at our Rosenheim, Nittenau, and Neutraubling plants form the heart of our prevention efforts. The content of our health offerings primarily covers spine health, exercise, relaxation, preventing stress, and eating a healthy, balanced diet. Our workplace wellness programmes include short (15-minute) and intensive (45 to 60-minute) units on the various topics. Internal communications on specific health topics like colon cancer prevention serve as an important tool for raising awareness among employees about their health and thus helping them remain healthy. Due to COVID-19, we were once again unable to offer in-person programming in 2021. As an alternative, we relied on various virtual opportunities. Given the continuing stress resulting from the pandemic, the focus here was on mental health, with dedicated, multi-part webinar series on stress management and resilience. Each of the events consisted of a presentation and a discussion. In order to reach as many employees as possible, the presentation portion was recorded and the video published on Krones' Intranet, which also contains a separate page dedicated to mindfulness, where we provide links to further information about the webinar content.

### 2.3 In-house medical service: Focus on COVID vaccination

The most involved preventive measure in 2021 was the vaccination campaign we conducted across all of our German sites. Krones' crisis management team made the decision to run the campaign back in January, immediately following the start of the general vaccine rollout in Germany. Together with an external medical provider, we developed a concept that was ready for implementation in mid-March, in time for the distribution of vaccines to company medical services in June.

In order to plan for sufficient capacity, we conducted an anonymous survey through the Krones Intranet in April. In it, 6,800 persons (around 70 percent of the German workforce) indicated an interest in getting vaccinated through

Krones AG. In all, some 3,200 people, including family members of staff and employees of local service providers, were vaccinated in specially established vaccination centres in Neutraubling, Nittenau, Raubling, Freising, and Flensburg. As for the far smaller number of vaccinations performed on site compared with the results of our online survey, we attribute that to the fact that many people who had initially expressed an interest will have been vaccinated through their regular doctor or one of the public vaccination sites. Employees who were unable to participate in the 2-month campaign – whether due to scheduling difficulties or because they joined the company after the campaign ended – can still be vaccinated, on request, through the in-house medical service.

## Results

**Occupational health management**

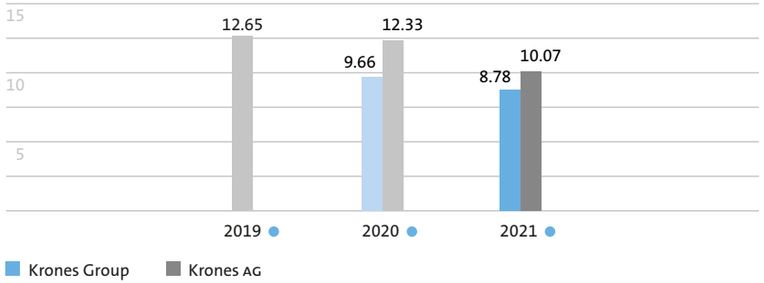
The efforts to optimise spine health, as mentioned in our previous report, were implemented as planned: In a three-month pilot project, employees in the Control Cabinet Production department at our Neutraubling site received individual consultation at their workstation by physical therapists from the RFZ Rückenzentrum Regensburg centre for spinal health. The consultations covered individual training on seated and standing posture that was specially designed for the movements common to these employees' day-to-day work as well as instructions for exercises that can be done to offset the effects of poor posture and to improve their posture. These consultations were complemented by workshops offered in conjunction with Lean Management and the in-house medical service which were aimed at defining new ergonomic standards for the workplace and boosting general health awareness within the company. The pilot project was completed in 2021. The broader rollout will take place in 2022.

As of October, a team member from the physical therapy practice Kalteis is available exclusively to all Krones employees at the Neutraubling plant twice weekly. This opportunity was established to spare employees needing or wanting physical therapy treatment the extra travel time. The services offered include various modalities of treatment ranging from general physiotherapy to breathing therapy as well as traditional massage and preventive treatments. Billing is done either by way of private prescription, which is paid for by private health insurance or on a self-pay basis.

## Occupational safety management

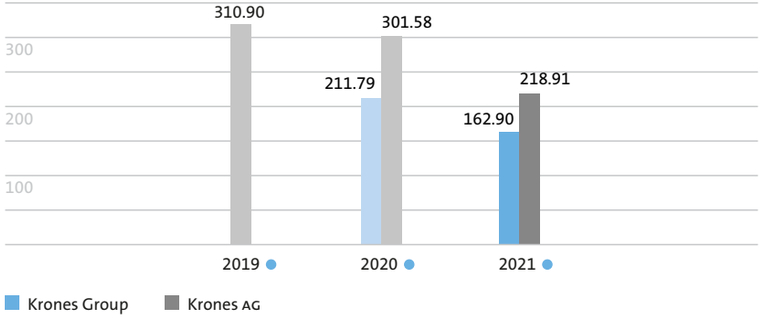
In 2021, the effectiveness of our occupational safety management was reviewed on the basis of quarterly reports to management. The reports included accident statistics, lost days, and costs associated with accidents.

Krones Group – Workplace accidents per 1 million hours worked




*This figure is based on employees covered by and exempt from collective agreements, apprentices, trainees, interns, and working students at Krones AG and does not include temporary workers or contractors. It only includes the number of workplace accidents (excluding commuting accidents) in the current calendar year.*

Krones Group – Lost days following workplace accidents per 1 million hours worked




*This figure is based on employees covered by and exempt from collective agreements, apprentices, trainees, interns, and working students at Krones AG and does not include temporary workers or contractors. Lost days from 1 January 2021 to 31 December 2021 are calculated from the first day lost as a result of the accident and are attributed to the accident. Lost days include every full calendar day (including holidays and weekends if these are included in the certification of the person's incapacity for work). Lost days resulting during the calendar year due to earlier workplace accidents are also included in the calculation.*

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# Living with the coronavirus at Krones: Business trips and service assignments

*What can Krones do to protect employees from COVID-19 when they are travelling abroad for work? And what happens when someone does fall ill? Michael Müller of the Global Safety and Security Department at Krones offers a look into his work.*

**Mr. Müller, what measures has Krones taken to protect employees on service assignments?**

The measures cover the period from the start of a business trip to the employee's return to Germany and factor in all the relevant details, such as travel modalities or destination. The resulting requirements include both basic rules, such as mandatory wearing of masks and regular testing, as well as customer- and country-specific stipulations, which in some cases have even differed from region to region. What's more, for most sites, we now also send employees whose sole task is to ensure compliance with the safety and hygiene concepts and to serve as direct contact persons for our service technicians in the event of any questions relating to COVID-19.

**What does Krones do if a service technician from Germany catches COVID-19 while abroad?**

For Krones, it's clear that we don't want to fill hospital beds, especially in regions with high incidence rates and overburdened health-care systems. And in some countries it would simply be impossible to provide the requisite medical care to German standards.

For these reasons, we launched our own evacuation efforts and flew the employees concerned back to Germany in a private aircraft accompanied by doctors, of course in full compliance with all safety precautions. One of the safety measures taken with serious cases was private transport in a transparent transport pod fitted with special air filters, for instance.

**In such cases, every minute counts …**

Yes, everything does have to happen fast, especially with serious cases. That is why we used all the options available – including helicopters and even private Learjets. But even if we were able to charter a private jet fast, delays were still possible. We still had to obtain permission to fly over all the countries on the route back to Germany. And when it would appear that every detail had been clarified, we still couldn't rely on actually getting the slot for departure promised, not knowing whether perhaps the authorities would give another flight priority.

Story

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# Diversity

## Goals

- Promote diversity within our workforce. With targeted programmes, worldwide talent pools, international thematic communities, and measures aimed at establishing balanced age structures, we seek to connect employees of diverse age groups, genders, nationalities, and career fields and thus inject more flexibility, creativity, and efficiency into our processes.
- As a quantitative incentive for promoting women, the Executive Board announced a binding quota in 2021, under which the share of women in the first two levels of management immediately below the Executive Board within Krones AG is to reach 15 percent by the end of 2024.

Diversity is an important topic for Krones and our stakeholders. Krones signed the Diversity Charter in 2010, thus expressing the company's unequivocal commitment to promoting diversity within the group.

Fairness and mutual respect are among the core values that we not only live by within the group but also want to convey with pride to the outside world. For this reason, we address the topic in very clear terms in our mission statement, which applies across the group and is available to the public on our corporate website.

We are a multinational corporation in which a diversity of cultures, languages, and ways of life come together on equal footing. We are fair and forthright in our interactions, accept responsibility, and make critical decisions. Honesty and transparency inform all of our actions. We are interested in the thoughts and opinions of our employees and partners and are willing to learn from others.

## Organisation

For us, diversity is not an end in itself but rather the very basis of our success. Without our group network of over 100 sites in 55 countries, we would not be able to deliver the quality and speed that our customers rightly expect from us. Maintaining this diversity is an important building block for our future as a business. That is why we have intentionally refrained from establishing a one-size-fits-all diversity policy down to the individual measures across the group. Defining and managing such policies centrally would mean relegating the unique needs of our individual sites in favour of constraints that, though intended to promote diversity, would actually restrict it. Thus, rather than subordinating the companies to a central diversity management, we encourage them to promote diversity as best fits their local circumstances, albeit in keeping with the groupwide emphasis on gender, age structure, and cultural diversity.

## Actions and processes

**Promoting a balanced age structure**

Different life stages entail different needs and challenges. For that reason, we attach great importance to supporting employees of all age groups with suitable measures.

We aim to offer young talents stable and motivating prospects for their future careers. That is why we maintain our broad range of vocational training opportunities and once again hired all of our graduating trainees within Krones AG in 2021, despite the continued difficult economic situation.

Flexible working hours and increased use of mobile working as well as – sometimes temporary – part-time employment enable employees who need to care for children or other family members to reconcile family and work. In 2021, the options for flexible working hours and locations expanded even further. In July, we adopted a revised company agreement on mobile working, under which up to 50 percent of work within an organisational unit can be done remotely to the extent permitted by the individual tasks. The company agreement also grants additional freedoms with respect to workplace, permitting mobile employees to spend up to 25 working days per calendar year in countries outside Germany but within the European Union.

As in Germany as a whole, the average age of Krones AG employees is moving gradually upwards. We take that fact into account by offering options designed specifically for older employees. Partial retirement has been an especially popular tool that we will continue to rely on in the future.

Our catalogue of continuing professional development opportunities also seeks to meet the needs and interests of older employees, promoting the ideal of lifelong learning. In this regard, it is worth highlighting a qualification measure that was carried out in Neutraubling, in which our mechanics were able to reskill to electronics technicians. Some of the programme participants had been with Krones for several decades, and this opportunity opened up entirely new, promising career prospects for them within the group.

**Promoting gender diversity**

Like many other technically oriented companies, we too are faced with the fact that the majority of applications we receive come from male candidates. We are taking a variety of steps to nevertheless establish a balanced gender profile in our workforce.

We publish regular contributions on our social media channels, employee newsletter, and our new online customer magazine to counter gender stereotypes, for example, with portraits of female employees following a variety of training and career paths. As a member of the “Frauen führen” women’s leadership network, we also maintain active dialog with partner companies. Through it, we not only gain important insights into how we can specifically promote women in the company but also gladly share insights into our own working environment. Because the perspectives of women within the company are especially relevant here, female managers from Krones serve as presenters, sharing their experiences and views with the network.

Equality also plays a central role for our locations outside Germany, as this example from the US shows: As an equal opportunity employer, our US subsidiary Krones Inc. bases all of its hiring and promotion decisions exclusively on qualifications and performance criteria and reports demographic data on its workforce to the Equal Employment Opportunity Commission of the US government annually.

**Promoting cultural diversity**

International diversity has played an important role at Krones since its founding. But with the increasing globalisation of the economy as a whole, this topic has become considerably more important.

For us, driving internationalisation is not merely a matter of creating an ever-tighter global corporate network. To remain competitive and ensure our future growth, it is essential that we not only assign operational activities to the regional sites but also entrust them with strategic responsibilities. Likewise, when setting up our manufacturing facility in Debrecen, Hungary, we attached considerable importance to ensuring the plant’s independence from the beginning, for instance by establishing regional management with extensive scope

for decision-making, building new processes that are adapted to the specific local circumstances, and enabling local HR specialists to do their recruiting autonomously.

Understanding and acceptance of cultural differences is an important factor for successful global cooperation. That is why we offer customised intercultural training, e-learning, and individual training to employees who will be posted abroad. We also offer management employees who will be working abroad an opportunity to participate in our Intercultural Leadership Programme (ILP) in their destination country. In this preparatory coaching programme, participants will work on specific intercultural challenges, differences in leadership culture, and personal development goals with a country expert. As part of the ILP, support is also offered throughout the posting.

Although we had reported in our previous report that Krones' Across Borders exchange programme would resume in 2021, that was not possible due to the continuing health crisis. The programme will resume as soon as the global situation allows. However, because we deeply value this means of sharing across our sites, we are currently exploring possibilities for whether and how we might run a scaled-down version of the programme in 2022 that is adapted to the current reality.

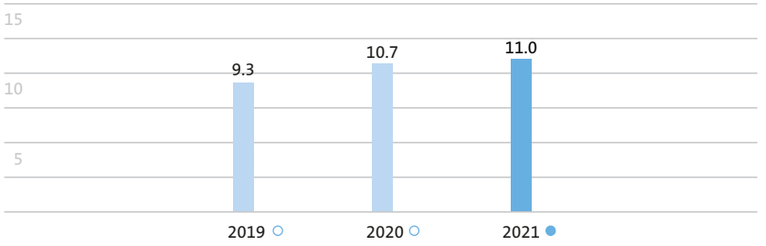
## Results

Our efforts under the header Diversity focused on analysis and conceptual work in 2021. Nonetheless, we have also put the first actions into motion, with an eye to the future.

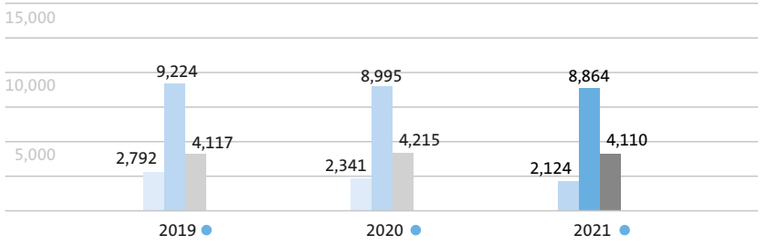
For example, the Human Resources and Corporate Communications departments have created a detailed guide to gender-inclusive language. It encourages employees to be open-minded and self-critical as they reflect on their own usage and offers them various suggestions for how they can be more sensitive in their word choice. With specific examples from the world of Krones, it also explains how inclusive language can be used in our day-to-day communication without sacrificing comprehensibility or becoming overly cumbersome. To promote the guide and its implementation, its publication in 2022 will be accompanied by a corresponding communication campaign.

As a quantitative incentive for promoting women, the Executive Board announced a binding quota in 2021, under which the share of women in the first two levels of management immediately below the Executive Board within Krones AG is to reach 15 percent by the end of 2024.

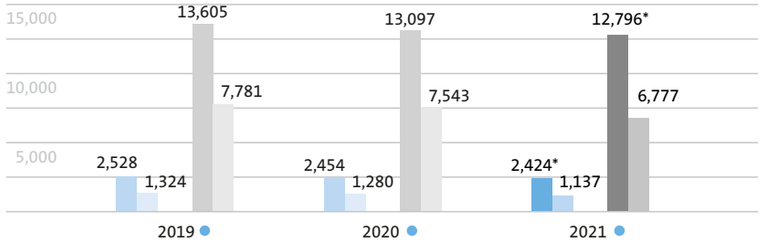
Krones AG – Share of women in the first two levels of management immediately below the Executive Board (%)



## Krones Group – Age structure




## Krones Group – Gender ratio (absolute)

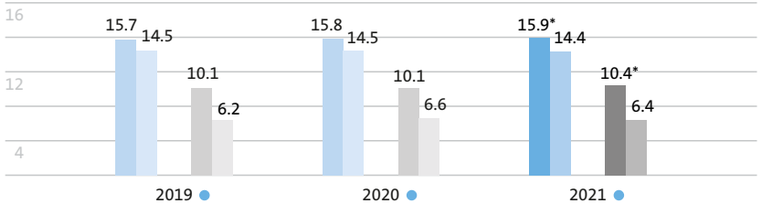



Women
- Krones Group
- of which Krones AG

Men
- Krones Group
- of which Krones AG

*The gender of 22 employees in the group could not be identified.

## Krones Group – Gender ratio (% women)

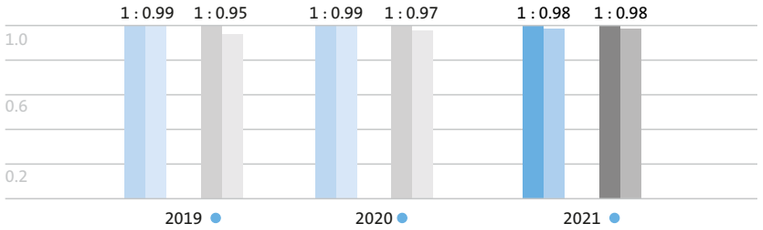



Employees covered by and exempt from collective agreements
- Krones Group
- Krones AG

Management
- Krones Group
- Krones AG

*The gender of 22 employees in the group could not be identified.

## Krones AG – Base salary and pay of men to women




Employees covered by and exempt from collective agreements
- Male
- Female

Management
- Male
- Female

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# “We respect each other and our work”

*Premwadee Mongkolnam has been working for Krones since 2016, most of that time in Service. She is from Thailand, and her background is in economics and management. In January 2021, she assumed responsibility for her first site and supervised the commissioning and installation of two lines at the same time.*

**Ms. Mongkolnam, what do you like most about your job?**

I like that it never gets boring. I am always working on different projects and travelling to different sites. That change of working place is really exciting and it allows me to not only meet new people, but also get to know new cultures and their food.

**Most site managers and also service engineers are men. Is it difficult for you to work in such a male-dominated field?**

I would say that I had to – or wanted to – prove myself a bit more in the beginning. Some of my colleagues wanted to test me, too. But once you know that, you know how to deal with it. Since I don’t have a technical background, I was nervous at the start. But my boss and all my colleagues gave me confidence. They are very lovely, and they respect my work.

My German colleagues are very nice and polite and sometimes almost overprotective, as well. All in all, we are a great team. We respect each other and our work, and everyone on the team is very professional. I definitely trust my colleagues. We all are not only colleagues but also friends.

**Do you have any tips for women who want to work in technical fields as well – as a service technician or even as a site manager at some point?**

My background is economics – and in my experience, it’s all about your interests. I enjoy my work and am eager to learn. And, to be honest, even if you studied mechatronics or electrical technology, working in this special field of manufacturing always means that there is plenty you don’t know yet. So it’s all about collaborating closely, being trained on the machines and gaining experience in the field. I learned from the site manager and engineers I was on-site with. And I think the most important factor for success for women working in the technical field is to have motivation for and joy in your work.



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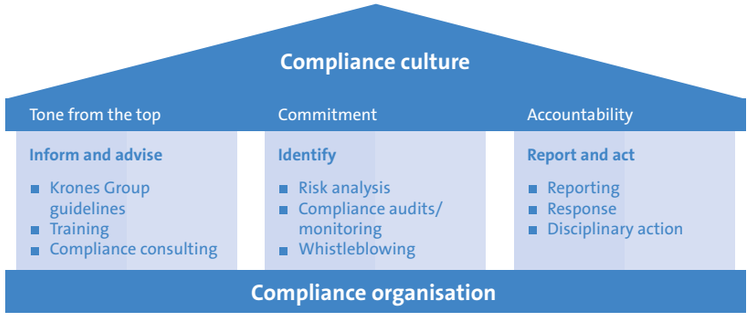
# Compliance

## Goal

Pursue a zero-tolerance policy for compliance violations and raise awareness across the board through effective compliance management – consisting of guidelines, risk analyses, measures, remedial action, and reporting.

Within the Krones Group, compliance stands as an umbrella term for conduct that is in keeping with the law and regulations. However, the rules that apply within the company go beyond the requirements of the law. They also include internal policies and moral values and norms that are aligned with Krones' own ethics and are manifest in Krones' Code of Conduct. The material aspects relevant to our understanding of compliance can be summarised as follows:




In general, Krones' compliance management aims to create a culture of integrity throughout the entire group and thus minimise compliance risks as much as possible.

## Organisation

Strategic and operational responsibility for compliance management rests with the Head of Corporate Governance at Krones AG and an office of the same name at the group level. Establishing this organisational basis for compliance yields advantages in terms of close, fast communication with other corporate governance-related areas such as sustainability.

In addition, the different regions in which Krones sites are located and all subsidiaries with more than 200 employees have their own compliance officers. These officers know the group's central compliance requirements as well as the laws and regulations of their respective regions. For employees on site, they are the direct contact person for all compliance matters.

A governance committee consisting of members of all Executive Board areas also supports the Head of Corporate Governance in an advisory capacity.

## Actions and processes

**Inform and advise**

Various groupwide communication channels are used to convey information to employees depending on the topic and target group:

- **Codes and guidelines**

The Krones Code of Conduct serves as the basis of the Compliance Management System. It was developed with the clear goal of ensuring compliance with laws, standards, policies, and guidelines company-wide and thus creating a working environment characterised by integrity, respect, and fair and responsible conduct. At the same time, the Code of Conduct serves to establish a reliable compliance culture and encourage employees to report irregularities. It applies to

and is binding for all bodies and every employee within the company. In the interest of all employees, violations are systematically investigated and disciplinary action taken.

With concrete scenarios, the Code illustrates the contribution every individual can make towards implementing the principles of conduct within the group. Like the Code of Conduct, the Krones Supplier Code covers the company's central compliance rules for service providers and suppliers.

Supplementary compliance guidelines, which also apply across the group, make concrete the fundamental normative principles of the Code of Conduct for specific applications, such as fair and proper competition and fighting money laundering and corruption.

### Training programme

We provide mandatory training programmes as part of our efforts to establish a culture of compliance throughout the entire company. For employees with a PC workstation, this training consists of comprehensive basic e-learning on the reasons, scope, and specific content of Krones' compliance culture. Employees must also complete a refresher e-learning course every two years. For employees without a PC workstation, instruction is the responsibility of the respective managers.

A second training series is dedicated to the topic of anti-corruption and is designed especially for employees in Sales and Purchasing. This training is also an e-learning course. Participation in and completion of all training courses are the responsibility of the respective managers and are documented accordingly.

### Knowledge transfer

As part of our information and consulting activities, certain topics have emerged that are of particular interest to employees or that often prompt questions because of their complexity. We see potential here for additional awareness training and are therefore currently preparing a podcast series to address them.

This communication channel has not yet been used in the group, and we chose it for two reasons: One the one hand, it is a popular format and we would like to meet employees where they are in terms of current media use and therefore give the topic of compliance a broader platform. On the other hand, we view podcasts as a suitable means for dealing with complex topics in a way that is both entertaining and deeply informative. We are currently in the planning phase of content concept and technical implementation. The first episode is slated for release in 2022 and will kick off a multipart series.

## Identify

### Risk analysis

The compliance risk analysis covers risks relating to the following:

- Governance
- Active and passive corruption
- Cartels
- Health, safety, security, and environment
- Money laundering
- Fraud

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The results of this risk analysis are aggregated at the level of the business areas and the regions and visualised on a risk overview developed specifically for each business area and region. The results are also bundled into our groupwide risk analysis. Additional compliance-related risks may be addressed by the individual departments or may be part of the general groupwide risk analysis.

Due to the travel restrictions imposed in response to the COVID-19 pandemic, planned risk analyses involving first-time on-site visits had to be postponed on short notice, and the focus shifted to the compliance reviews that had been planned for 2021, which were done virtually.

In order to make our processes more efficient, we invested in a new compliance software solution. It enables the Corporate Governance team to conduct and analyse compliance risk analyses within a software environment. It also makes it possible for the management of Krones companies to analyse their compliance risks themselves in a self-assessment procedure. The preparation phase for the launch was successfully completed in 2021. In 2022, the management will begin launching the self-assessments. In this way, we will be able to conduct annual compliance risk analyses in all group companies.

### Due diligence audits

In order to meet a number of national and international regulatory requirements, due diligence audits are conducted on customers, agents, suppliers, and third-party payers. That gives the group a tool for process-integrated monitoring of business partners in high-risk countries for compliance incidents, provided that the necessary data is publicly accessible. Any findings trigger an in-depth due diligence audit by Corporate Governance, in which additional sources of information are tapped in order to plausibility check and assess the finding.

### Report and act

Besides regular standard audits, the Head of Corporate Governance conducts spot checks – particularly of processes with increased compliance risk such as the reporting of travel expenses – to verify the effectiveness of our compliance culture. If he detects a suspected or actual compliance incident, “report and act” kicks in. It involves case management and disciplinary action. Knowledge gained through this process is used to develop and implement new actions as necessary and reasonable.

### Reporting

Clear lines of reporting apply to compliance. The Compliance Officers in the regions report to the Head of Corporate Governance, who in turn reports to the Supervisory Board’s Audit and Risk Committee once a year. The Head of Corporate Governance also regularly reports to the Executive Board and the governance committee in the latter’s quarterly meetings, presenting developments in the past quarter and further plans. The committee offers opinions in an advisory capacity.

### Help desk and Krones Integrity

Group employees seeking information about compliance-related matters or wishing to report possible violations can speak with their immediate superior or use any of three additional channels:

- Contact the Compliance Officer, the Head of Corporate Governance, or his team directly
- Phone the helpdesk or email *compliance@krones.com*
- Submit a report through the Krones Integrity online portal

The Krones Integrity online portal is available to group employees and to third parties who identify compliance gaps relating to Krones. To ensure the highest levels of access protection and data protection for users and to ensure encrypted content and a secure connection, the system is operated by an independent third-party provider. The whistleblower can decide whether to give the tip anonymously or with contact information.

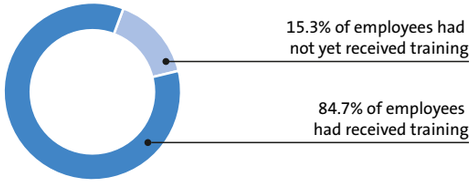
The growing number of submissions received through Krones Integrity suggests broad acceptance of the system among employees. As reports have increased, so too has the number of special investigations. All compliance-related matters and tips that are brought to the help desk or Krones Integrity are documented for further processing and evaluation.

In all, six tips were received through Krones Integrity, while 29 tips were received through other channels. Every tip is followed up and plausibility tested and then, if applicable, put to a deeper investigation and possible disciplinary action taken.

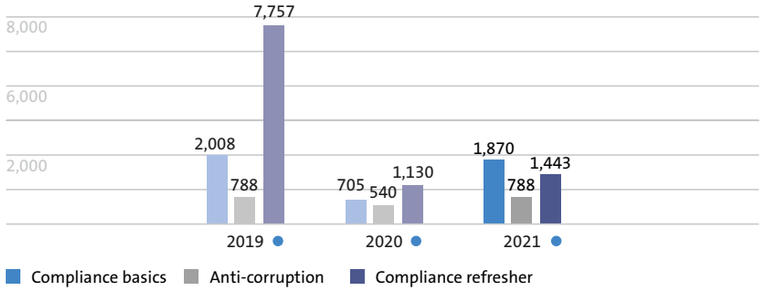
## Results

Krones Group – Compliance training 2021

Percentage of employees within the Krones Group who have received compliance training at least once as of the end of 2021



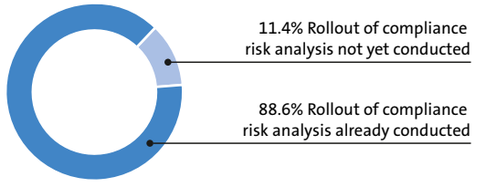

Krones Group – Compliance training (in-person and e-learning)




*The compliance basics course is mandatory for every new employee and every new manager within the Krones Group. It must be completed within the first three months of employment and may be taken as an e-learning course, instruction from a manager, or an in-classroom course. The anti-corruption training is relevant for employees who have regular third-party contact with customers, suppliers, and government offices. The refresher training was implemented throughout Krones AG in 2019 and will be successively rolled out worldwide. It serves to refresh the basic content every two to three years. In all, due to COVID-19, fewer training sessions were done than in the years before the pandemic. That is because no on-site compliance rollouts took place. Nevertheless, the transition to virtual trainings (e-learning and classroom training via Microsoft Teams) advanced in 2021.*

Krones Group – Compliance risk analyses 2021

Percentage of group covered by compliance risk analyses, based on the number of employees in the Krones Group

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# Insights into the Krones compliance network

*Richard Gahagan heads up the two Krones subsidiaries in Australia and New Zealand as Managing Director – and he's also one of the 11 Compliance Officers in the Krones world.*

**Richard, what are your duties as Compliance Officer?**

The job that my team and I have is to make sure that the Asia/Pacific region is compliant, in other words that all rules and regulations – whether statutory or within the company – are observed.

**What are the typical compliance issues in your region?**

In day-to-day business it starts with relatively simple questions, such as: What are the rules applicable for dealings with our customers? What do you have to keep in mind when agreeing contracts? What policies and requirements have to be observed? In addition to that, though, I'm also responsible for investigating compliance breaches or where there is a suspicion of breaches. Should such an event be reported, it is my duty to look into the matter and take the appropriate action.

**What is your experience in general of the cooperation within the Krones compliance network?**

It's very enriching, there's no doubt about that. The international compliance team gets together in regular online meetings and maintains very open lines of communication. We discuss a lot, share our experiences and offer each other advice – so everyone benefits.

**The basic principles of the compliance culture in the group are set out in the Krones Code of Conduct. As well as data protection, anti-corruption and human rights, it also addresses the issue of "sustainability". How relevant is that for your region?**

Extremely relevant. The issue of sustainability is at least as great in the Asia/Pacific sphere as it is in Europe – and especially here in Australia. We've got to meet very strict requirements imposed not only by our country governments, but also by our regional customers. It's not just about protecting the environment or reducing $CO_2$ emissions, though. Our customers are also asking us very specifically as to what the diversity in our workforce looks like, for instance, or what the employment working conditions are at our sites.

**How would you yourself assess this trend?**

I can only welcome it. I believe that sustainability affects us all, and every single one of us should get to grips with it. And not simply in order to keep the customer satisfied, perhaps, or gain plus points with our line manager. Our motivation should be to leave a healthier and happier world behind for our grandchildren and great-grandchildren than the one we live in today.

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# Human rights

## Goal

Pursue a zero-tolerance policy for human rights violations and raise awareness across the board through effective human rights management – consisting of guidelines, risk analyses, measures, remedial action, and reporting.

Fairness, mutual respect, and tolerance are fundamental values that inform the Krones Group's culture. Every member of the group is expected to honour these values and use them as a guide for their own actions. That expectation is clearly and unequivocally stated in the Krones mission statement, our Code of Conduct, and our leadership principles, which apply across the group.

Because we do business globally, we consider human rights due diligence imperative along our entire value chain. We base our human rights due diligence primarily on the following guidance:

- UN Global Compact
- International Labour Organization (ILO)
- Base Code of the Ethical Trading Initiative (ETI)
- OECD Guidance

## Organisation

Under Krones' Code of Conduct, all employees – particularly those in managerial roles – are responsible for ensuring that human rights standards are upheld at every point along our value chain. The strategic management of our human rights policy and the operational steering, implementation, and monitoring of measures and processes in the Krones Group are incumbent upon the Corporate Governance office. Affected departments such as Compliance, HR, Purchasing, Supplier Management, and Sales are drawn into the process as needed – for instance, if a possible human rights violation is reported.

## Actions and processes

**Group policy on human rights and labour standards**

Our Human Rights and Labour Standards policy establishes uniform minimum standards for sustainable, fair working conditions in our own operating and work processes across the group. The provisions of the policy cover topics such as formal employment relationships, fighting discrimination at work, and health and safety and define a basic set of rules that apply in every one of the Krones Group's establishments unless other legal or regulatory provisions go beyond them. The policy applies to all employees within the Krones Group, although managers and supervisors in particular – especially department heads, managing directors, and plant managers – bear responsibility for compliance with human rights due diligence in their teams and at their sites.

**Human rights in the Code of Conduct und Supplier Code**

In order to ensure that human rights due diligence in our company's value chain is lastingly communicated to all relevant parties, the topic "respect for human rights" is a central chapter of both the Code of Conduct and the Supplier Code of the Krones Group. The two documents describe and prescribe standards of conduct. They use fictional examples to clarify what a human rights violation might look like. The Codes also obligate all group employees and suppliers to respect human rights and report any violations. The Code of Conduct and Supplier Code are binding documents across the group, and non-compliance of any kind or severity can result in disciplinary action. Above and beyond the policy, Code of Conduct, and Supplier Code, we also publish an annual statement on the UK Modern Slavery Act.

**Human rights risk analysis in the supply chain**

In 2021, we conducted a human rights risk analysis – which we had last done in 2019 – to assess the likelihood of possible human rights violations within our upstream supply chains. As reported in detail in the "Sustainable supply chain" section of this report (see page 71), we had a database-supported risk assessment done on two sustainability issues with the help of a third-party service provider. One of the topics on which the assessment focused was human rights. On the basis of purchasing volume, country of origin and producing country as well as the products and services supplied, potential hotspots for human rights violations were identified – not only for Tier 1 suppliers but also those deeper down the supply chain. In order to make risk assessment for this complex topic as tangible as possible, the database uses the metric of "risk working hours". Our Human Rights Management will now concentrate on those suppliers and supply chains rated as highest risk.

**Due diligence audits along the value chain**

As another aspect of our due diligence with respect to human rights, the Krones Group conducts due diligence audits on its partners along the entire supply chain. The CG Compliance department leads these efforts (see page 62) and, in so doing, obtains information not only about corruption, money laundering, or incidents with general legal implications but also about cases of environmental pollution or human rights violations. In a prescribed process, any due diligence findings that relate specifically to human rights abuses or risks are forwarded directly to CG Sustainability, where the case is assessed and, if applicable, passed on to the responsible person in Sales, Purchasing, or Supplier Management.

**Human rights-related questionnaires and audits**

Within our processes for sustainable supply chain management, surveys and audits serve as the key means for checking compliance with provisions relating to human rights and labour law (see page 71). As part of the supplier vetting process, certain supplier groups are asked specifically about human rights topics using standardised questionnaires. In the quality audits for supplier management, aspects like contracts, working hours, and occupational safety are also included. In addition, in 2021, social audits with a focus on human rights and labour standards were conducted on selected suppliers. The audit format, which has been in use since 2020, has thus become established as yet another pillar of our human rights due diligence.

**Human rights within the Krones Integrity reporting system**

Krones Integrity is an online portal through which employees, business partners, and third parties can submit tips about violations of laws or internal rules – either anonymously or with contact information. It can be accessed from the corporate website. It is also possible to clearly flag tips that relate to human rights violations as such and thus for responders to handle them accordingly. Information submitted is reviewed by the relevant teams. If a violation has, in fact, occurred, suitable action is taken to remedy the situation as quickly as possible.

## Results

The planned expansion of the Human Rights Management system and implementation of additional measures in existing HR, purchasing, and audit processes, announced previously, is progressing. In 2021, the Human Rights and Labour Standards policy was communicated across the group by way of the regional governance representatives. Communications were also issued through internal channels to amplify the message. The renewed human rights risk analysis was completed at the end of 2021 and serves as the basis for human rights management in the upstream value chain. As part of the social audit conducted this year on selected higher-risk suppliers, a means for making formal statements on specific audit findings was established for the first time. That enables us to better document and track critical findings.

# Well prepared for the new regulations

***In 2023, a new supply chain due diligence law will enter into force in Germany. The goal is to minimise human rights and environmental risks in supply chains, and it's a seed that's fallen on fertile ground at Krones.***

The Act on Corporate Due Diligence in Supply Chains (Supply Chain Due Diligence Act – LkSG) was passed with the intention of identifying, preventing, or minimising the risk of human rights abuses and environmental degradation. It not only defines corresponding preventive and remedial measures but also obliges companies to set up a whistleblower system and publish regular reports. The due diligence obligations cover both the company's own business and the actions of contractual partners and suppliers. Thus, the responsibility of a company no longer ends at its own gates but extends along its entire supply chain.

**Sustainability as a purchasing criterion**

The law requires that companies issue policy statements on the topic. At Krones, these are already in place in the form of our Code of Conduct, our internal human rights guidelines, and the Supplier Code, in which the topic of human rights holds a prominent place. As a further step, the law prescribes an analysis of sustainability risks in the supply chain. Krones has been working with an external service provider since 2021 that is using a database to examine the entire supply chain for human rights risks and emission intensity.

Since 2020, Krones has also been conducting social audits on certain supplier groups with elevated human rights risk in order to consistently enforce our zero-tolerance policy for human rights violations in the supply chain.

**Using existing compliance processes**

To raise awareness among all persons involved within the group, Krones relies on both the Krones Integrity reporting portal and training measures. All employees are required to complete a compliance refresher course through e-learning every two or three years, in which they also give serious thought to topics that include the protection of human rights. Adding to that, in 2022, a specific e-learning programme on remedial and preventive measures will be launched. This course is designed especially for employees who work in Purchasing or Sales or on construction sites.

**Cooperation within the industry**

Another aspect of our approach is to cooperate with other companies. In a working group of the German Engineering Federation (VDMA), Krones shares views and experiences with other companies on the topic of human rights and together the companies seek to develop collaborative solutions. In this way, we are able to address certain challenges in a collective effort and have a greater impact on upstream supply chains.

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# Sustainable supply chain

## Goals

- Increase the material efficiency and sustainability of the raw materials used in the manufacture of our products.
- Evaluate 100 percent of suppliers who account for purchasing volumes of 1,000,000 euros or more against sustainability criteria by 2030.

Sustainability is a responsibility that runs the entire length of our value chain. As the markets have become increasingly globalised, Krones has steadily grown its global footprint through regional sourcing of materials, components, and services. Besides the strategic benefits like cost efficiency, closeness to customers, and increased use of the expertise of our employees worldwide, this has also yielded benefits in terms of sustainability, such as reduced transport distances. At the same time, the gradual relocation of supply chains to the regions also presents challenges in terms of sustainability and responsibility.

## Organisation

Within the Krones Group, procurement and supplier management are distributed across a network of central strategic functions and decentralised operating units. The starting and end points are the Product Lines, which act as internal customers that submit their needs for materials and services to the respective decentralised purchasing departments. As we gradually decentralise our procurement activities, more and more purchasing functions are delegated to the regions and subsidiaries. The Corporate Procurement department, which reports directly to the Executive Board member responsible for Finance and Controlling, is the hub for all aspects of procurement management. Supplier Quality Management operates in parallel, driving the vetting, assessment, and development of suppliers.

In addition, our Supply Chain Governance Board meets quarterly to ensure the sustainability of our purchasing and supplier relationships. The board consists of management from Corporate Governance, Corporate Procurement und Supplier Quality Management, who focus specifically on sustainability and compliance topics within the supply chain.

## Actions and processes

**Supplier Code and procurement policy are the foundation**

Krones' Supplier Code defines the company's requirements of business partners in terms of sustainability and social responsibility. It applies across the group, and suppliers are contractually bound through our general terms and conditions to comply with its provisions. If there is documented non-compliance with these rules, we work with the supplier to determine corrective action based on the severity of the violation. This may go as far as termination of the business relationship.

Like the Krones Code of Conduct, the Supplier Code contains sections that deal explicitly with the topics of human rights, data protection, and quality, health and safety, and environment. The channels for reporting violations and irregularities are also addressed.

Beyond the Supplier Code, key actions and processes are governed by a procurement policy that applies groupwide and was revised in 2021. Krones AG and its

subsidiaries implement the provisions of this policy, taking into account business- and region-specific considerations. Supplier management is done in six stages, each of which is a process in and of itself. The processes' objective is to establish transparency with respect to the performance, quality, and sustainability of Krones suppliers.

**Due diligence audits for identifying risks**

As an additional process to ensure our due diligence in the supply chain, the Corporate Governance department continuously performs due diligence audits on existing and new suppliers. By way of an established online tool, the names of existing and new suppliers to the Krones Group can be checked for any involvement in business related to legal, compliance, environmental, and human rights violations. The information in the tool is based on publicly available sources of all kinds. The resulting findings are first examined by experts from Corporate Governance and then – after an assessment of the case by the Supply Chain Governance Board – forwarded to the corresponding office within Procurement and Supplier Management. The due diligence audits make possible process-integrated monitoring of suppliers in high-risk countries and industries for possible violations of the principles of doing business sustainably and responsibly. The results are aggregated and used in the groupwide risk analysis.

**Database-supported risk assessment for topics of focus**

In order to gain more transparency on sustainability-related risks in our global supply chain, we commissioned a new database-supported risk assessment at the end of 2021. The analysis is focused on the topics of human rights and greenhouse gas emissions. With the help of an external service provider, the Krones Group's supplier base is being evaluated against a database on the basis of purchasing volume, country of origin or production, and the products and services delivered. The results will enable us to identify potential risk hotspots with respect to human rights abuses and emissions intensity in our upstream supply chain – not only for Tier 1 suppliers but also deeper down the supply chain. The new risk assessment serves as the basis for further steps such as targeted surveys, audits or development talks with suppliers. The results are expected to be available in early 2022.

**Questionnaires as a tool for vetting suppliers and raising awareness**

Besides assessments on the basis of publicly available information and specific databases, we also let our business partners speak for themselves. During the registration process, potential suppliers are first asked to provide general information about their company. In this step, they must agree to uphold the Krones' Supplier Code. Suppliers are then vetted on the basis of specific criteria depending on the product group. Topics relating to sustainability, such as environmental protection and occupational safety, are also made part of this process for certain supplier groups through a standardised questionnaire. Suppliers are generally only approved after they have been completely vetted and deemed qualified. The basic questionnaire, from which the specific versions for the different supplier groups are developed, include targeted questions about human rights and compliance. Supplier Quality Management tracks the individual questionnaires while Corporate Governance takes care of evaluating the responses and documentation.

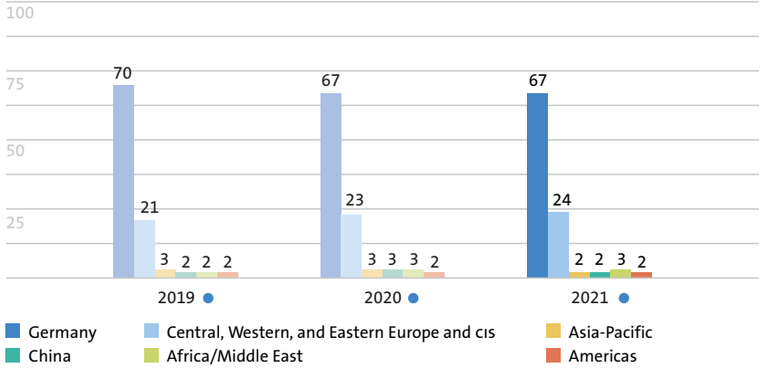
**Risk-based audits for verifying effectiveness**

Once a business relationship is established, suppliers are evaluated on a regular basis. Selected suppliers' environmental, occupational safety, and quality management are reviewed through risk-based product and system audits. The focus is on possible weaknesses, risks, and improvement potential of the audited management systems. Any necessary remedial actions are determined by the audited organisation and coordinated with those responsible for carrying out the actions. Purchasing, Quality Management, and the respective departments collaborate closely on the reviews that make up the audit.

As of 2020, we conduct additional social audits above and beyond the regular product and system audits on selected suppliers. Because of travel restrictions and hygiene measures, these audits were done in a digital format. The audit, which covered the supplier group installation service providers, focused specifically on topics relating to all aspects of human rights and working conditions. The Corporate Governance and Internal Audit departments were in charge of the social audit, which complements existing supplier management audits and is also conducted on selected suppliers.

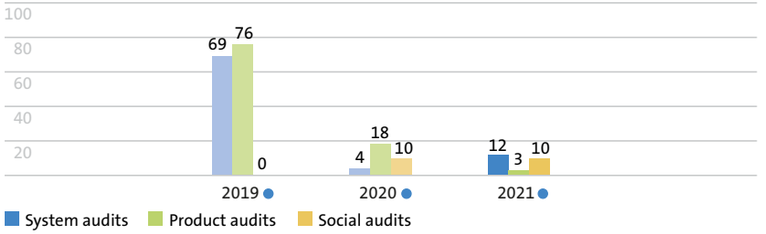
## Results

Krones AG – Purchasing volume by region of origin (% of total)*




*Rounding may result in the presentation in the graphic totalling more or less than 100%.

Krones AG – Number of system, product, and social audits on suppliers




The low number of system and product audits compared to previous years can be attributed to travel restrictions imposed as a result of the COVID-19 pandemic.

Krones AG – Key raw materials sourced (metric tonnes)

Data collected from Krones AG's largest suppliers serves as the basis for calculating the raw material tonnages. In addition, the figures also include some estimated values, to present the sourced materials as fully as possible.

# Knowing our strengths and using them

***Change is not always easy. Especially in uncertain times. But, as Krones' Nittenau plant has shown, it can also be fun.***

Within Krones' value chain, the Nittenau plant serves as an internal supplier, delivering manufactured parts and pre-assembled modules to the downstream production areas. For this, the plant can draw from an enormous pool of technologies and expertise. "Whether we're talking about aluminium, stainless, cast parts, or welded assemblies, we can not only process a wide variety of materials but also cover the entire range of processing steps, from blanks to the finished, coated part," says plant manager Markus Riedlbauer. "There aren't many of us on the market who can handle this level of complexity. That, combined with the logistical advantage of being located just 38 kilometres from the main plant, puts us in a unique position."

**Reorganized and ready for the future**

It's a trump card that needs to be played well. Which is precisely why the plant took the opportunity for a strategic and organisational realignment, to more closely tune its operations to Krones' value creation strategy. It meant concentrating existing resources on the things that Nittenau does best – and that bring the greatest big-picture benefit to Krones. Specifically, that means the manufacture of piece parts and larger parts and the assembly of modules. Volume production, which had previously also been done at the plant, has been completely outsourced to third-party vendors, because relatively simple parts that are needed in large quantities are easy to buy on the international market.

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# About this report

This report combines the separate consolidated non-financial report for the Krones Group and the separate non-financial report for Krones AG in accordance with Sections 315b and 315c of the German Commercial Code (Handelsgesetzbuch, HGB) in conjunction with Sections 289b through 289e HGB. For the sake of better readability, we will refer to it here simply as the “Non-financial Report“. The Non-financial Report 2021 is publicly available at Krones’ website under *Company/Responsibility/Sustainability/Download*.

The Non-financial Report for the financial year 2021 has been reviewed by the Supervisory Board of Krones AG. In addition, by order of the Supervisory Board, this report has been audited by ERNST & YOUNG GMBH, Wirtschaftsprüfungsgesellschaft, under consideration of the International Standard on Assurance Engagements (ISAE) 3000 (Revised): “Assurance Engagements other than Audits or Reviews of Historical Financial Information”, published by the International Auditing and Assurance Standards Board (IAASB) under a Limited Assurance Engagement with respect to the disclosures required by law under Sections 315b and 315c in conjunction with Sections 289b through 289e HGB. This report includes disclosures beyond those required by law. Any information that is unaudited is set against a shaded background and marked with the open circle symbol “○“ in the margin.

# **Key Facts** about the Non-financial Report 2021

**Medium**
The Non-financial Report serves as the central means for transparently disclosing the sustainability performance of Krones AG and the Krones Group. It contains the qualitative and quantitative non-financial information on sustainability topics that are material to the company.

**Content**
The content of this report relates to the financial year 2021 and has been derived directly from the Krones Group's materiality matrix, which applies equally to Krones AG. In developing the materiality analysis, we have taken into account the disclosure requirements of the German CSR Directive Implementation Act (CSR-RUG). In addition to the disclosures required under Section 289c (3) HGB and its definition of materiality, we also report on community engagement because it is relevant to our stakeholders.

**Scope**
German Accounting Standard 20 requires disclosure of the policies pursued by the parent entity with respect to reportable aspects and topics. In this report, we have clearly indicated which policies apply to Krones AG and which apply across the group. We do not report on policies that apply only to individual subsidiaries. Information about the consolidated group can be found on page 142 of the Krones Group Annual Report.

**Content verification**
Unless otherwise noted, all content, data, and figures are disclosures required under the German CSR Directive Implementation Act and have been audited for their accuracy. Details of the verification process can be found under the heading "About this report". Additional information is presented for some topics of material interest in order to lend added transparency for our stakeholders but is not subject to verification under the CSR Directive Implementation Act. These unaudited portions are clearly separated from audited text and set against a shaded background. Unaudited prior-year figures are likewise marked as such.

**Key performance indicators**
We do not track key (management-related) non-financial performance indicators for the policies presented here.

**Risks**
In collaboration with Risk Management and with managers and experts from the various departments, we conducted a risk analysis with respect to the likelihood of an event and its potential negative impact on the reportable aspects. The analysis revealed no risks with a high likelihood of an event and severe negative impact with respect to the company's own business activity, business relationships, products, or services.

**Alignment**
We have based our presentation of policies on the Global Reporting Initiative's guidance. In preparing this report, we have not applied any one national or international sustainability reporting framework to its full extent. The existing frameworks are based on a definition of materiality that is not in keeping with the German CSR Directive Implementation Act.

# EU Taxonomy

## Objective and overview of requirements

With the EU Taxonomy Regulation [Regulation (EU) 2020/852] and the associated delegated acts, the European Union seeks to promote the transition to a sustainable economy. In order to fulfil these new transparency requirements, the Krones Group in (the reporting year) 2021 the Krones Group established processes that make it possible to determine what proportion of revenue, CapEx, and OpEx come from sustainable economic activities. Due to the disclosure requirements under Article 8 of the Taxonomy Regulation (EU) 2020/852 in conjunction with Article 10 of the delegated act (EU) 2021/C(2021) 4987 final version from 6 July 2021, the focus of the KPIs reported here is on taxonomy-eligible activities. Then, in the report on the year 2022, we will show what share of taxonomy-eligible activities qualifies as environmentally sustainable under the Taxonomy Regulation ("taxonomy-aligned"). Due to possible changes in the application of the EU Taxonomy, it must be noted that the data may not be collected continuously.

## Organisation

In a first step, an internal task force involving Corporate Governance, Product Sustainability, Investor Relations, and Controlling conducted an analysis of the economic activities of the Krones Group. In selecting the relevant economic activities, the task force used the NACE codes for orientation. These codes make up a system for classifying business activities, and the EU Taxonomy Regulation references them explicitly. Based on the descriptions of EU Taxonomy activities, a qualitative content reconciliation was done to identify which of the Krones Group's economic activities are taxonomy-eligible.

## Relevant activities and determining KPIs

Pursuant to the Annex to Delegated Act C (2021) 2800 final from 4 June 2021, the EU Taxonomy activities 3.6 and 9.1 apply to the Krones Group. Activity 3.6 refers to the manufacture of Krones enviro machines, the recycling machines, and components of energy self-sufficient breweries. Because of their high energy and media efficiency, these technologies enable our customers to significantly reduce their greenhouse gas emissions. These Krones machines therefore fall within the description of activity 3.6, which includes the manufacture of technologies aimed at substantial GHG emission reductions in other sectors of the economy. Consulting activities in factory planning dedicated to adaptation to climate change can be categorised under activity 9.1. This activity is described in Annex II of Delegated Act C (2021) 2800 final. Activities 3.6 and 9.1 are revenue-based and are therefore reported as taxonomy-eligible revenue. Moreover, Krones was able to determine the relevance of the non-core activities 4.15, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 8.1 and 9.1. Activity 9.1 refers to research and development expenditure and thus to Annex I of Delegated Act C (2021) 2800 final. These non-core activities are individual measures taken by the Krones Group that are to be categorised as taxonomy-eligible pursuant to Annexes I and II of Delegated Act C (2021) 2800 final. Therefore, they are taken into account in the KPIs OpEx and/or CapEx. In all, the revenue KPI refers to the consolidated financial statements of the Krones Group. CapEx includes additions to tangible and intangible assets as well as right-of-use assets. Costs associated with research and development and maintenance are included in the KPI OpEx. The KPIs presented here must be viewed with the fact in mind that the EU Taxonomy does not yet fully apply to the Krones Group because material economic activities are not in the catalogue of EU Taxonomy activities.

audited

| Economic activities (1) | Code (2) | Absolute revenue (3) | Proportion of revenue (4) |
|---|---|---|---|
| | | € | % |
| **A. Taxonomy-eligible activities (A.1 + A.2)** | | | |
| A1. Environmentally sustainable activities (taxonomy-aligned) | | | |
| Revenue from environmentally sustainable activities (taxonomy-aligned) (A.1) | | – | – |
| A.2 Taxonomy-eligible, but not environmentally sustainable activities (non-taxonomy-aligned activities) | | | |
| Revenue from taxonomy-eligible, but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2) | | 87,200,000 | 2.4 |
| **B. Taxonomy-non-eligible activities** | | | |
| Revenue from taxonomy-non-eligible activities (B) | | 3,547,300,000 | 97.6 |
| **Total (A+B)** | | 3,634,500,000 | 100 |

| Economic activities (1) | Code (2) | Absolute CapEx (3) | Proportion of CapEx (4) |
|---|---|---|---|
| | | € | % |
| **A. Taxonomy-eligible activities (A.1 + A.2)** | | | |
| A1. Environmentally sustainable activities (taxonomy-aligned) | | | |
| CapEx from environmentally sustainable activities (taxonomy-aligned) (A.1) | | – | – |
| A.2 Taxonomy-eligible, but not environmentally sustainable activities (non-taxonomy-aligned activities) | | | |
| CapEx from taxonomy-eligible, but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2) | | 2,100,000 | 1.5 |
| **B. Taxonomy-non-eligible activities** | | | |
| CapEx from taxonomy-non-eligible activities | | 139,200,000 | 98.5 |
| **Total (A+B)** | | 141,300,000 | 100 |

| Economic activities (1) | Code (2) | Absolute OpEx (3) | Proportion of OpEx (4) |
|---|---|---|---|
| | | € | % |
| **A. Taxonomy-eligible activities (A.1 + A.2)** | | | |
| A1. Environmentally sustainable activities (taxonomy-aligned) | | | |
| OpEx from environmentally sustainable activities (taxonomy-aligned) (A.1) | | – | – |
| A.2 Taxonomy-eligible, but not environmentally sustainable activities (non-taxonomy-aligned activities) | | | |
| OpEx from taxonomy-eligible, but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2) | | 8,600,000 | 7.2 |
| **B. Taxonomy-non-eligible activities** | | | |
| OpEx from taxonomy-non-eligible activities | | 110,200,000 | 92.8 |
| **Total (A+B)** | | 118,800,000 | 100 |

audited

## Independent auditor's report on a limited assurance engagement

To Krones AG, Neutraubling

We have performed a limited assurance engagement on the non-financial report of Krones AG, Neutraubling, (thereinafter the "Company"), which is combined with the non-financial report of the Group, for the period from 01 January 2021 to 31 December 2021 (thereinafter the "non-financial report").

Not subject to our assurance engagement are any information marked as unaudited by a colored background and any disclosures for prior year marked by "○".

### Responsibilities of the executive directors

The executive directors of the Company are responsible for the preparation of the non-financial report in accordance with Sec. 315c in conjunction with Sec. 289c to 289e HGB ["Handelsgesetzbuch": German Commercial Code] and Article 8 of Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (thereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder as well as in accordance with their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as set out in section 3 "EU-Taxonomy" of the non-financial report.

These responsibilities of the Company's executive directors include the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as the executive directors consider necessary to enable the preparation of a non-financial report that is free from material misstatement, whether due to fraud (manipulation of the non-financial report) or error.

The EU Taxonomy Regulation and the Delegated Acts adopted thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, the executive directors have disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in section 3 "EU-Taxonomy" of the non-financial report. They are responsible for the defensibility of this interpretation. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

### Independence and quality assurance of the auditor's firm

We have complied with the German professional requirements on independence as well as other professional conduct requirements.

Our audit firm applies the national legal requirements and professional pronouncements – in particular the BS WP/vBP ["Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors]) in the exercise of their Profession and the IDW Standard on Quality Management issued by the Institute of Public Auditors in Germany (IDW): Requirements for Quality Management in the Audit Firm (IDW QS 1) and accordingly maintains a comprehensive quality management system that includes documented policies and procedures with regard to compliance with professional ethical requirements, professional standards as well as relevant statutory and other legal requirements.

## Responsibilities of the auditor

Our responsibility is to express a conclusion with limited assurance on the non-financial report based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the Company's non-financial report is not prepared, in all material respects, in accordance with Sec. 315c in conjunction with Sec. 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors disclosed in section 3 "EU-Taxonomy" of the non-financial report. Not subject to our assurance engagement are any information marked as unaudited by a colored background and any disclosures for prior year marked by "○".

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the auditor.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the sustainability organization and stakeholder engagement,
- Inquiries of the employees regarding the selection of topics for the non-financial report, the risk assessment and the policies of the Company and the Group for the topics identified as material,
- Inquiries of employees of the Company and the Group responsible for data capture and consolidation as well as the preparation of the non-financial report, to evaluate the reporting system, the data capture and compilation methods as well as internal controls to the extent relevant for the assurance of the disclosures in the non-financial report,
- Identification of likely risks of material misstatement in the non-financial report,
- Analytical procedures on selected disclosures in the non-financial report at the level of the Company and the Group,
- Reconciliation of selected disclosures with the corresponding data in the annual financial statements and management report,
- Evaluation of the process to identify the economic activities taxonomy-eligible and the corresponding disclosures in the non-financial report,
- Evaluation of the presentation of the non-financial report.

In determining the disclosures in accordance with Art. 8 of the EU Taxonomy Regulation, the executive directors are required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

## Assurance conclusion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the non-financial report of the Company for the period from 01 January 2021 to 31 December 2021 is not prepared, in all material respects, in accordance with Sec. 315c in conjunction with Sec. 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors as disclosed in section 3 "EU-Taxonomy" of the non-financial report.

We do not express an assurance conclusion on any information marked as unaudited by a colored background and any disclosures for prior year marked by "○".

## Restriction of use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. As a result, it may not be suitable for another purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company alone. We do not accept any responsibility to third parties. Our assurance conclusion is not modified in this respect.

## General Engagement Terms and Liability

The "General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]" dated 01 January 2017 are applicable to this engagement and also govern our relations with third parties in the context of this engagement (*www.de.ey.com/general-engagement-terms*). In addition, please refer to the liability provisions contained there in no. 9 and to the exclusion of liability towards third parties. We accept no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we will not update the report to reflect events or circumstances arising after it was issued, unless required to do so by law. It is the sole responsibility of anyone taking note of the summarized result of our work contained in this report to decide whether and in what way this information is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Munich, 16 March 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

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Wirtschaftsprüferin
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| | |
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This English language report is a translation of the original German Krones Konzern Nichtfinanzieller Bericht 2021. In case of discrepancies the German text shall prevail.

The original German report can be found on our website under the heading Sustainability.

## Audit opinion key

- ● *audited*
- ○ *unaudited*

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