Krones Group Annual Report 2021

sustainable.digital

KRONES

2021 highlights

- Krones recovered very well in 2021 from the pandemic-related recession in 2020. The company improved revenue by 9.4% to €3,634.5 million.
- Order intake increased by 30.5% and reached an all-time record level of €4,316.2 million.
- Krones significantly improved profitability. EBITDA increased from €133.2 million to €312.6 million. The EBITDA margin thus improved in 2021 to 8.6% (previous year: 4.0%). Adjusted for one-off effects, the EBITDA margin was 8.1%, compared to 6.2% in the previous year.
- Krones generated free cash flow of €203.3 million in the reporting year (previous year: €221.3 million).
- In view of the positive business performance, the company intends to pay a dividend for 2021 of €1.40 per share (previous year: €0.06 per share).
- For the full year 2022, the Executive Board forecasts revenue growth of 5% to 8% with an improved EBITDA margin of 8% to 9% and ROCE of 10% to 12% (2021: 10.0%).

		2021	2020	Change
Revenue	€ million	3,634.5	3,322.7	+9.4%
Order intake	€ million	4,316.2	3,307.0	+30.5%
Order backlog at 31 December	€ million	1,893.0	1,211.3	+56.3%
EBITDA	€ million	312.6	133.2	+134.7%
EBITDA margin	%	8.6	4.0	+4.6 PP*
EBIT	€ million	170.9	−40.8	–
EBT	€ million	177.3	−36.6	–
EBT margin	%	4.9	−1.1	+6.0 PP*
Consolidated net income	€ million	141.4	−79.7	–
Earnings per share	€	4.47	−2.52	–
Dividend per share	€	1.40**	0.06	–
Capital expenditure for PP&E and intangible assets	€ million	104.9	93.8	+€11.1 million
Free cash flow	€ million	203.3	221.3	−€18.0 million
Net cash at 31 December***	€ million	378.3	184.9	+€193.4 million
Working capital to revenue****	%	24.8	28.3	−3.5 PP*
ROCE	%	10.0	−2.2	+12.2 PP*
Employees at 31 December				
Worldwide		16,303	16,736	−433
Germany		9,821	10,364	−543
Outside Germany		6,482	6,372	+110

*Percentage points **As per proposal for the appropriation of earnings available for distribution
***Cash and cash equivalents less debt ****Average of last 4 quarters

1

TO OUR SHAREHOLDERS

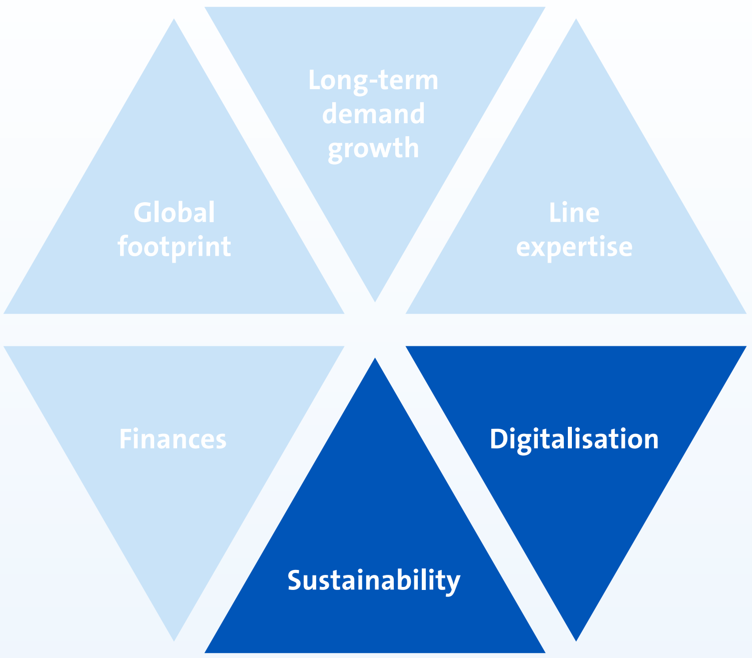
sustainable.digital

After showcasing six major strengths of Krones under the heading “Focus on strengths” in our 2020 Annual Report, this year we present two of those strengths in greater detail: **sustainability** and **digitalisation**.

Both of these play a major role for Krones’ customers, who want to cut resource use and shrink their carbon footprint. Further digitalising beverage plants also enables customers to reduce production and labour costs and to increase production efficiency. This places a key focus on innovative products and services to enhance customer benefit in terms of both digitalisation and sustainability.

Under the heading of **sustainable.**digital in this Annual Report, we present examples of Krones’ successful sustainability and digitalisation activities.

Krones’ strengths



Sustainability

Krones contributes to the **solution** of **three major challenges** facing humanity

Sustainability is not only the responsible way forward. It is of existential importance. Enormous challenges confront the entire human race. The first priority is to combat climate change in order to avert irreversible harm. At the same time, an adequate food supply for the growing world population has to be ensured for the long term. Another global problem is plastic waste, which has severe impacts on our environment.

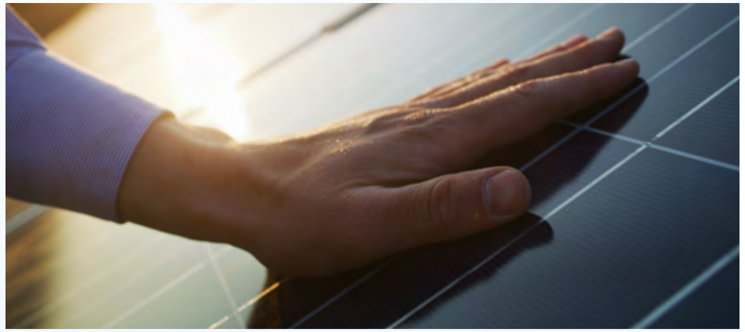
Krones has the technologies and knowhow to help meet these huge challenges. And it already has them today. We gained this head start as a result of our early commitment to sustainability.

Feeding the world

- Smaller process losses
- Less food waste
- Alternative protein sources

Combating climate change

- Low-carbon production
- Energy-efficient enviro solutions
- Less food waste



Avoiding plastic waste

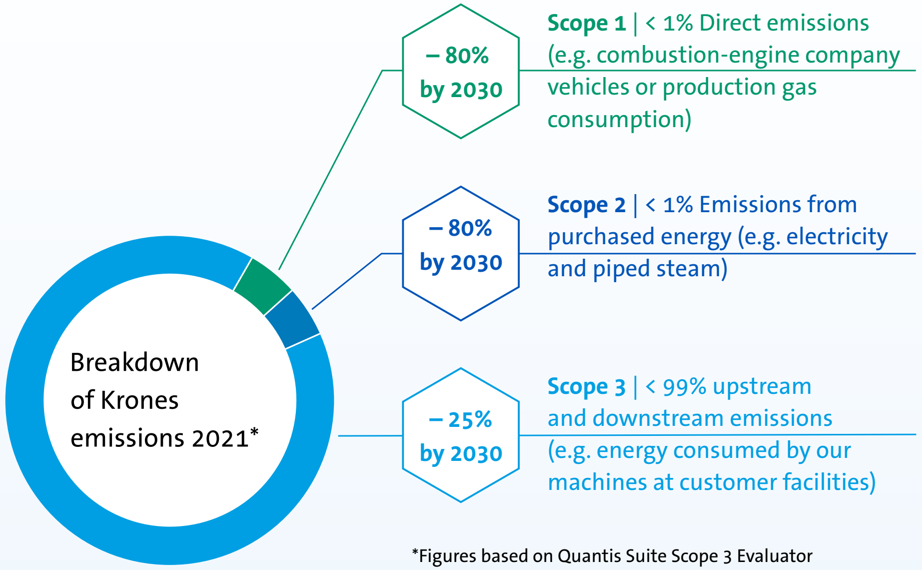
- Recyclable packaging
- Plastics recycling solutions
- Circular economy

Sustainability | Combating climate change

Krones climate targets **focus on customer benefit**

In its climate strategy, Krones has set ambitious targets for reducing the company's carbon footprint. By 2030, relative to the 2019 base year, we aim to **reduce both Scope 1 and Scope 2** greenhouse gas emissions **by 80%**. These comprise all emissions generated by Krones itself – for example in production or from the consumption of purchased energy.

A particularly important emission category, however, consists of Scope 3 emissions. These make up about 98% of Krones' total carbon footprint. Scope 3 emissions mostly arise from the use of our products in customers' production facilities. We have already been able to cut these emissions significantly in recent years with our enviro sustainability programme. However, we will continue to identify ways of reducing them further so that our lines use even less energy and other media. Overall, we target up to a **25% reduction in Scope 3** greenhouse gas emissions **by 2030**. Our customers will benefit from this.



*Figures based on Quantis Suite Scope 3 Evaluator

Sustainability | Combating climate change

Krones enviro – the industry standard for product sustainability

The enviro sustainability program reflects our aim of providing efficient and environment-friendly technologies for the production of safe and high-quality liquid foods – for the benefit of our customers.

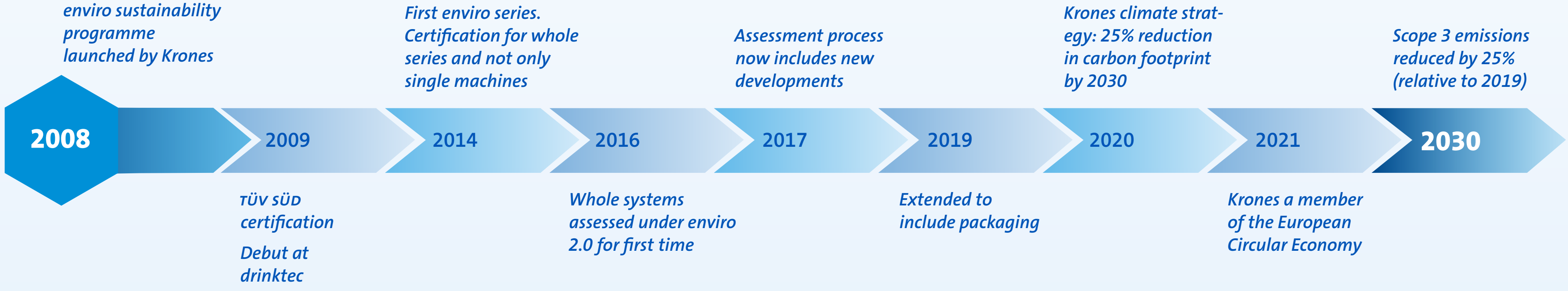
Many Krones customers have adopted ambitious sustainability targets. We help them achieve those targets. The key here is energy and resource-efficient machines and lines. The enviro sustainability programme has been a central element of product sustainability at Krones ever since 2008.

With enviro, we offer our customers real added value. Thanks to technical innovations, enviro products consume significantly less energy, water and other operating materials than standard machines. Those savings are not achieved at the expense of performance. Beverage producers generate higher earnings over the entire line life cycle. In addition to the economic benefits, their lower resource consumption has a positive impact on customer's carbon and climate footprint.

Krones has continuously developed enviro over the years. Initially, only individual machines carried the enviro label. Today, entire systems are certified. Since 2019, in order to minimise the environmental impact of beverage and food packaging, Krones has also assessed innovative packaging solutions according to enviro criteria.

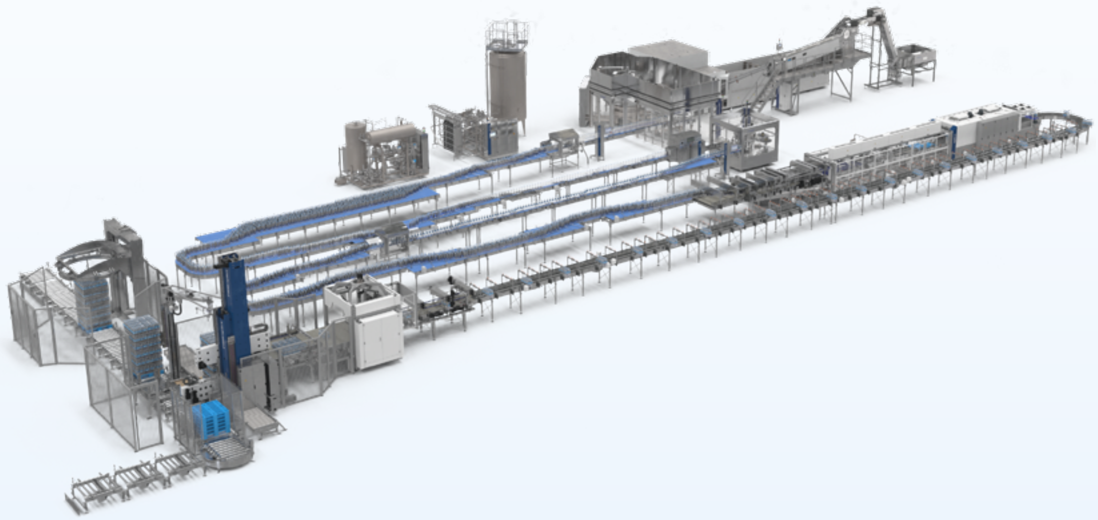
enviro as value driver in research and development

Development activities at Krones are aligned to specific value drivers. One such value driver is "environmentally friendly", targeting minimum consumption of energy and media, zero-waste production and sustainable packaging.

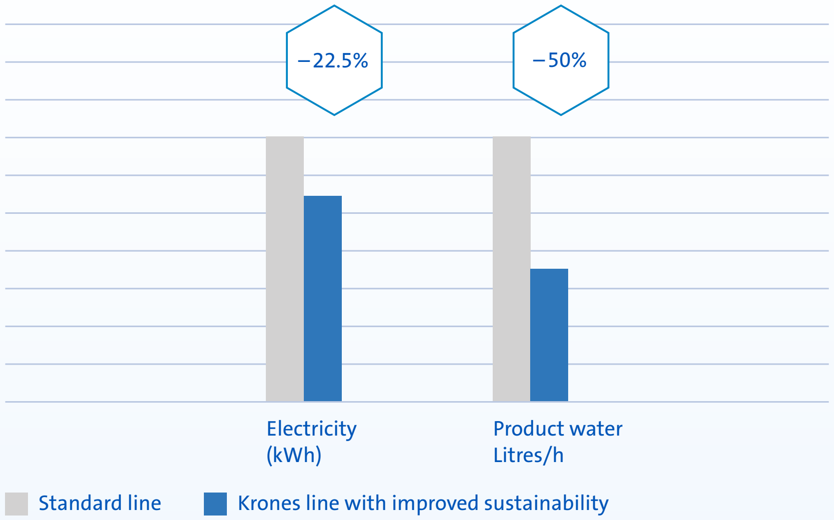


Krones enviro in figures: **major resource savings**

Numerous enviro machines and lines are now in operation at our customers' production facilities. One example is a PET filling and packaging line for soft drinks that uses **22.5% less electricity and 50% less water** than a standard line. Each of the various machines within the line uses all enviro options. The Contiform 3 Pro stretch blow-moulding machine, for example, saves a lot of energy due to the innovative heating chamber when inflating PET preforms.



Top performance with reduced carbon footprint



The PET line for soft drinks in non-returnable 1.5-litre bottles has a capacity of 36,000 bottles per hour. Because it uses all enviro options, it consumes significantly less electricity and water than a standard line and therefore has lower greenhouse gas emissions.

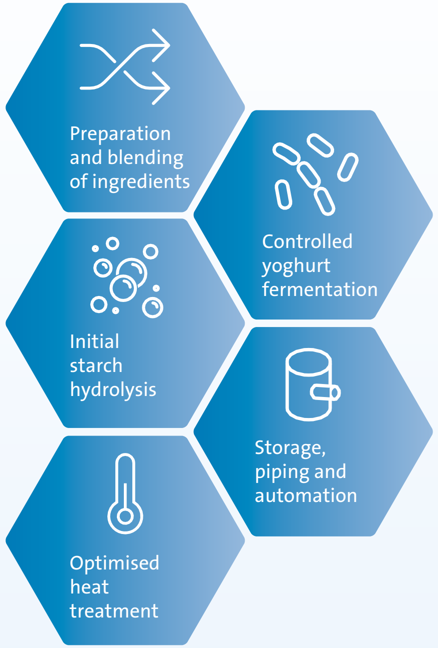
Feeding people sustainably with alternative proteins

The world's human population of around eight billion is matched many times over by the number of farm animals bred to feed them. These consume huge quantities of valuable resources such as feed and water. Livestock farming has a gigantic global carbon footprint. Providing people with alternative proteins is therefore a valuable contribution towards combating climate change. On the whole, plant proteins are still in their infancy, but technological progress is advancing at a rapid pace.

Yoghurt without milk, but with plenty of flavour

A flagship project for how Krones is positioning itself in the growth market for alternative proteins can be found in Russia. We supplied producer Sady Predonia with the entire process technology for the production of non-dairy yoghurt products.

Milk production generates substantial quantities of greenhouse gases. Available in a range of flavours, the oat yoghurt is a full substitute for dairy-based yoghurt. The line we installed at Sady Predonia incorporates the wide-ranging expertise of Krones subsidiary Milkron. All operations, including pretreatment and blending of ingredients, optimum heat treatment, automation and storage, are provided by Milkron.



Krones subsidiary Milkron supplied the entire process technology for the dairy-free yoghurt products project at Sady Predonia.

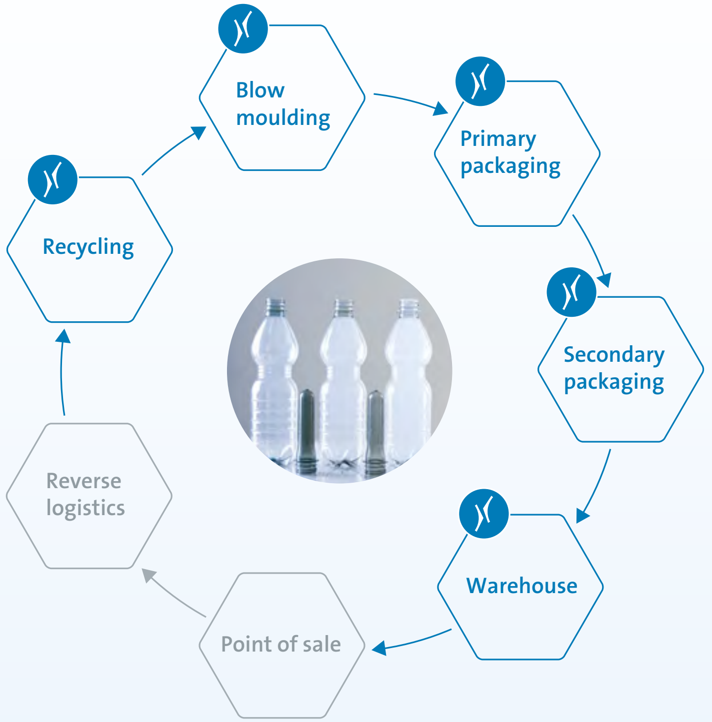
Avoiding plastic waste with recycling

Every year, eight million tonnes of plastic waste end up in the world's oceans. As a leading supplier of PET filling and packaging technology, Krones works together with customers to combat the problem of plastic waste. The key to success lies in a functioning circular economy. Krones has the right solutions on hand for this purpose, from material-saving packaging design and low-energy container production to recycling used plastics. Our MetaPure PET recycling system plays a key role here.

PET recycling increasing rapidly in importance

Inside MetaPure, used plastic bottles are first pre-sorted and reduced to flakes. After washing, the flakes pass through a decontamination module. The end product of the sophisticated process is food-grade recycled PET (rPET), which the beverage industry can use as the raw material for new bottles.

We expect rapidly growing customer demand for our MetaPure PET recycling line in the years ahead. Around 10% of the plastic bottles filled on Krones' new lines in 2021 were recycled in MetaPure. By 2023, we expect to see this rate almost double to over 18%.



Technologies from Krones ensure that the circular economy for plastic packaging really works. A core element is PET recycling.

Digitalisation

Krones.world – **all digital services** on a single platform

We are only at the start of the journey with the digital beverage plant. But more and more customers are embracing Krones' digital eco-system. The number of new lines on our digital platform is some 30% and rising.

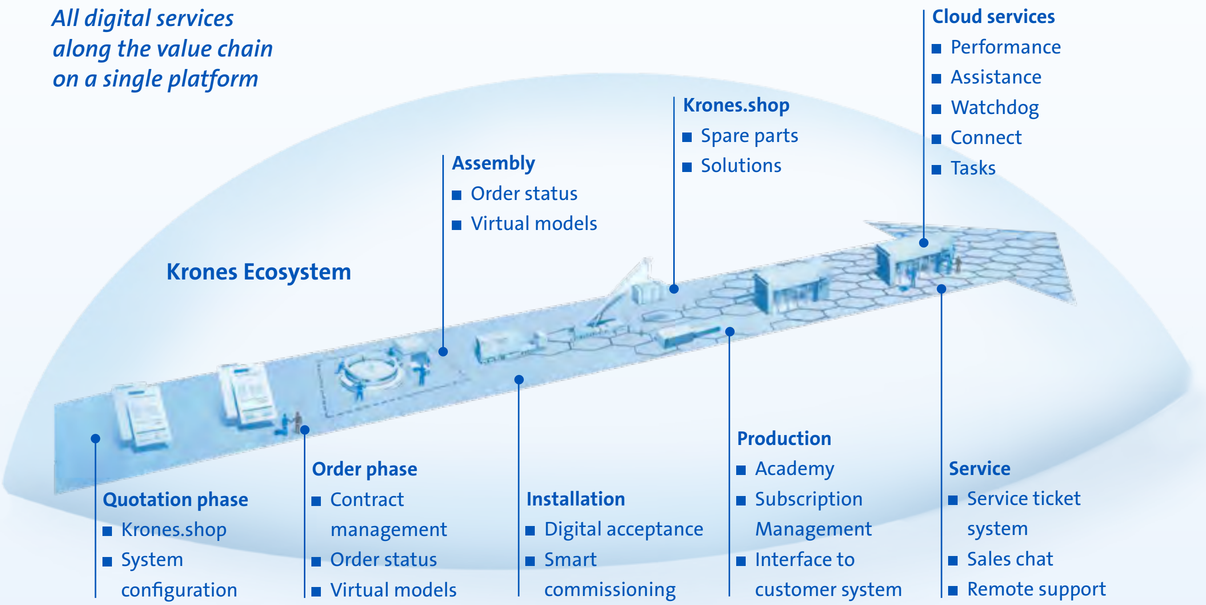
Our Krones.world portal gives plant operators one-stop access to all Krones digital services on the web, wherever they are and with any device. Customers' machines and lines just have to be set up to deliver digital data to the cloud (we call this Connected Line). For this purpose, Krones has incorporated the ReadyKit edge device into all new lines since 2020. Older lines can be retrofitted.

The central component of Krones.world is an Industrial Internet of Things (IIoT) platform (page 13). This collects all relevant machine and plant data, providing the basis for a wide variety of digital services, such as our Performance tool (page 14). Our customers also have access in Krones.world to Krones.shop (page 15) and digital support.

By using the digital services, customers improve the efficiency of their machines and lines, and cut costs. This delivers reductions in total cost of ownership (TCO).

Krones' goal is to operate a line over its entire life cycle via digital service centres. This applies right from the start – even in configuration at the quote phase. On-site commissioning, too, can be done remotely online. During operation, it analyses the data, detects any anomalies and predicts problems. Based on this, we can send customers recommendations on what to do, thus enabling proactive production planning. Krones provides this data-driven production optimisation on the basis of service-level agreements, with continuously increasing levels of automation.

All digital services along the value chain on a single platform



Digitalisation

Krones makes **beverage plants more efficient** with digital machine data

With the Krones Industrial Internet of Things (IIoT) platform, the company is once again setting standards in the beverage and liquid food industry. All data sent by the machines is stored in the cloud. Customers and – if they allow – Krones can securely access the data at any time, anywhere, and with any device.

Based on the collected data, Krones provides a range of applications or **digital services** on the platform. These give customers full realtime visibility of their production operations. The high level of transparency and smart data analysis make it possible to identify and act on any potential for improvement. That increases production quality and reduces operating costs.

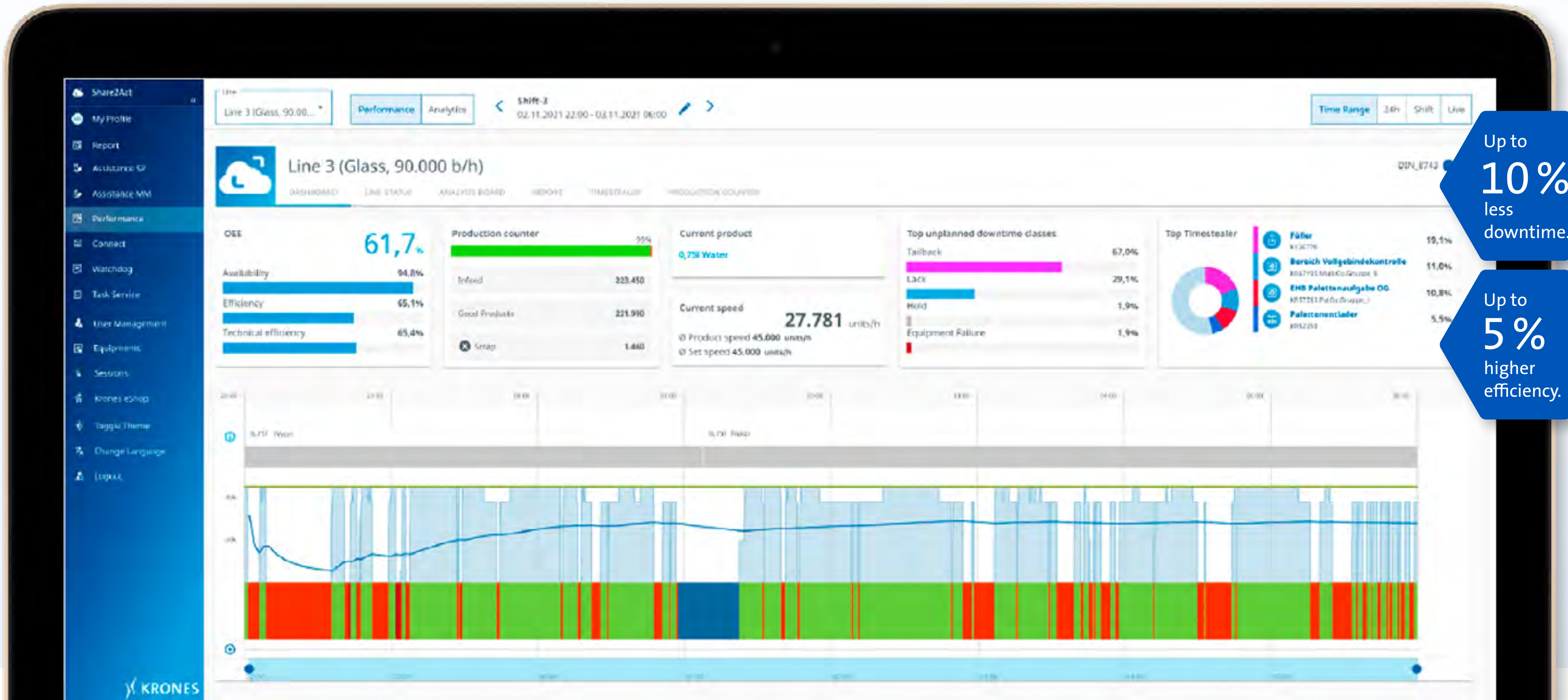
We provide each customer with a custom-tailored range of digital services. The individual applications are functionally complementary, interoperate seamlessly and share information. This enables us to avoid presenting the same data multiple times.

Our digital services are under ongoing development with the rollout of new applications. An example is our Performance tool, which we briefly present on the next page.

Digitalisation

Performance: all key data at a glance

The key role of the IIoT platform is our **Performance** application. This tool displays all key performance indicators (KPIs) in real time, including **overall equipment effectiveness (OEE), units produced, malfunctions** and **speed losses.** It also precisely identifies what parts of the system are causing downtime (timestealers). This makes for easier and faster trouble-shooting. Overall, the Performance tool delivers up to 10% less downtime and up to 5% higher efficiency.



Up to 10 % less downtime.

Up to 5 % higher efficiency.

Digitalisation

Krones.shop: the leading online shop in the beverage and liquid food industry

Using **Krones.shop**, our customers can quickly and easily order spare parts, components and services for their machines and lines online. With the aid of personal user profiles, we proactively offer customers products and services that are precisely tailored to their machinery and equipment. That enhances customer loyalty and satisfaction.

Our now more than 25,000 registered users can choose from **around six million products**. Alongside spare parts, Krones also sells a wide range of LCS products via the online platform, including upgrades, inventory packages and training. The company already conducts over 15% of its LCS business through Krones.shop.

Krones.shop also offers interesting solutions regarding sustainability. As well as physical shipment, spare parts ordered from Krones.shop can be delivered in digital form. Krones sends a digital blueprint for the client to produce the required part right there on a 3D printer. That saves not only money, but also transportation and so cuts carbon emissions.

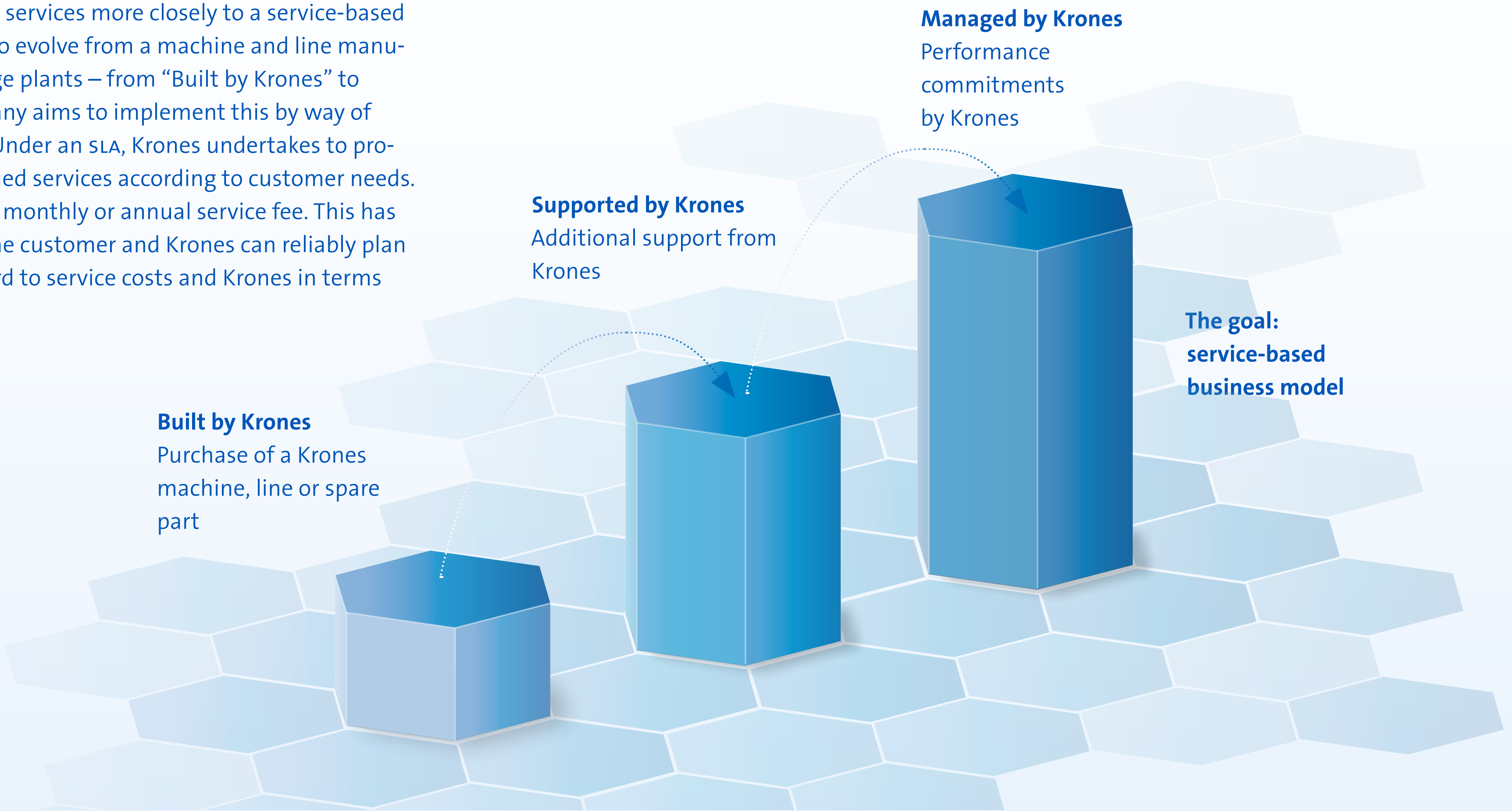
What Krones.shop has to offer:

- Over six million parts
- LCS products (upgrades, storage packages, training, etc.)
- Downloads for 3D printing of spare parts
- Over 25,000 registered users
- Available in 181 countries (more than Amazon)
- Over 30,000 visits per month
- Over 15% of the LCS business is handled via Krones.shop

Digitalisation

Digital Services: from “**Built by** Krones” to “**Managed by** Krones”

With the IIoT platform and Krones.shop, Krones.world provides the basis for aligning Krones products and services more closely to a service-based business model. Krones’ goal is to evolve from a machine and line manufacturer to a manager of beverage plants – from “Built by Krones” to “Managed by Krones”. The company aims to implement this by way of service level agreements (SLAs). Under an SLA, Krones undertakes to provide a plant operator with specified services according to customer needs. In return, Krones receives a fixed monthly or annual service fee. This has the great advantage that both the customer and Krones can reliably plan ahead – the customer with regard to service costs and Krones in terms of income.



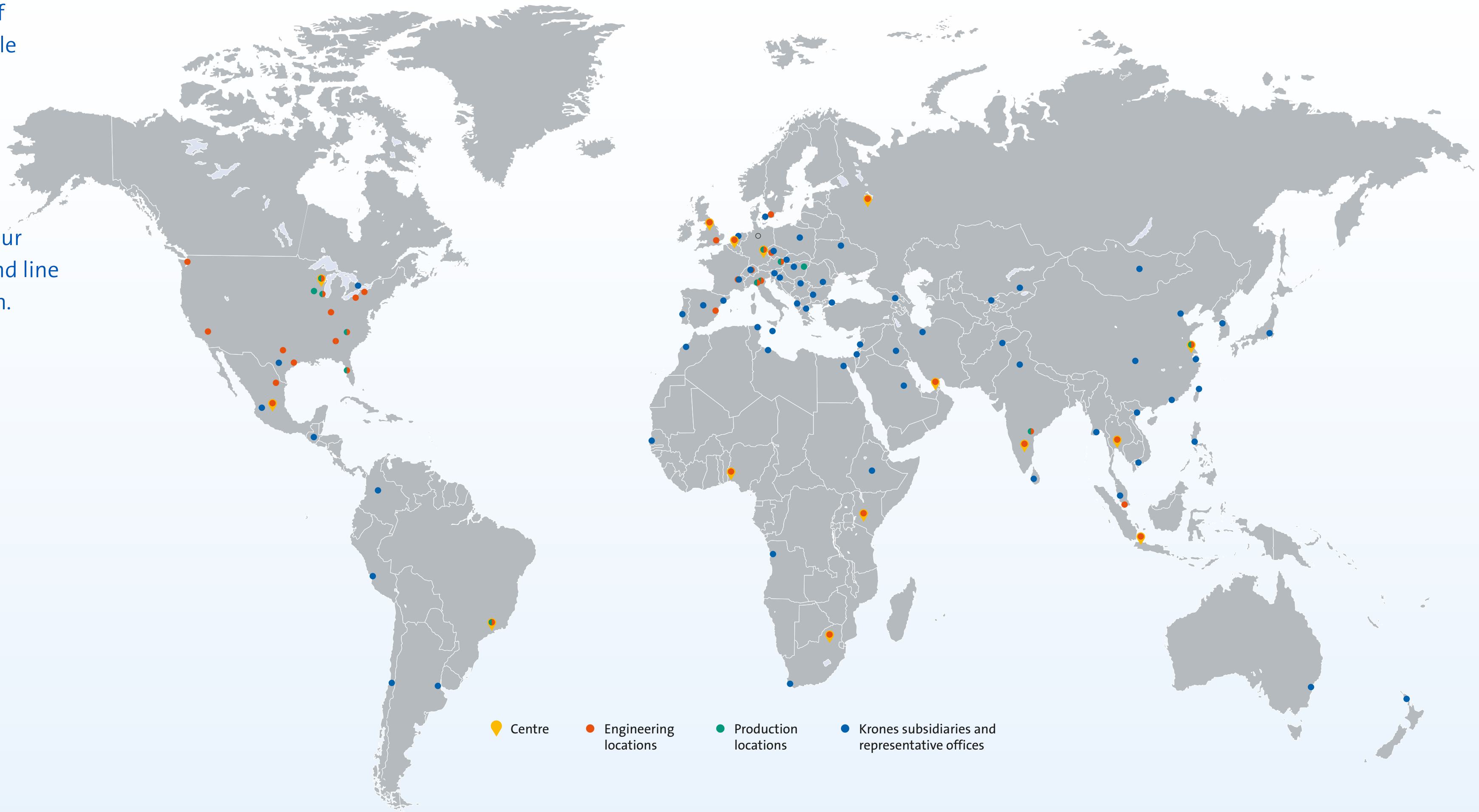
Digitalisation

Digital services + Krones service network = **unbeatable customer benefit**

Our approximately 3,000 local service staff around the world continue to play a key role in the practical delivery of digital services. More than 100 service companies in over 70 countries provide customers with support and advice, remotely or in person. Plant operators therefore benefit not only from our digital knowhow, but also from our many years of cross-sectoral experience and line expertise worldwide: an ideal combination.

Key facts:

- Over 100 subsidiaries and branches
- In over 70 countries
- Some 3,000 service staff worldwide



Letter from the **Executive Board**

"The Krones team can look back on a successful financial year. We will make use of our strengths, especially in difficult times."

Christoph Klenk
CEO

Dear shareholders and friends of Krones,

Krones' positive 2021 financial year is overshadowed by the war in Ukraine. We condemn the invasion of Ukraine by Russian troops on 24 February 2022 as a breach of international law that cannot be excused in any way. How the conflict will develop and what impacts it will have on the global economy are currently hard to predict.

Successful 2021 financial year

The dominant topic in 2021 continued to be the Covid-19 pandemic. This eased as a result of effective vaccines, at least in industrialised countries. With the experience gained since the start of the crisis and the dedication of our entire team, we were able to continue providing customers with top-quality products and services at all times in 2021. This team effort was worth it. Krones can look back on a successful 2021 financial year.

Making use of Krones' strengths

The global economy recovered in 2021 from the severe Covid slump. Demand also picked up in our markets. It even grew faster and stronger than we expected at the beginning of 2021. Krones is strategically well placed and was able to make use of the positive market conditions. We have a large, innovative range of products and services and have sites and our own teams in over 70 countries around the world. This broad global footprint is extremely valuable, especially in times of travel restrictions.

Digitalisation and sustainability as major growth drivers

The Covid-19 pandemic has accelerated digitalisation, including in our industry. Krones has invested heavily in this growth field and already offers many digital products and services for customers. We continue to push ahead in this area. The digital beverage plant provides our customers with the ideal space for transparent, safe, flexible and efficient production. Further information on Krones' digitalisation activities can be found on pages 5 to 17 of this Annual Report. On the same pages, we also present interesting information on the topic of sustainability. This is an area where Krones set the industry standard early on. Today, sustainability – like digitalisation – is a key priority for our customers. Both areas are among Krones' strengths. This is why the motto of our Annual Report 2021 is "sustainable.digital".

Structural measures take effect – Krones significantly improves profitability

Our business picked up strongly in 2021. After the Covid slump, customers were already beginning to invest more again in the fourth quarter of 2020. Nevertheless, we were positively surprised by the speed and scale of the growth in orders. In total, order intake increased in 2021 by 31% year-on-year to €4.3 billion. This means that the contract value of orders actually exceeded its pre-crisis level. The same is not yet true of revenue. This went up by 9% year-on-year to €3.6 billion. Earnings before interest, taxes, depreciation and amortisation (EBITDA) improved very significantly from €133 million to €313 million. The EBITDA margin, adjusted for one-off items in each year, rose from 6.2% in the previous year to 8.1%. Krones achieved the 2021 targets for growth and earnings – which we already upgraded at the end of the first half year – in each case at the upper end of the target range.

A significant performance contribution came from structural measures that Krones adopted in 2019 and 2020 and continued in 2021. We adjusted capacities, for example, and improved our cost structures. Krones is now more flexible overall. A look at the global procurement markets shows how important that is. Materials are in short supply and prices have risen significantly. Many companies had to interrupt production in 2021 due to material shortages. Krones was able to avoid production downtimes thanks to its international procurement organisation and flexible production processes. In addition, the strategic measures enabled us to at least partly offset the higher material and freight prices with savings elsewhere.

Shareholders to receive dividend of €1.40 per share

Our shareholders are also to benefit from the good earnings in 2021. After Krones paid the statutory minimum dividend (€0.06 per share) last year due to the negative consolidated net income, we intend to pay a dividend of €1.40 per share for the successful 2021 financial year.

Krones is optimistic for the future despite the challenges

Krones came through the 2020 crisis in stable shape and regained the profitable growth trend in 2021. But we also face new internal challenges. With a very large order backlog and production operating at full capacity, completing the machines and lines on time for our customers demands considerable effort from our workforce. That will not be easy given the tight situation on procurement markets and in supply chains, which is expected to continue in 2022. I am sure that our team will once again rise to the challenge. But this will continue to require maximum flexibility over the current year.

To continue providing customers with top-quality, innovative products and services despite the rising material costs, Krones increased the prices of all bottling and packaging equipment and for process technology by 6% with effect from 1 August 2021. Order intake was unaffected by the price increase and remained very high in the fourth quarter of 2021.

Executive Board forecasts profitable growth in 2022

Despite major challenges, there are good reasons to be optimistic for the 2022 financial year and beyond. Based on the positive market trend and Krones' strong position, the Executive Board expects consolidated revenue to be between 5% and 8% higher in 2022 than in the previous year. Profitability will benefit from the improved cost structure and higher selling prices. However, a number of uncertainties also have to be taken into account. These include for example material shortages and problems in global supply chains, and also political risks. In particular, it is hard to predict how the situation in Ukraine will develop and what impact it will have on the global economy in 2022. It is also uncertain how the Covid-19 pandemic will continue to play out around the world. For 2022, Krones forecasts an EBITDA margin of 8% to 9%. Return on capital employed (ROCE) has replaced the working capital to revenue ratio as the third key performance indicator. The target for ROCE in 2022 is 10% to 12% (2021: 10.0%).

Krones adopts ambitious new medium-term targets to 2025

Krones continues to aim for profitable growth beyond the current financial year. We published ambitious new medium-term targets in November 2021. By 2025, we aim to achieve revenue of around €5 billion. In addition to organic growth of 5% per year, this will also include growth from acquisitions. The medium-term target for the EBITDA margin is between 10% and 13%. For ROCE, we aim for at least 20% by 2025.

We can only achieve our targets as a team

The main reason for our confidence in the future despite all challenges is our workforce. Krones has a highly qualified international team who are committed to surmounting all challenges. They demonstrated this impressively under difficult conditions in 2021. On behalf of the entire Executive Board, I would like to take this opportunity to thank all employees for their outstanding dedication in the 2021 financial year. I am sure that, working together as a team, we will master all the challenges and continue to successfully shape Krones' future.

Christoph Klenk
CEO

The **Executive Board**

Markus Tischer
International Operations and Services

Ralf Goldbrunner
Bottling and Packaging Equipment
Compact Class

Christoph Klenk
CEO

Norbert Broger
CFO

Thomas Ricker
CSO

Report of the **Supervisory Board**

Volker Kronseder
Chairman of the Supervisory Board

Ladies and Gentlemen,

Following last year's pandemic-related loss, Krones returned to profitable growth in 2021. As well as the marked rebound in the global economy, the structural measures initiated by the Executive Board in 2019 and 2020 played a key part in this. Krones continued to implement those measures in 2021. In particular, reducing the workforce in Germany was a very hard decision for the Executive Board and the Supervisory Board. However, it was regrettably essential in order to avoid risk to the company's long-term success. For many years now, Krones has kept the longer-term impacts in focus when making all major decisions. The Executive Board and Supervisory Board will continue to apply this principle of sustainability in all future strategic decisions at Krones.

Advice and oversight

The Supervisory Board of Krones AG continuously monitored and advised the Executive Board during the 2021 financial year, as prescribed by the German Stock Corporation Act and the company's articles of association, and discharged its responsibilities with due care.

Provisions of the German Stock Corporation Act and the German Corporate Governance Code concerning the Executive Board's reporting obligations to the Supervisory Board were complied with at all times. The Executive Board regularly informed the Supervisory Board about the company's business and financial situation and risk management in written and oral reports both during and outside of Supervisory Board meetings. With regard to decisions of particular significance to Krones AG and the Group, the Supervisory Board was informed and involved by the Executive Board at an early stage. The Chairman of the Supervisory Board and the Chief Executive Officer in particular maintained regular contact between meetings. In that connection, they jointly discussed matters of corporate strategy, current business performance, the risk situation, risk management and compliance.

The Supervisory Board accompanied the implementation of the Executive Board's structural measures during 2021 and kept itself regularly informed of the current status. Other focuses of the Supervisory Board's work in 2021 included the tight situation on procurement markets, achievement of the financial targets for 2021 and the new medium-term targets, and corporate strategy.

Changes in membership of the Supervisory Board

There were two changes in the membership of the Supervisory Board in 2021. On the shareholder side, Norman Kronseder stepped down from the Supervisory Board at the end of the Annual General Meeting on 17 May 2021. Nora Diepold was elected in his place at the Annual General Meeting. On the employee side, Klaus Gerlach's term of office ended on 31 December 2021. He was succeeded as employee representative on the Supervisory Board by Stefan Raith.

No conflicts of interest

According to recommendation E.1 of the German Corporate Governance Code, each member of the Supervisory Board is required to disclose conflicts of interest to the Chairman of the Supervisory Board without delay. No conflicts of interest were disclosed in the reporting period.

Attendance at Supervisory Board meetings

In total, five regular Supervisory Board meetings were held in 2021. The Executive Board attended some meetings in a guest capacity. As a rule, however, the Supervisory Board met without the Executive Board. In accordance with Recommendation D.8 of the German Corporate Governance Code, we provide the following information on meeting attendance by individual members of the Supervisory Board:

Supervisory Board member	Number of meetings	Meetings attended
Volker Kronseder	5	5
Josef Weitzer	5	5
Dr. phil. Verena Di Pasquale	5	4
Nora Diepold (from 17 May 2021)	4	4
Robert Friedmann	5	4
Klaus Gerlach	5	5
Oliver Grober	5	5
Thomas Hiltl	5	5
Markus Hüttner	5	5
Norman Kronseder (until 17 May 2021)	1	1
Prof. Dr. jur. Susanne Nonnast	5	5
Beate Eva Maria Pöpperl	5	5
Norbert Samhammer	5	5
Petra Schadeberg-Herrmann	5	5
Jürgen Scholz	5	4
Hans-Jürgen Thaus	5	4
Matthias Winkler	5	5

Supervisory Board meeting reports

The first meeting of the Supervisory Board in 2021 took place on 24 March. Representatives from Krones' auditing firm were present for a portion of the meeting. Chief Finance Officer Norbert Broger provided the Supervisory Board with a presentation of how the key figures developed in the 2020 financial year. The key audit partners then gave the Supervisory Board a detailed explanation of their audit engagement together with the focal points of their review of the 2020 annual financial statements and provided a detailed overview of the audit. They remained available for the Supervisory Board's questions and answered them in full. The Audit and Risk Management Committee commented on the results of the audit. The Supervisory Board then ratified the annual financial statements and management report of Krones AG and approved the consolidated financial statements and consolidated management report.

At the same meeting, a resolution was passed adopting the remuneration system for the Executive Board and the Supervisory Board and submitting it for approval at the Annual General Meeting. A further item on the agenda was the extension of the Executive Board appointments of Christoph Klenk, Markus Tischer and Ralf Goldbrunner through to 31 December 2026. The findings of the efficiency review on the work of the Supervisory Board were also presented.

In addition, the Chairman of the Supervisory Board presented the agenda for the 2021 Annual General Meeting to the Supervisory Board. Major items on the agenda for the Annual General Meeting included the dividend proposal for the 2020 financial year and the election of Nora Diepold as shareholder representative to the Supervisory Board. The Supervisory Board then adopted the agenda for the Annual General Meeting. In the report on business performance, the Executive Board informed the Supervisory Board about the current business environment and the measures for achievement of the 2021 financial targets.

The virtual Annual General Meeting of Krones AG was held on 17 May, followed by the second, constitutive meeting of the Supervisory Board. Supervisory Board Chairman Volker Kronseder took leave of long-standing Supervisory Board member Norman Kronseder and thanked him for his good and successful contribution. Norman Kronseder was a member on the Supervisory Board on the shareholder side since 1991 and left office at the end of the Annual General Meeting. In his place, the Annual General Meeting elected Nora Diepold, whom Volker Kronseder warmly welcomed to the Supervisory Board at her first meeting. The departing Supervisory Board member Norman Kronseder was also a member of the Audit and Risk Management Committee and of the Standing Committee. It was decided at the constitutive meeting that Norman Kronseder's place on the Audit and Risk Management Committee should be taken by Matthias Winkler. The vacancy on the Standing Committee was filled by Prof. Dr Jur. Susanne Nonnast. In the economic report, the Executive Board reported to the Supervisory Board on the current business situation and the key figures for the first quarter of 2021.

The third meeting of the Supervisory Board in 2021 took place on 21 July. A major topic of the meeting was the situation on procurement markets, with general supply chain problems and rising prices. Among other things, the Executive Board explained to the Supervisory Board the measures taken by Krones in response to the tight procurement market situation. A further topic at the meeting consisted of forthcoming changes in the company's organisation. In the economic report, the members of the Executive Board reported on how the business areas for which they are each responsible developed in the first half of 2021.

At its fourth 2021 meeting, held on 22 September, the Supervisory Board consulted intensively on corporate strategy and Krones' future strategic orientation. In addition, the Executive Board informed the Supervisory Board about the current business situation and notably about the supplier situation and the availability of materials. The Executive Board explained that the challenging situation on the procurement markets did not put at risk the achievement of the 2021 financial targets. One topic that has risen significantly in importance is cybersecurity. Many companies have already fallen victim to cyberattacks. IT experts informed the Supervisory Board about the current status and further development of security measures at Krones. This related both to the company's own IT systems and production facilities as well as to Krones products.

The Supervisory Board held its fifth meeting in 2021 on 7 December. A major item on the agenda was the report of the Audit and Risk Management Committee addressing the topics of risk management, internal auditing and compliance. Committee Deputy Chairman Josef Weitzer explained the subject matter of the committee meeting of 17 November 2021 and the determinations on the risk management system and its effectiveness. He gave the Supervisory Board a detailed presentation on the strategic risks and explained that, in the opinion of the Audit and Risk Management Committee, Krones' risk management system adequately reflects the risks. The Supervisory Board also addressed the Declaration of Compliance pursuant to section 161 of the German Stock Corporation Act. A further topic of the fifth Supervisory Board meeting was the Executive Board's economic report with the annual budget and capital expenditure budget for 2022. The fifth meeting in 2021 was the last Supervisory Board meeting attended by Klaus Gerlach. Mr. Gerlach, an employee representative on the Supervisory Board since 2012, retired at the end of 2021. Volker Kronseder thanked him on behalf of the entire Supervisory Board for his many years of good service.

The work of the Audit and Risk Management Committee

The Audit and Risk Management Committee comprises Volker Kronseder, Josef Weitzer, Hans-Jürgen Thaus, Norman Kronseder (until 17 May 2021), Jürgen Scholz, Markus Hüttner and Matthias Winkler (from 17 May 2021). Its Chairman is Hans-Jürgen Thaus. Mr. Thaus (former Chief Finance Officer of Krones AG) and Matthias Winkler (tax advisor and partner in an accounting firm) have the necessary expertise in accounting and auditing required by law.

The Audit and Risk Management Committee oversees the company's accounting and financial reporting, the audit of the financial statements and other reporting, and prepares related proposals for Supervisory Board resolutions. The Committee also prepares the Supervisory Board's review of the annual financial statements, the management report and the auditor's report for the separate and consolidated financial statements and makes recommendations. Furthermore, the Audit and Risk Management Committee monitors the quality of the financial statements and the effectiveness of the internal control system, the risk management system and the compliance system.

The Audit and Risk Management Committee held three meetings in 2021. In accordance with Recommendation D.8 of the German Corporate Governance Code, we provide the following information on meeting attendance by individual members of the Audit and Risk Management Committee:

Committee member	Number of meetings	Meetings attended
Hans-Jürgen Thaus	3	2
Josef Weitzer	3	3
Markus Hüttner	3	3
Norman Kronseder (until 17 May 2021)	1	1
Volker Kronseder	3	3
Jürgen Scholz	3	2
Matthias Winkler (from 17 May 2021)	2	2

At its first meeting, on 18 March, the committee primarily prepared the Supervisory Board meeting held to ratify the financial statements. To this end, representatives of Krones' auditor presented the committee with a detailed report on the audit of the annual and consolidated financial statements. This covered the scope, content and focal points of the audit. The members of the Audit and Risk Management Committee unanimously agreed to recommend that the Supervisory Board should ratify the annual financial statements and management report of Krones AG for the 2020 financial year and approve the consolidated financial statements and consolidated management report for 2020. Another item on the agenda of the first meeting was the non-financial report for the 2020 financial year. The committee members passed a resolution recommending that the Supervisory Board should ratify the 2020 non-financial report.

The Audit and Risk Management Committee met for its second meeting in 2021 on 28 June. At that meeting, the committee consulted on current business developments and on conditions of supply and delivery.

The third meeting of the Audit and Risk Management Committee took place on 17 November. At that meeting, the heads of Controlling, Internal Audit and Compliance informed the members of the committee in detail about the current risk situation, internal audit and compliance management. Also in the same meeting, the committee addressed the effectiveness of the risk management system.

The work of the Standing Committee

The members of the Standing Committee are Volker Kronseder, Josef Weitzer, Norman Kronseder (until 17 May 2021), Prof. Dr. jur. Susanne Nonnast (from 17 May 2021) and Markus Hüttner. It is chaired by Volker Kronseder. The committee generally deals with all other topics that are outside the remit of the Audit and Risk Management Committee. These include, for example, human resources strategy and Executive Board and Supervisory Board remuneration.

The Standing Committee met three times in 2021. In accordance with Recommendation D.8 of the German Corporate Governance Code, we provide the following information on meeting attendance by individual members of the Standing Committee:

Committee member	Number of meetings	Meetings attended
Volker Kronseder	3	3
Josef Weitzer	3	3
Markus Hüttner	3	3
Norman Kronseder (until 17 May 2021)	1	1
Prof. Dr. jur. Susanne Nonnast (from 17 May 2021)	2	2

At its first meeting, on February 18, the Standing Committee dealt with the revision of the remuneration system for the Executive Board and changes to the remuneration system for the Supervisory Board and prepared recommendations on these matters for the Supervisory Board. Also at the same meeting, the committee resolved to recommend to the Supervisory Board that the Executive Board appointments of Christoph Klenk, Markus Tischer and Ralf Goldbrunner be extended through to 31 December 2026.

The Standing Committee's second meeting took place on 12 July. In this meeting, the committee dealt with internal organisation changes and a recommendation on this subject to the Supervisory Board.

The main topics discussed at the third meeting of the Standing Committee, which was held on 17 November 2021, were the strategy process and the Krones target vision for 2025.

Supervisory Board concurs with audit results

The annual financial statements of Krones Aktiengesellschaft prepared by the Executive Board, the consolidated financial statements, the management report for Krones AG and the group management report for the period ended 31 December 2021 were examined by the auditors elected by the annual general meeting, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, and each issued with an unqualified audit report. The audited annual financial statements and consolidated financial statements, the management report for Krones AG and the consolidated management report for the period ended 31 December 2021 were duly submitted to all members of the Supervisory Board for review. The audited financial statements and management reports were the subject of the Supervisory Board meeting held to ratify the financial statements on 23 March 2022. Representatives of the auditing firm also attended for part of that meeting and informed the Supervisory Board of their audit results and the focal points of their audit.

The Supervisory Board noted and approved the audit results. No objections were raised following the final review by the Supervisory Board, which covered in particular the matters described in the auditor's audit report including the audit procedures. The Supervisory Board has ratified the annual financial statements for Krones AG and approved the consolidated financial statements as well as the Executive Board's proposal for the appropriation of earnings available for distribution. The 2021 annual financial statements for Krones AG are thus ratified.

The auditors included in their audit the Executive Board's report, in accordance with section 312 of the German Stock Corporation Act, on Krones AG's relations to affiliated companies and submitted their audit report to the Supervisory Board. The audit by the auditors did not give rise to any objections. The auditor issued the following unqualified audit opinion on the dependency report: "Based on our due audit and assessment, we confirm that

1. the statements as to fact made in the report are accurate,

2. the consideration given by the company in respect of the legal transactions referred to in the report was not unreasonably high."

The Supervisory Board's review of the report, in accordance with section 312 of the German Stock Corporation Act, on Krones AG's relations to affiliated companies did not give rise to any objections. The Supervisory Board therefore concurred with the results of the audit by the auditors. Following the final outcome of its own review, the Supervisory Board did not raise any objections to the Executive Board's concluding declaration on relations with affiliated companies.

In addition to the statutory audit, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft also performed a limited assurance review of the separate combined non-financial report of Krones AG and the Krones Group for the period from 1 January to 31 December 2021. On the basis of that review, the auditor did not raise any objections to the non-financial report or with regard to the meeting of statutory requirements relating to the non-financial report.

Thanks to the Executive Board and the employees

Krones returned good earnings in the 2021 financial year, despite the impacts of the Covid-19 pandemic. This was only possible because the entire Krones team worked hard and with dedication towards success. For this, the members of the Supervisory Board would like to thank the Executive Board and all of the company's employees.

Neutraubling, March 2022
The Supervisory Board

Volker Kronseder
Chairman of the Supervisory Board

The **Supervisory Board**

Volker Kronseder
Chairman of the Supervisory Board

* University Hospital Regensburg
* Economic Advisory Board, Bayerische Landesbank

Josef Weitzer**
Deputy Group Employees' Council Chairman
Deputy Composite Employees' Council Chairman
Employees' Council Chairman, Neutraubling

* Bay. Betriebskrankenkassen

Markus Hüttner **
Deputy Group Employees' Council Chairman
Deputy Composite Employees' Council Chairman
Deputy Employees' Council Chairman, Neutraubling

Nora Diepold (since 17 May 2021)
Chief Executive Officer
NK Immobilienverwaltungs GmbH Regensburg

Dr. phil. Verena Di Pasquale**
Deputy Chairperson of DGB Bayern
(the German Trade Union Confederation in Bavaria)

Robert Friedmann
Spokesman for the central managing board of the Würth Group

* ZF Friedrichshafen AG

* Other Supervisory Board seats held, pursuant to Section 125 (1) sentence 5 of the German Stock Corporation Act ** Elected by the employees

Klaus Gerlach** (until 31 December 2021)
Head of Central International Operations and Services

Oliver Grober**
Chairman of the Employees' Council, Rosenheim

Thomas Hiltl**
Chairman of the Employees' Council, Nittenau

Norman Kronseder (until 17 May 2021)
Farmer and forester

* Bayerische Futtersaatbau GmbH

Prof. Dr. jur. Susanne Nonnast
Professor at Ostbayerische Technische Hochschule (OTH) Regensburg

Beate Eva Maria Pöpperl **
Independent Member of the Employees' Council

* Other Supervisory Board seats held, pursuant to Section 125 (1) sentence 5 of the German Stock Corporation Act   ** Elected by the employees

Stefan Raith (since 1. January 2022)
Head of Business Line, Line Solutions
Krones AG

* re-sult AG, Regensburg

Norbert Samhammer
Managing Director, Samhammer Holding GmbH

* Samhammer AG

Petra Schadeberg-Herrmann
Managing Partner, Krombacher Brauerei Bernhard Schadeberg GmbH & Co. KG, Krombacher Finance GmbH, Schawei GmbH, Diversum Holding GmbH & Co. KG

Jürgen Scholz**
First authorised representative, IG Metall administrative office in Regensburg

* Infineon Technologies AG

Hans-Jürgen Thaus

* Maschinenfabrik Reinhausen GmbH

Matthias Winkler
Managing Partner WW+KN Steuerberatungsgesellschaft mbH
Managing Partner WW+KN Treuhand GmbH

* Other Supervisory Board seats held, pursuant to Section 125 (1) sentence 5 of the German Stock Corporation Act ** Elected by the employees

The Krones **share**

"Our share price benefited from the company's strong financial results with a value gain of 45.2% in 2021."

Olaf Scholz
Head of Investor Relations

- Equity markets benefited in 2021 from high market liquidity
- Krones shares a clear outperformer with 45.2% price gain
- Shareholders to receive dividend of €1.40 per share for 2021

High liquidity and rising corporate profits drive global stock market rally

The 2021 stock market year showed a stable upward trend overall. After a weak January, share prices rose steeply to mid-year. The bull market was mainly driven by the ongoing highly expansionary monetary policy pursued by major central banks. Successful vaccination campaigns against the coronavirus in industrialised countries also resulted in optimistic forecasts for the economy. Together with the huge stimulus packages launched by major governments in 2020, these made for a global economic upturn and rising corporate profits.

Stock markets did not climb as rapidly in the second half of the year. The upward trend was interrupted many times. Bad news from China, where major property developers ran into difficulties, led to short-term dips in the market. Global supply chain problems also affected investor confidence. Overall, however, the positive underlying sentiment continued in the second half of the year, with the result that the major stock market indices ended 2021 close to their highest levels for the year and with mostly double-digit gains.

Germany's DAX index climbed 15.8% in the reporting period to 15,885 points. As a result, the DAX ended 2021 just 2.5% below its all-time, November 2021 high of 16,290 points. The Euro Stoxx 50 did even better. Representing the 50 largest companies in the euro area, the index gained 21.0% in the reporting period. The best-known US index, the Dow Jones, also increased significantly by 18.7%. The upward trend on the Japanese stock market was less dynamic. The Nikkei index improved by just 4.9% in reporting year.

Krones shares a clear outperformer with 45.2% price gain

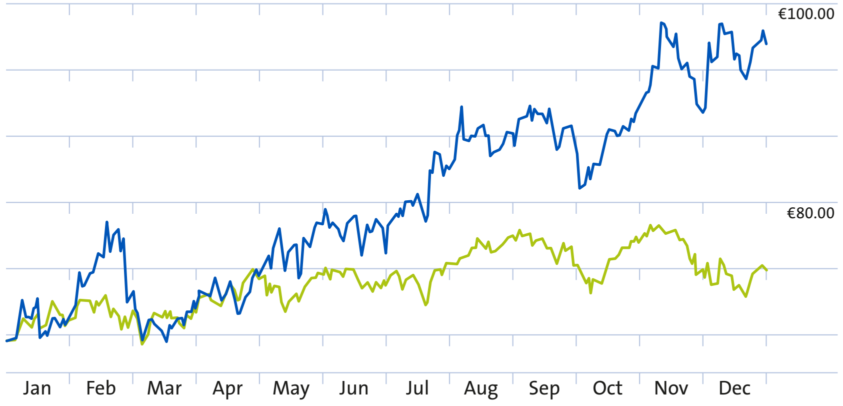
The Krones share benefited over the course of 2021 from the company's positive business figures. Our share price significantly outperformed the SDAX for almost the entire reporting period.

After a slow start to the 2021 stock market year, and especially from May onwards, the Krones share price performed significantly better than the market. The main reason for the strong upward movement was the company's good business performance.

In February, the share price benefited from publication of the preliminary figures for the 2020 financial year along with guidance for 2021. It then fell back to its level from the beginning of the year and marked its low for the reporting period at €64.30 on 17 March. Krones shares then climbed slightly, in step with the overall market. In May, the share price reacted positively to the good figures for the first quarter, rising to around €80 by the beginning of June. The next boost to our share price came in July with the preliminary half-year figures and the upgraded full-year guidance for 2021. Supported by many positive comments from analysts, our shares climbed to around €90 at the beginning of August. Towards the end of the third quarter of 2021, the share price suffered from the general weakness of the equity markets triggered by concerns about rising inflation and interest rates and by problems at Chinese property developers.

Krones shares got off to a good start in the fourth quarter and confirmed the upward trend. Following the publication of the nine-month figures on 5 November, the share price reached its high for the year at €99.60. Following the Capital Market Day on 16 November, at which Krones announced new medium-term targets, several banks raised their price targets for our shares to in excess of €100. The positive assessment by analysts and investors ensured that Krones' shares significantly outperformed all major stock indices through to the end of the year, closing at €95.90 for a 45.2% annual gain. Including the €0.06 per share dividend, our share price gained 45.3% in value over the course of 2021. The SDAX, of which Krones has been a component since 2018, went up by just 11.2% in 2021.

Krones share price performance compared with the SDAX 2021



Key figures for the Krones share

At 31 December		2021	2020	2019
Earnings per share	€	4.47	−2.52	0.30
Equity per share	€	44.05	37.98	43.36
Free cash flow per share	€	6.43	7.00	−2.99
Price/earning (P/E) ratio based on closing price for the year		21.5	–	225.0
Dividend per share	€	1.40*	0.06	0.75
High	€	99.60	75.50	88.85
Low	€	64.30	41.92	47.46
Year's closing price	€	95.90	66.05	67.50

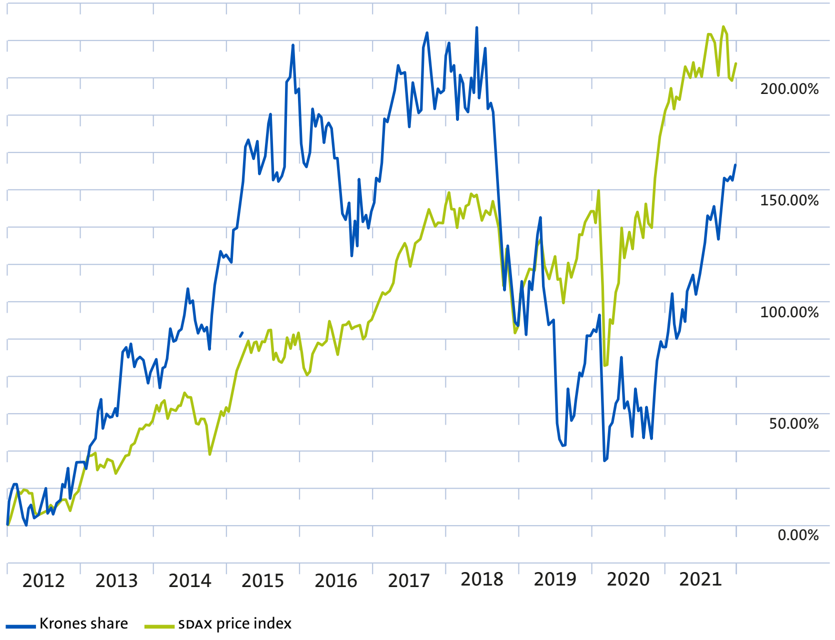
* As per proposal for the appropriation of earnings available for distribution; share price data source: Xetra

Ten-year performance of Krones shares: 11.8% p.a.

The Krones share price has risen by an average of 10.1% a year over the last ten years. Including dividends, the value growth is 11.8% p.a.

The past ten years from 2012 to 2021 have seen our share price increase by 160%. Krones' average annual share price gain over the ten-year period comes to 10.1%. That is slightly less than the SDAX price index (+11.8%), meaning the SDAX excluding dividends. Including paid-out dividends, and assuming these are reinvested in Krones shares after payout, the average annual return on our shares since 2012 comes to 11.8%. The comparable SDAX performance index gained 14.0% annually.

Performance of Krones shares compared with the SDAX price index, 2012 – 2021



Krones improves position in SDAX index

At the end of 2021, Krones' shares ranked 17th in terms of market capitalisation, placing Krones among the heavyweights of the 70 companies in the SDAX index.

Krones shares have been listed and available for trading on all German stock exchanges since 29 October 1984. Our shares are no par value ordinary bearer shares. Each share carries one vote in the annual general meeting. The total number of Krones shares is 31,593,072.

Our share has been a component of the SDAX since mid-2018. The SDAX is the Deutsche Börse stock exchange index containing the 70 companies that succeed those listed in the MDAX in market capitalisation. Until Deutsche Börse's index reform in September 2021, inclusion in the index was based on stock exchange turnover as well as market capitalisation. Following that reform, the sole quantitative criterion is the market capitalisation of shares in free float (as defined by Deutsche Börse). As a result of the company's good performance, Krones significantly improved its position in the SDAX during the reporting period, ranking 17th (previous year: 25th) among SDAX companies in terms of market capitalisation at the end of 2021.

Total daily trading volume in XETRA trading and on Frankfurt stock exchange averaged around 35,500 Krones shares in 2021 (previous year: 48,000 shares). 2021 likewise saw fewer Krones shares change hands on alternative trading platforms, which primarily handle orders from institutional investors. Average daily trading volume there came to around 47,500 shares (previous year: around 65,000).

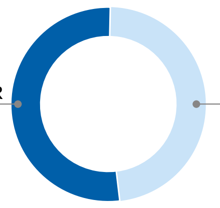
Key data for the KRONES share

Number of shares	31,593,072
German securities identification number	633500
ISIN	DE 0006335003
XETRA ticker symbol	KRN

Shareholder structure

Krones' shareholder structure remained virtually unchanged in the reporting period. At 31 December 2021, Familie Kronseder Konsortium GbR held the majority of Krones AG's shares, with 52.1%. The family intends to remain a stable majority shareholder of Krones AG. The free float came to 47.9% at the end of 2021.

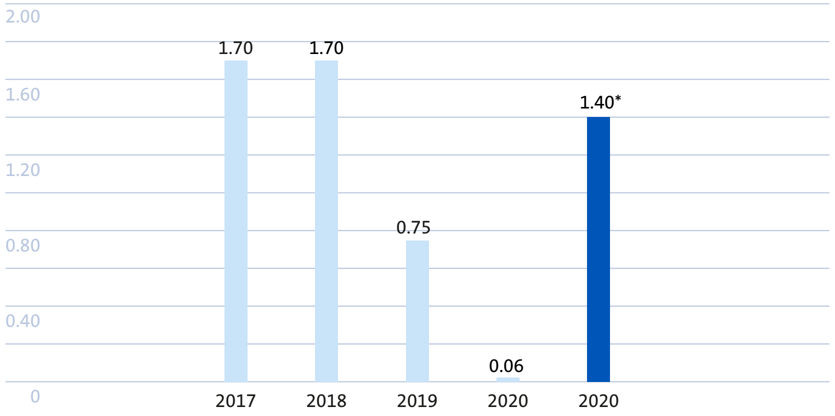
Shareholder structure as of December 2021



Krones to pay a dividend of €1.40 per share for 2021

Krones' long-term dividend policy is to pay out 25% to 30% of consolidated net income to shareholders. Due to the pandemic-related negative net income in 2020, the company paid only the statutory minimum dividend last year. This was €0.06 per share. For 2021, which was a successful year overall, Krones intends to significantly increase the dividend to €1.40 per share. This corresponds to 31% of consolidated net income. The dividend ratio is thus slightly above the long-term target corridor.

Dividend per share (€)



* As per proposal for the appropriation of earnings available for distribution

Sustainability at Krones

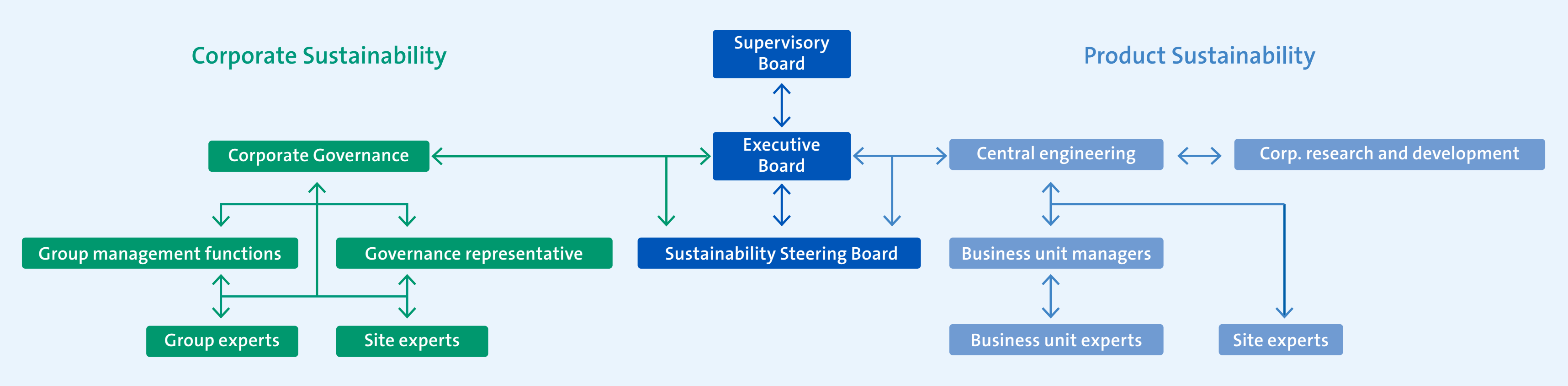
Sustainable value creation is a central focus at Krones in order to make our contribution to a future worth living. Our customers also attach great importance to sustainable production and products. Investors also increasingly base investment decisions on sustainability criteria. Krones' sustainability targets, strategies and performance are of great importance to stakeholders.

Our approach

Efficient and environment-friendly technologies for safe and high-quality beverages: That is the mission in terms of sustainability that Krones has set itself as systems supplier to the food and beverage industry. 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 focus on innovative solutions and efficient technologies. Accordingly, 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 a consistent approach to sustainability will help us leverage new opportunities for growth.

Two separate teams serve as Group-wide coordinating bodies to integrate sustainability in parallel into the development of our company and our products: All product-specific sustainability issues converge in Corporate Development, while all company-specific environmental, social and governance (ESG) aspects are centrally managed by Corporate Governance. The top-level Sustainability Steering Board addresses all sustainability matters arising from the entire Krones Group value chain. Here, representatives from the management of central units along the value chain (including procurement, research and development, and sales) consult on the strategic orientation in terms of sustainability and formulate suggestions and recommendations for the Executive Board.



Our targets

In 2020, analogous to the material sustainability topics, Krones developed and adopted new goals for the company's sustainable development through to 2030. Unless noted otherwise, the new goals use the year 2020 as a baseline and apply across the group. 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 impact on the 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 Agenda 2030. 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 the 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. When assessing sustainability topics for materiality in 2019, 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 it will need to address 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. Krones has an influence on the following UN SDGs:

Our network

We believe that we are stronger when we work together. Krones has been a member of the UN Global Compact since 2012. We collaborate with companies within our industry under a diverse range 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 the 2021 financial year, we additionally joined Business Ambition for 1.5 °C.

We ensure transparency towards customers, investors, and analysts by participating in recognised ratings and audits.

On the annual reassessment of our sustainability performance, we use feedback from rating agencies to fine-tune our structures, processes and activities. We thus improved our CDP Climate Change score from D in the previous year to C. Conversely, our rating on the EcoVadis Scorecard went down from gold to silver. It is clear to us that the realignment of our sustainability strategy in 2020 was an important further step towards sustainable development at Krones. Our ambition is to become the industry benchmark in terms of sustainability. We aim for this to be reflected in our ratings in future years.

We are members of

BLUECOMPETENCE Alliance Member
Partner der Nachhaltigkeitsinitiative des Maschinen- und Anlagenbaus

WE SUPPORT UN GLOBAL COMPACT

We operate within

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

BUSINESS AMBITION FOR 1.5°C

We report to

ecovadis

CDP
DISCLOSURE INSIGHT ACTION

Sedex Member

Environmental sustainability: Decarbonisation

Activities to reduce greenhouse gas emissions are of particular importance to the capital market. In addition to Scope 1 and Scope 2 emissions, analysts and investors are notably interested in how we reduce carbon emissions from our machinery and equipment (Scope 3 emissions) and so help customers shrink their carbon footprint. This is a decisive investment criterion for customers and hence also a key success factor for Krones. In the following, we therefore present information on the reduction of Krones' carbon footprint.

Target

We are reducing the Krones Group's corporate carbon footprint by cutting Scope 1 and Scope 2 greenhouse gas emissions by 80% by 2030. With regard to the group's Scope 3 emissions, we aim for a reduction of 25 percent by 2030, with a focus on shrinking our product carbon footprint. Both goals use 2019 as the base year. Above and beyond these goals, we aim to make our own business processes climate neutral in the long term.

Scope 1 emissions are "direct" emissions generated by on-site combustion. They therefore include all greenhouse gas emissions resulting from the company's own business activities.

Scope 2 emissions are "indirect" energy-related emissions from the generation of energy purchased by the company for its own use. These greenhouse gas emissions are physically generated in electricity, steam and district heat generating plants operated by external energy producers.

Scope 3 emissions are all other indirect emissions from the value chain and products. They include all other indirect greenhouse gas emissions from upstream and downstream business activities.

As a company that emits greenhouse gases along its value chain, we have a responsibility to help combat climate change. To meet this responsibility, we set new climate targets in the 2020 financial year. These provided for significant reductions in both direct and indirect emissions by 2030. We set the reductions to be achieved in each case in terms of absolute figures not tied to revenue.

The associated climate strategy covers all major production sites in the Krones Group worldwide and has been validated in an objective evaluation by the Science Based Targets initiative.

Environmental and climate policy

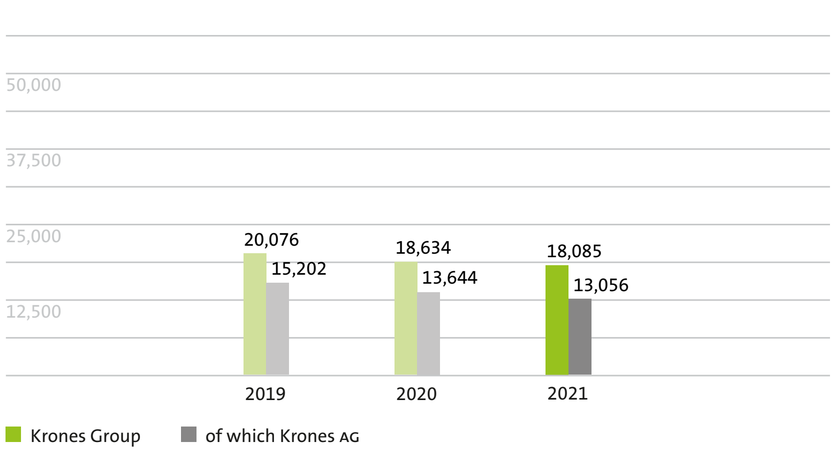
To set strategic and organisational priorities in operational environmental and climate protection at Krones, we adopted and published a Group-wide environmental and climate policy at Krones in the 2021 financial year. We also specified environmental standards, focal topics and the associated targets, processes and responsibilities. The standards are to be applied in day-to-day production processes and projects, thus ensuring environmentally friendly operations at all producing sites and subsidiaries and contributing to continuous improvement in environmental protection.

Reduction of Scope 1 and Scope 2 emissions

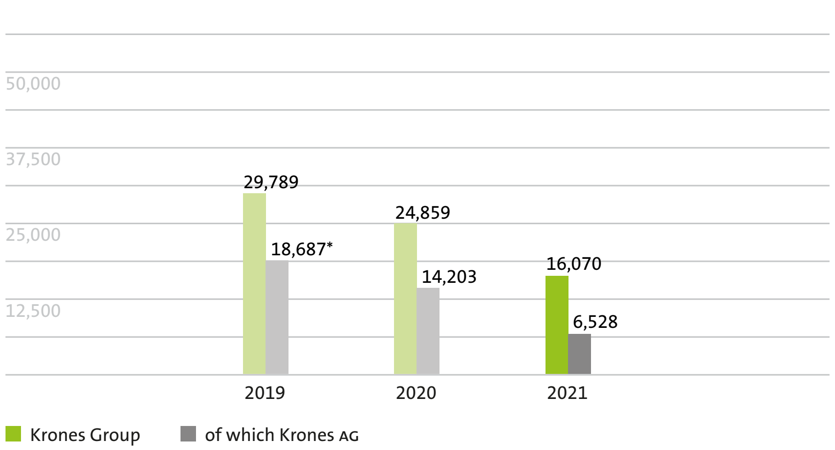
For the reduction of direct and indirect energy-related greenhouse gas emissions, all measures have been assigned to the areas of energy efficiency, own generation and energy procurement.

The charts below show the development of greenhouse gas emissions at Krones.

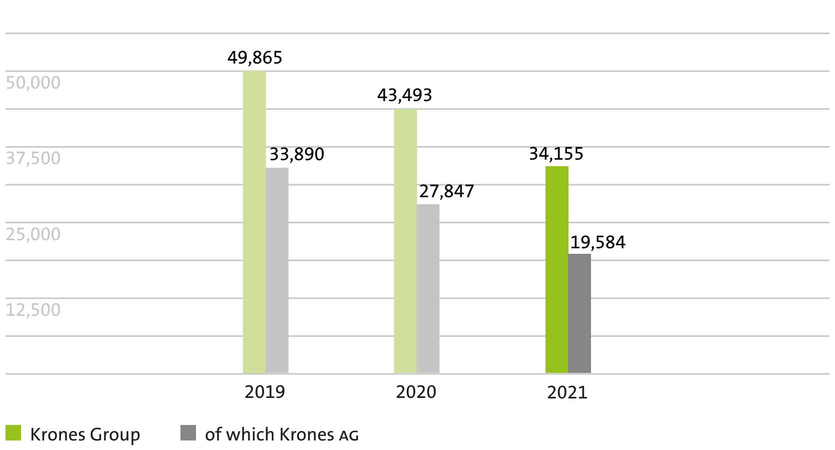
Krones Group: Greenhouse gas emissions, Scope 1 (metric tonnes)



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



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

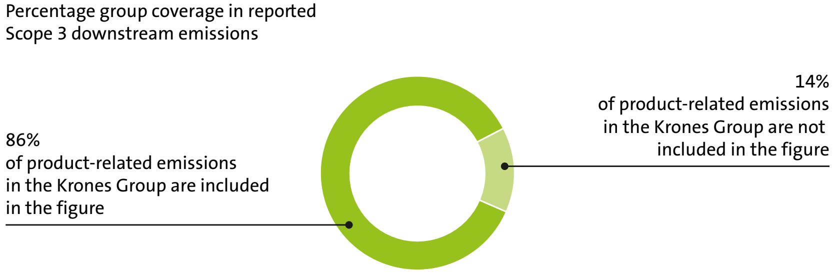


Reducing Scope 3 emissions

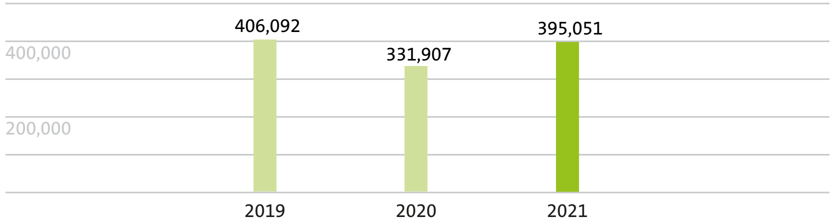
Our analysis has shown that the majority of our Scope 3 emissions come from the downstream value chain. We therefore focus efforts to reduce Scope 3 emissions on improving our own products. Although we have achieved substantial and consistent results under the enviro programme, we do not want to leave the remaining potential for reduction untapped. You can read more about this under "Product sustainability" on page 17 to 23 of our Non-financial Report.

As of 2021, we are also placing an increasing focus on the upstream supply chain. In a database analysis based on monetary procurement figures, we have identified the biggest emission drivers in our supply chain. The next step is to derive suitable measures for reducing emissions here as well. We have already entered into discussions with an initial selection of suppliers in order to find an effective and practicable approach (for more information, please see und "Sustainable supply chain" on page 71 to 74 of the Non-financial Report).

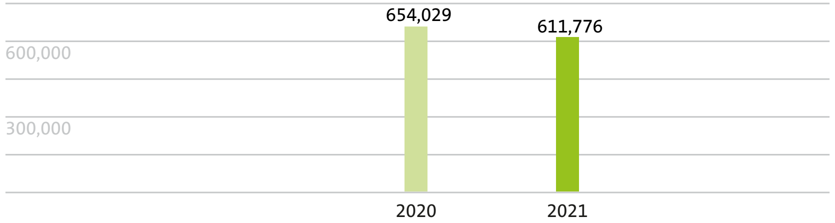
Krones Group: Greenhouse gas emissions, Scope 3 from the use of our machines and lines 2021 (GHG Protocol Scope 3 Category 11)



Krones Group: Greenhouse gas emissions, Scope 3 from the use phase of our machines and lines (metric tonnes)



Krones Group: Greenhouse gas emissions, Scope 3 from the upstream supply chain (metric tonnes)



More information on the subject of sustainability at Krones can be found in our Non-financial Report.

This is available online at www.krones.com/en/company/responsibility/downloads.php., which is published concurrently with this Annual Report.

2

CONSOLIDATED MANAGEMENT REPORT

Krones **at a glance**

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.

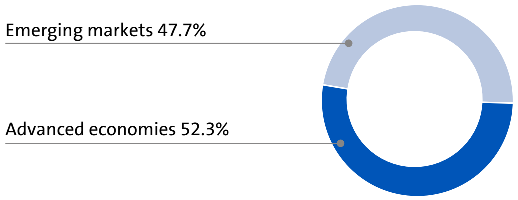
Krones reports on two segments: **Machines and Lines for Product Filling and Decoration** and **Machines and Lines for Beverage Production/Process Technology**. The former Machines and Lines for the Compact Class segment, which was reported on separately until 2017, was made part of Krones' core segment **Machines and Lines for Product Filling and Decoration** with effect from 1 January 2018.

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 90% of consolidated revenue outside Germany. The regional breakdown of revenue is well balanced overall. In the reporting period, Krones generated 52.3% of its revenue in industrialised countries and 47.7% in the rapidly growing emerging markets.

Krones group share of consolidated revenue 2021



Apart from 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 primarily compete against Krones for orders on their home market.

Backed by our global service portfolio, which enables us to provide fast service to customers on-site, Krones is well positioned in the competitive arena as a full-service provider.

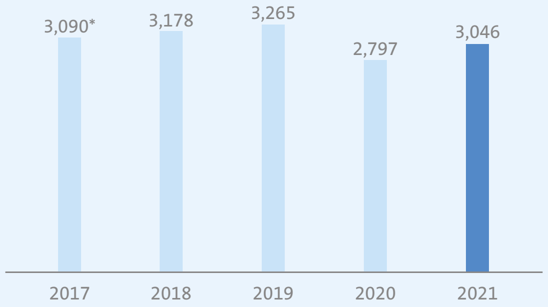
Machines and Lines for Product Filling and Decoration

This is by far Krones' largest segment. It offers machines and lines for filling, labelling, packaging, and conveying products. Machines and lines for producing PET containers and converting used plastic bottles into food-grade recycled material (PET recycling systems) are also part of this segment.

- Product treatment technology
- Labelling technology
- Inspection technology
- Filling technology
- Cleaning technology
- Plastics technology
- Packing and palletising technology
- Conveyor technology

See also Segment report, pages 94 and 141.

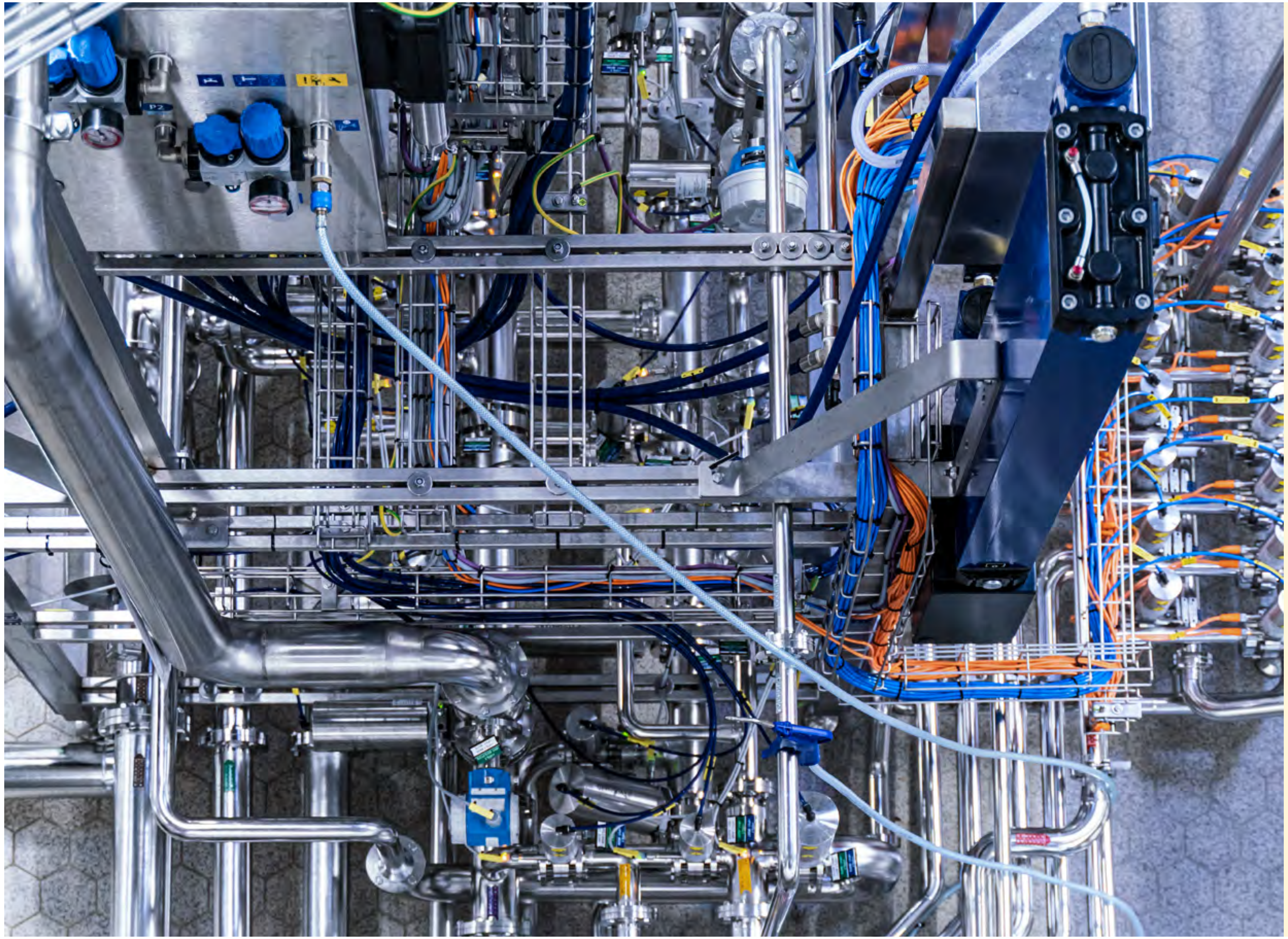
Revenue (€ million)



* *incl. Machines and Lines for the Compact Class*

	2021	2020
EBITDA (€ million)	283.2	171.5
EBITDA margin (%)	9.3	6.1

Machines and Lines for Beverage Production/Process technology

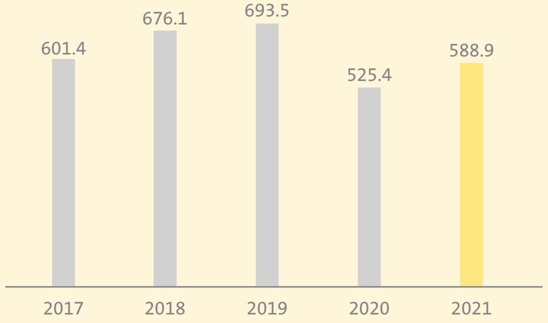


This Krones segment supplies customers with machines and lines for producing and processing beer, soft drinks, fruit juices, milk and dairy drinks. Beverage Production/Process Technology also includes the intralogistics business under subsidiary System Logistics together with Evoguard brand components.

- Brewhouse and filtration technology
- Information technology
- Intralogistics

See also Segment report, pages 96 and 141.

Revenue (€ million)



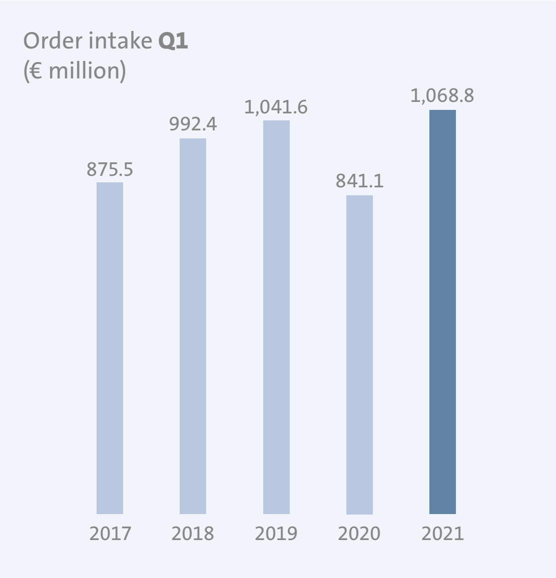
	2021	2020
EBITDA (€ million)	29.4	–38.3
EBITDA margin (%)	5.0	–7.3

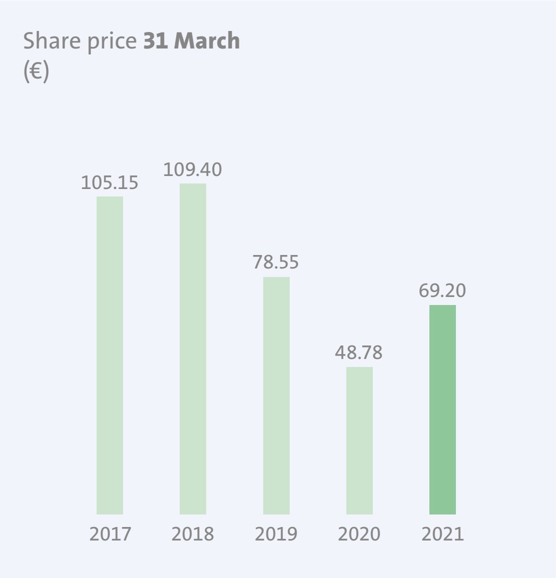
First quarter 2021

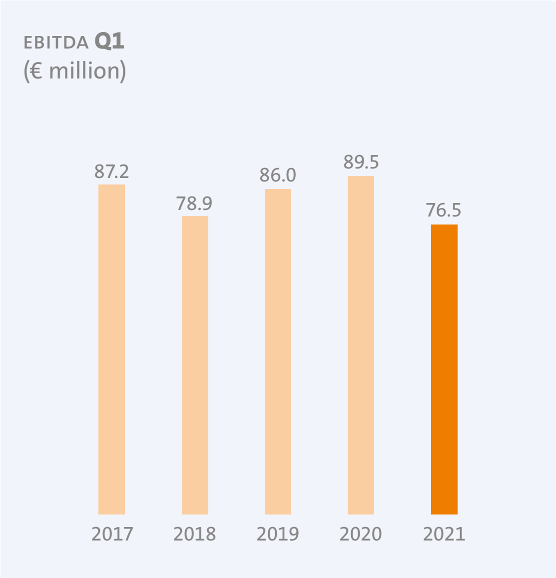
Customer orders at Krones were significantly higher in the first quarter than the previous year's figure, which was affected by the pandemic. Order intake rose by 27.1% to €1,068.8 million. Revenue, on the other hand, decreased by 7.2% to €874.6 million. Due to the success of structural measures adopted by Krones, the shortfall in earnings was limited despite the lower revenue. EBITDA went down from €89.5 million in the previous year to €76.5 million.

In the Non-financial Report 2020 published in March, Krones presented in detail the new targets for the company's sustainable development through to 2030. Krones has set sustainability targets for the five core areas of ethics, employees, market, environment and society. Particularly notable targets are those for product sustainability and for reducing CO_2 emissions.

The stock markets continued their upward trend. This was mainly driven by the persistently low interest rates and the hope that the coronavirus crisis would soon come to an end. The Krones share price also rose during the quarter, in some cases sharply. It reached its high point at €78.35 on 16 February. Profit taking and a general correction on the stock markets subsequently brought down the share price. At the end of March, Krones shares stood at €69.20, up 4.8% on the beginning of the year.





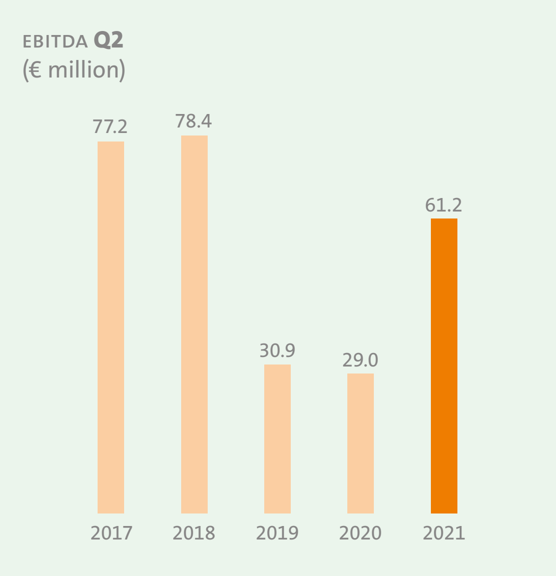


Second quarter 2021

The Krones Annual General Meeting (AGM) was held in Neutraubling on 17 May. As in the previous year, it took place as a virtual meeting due to the Covid-19 pandemic. AGM attendance – the proportion of the company's share capital represented at the online general meeting – was about 80%. All agenda items submitted for voting were adopted by shareholders with a large majority.

Krones' business further recovered in the second quarter. Order intake was up 58.3% year on year, to €975.5 million. In terms of revenue, we were able to catch up the shortfall from the first quarter. Revenue from April to June increased by 11.7% year on year to €845.5 million. EBITDA improved from the previous year's figure of €29.0 million, which was heavily affected by the pandemic, to €61.2 million.

This upward movement in the Krones share price accelerated during the second quarter. Our shares primarily benefited from the business recovery. Many analysts upgraded their price targets for Krones shares due to the good fundamentals. At the end of June, our share price stood at €75.35. This marked a 14.1% increase on the beginning of the year. The SDAX, of which Krones shares are a component, went up by only 8.5% in the same period.

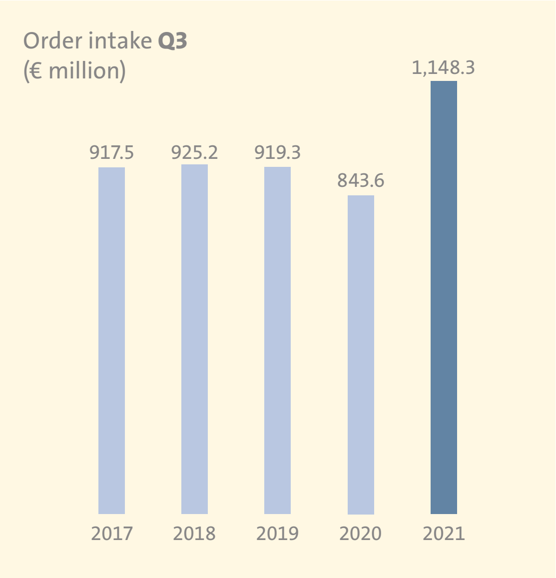


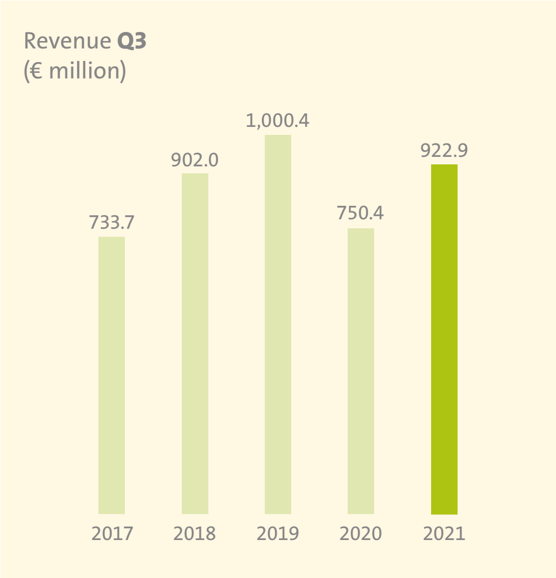
Third quarter 2021

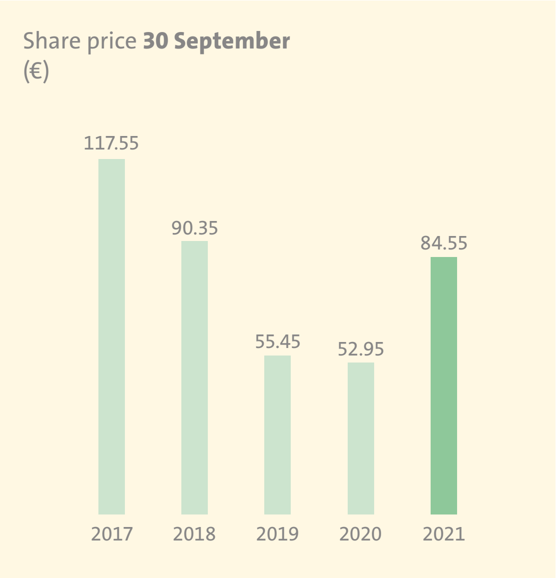
Between July and September, Krones recorded strong year-on-year growth in all financial key performance indicators. Order intake grew 36.1% to €1,148.3 million Revenue went up by 23.0% to €922.9 million. At €74.9 million, EBITDA was 160.1% higher in the third quarter than in the prior-year period. Over the first three quarters, Krones generated free cash flow of €107.5 million (previous year: –€58.4 million). Based on the positive overall first-half trend, Krones raised its full-year guidance for 2021.

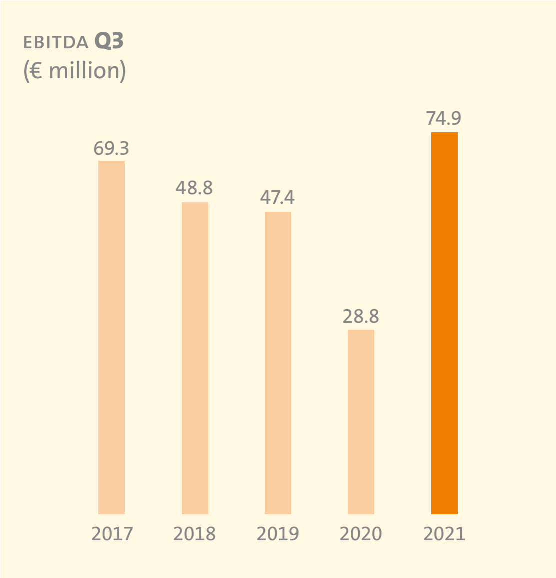
Digitalisation is a key strategic issue for Krones. According to the findings of a study compiled by strategy and management consultancy Infront Consulting in collaboration with Capital, the business magazine, Krones is among the champions of the digital transformation. The study covered a total of 127 major companies from eight industries. Krones took second place in the mechanical engineering category.

The Krones share price peaked in the third quarter at €90.80. In the second half of September, the share price was then affected by the general market weakness triggered by worries about Chinese real estate developers. Overall, however, the Krones share price performed significantly better than the market. With a price of €84.55 as of 30 September, our shares were up 28.0% on the beginning of the year. The SDAX rose by just 11.8%.







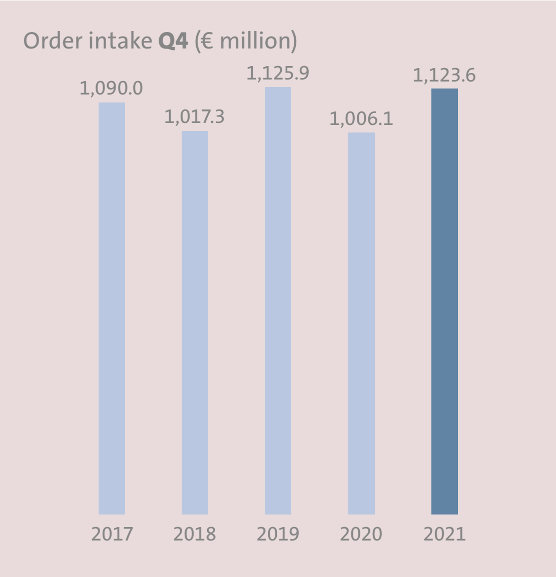


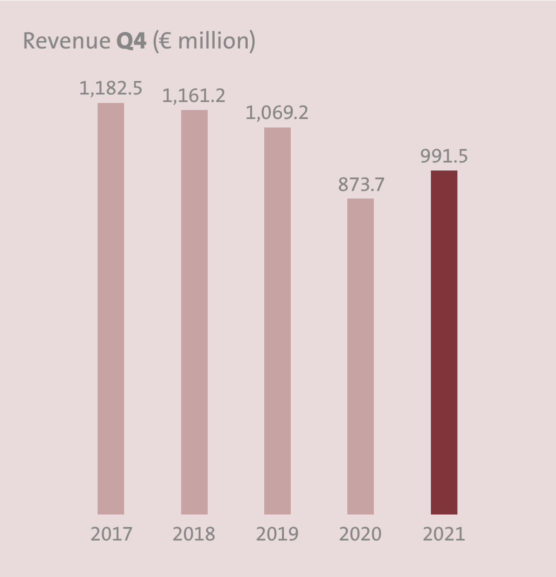
Fourth quarter 2021

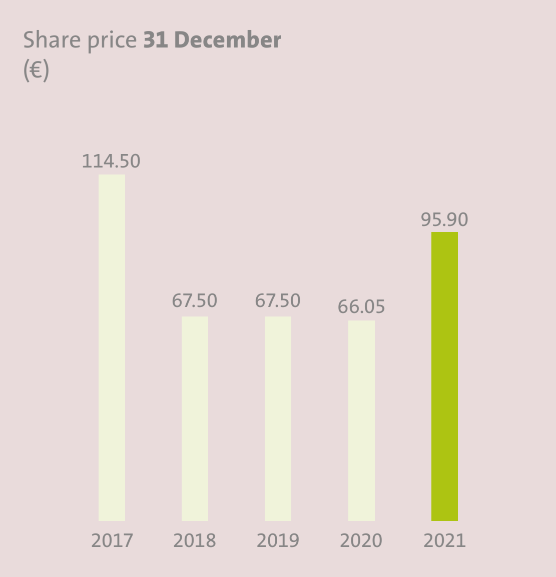
Demand continued to increase dynamically in the fourth quarter. Order intake exceeded the previous year's figure by 11.7% and rose to €1,123.6 million. Revenue between October and December increased 13.5% year-on-year to €991.5 million. In addition to the operational improvement in profitability, the fourth-quarter results also reflect positive one-off effects. In total, Krones generated EBITDA of €100.0 million (previous year: €–14.1 million).

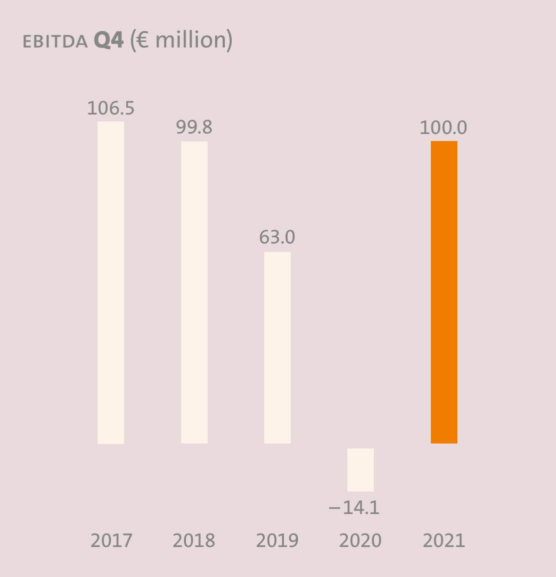
Krones held its annual Capital Markets Day on 16 November. This took place in virtual form due to the Covid situation. Executive Board members Christoph Klenk, Norbert Broger and Markus Tischer informed analysts and investors in detail about key strategic topics at Krones, including digitalisation and sustainability. The company also published its new medium-term targets at the Capital Markets Day event.

Following the publication of the nine-month figures on 5 November, the Krones share price reached its high for the year at €99.60. After our Capital Market Day, several banks raised their price targets for our shares to in excess of €100. The positive assessment by analysts and investors ensured that Krones' shares significantly outperformed all major stock indices through to the end of the year, closing at €95.90 for a 45.2% annual gain.









Systems and Lifecycle Service – **performance matters**

Krones delivers turnkey plants to the beverage and liquid food industry. We use our knowhow and our line expertise to keep down customers' investment and operating costs. Just as important, we enable our customers to produce reliably and at high quality.

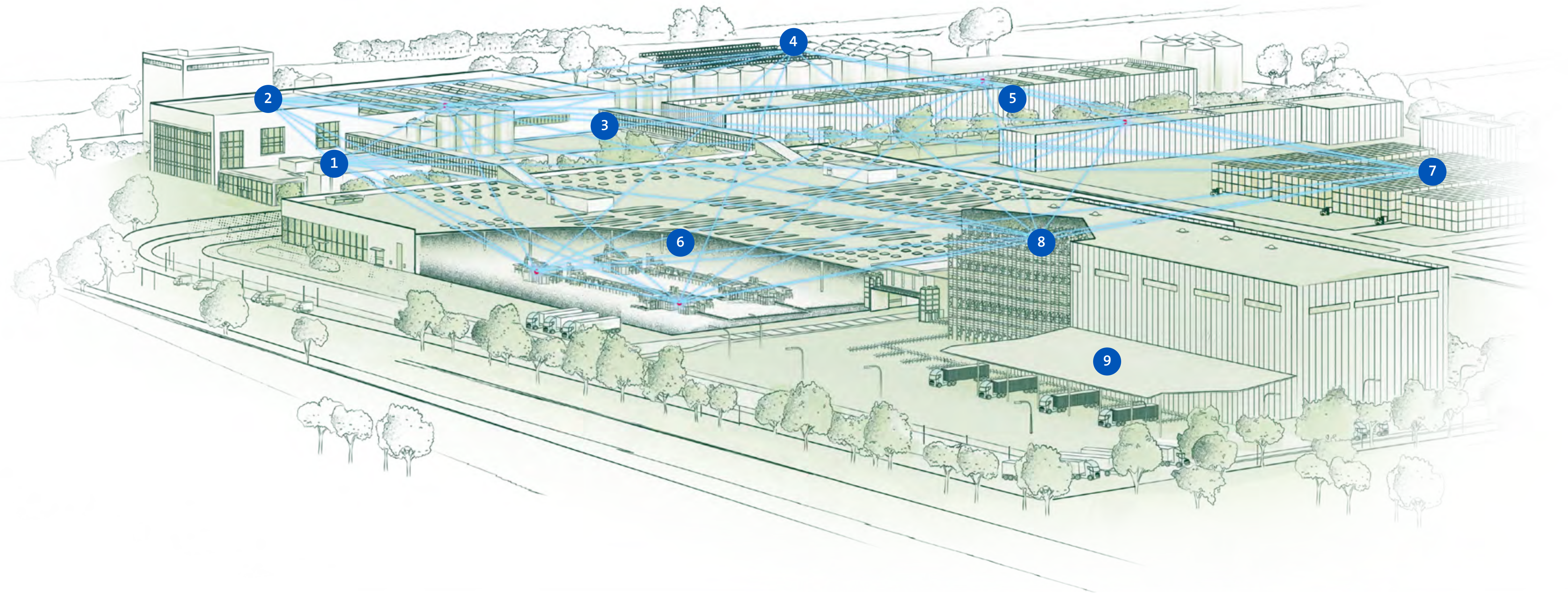
We deliver all of the machines and lines needed for producing, filling and packaging beverages. Furthermore, we provide complete logistics systems, supply and disposal systems and custom IT and digitalisation solutions that manage and optimise all production processes.

Our lifecycle service (LCS) experts additionally support customers with excellent, 24/7 after-sales service and advice. In this way, we ensure that beverage producers are able to maintain top production performance. The Krones LCS teams work together with customers to find solutions for efficient, secure, reliable and cost-effective production. They also provide expert consulting on maintenance and retrofitting – as Partners for Performance. The digital services provided by Krones that are accessible to customers on the Krones.world portal play an increasingly important role in further improving overall line efficiency.

The two illustrations of a complete beverage plant and of a filling and packaging line provide a brief overview of our portfolio.

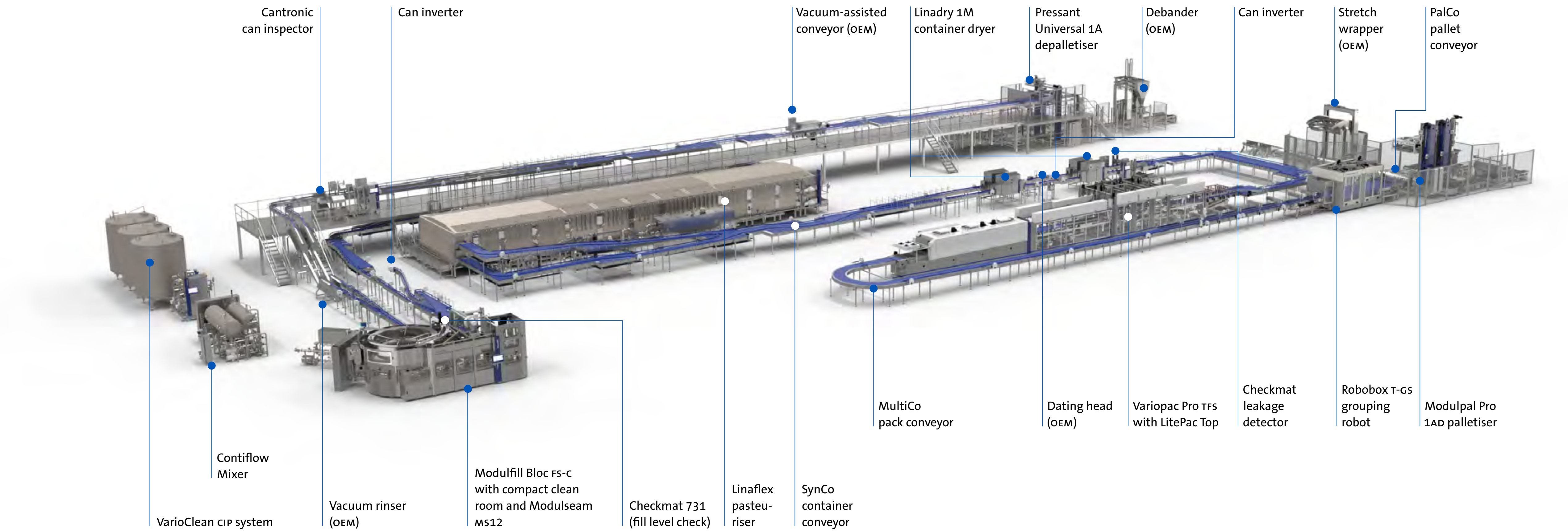
LCS Partner for Performance

Brewery: Krones supplies the complete beverage plant



1. Administration and visitors
2. Brewhouse
3. Cellar
4. Fermentation and storage cellar, tank farm
5. Utilities
6. Bottling and packaging area
7. Empties warehouse
8. High-bay warehouse
9. Dispatch

Filling and packaging line for canned beer



Strategy and management system

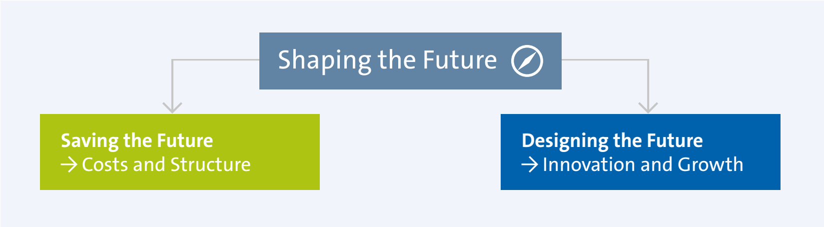
"Krones is emerging from the coronavirus crisis even stronger than before. We are making good progress in continuously improving Krones' competitiveness and future readiness."

Christoph Klenk
CEO

Krones has come through the Covid-19 pandemic comparatively well so far. The company quickly adapted its strategy to the new realities. However, this does not mean at all that Krones is returning to business as usual. Our markets, and the increasingly volatile global economy, present us almost every day with new challenges, and also new opportunities.

One real challenge relates to the difficult situation on procurement markets. Viewed globally, the Covid-19 pandemic is also far from being over. On the other hand, our markets present opportunities with regard to digitalisation and sustainability.

To ensure the most successful possible future for Krones, the company will master two key challenges. First, in order to secure its future, Krones must have the best possible organisational and cost structure. This is not a once-only change, but an ongoing process that demands great energy and discipline from the whole workforce. Second, we will make use of future growth opportunities in our attractive market to shape a successful future for our company. Innovations are an important part of this.



Improving cost structure is an ongoing task

The cost-reduction measures launched in past years are taking effect. Among other things, the workforce reduction decided in 2019 and 2020 was completed in the reporting year. This necessary capacity adjustment will be reflected in the full-year figures for the first time in 2022. In addition, we will continue to simplify structures and processes throughout the Group and to optimise production costs. We still see further scope for savings in project execution, adapting the product portfolio and optimising the degree of value added in-house. By systematically implementing these changes, Krones will make costs more flexible and be able to respond better to future fluctuations in demand.

A further important focus is expanding our global value chain. This allows us to better use regional resources and makes us less vulnerable to protectionist trade restrictions. We are also gaining significant cost advantages by establishing regional production sites and supply chains in Hungary and China. Producing at our Debrecen site in Hungary will save us around €20 million per year by 2024.

Digitalisation and sustainability established as new megatrends

One lesson learned from the coronavirus crisis is that Krones' markets show stable growth over the medium and long term. They soon recover from temporary setbacks, as in 2020. This is due to long-term megatrends: global population growth continues, the middle class in emerging economies will keep on growing and urbanisation will continue.

Issues around digitalisation and sustainability have gained massively in importance among our customers in recent years. They have become established as new megatrends and will additionally drive the medium and long-term growth of the filling and packaging market.

Pandemic an added boost to digitalisation

Digitalisation was already an important focus for Krones and our customers long before the Covid-19 pandemic. However, travel restrictions during the pandemic made the benefits of digitalisation even more obvious, especially in services and when bringing newly installed machinery into operation. This is why the digitalisation of beverage plants is no longer just a vision, but is already delivering significant added value for plant operators today.

We are only at the early stages of digitalisation in the beverage and packaging industry. But that makes it all the more important for Krones, with the Krones. world platform, to take a leading position in this area as elsewhere. In Krones. world, we have brought together all digital products services on a single platform. This lets customers access all digital Krones products that are relevant to them with a single login across different devices.

Line expertise the basis for new business models

Line expertise is the basis for the value-added digital beverage plant.

Filling and packaging lines are made up of many individual machines and systems. Krones has profound expertise regarding interoperation between the individual components. This line expertise also provides the foundation for exploiting the opportunities of digitalisation and for developing new business models.

Krones aims no longer to be solely the maker of machines, equipment and spare parts, but to service and manage customers' entire lines on the basis of service agreements. This allows Krones to generate more revenue from recurring business. Other positive effects of the digital service model are that the business has lower volatility and greater scalability.

Krones supports customers in their carbon footprint and sustainability

Reducing carbon emissions and resource consumption is high on the agenda for almost all Krones customers. They also expect their suppliers to contribute in this regard – including Krones. This is why we launched our TÜV-certified enviro sustainability program as long ago as 2008. The resulting improvements in the energy efficiency of our products have already led to significant resource savings for our customers over many years.

Krones will further extend its role with regard to sustainability. To this end, it has set the goal of ensuring that Krones machines and lines reduce resource consumption for customers by a further 25% between 2020 and 2030. Krones aims to reduce its own carbon emissions even more significantly – by 80% – during the same period.

Krones focuses in the core segment on all three major container types: PET, glass and cans

Sales of the various packaging materials vary with consumer trends. Interest in PET bottles has increased again since the coronavirus crisis, for example, after a fall in demand for PET in 2019 due to the plastics debate – most of all in Western Europe. Since the pandemic, more drinks are consumed at home and less in bars and restaurants. That has significantly boosted purchases of canned beer and carbonated beverages. We will further extend our strong market position in can lines. But glass, too, remains the second most widely used packaging material after PET, is versatile and refillable, and continues to be highly popular among consumers.

To absorb fluctuation between the three major packaging materials – PET, glass and cans – Krones provides complete filling and packaging lines for all three. Krones will also continue to invest in the development of innovative products for all three types of packaging in order to maintain its technological edge.

Sensitive products add to growth in process technology

In the Beverage Production/Process Technology segment, Krones focuses not only on beer and soft drinks, but also on sensitive products such as milk and juices. Producing and storing these products requires the highest standards of product safety and product quality. Krones is further expanding the product range in this high-end sector.

An additional, increasing focus in this segment is on the production of alternative proteins. These will contribute significantly to climate change mitigation. Alternative proteins substantially reduce carbon emissions relative to the consumption of conventional meat. With its process technology solutions, Krones intends to play an important role in this still young but rapidly growing field.

Intralogistics making above-average contribution to growth and is a separate segment from 2022

Intralogistics subsidiary System Logistics has become an important pillar in the Krones portfolio. It already generated almost half of segment revenue in the Process Technology/Beverage Production segment in the reporting years and is expected to continue growing at an above-average rate in the coming years. Krones reports Intralogistics as a separate, third segment from 2022 due to its size and for added transparency.

System Logistics benefits from strong market growth in logistics and e-commerce. In addition, Krones plans to further expand its intralogistics operations in the Asia-Pacific region and in India. Efforts to develop the US market will be stepped up through our established sites in the USA and Mexico.

To achieve its growth targets in the USA and further improve profitability, Krones will expand capacity in software and project management and shorten project lead times.

Recycling PET to cut plastic waste

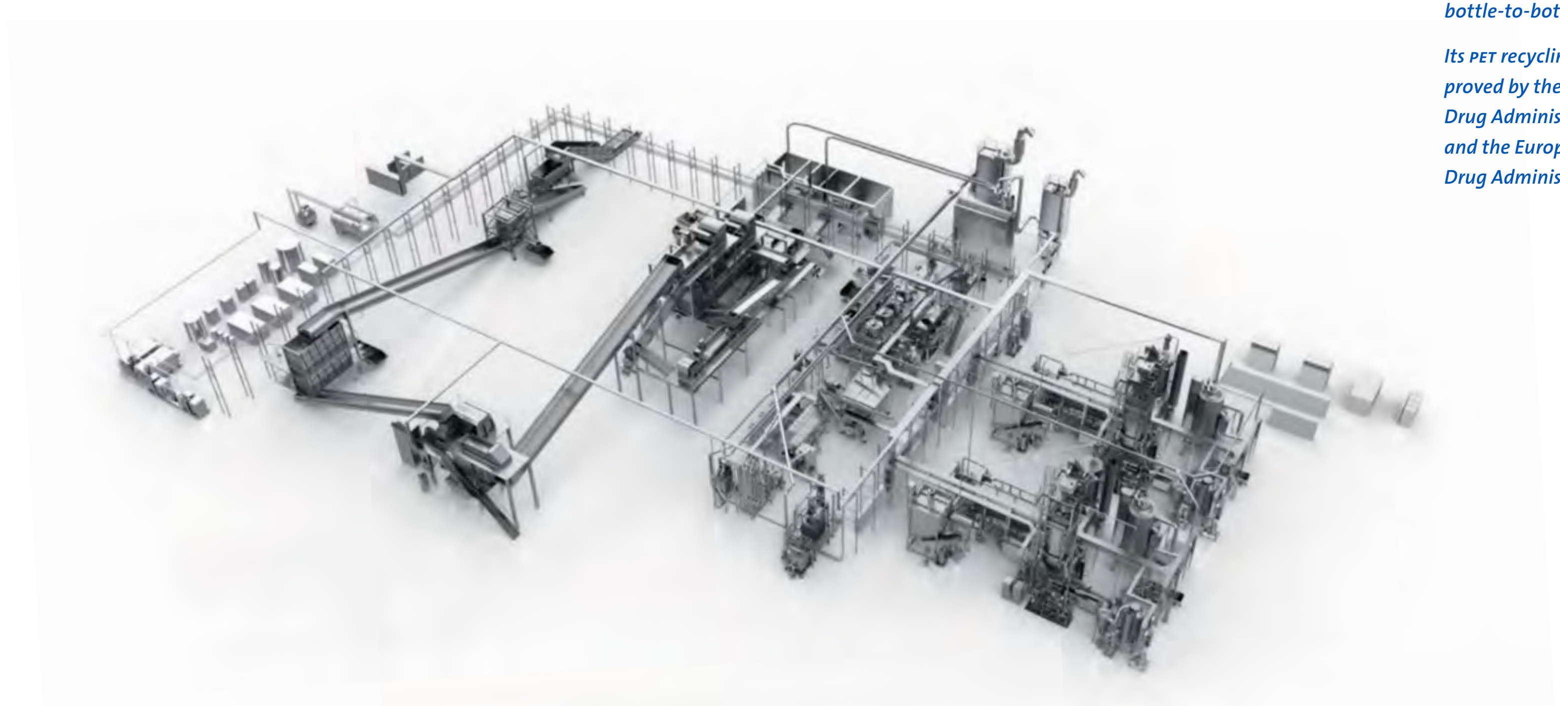
As well as addressing climate change, Krones also helps combat another urgent problem facing humanity: reducing plastic waste. Here, the company is working on a resource-efficient material cycle for PET. This ranges from material-saving packaging design and low-energy container production to the recycling of used plastics. This centres on high-quality recycling of returned PET bottles in order to reuse the material in production.

With its various Metapure lines, Krones has already provided high-end recycling solutions for true bottle-to-bottle recycling for many years. Many major customers will significantly increase the proportion of recycled PET (rPET) in their bottles – in some cases by 50% or more – by 2025. Krones has all major core technologies needed to produce new PET bottles from used PET bottles in what is called bottle-to-bottle recycling.

Although rPET is chemically identical to virgin PET, there are differences in processing. Krones supports customers in refitting their production lines for the circular economy. All new Krones PET filling lines are already able to process up to 100% rPET with the same quality and efficiency.

Due to the rising demand, PET recycling will become increasingly important for Krones in the years ahead. By 2023, some 20% of plastic bottles produced on newly sold Krones lines could be recycled by Krones recycling systems. In the reporting year, this figure stood at around 10%. The long-term target is to get as close as possible to 100%.

Krones one-stop-shop solution for PET recycling lines



Krones provides food-grade PET recycling solutions for bottle-to-bottle recycling.

Its PET recycling lines are approved by the U.S. Food and Drug Administration (FDA) and the European Food and Drug Administration (EFSA).

Growth through further internationalisation

Employees in the emerging markets 2017–2021

Year	South America	Africa	Asia-Pazific	Eastern Europe	China	**Total**
2017	581	393	734	398	608	**2,714**
2018	637	452	830	507	716	**3,142**
2019	782	671	1.009	933	792	**4,187**
2020	778	639	974	922	742	**4,055**
2021	803	633	959	1.006	732	**4,133**

Krones has long sold most machines and lines internationally and some 40% of the workforce are now employed in locations outside of Germany. Further internationalisation nevertheless remains a significant growth driver in both segments. The Covid-19 pandemic and the resulting travel restrictions have highlighted the benefits of Krones' global footprint. Long before that, however, growing protectionism in various parts of the world already provided sufficient reason to develop global production, sales and service locations.

The focus is on the emerging markets, and primarily the Asia-Pacific and Africa regions. These will develop well above average, mainly because of the rapidly growing middle class. Krones will expand its existing operations in these regions. This will make the Krones service network more tightly meshed than ever, and closer than ever to our customers. And that enables us to address customers' needs quickly and directly. The company once again increased the size of its emerging markets workforce during the reporting period following a slight decline in 2020 due to the coronavirus crisis.

Higher selling prices to offset rising material costs

The significant demand growth in the reporting year meant that selling prices recovered from the low level of the 2020 pandemic year. Krones was also able to push through the price rises announced in August 2021. This largely offset the higher purchase prices for materials. Despite continued intensive competition, Krones sees itself in a good position to pass on rising material and labour costs to customers.

Innovation secures the company's future growth

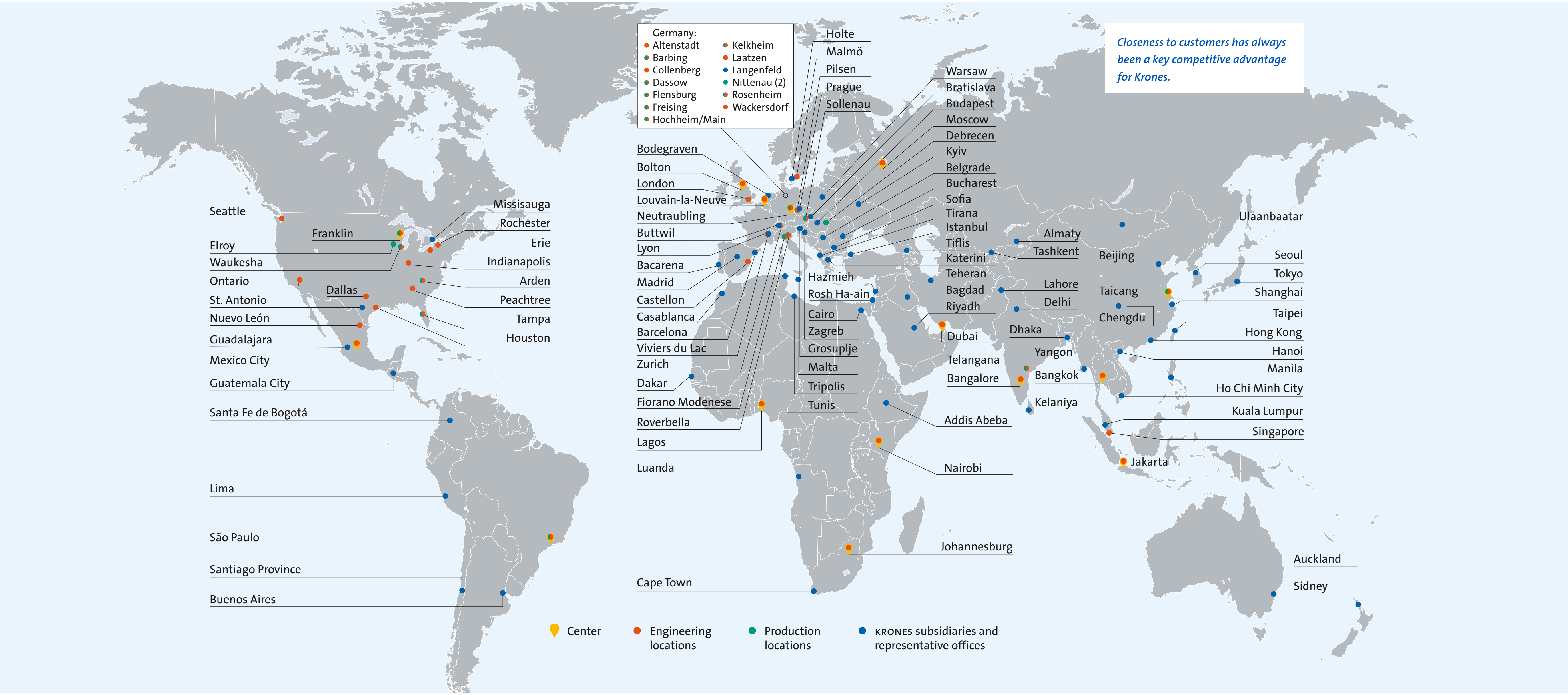
Attractive and innovative products and services are a fundamental requirement for lasting improvements in price quality. They provide clear and measurable added value. The greater the benefit for customers, the more willing they are to accept higher prices. Sustainability and digitalisation especially hold major potential for adding value. We showcase a small selection of our innovations from the reporting period on pages 62 to 70.

Strong focus on free cash flow

Free cash flow is expected to increase in step with profit in the years ahead.

Alongside growth and profitability, the ability to generate cash from the day-to-day business is a further key criterion for the long-term success of any business enterprise. Krones therefore places a strong focus on free cash flow. The company generated a free cash flow of €203.3 million in the reporting period. Krones' goal for the coming years is to increase free cash flow in step with higher profits and with improvements in return on capital employed (ROCE).

KRONES Global Footprint



Closeness to customers has always been a key competitive advantage for Krones.

A key factor influencing the development of free cash flow is working capital. In 2021, the working capital to revenue ratio stood at 24.8%, which is inside our target corridor of 26–27%. Less working capital tied up in the operating business means more capital for other purposes. Working capital also affects ROCE, as it is part of capital employed. As working capital goes down, ROCE goes up – on the same EBIT.

Optimising working capital therefore remains a core task. Although working capital will always be subject to fluctuations, the company has already taken various steps to reduce working capital in all key areas that influence it – trade receivables, inventories, trade payables and advance payments.

Stable financial and capital structure provides scope for investment

The positive free cash flow performance in the reporting period further strengthened our good capital base. At the end of 2021, Krones had some €378 million in net cash and a very solid 39.8% equity ratio. In addition, the company has around €1 billion in undrawn credit lines. A very solid financial and capital structure is important in today's crisis-prone global economy. It gives us sufficient scope for investment in growth and the future.

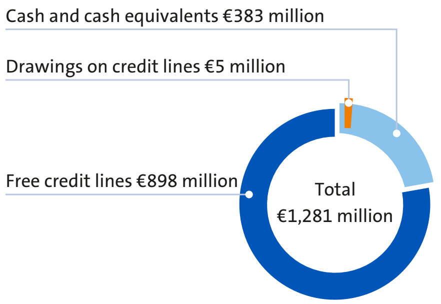
Most of that investment will be made within the business. To develop innovative products, Krones will continue to spend some 5% of revenue on research and development. In the years ahead, capital expenditure on property, plant and equipment will settle in a band between 2.5% and 3% of revenue. This will mainly be spent on expanding our international locations and IT systems.

In light of its financial strength, however, the company is also increasingly considering acquisitions. Here, Krones looks for mid-sized companies that strengthen its existing portfolio technologically and regionally, or that expand the range of products and services in filling and packaging. Acquisitions outside of the beverage industry are also a possibility.

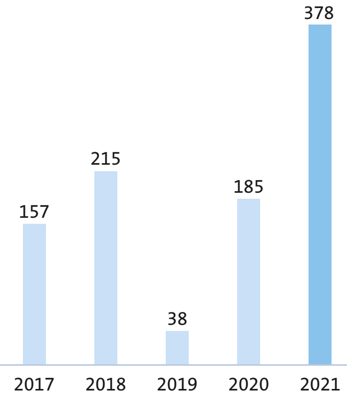
Our strong finances enable us to take advantage of attractive acquisition opportunities.

In addition, we will continue to allow the company's owners to share commensurately in our success in the form of dividend distributions. Krones' dividend strategy is to pay out 25% to 30% of consolidated net income to shareholders, although in past years it has aimed for the upper end of this range.

Liquidity reserves 31 Dec 2021



Net cash (€ million) at 31 Dec



A company is only ever as good as its employees

The sadly-needed reduction in the workforce was completed in the reporting period. This measure was undeniably difficult for our workforce. However, it did nothing to change Krones' corporate culture of team spirit and pulling together. We and the entire team are now focused optimistically again on the future. That means responding flexibly to the challenges ahead and making targeted use of market opportunities. To this end, Krones will selectively strengthen its workforce in the coming years, primarily in the areas of IT and software, and also in the emerging markets.

Our motivated and qualified employees secure the company's future. They are the face of the company and it is they who ensure that customers are satisfied with Krones products and services. For this reason, Krones will continue to commit above-average investment to training and employee development.

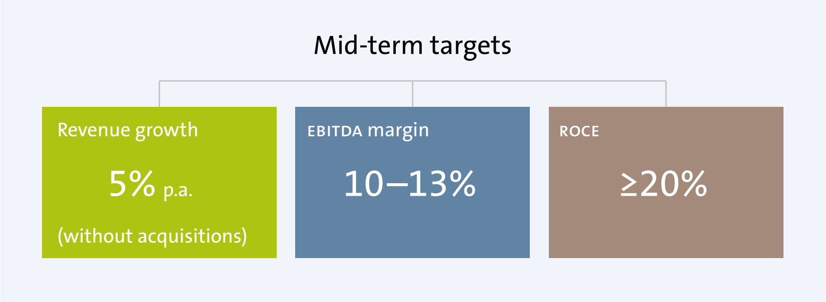
New medium-term targets adopted by Krones to 2025

The company maintained its medium-term financial targets even during the coronavirus crisis:

- 2% to 5% average organic revenue growth per year
- 9% to 12% EBITDA margin (corresponding to an EBT margin of 6% to 8%)
- 24% to 26% working capital to revenue ratio

As reported at this point last year, Krones aimed to achieve these targets by 2023. After the 2021 financial year went significantly better than originally expected, it is now possible that the lower range of the previous medium-term targets will be achieved not in 2023, but already in the current 2022 financial year. However, this depends on the overall economic situation.

Krones has adopted new ambitious medium-term targets to 2025



Revenue is expected to increase from €3.6 billion in 2021 to around €5 billion by 2025. On an organic basis – meaning without acquisitions – the company aims to grow revenue by an average of 5% per year (previously 2–5%), to €4.5 billion. The remainder is to be achieved by further growth outside of the beverage industry and also by means of acquisitions.

Krones plans to continue growing profitably in future years. To this end, it targets an EBITDA margin of 10–13% in the medium term (previously: 9–12%).

Krones is introducing return on capital employed (ROCE) from 2022 as a new target for the efficient use of capital. This replaces the previous third target, working capital as a percentage of revenue. ROCE reflects both working capital and fixed assets. In addition, ROCE gives investors an even more accurate picture of how efficiently the company manages the capital it uses. Krones has already published ROCE as a key performance indicator in past years. Its target for ROCE is a significant increase to at least 20% by 2025 (2021: 10.0%).

Krones' management system

Krones' management primarily uses the following financial performance indicators to steer the group and its two segments:

- Revenue growth
- EBITDA margin (earnings before interest, taxes, depreciation and amortisation as a percentage of revenue)
- Working capital as a percentage of revenue (until 2021)
- ROCE – return on capital employed (from 2022) – the ratio of EBIT to average net capital employed in the past four quarters. Net capital employed is defined as non-current assets (excluding goodwill and financial assets) plus working capital.

In order to strengthen our market position and utilise economies of scale, we aim in the medium-term to achieve **revenue growth** above the market average.

Earnings before interest, taxes, depreciation and amortisation (EBITDA) is a key earnings performance indicator. Profitability, measured as the **EBITDA margin** (EBITDA as a percentage of revenue) is among our key targets and parameters. The EBITDA margin indicates the company's profitability in relation to revenue, irrespective of the tax rate, financial income/expense and depreciation and amortisation. For the group, we set the target margin as the weighted average of the two segments.

Our third major performance indicator is **working capital to revenue**, which is calculated at group level. Working capital is calculated as follows: (inventories + trade receivables + contract assets) – (trade payables + contract liabilities). This figure indicates how much working capital is needed to finance revenue generation. The lower the number, the less capital is tied up in operations and the more financial leeway the company has to use its cash resources for other purposes.

Changes from the 2022 financial year onwards

From the 2022 financial year, we are replacing the **working capital to revenue ratio** with **ROCE** (return on capital employed). The reason for the change in the third target is that ROCE reflects both working capital and fixed assets. ROCE shows investors how efficiently the company makes use of capital. The other two performance indicators (revenue growth and the EBITDA margin) remain unchanged.

In addition, commencing in the 2022 financial year, Krones now manages the group via three segments. The Intralogistics segment is added alongside the two existing segments. This is because the Intralogistics business, which was previously part of the Beverage Production/Process Technology segment, has attained a commensurate size as a result of the previous years' strong growth. The new segmentation also enhances the transparency and depth of Krones' segment reporting.

Development of the key performance indicators in the last five years

	2017	2018	2019	2020	2021
Year-on-year revenue growth	8.8%	4.4%	2.7%	–16.1%	9.4%
EBITDA margin	9.2%	7.9%	5.7%	4.0%	8.6%
Working capital to revenue	27.3%	27.3%	26.9%	28.3%	24.8%
ROCE (from 2022)	14.9%	11.5%	2.2%	–2.2%	10.0%

Other financial key performance figures

In addition to the above, a further important performance indicator for Krones is **free cash flow** (cash flow from operating activities less cash flow from investing activities). We take further guidance from the development of **EBT** (earnings before taxes) and the **working capital to revenue** ratio.

Research and **development** (R&D)

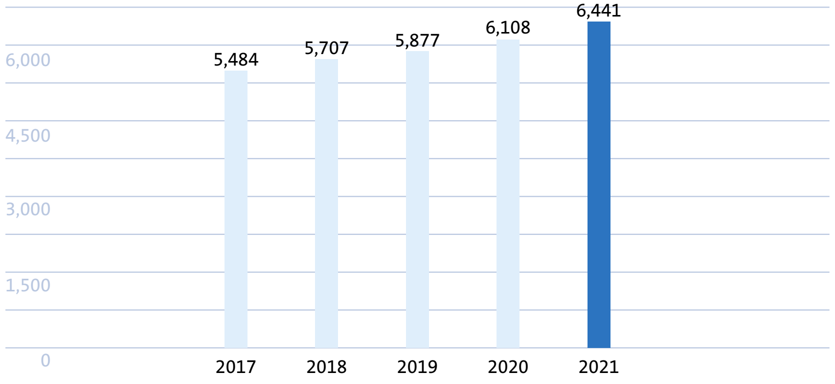
- Krones invests 4.8% of revenue in R&D
- R&D strategy focuses on line expertise, sustainability and digitalisation
- Six clearly defined R&D programmes
- Extending market leadership in aseptics

Innovative products secure our company's future. This is why research and development (R&D) has always been a key strategic pillar in Krones' long-term corporate success.

Krones invests 4.8% of revenue in R&D

Some 2,100 highly qualified people drive the development and improvement of machines, systems and services at Krones worldwide. The innovative strength of the Krones R&D team is reflected in the number of registered patents and utility models. This rose to 6,441 at the end of 2021 (previous year: 6,108).

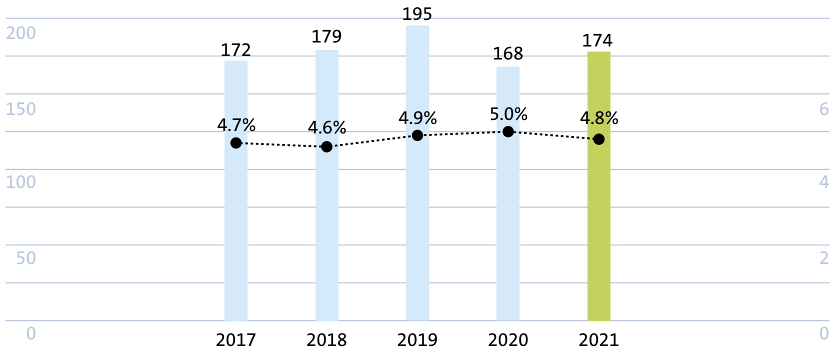
Registered patents and utility models – KRONES Group



Krones invested 4.8% of consolidated revenue in research and development in 2021.

To maintain the high pace of innovation, Krones once again spent a significant share of revenue on R&D in 2021. R&D spending amounted to €174 million (previous year: €168 million) or 4.8% of consolidated revenue (previous year: 5.0%). €28.2 million of this was capitalised as development costs in the reporting period (previous year: €23.7 million).

R&D expense (€ million) and R&D ratio (%)



Collaboration across all product areas

A clearly defined innovation process manages the entire development portfolio for all product areas. Employees from various areas are actively involved in development projects. This ensures that all key aspects of the product development process and product lifecycle are aligned to customer needs. To further increase the pace of innovation, Krones has merged and harmonised the R&D processes for automation and digitalisation under the name Krones.digital. This matrix organization brings together employees who work at different locations and in different Krones companies. All cooperate closely with the R&D team who develop machinery and equipment. In projects that are successful, the innovation process generates products and services that do well in the market. A number of examples can be found on pages 66 to 68.

As well as making use of in-house expertise for innovation, Krones cooperates with universities, research institutions and the R&D departments of several other companies. Examples of collaborations on innovative developments include lossless food production and the use of standardised web services.

Krones R&D strategy with three focal areas

The Krones R&D strategy is derived from the corporate strategy. All innovations focus on customer benefit. New products and services must create added value for customers. As well as meeting customer needs, our innovation activities are also aligned to cross-cutting megatrends. This results in **three focal areas** for our R&D strategy at Krones:

System solutions	Sustainability	Digitalisation

The four value drivers in the Krones R&D strategy

The Krones strategy is centred on customer satisfaction. From our many discussions with customers and decades of industry experience, we know what is important to customers in the food and beverage industry. In this regard, Krones has identified four areas as the value drivers of its R&D strategy:

Product and production safety	Cost efficiency	Flexibility	Sustainability
Product safety	Maximum overall system efficiency	Maximum numbers of product variants	Sustainable packaging
Product quality	Smart systems	Future adaptability of equipment	Zero-waste-production
Production safety	Robustness	Inventory-optimised production	Low energy and media consumption

R&D strategy programmes

The strategy and value drivers outlined above give rise to six clearly defined R&D programmes, which were further advanced during the reporting period.

Sustainable packaging	Solutions for more sustainable use of plastics; environment-friendly packaging innovations; PET recycling
High-performance and flexible systems	Machines and lines that combine high output with maximum flexibility for operators
Streamlined glass systems	Compact, resource-saving, efficient end-to-end solutions for filling beverages in glass bottles
High-quality aseptics	Systems for microbiologically risk-free filling of sensitive beverages with even lower resource and operating input
Flexible can lines	End-to-end solutions for can filling that stand out for even better hygiene, sustainability and flexibility
Digital ecosystem	Further development of the integrated digital ecosystem for smart, connected production

Sustainable packaging solutions and recycling

Our customers attach great importance to protecting the climate and the environment. Beverage consumers are becoming more demanding in their requirements and this has a direct impact on investment spending at our customers. Krones has consequently been advancing the development of sustainable packaging solutions and PET recycling for many years. Because our customers want to continue benefiting from the advantages of PET packaging (weight, stability, flexibility and cost), bottles are increasingly made from recycled PET (rPET). This makes it important for all new Krones lines to be able to process up to 100% rPET.

With its various Metapure lines, Krones offers high-quality recycling solutions to produce prime recycled resin from used PET bottles. This recycled resin can be used to produce new food-grade bottles (bottle-to-bottle recycling). The company is also extending its recycling technology to cover other plastics such as polyolefins, packaging films and closures. This makes it possible to recycle a large proportion of plastics in a closed loop. That saves resources and reduces plastic waste.

Supporting customers' climate targets with enviro

Krones has addressed sustainability since as long ago as 2008, pooling all related activities in the enviro program. The objective of enviro is to reduce energy and media consumption on our machines and lines. This results in significant savings for customers, both financially and in terms of carbon emissions.

The digital beverage plant

Krones' prime focus in digitalisation is on filling and packaging lines. Our Connected Line integrates all machinery in a customer's plant into our digital, cloud-based ecosystem. In this way, the customer gains maximum transparency across the entire production plant. The Krones.world portal gives customers access to all Krones digital products and services.

We aim to support plant operators with digital applications so they can leverage the collected data for higher plant availability and output combined with lower operating and labour costs. One example is the Tasks tool, which alerts plant personnel to problems at an early stage and gives clear instructions on what to do. This avoids downtime and potential repair costs.

Krones' goal is to operate a line over its entire life cycle via digital service centres on the basis of precisely specified service-level agreements. This makes digitalising our life cycle service (LCS) business an important part of our R&D activities.

To quickly advance Krones' worldwide digitalisation at a high quality level, we increasingly use international resources to supplement the capabilities of our domestic digitalisation specialists.

Krones products stand out for flexibility and performance

New products from Krones are engineered to give customers the greatest possible flexibility in the production process. They must be able to switch production quickly and easily between beverages and between different types and shapes of packaging. Machines and lines must also be designed for easy future upgrading and expansion, including with third-party products.

Besides flexibility, another key decision criterion for customers is cost-efficiency. This is achieved on the one hand by streamlining lines with a well thought-out layout. We benefit here from the line expertise accumulated over decades throughout the Krones Group. Streamlined filling lines reduce total cost of ownership (TCO).

On the other hand, lines are expected to fill as many cans or bottles as possible per unit time. Higher output can only be achieved with technically mature and stable machines and systems. .

Extending our leading market position in aseptics

The aseptic filling of sensitive products such as milk or fruit juices places the highest demands on system reliability and hygiene. Krones leads the market here with top quality in product and production safety and reliability. The company drives innovation in aseptics both for high-end and for sophisticated full-system solutions, thus extending its position as technology leader in aseptic PET filling.

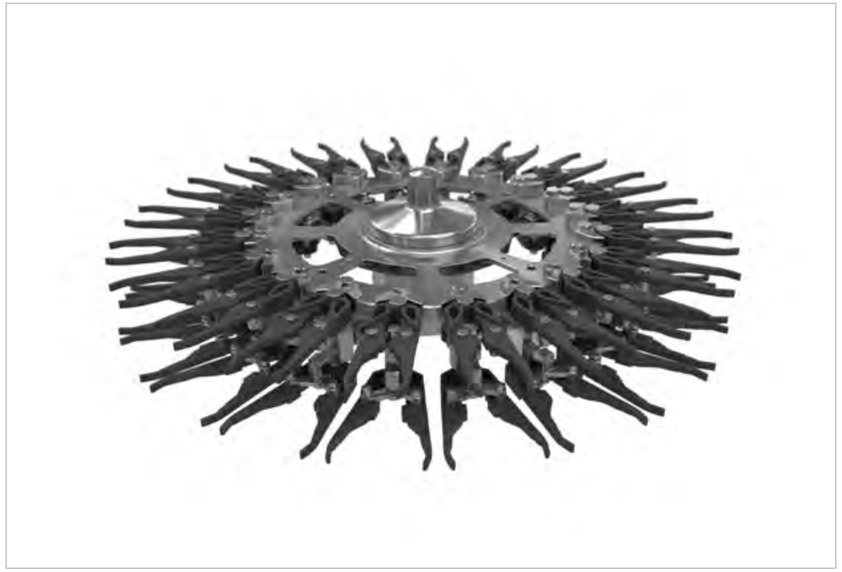
Glass and cans an important part of R&D programmes

Alongside PET, which remains the dominant packaging material, Krones also continues to focus on glass and cans and to strengthen these segments with innovation. Accordingly, these two forms of packaging are also an important part of the R&D programmes at Krones.

In glass, in addition to the further evolution of individual products such as beer fillers (see page 69), we work above all on developing streamlined, resource-saving, efficient end-to-end solutions for glass bottle filling.

For cans, Krones focuses on flexible, sustainable and hygienic machine and line solutions. An example is the new generation of hygienic can fillers. A smaller clean chamber makes the line easier and faster to clean, thus reducing downtime. With the market launch of our own can seamer, we have added a key component to our can filling portfolio and reduced our dependence on suppliers.

In the following, we present a selection of Krones innovations from the reporting period.



Clamping starwheels

Bottles have to be moved quickly, precisely and safely around a bottling plant. A key part is played here by clamps that grip bottles around the body and pass them on. Multiple clamps are arranged on a clamping starwheel. The newly developed clamping starwheels from Krones can handle a range of bottle shapes and sizes. Customers no longer have to switch them out for a change of bottle format. This improves flexibility and reduces costs. The new clamp geometry also means that more clamps can fit on a starwheel. This means more bottles can be filled on a machine of the same size. The new clamping starwheels are not only available for new machines, but are also capable of being retrofitted.

Prejet preform rinser

Before PET preforms are blown into bottles, they have to be thoroughly cleaned. This task is performed by Prejet, the new preform rinser. It reliably and efficiently removes all macro particles such as PET dust and film. The Prejet inserts a lance into the preforms and cleans them with ionised air. In order to safely remove the particles, they are extracted, filtered out and collected. The system works so effectively that it is also suitable for aseptic applications. Alongside cleaning performance, a major focus was placed when developing Prejet on energy and media consumption. Compared to the previous model, the machine uses up to 50% less compressed air.

The Future Line project

Together with a reference customer, we carried out a demonstration project to show the potential of smart digital assistance systems in beverage plants. The customer has a returnable bottle line implemented as a Connected Line. This means Krones can record and analyse all relevant production data from the line for the customer and make recommendations for rapid troubleshooting. The aim was to run the line without unnecessary downtime and with fewer line operators, despite its exceptional size and complex material flows.

Connected Line brings many benefits and also solves problems frequently faced by beverage producers in day-to-day operations. First, lines come to a standstill due to a lack of operating materials such as labels or glue, because the operator is unable to see early enough that they are running out. Second, jams are caused by bottles falling over unnoticed at the bottle washer. Krones has been able to eliminate these problems with smart analysis of data from the Connected Line.

The data shows if operating materials are about to run out or if a bottle has tipped over. This information must quickly reach the operator in charge. That is ensured by the Krones digital Task tool, which uses the company's proprietary, cloud-based IIoT platform. The tool sends the operator information and instructions on a mobile device such as a smartphone or smartwatch. The operator can then see to it that materials are replenished before they run out, and that any fallen bottles are quickly removed from the line. Smart data use enables Krones digital assistance systems to prevent unnecessary downtime and helps maximise plant availability.

Adjustment to capper portfolio

In the European Union from 2024, caps on single-use plastic bottles must be designed in such a way that they stay tethered to the bottle after opening. These tethered caps necessitate modifications to filling equipment. The capper has to be adapted accordingly. In close collaboration with cap producers, Krones worked to prepare for the new legal requirement from an early stage and made technical adjustments to the entire capper portfolio. As a result, we already have a matching solution for the most common tethered cap variants today.

The road from product innovation to series production is long and challenging. Krones gains valuable experience by using pilot series that are made available to selected customers. The findings from these field trials can then be used to make permanent adaptations to machines and lines. A new product does not go into series production until we are sure it will meet the demands of practical use in the long term. This process can take several years. Below, we present a number of former innovations that entered series production in 2021 or will do so in the near future.

Dynafill

Krones presented a revolution in beer bottling with the Dynafill beer filler at drinktec in 2017. Rather than filling and crowning beer bottles in two separate units, Dynafill completes both operations in a single machine. That slashes filling and crowning time by 50%, to just five seconds.

Dynafill offers even more benefits for customers. It cuts the number of filling valves from 100 to 66 while keeping output unaltered at 36,000 bottles per hour. The footprint is downsized by half as it eliminates both a separate crowner and the starwheels needed to transfer bottles from filler to crowner. The enclosed hygienic filling and crowning zone ensures optimal product purity.

Dynafill also scores in terms of CO_2 consumption. Because it eliminates flushing phases, it uses 20% less CO_2 than conventional systems. As a further, very important positive contribution to customers' carbon footprint, Dynafill can handle beverages both in coldfill and warmfill applications (with temperatures up to 30 °C). That saves valuable cooling energy.

Modulfill VFS-M with PFR valve

The Modulfill VFS-M combines process technology and filling. This is because the 'M' stands for the Contiflow mixer. A key part is played in this Krones block solution by the infinitely adjustable PFR valve. The valve flow speed can be precisely adjusted to the prevailing conditions. Foaming due to excessively fast filling or wasted time due to excessively slow filling are a thing of the past. Combining the filler with the PFR valve increases line performance by up to 25%. As the PFR valves are electrically actuated, Modulfill VFS-M also saves energy. In addition, the block design considerably reduces the system footprint, the consumption of cleaning media and cleaning and changeover times.

Contipure AseptBloc E

Aseptic lines traditionally rely on chemical processes for sterilisation. The Krones Contipure AseptBloc E takes a new approach. The preform sterilisation module sterilises the inner and outer surfaces of PET preforms using electron beams. This innovative method kills even stubborn and chemically resistant germs. Because it works without water or chemicals, the technology is efficient and sustainable.

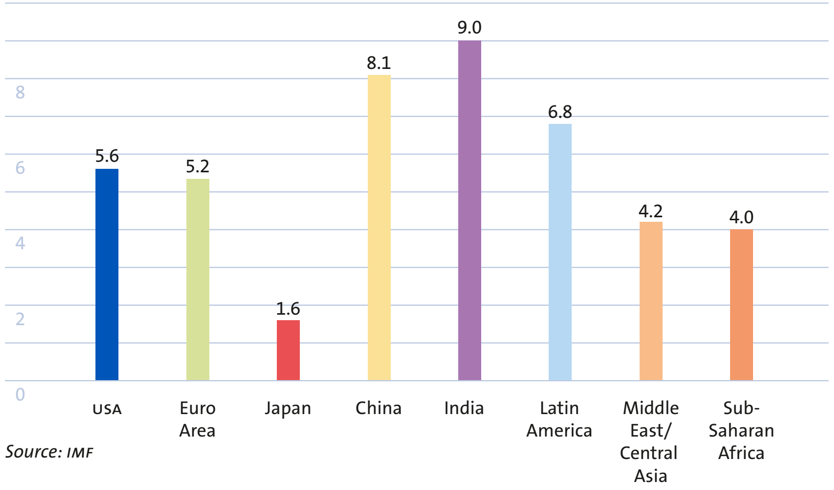
Economic environment

- Global economy grew 5.9% in 2021
- German mechanical engineering benefiting from strong economy
- Global demand for packaged beverages picking up again

Strong 5.9% global economic growth in reporting year

In 2021, the global economy recovered well from the previous year's recession. The main reason for the strong growth in the global economy was the abatement of the Covid-19 pandemic as a result of vaccination. Investment programmes launched in major economies during 2020 additionally supported the upswing. According to January 2022 data from the International Monetary Fund (IMF), global gross domestic product (GDP) rose by 5.9% in 2021 (2020: –3.1%). The IMF forecast had stood at 5.5% at the beginning of the year and 6.0% at mid-year. In the second half-year, international supply and material shortages prevented growth from being even stronger.

GDP growth rate 2021 by region (%)



Source: IMF

Economic growth in the mature industrialized economies was stronger in 2021 than the global average. The economy there grew by a total of 5.0% (previous year: –4.5%). Japan was hit particularly hard by the increasing supply and material shortages in the second half of the year. The Japanese economy expanded by just 1.6% (previous year: –4.5%). In the euro area, the economy benefited from the ECB's continued loose monetary policy and stimulus programmes. GDP in the common currency area rose by 5.2% in 2021, compared to a 6.4% decrease in the previous year. Of all industrialised countries, the USA recovered most strongly. The world's largest economy increased GDP by 5.6% in the reporting period (previous year: –3.4%).

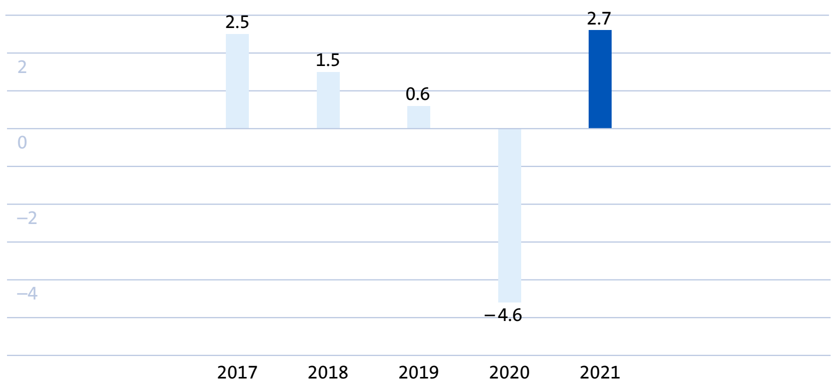
Emerging and developing economies grew more dynamically in the reporting period than industrialised economies. GDP in emerging and developing countries increased by 6.5% in 2021 (2020: –2.0%). According to IMF experts, this was mainly due to the positive trend in China and India. As the year progressed, the Chinese economy had the strongest recovery from the coronavirus pandemic. Following 2.3% growth in the previous year, GDP in China grew by 8.1% in 2021. India recorded even stronger growth, with GDP up 9.0%, after a particularly hard hit from the coronavirus crisis in the previous year (–7.3 percent). Latin American economies likewise recovered strongly. Economic output in this region rose by 6.8% (previous year: –6.9%). The GDP increase in the Middle East/ Central Asia region was 4.2% in the reporting year (previous year: –2.8%). Economic activity in the Sub-Saharan Africa region increased by 4.0% in 2021 (previous year: –1.7%).

German economy records below-average 2.7% growth

Compared to the rest of Europe (euro area: +5.2%), the German economy grew less strongly in the reporting period. According to preliminary figures from Germany's Federal Statistical Office, German GDP went up by 2.7% relative to the previous year, when the economy contracted by 4.6%. As a result, domestic economic output has not yet returned to pre-crisis levels.

The German economy picked up across almost all sectors in 2021, but economic activity in almost all sectors remained below the level seen before the crisis. Higher government spending, exports and investment were the strongest growth drivers, while private consumption stayed at the previous year's low level.

GDP growth Germany (%)



Source: Germany's Federal Statistical Office

Machinery sector recovered in 2021

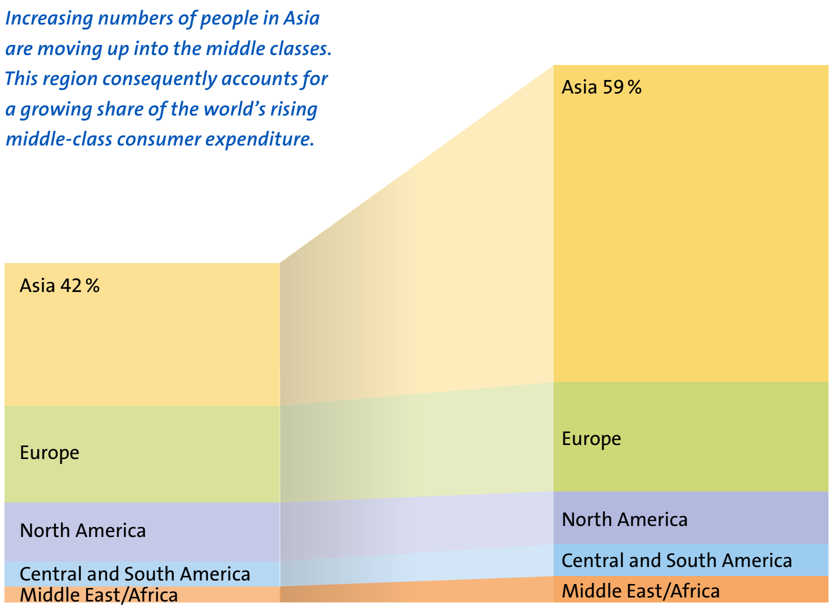
Companies in the German machinery sector completed a challenging year in 2021 with substantial growth figures. The industry benefited from a strong economy in China, the USA and Europe, its three most important sales markets. On preliminary data, the German Mechanical Engineering Industry Association (VDMA) expects machinery and industrial equipment output to have increased in value by 7% in 2021 relative to the previous year (2020: –11.8%). In September, this forecast had stood at 10%. The fact that output did not quite match the high expectations despite a good order intake was due to a number of supply shortages in the second half of 2021. Electronic components and metals in particular were in short supply, which hindered companies from processing the large order intake.

Megatrends support stable market growth

The good long-term growth prospects for Krones' markets remain intact. After a brief setback in 2020, the first year of the pandemic, the markets for packaged beverages and food returned to a stable growth trend in the reporting year. This growth is supported by megatrends driving above-average medium and long-term demand for food and beverage packaging machinery.

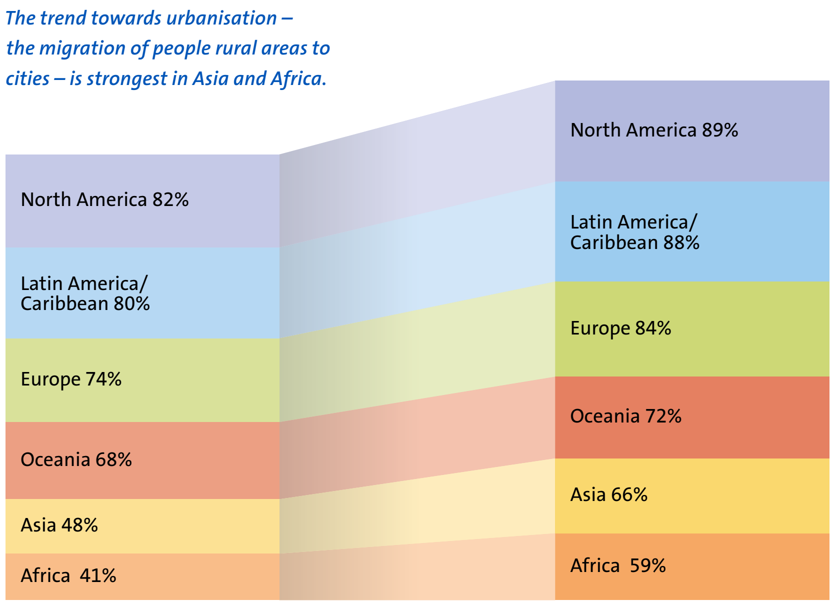
The main, overarching megatrend is global population growth. At the end of 2021, some 7.9 billion people inhabited the earth. According to United Nations forecasts, that number is increasing at a rate of some 70 million each year. Population growth is especially strong in Africa and Asia. The world's population is expected to reach about 8.5 billion by 2030. All those people need to eat and drink. And many of them will consume packaged beverages and food. This is supported by two other megatrends, which are the growing middle class and increasing urbanisation.

Asia's share of global middle class consumption is growing rapidly



2020 (expected) US$35.0 trillion — *Source: OECD* — 2030 (expected) US$55.7 trillion

Urban population in 2015 and 2050 (% of total)



Source: United Nations, (World Urbanization Prospects, The 2018 Revision)

Growing middle class increases consumer spending

The long-term trend of more and more people in emerging and developing economies escaping poverty and rising into the middle class is unbroken. According to forecasts by the OECD, the middle classes worldwide will grow from 3.2 billion people to 4.9 billion between 2020 and 2030. As incomes rise, so too does consumer spending – and that includes spending for packaged beverages and foods. Asia accounts for a large share of the growth of the middle class and the corresponding increase in buying power worldwide. The OECD estimates that Asia's share of total middle-class consumer spending worldwide was 42% in 2020. By 2030, that figure is expected to rise to 59%. Total consumer spending by the global middle classes is likely to increase from US$35 trillion to US$55.7 trillion in that time.

Urbanisation supporting consumption of packaged food and beverages

Increasing urbanisation – the migration of people from rural areas to cities – also promotes demand for packaged food and beverages. That is because city-dwellers consume more packaged products on average than people who live in the countryside.

The United Nations forecasts that two out of three of the earth's inhabitants will live in cities by 2050. At present, only about half of the world's population lives in cities. The strongest influx of people into cities is in the developing and emerging market countries of Africa and Asia.

Sustainability and digitalisation: additional growth drivers

Climate change and environment protection are among the most important issues facing society. Consumers are increasingly turning to sustainable and environment-friendly products as a result. This in turn drives demand from beverage producers for resource-efficient filling and packaging machines.

A further growth driver is increasing digitalisation. Smart, digital products and services enable beverage manufactures to produce more flexibly and efficiently and at lower cost. The trend towards the digital beverage plant is in its infancy. It will ensure growing demand in the medium and long term.

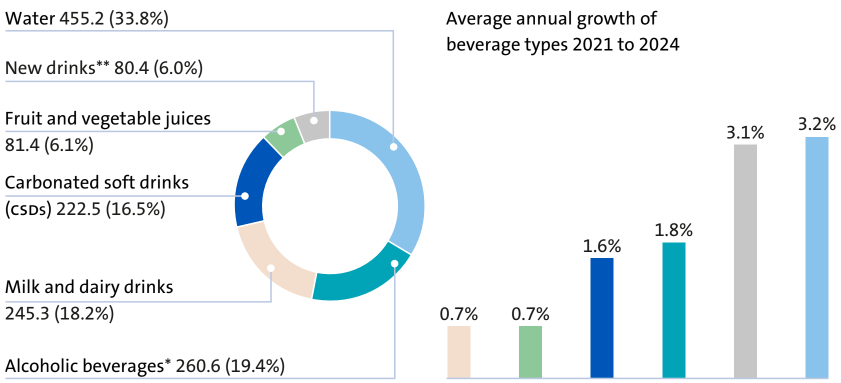
The increasing global population, urbanisation, digitalisation, growth of the middle class and sustainability are megatrends that support the growth of Krones' markets.

Consumption of packaged beverages continues to rise

Global demand for packaged beverages recovered in 2021 from the previous year's pandemic-related downturn. According to preliminary figures from Global Data, global consumption of packaged beverages, at a total of 1,345 billion litres in 2021, was 4.7% higher than a year earlier. Global beverage consumption is thus almost back to pre-crisis levels (2019: 1,366 billion litres).

Demand for alcoholic beverages, which was hit hard by the Covid-19 pandemic in the previous year, grew disproportionately strongly in 2021 (+6.7%). Consumption of new drinks (sports and energy drinks together with ready-to-drink coffee and tea) rose even more steeply (+12.3%). Demand for carbonated beverages (+5.0%) and milk and dairy drinks (+5.1%) grew at roughly the same rate as overall consumption. Consumption of bottled water rose at a lower rate than the overall market in 2021 (+1.0%). It should be noted, however, that the water market remained relatively stable during the 2020 coronavirus crisis.

Global consumption of packaged beverages in 2021 (billion litres)



2021: 1,345.4 billion litres (e)

*Beer, wine, and spirits
** Energy drinks, sports drinks, and ready-to-drink tea and coffee

Sources: Global Data

Global demand for packaged beverages is expected to show stable growth in the years ahead. According to Global Data, it is projected to grow at average annual rates of 2.0% from 2021 to 2024. The contribution of the various beverage subcategories to the projected overall market growth will vary.

Demand for packaged beverages recovered in 2021 from the pandemic-related downturn. Market researchers also expect stable market growth in the years ahead. Consumption of bottled water is expected to rise significantly more rapidly than the overall market.

The strongest growth according to Global Data is expected to be seen in **bottled water** consumption. This is by far the largest segment of the global beverage market (2021 share: 33.8%) and is benefiting from growing demand for clean bottled drinking water in emerging and developing economies and from the health trend in industrialised countries. Global Data expects demand for bottled water to grow at an average annual rate of 3.2% from 2021 to 2024.

With regard to the packaged **alcoholic beverages** market, market researchers are once again more confident than they were at the height of the Covid-19 pandemic. Nevertheless, the growth rate in the second-largest segment (2021 share: 19.4%) is likely to be slightly below overall market growth. In total, Global Data expects that the consumption of packaged alcoholic beverages will grow at an average annual rate of 1.8% from 2021 to 2024.

Growth estimates are moderate regarding the consumption of **milk and dairy drinks** (share of global beverage consumption in 2021: 18.2%). Global Data forecasts below-average growth rates both for plain milk, which accounts for around 70% of the market segment, and for niche products such as yoghurt smoothies and flavoured milk. For the entire milk and dairy drinks segment, the projected average annual growth rate is 0.7% from 2021 to 2024.

Demand for **carbonated soft drinks (CSDs)** (2021 share: 16.5%) is expected to grow at a slightly lower rate than the overall market over the next few years. The average growth rate expected by Global Data for 2021 to 2024 is 1.6%. In industrialised countries especially, the trend towards healthy eating is slowing demand for sugary soft drinks.

In the two smaller segments of the beverage market, **fruit and vegetable juices** (share of total beverage consumption in 2021: 6.1%) and **new drinks** (6.0%), the growth prospects are better for new drinks. For this beverage category, which includes sports drinks, energy drinks, and ready-to-drink coffee and tea, Global Data forecasts average annual increases of 3.1% from 2021 to 2024. Demand for fruit and vegetable juices is expected to grow by an average of just 0.7% per year during the same period.

Emerging markets the most important growth driver for beverage demand

Krones is benefiting in emerging and developing economies from population growth, a burgeoning middle class and urbanisation. The growing diversity of beverages and packaging stimulate demand in mature industrial countries.

Over the next few years, consumption of packaged beverages is expected to continue to grow at the highest rate in emerging and developing markets. This is mainly because growth in emerging economies is driven by key megatrends such as global population growth, a burgeoning middle class and urbanisation.

The highest growth rates according to Global Data will be in China. Demand for packaged beverages is anticipated to rise there by an annual average of 3.2% between 2021 and 2024. The experts expect a disproportionately high average growth rate of 2.8% for the Russia/CIS/Eastern Europe region. Demand in Africa/Middle East will also continue to grow. Consumption of packaged beverages is anticipated to rise there by an average of 2.4% a year between 2021 and 2024. Beverage demand in the Asia/Pacific region is expected to grow slightly faster than overall demand, with an average rate of 2.1%.

Demand is expected to develop at a lower rate than the overall market in the major mature markets of Western Europe (forecast average growth rate: 1.5%) and North and Central America (0.9%). Krones' growth opportunities in such markets relate not to rising beverage consumption, but to increasing diversity of beverages and packaging.

Worldwide consumption of packaged beverages*

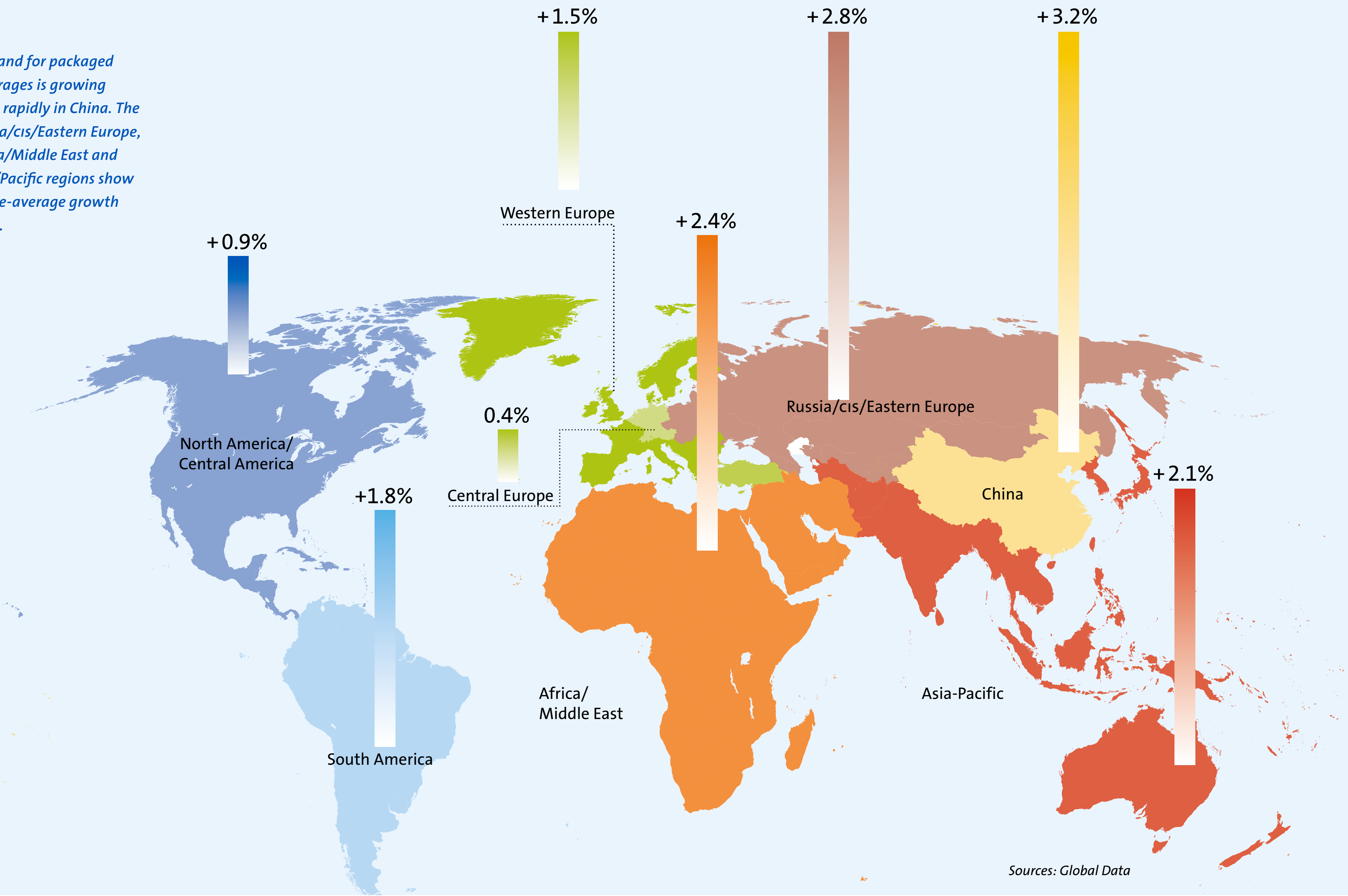
	2021 (e)		2024 (e)		Average annual growth (%)
	Billion litres	%**	Billion litres	%**	2021 – 2024
China	274.8	20.4	302.4	21.2	3.2
Asia-Pacific	271.8	20.2	298.2	20.2	2.1
North America/Central America	218.2	16.2	223.9	15.7	0.9
South America	172.3	12.8	182.0	12.7	1.8
Western Europe	139.6	10.4	145.8	10.2	1.5
Africa/Middle East	118.4	8.8	127.1	8.9	2.4
Russia/CIS/Eastern Europe	98.3	7.3	106.7	7.5	2.8
Central Europe	52.0	3.9	52.6	3.7	0.4
Worldwide	**1,345.4**	**100.0**	**1,429.6**	**100.0**	**2.0**

*Rounding differences possible **Share of global consumption | (e) = expected

Sources: Global Data

Global consumption of packaged beverages by region: annual growth 2021–2024

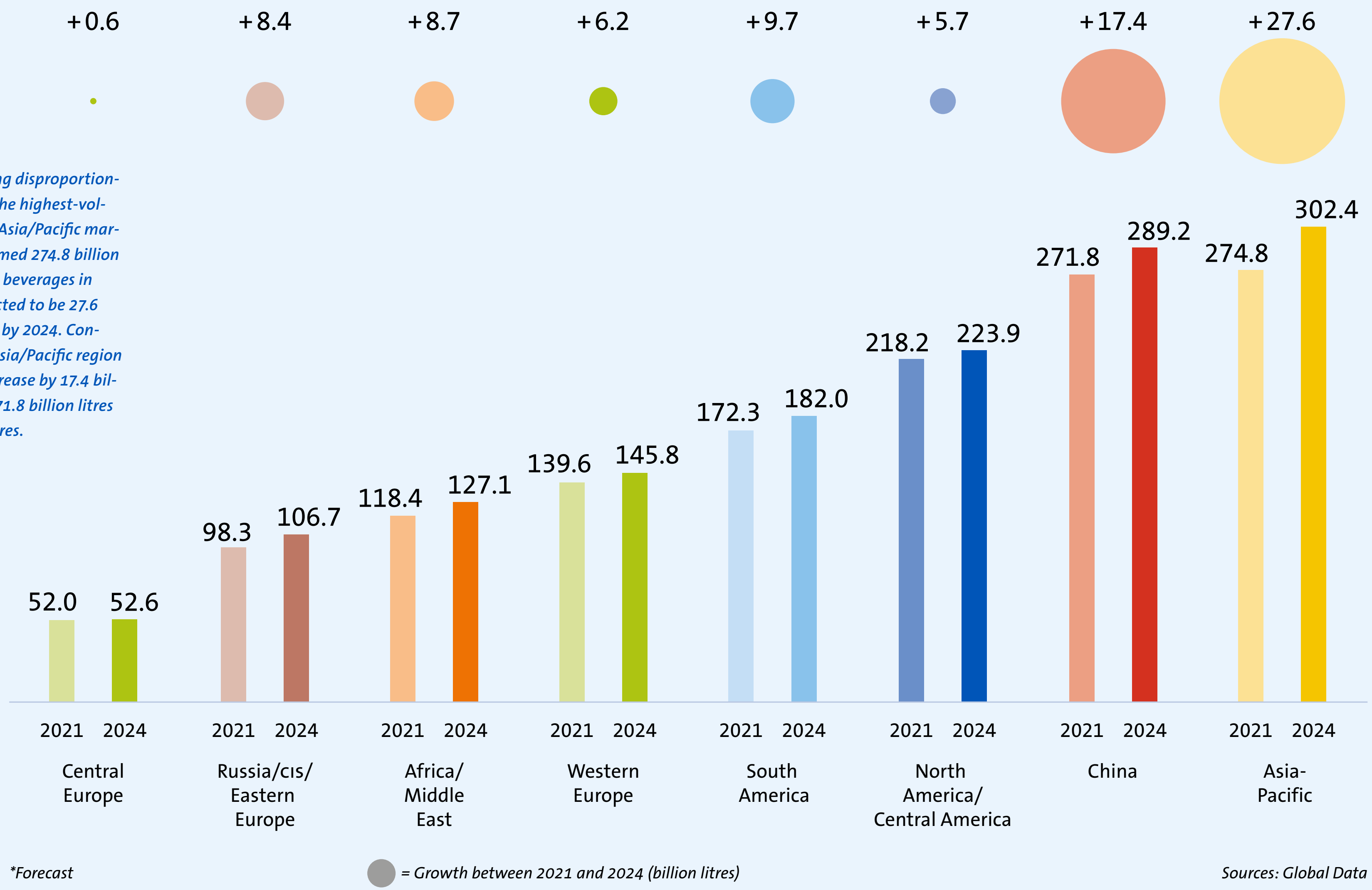
Demand for packaged beverages is growing most rapidly in China. The Russia/CIS/Eastern Europe, Africa/Middle East and Asia/Pacific regions show above-average growth rates.



Sources: Global Data

Global consumption of packaged beverages by region: **billion litres***

Demand is growing disproportionately strongly in the highest-volume Chinese and Asia/Pacific markets. China consumed 274.8 billion litres of packaged beverages in 2021. This is expected to be 27.6 billion litres more by 2024. Consumption in the Asia/Pacific region is projected to increase by 17.4 billion litres, from 271.8 billion litres to 289.2 billion litres.



*Forecast

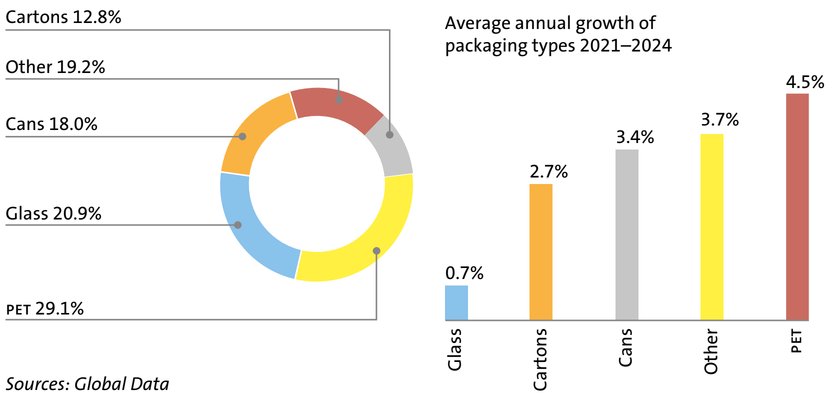
Sources: Global Data

Demand for PET containers continues to grow

The number of beverage container units filled is rising continuously worldwide. The figure was 1,828 billion in 2021. Around 30% of the total was accounted for by PET plastic.

Alongside beverage consumption, a further important statistic for providers of bottling and packaging equipment such as Krones is the number of units filled. This increased by 5.2% year-on-year in 2021 to 1,828 billion. The number of units filled is expected to gain by an average of 3.0% per year to nearly 2,000 billion in 2024. Most beverages are sold in plastic bottles, glass bottles, metal cans and paper-based cartons.

Global beverage market by packaging material in 2021 (based on units filled)



Sources: Global Data

Beverage containers are most frequently made of the **polyethylene terephthalate (PET) plastic**. According to figures from Global Data, 29.1% of units filled worldwide in 2021 were PET containers. The use of PET bottles is expected to grow disproportionately strongly in the next few years. This is because water – the most widely consumed beverage, and with high growth rates – is mainly sold in PET bottles. Based on Global Data figures, the number of PET containers used in the global beverage industry is expected to increase by an average of 3.7% per year through to 2024.

Glass accounted for 20.9% of all beverage containers in 2021. This makes glass the second most frequent packaging material for beverages. Glass bottles are primarily used for beer and other alcoholic beverages. Partly because demand for alcoholic beverages is growing more slowly than the overall beverage market, the share of glass beverage containers is expected to decline. The expected annual average growth rate of 0.7% is significantly below the growth forecast for the overall market.

A further important beverage packaging material comprises **metal cans** (2021 share: 18.0%). These are frequently used for beer, carbonated soft drinks and new drinks. The number of cans used for beverage packaging is expected to gain by an average of 2.7% per year through to 2024, which is slightly less than overall market growth.

Carton beverage packaging accounted for a 12.8% share in 2021. Cartons are mainly used to package milk, dairy drinks and fruit and vegetable juices. According to figures from Global Data, the number of cartons used for beverage packaging is likely to increase by an average of 3.4% per year through to 2024.

As one of the leading providers of machines and lines for the production, filling and packaging of PET containers, Krones benefits from the above-average growth in PET packaging. The company also has a strong market position in lines for filling and packaging beverages in glass bottles and cans. Krones does not provide solutions for carton packaging.

Krones **in figures**

- **Krones' business recovered in 2021 from the previous year's pandemic-related setback. Revenue rose by 9.4% to €3,634.5 million. Due to strong demand, order intake improved by 30.5% to €4,316.2 million.**
- **Krones' profitability increased significantly. The EBITDA margin adjusted for one-off effects improved from 6.2% in the previous year to 8.1%.**
- **Krones plans to pay a dividend of €1.40 per share for the successful 2021 financial year (previous year: €0.06).**

	Guidance for 2021* as of March 2021	Updated guidance for 2021 as of July 2021	Actual 2021
Revenue growth	2.5–3.5%	7–9%	9.4%
EBITDA margin	6.5–7.5%	7–8%	8.1%**
Working capital/revenue***	26–27%	26–27%	24.8%

* From the report on expected developments in the 2020 management report
** Excluding positive one-off effects on earnings of €17 million *** Average of last 4 quarters

Krones increased revenue in 2021 by 9.4% to €3,634.5 million

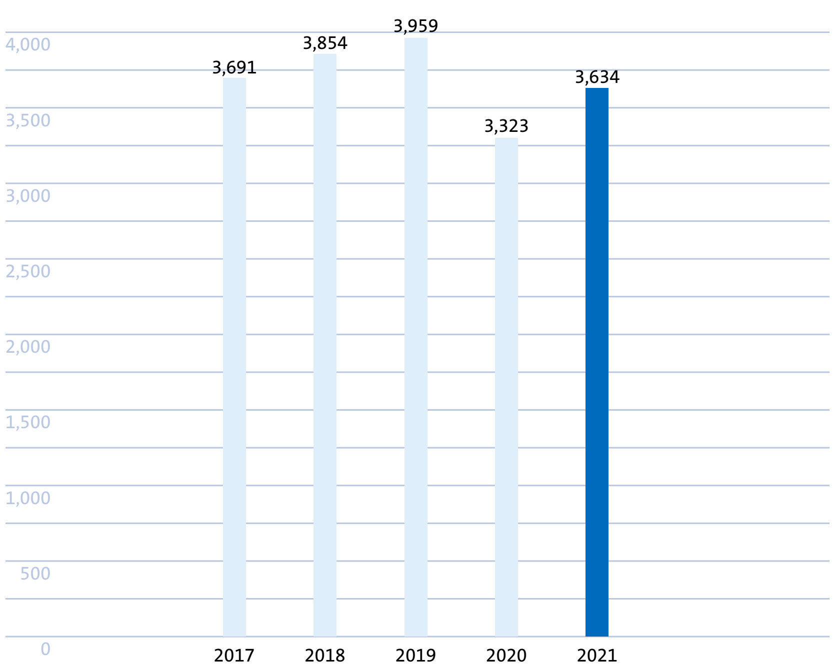
Revenue increased in 2021 by 9.4% to €3,634.5 million. This means Krones reached the upper end of the upgraded growth target of 7% to 9% published in July.

The global economy recovered in 2021 from the previous year's Covid slump. Demand also picked up in Krones' markets. This benefited us as a leading full-service supplier to the international filling and packaging industry. Krones profited particularly in the reporting year from its broad global footprint and proximity to global beverage producers. Despite the pandemic-related travel restrictions, we were able to supply customers with products and services in a timely manner.

Krones' growth accelerated significantly from the second quarter. In total, revenue increased by 9.4% year-on-year in 2021, from €3,322.7 million to €3,634.5 million. This means we reached the upper end of the upgraded growth target published in July for the full year 2021 (7% to 9%).

Both new machinery revenue and service revenue were higher in 2021 than in the previous year. New machinery revenue grew particularly strongly. It should be noted, however, that the Covid slump in 2020 hit the new machinery business harder than service activities.

Krones Group revenue (€ million)

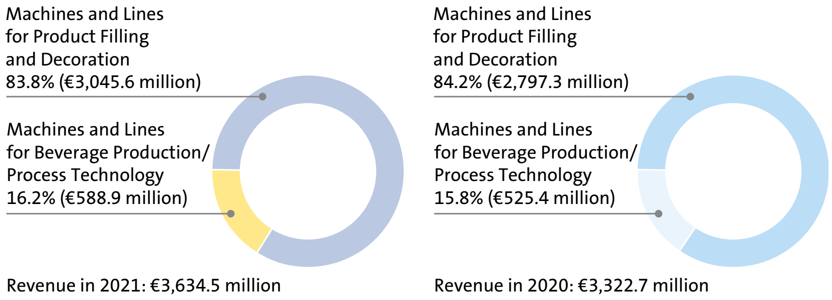


Revenue by segment

Both segments recovered significantly in 2021 from the previous year's pandemic-related setback.

Revenue in the core segment, Machines and Lines for Product Filling and Decoration, rose by 8.9% year-on-year from €2,797.3 million to €3,045.6 million in 2021. The segment's share of consolidated revenue decreased slightly to 83.8% (previous year: 84.2%).

Share of consolidated revenue



Business picked up even more strongly in the Machines and Lines for Beverage Production/Process Technology segment than in the core segment. Revenue went up by 12.1% from €525.4 million in the previous year to €588.9 million in the reporting period. The segment contributed 16.2% of consolidated revenue (previous year: 15.8%).

Further information can be found under "Report from the segments" beginning on page 94 and under "Segment reporting" in the notes to the consolidated financial statements on page 141.

Revenue by region

Krones generated some 90% of consolidated revenue internationally in 2021. The company recorded strong growth in China and in North and Central America.

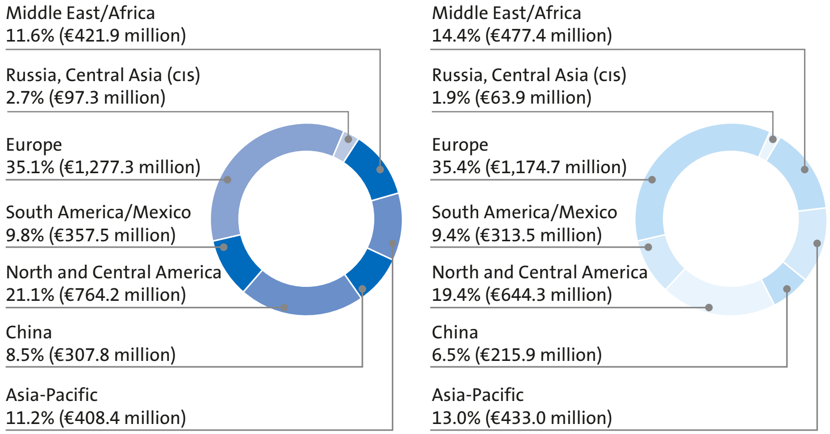
In Krones' home market of Germany, revenue recovered in 2021 from the steep fall (of 29.8%) in the previous year. Revenue went up by 14.2% from €328.7 million in 2020 to €375.5 million. The domestic share of total consolidated revenue consequently increased to 10.3% (previous year: 9.9%).

Our business in Europe (excluding Germany) picked up significantly overall in 2021. Revenue in the large Western Europe sales region increased by 10.9% to €517.9 million. Revenue in Central Europe (Austria, Switzerland and the Netherlands) improved to €243.0 million in the reporting period (an increase of 7.9%). In percentage terms, the strongest revenue growth in 2021 was in the Russia/CIS region. From a relatively low base, revenue there climbed 52.3% year-on-year to €97.3 million. Krones revenue in Eastern Europe decreased in 2021. At €140.9 million, it was 8.4% down on the prior-year period. In all, Krones' revenue in Europe (excluding Germany) and Russia/CIS improved 9.8% year-on-year from €909.9 million to €999.1 million in 2021. The share of consolidated revenue increased slightly to 27.5% (previous year: 27.4%).

Share of consolidated revenue	2021		2020		Change
	€ million	%*	€ million	%*	%
Germany	375.5	10.3	328.7	9.9	+14.2
Central Europe (excluding Germany)	243.0	6.7	225.2	6.8	+7.9
Western Europe	517.9	14.2	467.0	14.1	+10.9
Eastern Europe	140.9	3.9	153.8	4.6	−8.4
Russia, Central Asia (CIS)	97.3	2.7	63.9	1.9	+52.3
Middle East/Africa	421.9	11.6	477.4	14.4	−11.6
Asia-Pacific	408.4	11.2	433.0	13.0	−5.7
China	307.8	8.5	215.9	6.5	+42.6
North and Central America	764.2	21.1	644.3	19.4	+18.6
South America/Mexico	357.5	9.8%	313.5	9.4	+14.0
Total	**3,634.5**	**100.00**	**3,322.7**	**100.0**	**+9.4**

* Share of total revenue

Share of consolidated revenue



Revenue 2021: €3,634.5 million

Revenue 2020: €3,322.7 million

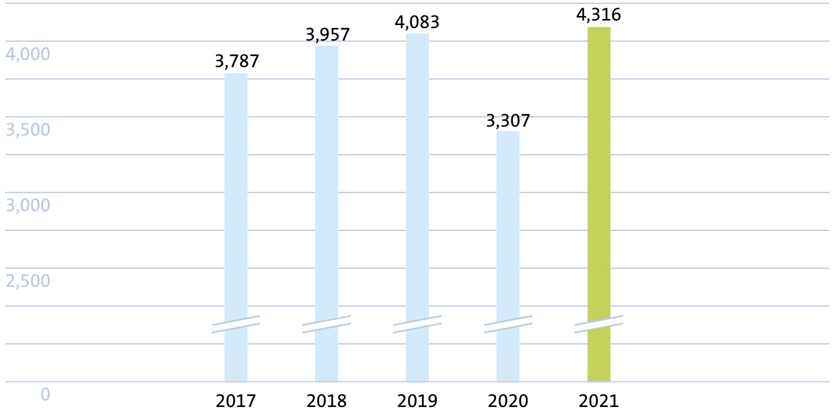
Krones' revenue in markets outside of Europe rose less strongly overall in 2021 (by 8.4%) than consolidated revenue. Its share of consolidated revenue consequently fell slightly to 62.2% (previous year: 62.7%). Business developed differently in the individual sales regions. In the Middle East/Africa region, revenue was down 11.6% in 2021 to €421.9 million. However, it should be noted that revenue there increased in 2020 (by 5.7%) despite the coronavirus crisis. Krones recorded strong growth in China in 2021. Revenue there went up by 42.6% to €307.8 million. However, this was after a 32.5% decline in the previous year due to the pandemic. As a result, Krones revenue in China almost regained the level from before the coronavirus crisis (2019: €319.9 million). In the Asia/Pacific region, revenue was down 5.7% year-on-year to €408.4 million in 2021.

Business in the Americas developed very well for Krones in 2021. In North and Central America, revenue rose by 18.6% to €764.2 million, after a slight decrease in the previous year. Revenue in South America/Mexico likewise increased strongly by 14.0% to €357.5 million and almost made good the decline in the previous year.

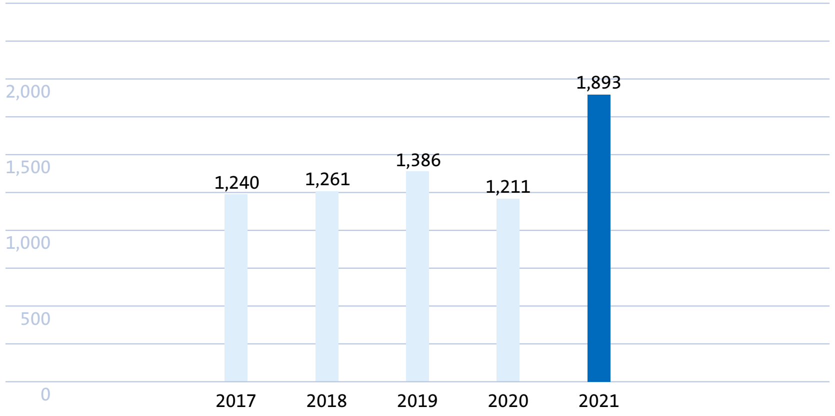
Krones continues to have a balanced revenue split between emerging and mature markets. We generated 47.7% of consolidated revenue in emerging markets in 2021 (previous year: 49.0%). The share of revenue generated in mature industrialised countries was 52.3% (previous year: 51.0%).

Order intake and order backlog

Krones Group order intake (€ million)



Krones Group backlog at 31 December (€ million)



Order intake increased by 30.5% and reached an all-time record of €4,316.2 million

Order intake increased strongly by 30.5% to €4,316.2 million in 2021. This is the highest ever contract value of orders for any financial year in Krones' corporate history.

Demand for Krones products and services increased strongly in the reporting year. Overall, investment confidence among Krones' customers recovered faster and more strongly than expected from the 2020 Covid slump. Mid-sized producers in the international food and beverage industry in particular invested significantly more again in existing and new production capacity in 2021 than in the previous year.

Thanks to its broad and innovative range of products and services, Krones was able to take advantage of the rising investment confidence and recorded strong order growth. The 6% price increase on all bottling and packaging equipment and for process technology with effect from 1 August 2021 did not significantly affect customer orders in the reporting period. Order intake remained very high in the fourth quarter of 2021, at €1,123.6 million. In total, order intake increased by 30.5% year-on-year between January and December 2021, from €3,307.0 million to €4,316.2 million. This means that the contract value of orders not only exceeded pre-crisis levels (2019: €4,083.5 million), but also reached a record high.

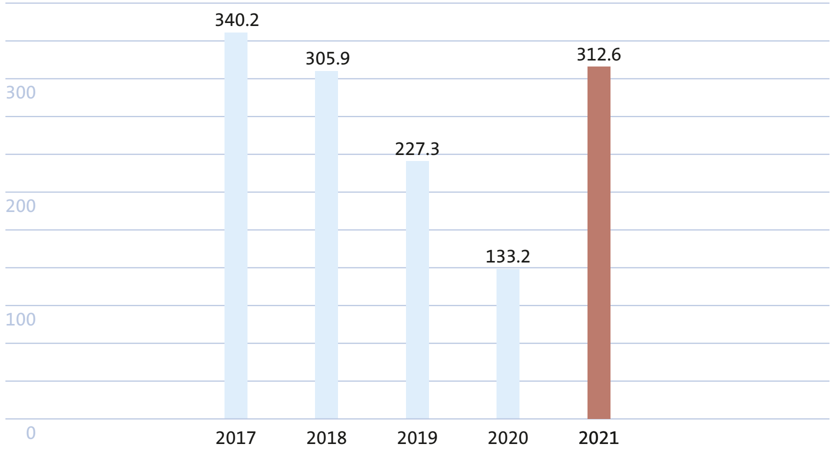
Order intake in 2021 was higher than in the previous year in all of Krones' sales regions. The contract value of orders grew particularly strongly in Central and Western Europe and in China. Growth was broadly in step with the Group in Eastern Europe and the Russia/CIS region. In the remaining regions, order intake did not increase as strongly as the Group total.

Strong increase in order backlog by 56.3% to €1,893.0 million

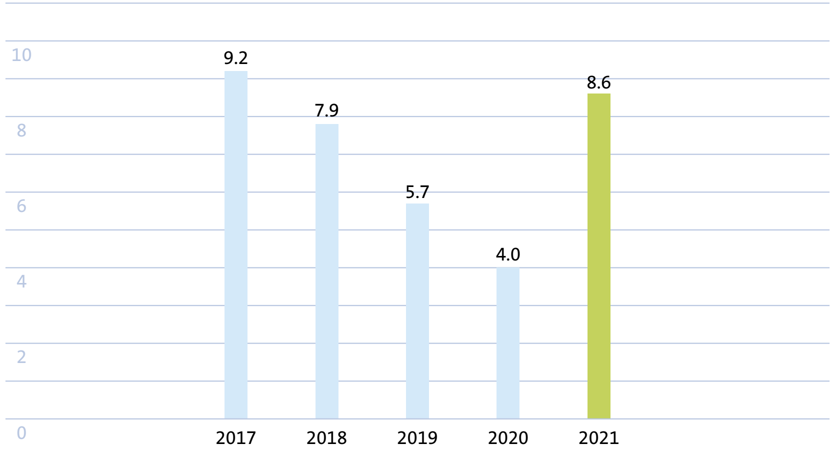
Due to very high customer demand for our products and services, the order backlog increased significantly despite the revenue growth in 2021. Krones had orders on hand totalling €1,893.0 million at 31 December 2021. The order backlog was consequently 56.3% up on the previous year (€1,211.3 million). The large forward reach of the order backlog ensures stable production capacity utilisation for the months ahead. It should be noted, however, that processing of some orders will extend into 2023.

Krones Group earnings

Krones Group EBITDA (in € million)



Krones Group EBITDA margin (%)



Strategic measures delivering results; Krones improves EBITDA margin to 8.6%

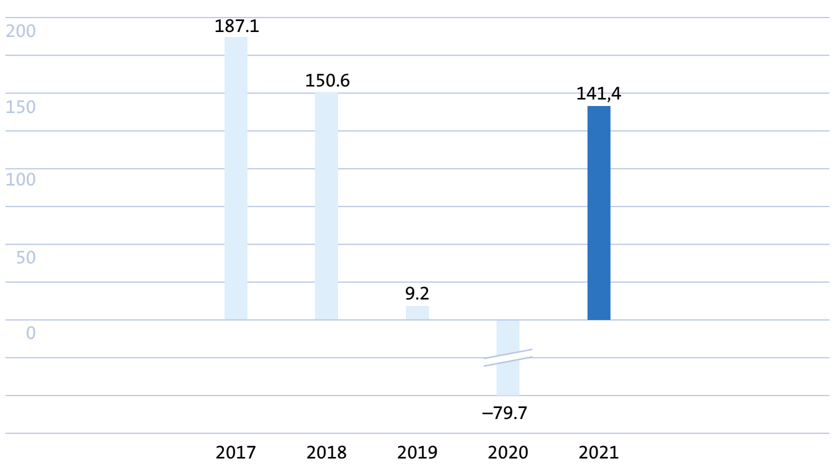
The EBITDA margin adjusted for one-off items in each year rose from 6.2% in the previous year to 8.1%. This means Krones reached the upper end of the upgraded margin target of 7% to 8%.

Krones' profitability improved significantly in 2021. In addition to high production capacity utilisation, this was also a result of strategic measures that we continued to implement in the reporting period. These are reflected, for example, in savings in personnel expenses. Further expansion of our global footprint in production and procurement also means that Krones is now more flexible overall. The tight situation on procurement markets in 2021 consequently had only a limited impact on Krones' earnings.

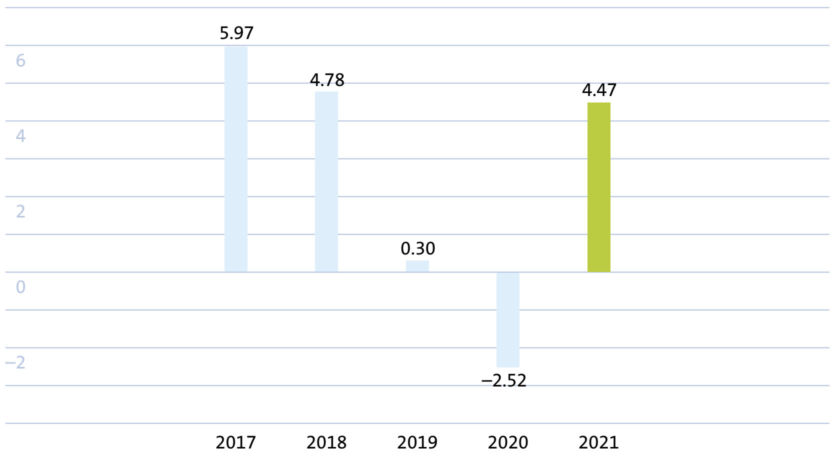
Earnings before interest, taxes, depreciation and amortisation (EBITDA) increased significantly from €133.2 million in the previous year to €312.6 million in 2021. EBITDA was affected by one-off effects both in the reporting period and in the previous year. In 2020, restructuring charges negatively impacted earnings by around €72 million. EBITDA in 2021 contained a positive impact from one-off effects in the amount of around €17 million. Following completion of the workforce reduction in Germany, Krones reversed to income the remaining portion of the provisions recognised for this purpose, amounting to around €29 million. This was partly offset by expenses for the corona bonus paid to employees and other pandemic-related expenses (such as Covid tests and vaccinations) totalling around €12 million.

Krones' EBITDA margin increased in 2021 to 8.6% (previous year: 4.0%). Adjusted for one-off effects, the EBITDA margin was 8.1% in 2021, compared to 6.2% in the previous year. Krones consequently reached the upper end of the upgraded EBITDA margin target for 2021 of 7% to 8% published in July 2021.

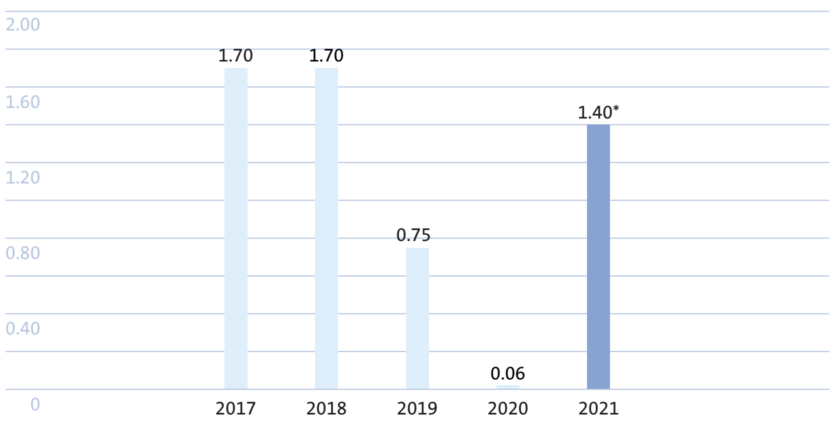
Krones Group net income (€ million)



Krones Group earnings per share (€)



Dividend per share (€)



* As per proposal for the appropriation of earnings available for distribution

Earnings before taxes (EBT) improved from –€36.6 million in the previous year to €177.3 million. Krones generated an EBT margin of 4.9% in 2021 (previous year: –1.1%). Excluding one-off effects, the EBT margin was 4.4% in the reporting year (previous year: 1.3%). In total, Krones generated consolidated net income of €141.4 million in the reporting period (previous year: –€79.7 million). Earnings per share improved as a result to €4.47 (previous year: –€2.52).

Krones increases dividend significantly to €1.40 per share

Due to the pandemic-related negative net income in 2020, Krones paid only the statutory minimum dividend last year. This was €0.06 per share. At the Annual General Meeting on 31 May 2022, the Executive Board and Supervisory Board will be proposing the distribution of a dividend of €1.40 per share for the successful 2021 financial year. In this way, Krones will once again accord shareholders an appropriate share in the company's success.

Krones Group earnings structure

€ million	2021	2020	Change
Revenue	3,634.5	3,322.7	+9.4%
Changes in inventories of finished goods and work in progress	+19.6	+39.1	−49.9%
Total operating performance	3,654.0	3,361.8	+8.7%
Other own work capitalised	+53.6	+36.7	+46.0%
Other operating income	+161.8	+120.5	+33.8%
Goods and services purchased	−1,807.4	−1,694.7	+6.7%
Personnel expenses	−1,176.7	−1,175.2	+0.1%
Other operating expenses	−572.6	−516.0	+11.0%
EBITDA	312.6	133.2	+134.7%
Depreciation and amortisation on fixed assets	−141.7	−174.0	−18.6%
EBIT	170.9	−40.8	–
Financial income/expense	+6.4	+4.2	+52.4%
EBT	177.3	−36.6	–
Income tax	−35.9	−43.1	−16.7%
Consolidated net income	141.4	−79.7	–

For further information, please see the full statement of profit and loss on p. 134.

Krones' revenue and key earnings figures were not materially affected by exchange rates, acquisition or divestments in 2021.

The 2021 financial year saw Krones recover significantly from the Covid-related decline in business in the previous year. Revenue and total operating performance increased almost equally. At €3,634.5 million, revenue was 9.4% higher than in the 2020 financial year. Total operating performance improved by 8.7% to €3,654.0 million. This increase was not quite as strong as the growth in revenue because Krones increased its inventories of finished goods and work in progress by a smaller amount in the reporting period (€19.6 million) than in the previous year (€39.1 million).

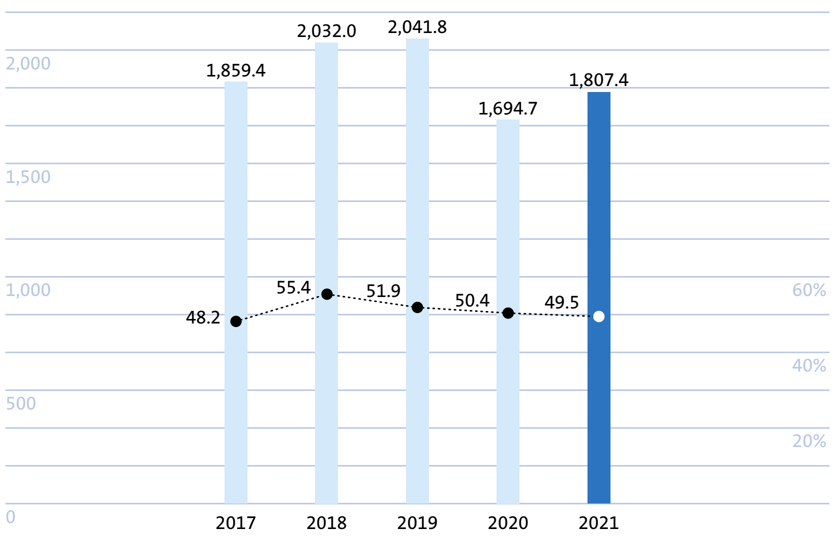
Krones significantly improved profitability in the reporting period. This was partly due to disproportionately small increases in the two major expense categories labour and material.

Krones also significantly improved profitability in 2021 – despite in some cases steep rises in material and freight costs. This improvement was primarily attributable to consistent implementation of the structural measures launched in 2020 and Krones' high degree of flexibility. The success of these measures is reflected above all in a disproportionately small rise in labour and material costs.

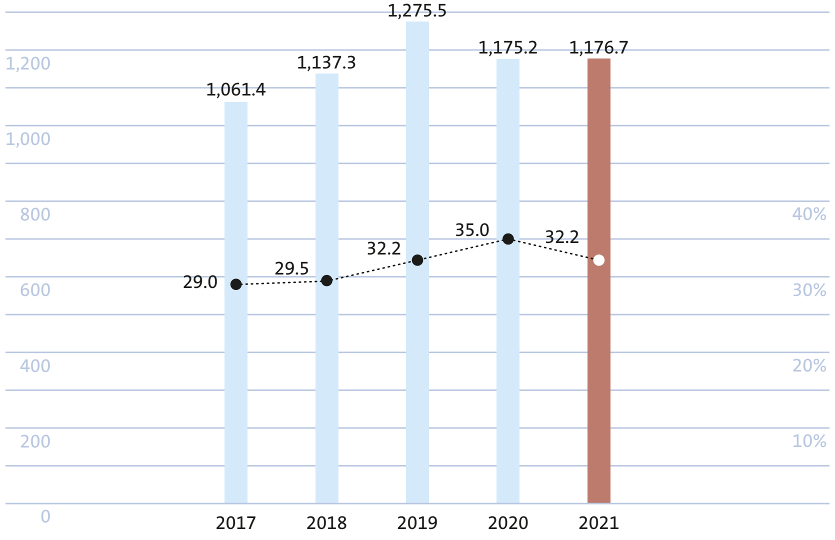
Personnel expenses, at €1,176.7 million in the reporting year, were near-constant relative to the previous year (€1,175.2 million) despite the significant expansion in business volume. Without the €8 million corona bonus that Krones paid employees in the reporting period, personnel expenses would have decreased. However, the previous year's figure was affected by around €72 million in restructuring expenses for the reduction in the workforce. The personnel expense ratio – the ratio of personnel expenses to total operating performance – fell to 32.2% in 2021. Adjusted for the corona bonus, the ratio was 32.0%. In the previous year, the personnel expense ratio was still 35.0%, or 32.8% excluding restructuring expenses.

Cost of goods and services purchased likewise increased by less than total operating performance, rising by 6.7% to €1,807.4 million. The material expense ratio – the ratio of goods and services purchased to total operating performance – decreased from 50.4% in the previous year to 49.5% in the reporting period. In the reporting year, Krones successfully countered supply shortages in material procurement, primarily for steel and electrical components, and the increase in purchased services (relating to an increase in the temporary workforce). The main positive effect here came from our structural measures to reduce material costs.

Goods and services purchased (€ million) and material expense ratio (%)



Personnel expenses (€ million) and personnel expense ratio (%)

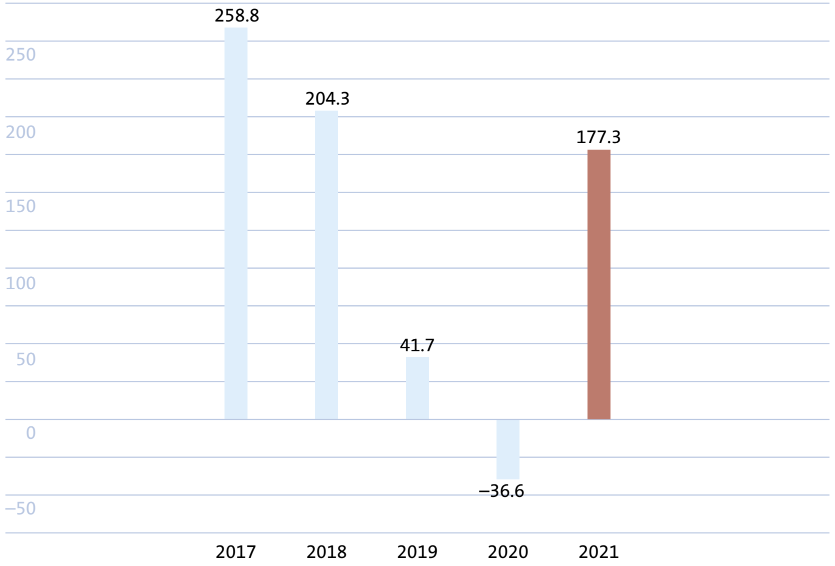


Other operating expenses increased by 11.0% in 2021 to €572.6 million. This was mainly due to higher freight costs, which more than offset cost savings elsewhere. Other operating income also increased significantly, climbing from €120.5 million to €161.8 million. This includes around €29 million from the reversal of restructuring provisions following completion of the workforce reduction program in the reporting year. Own work capitalised rose from €36.7 million to €53.6 million. In total, the net balance of other operating income and expenses and own work capitalised changed slightly from –€358.8 million in the prior-year period to –€357.3 million in the reporting period. As a percentage of total operating performance, this represents a reduction from 10.7% to 9.8%.

Krones improved EBITDA (earnings before interest, taxes, depreciation and amortisation) by €179.4 million in the reporting period, from €133.2 million to €312.6 million. The EBITDA margin increased from 4.0% to 8.6%. Adjusted for one-off earnings effects of around €17 million resulting from the reversal of restructuring provision of €29 million and direct pandemic expenses (corona bonus, Covid tests and vaccinations, etc.) of €12 million, the EBITDA margin was 8.1%. The previous year's EBITDA margin adjusted for restructuring expenses for the reduction in the workforce was 6.2%.

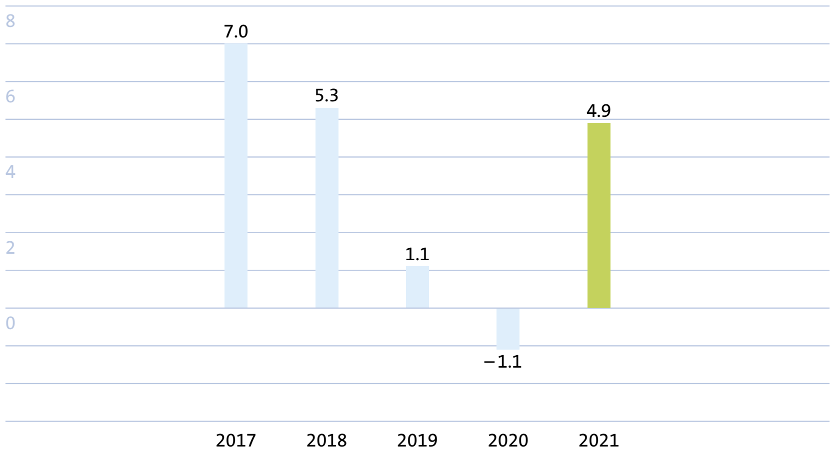
Depreciation and amortisation of fixed assets decreased in the 2021 financial year. At €141.7 million, this item was down 18.6% on the previous year's figure of €174.0 million, which included around €18 million in impairments of intangible assets. Partly due to the lower depreciation and amortisation, earnings before interest and taxes (EBIT) increased significantly from –€40.8 million in the previous year to €170.9 million in 2021.

Krones Group EBT (€ million)

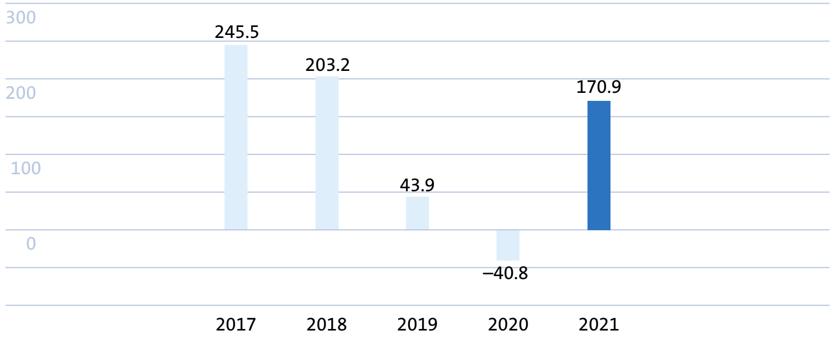


Krones improved net financial income/expense in the reporting year from €4.2 million to €6.4 million. This was attributable to investment income of €2.0 million (previous year: €0.0 million), while net interest income remained virtually unchanged at €4.4 million. Earnings before taxes (EBT) climbed from –€36.6 million in the previous year to €177.3 million in 2021. This results in an EBT margin of 4.9% (previous year: –1.1%). Adjusted for one-off income and expenses, the EBT margin was 4.4% in 2021 (previous year: +1.3%). Income taxes decreased from €43.1 million to €35.9 million. The income taxes item in the previous year was heavily affected by non-taxable expenses resulting from restructuring and remeasurements. In total, Krones generated consolidated net income of €141.4 million in the reporting period (previous year: –€79.7 million).

Krones Group EBT margin (%)



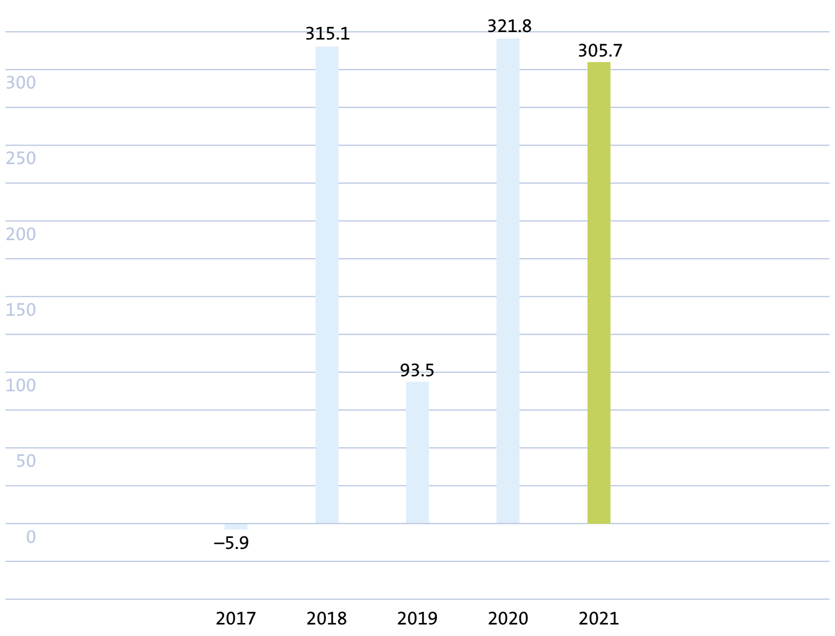
Krones Group EBIT (€ million)



Consolidated cash flow

€ million	2021	2020
Earnings before taxes	**177.3**	**–36.6**
Other non-cash changes	+153.7	+186.7
Changes in working capital	+124.5	+166.0
Changes in other assets and liabilities	–149.8	+5.7
Cash flow from operating activities	**305.7**	**321.8**
Capital expenditure for intangible assets and property, plant and equipment	–104.9	–93.8
M&A activities	±0.0	±0.0
Other	+2.5	+6.7
Free cash flow	**203.3**	**221.3**
Cash flow from financing activities	–60.9	–99.0
Other	+24.0	–15.7
Net change in cash and cash equivalents	**166.4**	**106.6**
Cash and cash equivalents at the end of the period	**383.4**	**217.0**

Krones Group cash flow from operating activities (€ million)

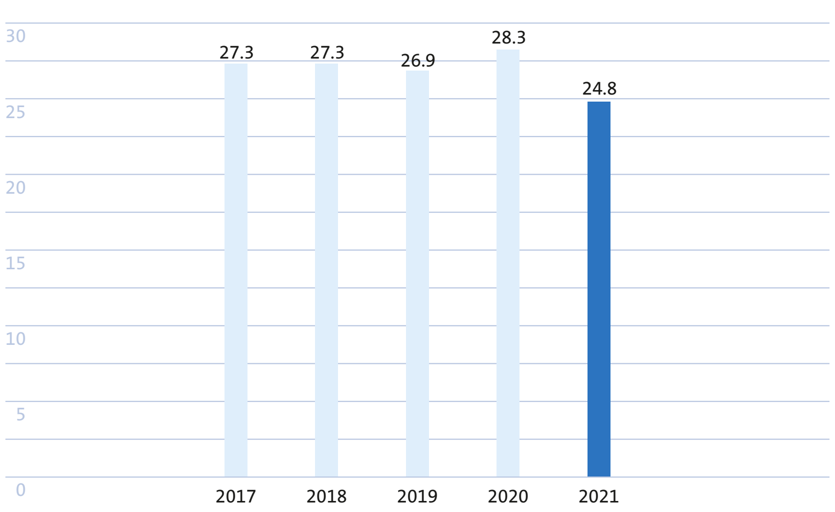


For further information, please see the full statement of cash flows on page 138.

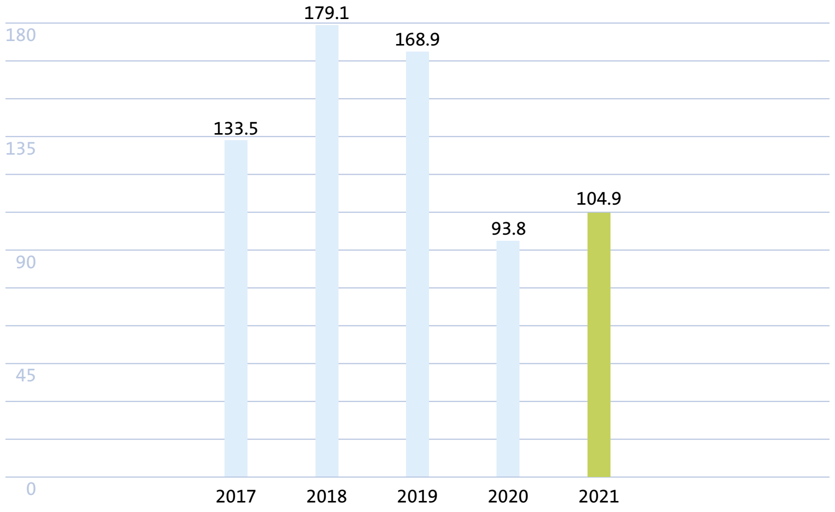
Krones generated cash flow from operating activities of €305.7 million in 2021 (previous year: €321.8 million). The main reason for the once again very high figure was the positive earnings before taxes.

Krones' cash flow once again developed positively in the reporting year, even though it did not quite match the very high prior-year figures. The company generated cash flow from operating activities of €305.7 million in 2021 (previous year: €321.8 million). A positive contributing factor here was the €213.9 million higher earnings before taxes. The increase in other assets and liabilities, on the other hand, had a €149.8 million negative impact on cash flow in 2021, compared with a €5.7 million positive impact in the previous year. The lower figure was mainly due to a decrease in liabilities from employee programmes in the reporting year. Non-cash changes with a reduced positive effect of €153.7 million (previous year: €186.7 million) likewise contributed to the fact that cash flow from operating activities was lower than in 2020. The €124.5 million reduction in working capital increased cash flow, but not as much as in the previous year (€166.0 million).

Krones Group working capital to revenue (%, average over four quarters)



Krones Group capital expenditure for PP&E and intangible assets (€ million)



Working capital as a percentage of revenue significantly improved to 24.8%

Krones significantly improved average working capital to revenue over the past four quarters in 2021 from 28.3% to 24.8%. The company thus exceeded its target of 26%–27%.

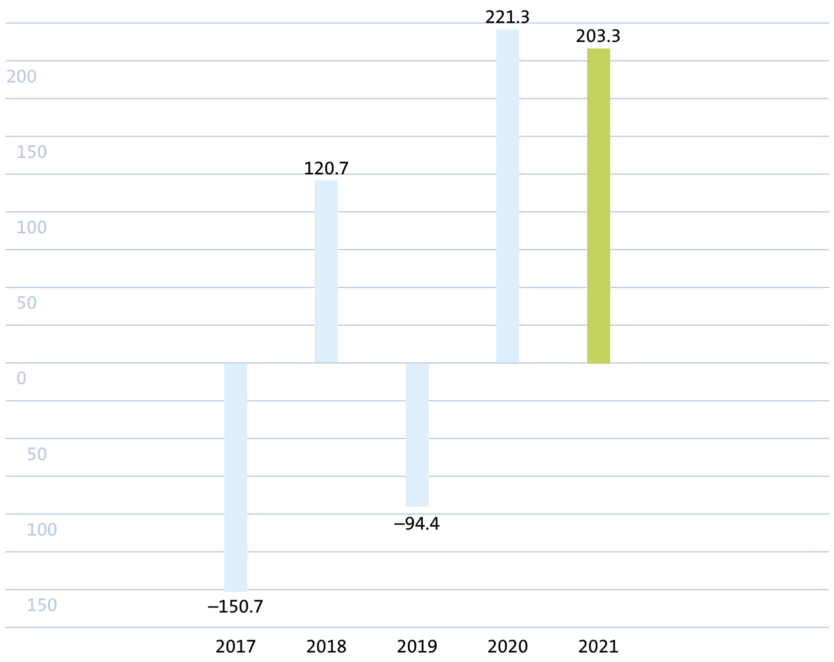
Krones significantly improved average working capital over the past four quarters as a percentage of revenue to 24.8% in the reporting period, compared with 28.3% in the previous year. Consequently, Krones reduced working capital further in the reporting year than forecast (26% to 27%). The large decrease reflects the higher revenue and rising advance payments due to the greater order intake. The reduction in working capital as a percentage of revenue was even more pronounced as of the reporting date, at 20.1% (previous year: 25.7%). The supplier finance programme used by Krones is accounted for under trade payables as it does not significantly alter the contractual terms of the payables. Correspondingly, the cash outflow is presented in cash flow from operating activities.

Krones generated free cash flow of €203.3 million

As planned, Krones increased capital expenditure in the 2021 financial year to €104.9 million (previous year: €93.8 million). The ratio of capital expenditure to depreciation and amortisation was 0.74 (previous year: 0.54).

Krones invested a total of €104.9 million in property, plant and equipment and intangible assets in the reporting period. As planned, this is above the prior-year figure of €93.8 million. Relative to revenue, the capital expenditure ratio was stable at 2.9% (previous year: 2.8%) and thus in line with expectations. The ratio of capital expenditure to depreciation and amortisation increased from the very low figure of 0.54 in the previous year to 0.74 in the reporting year. As in the previous year, there were no M&A activities in 2021 with a positive or negative impact on cash flow.

Krones Group free cash flow (€ million)

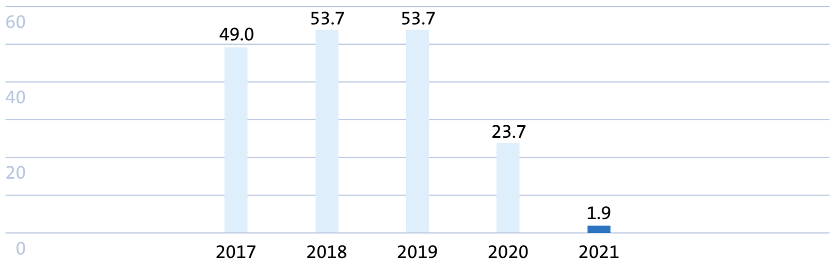


Krones generated free cash flow of €203.3 million in 2021 (previous year: €221.3 million).

Despite the higher capital expenditure, Krones generated a large free cash flow – the net inflow of cash and cash equivalents from operating activities – of €203.3 million in the reporting year (previous year: €221.3 million).

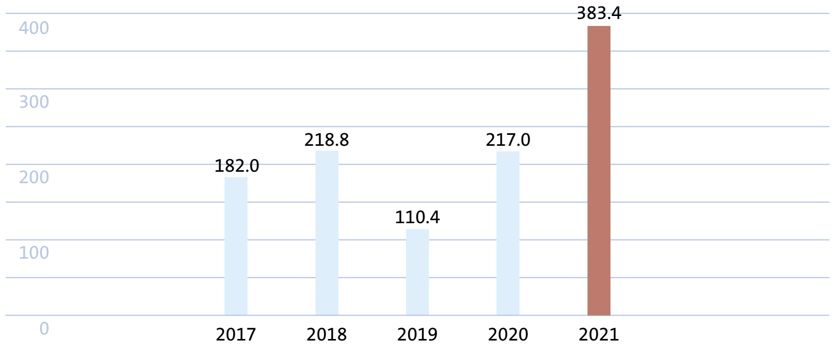
The cash outflow from financing activities between January and December 2021 was €60.9 million (previous year: €99.0 million). In the reporting period, this item includes the cash outflow from the dividend payout of €1.9 million (previous year: €23.7 million), the cash outflow from the repayment of lease liabilities

Krones Group dividend payout (€ million)



in the amount of €32.0 million (previous year: €35.2 million) and repayment of bank debt in the amount of €27.0 million (previous year: €40.2 million). Changes in exchange rates and the consolidated group increased liquidity by €24.0 million (previous year: €15.6 million). As a result, Krones had cash and cash equivalents totalling €383.4 million at 31 December 2021 (previous year: €217.0 million). Net cash (cash and cash equivalents less bank debt) went up from €184.9 million in the previous year to €378.3 million.

Krones Group cash and cash equivalents at 31 December (€ million)



Balance sheet structure

€ million at 31 December	2021	2020	2019
Non-current assets	1,133	1,093	1,154
of which fixed assets	1,001	990	1,070
Current assets	2,362	1,957	2,165
of which cash and equivalents	383	217	110
Equity	1,392	1,200	1,370
Total debt	2,103	1,850	1,949
Non-current liabilities	434	476	452
Current liabilities	1,669	1,374	1,497
Total	**3,495**	**3,050**	**3,319**

For further information, please see the full balance sheet on page 136 and 137.

Due to the substantial rise in business volume, Krones' total assets increased by 14.6% in the reporting year.

Krones' total assets increased by 14.6% in the reporting year and thus by more than the 8.7% rise in total operating performance. Total assets came to €3,494.8 million as of 31 December 2021 (31 December 2020: €3,049.5 million). The main cause of the larger increase was the substantial build-up of current assets and liabilities due to the significant growth in business volume.

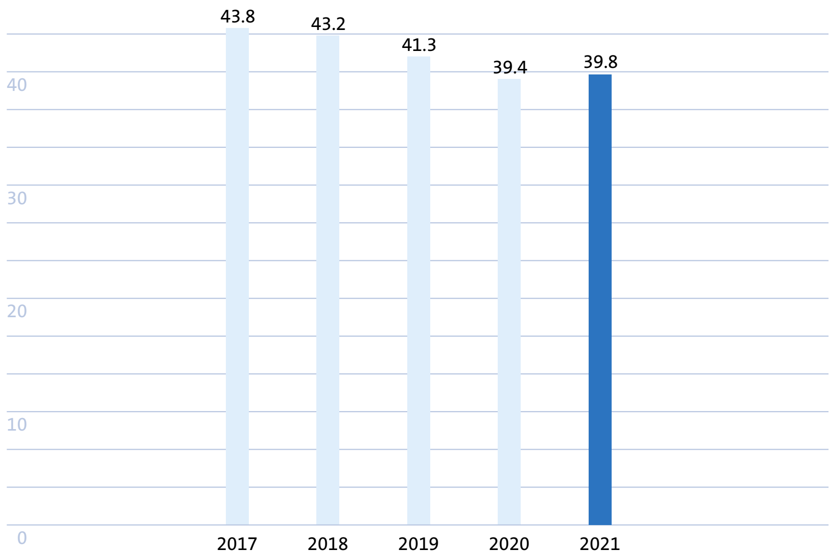
There were no material acquisition or divestment effects on any assets side or equity and liabilities side balance sheet items.

Non-current assets rose slightly in 2021 to €1,132.8 million (31 December 2020: €1,092.5 million). Fixed assets stood at €1,001.4 million as of the year-end (31 December 2020: €990.0 million). The minor increase in fixed assets related to property, plant and equipment and right-of-use assets. These went up slightly from €656.1 million at the end of 2020 to €667.0 million. Intangible assets likewise increased slightly to €303.2 million (31 December 2020: €300.6 million).

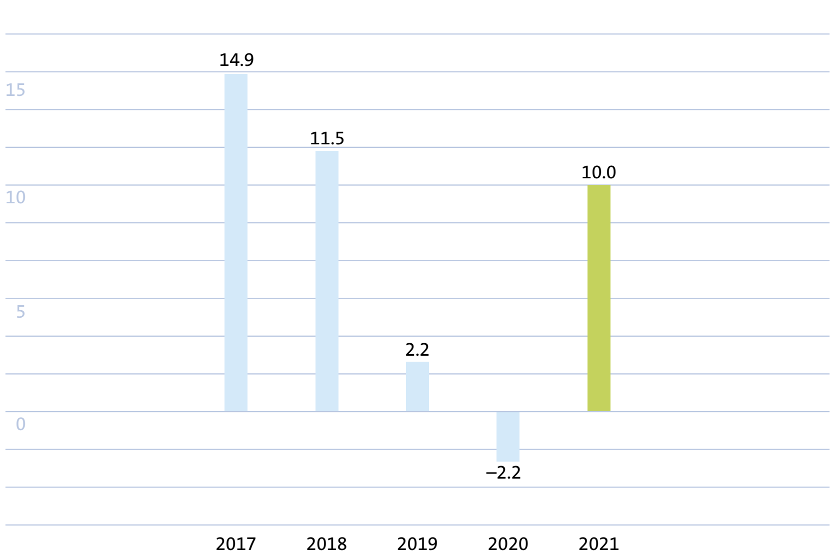
Krones' current assets rose significantly overall, mainly due to the growth in business volume. Current assets came to €2,362.0 million at the end of the reporting period, which is 20.7% or €405.0 million higher than the figure as of 31 December 2020. All major balance sheet items contributed to the substantial increase. A significant increase (by €75.2 million) was recorded in contract assets, which stood at €594.0 million at the end of 2021. Trade receivables also went up by €39.2 million to €743.3 million, inventories by €78.5 million to €433.6 million and other assets by €50.6 million to €195.8 million. As Krones generated a high positive free cash flow in the reporting period, there was also a significant increase in cash and cash equivalents. These rose from €217.0 million to €383.4 million.

On the equity and liabilities side of the balance sheet, Krones significantly increased current liabilities. These went up by 21.5% or €294.8 million to €1,668.8 million. This was mainly due to a €195.1 million increase in contract liabilities to €600.2 million, mostly reflecting higher prepayments from customers. Trade payables also went up significantly by €140.2 million to €510.5 million. This includes supplier finance liabilities in the amount of €81.1 million. These outstanding liabilities are settled with suppliers by a bank before they are due. The original supplier liabilities are unaffected in substance because the acknowledgement of the liability is unaltered. Other liabilities and provisions also rose due to the increased business volume, increasing to €319.9 million (31 December 2020: €300.0 million). In contrast, other provisions decreased. These fell by €33.5 million to €164.5 million. This partly reflects the reversal of restructuring provisions for the workforce reduction in the amount of around €29 million. Current bank debt was eliminated in its entirety during the reporting period (31 December 2020: €27.0 million).

Krones Group equity ratio (%)



Krones Group ROCE (%)



The solid 39.8% equity ratio and €378.3 million in net cash provide a strong basis for further profitable growth at Krones.

Non-current liabilities were down as of the 2021 reporting date. These fell by €41.1 million to €434.4 million (31 December 2020: €475.5 million). This mainly related to provisions for pensions. These decreased, mostly due to an increase in the discount factor, and mostly not accounted for through profit or loss, to €251.2 million (31 December 2020: €281.4 million). At the end of the reporting period, as in the previous year, the company had €5.1 million in non-current bank debt.

Significant increases in equity, net cash and ROCE

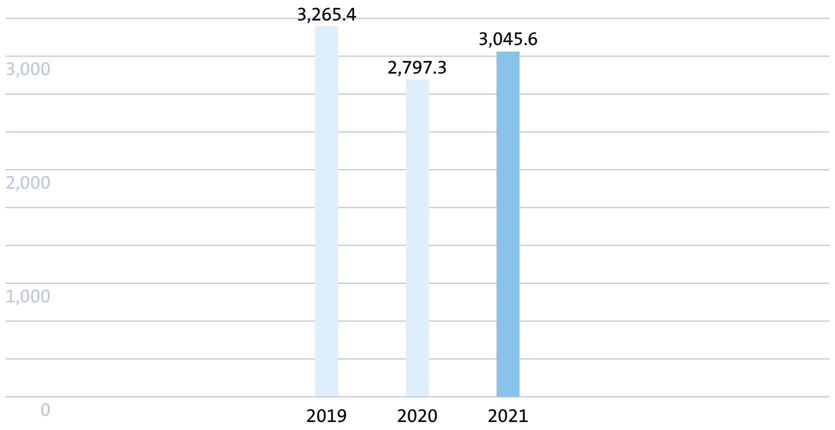
Due to the positive consolidated net income, equity increased in 2021 by €191.6 million to €1,391.6 million. The equity ratio improved to 39.8% as of the 2021 reporting date (31 December 2020: 39.4%). With net cash (cash and cash equivalents less bank debt) of €378.3 million at the end of the reporting period (31 December 2020: €184.9 million), Krones continues to have an extremely stable and solid financial and capital structure. In addition, Krones had available around €1 billion in unused lines of credit as of 31 December 2021.

Krones significantly improved return on capital employed (ROCE) from –2.2% in the previous year to +10.0% in the reporting year. ROCE is the ratio of EBIT to average net capital employed in the past four quarters. Net capital employed is defined as non-current assets (excluding goodwill and financial assets) plus working capital. The significant improvement in ROCE was mainly due to the strong increase in EBIT, which was negative in the previous year due to the expenses for the reduction in the workforce. However, part of the increase was also attributable to the decrease in average working capital while average non-current assets remained stable.

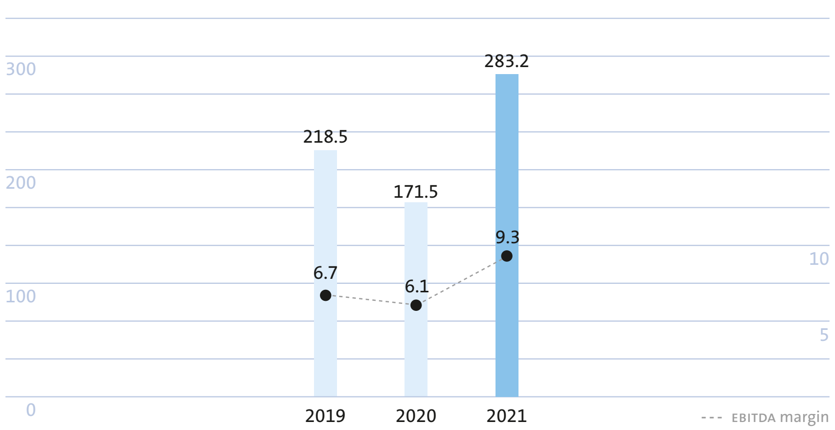
Report from the **segments**

Machines and Lines for Product Filling and Decoration

Segment revenue (€ million)



Segment EBITDA (€ million) and EBITDA margin (%)



Segment revenue

Krones' core segment significantly exceeded the growth expectations for 2021 with an 8.9% increase in revenue to €3,045.6 million.

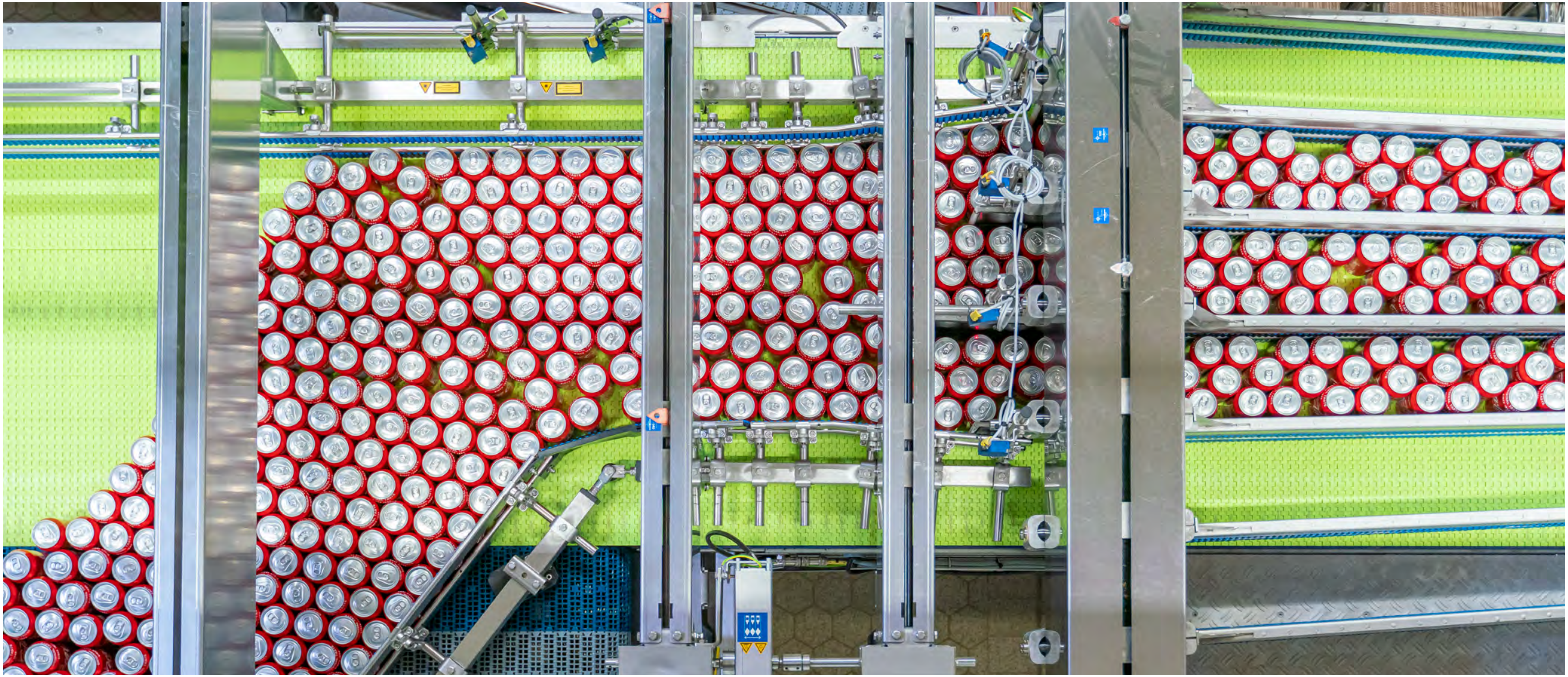
After moderate revenue growth in the first half of 2021, revenue in the core segment, Machines and Lines for Product Filling and Decoration, picked up rapidly in the second half year. In total, segment revenue went up in the reporting period by 8.9% year-on-year, from €2,797.3 million to €3,045.6 million. The segment thus significantly exceeded its growth target of 2% to 3% for 2021. Both new machinery revenue and service revenue exceeded the previous year's level, with new machinery business growing particularly strongly. However, this was hit harder by the coronavirus crisis in the previous year than was the case for service activities. The segment's share of consolidated revenue decreased slightly in 2021 to 83.8% (previous year: 84.2%).

Segment earnings

Core segment profitability improved in 2021. The EBITDA margin was 9.3% (previous year: 6.1%).

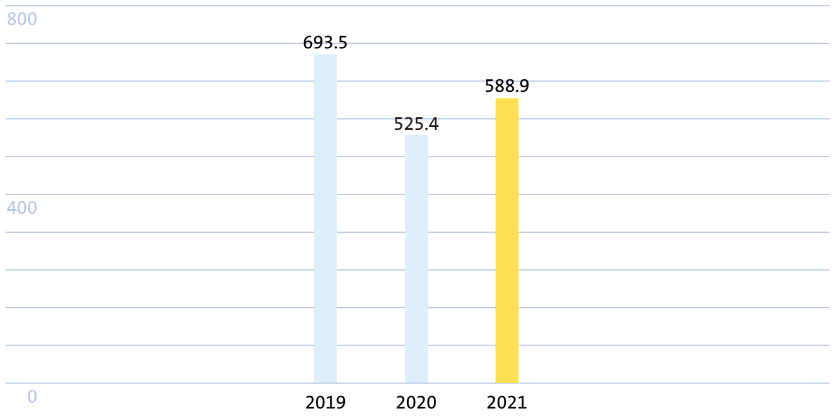
Core segment profitability improved strongly in 2021. This was partly due to high capacity utilisation and the company's structural measures. One-off effects of around €17 million also had a positive impact on earnings. In the previous year, segment earnings were reduced by restructuring expenses of just under €66 million. In total, earnings before interest, taxes, depreciation and amortisation (EBITDA) went up 65.1% to €283.2 million in 2021. The EBITDA margin increased to 9.3% (previous year: 6.1%). Excluding the positive one-off effects on earnings, the segment margin of 8.7% was at the upper end of the 8.0% to 9.0% target range.

Machines and Lines for Product Filling and Decoration

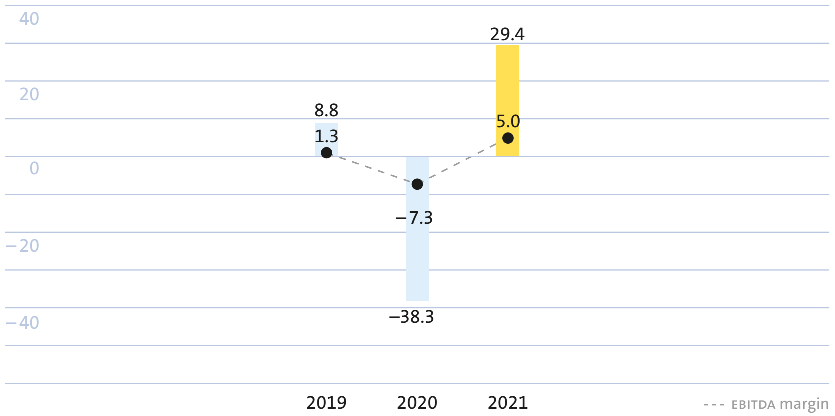


Machines and Lines for Beverage Production/Process Technology

Segment revenue (€ million)



Segment EBITDA (€ million) and EBITDA margin (%)



Segment revenue

Revenue grew disproportionately strongly in 2021 in Intralogistics. Total segment revenue increased by 12.1%.

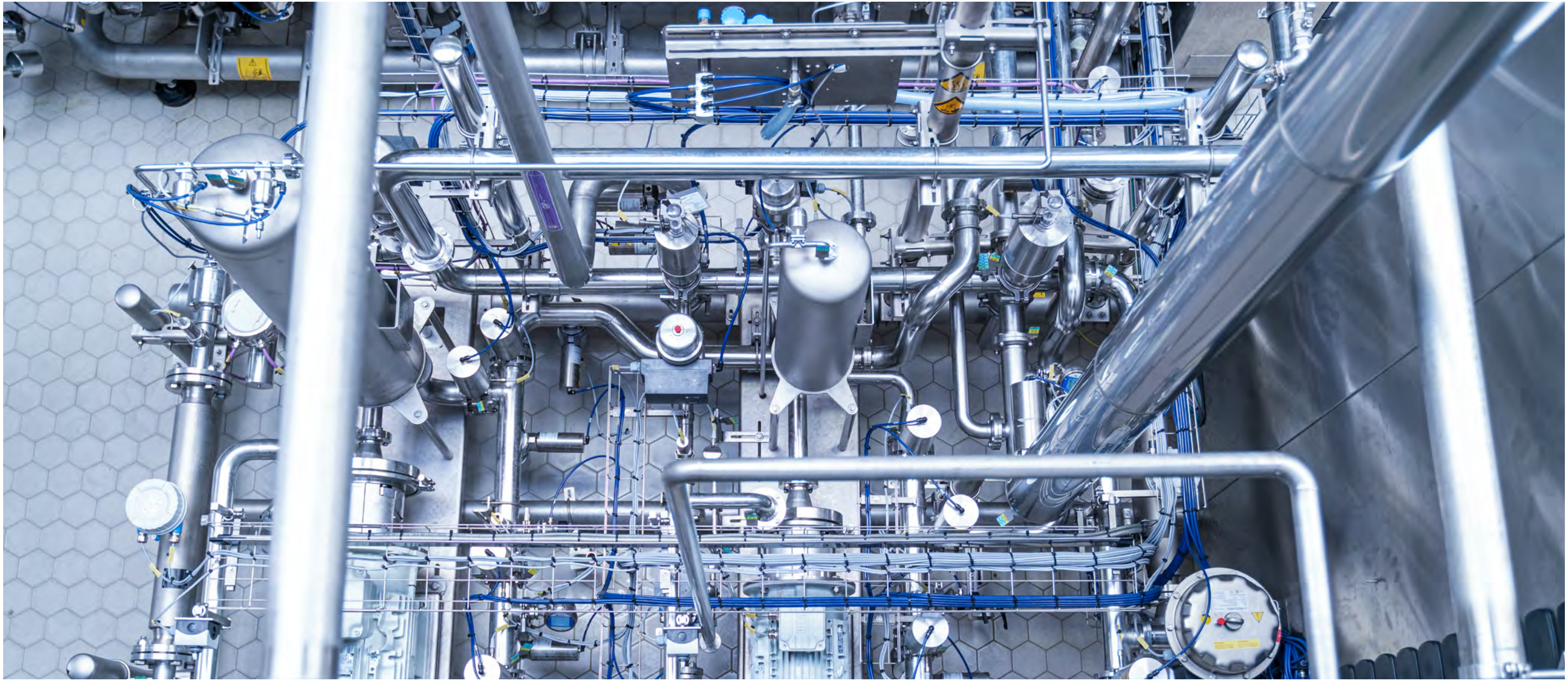
Revenue in the Machines and Lines for Beverage Production/Process Technology segment climbed by 12.1%, from €525.4 million in the previous year to €588.9 million in 2021. The target for revenue growth was 5% to 7%. Intralogistics, which was still part of the segment in the reporting year, recorded disproportionately strong growth, recovering strongly in the reporting period from the pandemic-related decrease in 2020. Beverage Production revenue, the second sub-segment, was slightly down. The entire segment's share of consolidated revenue increased in 2021 to 16.2% (previous year: 15.8%).

Segment earnings

Following the previous year's loss (of €38.3 million), the Machines and Lines for Beverage Production/Process Technology segment generated positive EBITDA of €29.4 million in 2021.

The higher revenue is also clearly reflected in the profitability performance of the Machines and Lines for Beverage Production/Process Technology segment. Earnings before interest, taxes, depreciation and amortisation (EBITDA) improved by €67.7 million, from –€38.3 million in the previous year to a positive €29.4 million. Intralogistics saw an improvement in earnings, which in 2020 were heavily impacted by the Covid-19 pandemic. Profitability in Process Technology in particular benefited very strongly from structural measures, such as the spin-off of the brewery activities into a separate company, and was likewise higher than in the previous year. In total, the segment's EBITDA margin increased to 5.0% in 2021 (previous year: –7.3%). The segment significantly exceeded the 0% to 1.0% margin target for 2021.

Machines and Lines for Beverage Production/Process Technology



Overall assessment of **economic position**

The global economy recovered in 2021 from the previous year's pandemic-related slump. Demand also picked up significantly in Krones' markets. This benefited the company as a leading full-service supplier to the international filling and packaging industry. Revenue, order intake and earnings increased significantly compared with the previous year. Overall, Krones achieved the upgraded full-year growth and earnings targets for 2021 published in July 2021.

Revenue increased by 9.4% to €3,634.5 million. This means Krones reached the upper end of the upgraded growth target published in July 2021 for the full year 2021 (7% to 9%).

Order intake rose by 30.5% to €4,316.2 million. The contract value of orders not only exceeded pre-crisis levels in 2021, but also reached an all-time high. At €1,893.0 million, the order backlog exceeded the previous year's figure by 56.3%.

Krones' profitability improved significantly in 2021. In addition to higher production capacity utilisation, this was also a result of strategic measures that the company continued to implement in 2021. Earnings before interest, taxes, depreciation and amortisation (EBITDA) increased from €133.2 million in the previous year to €312.6 million. The EBITDA margin rose to 8.6% (previous year: 4.0%). Adjusted for one-off effects on EBITDA in both 2021 and 2020, the EBITDA margin improved from 6.2% in the previous year to 8.1% in the reporting period. Krones consequently reached the upper end of the upgraded EBITDA margin target of 7% to 8% published in July 2021.

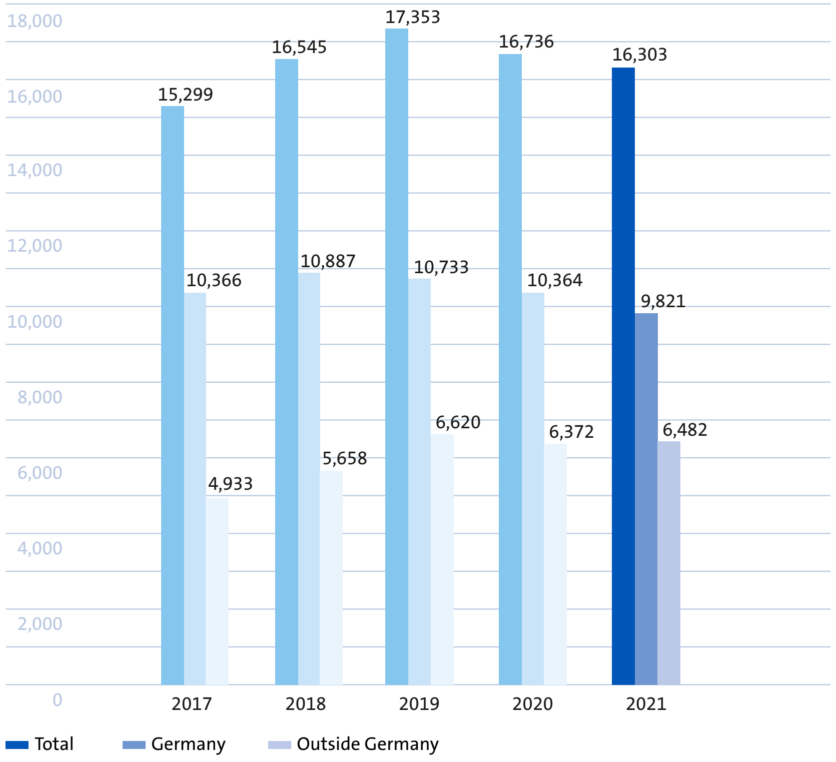
Krones once again generated a large free cash flow in 2021. At €203.3 million, this was only slightly down on the very high figure from the previous year (€221.3 million). The company significantly improved the working capital to revenue ratio to 24.8% (previous year: 28.3%). This was below the target corridor of 26% to 27%. At €378.3 million, Krones' net cash (cash and cash equivalents less bank debt) was significantly higher at the end of 2021 than a year earlier (€184.9 million). The equity ratio was 39.8% (previous year: 39.4%). Overall, the company continues to possess a very robust financial and capital structure.

Krones has a large order backlog and is fundamentally optimistic at the beginning of the 2022 financial year. At the same time, various uncertainties mean that the business environment remains challenging for Krones. These include material shortages and problems in global supply chains, political risks in Europe and other parts of the world, and also strong inflation in many countries. It is also uncertain how the Covid-19 pandemic will continue to play out around the world and how the impacts of the war in Ukraine will affect the growth of the global economy in 2022.

For the full year 2022, based on the prevailing macroeconomic outlook and the current expected development of the markets relevant to Krones, the Executive Board forecasts revenue growth of 5% to 8% with an improved EBITDA margin of 8% to 9%. The target for return on capital employed (ROCE) is 10% to 12%.

Krones **Employees**

Employees by region



Krones employs 16,303 people worldwide – 2.6% fewer than a year earlier

Krones reduced the workforce by 433 positions worldwide in 2021. The workforce at German sites decreased by 543 employees. Internationally, the number of employees increased by 110. The international workforce thus made up 39.8% of the total (previous year: 38.1%).

As in the previous year, the number of employees at Krones decreased in 2021, falling by 433 employees or 2.6% to 16,303. Krones continued to implement structural adjustments at its German sites in the reporting period. The number employed in Germany went down as a result by 543 to 9,821. Krones completed the reduction in the workforce during the second half of 2021. As a result, the number of employees has decreased by 1,050 or 6.1% since 31 December 2019. Following a decline in the previous year, the number of employees outside Germany once again slightly increased by 110 to 6,482. The share of employees outside Germany went up in the reporting period to 39.8% (previous year: 38.1%).

Slight increase in emerging markets workforce

Most of the increase in the international workforce was in emerging economies, primarily at our plant in Hungary (Eastern Europe) and on the service side. Following the pandemic-driven decline in 2020 (by 3.2%), the number of employees in such regions increased in the 2021 financial year by 78 to 4,133. This meant that over a quarter (25.4%) of the Krones team was employed in emerging markets at the end of the reporting period (previous year: 24.2%).

Employees in the emerging markets 2017 – 2021

Year	South America	Africa	Asia-Pacific	Eastern Europe	China	**Total**
2017	581	393	734	398	608	**2.714**
2018	637	452	830	507	716	**3.142**
2019	782	671	1.009	933	792	**4.187**
2020	778	639	974	922	742	**4.055**
2021	803	633	959	1.006	732	**4.133**

After a slight decrease in the previous year (by 3.2%), Krones increased its emerging markets workforce slightly in 2021 by 1.9% to 4,133. That represents 25.4% of the total workforce.

The company plans to continue its above-average growth in emerging markets, where Krones has for years generated about 50% of consolidated revenue. Emerging markets are an important element in achieving the medium-term growth targets. In the medium term, given stable market growth, Krones will therefore further increase the proportion of the workforce in emerging markets. Attracting more employees for our international locations means that we are closer to customers and can serve them faster – a key competitive advantage.

To ensure a highly qualified and motivated team for the long term, Krones continues to invest heavily in training and employee development. Employees are the face of the company and the basis for Krones' long-term success.

More information on the subject can be found in our Non-financial report. This is available online at https://www.krones.com/en/company/responsibility/downloads.php.

Sustainability at Krones

In the context of its sustainability management activities, the Krones Group contributes to sustainable development. In order to identify potential risks at an early stage, reduce our environmental footprint and continuously enhance our positive impact on the community, sustainability is incorporated in all major decisions. We are aware of our responsibility in the Krones Group, not only for our business performance, but also for the effects of our business activities on the environment, employees, society and future generations.

Non-financial report for 2021

Under the CSR Directive Implementation Act, which entered into force in Germany in 2017, we disclose the policies we pursued in the last financial year with respect to the non-financial aspects that are material to our company.

The non-financial report for 2021, which is not part of the group management report, is simultaneously the combined separate consolidated non-financial report for the Krones Group and Krones AG for the 2021 financial year, within the meaning of Sections 315b and 315c read in conjunction with Sections 289c to 289e of the German Commercial Code (HGB). It is published concurrently with this Annual Report.

Risk and opportunity report

- Risks identified on an ongoing basis
- Efficient control and management tools limit risks

Krones' risk management system

Krones actively addresses potential risks. All key business processes are constantly subject to an internal control and management system.

Krones is exposed to a variety of risks that are inextricably linked with doing business globally. We continuously monitor all significant business processes to identify risks early and to actively manage and limit them. Within our corporate strategy, we also identify, analyse and unlock opportunities. Unlike risks, business opportunities are not documented within our risk management system.

In essence, risks are defined as potential negative deviations from our earnings forecast for the 2022 financial year. Opportunities are potential positive deviations from our earnings forecast for the 2022 financial year. Because they share the same sales and procurement markets, the same risks and opportunities essentially also apply to both of the Krones Group's operating segments.

Krones' risk management system consists of an internal control system with which we record, analyse and assess all relevant risks. We monitor all material risks and any countermeasures already taken in a detailed, ongoing process that includes planning, information and control.

We assess risks on the basis of the likelihood of an event and its potential financial impact. Earnings before interest and taxes (EBIT) serve as the measure for potential financial impact. Starting with gross risk, we determine the net risk, which takes into account any mitigating actions taken.

Krones presents risks on page 105 using a three-column approach, which covers the maximum loss associated with a risk, the likelihood of an event and the financial impact – the latter being the product of the first two factors. Each factor is categorised as either low, medium, or high.

The categories are defined as follows:

Maximum loss* (€ million)		Likelihood of an event (%)		Potential financial impact* (€ million)	
low	1.0 to 10.0	low	0 to 20	low	1.0 to 10.0
medium	10.1 to 50.0	medium	21 to 49	medium	10.1 to 50.0
high	> 50.0	high	50 to 100	high	> 50.0

*Based on EBIT

Multi-stage risk management system

We are continually improving our risk management system on the basis of practical experience. The system consists of the following modules: risk analysis, risk monitoring, and risk planning and control.

Risk analysis

In order to identify risks early, we continuously monitor all business activities. Material project-related risks are reduced or avoided before an order is accepted. We conduct a profitability analysis of all quotes prior to order acceptance. For orders that exceed a specified volume, we also conduct a multidimensional risk analysis. Apart from profitability, we also individually record and evaluate financing risks, technological risks, regional risks and tax risks as well as scheduling and other contractual risks before accepting an order.

To manage risks that arise from changes in the market and competitive situation, we create detailed market and competition analyses for all segments and business areas on a regular basis.

In addition, we conduct a comprehensive risk inventory annually for Krones AG and all significant group companies. The results of the risk inventory and mitigating actions are used in our annual planning and forecasting. The basic principles and the process are documented in a risk manual. The risk management system serves not only the purpose mandated by law – early detection of going concern risks – but also covers all risks that may have a significant negative impact on earnings.

Risk monitoring

We use a variety of interlinked controlling processes to monitor risks within the Krones Group. Regular comprehensive reports from the individual business units keep the Executive Board and other decision-makers apprised in a timely manner of all possible risks and deviations from company planning and of the status of mitigating actions. For projects with a high contract value, potential risks are examined and evaluated in regular meetings. Employees who identify risks pass their information on without delay through the company's internal reporting system.

Risk planning and control

We primarily use the following tools to plan our business activities and control risk within our internal control system:

- Annual planning
- Medium-term planning
- Strategic planning
- Rolling forecasts
- Monthly and quarterly reports
- Capital expenditure planning
- Production planning
- Capacity planning
- Project controlling
- Accounts receivable management
- Exchange rate hedges
- Insurance policies

Risk management organisation

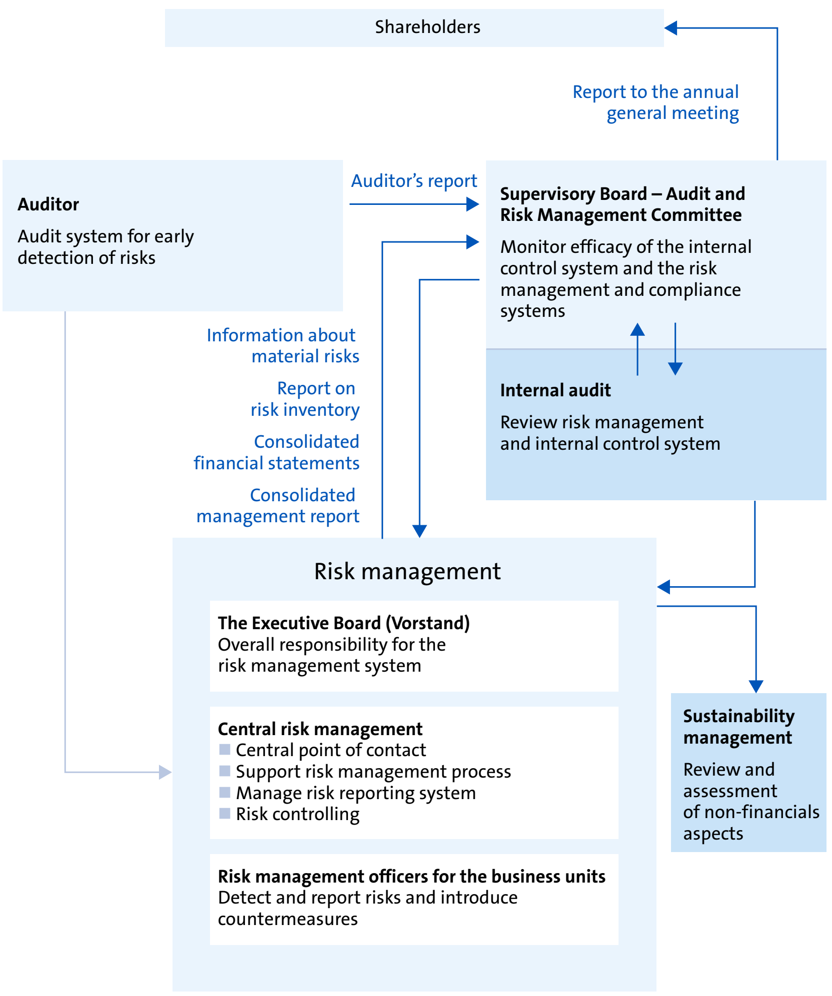
Krones' risk management system is continuously monitored and reviewed. This is governed by clear areas of responsibility and accountability.

Risk management at Krones is part of Controlling. The risk management system is reviewed by Internal Audit.

All relevant information is collated in Controlling, where it is processed and made available in a management tool for the Executive Board. In addition, the various segments and business units also have risk management officers who are responsible for risk management. This includes identifying and reporting risks as well as introducing and implementing measures to actively control them.

Krones revised the organisation of risk management during the reporting year in accordance with the Financial Market Integrity Strengthening Act (FISG). The Audit Committee now has the right to obtain information directly from the managers responsible for control and monitoring tasks at Krones.

Risk management organisation at Krones



Key features of the internal control system and the risk management system as relates to accounting and financial reporting

The aim of the internal control and risk management system is to ensure that all business transactions are correctly recorded, processed, recognised and included in financial reporting.

Krones has an internal control and risk management system for accounting and financial reporting processes to ensure that all business transactions are always correctly recorded, processed, recognised and included in financial reporting. Krones' internal control and risk management system comprises all principles, methods and measures to ensure that the company's accounting and financial reporting are effective, efficient and proper and in compliance with all relevant regulations and standards.

The Krones Group has a clear management and corporate structure. Cross-cutting key functions are centrally managed.

- The duties of the units that are materially involved in accounting and financial reporting processes are explicitly segregated and responsibilities clearly assigned.
- Regular reviews and audits are conducted within the various units, primarily by Controlling.
- Commercial off-the-shelf software is used for accounting and financial reporting as far as possible.
- Special security precautions protect the software and IT systems used for accounting and financial reporting against unauthorised access.
- Sufficient binding policies (e.g. for payments and travel expenses) are in place and updated on an ongoing basis.
- All of the departments involved in the accounting and financial reporting process work constantly to assure the quality of their work.
- Regular spot checks are used to continuously verify the completeness and accuracy of our accounting data.
- The software used in accounting performs programmed plausibility checks.
- We use dual verification for all accounting-related processes.

Overview and description of material risks

Risk categories	Maximum loss	Likelihood of event	Potential financial impact
General business environment and industry-specific risks			
General economic risks	high	medium	high
Industry-specific risks	low	low	low
Financial risks			
Default risks	high	low	medium
Liquidity risk	low	low	low
Interest rate risk	low	low	low
Currency risk	high	low	low
Operational risks			
Price risk	high	medium	medium
Procurement risks	high	high	high
Cost risk	high	low	medium
Personnel risk	low	low	low
Legal risks	high	medium	medium
Environmental and safety risks	medium	low	low
IT risks	high	medium	medium

Krones classifies the maximum loss, the likelihood of an event and the potential financial impact of material risks into the three risk categories low, medium and high. Definitions are provided below on page 101.

General business environment and industry-specific risks

General economic risks

As a provider of products and services for the food and beverage industries, Krones is less dependent on economic cycles than other machinery manufacturers. However, the company cannot escape the influence of the general economic situation entirely.

There are a number of macroeconomic uncertainties that could cause the global economy to perform worse than forecast in 2022. The most prominent of these is the Covid-19 pandemic. It is difficult to predict how the Covid situation will continue to develop in individual regions. If the pandemic continues to worsen overall, it could slow down the general economic recovery or in the worst case even cause a recession. One potential danger, for example, is if the existing vaccines prove not to provide sufficient protection against new variants of the virus. There would then be the possibility of extensive contact restrictions or lockdowns. This would negatively impact the whole economy and also our customers' willingness to invest. An unfavourable path of the Covid-19 pandemic in general could have a negative impact on Krones' revenue and earnings.

Risk factors for the global economy also include geopolitical tensions. First and foremost among these is the war in Ukraine. It is not currently possible to predict how this will develop and how its consequences will affect the global economy. There is a risk that the impacts on the global economy will be significant. This would also negatively impact Krones' business.

The threat of international trade conflicts also creates overall economic uncertainty. There is a risk, for example, of the conflict intensifying between China and the USA, both of which are major economic regions. This could have a significant impact on the global economy. If global economic growth were to be considerably weaker than expected due to sustained trade conflicts, that would negatively impact Krones' revenue and earnings.

The overall economy could be volatile if the Chinese real estate market develops unfavourably. A number of property developers in China have already run into payment difficulties. If payment and credit defaults were to spread, there is a risk that the resulting negative effects could unsettle the entire financial market and lead to a global financial crisis. This would have a significant impact on overall economic development and therefore also have a negative impact on Krones' earnings situation.

Impact of general economic risks: We rate the maximum loss as medium, the likelihood of an event as low and the financial impact as high.

Industry-specific risks

Krones is exposed to industry-specific risks primarily through the development of the global packaging market and the actions of competitors. The competitive environment could intensify if Krones' competitors step up the fight for orders to improve their capacity utilisation. We address the risk of loss of market share by further expanding our technology leadership. Krones' strong focus on service also sets the company apart from competitors.

Plastic and PET packaging is a subject of increasing debate in recent years, primarily in Europe. Krones generates a large proportion of revenue with products and services connected with this type of packaging. It cannot be ruled out that the PET debate will intensify and spread to other regions in the long term. This could reduce our customers' willingness to invest in plastics technology and hence have a negative impact on revenue and earnings.

Impact of industry-specific risks: We rate the maximum loss as low, the likelihood of an event as low and the financial impact as low.

Financial risks

The financial risks to which Krones is exposed are default risks, liquidity risks, interest rate risks and currency risks. Our description of these risks and suitable actions below is in keeping with the disclosure requirements under IFRS 7 on the reporting of risks relating to financial instruments. Because of regional and customer-related diversification, there is no material concentration of risk.

1. Default risk

Default risk is the maximum potential risk arising from each individual exposure at the reporting date. Any counter-exposures are not taken into account.

1.1 Trade receivables

Credit risk in trade receivables is the risk of economic loss arising from a customer's failure to fulfil contractual payment obligations.

Krones manages credit risk on trade receivables on the basis of internal policies. Most trade receivables are backed by various, sometimes country-specific, forms of security. These include retentions of title, guarantees and documentary credits. In order to prevent credit risk, we also run external credit checks on customers. In addition, there are processes in place for continually monitoring receivables that may be at risk of default. Write-downs on bad debt (non-recoverable trade receivables) are taken on an individual basis. The very low volume of actual defaults, as measured against the total volume of receivables, attests to the effectiveness of the measures taken.

The theoretical maximum credit risk from trade receivables corresponds to the carrying amount.

€ thousand	Carrying amount	of which not overdue at the reporting date	of which overdue by the following number of days at the reporting date: up to 90 days	between 90 and 180 days	between 180 and 360 days	more than 360 days
31 Dec 2021 Trade receivables and contract assets	1,380,271	1,239,730	99,696	23,400	14,298	3,147
31 Dec 2020 Trade receivables and contract assets	1,259,108	1,130,227	82,798	26,194	17,698	2,191

1.2 Derivative financial instruments

Krones uses derivative financial instruments on the basis of individual contracts solely for risk management purposes. Not using derivative financial instruments would expose the company to greater financial risks.

These instruments essentially cover the risks arising from exchange rate movements between the euro and the US dollar, the Canadian dollar, the Norwegian krone and the Japanese yen. The material contractual details (amount and term) of underlying and hedge transactions are largely identical. Default risk relating to derivative financial instruments in the event of counterparty default is limited to the balance of the positive fair values. More information on this topic is provided in the notes to the consolidated financial statements.

1.3 Other financial assets

The maximum credit risk position arising from other financial assets corresponds to the carrying amount of the instruments. Krones is not exposed to any material default risk arising from its other assets, all of which are current assets.

Impact of default risks: We rate the maximum loss as high, the likelihood of an event as low and the financial impact as medium.

2. Liquidity risk

Liquidity risk is the risk of a company being unable to sufficiently fulfil its financial obligations.

Krones generates most funding through operating activities. These funds primarily serve to finance working capital and capital expenditures. Krones manages its liquidity by reserving sufficient cash and credit lines with banks in addition to the regular inflow of payments from operating activities. The company's liquidity management for operations consists of a cash management system that is based on rolling monthly liquidity planning with a planning horizon of one year. This enables Krones to be proactive about any possible liquidity bottlenecks. Apart from cash on hand, Krones' cash and cash equivalents consist primarily of demand deposits. The following overview of maturities shows how the undiscounted cash flows relating to liabilities as of 31 December 2021 influence the company's liquidity situation.

€ thousand	Carrying amount at 31 Dec 2021	Cash flow for 2022		Cash flow for 2023 – 2026		Cash flow for 2026 or later	
		Interest	Repay-ment	Interest	Repay-ment	Interest	Repay-ment
Derivative financial instruments	7,397	0	7,397	0	0	0	0
Liabilities to banks	5,098	42	0	82	5,098	0	0
Trade payables	515,141	0	515,141	0	0	0	0
Liabilities from leases	97,424	262	29,626	1,736	51,242	1,202	16,556
Other financial liabilities	96,090	0	83,181	0	12,909	0	0
Total	**721,150**	**304**	**635,345**	**1,818**	**69,249**	**1,202**	**16,556**

€ thousand	Carrying amount at 31 Dec 2020	Cash flow for 2021		Cash flow for 2022 – 2025		Cash flow for 2025 or later	
		Interest	Repay-ment	Interest	Repay-ment	Interest	Repay-ment
Derivative financial instruments	784	0	735	0	49	0	0
Liabilities to banks	32,064	43	27,005	158	3,809	7	1,250
Trade payables	370,359	0	370,315	0	44	0	0
Liabilities from leases	95,217	713	28,058	2,494	50,851	1,315	16,308
Other financial liabilities	107,556	0	95,369	0	12,187	0	0
Total	**605,980**	**756**	**521,482**	**2,652**	**66,940**	**1,322**	**17,558**

Impact of liquidity risk: We rate the maximum loss as low, the likelihood of an event as low and the financial impact as low.

3. Interest rate risk

Krones is exposed to risk arising from possible fluctuations in market interest rates. As of the 2021 reporting date, Krones made comparatively minor use of bank borrowings relative to its business volume.

Impact of interest rate risk: We rate the maximum loss as low, the likelihood of an event as low and the financial impact as low.

4. Currency risk

Because exports to countries outside the eurozone make up a significant portion of total revenue, we are exposed in principle to currency risk. We use exchange rate hedges to counter such risk as far as possible. In addition, we make most purchasing and sales transactions in euros or the relevant functional currency.

Currency sensitivity analysis

31 Dec 2021 € thousand	Currency USD	Currency CAD	Currency CNY	Currency GBP
Consolidated statement of profit and loss	4,955	304	–309	244
Consolidated equity	10,941	787	2,067	206

31 Dec 2020 € thousand	Currency USD	Currency CAD	Currency CNY	Currency GBP
Consolidated statement of profit and loss	–4,321	621	1,847	–138
Consolidated equity	12,762	251	0	–111

A change in reporting date closing rate by +10% in relation to the foreign currency against the euro (indirect quotation) would have the following effect on consolidated net income and other equity components:

Impact of currency risk: We rate the maximum loss as high, the likelihood of an event as low and the financial impact as low.

Operational risks

1. **Price risk**

Krones operates in a highly competitive market in which some orders are generated by way of prices that do not cover costs. Fixed-price contracts with customers also entail price risks.

Krones must generally bear any additional costs that arise. In order to minimise this risk, Krones has introduced a multidimensional order analysis process. Any enquiry or order equal to or greater than a specific amount is assessed on the basis of financial, technical/technological, tax, legal and regional risks.

Impact of price risk: We rate the maximum loss as high, the likelihood of an event as medium and the financial impact as medium.

2. **Procurement risks**

The situation on procurement markets and global supply chains was very difficult in the 2021 financial year. This was also reflected in rising material prices. We expect that ensuring a sufficient supply of material and bought-in parts at all times will continue to be a major challenge in 2022.

Krones is generally exposed to market price risk relating to its procurement of parts and raw materials for operations. Geopolitical and macroeconomic developments are the primary factors influencing raw material prices. There is a risk that raw material prices will develop to our disadvantage. The company mitigates this risk through targeted procurement management and supply contracts to reduce material commodity price risks. We have factored further price increases into our earnings forecast for 2022. If material procurement costs rise by more than expected, then earnings could be lower than forecast.

We also face risks relating to products, deadlines and quality with regard to suppliers. A specially designed process for supplier selection, monitoring and management helps minimise these risks. Should there nevertheless be temporary supply problems, there would be a risk of production stoppages, which could have a negative impact on Krones' revenue and earnings.

Impact of procurement risks: We rate the maximum loss as high, the likelihood of an event as high and the financial impact as high.

3. **Cost risk**

Our earnings forecast is based on the assumption that we will achieve cost reductions as a result of structural measures. An example of such measures is the workforce adjustment at our German sites, which will be reflected in the figures for a full year for the first time in 2022. We also expect to obtain cost savings by producing at our plant in Hungary and by procuring greater volumes of materials in best-cost countries. We seek to optimise cost structures along the entire value chain. Krones is exposed to the risk that these cost savings will be smaller than expected. We mitigate this risk by continually monitoring the projects underway across the company.

In addition, potential risks to projects in progress due to internal or external factors are tracked during project execution and countermeasures taken without delay.

Impact of cost risk: We rate the maximum loss as medium, the likelihood of an event as low and the financial impact as high.

4. Personnel risk

   As well as in its established businesses, Krones intends to grow more rapidly in particular on the services and digital side. For that purpose, we need highly qualified employees in Germany and abroad. There is a risk that the company will not find enough suitable employees. We will ensure early access to qualified employees through ongoing cooperation with colleges and universities. We regularly employ students pursuing their bachelor's and master's degrees. We also use professional HR consultants.

   Impact of personnel risk: We rate the maximum loss as low, the likelihood of an event as low, and the financial impact as low.

Legal risks

Krones is exposed to risks arising from operating activities in connection with possible legal disputes. Krones addresses legal risks with its rules of conduct, codes and an internal compliance structure. In addition, the company has taken out insurance policies that are customary for our sector.

Impact of legal risks: We rate the maximum loss as high, the likelihood of an event as medium, and the financial impact as medium.

Environmental and safety risks

As a manufacturing company, Krones is exposed to risks relating to the environment and safety that could lead to possible harm to individuals, goods or the company's reputation. Any harm caused by technical or human error in production can have a direct impact on our financial position. Such an event and any resulting fines, claims for damages or harm to our reputation can also have an indirect financial impact. Krones mitigates environmental and safety risks with high technical standards in production, training, rules of conduct and insurance policies customary in our industry.

Impact of environmental and safety risks: We rate the maximum loss as medium, the likelihood of an event as low and the financial impact as low.

IT risks

All of Krones' material business processes are based on functioning IT systems. The risks here are failure or malfunction of or unauthorised access to critical systems. Such events could result in production stoppages and the loss or misuse of important confidential data.

In general, more and more companies are becoming victims of computer crime, and there are serious cyber security risks. Computer crime is frequently based on professional international structures, which makes averting and combating it a major challenge. Krones uses internationally recognised IT security measures to protect against risks relating to cyber-crime and other IT risks. We have redundant IT systems in place for critical business processes.

Impact of IT risks: We rate the maximum loss as high, the likelihood of an event as medium and the financial impact as medium.

Overview and description of material opportunities

Material opportunities

Krones does not record business opportunities within the risk management system. For this reason, we do not report on the likelihood of an event or the possible financial impact in relation to opportunities. We describe opportunities in general below.

General economic opportunities

General economic opportunities arise for Krones as a result of the company's good international positioning. We stand to benefit if the economy in individual world regions develops better than experts have predicted. In particular, Krones has considerably strengthened its market position in recent years in the emerging markets in the Asia-Pacific region and in Africa and the Middle East. Additional opportunities would therefore arise for us if the emerging market economies were to grow faster than expected. International Monetary Fund experts expect growth in economic activity for 2022 in the euro area and the USA. If the growth momentum is stronger than expected in these regions, that could result in revenue and earnings above our guidance.

Industry-specific opportunities

Beverage and food producers increasingly focus on conserving energy and other resources. There is a chance of this trend intensifying and customers being more willing to accept higher prices. That would open additional selling and revenue opportunities for Krones due to the company's competitive advantages in this area. With enviro, our certified management system, we have established the basis for ensuring that Krones machines and lines have especially low energy and media consumption. The company has also developed a competitive advantage here.

Digitalisation also presents considerable additional sales and revenue opportunities for Krones. Customers expect Krones' smart machines and lines to reduce their operating and labour costs. Krones already has a number of products and services in the "digital beverage plant" portfolio and intends to further extend its position in the growth field of digitalisation.

Opportunities arising from acquisitions

Krones continued the process of integrating past acquisitions during the reporting period. No new acquisitions were made. Acquisitions are now beginning to be a stronger strategic focus again. We are primarily interested in mid-sized companies that strengthen our existing portfolio technologically and regionally, or that expand the range of products and services. A solid financial position and capital structure enable Krones to seize opportunities for external growth. Acquisitions are not included in our earnings forecasts. External growth could open up opportunities for Krones.

Operational opportunities

1. **Selling prices**
   Krones has optimised its cost structure by adopting a range of strategic measures. This is an important part of the basis for the targeted improvements in earnings. Alongside cost reductions, however, Krones is also focusing strategically on raising selling prices. In the reporting period year, with effect from 1 August 2021, we increased the prices of all bottling and packaging equipment and for process technology by 6%. We aim to implement further price increases in 2022.

2. **Procurement prices**
   The company increasingly buys standardised parts and complete assemblies from suppliers. In addition, Krones procures more and more materials locally at the company's locations worldwide and in best-cost countries. The

opportunity exists that, overall, we might save more in this way than forecast and thus offset the expected price increases to a greater extent than expected. Additional opportunities will also arise if raw material and other material prices develop more favourably than forecast.

3. **Costs**
   Krones has adjusted capacity in line with a short-term fall in demand. A major part of this comprised the reduction in the workforce in Germany. This was completed in 2021 and will have an effect on the full-year figures for the first time in 2022. We have also launched and in some cases already implemented further short-term and structural measures to optimise the company's cost structure. Opportunities arise for Krones if cost savings have a more rapid or a greater effect than planned.

Risks from the Ukraine-Russia conflict

The current situation concerning the war in Ukraine may give rise to risks for Krones.

Disruption of supply chains and at suppliers from the affected regions could result in procurement risk. As Krones procures virtually no materials or products from suppliers in those regions, the direct impact on procurement risk is considered to be very low.

The current conflict in the two countries could lead to risk for sales of Krones products if customers in those countries are restricted in their ability to continue their business activities or Krones is unable to supply products there due to sanctions. As Krones transacts only 1% to 1.5% of its business with the countries concerned, the risk to Krones' order intake and revenue is considered to be low. Furthermore, Krones has a large order backlog with long current lead times with customers in other regions, thus enabling the effects of such risk to be further mitigated.

Settlement and payment default risk has been assessed for outstanding orders with customers in the two countries. This risk was calculated on the assumption of a general risk of default by a number of customers due to the imposed economic sanctions. The resulting risk is calculated at an amount in the mid single-digit millions of euros.

Krones AG is the shareholder of Krones Ukraine LLC, Kyiv, and Krones o.o.o., Moscow. Krones does not see any material risk in the assessment of the recoverability of the assets in these companies, which account for approximately 0.6% of total consolidated assets.

Summary of risks and opportunities

Viewed from today's perspective, Krones is not exposed to any risks that threaten the company's continued existence.

The main change in our assessment of the risks and opportunities relative to the previous year is an increase in procurement risks due to the general market situation. Aside from this, the main risks continue to be found in the general business environment and in industry-specific and financial risks.

In addition, there is risk arising from the current war situation between Russia and Ukraine. Krones has assessed the potential impact on the Group. Based on this assessment, Krones has not identified any uncertainties that would cast doubt on its ability to continue as a going concern.

Events after the reporting period

On 24 February 2022, Russia started the war in Ukraine. As Russia and Ukraine account for a relatively small share of Krones' business activities, the conflict has no significant impact on Krones. Based on this, Krones has not identified any uncertainties that would cast doubt on its ability to continue as a going concern.

There were no other material events after the reporting period.

Report on **expected developments**

- Positive economic outlook for 2022
- Krones expects good growth in the current year
- Profitability once again to increase in 2022

Global economy expected to grow by 4.4% in 2022, with decreasing momentum

The International Monetary Fund forecasts that the global economy will grow by 4.4% in 2022.

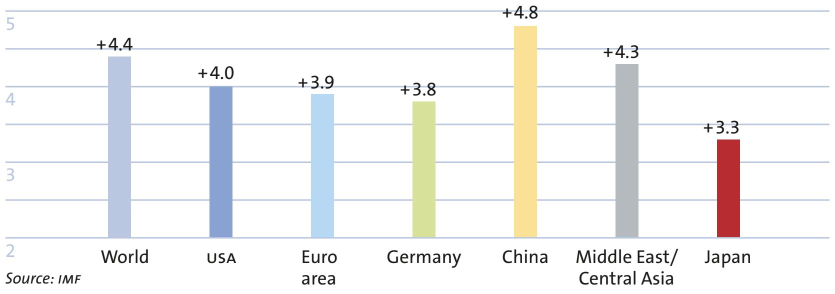
In January 2022, the International Monetary Fund (IMF) forecast global economic growth of 4.4% for 2022. This means that the upswing is losing momentum compared with 2021 (growth of 5.9%). In October 2021, the experts' forecast had been 0.5% higher at 4.9%. The IMF expects that the rapid spread of the omicron coronavirus variant will slow economic growth. Further reasons for the experts' more guarded assessment include rising energy prices and supply shortages, which are driving a significant rise in inflation, particularly in the USA and many emerging economies.

The IMF economists see risks for downward revisions of the growth forecast among other things in the further course of the coronavirus pandemic. Further supply and material shortages could also slow growth and lead to prolonged inflation. The interest rate hikes that would then be necessary would trigger financial market upheaval and negatively impact the global economy.

On IMF estimates, growth in emerging and developing economies, at 4.8% in 2022, will slow significantly relative to the strong previous year (6.5%). This is mainly due to China. The IMF forecasts that Chinese GDP growth will fall to just 4.8% in 2022 (2021: 8.1%). Key factors behind the weaker growth are lockdowns in entire cities and regions under the zero-Covid strategy and financing problems at real estate developers.

The IMF published the forecasts for global economic growth in 2022 before the Russian attack on Ukraine. On 25 February, the IMF issued a statement that the crisis in Ukraine comes at a delicate time, when the global economy is recovering from the ravages of the Covid-19 pandemic, and threatens to undo some of that progress.

Percentage GDP growth in 2022 (forecast)



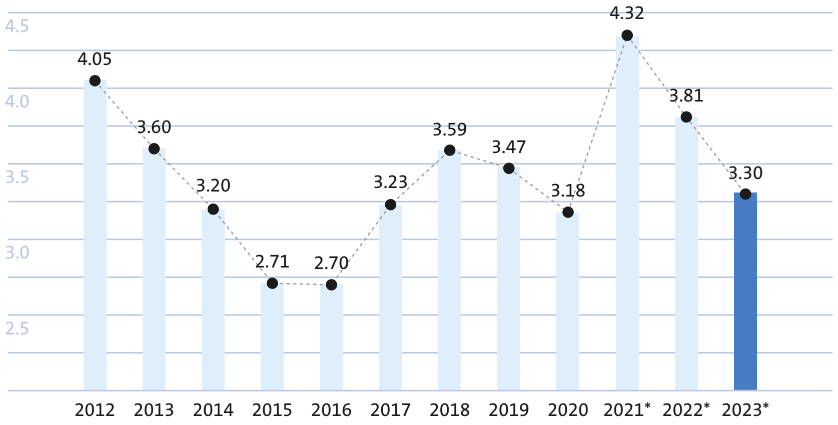
Source: IMF

As in the previous year, the strongest growth among emerging markets is expected to be recorded by India, with a repeated strong 9.0% increase. The IMF expects less dynamic growth for the Middle East/Central Asia region. There, the experts forecast GDP growth of 4.3%. In Latin America, the economy is expected to grow by just 2.4% in 2022. This region is being held back by rising interest rates due to high inflation.

For industrialised economies, the IMF forecasts 3.9% GDP growth in 2022. In Germany, the experts expect a slightly smaller GDP increase of 3.8%. For the euro area, the IMF anticipates GDP growth of 3.9%. Due to the interest rate hikes announced by the US Federal Reserve and the supply and material shortages, the IMF experts have downgraded the economic growth forecast for the USA in 2022 to 4.0%. The October 2021 forecast had still been for an increase of 5.2%. As in the previous year, Japan is likely to be one of the slowest-growing industrialised economies. The IMF's forecast is for growth of 3.3%.

Good overall conditions for consumption

Global inflation rate 2012 to 2020 and forecast to 2023, in %

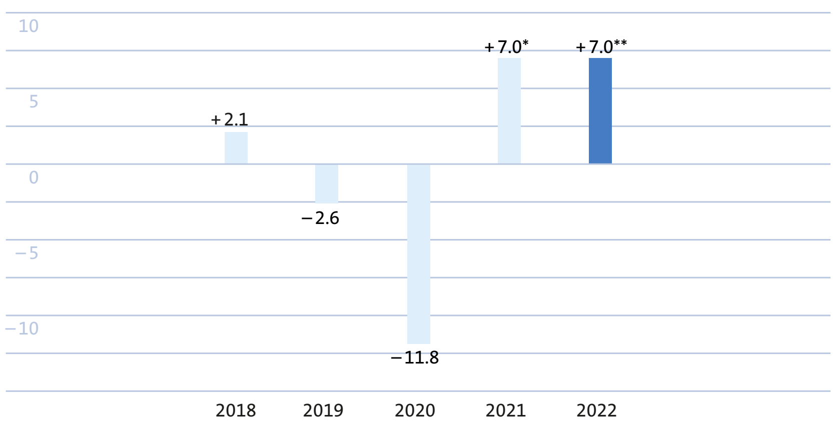


* Forecast

Source: Statista 2022

Positive outlook for the machinery sector

Year-on-year change in German mechanical engineering output, in %



* Estimate **Forecast

Source: Germany's Federal Statistical Office, VDMA

Consumer spending is a key factor determining the propensity of Krones' customers to commit to capital expenditure and, consequently, the level of demand for beverage filling and packaging equipment. Low unemployment and inflation rates have a positive effect on consumer's buying power. They therefore support demand for packaged food and beverages and indirectly influence demand for our company's products and services. With a continued low unemployment rate and slightly increased inflation, we do not expect any overall negative impacts on Krones' business.

The German Mechanical Engineering Industry Association (VDMA) expects 7% year-on-year output growth in 2022.

Germany's Mechanical Engineering Industry Association (VDMA) expects that the strong order intake in 2021 will continue to have a positive impact on the industry in 2022. The VDMA expects machinery and industrial equipment output to rise this year by 7% year-on-year. Demand is primarily being driven by Europe and the USA. The Chinese sales market already lost some momentum in 2021. Prolonged material shortages could retard growth in the sector. These are not expected to ease until the second half of 2022 at the earliest.

Good overall economic outlook for 2022

After a positive financial year overall in 2021, Krones is fundamentally optimistic at the beginning of the 2022 financial year. The reason for this, in addition to the good overall economic forecasts, is sustained high demand for Krones' products and services – despite price increases in the second half of 2021. There are also risks for the global economy, however, and hence also for Krones' business performance. 2022 will be marked by rising US interest rates and by economic and political uncertainties. For example, it is not currently possible to predict how the war in Ukraine will develop and how its consequences will impact the global economy. The ongoing path of the coronavirus pandemic is also hard to predict. If the risks do not affect the economy more than currently expected, there is not likely to be a negative impact on Krones' order intake from customers and investment confidence in the beverage industry will remain at a good level.

Overall, we therefore expect the global market for bottling and packaging equipment, along with selling prices, to continue increasing in 2022. However, competition in our markets and cost pressure will again remain strong this year.

The medium and long-term outlooks remain positive. Consumer demand for packaged beverages and liquid foods is steadily growing due to a number of megatrends such as the growing world population. The focus on sustainability and digitalisation is likewise supporting demand for innovative beverage filling and packaging machinery.

Because they share the same sales and procurement markets, the economic, sectoral and company-specific outlook essentially applies to all three segments of the Krones Group.

All segments to grow and improve profitability in 2022, including the new Intralogistics segment

Commencing in the 2022 financial year, the Krones Group reports on three segments. The Intralogistics segment is added alongside the two existing segments. This is because the Intralogistics business, which was previously part of the Beverage Production/Process Technology segment, has reached a commensurate size as a result of the previous years' strong growth. The new segmentation also enhances the transparency and depth of Krones' reporting.

Krones will continue to implement the structural measures already launched and to expand its global footprint in the current year. This permits cost structures to be further optimised and made more flexible. In addition, we aim to exploit growth opportunities in our market throughout the Group with innovations and future-ready products and services. Acquisitions are an option in all segments for additional inorganic growth. The goal is to increase profitability in all segments with the support of higher revenue.

Machines and Lines for Product Filling and Decoration segment

	Guidance for 2022	2021 actual	Guidance for 2021**
Revenue growth	5–7%	8.9%	2–3%
EBITDA margin	9–10%	8.7%*	8.0–9.0%

* Excluding positive one-off earnings effects of approximately €17 million
** From the report on expected developments in the 2020 management report.

In the core segment, **Machines and Lines for Product Filling and Decoration**, Krones will continue to further streamline structures and processes while also expanding its global footprint. To this end, it will expand production in Hungary and China together with the related supply chains and strengthen the regional service network. In addition, Krones will make use of its extensive line expertise to consolidate and expand its market position with regard to efficient, reliable, high-performance filling and packaging lines.

The strong trend among our customers towards sustainable production with lower carbon emissions is likewise expected to support growth. Krones is ideally positioned here with its resource-saving enviro products and sustainable PET solutions, including PET recycling.

The services business, supported by digital solutions, is also anticipated to contribute to growth in the core segment this year, despite travel restrictions.

For the core segment in 2022, Krones expects 5% to 7% revenue growth. The EBITDA margin is expected to be around 9% to 10%.

Machines and Lines for Beverage Production/Process Technology segment

	Guidance for 2022*	2021 actual**	Guidance for 2021***
Revenue growth	10–15%	12.1%	5–7%
EBITDA margin	5–7%	5.0%	0–1.0%

* Excluding Intralogistics ** Including Intralogistics *** From the report on expected developments in the 2020 management report

As well as continuing to implement cost-cutting measures, the focus in the **Machines and Lines for Beverage Production/Process Technology** segment is on closer coordination between global units. Growth is expected from new markets such as cosmetics and alternative proteins. The after-sales business is also being expanded.

In 2022, the Process Technology segment is expected to increase revenue by between 10% and 15% year-on-year and earn an EBITDA margin of 5% to 7%.

Overall, Krones forecasts revenue growth of 10% to 15% in 2022 for the Process Technology segment – which included intralogistics until 2021 – with an EBITDA margin of around 5% to 7%.

Intralogistics segment

	Guidance for 2022	2021 actual
Revenue growth	8–13%	40%
EBITDA margin	4–6%	3.7%

In the new **Intralogistics** segment added in 2022, we expect ongoing strong demand for our products and services. This segment is benefiting from increasing automation and digitalisation as well as booming e-commerce. In 2022, Krones will continue to deliver above-average growth in intralogistics and further improve profitability. Revenue is expected to grow by 8% to 13% and the EBITDA margin to be between 4% and 6%.

Krones targets improvements in revenue, the EBITDA margin and ROCE for the Group in 2022

Krones made a strong start to the 2022 financial year with a very large order backlog. At the same time, various uncertainties mean that the business environment remains challenging for Krones. These include material shortages and problems in global supply chains, political risks in Europe and other parts of the world, and also strong inflation in many countries. It is also uncertain how the Covid-19 pandemic will continue to play out around the world and how the impacts of the war in Ukraine will affect the growth of the global economy in 2022.

Krones aims to increase the three key performance indicators revenue, EBITDA margin and ROCE in 2022.

Based on the prevailing macroeconomic outlook and the current expected development of the markets relevant to Krones, the company expects consolidated revenue growth of 5% to 8% in 2022.

Thanks to increasing revenue and the continued implementation of the cost optimisation measures, Krones aims to improve its profitability this year compared with 2021. At group level for 2022, the company forecasts an EBITDA margin of 8% to 9%.

For the third performance target, return on capital employed (ROCE), Krones expects an increase this year to between 10% and 12%. Beginning in 2022, ROCE replaces the previous third key performance indicator, working capital as a percentage of revenue. ROCE reflects both working capital and fixed assets. In addition, ROCE gives investors an even more accurate picture of how efficiently the company manages the capital it uses.

	Guidance for 2022	2021 actual	Guidance for 2021**
Revenue growth	5–8%	9.4%	2.5–3.5%
EBITDA margin	8–9%	8.1%*	6.5–7.5%
ROCE	10–12%	9.0%*	–

* Excluding positive one-off earnings effects of approximately €17 million
** From the report on expected developments in the 2020 management report.

Takeover-related disclosures (report pursuant to Sections 315a and 289a of the German Commercial Code (HGB))

Pursuant to Section 4 (1) of the articles of association, the subscribed capital (share capital) of Krones Aktiengesellschaft as of 31 December 2021 amounted to €40,000,000.00 and was divided into 31,593,072 ordinary bearer shares each representing a notional €1.27 of share capital. With the exception of treasury shares, from which the Company has no rights, all shares carry the same rights and obligations. Krones held no treasury shares as of 31 December 2021. Shareholders' rights and obligations arising from shares follow from statutory provisions of the Stock Corporation Act (AktG), primarily Sections 12, 53a et seq., 118 et seq., 133 et seq. and 186 AktG.

Under Section 20 (1) of the articles of association, each share entitles its holder to one vote in the annual general meeting. The Company has no voting rights from treasury shares.

Pursuant to Section 18 (1) of the articles of association, only those shareholders who register with the company in writing in German or English and provide proof of their shareholding prior to the annual general meeting are entitled to participate and vote in the annual general meeting. Under Section 67c (3) AktG, proof of the shareholder's shareholding in text form provided by the last intermediary is sufficient as proof and may also be communicated to the company directly by the last intermediary. The proof of shareholding must relate to the start of the twenty-first calendar day prior to the annual general meeting.

Restrictions on the voting rights attached to shares may also result from provisions of the Stock Corporation Act, such as under Section 136 AktG. Infringements of notification obligations within the meaning of sections 33 (1), 38 (1) and 39 (1) of the German Securities Trading Act (WpHG) may lead to a situation where, under section 44 WpHG, rights attached to shares, including voting rights, are at least temporarily suspended.

To the knowledge of the Executive Board, the following agreement exists, or existed in the 2021 financial year, that may be considered a restriction within the meaning of Section 289a sentence 1 no. 2 and Section 315a sentence 1 no. 2 HGB: Mr. Harald Kronseder, Mr. Gunther Kronseder, Harald Kronseder Holding GmbH, Neutraubling, Beteiligungsgesellschaft Kronseder mbH, Neutraubling, VMAX Familienstiftung, Neutraubling, Ms. Nora Diepold (née Kronseder) and Mr. Leopold Kronseder are parties to a pool agreement. The members of the pool agreement have established a civil-law partnership ("Familie Kronseder Konsortium"), the purpose of which is to ensure, by means of uniform decision-making by the shareholders and uniform exercise of voting rights in general meetings of Krones Aktiengesellschaft and by restricting the ability for the shares in Krones Aktiengesellschaft bound in the pool agreement to be sold at will, (a) the influence of the shareholders (and in particular the influence of the Kronseder family) and their legal successors, (b) the continuation of Krones Aktiengesellschaft in a scope comparable to the overall business situation at the time of signing the pool agreement (comparable revenue, comparable order volume, comparable operating assets, comparable size of workforce) and (c) that the company retains the character of a family-owned company.

The Executive Board of the company is not aware of any other restrictions relating to voting rights or the transfer of shares.

The company is aware of the following direct and indirect shareholdings in the company's capital that exceed 10% of the voting rights: Leopold Kronseder (indirect), Nora Diepold (née Kronseder) (indirect), Gunther Kronseder (indirect), VMAX Familienstiftung, Neutraubling (direct and indirect), Harald Kronseder (direct and indirect), Harald Kronseder Holding GmbH, Neutraubling (direct and indirect), Beteiligungsgesellschaft Kronseder mbH, Neutraubling (indirect), Dr. Volker Kronseder (indirect).

To the company's knowledge, the members of Familie Kronseder Konsortium jointly hold the following interest in the share capital:

	Total share of voting rights
Familie Kronseder Konsortium	52.1 %

Changes to the shareholdings listed above that are not required to be reported to the company may have occurred since the specified date (24 January 2022). Because the company's shares are bearer shares, the company is generally only aware of changes in shareholdings if the changes are subject to reporting requirements.

The company has not issued any shares with special rights conferring powers of control. There is no employee share scheme where the control rights are not exercised directly by the employees.

The appointment and dismissal of Executive Board members is governed by Sections 84 and 85 AktG and by Section 31 of the Codetermination Act (MitbestG). Pursuant to Section 6 (1) of the articles of association, the Executive Board consists of at least two members. Pursuant to Section 6 (2) of the articles of association, determination of the number of Executive Board members, the appointment of regular and deputy members of the Executive Board, the execution of their employment contracts and revocation of appointments are the responsibility of the Supervisory Board.

Such amendments are to be adopted by resolution of the annual general meeting (Section 119 (1) No. 5 and Section 179 (1) of the German Stock Corporation Act). Unless mandatory provisions of law stipulate otherwise, resolutions of the annual general meeting are made with a simple majority of votes cast or, in cases in which the law prescribes a majority of shares in addition to a majority of votes, with a simple majority of the share capital represented in the vote.

Accordingly, in derogation from Section 179 (2) sentence 1 AktG, resolutions of the annual general meeting amending the articles of association also require, in addition to a simple majority of votes, a majority of the share capital represented in the vote, unless a larger majority is prescribed by law. The Supervisory Board is authorised to make amendments that affect only the wording of the articles of association (Section 179 (1) sentence 2 AktG in conjunction with Section 13 of the articles of association). In addition, the Supervisory Board is authorised by resolution of the annual general meeting of 17 June 2021 to amend the articles of association in accordance with any utilisation of Authorised Capital 2021 and upon expiry of the term of the authorisation for the utilisation of Authorised Capital 2021.

By resolution of the annual general meeting of 17 May 2021, the Executive Board is authorised to increase the company's share capital, with the approval of the Supervisory Board, by up to €10 million (Authorised Capital 2021) through the issuance on one or more occasions of new ordinary bearer shares against cash contributions up to and including 16 May 2026. Shareholders must normally be granted subscription rights to these shares. The Executive Board is authorised to exclude shareholders' subscription rights, with the approval of the Supervisory Board, for any fractional amounts that may arise. Moreover, the Executive Board is authorised to determine the further details of the capital increase and its implementation, in both cases with the approval of the Supervisory Board.

The Executive Board is authorised to repurchase treasury shares and to sell repurchased shares in the cases stipulated on by law in Section 71 of the German Stock Corporation Act (AktG). By resolution of the annual general meeting of 13 June 2018, the Executive Board is authorised, with the approval of the Supervisory Board, up to and including 12 June 2023, subject to compliance with the principle of equal treatment (Section 53a AktG), to buy treasury shares totalling up to 10% of the company's share capital at the time that the resolution was adopted or, if smaller, at the time that the authorisation is exercised. The amount of shares purchased under this authorisation, together with other treasury shares that the company has already acquired or still holds or shares that are attributable to the company under Sections 71d and 71e of the German Stock Corporation Act, may at no time exceed 10% of the company's share capital at the time. The authorisation may be exercised once or multiple times, either in whole or in part, in pursuit of one or multiple purposes, by the company, by Group companies or by a third party acting on the company's behalf or on behalf of Group companies. The authorisation may not be used for the purpose of trading in the company's shares.

The purchase of treasury shares may be carried out, at the discretion of the Executive Board, through a stock exchange or through a public tender offer addressed to all of the company's shareholders or through a public request to the shareholders to tender shares for sale.

By resolution of the annual general meeting of 13 June 2018, the Executive Board is authorised to use any treasury shares bought pursuant to the aforementioned authorisation in accordance with Section 71 (1) No. 8 of the Stock Corporation Act, besides for sale on the stock exchange or by offer to all shareholders, for any permissible purpose, and in particular as follows:

1) The shares may be cancelled and the share capital reduced by the proportion of the share capital accounted for by the cancelled shares, without the cancellation or its execution requiring a further resolution by the annual general meeting.

2) They may be offered and transferred to third parties in return for non-cash contributions.

3) The shares may be sold to third parties against cash payment if the price at which the shares in the company are sold is not significantly lower, within the meaning of sections 71 (1) no. 8 sentence 5 and 186 (3) sentence 4 of the Stock Corporation Act, than the stock exchange price of a company share at the time of sale.

4) The shares may be used to service obligations or rights to purchase shares in the company arising from and in connection with convertible bonds or bonds with warrants, or profit-sharing rights with conversion rights or warrants, issued by the company or any of its group companies.

The authorisations for the Executive Board to sell and otherwise use purchased shares may be exercised once or multiple times, individually or in combination, on the whole volume or on partial volumes of the acquired shares. The above authorisations may also be exercised by dependent companies or companies that are majority-owned by the company or by third parties on behalf of the company or its dependent or majority-owned companies.

Shareholders' statutory subscription rights to such shares are excluded to the extent that the shares are used in exercise of the authorisations set out above under ii) to iv) inclusive or, in the case of sales of treasury shares to all shareholders, to the extent necessary to avoid fractional amounts.

Further details may be found in the authorising resolution, the full wording of which is reproduced in agenda item 9 in the notice convening the annual general meeting of Krones Aktiengesellschaft on 13 June 2018 published in the Federal Gazette on 19 April 2018.

Krones Aktiengesellschaft has not made any material agreements containing special provisions relating to a change or acquisition of control following a takeover offer.

The company has not made any agreements with members of the Executive Board or company employees relating to compensation in the event of a takeover offer.

Dependecy report

Pursuant to Section 17 of the German Stock Corporation Act (AktG), Familie Kronseder Konsortium GbR, Neutraubling, has a controlling influence over Krones AG. Thus, in keeping with Section 312 AktG, the Executive Board has prepared a report which contains the following final declaration:

Krones AG did not carry out any legal transactions with third parties at the instigation or in the interests of the shareholders of Familie Kronseder Konsortium GbR or their affiliates. Measures requiring reporting within the meaning of Section 312 AktG were neither taken nor omitted.

For every transaction made between KRONES AG and the owners of Familie Kronseder Konsortium GbR and affiliated companies in the reporting period, Krones AG made arrangements for appropriate consideration within the meaning of Section 312 AktG and – to the extent that it was to be fulfilled in the reporting period – also received appropriate consideration.

The statement on corporate governance is also available online at https://www.krones.com/en/company/investor-relations/corporate-governance-statement.php

Neutraubling, 16 March 2022
Krones AG

The Executive Board

Christoph Klenk
CEO

Norbert Broger
CFO

Thomas Ricker
CSO

Markus Tischer

Ralf Goldbrunner

3

CORPORATE GOVERNANCE

Krones is committed to sustainability and responsibility

Corporate governance relates to corporate management and control on the basis, in fact and in law, of responsibility and sustainability. Krones takes the principles and rules of corporate governance into account in all business activities. In the Corporate Governance Statement, the Krones Executive Board and Supervisory Board report on the company's corporate governance in accordance with Sections 289f and 315d of the German Commercial Code (HGB) and Principle 22 of the German Corporate Governance Code in the version dated 16 December 2019.

Declaration of the Executive Board and Supervisory Board of Krones Aktiengesellschaft on the German Corporate Governance Code pursuant to Section 161 of the German Stock Corporation Act (AktG)

The Executive Board and Supervisory Board of Krones Aktiengesellschaft declare pursuant to Section 161 AktG:

Since issuing its last Declaration of Conformity in January 2021, Krones Aktiengesellschaft has complied with all recommendations of the Government Commission on the German Corporate Governance Code in the version dated 16 December 2019, as published by the Federal Ministry of Justice and Consumer Protection in the official section of the Federal Gazette. The Executive Board and Supervisory Board of Krones Aktiengesellschaft declare that Krones Aktiengesellschaft complies with the recommendations and will continue to do so in the future, with the following exceptions:

- Recommendation D.5 is not complied with. This calls for the formation of a Nomination Committee, composed exclusively of shareholder representatives, which names suitable candidates to the Supervisory Board for the latter's proposals to the general meeting.

  Committees are primarily useful for larger bodies if they make the body's work more efficient. There are eight shareholder representatives on the Supervisory Board of Krones Aktiengesellschaft, who suggest nominees for election to the Supervisory Board at the general meeting. Given the established, efficient work of the shareholder representatives on the Supervisory Board, we do not therefore consider it necessary to create a separate nomination committee.

- Recommendation G.10 is not complied with. This calls for Executive Board members' variable remuneration, taking their respective tax burden into consideration, to be predominantly invested in company shares or to be granted predominantly as share-based remuneration. Granted long-term variable remuneration components are to be accessible to Executive Board members only after a period of four years.

  The variable remuneration amounts granted to members of the Executive Board are not share-based and Executive Board members are not required to invest them predominantly in shares in Krones Aktiengesellschaft. The Supervisory Board considers that the share price alone is not sufficient as an indicator to reflect the Executive Board's performance in the interests of the company. The structure of variable remuneration is intended to take this into account. Variable remuneration amounts are accessible to Executive Board members after three years.

- Recommendation G.17, under which appropriate account is to be taken of the larger time commitment of the chairs of Supervisory Board committees, is not complied with.

  The Supervisory Board is of the opinion that, given the size of the committees, the current additional remuneration paid to members of Supervisory Board committees is also appropriate for the committee chairs. This does not apply, however, to the Chairman of the Audit and Risk Management Committee.

Neutraubling, January 2022

For the Executive Board:

Christoph Klenk
CEO

For the Supervisory Board:

Volker Kronseder
Chairman

Objectives of the Supervisory Board

Pursuant to Recommendation C.1 of the German Corporate Governance Code, the Supervisory Board must specify concrete objectives relating to its composition and develop a profile of skills and expertise for the board as a whole. While doing so, the Supervisory Board must take the principle of diversity into account.

In keeping with Recommendation C.1 of the Code, the Supervisory Board of Krones has specified the following objectives:

a) Composition based on suitable knowledge, skills and experience (profile of skills and expertise)

The Supervisory Board of Krones AG shall be composed in such a way that its members possess the knowledge, skills and professional experience required to properly complete the tasks of a member of the Supervisory Board of an international corporation and to preserve Krones AG's public reputation.

Krones AG operates internationally and has subsidiaries and offices in many countries around the globe. Therefore, international experience must be taken into consideration when selecting members of the Supervisory Board. International experience relates not only to foreign language skills but also to employment in other international companies.

Motivation, integrity, character, professionalism and independence should also be taken into account when considering candidates for election.

b) Diversity

The Supervisory Board of Krones AG takes diversity into account in the selection of its members. Under Germany's Act on Equal Participation of Women and Men in Leadership Positions in the Private and Public Sectors, which entered into force on 1 May 2015, at least 30 percent of Supervisory Board seats at Krones must be held by women and men, respectively. Employee and shareholder representatives on the Supervisory Board of Krones AG have decided that each group will meet the gender quota separately. In accordance with the law and the articles of association, the Supervisory Board of Krones AG comprises eight shareholder representatives and eight employee representatives. Thus, the Supervisory Board should have at least two female employee representatives and at least two female shareholder representatives. There are three female shareholder representatives on the Supervisory Board: Nora Diepold, Petra Schadeberg-Herrmann and Prof. Dr. Susanne Nonnast. The Supervisory Board has two female employee representatives, Dr. Verena Di Pasquale and Beate Eva Maria Pöpperl.

c) Independence of members

The independence of the members of the Supervisory Board shall be ensured in order to prevent conflicts of interest. Potential candidates are not to serve as advisors or board members to major competitors of Krones AG and are not to hold management positions at companies that are customers, suppliers or Krones AG group companies. The Supervisory Board shall contain no more than two former members of the Executive Board.

Each member of the Supervisory Board shall agree to submit a declaration to the Chairman of the Supervisory Board if there is any conflict of interest. If a conflict of interest persists over an extended period, or is material, the Supervisory Board member in question must resign.

In accordance with Recommendation C.6 of the Code, the Supervisory Board must include what it considers to be a suitable number of independent members among the shareholder representatives. A Supervisory Board member is considered independent within the meaning of that recommendation if they are independent of the company and its Executive Board and independent of any controlling shareholder.

In accordance with Recommendation C.7 of the Code, more than half of the shareholder representatives on the Supervisory Board are to be independent of the company and the Executive Board. In the reporting period, that was the case for Nora Diepold, Prof. Dr. Susanne Nonnast, Petra Schadeberg-Herrmann, Volker Kronseder, Hans-Jürgen Thaus, Robert Friedmann, Norbert Samhammer and Matthias Winkler.

In accordance with Recommendation C.9 of the Code, if the Supervisory Board has more than six members, at least two shareholder representatives are to be independent of any controlling shareholder. In reporting period, all shareholder representatives on the Supervisory Board except Volker Kronseder, Norman Kronseder (on the Supervisory Board until 17 May 2021) and Nora Diepold (on the Supervisory Board from 17 May 2021) were independent of the controlling shareholder in accordance with this recommendation.

In accordance with Recommendation C.10 of the Code, the Chair of the Supervisory Board, the Chair of the Audit Committee and the Chair of the committee that addresses Executive Board remuneration are to be independent of the company and the Executive Board. Krones Aktiengesellschaft fully complies with this recommendation.

d) Age limit

The age limit for members of the Supervisory Board is 70 years. A member's term in office ends at the conclusion of the annual general meeting that follows his or her 70th birthday. Reasons must be given for any departure from this rule.

Supervisory Board member Hans-Jürgen Thaus has already reached the age of 70. His term of office did not end at the end of general meeting following his 70th birthday. Reasons: From his many years as Chief Finance Officer and Deputy Chairman of the Executive Board of Krones AG, Mr. Thaus has outstanding knowledge of the market and the company. With his expertise and experience, he makes a valuable contribution to the efficient supervision of the Executive Board and to Krones' success. There are also no personal grounds relating to Mr. Thaus, such as availability, that speak against making a departure from the age limit. The Supervisory Board had no objections to this departure from the rules of procedure.

Status of implementation of the Supervisory Board's objectives

The Supervisory Board of Krones implemented all of the objectives a) to d) in financial year 2021.

Information on the length of service of Supervisory Board members

The Supervisory Board has not set a cap on the duration of Supervisory Board membership. We believe that such a cap does not make sense because the expertise of experienced Supervisory Board members should remain available to the company. The Supervisory Board of Krones will continue to examine the suitability of Supervisory Board members on an individual basis, regardless of how long members have already been on the board. We provide the following information on the length of service of the current members of the Supervisory Board:

Volker Kronseder	On the Supervisory Board since 15 June 2016
Josef Weitzer	On the Supervisory Board since 20 June 2007
Nora Diepold	On the Supervisory Board since 17 May 2021
Robert Friedmann	On the Supervisory Board since 13 June 2018
Klaus Gerlach	On the Supervisory Board from 13 June 2012 to 31 December 2021

Oliver Grober	On the Supervisory Board since 13 June 2018
Thomas Hiltl	On the Supervisory Board since 13 June 2018
Markus Hüttner	On the Supervisory Board since 1 July 2020
Professor Dr. jur. Susanne Nonnast	On the Supervisory Board since 15 June 2016
Beate Eva Maria Pöpperl	On the Supervisory Board since 20 June 2017
Stefan Raith	On the Supervisory Board since 1 January 2022
Petra Schadeberg-Herrmann	On the Supervisory Board since 15 June 2011
Norbert Samhammer	On the Supervisory Board since 13 June 2018
Jürgen Scholz	On the Supervisory Board since 20 June 2007
Hans-Jürgen Thaus	On the Supervisory Board since 25 June 2014
Matthias Winkler	On the Supervisory Board since 13 June 2018

Information on corporate governance practices

Corporate governance at Krones is based on fairness and transparency. This principle applies both to cooperation between the Executive Board and the Supervisory Board and to our interaction with employees, customers, suppliers and the general public.

Compliance at Krones is an overarching concept denoting conduct consistent with the rules, where the rules to be observed within the company far exceed statutory requirements. They also include internal guidelines and regulations, and embody the moral values and standards that correspond to Krones' ethical principles. Krones has established a compliance management system over the years covering the areas of prevention, detection and response. There is also close coordination with other elements of corporate governance, notably sustainability, governance itself, internal audit and the internal control and risk management system.

In order to strengthen compliance, Krones introduced a compliance whistleblower portal in 2018. This reporting system on the Krones website allows company employees and outsiders to anonymously bring attention to potential infringements of the law or rules and regulations. The whistleblower portal can be accessed from https://www.krones.com/en/company/responsibility/krones-integrity.php.

Krones revised its Code of Conduct in 2019. The Code of Conduct contains the detailed principles and basic rules for our activities, including our conduct towards business partners and the public. Subjects covered in the Code of Conduct include corporate values, sustainability, acting in accordance with the law and ethics, social responsibility and handling information and knowledge. Concrete examples on each topic help employees implement and adhere to the rules set out in the Code of Conduct in their daily work. The Code of Conduct applies for the entire Krones Group and is available in various languages. It can be accessed from https://www.krones.com/en/company/responsibility/compliance.php.

Sustainability is integral to Krones' corporate strategy and corporate governance practices. We review all activities for sustainability and for whether they meet the sustainability goals defined by Krones, including not only our social and economic responsibilities but also the environmental impact of the manufacture and use of our products. Krones maintains eco-friendly production operations and not only complies with statutory regulations but makes every effort to remain as far as possible below prescribed limits.

In order to obtain objective confirmation both for itself and for stakeholders, Krones had the climate strategy that it adopted in 2020 reviewed by the independent Science Based Targets initiative (SBTi). The findings confirm that the Group is on the right track from a science-based perspective. According to SBTi, Krones' climate targets contribute to limiting greenhouse effect-driven global warming to 1.5 degrees Celsius. They were thus rated as ambitious and effective – and officially declared to be science-based targets.

To communicate its commitment to ethical business issues to the outside world, Krones has been a member of the United Nation (UN) Global Compact ever since 2012. The UN Global Compact lays down globally applicable principles relating to human rights, labour, the environment and anti-corruption and requires companies to comply with them. The text of the UN Global Compact and related information are available at www.unglobalcompact.org.

Our governance principles ensure that the welfare of the very people who contribute to our success is never subordinated to economic interests. In order to prevent accidents at the workplace and work-related illness, Krones creates a safe environment that is conducive to the good health of our employees. All of our workflows are designed with employee safety and health in mind, and we ensure that the workplace is ergonomic.

When choosing our suppliers, we look at their performance with respect to sustainable, socially responsible business practices. For this purpose, Krones has developed a Supplier Code, which was revised in 2020. It now covers the subjects of acting in accordance with the law and ethical principles, handling knowledge and information, social responsibility, and commitment and monitoring. The previous topics of safety and health, the environment, working conditions and compliance are included under the revised headings. In addition, selected suppliers are subject to regular quality and social audits to verify that they meet the standards required by Krones. This applies not only to the suppliers themselves, but also increasingly with regard to their supply chain.

The Supplier Code is available at https://www.krones.com/en/company/responsibility/compliance.php.

Information on corporate governance practices is also contained in Krones' Non-financial Report, which can be accessed from https://www.krones.com/en/company/responsibility/downloads.php.

Diversity policy and succession planning for the Executive Board

Responsibility for succession planning and for monitoring diversity lies with the Executive Board, the Supervisory Board and the Standing Committee. For the appointment of members of the Executive Board, preference is given to candidates who are best qualified in terms of their accomplishments and knowledge to safeguard the interests of the company and its stakeholders for the long term. The company's diversity policy is also taken into account in the appointment process. When filling a position on the Executive Board, the Supervisory Board considers diversity with respect to candidates' professional and educational background, age, gender and international management qualifications. The policy consists of the following aspects in detail:

- The Supervisory Board has set a standard age limit for members of the Executive Board. The standard age limit is 62 years. The Supervisory Board also gives due consideration to ensuring a balanced age structure.
- At least two members of the Executive Board are required to have a technical/engineering background. At least two members are required to have international management experience. The Executive Board as a whole is required to represent the best possible composition for the Krones Group, its core business and all stakeholders.
- With the current all-male composition of the Executive Board, the percentage of women on the Executive Board is 0%. The reason for the current all-male composition of the Executive Board is that the Supervisory Board, despite the existence of suitable female candidates, has been unable to recruit any of those candidates for a position on the Executive Board. Pursuant to Section 111 (5) of the German Stock Corporation Act, the Supervisory Board of Krones AG has accordingly established a target of 0% participation of women on the Executive Board. This quota applies for as long as the Execu-

tive Board remains in its current composition on the basis of the agreed lengths of contract, including any extensions. However, under the company's diversity policy, women with comparable qualifications will be given priority consideration for any openings on the Executive Board.

- The Supervisory Board has set the contract term for first-time appointees to Executive Board positions at three years.

Duties and activities of the Executive Board and the Supervisory Board

The Executive Board of Krones AG consisted of five members in the 2021 financial year. Members of the Executive Board are each responsible for their respective Executive Board portfolio (see pages 21 and 192). The Executive Board manages the company and its affairs. The members of the Executive Board hold regular Executive Board meetings. At these meetings, the Executive Board discusses current and strategic topics and makes decisions. For strategically important decisions, the Executive Board involves the Supervisory Board in the decision-making process in a timely manner. The work of the Executive Board, in matters such as the majority required for resolutions and transactions that require Supervisory Board approval, is governed by rules of procedure for the Executive Board that are issued by the Supervisory Board.

The Supervisory Board oversees the Executive Board. In accordance with the articles of association, the Supervisory Board has 16 members. The Executive Board and the Supervisory Board communicate on a regular basis. The Executive Board informs the Supervisory Board in a timely manner about business development, the company's financial situation, risk management, business forecasts and strategy. In addition to regular oral reports, the members of the Supervisory Board receive written reports on the company's earnings and financial situation from the Executive Board each month.

The Chairman of the Supervisory Board coordinates the work of the Supervisory Board (see pages 28–30 and 192 for a listing of the members). The Chairman or Deputy Chairman presides over Supervisory Board meetings.

The Supervisory Board adopts resolutions either in meetings or in exceptional cases by circulation. Members of the Executive Board participate in meetings of the Supervisory Board at the invitation of the Chairman or Deputy Chairman of the Supervisory Board. The Executive Board members give oral or written reports on agenda items and respond to questions from Supervisory Board members.

Each year, the Chairman of the Supervisory Board describes the Board's activities in his report to shareholders in the annual report and at the annual general meeting.

The Supervisory Board has adopted rules of procedure of its own, governing matters such as responsibilities and rules for the adoption of resolutions.

In order to perform its work in the most efficient manner possible, the Supervisory Board has formed an Audit and Risk Management Committee and a Standing Committee.

Composition, duties and activities of the Audit and Risk Management Committee

The Audit and Risk Management Committee consists of Supervisory Board Chairman Volker Kronseder, his deputy Josef Weitzer and Supervisory Board members Hans-Jürgen Thaus, Matthias Winkler, Markus Hüttner and Jürgen Scholz. Its Chairman is Hans-Jürgen Thaus.

The Audit and Risk Management Committee meets regularly, oversees the accounting and financial reporting process and the audit of the financial statements and prepares corresponding proposals for resolutions for the Supervisory Board. The Committee also prepares the Supervisory Board's review of the annual financial statements, the management report and the auditor's report for the separate and consolidated financial statements and makes recommendations. In addition, the Audit and Risk Management Committee monitors the effectiveness of the internal control system, the risk management system and the compliance system.

Composition, duties and activities of the Standing Committee

The Standing Committee consists of Volker Kronseder, Josef Weitzer, Prof. Dr. Susanne Nonnast and Markus Hüttner. Volker Kronseder chairs the committee. The Standing Committee meets regularly and deals with all topics that do not fall within the scope of the Audit and Risk Management Committee.

These include corporate strategy, human resources strategy, Supervisory Board remuneration and Executive Board remuneration.

Self-assessment of the work of the Supervisory Board

The Supervisory Board provides the following information pursuant to Recommendation D.13 of the German Corporate Governance Code: A self-assessment of the effectiveness of the work of the Supervisory Board as a whole and of its committees was carried out in the 2021 financial year. Among the criteria were the topics of organisation, information and communication within the Supervisory Board and the committees. Questionnaires were also used as part of the self-assessment. No recourse was made to outside support.

Determinations pursuant to Sections 76 (4) and 111 (5) of the German Stock Corporation Act

Under Section 76 (4) of the German Stock Corporation Act, the Executive Board is required to determine targets for the participation of women in the two levels of management below the Executive Board. It must also set a deadline for compliance with the targets. As of 31 December 2021, the percentage of women in each of the two levels of management below the Executive Board stood at 11.04%.

The Executive Board aims to increase this figure significantly in the medium term. Despite intensive efforts, it has so far been possible to fill only a small number of vacant management positions at Krones with women candidates possessing comparable qualifications. One major reason for this is the extremely engineering-oriented context of Krones’ business activities. We will further step up our efforts and give women priority consideration when filling any openings for management positions. The Executive Board of Krones AG has set the target for the percentage of women in the two levels of management below the Executive Board at 15%. This target is to be attained by 31 December 2024.

Percentage of women on the Executive Board

So far, despite intensive efforts, the Supervisory Board has not been able to recruit suitable women candidates for the Executive Board. Because the lengths of current contracts mean that no changes can be expected on the Executive Board in the short term, the Supervisory Board has set a target of 0% for the percentage of women on the Executive Board of Krones AG and thus complies with the requirements under Section 111 (5) of the German Stock Corporation Act. There is therefore no need to set a deadline for compliance.

Disclosures pursuant to Section 289f (2) 1a of the German Commercial Code

The applicable remuneration system for members of the Executive Board in accordance with section 87a (1) and (2) sentence 1 AktG, which was approved by the Annual General Meeting of 17 May 2021 and the resolution on remuneration for the members of the Supervisory Board adopted by the Annual General Meeting of 17 May 2021 in accordance with Section 113 (3) AktG are publicly available at https://www.krones.com/en/company/investor-relations/annual-general-meeting.php, under 2021. The remuneration report and the auditor’s report in accordance with Section 162 AktG are made publicly available at the same address, under 2022.

4

CONSOLIDATED FINANCIAL STATEMENTS

Consolidated statement of **profit and loss**

€ thousand	Notes	2021	2021	2020	2020
Revenue	19		3,634,456		3,322,743
Changes in inventories of finished goods and work in progress	5		19,562		39,140
Other own work capitalised	20		53,565		36,748
Other operating income	21		161,762		120,453
Goods and services purchased	22		−1,807,417		−1,694,677
Expenses for materials and supplies and for goods purchased		−1,373,216		−1,316,229	
Expenses for services purchased		−434,201		−378,448	
Personnel expenses	23		−1,176,686		−1,175,211
Wages and salaries		−983,497		−983,403	
Social security contributions and expenses for pension plans and for benefits	14	−193,189		−191,808	
Depreciation and amortisation of intangible assets and property, plant and equipment	1/2		−141,738		−174,035
Other operating expenses	24		−572,606		−515,972
EBITDA			**312,636**		**133,224**
EBIT			**170,898**		**−40,811**
Investment income	25	2,032		0	
Profit or loss shares attributable to associates that are accounted for using the equity method	4	−36		−88	
Income from other securities and loans classified as non-current financial assets	25	0		0	
Interest and similar income	25	9,891		11,554	
Interest and similar expenses	25	−5,525		−7,252	
Financial income/expense	25		**6,362**		**4,214**
Earnings before taxes			**177,260**		**−36,597**
Income tax	8/26		−35,874		−43,056
Consolidated net income			**141,386**		**−79,653**
Profit share of non-controlling interests			20		52
Profit share of KRONES Group shareholders			141,366		−79,705
Earnings per share (diluted/basic) in €	27		4.47		−2.52

Consolidated statement of **comprehensive income**

€ thousand	Notes	2021	2020
Consolidated net income		**141,386**	**−79,653**
Items that will not be reclassified subsequently to profit or loss			
Remeasurement of defined benefit plans	12	21,328	−15,384
		21,328	−15,384
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation		36,049	−56,708
Cash flow hedges	12	−7,873	5,362
		28,176	−51,346
Other comprehensive expenses and income after income taxes	9	**49,504**	**−66,730**
Total comprehensive income	9	**190,890**	**−146,383**
of which attributable to non-controlling interests		20	52
of which attributable to Krones Group shareholders		190,870	−146,435

Consolidated statement of financial position – **Assets**

		31 Dec 2021		31 Dec 2020	
€ thousand	Notes				
Intangible assets	1	303,160		300,597	
Property, plant and equipment and right-of-use assets	2	667,009		656,142	
Non-current financial assets	3	28,846		29,841	
Investments accounted for using the equity method	4	2,357		3,380	
Fixed assets		**1,001,372**		**989,960**	
Deferred tax assets	8	75,177		54,434	
Trade receivables	6	42,976		36,223	
Tax receivables		1,603		236	
Other assets	6	11,676		11,639	
Non-current assets			**1,132,804**		**1,092,492**
Inventories	5	433,604		355,120	
Trade receivables	6	743,326		704,129	
Contract assets	6/19	593,969		518,756	
Tax receivables		11,977		16,819	
Other assets	6	195,785		145,204	
Cash and cash equivalents	7	383,371		216,988	
Current assets			**2,362,032**		**1,957,016**
Total			**3,494,836**		**3,049,508**

Consolidated statement of financial position – **Equity and liabilities**

€ thousand	Notes	31 Dec 2021		31 Dec 2020	
Subscribed capital	9	40,000		40,000	
Capital reserves	10	141,724		141,724	
Profit reserves	11	373,390		370,654	
Other reserves	12	−163,373		−213,318	
Consolidated retained earnings		1,000,813		861,465	
Consolidated equity of the parent company			**1,392,140**		**1,200,525**
Non-controlling interests	13	−557		−577	
Equity			**1,391,583**		**1,199,948**
Provisions for pensions	14	251,156		281,412	
Deferred tax liabilities	8	5,293		2,992	
Other provisions	15	78,819		79,419	
Tax liabilities		4,496		4,098	
Liabilities to banks	16	5,098		5,059	
Trade payables	16	0		44	
Other financial obligations and lease liabilities	16	79,700		78,385	
Other liabilities	16	9,849		24,116	
Non-current liabilities			**434,411**		**475,525**
Other provisions	15	164,523		198,024	
Liabilities to banks	16	0		27,005	
Contract liabilities	16/19	600,236		405,094	
Trade payables	16	515,141		370,315	
Tax liabilities		26,007		26,563	
Other financial obligations and lease liabilities	16	42,987		47,061	
Other liabilities and accruals	16	319,948		299,973	
Current liabilities			**1,668,842**		**1,374,035**
Total			**3,494,836**		**3,049,508**

Consolidated statement of **cash flows**

€ thousand	Notes	2021	2020
Earnings before taxes		177,260	−36,597
Depreciation and amortisation and reversals	1/2	141,738	174,035
Increase in provisions and accruals	15/16	3,533	5,347
Interest and similar expenses and income	25	−4,366	−4,302
Gains and losses from the disposal of non-current assets	21/24	−23	−37
Other non-cash expenses and income		12,818	11,622
Increase (previous year: decrease) in trade receivables, contract assets and other assets not attributable to investing or financing activities		−152,578	236,652
Increase (previous year: decrease) in inventories	5	−72,348	16,165
Increase (previous year: decrease) in trade payables, contract liabilities and other liabilities not attributable to investing or financing activities		256,805	−31,547
Cash generated from operating activities		**362,839**	**371,338**
Interest paid		−2,805	−5,457
Income tax paid and refunds received		−54,301	−44,114
Cash flow from operating activities		**305,733**	**321,767**
Cash payments to acquire intangible assets	1	−43,652	−36,938
Proceeds from the disposal of intangible assets	1	230	55
Cash payments to acquire property, plant and equipment	2	−61,238	−56,851
Proceeds from the disposal of property, plant and equipment	2	2,457	6,439
Cash payments to acquire non-current financial assets		−295	−4,487
Proceeds from the disposal of non-current financial assets		1,735	0
Cash payments to acquire affiliated companies		0	0
Deferred purchase price payment for business acquisitions from previous periods		−11,150	−11,595
Interest received		7,402	2,894
Dividends received		2,032	0
Cash flow from investing activities		**−102,479**	**−100,483**
Cash payments to owners		−1,896	−23,695
Proceeds from new borrowing		0	32,000
Cash payments to service debt		−26,966	−72,178
Cash payments to acquire non-controlling interests		0	0
Cash payments for the repayment of lease liabilities		−32,029	−35,168
Cash flow from financing activities		**−60,891**	**−99,041**
Net change in cash and cash equivalents		**142,363**	**122,243**
Changes in cash and cash equivalents arising from changes in exchange rates		8,050	−15,637
Changes in cash and cash equivalents arising from changes in the consolidated group		15,970	0
Cash and cash equivalents at the beginning of the period		216,988	110,382
Cash and cash equivalents at the end of the period	7	**383,371**	**216,988**

Consolidated statement of **changes in equity**

	Parent company							Non-controlling interests	Consolidated equity
€ thousand	Share capital	Capital reserves	Profit reserves	Other reserves		Group retained earnings	Equity	Equity	
				Currency differences in equity	Other remaining reserves				
Notes	9	10	11	11	12			13	
At 1 January 2020	**40,000**	**141,724**	**370,553**	**−30,275**	**−116,313**	**964,966**	**1,370,655**	**−629**	**1,370,026**
Dividend payment (€0.75 per share)						−23,695	**−23,695**		**−23,695**
Consolidated net income 2020						−79,705	**−79,705**	52	**−79,653**
Allocation to profit reserves			101			−101	**0**		**0**
Changes in the consolidated group			0			0	**0**	0	**0**
Other comprehensive expenses and income				−56,708	−10,022		**−66,730**		**−66,730**
At 31 December 2020	**40,000**	**141,724**	**370,654**	**−86,983**	**−126,335**	**861,465**	**1,200,525**	**−577**	**1,199,948**
Dividend payment (€0.06 per share)						−1,896	**−1,896**		**−1,896**
Consolidated net income 2021						141,366	**141,366**	20	**141,386**
Allocation to profit reserves			122			−122	**0**		**0**
Changes in the consolidated group			2,614		27	0	**2,641**	0	**2,641**
Other comprehensive expenses and income				36,049	13,455		**49,504**		**49,504**
At 31 December 2021	**40,000**	**141,724**	**373,390**	**−50,934**	**−112,853**	**1,000,813**	**1,392,140**	**−577**	**1,391,583**

5

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Consolidated **segment reporting**

€ thousand	Machines and Lines for Product Filling and Decoration		Machines and Lines for Beverage Production/ Process Technology		KRONES Group	
	2021	2020	2021	2020	2021	2020
Revenue	**3,045,598**	**2,797,319**	**588,858**	**525,424**	**3,634,456**	**3,322,743**
Depreciation, amortisation and impairments	128,169	134,711	13,569	39,324	141,738	174,035
of which impairments	4,152	7,408	0	21,629	4,152	29,037
Interest income	9,174	1,323	238	131	9,412	1,454
Interest expense	4,820	5,548	705	1,194	5,525	6,742
EBT	**162,447**	**31,417**	**14,814**	**−68,015**	**177,261**	**−36,598**
Share of profit or loss of associates accounted for using the equity method	−36	0	0	−88	−36	−88
EBIT	**155,052**	**36,818**	**15,846**	**−77,629**	**170,898**	**−40,811**
EBT margin (EBT to revenue)	**5.3%**	**1.1%**	**2.5%**	**−12.9%**	**4.9%**	**−1.1%**
EBITDA	**283,221**	**171,529**	**29,415**	**−38,305**	**312,636**	**133,224**
EBITDA margin (EBITDA to revenue)	**9.3%**	**6.1%**	**5.0%**	**−7.3%**	**8.6%**	**4.0%**

General **disclosures**

Legal basis

Krones provides machinery and systems for bottling and packaging and for beverage production. Innovative digitalisation solutions, intralogistics solutions and services round out the portfolio. Krones AG is registered in the Commercial Register of Regensburg Local Court (HRB 2344) and is headquartered in Neutraubling, Germany.

The consolidated financial statements of Krones AG, Neutraubling (the "Krones Group") for the period ended 31 December 2021 have been prepared in accordance with the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB), London, applicable at the reporting date, including the interpretations issued by the International Financial Reporting Interpretation Committee (IFRIC), as adopted by the European Union.

The group has not undertaken early application of IFRS standards and interpretations that have not yet entered into force.

A list of such standards and interpretations and of standards applied for the first time is provided on page 186. The commercial law stipulations under Section 315e (1) of the German Commercial Code (HGB) have been complied with in addition.

The Executive Board authorised the publication of the consolidated financial statements on 16 March 2022.

Non-controlling interests in consolidated equity are presented on the statement of financial position as a separate item within equity. On the statement of profit and loss, the share of profit or loss attributable to non-controlling interests is presented as a component of consolidated net income. The shares of consolidated net income attributable to the owners of the parent and to non-controlling interests are presented separately.

Non-controlling interests are additionally shown on the statement of changes in equity.

The explanatory notes provided in the following comprise disclosures and commentary that, in accordance with IFRS, must be included as notes to the consolidated financial statements in addition to the statement of financial position, statement of profit and loss, statement of comprehensive income, statement of changes in equity and statement of cash flows.

The statement of profit and loss was prepared using the nature of expense method.

The group currency is the euro.

Unless otherwise stated, all financial information presented in euros is rounded to the nearest thousand.

Consolidated group

Besides Krones AG, the consolidated financial statements of Krones AG for the period ended 31 December 2021 include all domestic and foreign subsidiaries over which Krones AG has direct or indirect control on account of a majority of voting rights.

Krones Meatech FZCO, Dubai, United Arab Emirates, Krones North West Africa (SARL), Casablanca, Morocco, Krones Middle East Maintenance, Riyadh, Saudi Arabia and Krones Italia S.R.L., Garda (VR), Italy were established and, together with Krones Korea Limited, Seoul, Korea, included in the scope of consolidation during the financial year.

Consolidation principles

The annual financial statements of Krones AG and of the domestic and foreign subsidiaries included in the consolidated financial statements have been prepared using uniform accounting policies, in accordance with IFRS 10.

They are all prepared as of the reporting date of the consolidated financial statements.

Acquisition accounting is performed in accordance with IFRS 3 (Business Combinations), under which all business combinations must be accounted for using the acquisition method. The acquired assets and liabilities are therefore recognised at fair value.

Goodwill that arose before 1 January 2004 continues to be accounted for as a deduction from equity.

Shares in the equity of a subsidiary that are not attributable to the parent are presented as non-controlling interests. If an acquisition includes put options granted to non-controlling interests for their interests in group companies and Krones has identical call options, the options are accounted for as if they had already been exercised and each is recognised as a liability at fair value instead of recognising non-controlling interests (anticipated acquisition method).

Liabilities are measured through profit or loss at fair value as of the reporting date.

Inter-company receivables, liabilities, provisions, income and expenses between consolidated companies are eliminated in consolidation. This also applies for inter-company profits or losses from trade between group companies provided the inventories from these transactions are still held by the group at the reporting date.

Companies for which Krones has the ability to exercise significant influence over their business and financial policies (generally by indirectly or directly holding between 20% and 50% of voting rights), are accounted for in the consolidated financial statements using the equity method and initially recognised at cost. Any excess of the cost of the investment over Krones' share of the net fair value of an associate's identifiable assets and liabilities is adjusted on a fair-value basis and the remaining amount is recognised as goodwill. Goodwill relating to the acquisition of an associate is included in the carrying amount of the investment and is not amortised. Instead, it is tested for impairment as part of the entire carrying amount of the investment in the associate. Krones' share in an associate's profit or loss subsequent to the acquisition date is recognised in the consolidated statement of profit and loss.

The carrying amount of associates is increased or decreased to recognise cumulative changes in fair value subsequent to the acquisition date. Krones' share in associates' gains or losses resulting from transactions between Krones and its associates is eliminated.

Currency translation

The consolidated financial statements are presented in euros, the functional currency of Krones AG.

The financial statements of consolidated companies that are prepared in a foreign currency are translated on the basis of the functional currency approach. Because the subsidiaries primarily operate independently in the economic environment of their respective countries, the functional currency is normally the local currency for each subsidiary. In the consolidated financial statements, assets and liabilities are therefore translated at the closing rate at the reporting date, while income and expenses from the financial statements of subsidiaries are translated at average annual rates.

Any exchange differences resulting from translation using these different rates in the statement of financial position and the statement of profit and loss are recognised directly in other comprehensive income. Exchange differences resulting from the translation of equity using historical exchange rates are also recognised in other comprehensive income.

In the separate financial statements of Krones AG and its subsidiaries, receivables and liabilities in foreign currencies are translated using the exchange rate at the time of the transaction and exchange differences are recognised in profit or loss at the closing rate at the reporting date. Non-monetary items in foreign currencies are carried at historical cost.

Exchange rates of subsidiaries' functional currencies against the euro:

		Closing rate		Average rate	
		31.12.2021	31.12.2020	2021	2020
US dollar	USD	1.132	1.228	1.182	1.142
British pound	GBP	0.840	0.900	0.860	0.890
Swiss franc	CHF	1.033	1.081	1.081	1.070
Danish krone	DKK	7.437	7.440	7.437	7.454
Canadian dollar	CAD	1.442	1.563	1.483	1.530
Japanese yen	JPY	130.320	126.500	129.859	121.820
Brazilian real	BRL	6.307	6.376	6.377	5.896
Chinese renminbi (yuan)	CNY	7.217	8.009	7.629	7.871
Mexican peso	MXN	23.141	24.409	23.989	24.532
Ukrainian hryvnia	UAH	30.884	34.781	32.240	30.868
South African rand	ZAR	18.054	18.014	17.483	18.777
Kenyan shilling	KES	128.085	134.043	129.660	121.715
Nigerian naira	NGN	465.250	484.550	484.037	435.249
Russian rouble	RUB	84.976	91.758	87.127	82.755
Thai baht	THB	37.542	36.733	37.839	35.714
Indonesian rupiah	IDR	16,133.700	17,246.300	16,902.746	16,595.705
Angolan kwanza	AOA	639.750	803.900	746.120	661.940
Turkish lira	TRY	15.142	9.107	10.503	8.051
Kazakhstan tenge	KZT	492.420	517.320	504.524	473.382
Australian dollar	AUD	1.561	1.586	1.575	1.656
New Zealand dollar	NZD	1.657	1.695	1.672	1.757
Swedish krona	SEK	10.256	10.025	10.146	10.488
Vietnamese dong	VND	25,872.000	28,331.000	27,118.700	26,527.952
Philippine peso	PHP	57.684	58.970	58.302	56.593
Bangladeshi taka	BDT	97.034	103.908	100.603	96.889
Singapore dollar	SGD	1.528	1.622	1.589	1.574
Myanmar kyat	MMK	2,012.680	1,630.110	1,910.092	1,567.874
United Arab Emirates dirham	AED	4.158	4.509	4.343	4.194
Hungarian forint	HUF	369.850	364.380	358.549	351.309
Malaysian ringgit	MYR	4.716	4.938	4.901	4.795
Pakistani rupee	PKR	199.796	196.645	192.819	184.936
Polish zloty	PLN	4.594	4.557	4.567	4.443
Norwegian krone	NOK	9.989	10.458	10.165	10.728
Indian rupee	INR	84.168	89.690	87.373	84.559
Guatemalan quetzal	GTQ	8.736	9.568	9.149	8.821
Cambodian riel	KHR	4,609.500	4,956.600	4,812.416	4,665.600
Bulgarian lev	BGN	1.956	1.956	1.956	1.956
Moroccan dirham	MAD	10.516	–	10.630	–
Saudi riyal	SAR	4.250	–	4.435	–

Estimates and judgements

In preparing the consolidated financial statements, management makes judgements, estimates and assumptions that affect the reported amounts of assets and liabilities as of the reporting date, the disclosure of contingent liabilities and the reported amounts of expenses and income. The uncertainty inherent in such assumptions and estimates can, however, lead to events that result in material adjustments to the carrying amounts of affected assets and liabilities in future periods. Krones does not currently expect that the consequences of climate change will have any significant impact on its business model.

Major assumptions made about the future, and other sources of estimation uncertainty at the end of the reporting period that have a risk of resulting in material adjustments to the carrying amounts of assets and liabilities within the next financial year, are explained in the following. Due to the ongoing spread of infection and the associated disruptions as a result of the Covid-19 pandemic, the estimates and judgements relating to intangible assets and liabilities in particular are subject to increased uncertainty. Available information on expected economic developments and country-specific government measures was taken in account in adopting the estimates and judgements.

Development costs are capitalised if they are associated with a future economic benefit and the remaining requirements in IAS 38.57 are met.

Intangible assets are tested for impairment if there are indications that they may be impaired or if annual impairment testing is required (this is the case for intangible assets with an indefinite useful life, intangible assets in the development phase and goodwill).

Impairment testing is performed by comparing the carrying amount of an asset (or cash-generating unit) with its recoverable amount. The first step of this comparison consists of determining value in use. If value in use is less than the carrying amount, fair value less costs of disposal is determined and compared with the carrying amount. If fair value less costs of disposal is less than the carrying amount, an impairment loss is recognised by reducing the carrying amount to the higher of value in use and fair value less costs of disposal.

Impairment testing involves making estimates and assumptions, in particular with regard to future cash inflows and outflow, that may differ from the actual amounts. The actual amounts may differ from the assumptions and estimates made if the conditions referred to change contrary to expectations.

Krones determines value in use using a present value (discounted cash flow) method. The cash flows used in the calculation are based on long-term corporate planning prepared by management. They are discounted at market discount rates.

The cash flows used in testing goodwill are taken as a rule from the detailed planning for the next three financial years. Revenue growth at the end of the forecast period is the long-term growth rate of the respective industrial sectors and countries in which the cash-generating units do business. They are discounted at market discount rates. Cash-generating units are tested for impairment using the pre-tax weighted average cost of capital (WACC). For the main assumptions made in impairment testing of cash-generating units, sensitivity analyses are carried out in order to rule out the possibility that reasonably possible changes in the assumptions used to determine the recoverable amount would lead to an impairment.

Purchase agreements for acquisitions include options for Krones to acquire the remaining minority interests. If the seller holds identical put options, the group assumes that the option will be exercised and therefore does not present the minority interests in the consolidated financial statements (anticipated acquisition method). Instead, a liability from the acquisition is recognised at fair value. The fair value is measured using the discounted cash flow method; the main input factors are medium-term planning and the discount rate. With regard to the exercise date, it is assumed as a rule that the probability of exercise is evenly distributed unless otherwise indicated. Impairment testing involves making estimates and assumptions about the timing. The actual amounts may differ from the assumptions and estimates made if the conditions referred to change contrary to expectations. Further details are provided in Note 18.

Accounting for deferred tax assets, which are mainly recognised for unused tax loss carryforwards, requires management to make estimates and judgements regarding the size of the future taxable profits that will be available against which the unused tax losses can be utilised. Tax planning strategies and the expected timing of events under such strategies are taken into account if they are sufficiently probable. Deferred tax assets are recognised as a rule to the extent that deductible deferred tax liabilities exist in the same amount and with the same timing. Otherwise, deferred tax assets are only recognised if it is highly likely that sufficient future taxable profits will be available against which the deferred tax assets recognised for loss carryforwards and temporary differences can be utilised. For the purpose of this assessment, expected taxable income is taken from corporate planning prepared according to the principles described above. As uncertainty increases further into the future, the analysis period is generally three years. In the case of loss-making entities, deferred tax assets are not recognised until turnaround is imminent or future profits are highly probable. When measuring loss allowances for deferred tax assets recognised for loss carryforwards, due account is taken of rules restricting loss utilisation (minimum taxation). Further details are provided in Note 8.

The post-employment pension expense from defined benefit plans is determined on the basis of actuarial calculations. Those calculations are based on assumptions and judgements regarding discount rates on the net obligation, mortality and future pension increases. Such estimates are subject to significant uncertainties due to the long-term nature of such plans. Details of those uncertainties, together with sensitivities, are presented in Note 14.

Provisions for warranties are accounted for on the basis of expected costs from customer orders. The estimates for the warranty obligations are based on experience in recent financial years and generally relate to a warranty term of between one and two years from the acceptance date. It is therefore expected that the majority of provisions for warranties will be settled within the next two years. Further details are provided on page 171.

Restructuring provisions are determined on the basis of estimates and are therefore subject to uncertainty.

For the purpose of accounting in accordance with IFRS 15, judgements are made regarding whether revenue is realised over time. Krones has come to the conclusion that revenue for highly customer-specific projects is to be recognised over time rather than at a point in time, as the resulting assets have no alternative use as a rule and Krones has a legal right to payment, including a profit margin, for performance already completed. Krones has determined that an input method is the most suitable for determining progress as there is a direct relationship between production cost being incurred and transfer of the product or service to the customer. The percentage of completion is the ratio of contract costs incurred up to the reporting date to the total estimated cost of the projects. Changes in estimates and differences between actual costs and estimated costs affect the profit on such projects.

Intangible assets

Acquired and internally generated intangible assets, excluding goodwill, are recognised in accordance with IAS 38 if it is sufficiently probable that the use of an asset will result in a future economic benefit and the cost of the asset can be reliably determined. The assets are recognised at cost and amortised systematically on a straight-line basis over their estimated useful lives. Amortisation of intangible assets is normally applied over a useful life of between three and five years and is presented in “Depreciation and amortisation of intangible assets and property, plant and equipment”. Intangible assets that are not yet available for use are tested annually for impairment.

Research and development expenditure

Development costs in the Krones Group are capitalised at cost if all recognition criteria in IAS 38.57 are met. In accordance with IAS 38, research expenditure cannot be capitalised and is therefore immediately recognised as an expense in profit or loss. Borrowing costs are capitalised as cost at a capitalisation rate of 0.03% (previous year: 0.25%).

Goodwill

Goodwill is not amortised. Instead, it is tested annually for impairment. It is also tested for impairment if an event occurs or circumstances arise that suggest that the recoverable amount may be less than the carrying amount. Goodwill is recognised at cost less cumulative impairment losses.

Goodwill is tested for impairment at the level of the cash-generating unit or group of cash-generating units represented by a division (or corresponding unit).

The cash-generating unit or group of cash-generating units represents the lowest level at which the goodwill is monitored for internal management purposes.

For the purposes of impairment testing, goodwill acquired in a business combination is allocated to the cash-generating unit or group of cash-generating units that is expected to benefit from the synergies of the business combination. If the carrying amount of the cash-generating unit or group of cash-generating units to which the goodwill is allocated exceeds the recoverable amount, an impairment loss is recognised for the goodwill allocated to the cash-generating unit or group of cash-generating units. The recoverable amount is the fair value less costs of disposal or the value in use, whichever is higher, of the cash-generating unit or group of cash-generating units. If either of these exceeds the carrying amount, it is not always necessary to determine both values. The values are normally measured on the basis of discounted cash flows. Even if the recoverable amount of the cash-generating unit or group of cash-generating units to which goodwill is allocated exceeds the carrying amount in subsequent periods, impairment losses on that goodwill are not reversed.

Property, plant and equipment

The Krones Group's property, plant and equipment are accounted for at cost less systematic depreciation on a straight-line basis over their estimated useful lives. The cost of self-constructed assets comprises all directly attributable costs and an allocation of overheads.

No revaluation of property, plant and equipment has been undertaken in accordance with IAS 16.

Systematic depreciation is based on the following useful lives, which are applied uniformly throughout the group:

Useful life	Years
Buildings	14 – 50
Technical equipment and machinery	5 – 18
Furniture and fixtures and office equipment	3 – 15

The useful lives take into account the different components of assets with significant differences in cost.

Government grants are only recognised if there is reasonable assurance that the conditions attaching to them will be complied with and the grants will be received.

Government grants related to assets are deducted from the cost of the assets and reversed in future periods to profit or loss in depreciation and amortisation of intangible assets and property, plant and equipment.

- **Leases**

A lease is a contract that conveys the right to use an asset for a period of time in exchange for consideration.

In accordance with IFRS 16, Krones normally recognises all leases and related contractual rights and obligations in the statement of financial position. Krones recognises a right-of-use asset and a corresponding lease liability at the time the leased item is available for use by the group.

Lease liabilities include the present value of the following lease payments:

- Fixed payments less any lease incentives payable by the lessor;
- Variable lease payments that depend on an index or a rate;
- Amounts expected to be payable under residual value guarantees;
- The exercise price of a purchase option, if the option is reasonably certain to be exercised;
- Payments of penalties for terminating the lease, if the lease term reflects the exercising of an option to terminate the lease.

The lease payments are discounted using the interest rate implicit in the lease, if that rate can be readily determined. If not, they are discounted using the incremental borrowing rate. The finance costs are recognised in profit or loss over the lease term. The carrying amount of lease liabilities is remeasured if there is a change in the lease or in the assessment of an option to purchase the underlying asset.

Right-of-use assets are measured at cost, which comprises:

- The amount of the initial measurement of the lease liability;
- Lease payments made at or before the commencement date, less any lease incentives received;
- Initial direct costs incurred;
- Dismantling obligations.

Subsequent measurement is at cost less any accumulated depreciation and any accumulated impairment losses. Right-of-use assets are depreciated on a straight-line basis over the shorter of the useful life and the lease term. Right-of-use assets are likewise tested for impairment.

With regard to the practical expedients provided for in the standard, Krones makes use of the practical expedients for low-value assets and for short-term leases (less than 12 months). The payments for short-term leases and leases of low-value assets are recognised as an expense on a straight-line basis.

Furthermore, the rules are not applied to leases of intangible assets. In the case of contracts that contain non-lease components as well as lease components, use is made of the option not to separate non-lease components from lease components.

Financial instruments

In accordance with IFRS 9, Krones classifies financial assets into three categories: financial instruments at amortised cost (AC), financial instruments at fair value through profit or loss (FVTPL) and financial instruments at fair value through other comprehensive income (FVOCI).

The classification of financial assets is made on the basis of Krones' business model for managing the financial assets and their contractual cash flow characteristics.

In accordance with IFRS 9, Krones classifies financial liabilities into three categories: financial instruments at amortised cost (AC), financial instruments at fair value through profit or loss (FVTPL) and financial instruments at fair value through other comprehensive income (FVOCI).

For the various classes of financial assets and liabilities, the carrying amounts are generally a reasonable approximation of fair value.

The fair value of financial assets and liabilities is determined on the basis of financial accounting models using inputs observable in the market at the reporting date (Level 2 within the meaning of IFRS 13.72). Level 2 assets and liabilities are primarily hedging and non-hedging derivatives.

The fair value of Level 1 financial assets and liabilities is based on unadjusted quoted prices in active markets for financial instruments. For Level 3 inputs within the meaning of IFRS 13.72, the fair values are the same as the carrying amounts. Measurement is based on estimates from forecasts of future developments.

Transactions against cash settlement are accounted for at the settlement date. Derivative financial instruments are accounted for at the trade date.

Net gains and losses include impairments and measurement changes for derivative financial instruments and are set out in the explanatory notes on the various measurement categories.

Loss allowances are therefore measured on the basis of one of the following:

- 12-month expected credit losses: Expected credit losses that result from default events that are possible within twelve months after the reporting date.
- Lifetime expected credit losses: Expected credit losses that result from all possible default events over the expected life of a financial instrument.

Loss allowances are measured on the basis of lifetime expected credit losses if the credit risk on a financial asset at the reporting date has increased significantly since initial recognition; otherwise, loss allowances are measured on the basis of 12-month expected credit losses. An entity may assume that the credit risk on a financial asset has not increased significantly if the financial asset is determined to have low credit risk at the reporting date. However, loss allowances must always be measured on the basis of lifetime expected credit losses for trade receivables and contract assets without a significant financing component; Krones also measures loss allowances on this basis for trade receivables and contract assets with a significant financing component.

The expected credit losses on trade receivables and on contract assets are estimated on the basis of external ratings and historical credit loss experience over the last 36 months. Within each group of financial instruments, credit risks are segmented on the basis of shared credit risk characteristics.

Trade receivables and contract assets have been grouped on the basis of shared credit risk characteristics for the purpose of measuring expected credit losses. The contract assets generally have the same risk characteristics as trade receivables.

Information on risk reporting in accordance with IFRS 7 is provided in the risk report in the group management report.

Derivative financial instruments and hedge accounting

The derivative financial instruments used in the Krones Group are used to hedge against currency risks from operating activities. The election has been made to apply the hedge accounting requirements of IAS 39 instead of the requirements in IFRS 9.

The main categories of currency risk at Krones comprise transaction risk arising from exchange rates and cash flows in foreign currencies. The main such currencies are the US dollar, the Canadian dollar, the pound sterling and the Chinese renminbi yuan.

Within the hedging strategy, 100% of items denominated in foreign currencies are generally hedged. The instruments used for this purpose are mostly forward exchange contracts and, in isolated cases, swaps, including currency swaps.

The strategy objective is to minimise currency risk by using hedging instruments that are judged to be highly effective, thus providing planning certainty by hedging the exchange rate.

The derivative financial instruments are measured on initial recognition and in subsequent measurement at fair value as of the reporting date. Fair value is determined using Level 2 inputs within the meaning of IFRS 13.72. Gains and losses on measurement are recognised in profit or loss unless the criteria for hedge accounting are met.

The derivative financial instruments for which hedge accounting is applied comprise forward currency contracts and currency swaps whose changes in fair value are presented in profit or loss or as a component of equity. In the case of cash flow hedges of currency risks on hedged items, changes in fair value are initially recognised directly in equity and subsequently reclassified to profit or loss when the hedged item affects profit or loss.

These derivative financial instruments are measured on the basis of the forward rates provided by the commercial bank concerned. They are derecognised/reclassified when the corresponding hedged items are recognised in the statement of financial position.

Receivables and other assets

Receivables and other assets, with the exception of derivative financial instruments, are accounted for at amortised cost. Non-interest-bearing and low-interest receivables with maturities of more than one year are discounted.

The group makes use of the possibility as a rule of selling export receivables that are covered by credit insurance and/or documentary letters of credit. Receivables sold as of the reporting date were derecognised in full. In the case of receivables covered by credit insurance, the risk relating to the exporter's deductible is generally retained. The group assumes in such cases that substantially all the risks and rewards of the receivables transfer to the purchaser of the receivables if the deductible does not exceed 10% of the value of each individual receivable. The fair value of the expected recourse obligation under the retained deductibles was recognised as an expense.

The sale of receivables from the spare parts business as of the reporting date was carried out under an established master factoring agreement. Assuming the legal validity of the receivables, the factor bears the credit risk on the receivables it has purchased.

Inventories

Inventories are carried at the lower of cost and net realisable value. Cost includes costs that are directly related to the units of production and an allocation of fixed and variable production overheads.

The allocation of overheads is based on normal capacity.

Selling costs and general and administrative costs are not capitalised. Inventory risks arising from increased storage periods or reduced usability are accounted for with write-downs.

The FiFo and weighted-average cost methods are applied as simplified measurement methods for raw materials, consumables and supplies.

Income tax

The tax expense comprises current and deferred taxes. Current taxes and deferred taxes are recognised in profit or loss except to the extent that they relate to a business combination or to an item recognised directly in equity or in other comprehensive income.

Current taxes are the amounts of taxes expected to be paid or recovered in respect of the taxable profit or tax loss for the financial year on the basis of the tax rates that apply at the reporting date or will apply in the near future together with all adjustments recognised for current tax of prior periods.

Deferred tax assets and deferred tax liabilities are accounted for using the liability method and are recognised for all temporary differences between the tax base and the carrying amounts in accordance with IFRS, for unused tax losses and for consolidation adjustments recognised in profit or loss. Deferred tax assets are only recognised to the extent that it is probable that the related tax benefits can be realised.

Deferred taxes are measured on the basis of the income tax rates that apply in the various countries at the time of realisation. Changes in the tax rates are taken into account if it is sufficiently certain that they will occur. Where legally permissible, deferred tax assets and liabilities have been offset.

Tax liabilities are recognised in the event that amounts in tax returns will probably not be realised (uncertain tax items). The amount is the best estimate of the expected tax payment (the expected amount or most likely amount of the uncertain tax item). Tax receivables from uncertain tax items are recognised if it is probable that they can be realised. Only if there is a tax loss carryforward or unused tax credit is no tax liability or tax receivable recognised for an uncertain tax item; the deferred tax asset for the unused tax loss carryforwards and tax credits is then adjusted instead.

Provisions for pensions

Provisions for pensions are measured using the projected unit credit method in accordance with IAS 19. This method takes into account known vested benefits at the reporting date together with expected future increases in state pensions and salaries based on a prudent assessment of relevant variables. The provisions are calculated on the basis of actuarial appraisals that take into account biometric factors.

Actuarial gains and losses have a direct impact on the consolidated statement of financial position, resulting in an increase or decrease in provisions for pensions and similar obligations and a reduction or increase in other reserves in equity. The consolidated statement of profit and loss is not affected by actuarial gains and losses as they are required to be recognised in other comprehensive income. Net interest on the net defined benefit obligation is determined by multiplying the net defined benefit obligation by the discount rate used to measure the defined benefit obligation. Because the net defined benefit obligation is reduced by any plan assets, the same discount rate is used to calculate return on plan assets. Current and past service costs and net interest are recognised in profit or loss.

Partial retirement benefit obligations

According to the definition of post-employment benefits in IAS 19, top-up payments under partial retirement agreements come under other long-term employee benefits. Such top-up payments are therefore not recognised in full as liabilities at their net present value. Instead, they are accrued on a prorated basis across the relevant years of active service of the employees taking partial retirement.

Other provisions

Other provisions are recognised when the group has an obligation to a third party as a result of a past event, an outflow is probable and the amount of the obligation can be reliably estimated. The provisions are measured at fully attributable costs or on the basis of the most probable settlement amount.

Restructuring provisions are recognised in connection with measures that materially change the scope of the business undertaken by a segment or business unit or the manner in which that business is conducted. Most such measures involve the termination of employment relationships. Restructuring provisions are recognised when implementation of a detailed formal plan has started or such a plan has been announced.

Provisions with a residual term of more than one year are recognised at the settlement amount discounted to the reporting date. The discount rate reflects the risks specific to the liability. The increase in the provision due to the passage of time is recognised as an interest expense.

Revenue

The basic criterion for revenue recognition under IFRS 15 is transfer of control. A distinction is made between transfer of control at a point in time and transfer of control over time:

Krones offers machinery and systems for bottling and packaging and for beverage production. Krones recognises revenue for highly customer-specific projects over time rather than at a point in time, as the resulting assets have no alternative use as a rule and Krones has a legal right to payment, including a profit margin, for performance already completed. Progress is measured using an input method. The percentage of completion is the ratio of contract costs incurred up to the reporting date to the total estimated cost of the project.

A further important part of Krones' business model consists of services. The company maintains service centres and offices around the world. Krones provides a comprehensive range of products and services for customers under the heading of lifecycle service (LCS). Krones recognises revenue from sales of spare parts at a point in time, on delivery of the goods (transfer of control). Revenue for services that come under LCS is mostly recognised over time as the customer simultaneously receives and consumes the benefits provided by the group's performance as the group performs. Accordingly, revenue is mostly recognised over time using an input method on the basis of the costs incurred. Revenue is only recognised on a straight-line basis in the case of longer-term maintenance services.

A provision is recognised in accordance with IAS 37 for anticipated losses relating to customer orders.

Costs to obtain contracts where the amortisation period of the costs would be one year or less are immediately recognised as expense.

Krones receives payments from customers on the basis of a payment plan that is part of the contracts. The payment terms vary among business units and countries. Contract assets relate to our conditional right to consideration for contractual performance obligations satisfied to date. Trade receivables are recognised when the right to receive the consideration becomes unconditional.

Contract liabilities relate to payments received in advance, meaning before contractual performance obligations have been satisfied. Contract liabilities are recognised as revenue when we satisfy the contractual performance obligations. If performance exceeds advance payments, the resulting positive balance is presented in contract assets and receivables.

Financing components are not included in the amount of revenue to be recognised if it is expected at inception of the contract that the period between the transfer of the promised good or promised service and payment for that good or service will be one year or less.

Revenue is presented net of reductions.

Segment reporting

Krones reports on two operating segments, which are the strategic business units. The two segments are organised by product divisions and services and managed separately due to the different technologies they cover. The Executive Board, as the chief operating decision maker, manages the company as a whole on the basis of monthly reports from the segments. Segment 1 comprises machines and lines for product filling and decoration. Segment 2 comprises machines and lines for beverage production and process technology. The accounting policies used are the same as those described under "General disclosures" above.

Segment performance is measured on the basis of internal reporting to the Executive Board, primarily segment revenue and segment EBITDA.

The table below shows revenue generated through business with third parties in each country (based on the location of customer headquarters).

€ thousand	2021	2020
Germany	375,525	328,742
North America	764,224	644,344
Rest of the world	2,494,707	2,349,657
	3,634,456	**3,322,743**

The table below shows non-current assets in each country:

€ thousand	2021	2020
Germany	684,530	651,440
North America	33,117	35,777
Rest of the world	308,777	317,620
	1,026,424	**1,004,837**

Notes to the **consolidated statement of financial position**

1 Intangible assets

The carrying amount of intangible assets changed as follows:

€ thousand	Industrial property rights and similar rights and assets as well as licenses	Goodwill	Capitalised development expenditure	Advance payments made	Total
31 December 2019					
Cost	232,805	141,063	448,461	28	822,357
Accumulated depreciation	162,395	17,520	297,290	0	477,205
Net carrying amount	**70,410**	**123,543**	**151,171**	**28**	**345,152**
Changes in 2020					
Cost					
Consolidated additions	0	0	0	0	0
Additions	12,869	0	23,675	4	36,548
Disposals	2,285	0	0	6	2,291
Transfers	38	0	−30	−14	−6
Exchange differences	−1,365	−5,345	0	0	−6,710
Amortisation					
Additions	21,759	17,904	36,736	0	76,399
Disposals	2,236	0	0	0	2,236
Transfers	0	0	0	0	0
Exchange differences	−599	−1,468	0	0	−2,067
Net carrying amount at 31 December 2020	**60,743**	**101,762**	**138,080**	**12**	**300,597**
31 December 2020					
Cost	242,062	135,718	472,106	12	849,898
Accumulated depreciation	181,319	33,956	334,026	0	549,301
Net carrying amount	**60,743**	**101,762**	**138,080**	**12**	**300,597**

Table continued on next page

€ thousand	Industrial property rights and similar rights and assets as well as licenses	Goodwill	Capitalised development expenditure	Advance payments made	Total
Changes in 2021					
Cost					
Consolidated additions	0	0	0	0	0
Additions	17,246	0	28,185	22	45,453
Disposals	3,014	0	717	0	3,731
Transfers	67	0	−55	−12	0
Exchange differences	1,027	5,114	0	0	6,141
Depreciation					
Additions	17,908	0	28,993	0	46,901
Disposals	2,784	0	717	0	3,501
Transfers	53	0	−53	0	0
Exchange differences	416	1,484	0	0	1,900
Net carrying amount at 31 December 2021	**60,476**	**105,392**	**137,270**	**22**	**303,160**
31 December 2021					
Cost	257,388	140,832	499,519	22	897,761
Accumulated depreciation	196,912	35,440	362,249	0	594,601
Net carrying amount	**60,476**	**105,392**	**137,270**	**22**	**303,160**

Adjusted for rounding

The additions to industrial property rights, similar rights/assets and licenses mainly relate to licenses for IT software. Customer bases amounting to €5,009 thousand (previous year: €6,724 thousand) are included in the carrying amount as of the reporting date.

All goodwill underwent a regular impairment test in accordance with IAS 36, as in the previous year. Impairment testing is performed on the basis of value in use at the level of the smallest cash-generating unit (CGU) or group of cash-generating units. The cash flow projections underlying impairment tests are based on the approved financial forecasts within the forecast period. These forecasts are based in part on external sources of information. They also take into account price agreements based on past experience and expected efficiency gains as well as assumptions about revenue growth based on strategy.

The table below provides an overview of the tested goodwill and the assumptions used for the respective impairment tests, each of which was performed at the level of the smallest cash-generating unit (CGU):

CGU		Carrying amount of goodwill € thousand	Forecast period in years	Annual revenue growth at end of forecast period	Discount rate before taxes
IPS	2021	34,055 [2]	3	1.0%	6.0%
	2020	31,404 [2]	3	1.0%	5.3%
SPRINKMAN	2021				
	2020	–	3	2.0%	11.2%
MHT	2021	20,180	3	1.0%	7.9%
	2020	20,180	5	1.0%	8.2%
S.P.S	2021	1,188	3	1.0%	7.7%
	2020	1,188	3	1.0%	7.6%
JAVLYN	2021	4,551 [2]	3	1.5%	13.3%
	2020	4,197 [2]	3	1.5%	13.3%
TRANS-MARKET	2021				
	2020	–	3	2.0%	11.2%
SYSTEM LOGISTICS	2021	30,906	3	1.0%	7.9%
	2020	30,906	3	1.0%	7.0%
HST	2021	4,258	3	1.0%	8.3%
	2020	4,258	3	1.0%	6.9%
TRIACOS	2021				
	2020	–	3	1.0%	6.1%
Other [1]	2021	10,254 [2]	3	1.0% – 2.0%	7.6% – 14.0%
	2020	9,630 [2]	3 – 4	1.0% – 2.0%	7.1% – 13.4%

[1] Goodwill with a carrying amount of less than €4 million in each case
[2] Change due to currency translation

The pre-tax discount rates are based on risk-free interest rates, which are determined on the basis of long-term government bond yields. The discount rate is adjusted for a risk premium that reflects the general risk associated with equity investments and the specific risk of the CGU. Revenue growth at the end of the forecast period is the long-term average growth rate of the respective industrial sectors and countries in which the CGUs do business.

Impairment testing did not result in the recognition of goodwill impairments (previous year: €17,904 thousand). The impairments in the previous year mainly related to reduced earnings prospects and were included in amortisation of intangible assets.

Based on the assumed 1.0% annual revenue growth for the MHT CGU at the end of the forecast period – as shown in the table – the recoverable amount of €4,685 thousand is greater than the carrying amount. If the pre-tax discount rate were to increase to 8.9%, the recoverable amount would equal the carrying amount. In all other respects, Krones AG is of the opinion that no reasonably foreseeable change to any of the material basic assumptions used to determine the value in use of cash-generating units to which goodwill has been allocated could result in the carrying amount being higher than its recoverable amount.

The capitalised development expenditure relates to new machinery projects at Krones AG. Development expenditure capitalised in the reporting period amounts to €28,185 thousand (previous year: €23,675 thousand).

As in the previous year, this includes borrowing costs in a non-material amount. Including capitalised development expenditure, a total of €174,320 thousand was spent on research and development in 2021 (previous year: €167,503 thousand). Impairment losses on capitalised development expenditure were recognised in amortisation in the reporting year in the amount of €4,152 thousand (previous year: €11,135 thousand). The charges were incurred in the Machines and Lines for Product Filling and Decoration segment only (previous year: in both segments) and related in the reporting period to technologies that will not be further pursued.

In the reporting period, because there were no business combinations, there were no additions to net carrying amounts for intangible assets (previous year: €– thousand). Accordingly, no goodwill is included, as in the previous year.

2 Property, plant and equipment and right-of-use assets

In 2021, as in the previous year, it was not necessary to recognise any impairments of property, plant and equipment in accordance with IAS 36. Additions to land and buildings and to construction in progress primarily related to expansion in the USA and expansion at the Neutraubling site in Germany (reorganisation of logistics). The €47,597 thousand in capital expenditure on technical equipment and machinery and on other equipment, furniture and fixtures and office equipment primarily relates to capacity expansion and modernisation at existing production locations.

In 2021, the carrying amounts for property, plant and equipment included government grants of €17,112 thousand (previous year: €15,052 thousand). Government grants in the amount of €803 thousand (previous year: €332 thousand) were reversed to profit or loss in 2021. As in the previous year, the depreciation figure in 2021 does not include any impairment reversals.

The reported property, plant and equipment is not subject to any restrictions of title or disposal.

In the reporting period, business combinations did not result in any addition to the net carrying amounts for property, plant and equipment (previous year: €– thousand).

Property, plant and equipment, including right-of-use assets, changed as follows:

€ thousand	Land and buildings	Technical equipment and machinery	Other equipment, furniture and fixtures and office equipment	Construction in progress	Advance payments made	Total
31 December 2019						
Cost	706,339	364,531	303,895	16,287	11,701	1,402,753
Accumulated depreciation	254,951	254,624	199,993	0	0	709,568
Net carrying amount	**451,387**	**109,907**	**103,902**	**16,287**	**11,701**	**693,185**
Changes in 2020						
Cost						
Consolidated additions	0	0	0	0	0	0
Additions	33,803	9,954	26,755	5,522	4,602	80,636
Disposals	13,418	6,470	19,645	529	0	40,062
Transfers	6,319	13,456	1,044	−8,946	−11,867	6
Exchange differences	−11,631	−5,749	−4,854	−250	−123	−22,607
Depreciation						
Additions	36,444	22,117	39,077	0	0	97,638
Disposals	10,168	5,132	18,796	0	0	34,095
Transfers	0	0	0	0	0	0
Exchange differences	−2,651	−3,200	−2,675	0	0	−8,526
Net carrying amount at 31 Dec 2020	**442,836**	**107,313**	**89,596**	**12,084**	**4,313**	**656,142**
31 December 2020						
Cost	721,412	375,722	307,195	12,084	4,313	1,420,726
Accumulated depreciation	278,576	268,409	217,599	0	0	764,584
Net carrying amount	**442,836**	**107,313**	**89,596**	**12,084**	**4,313**	**656,142**

Table continued on next page

€ thousand	Land and buildings	Technical equipment and machinery	Other equipment, furniture and fixtures and office equipment	Construction in progress	Advance payments made	Total
Changes in 2021						
Cost						
Consolidated additions	0	0	288	0	0	288
Additions	29,338	17,030	30,567	14,589	4,367	95,891
Disposals	7,362	14,568	27,457	25	0	49,412
Transfers	545	6,792	3,855	−8,693	−2,499	0
Exchange differences	10,819	6,023	3,534	248	22	20,646
Depreciation						
Additions	35,709	21,316	37,812	0	0	94,837
Disposals	6,360	14,169	26,449	0	0	46,978
Transfers	−1	5	−4	0	0	0
Exchange differences	2,763	3,467	2,457	0	0	8,687
Net carrying amount at 31 Dec 2021	**444,065**	**111,971**	**86,567**	**18,203**	**6,203**	**667,009**
31 December 2021						
Cost	754,752	390,999	317,982	18,203	6,203	1,488,139
Accumulated depreciation	310,687	279,028	231,415	0	0	821,130
Net carrying amount	**444,065**	**111,971**	**86,567**	**18,203**	**6,203**	**667,009**

The table below shows the recognised right-of-use assets for leased assets accounted for in property, plant and equipment:

€ thousand	Land and buildings	Technical equipment and machinery	Other equipment, furniture and fixtures and office equipment	Total
31 Dec 2021				
Net carrying amount	79,115	4,416	17,547	101,078
Additions	24,415	363	9,458	34,236
Depreciation	18,234	1,161	12,940	32,335

€ thousand	Land and buildings	Technical equipment and machinery	Other equipment, furniture and fixtures and office equipment	Total
31 Dec 2020				
Net carrying amount	73,281	5,149	21,054	99,484
Additions	33,751	3,290	10,095	47,136
Depreciation	18,594	994	11,683	31,271

Information on the corresponding lease liabilities is provided on page 172.

Interest expenses include €1,756 thousand (previous year: €2,485 thousand) in interest expense on leases. Other operating expenses include €2,653 thousand (previous year: €1,936 thousand) in expenses from short-term leases, €314 thousand (previous year: €805 thousand) in expenses from leases of low-value assets and €553 thousand (previous year: €645 thousand) in expenses for variable lease payments. Total cash outflows for leases amount to €34,428 thousand (previous year: €36,851 thousand).

3 Long-term financial assets

The non-current financial assets consist primarily of lendings to and investments in nonconsolidated companies.

4 Investments accounted for using the equity method

As in the previous year, one associated company was accounted for using the equity method as of the reporting date.

The table below shows the associate accounted for using the equity method:

Name	Place of business	Ownership interest (%)	
		31 Dec 2021	31 Dec 2020
Associate			
Technologisches Institut für angewandte künstliche Intelligenz GmbH	Weiden	31.15	44.0

The table below summarises the aggregated earnings data an aggregated carrying amounts of associates accounted for using the equity method:

€ thousand	2021	2020
Profit or loss for the period	–117	–201
Other comprehensive income	0	0
Total comprehensive income	–117	–201
Share of profit or loss	**–36**	**–88**
Carrying amount at 31 Dec	**2,357**	**3,380**

The ownership interest in Technologisches Institut für angewandte künstliche Intelligenz GmbH was reduced in 2021 from 44% to 31.15% in a partial sale.

The gain of €598 thousand recognised in this connection comprises the €1,585 thousand sale proceeds less the €987 thousand derecognised carrying amount and is presented in the income statement within financial income/expense as interest and similar income.

5 Inventories

The inventories of the Krones Group are composed as follows:

€ thousand	31 Dec 2021	31 Dec 2020
Raw materials, consumables and supplies	281,425	231,541
Work in progress	69,747	57,148
Finished goods	47,689	36,936
Goods purchased for sale	27,084	24,964
Other	7,658	4,531
Total	**433,604**	**355,120**

Inventories are recognised at the lower of cost and fair value less selling expenses.

Write-downs of €2,190 thousand on inventories were recognised as expense in 2021 (previous year: €835 thousand) and are substantially based on customary net realisable values and obsolescence allowances.

6 Receivables and other assets

€ thousand	31 Dec 2021	31 Dec 2020
Trade receivables	786,302	740,352
Contract assets	593,969	518,756
Other assets	207,461	156,843

The group measures expected credit losses using the simplified approach under IFRS 9; accordingly, all trade receivables and contract assets are accounted for with lifetime expected credit losses.

Non-recourse factoring reduced trade receivables by €62,651 thousand as of the reporting date (previous year: €62,468 thousand). Factored export receivables in the amount of €6,043 thousand (previous year: €168 thousand) continue to be recognised in full as substantially all the risks and rewards are retained. The purchase price received is presented in other liabilities.

The loss allowance for expected credit losses on trade receivables and contract assets changed as follows:

€ thousand	2021	2020
At 1 Jan	47,590	40,569
Change due to currency effects	706	−473
Additions	12,142	10,141
Reversals	−3,928	−2,647
At 31 Dec	**56,510**	**47,590**

The loss allowances include €9,494 thousand (previous year: €7,796 thousand) in impairments of contract assets. Other assets mainly comprise advance payments made (€40,850 thousand; previous year: €30,493 thousand), current tax assets (€52,802 thousand; previous year: €45,166 thousand), prepaid expenses (€13,806 thousand; previous year: €8,360 thousand) and other financial assets (€74,230 thousand; previous year: €47,364 thousand).

The derivative financial instruments measured at fair value that were entered into for future payment receipts and meet the conditions for hedge accounting or that were entered into as stand-alone hedge transactions totalled €2,129 thousand at the reporting date (previous year: €7,873 thousand).

7 Cash and cash equivalents

Apart from cash on hand totalling €280 thousand (previous year: €3,209 thousand), the cash and cash equivalents of €383,371 thousand (previous year: €216,988 thousand) consist primarily of demand deposits.

Changes in cash and cash equivalents in accordance with IAS 7 Statement of Cash Flows are presented in the statement of cash flows on page 138.

8 Income tax

Income tax receivables and liabilities relate exclusively to income tax in accordance with IAS 12.

The income tax breaks down as follows:

€ thousand	31 Dec 2021	31 Dec 2020
Deferred tax expense/income (–)	−22,054	−11,995
Current tax	57,928	55,051
Total	**35,874**	**43,056**

Deferred taxes are measured on the basis of the tax rates that, based on the current legal situation, apply or are expected to apply in the various countries at the time of realisation. In Germany, the tax rates that apply are, as in the previous year, a corporate income tax rate of 15.0% plus a solidarity surcharge of 5.5% and a local trade tax multiplier (Gewerbesteuerhebesatz) for Krones AG averaging 336%. The total income tax rate for the companies in Germany is consequently 27.6%. As in the previous year, tax rates abroad range between 9% and 34%.

The deferred tax assets and liabilities at 31 December 2021 break down by items on the statement of financial position as follows:

€ thousand	Deferred tax assets		Deferred tax liabilities	
	31 Dec 2021	31 Dec 2020	31 Dec 2021	31 Dec 2020
Intangible assets	4,370	2,607	43,482	41,487
Property, plant and equipment and other non-current assets	3,191	3,900	10,891	11,115
Current assets	21,440	18,121	33,978	34,314
Tax loss carryforwards	33,818	9,369		
Non-current liabilities	22,328	22,349	340	775
Current liabilities	31,290	34,967	563	507
Deferred tax items recognised in other comprehensive income	43,331	49,523	630	1,196
Subtotal	**159,768**	**140,836**	**89,884**	**89,394**
Offsetting (–)	**−84,591**	**−86,402**	**−84,591**	**−86,402**
Total	**75,177**	**54,434**	**5,293**	**2,992**

The deferred tax assets and liabilities recognised in other comprehensive income amounted, respectively, to €43,331 (previous year: €49,523 thousand) and €630 thousand (previous year: €1,196 thousand). The deferred tax assets include €41,646 thousand (previous year: €49,196 thousand) for actuarial losses recognised in other comprehensive income in accordance with IAS 19 and €1,685 thousand (previous year: deferred tax liabilities of €1,196 thousand) in hedging losses. The deferred tax liabilities comprise €630 thousand for actuarial gains recognised in other comprehensive income in accordance with IAS 19.

Deferred taxes on tax loss carryforwards in the amount of €137,492 thousand (previous year: €163,654 thousand) were not recognised because it is not sufficiently certain that the tax assets will be realised in the foreseeable future. These loss carryforwards can essentially be carried forward indefinitely.

Entities that made losses in the reporting year or the previous year and whose deferred tax assets are not covered by deferred tax liabilities have recognised deferred tax assets in the amount of €29,547 thousand. There is convincing evidence that these tax assets will be realised on the basis of management assumptions and judgements about the development of the business deriving from past experience and taking into account one-off effects in the financial year under review.

The temporary differences relating to equity interests in subsidiaries (outside basis differences) for which no deferred tax liabilities were recognised at the reporting date totalled €469,407 thousand (previous year: €327,487 thousand).

The tax expense of €35,874 thousand reported in 2021 is €13,050 thousand less than the expected tax expense that would theoretically result from application of the domestic tax rate of 27.6% at the group level. The difference can be attributed to the following:

€ thousand	2021	2020
Earnings before taxes	177,260	−36,597
Tax rate for the parent company Krones AG	27.60%	27.60%
(Theoretical) tax income (–)/tax expense (+)	48,924	−10,101
Adjustment due to difference between local tax rate and tax rate of Krones AG	−4,927	−5,902
Reductions in tax due to tax-exempt income	−2,489	−1,746
Current tax losses for which no deferred taxes recognised	32	23,012
Increases in tax expense due to non-deductible expenses	10,305	14,071
Tax effect of impairment of deferred taxes from loss carryforwards (+) / tax effect of as-yet unrealised deferred taxes on loss carryforwards (–)	−14,161	21,232
Tax income (–) / tax expense (+) for previous years	−1,991	6,258
Tax effect of as-yet unrealised deductible temporary differences	253	−5,072
Other	−72	1,304
Taxes on income	**35,874**	**43,056**

9 Equity

Krones AG's share capital amounted to €40,000,000.00 at 31 December 2021, as in the previous year. It is divided into 31,593,072 ordinary bearer shares, each with a theoretical par value of €1.27 per share. 31,593,072 shares were in circulation at the reporting date (previous year: 31,593,072). At 31 December 2021, as in the previous year, the company held no treasury shares.

The company is authorised in accordance with Section 71 (1) No. 8 of the German Stock Corporation Act (AktG) to buy treasury shares totalling up to 10% of the current share capital in compliance with the provisions of the law and of the authorising resolution.

The authorisation can be exercised by the company, by its consolidated companies or by a third party acting on its or their behalf, either in whole or in part, once or multiple times, in pursuit of one or multiple purposes.

The authorisation became effective upon resolution by the annual general meeting on 13 June 2018 and applies until midnight on 12 June 2023.

By resolution of the annual general meeting on 17 May 2021, the Executive Board is authorised to increase the company's share capital, with the approval of the Supervisory Board, by up to €10 million (authorised capital) through the issuance on one or more occasions of new ordinary bearer shares against cash contributions up to and including 15 June 2026. Shareholders must be granted subscription rights to these shares. The Executive Board is authorised to exclude the subscription rights of shareholders, with the approval of the Supervisory Board, for any fractional amounts that may arise. Moreover, the Executive Board is authorised to determine the further details of the capital increase and its implementation, in both cases with the approval of the Supervisory Board. The Supervisory Board is authorised to amend the articles of association in accordance with any utilisation of the authorised capital and upon expiration of the term of the authorisation.

The changes in equity that are recognised in other comprehensive income (excluding dividends) totalled €49,504 thousand in the reporting period (previous year: –€66,730 thousand) and consist of changes in exchange differences and cash flow hedges as well as the recognition of actuarial gains and losses on pensions under other reserves. In addition, the allocation of profit or loss to non-controlling interests resulted in a change in equity of €20 thousand (previous year: €52 thousand). The sum of changes in equity that are recognised in other comprehensive income and those that are recognised in profit or loss was €190,890 thousand (previous year: –€146,383 thousand).

A dividend of €0.06 per share was approved for the 2020 financial year and paid out by Krones AG in 2021 (previous year: €0.75 per share). The total dividend payout came to €1,896 thousand (previous year: €23,695 thousand).

Disclosures about capital management

A strong equity position is an important prerequisite for ensuring Krones' long-term survival. To achieve this, Krones regularly monitors and manages its capital on the basis of the equity ratio. In order to share the company's success with shareholders, Krones' policy is to pay out 25% to 30% of consolidated profit in the form of dividends.

10 Capital reserves

The capital reserves total €141,724 thousand (previous year: €141,724 thousand). The capital reserves include amounts transferred under Section 272 (2) No. 4 of the German Commercial Code (HGB) and amounts transferred under Section 272 (2) No. 1 HGB totalling €37,848 thousand.

11 Profit reserves

The legal reserve remains unchanged from the previous year at €51 thousand.

The other profit reserves include deductions for negative goodwill from acquisition accounting for subsidiaries consolidated before 1 January 2004 and adjustments made directly in equity at 1 January 2004 on the first-time application of IFRS. They also include the adjustments made directly in equity on the first-time application of IFRS 9 and IFRS 15 as of 1 January 2018.

12 Other reserves

Exchange differences recognised under other reserves contain the currency translations of financial statements of foreign subsidiaries that are recognised in other comprehensive income. Changes in other reserves are shown in the consolidated statement of changes in equity.

Other reserves changed as follows in financial year 2021:

€ thousand	Reserve for post-employment benefits	Reserve for cash flow hedges	Reserve for exchange differences	Other	Total
At 31 Dec 2019	**−113,677**	**−1,832**	**−30,275**	**−804**	**−146,588**
Measurement change	−21,437	7,266	−56,708	0	−70,879
Tax on items taken directly to or transferred from equity	5,938	−1,789	0	0	4,149
At 31 Dec 2020	**−129,176**	**3,645**	**−86,983**	**−804**	**−213,318**
Changes in the consolidated group	27	0	0	0	27
Measurement change	29,419	−10,391	36,049	0	55,077
Tax on items taken directly to or transferred from equity	−8,091	2,518	0	0	−5,573
At 31 Dec 2021	**−107,821**	**−4,228**	**−50,934**	**−804**	**−163,787**

The measurement changes for cash flow hedges include additions of −€4,228 thousand and amounts reclassified to profit or loss totalling €3,645 thousand after taxes.

13 Non-controlling interests

Non-controlling interests totalled −€557 thousand in 2021 (previous year: −€577 thousand).

A detailed overview of the composition of and changes to the individual equity components for the Krones Group in 2021 and the previous year is presented in the statement of changes in equity on page 139.

14 Provisions for pensions

Provisions for pensions are recognised for obligations relating to vested benefits and current benefit payments for eligible active and former employees of Krones Group companies and their surviving dependants. Various forms of retirement provision exist depending on the legal, economic and tax circumstances of the relevant country and are generally based on employees' remuneration and years of service.

Company pension plans are generally either defined contribution plans or defined benefit plans.

In defined contribution plans, the company does not assume any obligations beyond establishing contribution payments to special-purpose funds. Contributions are recognised as personnel expense in the year in which they are paid.

In defined benefit plans, the company undertakes an obligation to render the benefits promised to active and former employees, where a distinction is made between systems financed by provisions and systems financed through pension funds. The amount of the pension obligations (the defined benefit obligation) was computed in accordance with actuarial methods. Apart from the assumptions regarding life expectancy based on the 2018G Heubeck actuarial tables, the following average values for the group were also taken into account in the actuarial calculations:

The basis for calculating provisions for pensions in Germany is the company's pension scheme from 31 December 1982, which is closed to new entrants. The scheme entitles all covered employees to post-employment, permanent disability, and widow(er)'s pensions. The age limits are 63 for men and 60 for women. The post-employment pension amounts to 1% (0.5% beginning 1 January 1983) of the eligible earned income for each eligible year of employment, not to exceed 25%.

The basis for measurement of the permanent disability and widow(er)'s pensions (50% of post-employment pension) is the post-employment pension that can be earned by the time the employee reaches the age limit, although for the permanent disability benefit only that portion is granted which corresponds to the years of service actually reached. The measurement date for eligible years of service is 31 December 1982. A fixed table applies to new entries after this date. The individual provisions are based on individual contractual agreements.

There are further non-material pension plans in Germany and other countries. These therefore do not need to be described in detail.

Both the defined benefit obligations and plan assets are subject to fluctuations over time. This can have a positive or negative effect on funding status. Fluctuations in the defined benefit obligation within the Krones Group result primarily from changes in financial assumptions such as discount rates and increases in the cost of living as well as changes in demographic assumptions such as changed life expectancy.

%	Average for the group	
	2021	2020
Discount rate	1.3	0.8
Projected increases in wages and salaries	0.0	0.0
Projected increases in state pensions	2.0	2.0

The rates recommended for measuring pension liabilities at the end of the financial year as published by Heubeck AG, Mercer Deutschland GmbH, TowersWatson and AON Hewitt are used to determine the relevant discount rates. These values, which in turn are determined on the basis of market yields on senior fixed-coupon corporate bonds, are used to obtain an interest rate that reflects the anticipated benefit payments.

The following amounts are expected to be contributed to the defined benefit obligation in the coming years.

€ thousand	2021
Within the next 12 months	6,893
Between 2 and 5 years	29,887
Between 5 and 10 years	43,845

The average weighted residual term of post-employment benefit obligations is 19 years (previous year: 20 years).

The projected increases in wages and salaries comprise expected future pay increases, which are estimated each year on the basis of inflation and employees' years of service with the company. Since the pension commitments at our companies in Germany are independent of future pay increases, the projected increase in wages and salaries was not taken into account when determining the corresponding pension provisions.

Increases or decreases in either the net present value of defined benefit obligations or the fair value of fund assets can result in actuarial gains or losses due to factors such as changes in parameters, changes in estimates relating to the risks associated with the pension commitments and differences between the actual and expected return on plan assets. The net value of the pension provisions breaks down as follows:

€ thousand	31 Dec 2021	31 Dec 2020	31 Dec 2019
Present value of benefit commitments financed by provisions	232,164	252,965	234,644
Present value of benefit commitments financed through pension funds	49,082	54,406	53,134
Present value of benefit commitments (gross)	281,246	307,371	287,778
Fair value of plan assets	−30,090	−25,958	−27,584
Carrying amount at 31 December (net defined benefit obligation)	**251,156**	**281,412**	**260,194**

The pension provisions, which amounted to €237,844 thousand at the reporting date (previous year: €268,794 thousand), are primarily attributable to Krones AG. The actuarial gains or losses resulting from changes in financial assumptions totalled €26,172 thousand (previous year: €21,507 thousand). Experience adjustments total –€466 thousand (previous year: –€333 thousand); adjustments due to changes in demographic assumptions total €0 thousand (previous year: €0 thousand).

The costs arising from pension obligations amounted to €3,585 thousand (previous year: €3,778 thousand) and break down as follows:

€ thousand	31 Dec 2021	31 Dec 2020	31 Dec 2019
Current service cost	1,207	692	1,213
Interest expense	2,667	3,521	5,010
Expected return on plan assets	−261	−435	−553
Past service cost and plan curtailments	−28	0	218
Costs arising from pension obligations	**3,585**	**3,778**	**5,889**

The present value of defined benefit obligations, which amounted to €281,246 thousand (previous year: €307,371 thousand), the fair value of the plan assets, which amounted to €30,090 thousand (previous year: €25,958 thousand), and the net amount of the two items reconcile as follows:

€ thousand	Present value of benefit commitments	Fair value of plan assets	Total
At 1 January 2020	**287,778**	**−27,584**	**260,194**
Consolidated additions	0	0	0
Current service cost	692	0	692
Interest expense (+)/interest income (–)	3,521	−435	3,086
Actuarial gains (+)/losses (–)	21,814	−259	21,555
Employer contributions	0	−421	−421
Benefits paid	−6,872	2,736	−4,136
Recognised past service cost	944	0	944
Exchange differences	−507	5	−502
At 31 December 2020	**307,371**	**−25,958**	**281,412**

€ thousand	Present value of benefit commit-ments	Fair value of plan assets	Total
At 1 January 2021	**307,371**	**−25,958**	**281,412**
Consolidated additions	1,936	−1,614	322
Current service cost	1,207	0	1,207
Interest expense (+)/interest income (–)	2,667	−261	2,406
Actuarial gains (+)/losses (–)	−25,469	−3,950	−29,419
Employer contributions	0	−884	−884
Benefits paid	−6,831	2,650	−4,181
Recognised past service cost	223	0	223
Exchange differences	142	−73	69
At 31 December 2021	**281,246**	**−30,090**	**251,156**

The actuarial gains or losses mainly relate to changes in financial assumptions. Krones Unterstützungs-Fonds e.V., an occupational pension scheme, is responsible for administrating and managing a portion of the plan assets. Krones AG is the scheme's sponsoring company. Allianz Global Investor is responsible for administrating and managing another portion of the plan assets as pension liability insurer.

The fair value of plan assets was €30.1 million as of 31 December 2021 (previous year: €26.0 million). Of that, €27.8 million consist of pension liability insurance policies (previous year: €23.4 million). The remaining plan assets are mainly attributable to Krones Unterstützungs-Fonds e.V., headquartered in Neutraubling. The fund assets are invested in a special-purpose fund that is administered and actively managed by Allianz GI (AGI). The eligible instruments are specified in the investment guidelines.

A defensive investment strategy is used. At 31 December 2021, the AGI fund consisted of 38.2% government bonds, 5.8% Pfandbriefe (covered bonds governed by the German Pfandbrief Act), and 23.6% investment-grade corporate bonds. The amount held as cash in hand came to 0.9%. The remainder was primarily equity funds. Interest rate risk is actively managed using interest rate futures. The duration of the investment volume is 2.30 years. Management of currency risk: No direct currency investments are made. The overall rating of the fund assets is A+. Krones AG's plan assets are secured as follows: 92% through the pension liability insurance policies from Allianz and 8% through Krones Unterstützungs-Fonds e. V.

The expected contributions to plan assets in 2022 are €852 thousand.

The expected pension benefit payments to be paid out of plan assets in 2022 amount to €2,625 thousand.

In 2021, a total of €53,433 thousand (previous year: €59,948 thousand) was spent on the employer contribution to defined contribution plans (contributions to pension insurance).

The sensitivity of the total pension commitments to changes in the weighted assumptions is as follows:

		Effect on the obligation	
	Change in assumption	Assumption increases	Assumption decreases
Discount rate	0.50%	8.6% decrease	9.8% increase
Change in state pensions	0.50%	7.3% increase	6.6% decrease
Life expectancy	1 year	4.0% increase	3.5% decrease

The above sensitivity analysis is based on a change in one assumption, with all other factors held constant. It is unlikely that this would be the case in reality and changes in several assumptions may be correlated. The same method was used to calculate the sensitivity of the defined benefit obligation to actuarial assumptions as was used to calculate the provisions for pensions in the statement of financial position.

15 Other provisions

€ thousand	1 Jan 2021	Consolidated additions	Utilisation	Reversal	Unwinding of discount/ change in discount rate	Additions	Exchange differences	31 Dec 2021	Due within 1 year
Personnel obligations	93,765	0	12,690	30,129	544	12,786	836	65,112	11,260
Provisions for anticipated losses	34,472	0	19,885	3,298	0	21,862	135	33,286	33,076
Provisions for warranties	72,906	0	18,031	2,997	15	17,190	1,097	70,180	55,825
Other remaining provisions	76,300	69	26,037	15,803	6	38,342	1,887	74,764	64,362
Total	**277,443**	**69**	**76,643**	**52,227**	**565**	**90,180**	**3,955**	**243,342**	**164,523**

The provisions for personnel obligations are primarily for non-current obligations relating to partial retirement. The provisions for severance payments recognised in the amount of €32,376 thousand in connection with restructuring were reversed due to unexpectedly high customer demand. The personnel obligations include €544 thousand for the effects of the time value of money (previous year: €729 thousand).

Provisions for anticipated losses relate to anticipate losses arising from customer contracts. As soon as an anticipated loss is identified, a provision is immediately recognised for it at the expected amount.

The provisions for warranties relate to project business and represent the expected costs from customer orders. The estimates for liabilities relating to project business are based on experience in recent years and mostly have a contractual term of between one and two years from acceptance. Krones therefore expects that the majority of provisions for warranties will be settled within the next two years.

The other remaining provisions primarily include provisions for damages and legal fees. The non-current provisions have been discounted using rates between 0.3% and 1.1%.

16 Liabilities

€ thousand	Residual term of up to 1 year	Residual term of 1 to 5 years	Residual term of over 5 years	Total at 31 Dec 2021
Liabilities to banks	0	5,098	0	5,098
Contract liabilities	600,236	0	0	600,236
Trade payables	515,141	0	0	515,141
Other financial obligations	13,361	11,902	0	25,263
Liabilities from leases	29,626	51,242	16,556	97,424
Other liabilities*	319,948	9,849	0	329,797
Total	**1,478,312**	**78,091**	**16,556**	**1,572,959**

* The other liabilities include €78,223 thousand in financial liabilities.

€ thousand	Residual term of up to 1 year	Residual term of 1 to 5 years	Residual term of over 5 years	Total at 31 Dec 2020
Liabilities to banks	27,005	5,059	0	32,064
Contract liabilities	405,094	0	0	405,094
Trade payables	370,315	44	0	370,359
Other financial obligations	19,003	11,226	0	30,229
Liabilities from leases	28,058	50,851	16,308	95,217
Other liabilities*	299,973	24,116	0	324,089
Total	**1,149,448**	**91,296**	**16,308**	**1,257,052**

* The other liabilities include €78,111 thousand in financial liabilities.

Krones makes use of a supplier finance programme. The group does not derecognise the original trade payables as it is not legally discharged from the liability and the liability is not materially modified. From the group's perspective, the arrangement does not materially change the payment terms. The group does not incur any additional interest or costs for the trade payables. The amounts therefore continue to be presented in trade payables as they correspond to trade payables in nature and purpose. As of 31 December 2021, trade payables include supplier finance liabilities in the amount of €81,147 thousand.

These outstanding trade payables are settled with suppliers by a bank before they are due. Within the programme, the original supplier liabilities are unaffected in substance because the acknowledgement of the liability is unaltered and are presented as trade payables.

Liabilities to banks (drawings on carried current credit lines, unsecured) carried interest at an average rate of 0.03% in the financial year.

Reconciliation of movements in liabilities to cash flow from financing activities

The table below shows changes in liabilities to banks and lease liabilities as a result of cash and non-cash changes.

€ thousand	31 Dec 2020	Other changes	Cash changes	Non-cash change due to acquisitions	31 Dec 2021
Liabilities to banks	32,064		−26,966		5,098
Liabilities from leases	95,217	34,236	−32,029		97,424
Total	**127,281**	**34,236**	**−58,995**		**102,522**

€ thousand	31 Dec 2019	Other changes	Cash changes	Non-cash change due to acquisitions	31 Dec 2020
Liabilities to banks	72,242		−40,178		32,064
Liabilities from leases	89,048	41,337	−35,168		95,217
Total	**161,290**	**41,337**	**−73,346**		**127,281**

The other changes mainly comprise additions from new leases.

The other financial liabilities are receivables not derecognised under IFRS 9, put/call options and earn-out obligations. Receivables not derecognised under IFRS 9 are also included in the amount of €6,043 thousand (previous year: €168 thousand) in trade receivables.

The other liabilities break down as follows:

€ thousand	Residual term of up to 1 year	Residual term of 1 to 5 years	Residual term of over 5 years	Total at 31 Dec 2021
Tax liabilities	36,867	145	0	37,012
Social security liabilities	8,487	0	0	8,487
Payroll liabilities	23,040	1,393	0	24,433
Accruals	201,794	0	0	201,794
Other	49,760	8,311	0	58,071
Total	**319,948**	**9,849**	**0**	**329,797**

The 'other' item includes €21,883 thousand (previous year: €68,288 thousand) in liabilities for severance payments.

Accruals, which amounted to €202,989 thousand (previous year: €157,603 thousand), have greater certainty with respect to their amount and timing than is the case with provisions. The primary items they include are outstanding supplier invoices, obligations relating to flexible working hours, accrued vacation, and performance bonuses.

€ thousand	Residual term of up to 1 year	Residual term of 1 to 5 years	Residual term of over 5 years	Total at 31 Dec 2020
Tax liabilities	35,102	47	0	35,149
Social security liabilities	5,773	0	0	5,773
Payroll liabilities	19,442	815	0	20,257
Accruals	157,603	0	0	157,603
Other	82,053	23,254	0	105,307
Total	**299,973**	**24,116**	**0**	**324,089**

17 Contingent liabilities

There were no contingent liabilities in the reporting period or in the previous year.

18 Other disclosures relating to financial instruments

The derivative financial instruments of the Krones Group substantially cover the currency risks relating to the US dollar, the Canadian dollar, the Chinese remnimbi yuan and the pound sterling. The nominal and fair values of the derivative financial instruments are as follows at the reporting date:

€ thousand	31 Dec 2021	31 Dec 2020	31 Dec 2021	31 Dec 2020
	Nominal value	Nominal value	Fair value	Fair value
Financial assets				
Currency hedging				
Forward exchange contracts	86,100	222,835	2,129	7,873
of which hedge accounting	15,021	27,689	170	4,798
Financial liabilities				
Currency hedging				
Forward exchange contracts	364,502	173,698	7,397	777
of which hedge accounting	266,667	6,258	6,654	115

The fair value includes the difference between the forward rate received from the relevant commercial bank and the rate at the reporting date together with appropriate premiums or discounts under accepted appraisal methodologies. These financial instruments are generally accounted for at the trade date.

Default risk relating to derivative financial instruments in the event of counterparty default is limited to the balance of the positive fair values. The cash flow hedges presented are judged to be effective.

The net loss from derivatives was €5,958 thousand in the reporting period (previous year: net loss of €4,074 thousand). The German master agreements and ISDA agreements do not meet the criteria to require offsetting in the consolidated statement of financial position. That is because the company currently does not have a legally enforceable right to offset the recognised amounts. The right to offset these amounts is only enforceable if future events occur such as insolvency of a party to the contract. Hedging transactions entered into directly by subsidiaries of the Krones Group also cannot be offset.

The following table presents the carrying amounts of the financial assets and liabilities underlying these agreements:

€ thousand	31 Dec 2021	31 Dec 2020
Financial assets		
Gross amounts of recognised financial assets	1,840,405	1,527,197
Amounts that are netted in accordance with IAS 32.42	0	0
Net amounts of recognised financial assets	1,840,405	1,527,157
Amounts subject to master netting agreement		
Derivatives	−483	−558
Net amount of financial assets	1,839,922	1,526,639
Financial liabilities		
Gross amounts of recognised financial liabilities	727,192	605,980
Amounts that are netted in accordance with IAS 32.42	0	0
Net amounts of recognised financial liabilities	727,192	605,980
Amounts subject to master netting agreement	0	0
Derivatives	−483	−558
Net amount of financial liabilities	726,709	605,422

The following table presents the financial instruments by their measurement categories and classes and also shows how the financial instruments that are measured at fair value fit within the fair value hierarchy.

31 Dec 2021			Measurement under IFRS 9				Measurement hierarchy		
€ thousand	Carrying amount at 31 Dec 2021	Of which subject to IFRS 7	At amortised cost (AC)	At fair value through profit or loss (FVTPL)	At fair value through other comprehensive income (FVOCI)	Measurement under IFRS 16	Level 1	Level 2	Level 3
Assets									
Non-current financial assets	28,846	2,533	2,533						
Trade receivables	786,302	786,302	786,302						
Contract assets	593,969	593,969	593,969						
Other assets	207,461	74,230	72,101	1,959	170			2,129	
of which derivatives	2,129	2,129		1,959	170			2,129	
Cash and cash equivalents	383,371	383,371	383,371						
Liabilities									
Liabilities to banks	5,098	5,098	5,098						
Trade payables	515,141	515,141	515,141						
Other financial liabilities and lease liabilities	122,687	122,687	6,284	18,980		97,424			18,980
Other liabilities and provisions	329,797	84,266	76,868	804	6,593			7,397	
of which derivatives	7,397	7,397		804	6,593			7,397	

31 Dec 2020			Measurement under IFRS 9				Measurement hierarchy		
€ thousand	Carrying amount at 31 Dec 2020	Of which subject to IFRS 7	At amortised cost (AC)	At fair value through profit or loss (FVTPL)	At fair value through other comprehensive income (FVOCI)	Measurement under IFRS 16	Level 1	Level 2	Level 3
Assets									
Non-current financial assets	29,841	3,737	3,737						
Trade receivables	740,352	740,352	740,352						
Contract assets	518,756	518,756	518,756						
Other assets	156,843	47,364	39,491	3,075	4,798			7,873	
of which derivatives	7,873	7,873		3,075	4,798			7,873	
Cash and cash equivalents	216,988	216,988	216,988						
Liabilities									
Liabilities to banks	32,064	32,064	32,064						
Trade payables	370,359	370,359	370,359						
Other financial liabilities and lease liabilities	125,446	125,446	741	29,488		95,217			29,488
Other liabilities and provisions	324,089	78,111	77,327	669	115			784	
of which derivatives	784	784		669	115			784	

Financial instruments categorised as Level 3 inputs and measured at fair value developed as follows:

€ thousand	2021	2020
Net carrying amount at 1 January	29,488	50,751
Additions resulting from acquisitions	0	0
Changes	−10,508	−21,263
(of which currency effects)	80	−79
(of which payouts)	−10,150	−11,595
Net carrying amount at 31 December	18,980	29,488

There were no other changes. The financial liabilities, which are based on individual measurement parameters and recognised at fair value, comprise contingent consideration and combined put/call options relating to acquisitions. These items are recognised under other financial liabilities and have been measured on the basis of recognised accounting models, taking into account contractual agreements as well as market and company data available at the reporting date.

The fair value of the put/call option for System Logistics was measured using the discounted cash flow method. The main input factors are medium-term planning and the discount rate. The estimated range of the undiscounted exercise prices, as a result of a renegotiation, is between €11,000 thousand and €13,000 thousand at the reporting date. On this basis, the fair value at the reporting date was €11,201 thousand.

There were no transfers between levels of the hierarchy.

The age structure of trade receivables and other receivables is as follows at 31 December 2021:

€ thousand		Carrying amount	Of which not overdue at the reporting date	Of which overdue by the following number of days at the reporting date			
				Up to 90 days	Between 90 and 180 days	Between 180 and 360 days	More than 360 days
31 Dec 2021	Trade receivables and contract assets	1,380,271	1,239,730	99,696	23,400	14,298	3,147
31 Dec 2020	Trade receivables and contract assets	1,259,108	1,130,227	82,798	26,194	17,698	2,191

The default risk to which the group is exposed in trade receivables and contract assets primarily depends on customer creditworthiness.

Krones' management has implemented a process in which each customer is assessed in terms of creditworthiness on the basis of external data such as ratings or internal data such as payment history and past-due status of receivables.

The final assessment is made on the basis of customer groups and a classification of customers into one of five risk categories, A to E, according to past-due status.

An expected credit loss rate is computed for each risk category on the basis of meaningful data.

The table below shows the gross carrying amounts and expected credit losses on trade receivables and contract assets:

Rating-based at 31 Dec 2021	Gross carrying amount in € thousand	Average loss rate	Loss allowance in € thousand
Key accounts	391,044	0.19%	664
Major customers	596,295	1.43%	7,405
Total	**987,338**		**8,069**

Rating-based at 31 Dec 2020	Gross carrying amount in € thousand	Average loss rate	Loss allowance in € thousand
Key accounts	438,262	0.32%	1,210
Major customers	531,096	1.85%	8,319
Total	**969,358**		**9,529**

Indicators that trade receivables and contract assets may be impaired include significant financial difficulties on the part of the customer.

	Category					
31 Dec 2021	A	B	C	D	E	**Total**
Average loss rate (%)	0.84%	0.74%	6.99%	12.17%	17.73%	
Gross carrying amount in € thousand	360,362	44,243	10,204	6,761	27,873	**449,443**
Loss allowance in € thousand	3,036	325	713	823	4,940	**9,837**

	Category					
31 Dec 2020	A	B	C	D	E	**Total**
Average loss rate (%)	0.80 %	0.74 %	6.03 %	14.23 %	26.05 %	
Gross carrying amount in € thousand	266,941	31,732	10,684	11,019	16,965	**337,341**
Loss allowance in € thousand	2,133	234	645	1,568	4,419	**8,999**

In addition, specific valuation allowances were recognised in the amount of €38,601 thousand (previous year: €29,063 thousand) for uncollectible receivables.

The following overview of maturities shows how the undiscounted cash flows relating to liabilities as of 31 December 2021 influence the company's liquidity situation.

€ thousand	Carrying amount at 31 Dec 2021	Cashflow 2022		Cashflow 2023 – 2026		Cashflow beyond 2026	
		Interest	Repayment	Interest	Repayment	Interest	Repayment
Derivative financial instruments	7,397	0	7,397	0	0	0	0
Liabilities to banks	5,098	42	0	82	5,098	0	0
Trade payables	515,141	0	515,141	0	0	0	0
Liabilities from leases	97,424	262	29,626	1,736	51,242	1,202	16,556
Other financial liabilities	96,090	0	83,181	0	12,909	0	0
	721,150	**304**	**635,345**	**1,818**	**69,249**	**1,202**	**16,556**

€ thousand	Carrying amount at 31 Dec 2020	Cashflow 2021		Cashflow 2022 – 2025		Cashflow beyond 2025	
		Interest	Repayment	Interest	Repayment	Interest	Repayment
Derivative financial instruments	784	0	735	0	49	0	0
Liabilities to banks	32,064	43	27,005	158	3,809	7	1,250
Trade payables	370,359	0	370,315	0	44	0	0
Liabilities from leases	95,217	713	28,058	2,494	50,851	1,315	16,308
Other financial liabilities	107,556	0	95,369	0	12,187	0	0
	605,980	**756**	**521,482**	**2,652**	**66,940**	**1,322**	**17,558**

Currency sensitivity analysis

A change in reporting date closing rate by +10% in relation to the foreign currency against the euro (indirect quotation) would have the following effect on consolidated net income and other equity components:

31 Dec 2021 € thousand	Currency USD	Currency CAD	Currency CNY	Currency GBP
Consolidated statement of profit and loss	4,955	304	−309	244
Consolidated equity	10,941	787	2,067	206

31 Dec 2020 € thousand	Currency USD	Currency CAD	Currency CNY	Currency GBP
Consolidated statement of profit and loss	−4,321	621	1,847	−138
Consolidated equity	12,762	251	0	−111

Notes to the **consolidated statement of profit and loss**

19 Revenue

The Krones Group's revenue of €3,634,456 thousand (previous year: €3,322,743 thousand) is recognised revenue from contracts with customers. Revenue from contracts with customers breaks down by segment and invoice recipients in geographical regions as follows.

€ thousand	2021		2020	
	Machines and Lines for Product Filling and Decoration	Machines and Lines for Beverage Production/ Process Technology	Machines and Lines for Product Filling and Decoration	Machines and Lines for Beverage Production/ Process Technology
Germany	288,295	87,230	258,730	70,012
Central Europe (excluding Germany)	228,033	15,004	208,333	16,894
Western Europe	376,337	141,558	356,510	110,509
Middle East/Africa	383,807	38,074	410,057	67,353
Eastern Europe	120,510	20,390	134,715	19,093
Russia, Central Asia (CIS)	81,545	15,757	60,758	3,126
Asia-Pacific	337,690	70,698	378,392	54,534
China	318,093	39,447	263,910	49,600
North and Central America	618,020	146,204	519,355	124,989
South America/Mexico	293,267	14,496	206,558	9,314
Total	**3,045,598**	**588,858**	**2,797,318**	**525,424**

The group's contract assets and contract liabilities changed as follows in the financial year:

€ thousand	31 Dec 2021	31 Dec 2020
Contract assets	593,969	518,756
Contract liabilities	600,236	405,094

The amount of revenue recognised in 2021 that was included in the contract liability balance at the beginning of the reporting period was €405,094 thousand (previous year: €442,884 thousand).

The increase in contract assets is mainly due to a larger volume of work in progress. The increase in contract liabilities is mainly due to higher prepayments from customers.

The amount of the transaction price allocated to performance obligations unsatisfied (or partially unsatisfied) at the end of the reporting period was €35,469 thousand (previous year: €40,962 thousand). Krones will recognise most of this as revenue in the next 36 months. No disclosures under IFRS 15.120 are made for performance obligations with an original expected duration of one year or less.

Most revenue in the Machines and Lines for Product Filling and Decoration segment and almost all revenue in the Machines and Lines for Beverage Production/Process Technology segment is recognised over time.

20 Other own work capitalised

Other own work capitalised consists primarily of capitalised development expenditure and capitalised cost of self-constructed property, plant and equipment at Neutraubling production site.

With respect to development expenditure capitalised in accordance with IAS 38, please refer to the notes on intangible assets.

21 Other operating income

The other operating income in the amount of €161,762 thousand (previous year: €120,453 thousand) includes prior-period income from reversal of provisions and accruals (€37,421 thousand; previous year: €5,026 thousand), gains from disposals of non-current assets (€480 thousand; previous year: €905 thousand) and from the reversal of loss allowances on receivables and contract assets (€3,928 thousand; previous year: €4,274 thousand) and – as the main item – currency translation gains of €68,971 thousand (previous year: €82,710 thousand). This compares with additions to loss allowances of €15,909 thousand (previous year: €15,808 thousand) and currency translation losses of €75,279 thousand (previous year: €75,236 thousand) under other operating expenses.

22 Goods and services purchased

The expenditure for goods and services purchased comprises expenses for materials and supplies and for goods purchased amounting to €1,373,216 thousand (previous year: €1,316,229 thousand) and expenses for services purchased amounting to €434,201 thousand (previous year: €378,448 thousand).

23 Personnel expenses

Within the Krones Group, 15,778 people (previous year: 16,561) including trainees (511; previous year: 578) were employed on average over the year. The workforce of the Krones Group is composed as follows (average for the year):

	2021	2020
White-collar employees exempt from collective agreements	2,673	2,814
Employees covered by collective agreements	13,105	13,747
Total	**15,778**	**16,561**

Expenses for the employer share of social insurance contributions in the amount of €89 thousand were reimbursed in 2021 by the German Federal Employment Agency (previous year: €4,385 thousand). The reimbursement amounts were offset against personnel expenses.

24 Other operating expenses

The other operating expenses include €457 thousand in prior-period losses from disposals of non-current assets (previous year: €867 thousand), additions to loss allowances on receivables and contract assets (€12,142 thousand; previous year: €15,808 thousand), other taxes (€6,895 thousand; previous year: €6,248 thousand) and – as the main items – freight costs (€129,994 thousand; previous year: €106,863 thousand), travel costs (€90,567 thousand; previous year: €71,099), currency translation losses (€75,279; previous year: €75,236 thousand), rent and cleaning costs (€5,492 thousand; previous year: €7,864 thousand), and maintenance costs (€35,249 thousand; previous year: €34,064 thousand).

25 Financial income/expense

The financial income of €6,362 thousand (previous year: €4,214 thousand) breaks down as follows:

€ thousand	2021	2020
Income from other securities and long-term loans	0	0
Interest and similar income	9,891	11,554
Interest and similar expenses	−5,525	−7,252
Interest income/expense	4,366	4,302
Investment income	2,033	0
Profit or loss shares attributable to associates that are accounted for using the equity method	– 36	−88
Net financial income/expense	**6,362**	**4,214**

Financial income/expense includes interest and similar income of €9,891 thousand (previous year: €11,554 thousand) and interest and similar expenses of €5,525 thousand (previous year: €7,252 thousand). Also included in 2021 is income from investments in non-consolidated entities in the amount of €2,033 thousand (previous year: €– thousand). The interest and similar income includes €– thousand (previous year: €10,100 thousand) for reductions in put options and earn-out obligations. Interest and similar expenses include €1,756 thousand (previous year: €2,485 thousand) for interest on lease liabilities and €1,040 thousand (previous year: €510 thousand) for an increase in earn-out obligations. Further information on investments accounted for using the equity method is provided in Note 4.

26 Income tax

Income tax amounted to –€35,874 thousand in 2021 (previous year: –€43,056 thousand). Further information is presented under Note 8, “Income tax” (pages 164 to 165).

27 Earnings per share

Under IAS 33 “Earnings per share”, basic earnings per share are calculated by dividing consolidated net income – less profit or loss shares of non-controlling interests – by the weighted average number of ordinary shares in circulation, as follows:

	2021	2020
Consolidated net income less profit or loss shares of non-controlling interests (€ thousand)	141,366	–79,705
Weighted average number of ordinary shares in circulation (shares)	31,593,072	31,593,072
Earnings per share (€)	**4.47**	**–2.52**

As in the previous year, diluted earnings per share are equal to basic earnings per share.

Other disclosures

Audit and consulting fees

The total fee invoiced by the auditor of the financial statements was as follows:

€ thousand	2021
Audit services	685
Other assurance services	124
Tax advisory services	4

Disclosures in accordance with the EU Audit Regulation

Other assurance services include statutory audits of corporate governance and supervision systems and functions (non-audit services required by national law), statutory assurance services relating to the remuneration report and non-statutory assurance services relating to non-financial information (non-audit services).

Events after the reporting period

On 24 February 2022, Russia started the war in Ukraine. As Russia and Ukraine account for a relatively small share of Krones' business activities, the conflict has no significant impact on Krones. Based on this, Krones has not identified any uncertainties that would cast doubt on its ability to continue as a going concern.

Information on the potential impacts of the war between Russia and Ukraine is provided in the risk report and the report on expected developments.

Related party disclosures

Within the meaning of IAS 24 Related Party Disclosures, the members of the Supervisory Board and of the Executive Board of Krones AG and the companies of the Krones Group, including unconsolidated subsidiaries, are deemed related parties.

The ultimate controlling party of Krones AG is Familie Kronseder Konsortium GbR. Transactions with the related parties and with the ultimate controlling party are conducted at arm's length.

Sales and revenues with members of key management personnel and companies affiliated with them amounted to €8,478 thousand in 2021 (previous year: €5,276 thousand). The amount of the amounting balance is €3,800 thousand (previous year: €1,997 thousand). Services received from members of key management personnel amount to €495 thousand in 2021 (previous year: €11 thousand). As in the previous year, there are no outstanding balances in this regard.

Revenues with shareholders of the ultimate controlling party of Krones AG and companies affiliated with them amounted to €151 thousand in 2021 (previous year: €84 thousand). Services received from shareholders of the ultimate controlling party of Krones AG and companies affiliated with them amounted to €1,064 thousand in 2021 (previous year: €427 thousand). As in the previous year, there are no outstanding balances in this regard.

Sales to subsidiaries that are not consolidated amounted to €9,354 thousand in 2021 (previous year: €20,574 thousand). Commissions received from such subsidiaries amounted to €4,205 thousand in 2021 (previous year: €4,210 thousand). Trade and other payment transactions resulted in assets of €1,411 thousand (previous year: assets of €9,278 thousand). Repayment is normally within twelve months. Loss allowances were recognised on receivables in the amount of €1,360 thousand in the financial year (previous year: €930 thousand). As of 31 December 2021, loss allowances are recognised on receivables of €2,290 thousand (previous year: €930 thousand). Income from investments in non-consolidated entities is included in the amount of €2,033 thousand (previous year: €– thousand).

As in the previous year, there are no contingent liabilities relating to guarantees. Trade and other payment transactions with associates totalled €– thousand in 2021 (previous year: €– thousand). As in the previous year, this did not result in any outstanding balance.

- **Disclosures pursuant to Section 314 (1) No. 6 HGB relating to members of the Executive Board and former members of the Executive Board**

Remuneration granted and owed for the 2021 financial year amounted to €6,439 thousand (previous year: €4,326 thousand).

Benefits granted to former members of the Executive Board and their surviving dependants amounted to €1,703 thousand (previous year: €1,679 thousand). IFRS pension provisions have been recognised in the amount of €11,016 thousand (previous year: €13,732 thousand).

- **Remuneration recognised as expense within the meaning of IAS 24 for members of the Executive Board**

Executive Board remuneration recognised as expense, including expenses for the long-term incentive provision, amounted to €7,177 thousand for the 2021 financial year (previous year: €4,520 thousand).

This includes short-term benefits in the amount of €4,424 thousand (previous year: €2,756 thousand), other long-term benefits in the amount of €1,556 thousand (previous year: €568 thousand). The benefits mainly comprise fixed remuneration, fringe benefits and variable remuneration components. In addition, €1,196 thousand (previous year: €1,196 thousand) was paid into the contribution-based post-employment benefits plan in 2021. Provisions of €4,277 thousand (previous year: €1,569 thousand) are recognised for the remuneration entitlements of members of the Executive Board.

IFRS pension provisions of €2,266 thousand (previous year: €3.018 thousand) were recognised for active members of the Executive Board. At the end of the financial year, following changes in the actuarial discount rate, the corresponding defined benefit obligation (DBO) amounted in total to €4,879 thousand (previous year: €5,385 thousand).

- **Supervisory Board remuneration**

The total remuneration paid to members of the Supervisory Board for the 2021 financial year amounted to €839 thousand (previous year: €833 thousand).

- **Corporate governance**

Shareholders can view the declaration of the Executive Board and the Supervisory Board from January 2022 pursuant to Section 161 of the German Stock Corporation Act [AktG] concerning the Corporate Governance Code as amended on 16 December 2019 at Krones AG's website. The exceptions are also listed there.

- **Risk report**

The risk report is part of the management report and is on pages 101 to 112.

Standards and interpretations

The accounting policies used in these consolidated financial statements correspond to the standards and interpretations whose application is mandatory as of 31 December 2021. The following new or amended standards and interpretations applied for the 2021 financial year.

Standard or interpretation		EU endorsement	Application mandatory for annual periods beginning
IFRS 4	Amendments: Deferral of IFRS 9	completed	1 January 2021
IFRS 9, IAS 39, IFRS 4, IFRS 7 AND IFRS 16	Amendments: Interest Rate Benchmark Reform – Phase 2	completed	1 January 2021
IFRS 16	Amendments: Covid-19-Related Rent Concessions (exempting lessees from determining whether Covid-19-related rent concessions are lease modifications)	completed	1 June 2020

Various new or amended standards in the above table entered into force in the reporting period. These new or amended standards have no material relevance for Krones AG.

The following standards and interpretations have been issued by the IASB but their application is not mandatory until after 31 December 2021.

Standard or interpretation		EU endorsement	Application mandatory for annual periods beginning
IAS 1	Amendments: Classification of Liabilities as Current or Non-Current	open	1 January 2023
IAS 16	Amendments: Proceeds before Intended Use	completed	1 January 2022
IFRS 3	Amendments: Reference to the Conceptual Framework	completed	1 January 2022
IAS 37	Amendments: Onerous Contracts – Cost of Fulfilling a Contract	completed	1 January 2022
	Annual Improvements to IFRS – 2018–2020 Cycle	open	1 January 2022
IAS 8	Amendments: Definition of Accounting Estimates	completed	1 January 2023
IFRS 14	Regulatory Deferral Accounts	open	1 January 2016
IFRS 17	Amendments: Deferral of Effective Date	completed	1 January 2023
IFRS 17	Insurance Contracts	completed	1 January 2023
IAS 1	Amendments: Disclosure of Accounting Policies	completed	1 January 2023
IFRS 16	Amendments: Covid-19-Related Rent Concessions (exempting lessees from determining whether Covid-19-related rent concessions are lease modifications)	completed	1 April 2021
IAS 12	Amendments: Deferred Tax related to Assets and Liabilities arising from a Single Transaction	open	1 January 2023

These standards and interpretations are not expected to have a material impact on the consolidated financial statements of Krones AG in the reporting period to which they are applied for the first time.

Shareholdings

Name and location of the company	Share in Capital held by Krones AG (%*)
Dekron GmbH, Kelkheim, Germany	100.00
Ecomac Gebrauchtmaschinen GmbH, Neutraubling, Germany	100.00
Evoguard GmbH, Nittenau, Germany	100.00
Gernep GmbH Etikettiertechnik, Barbing, Germany	100.00
HST Maschinenbau GmbH, Dassow , Germany	100.00
KIC Krones Internationale Cooperations-Gesellschaft mbH, Neutraubling, Germany	100.00
Krones Beteiligungsgesellschaft mbH, Neutraubling, Germany	100.00
Krones Service Europe GmbH, Neutraubling, Germany	100.00
Mabe GmbH, Munich, Germany, Germany	100.00
MHT Holding AG, Hochheim am Main, Germany	100.00
MHT Mold & Hotrunner Technology AG, Hochheim am Main, Germany	100.00
Milkron GmbH, Laatzen, Germany	100.00
PMR GmbH, Wackersdorf, Germany	100.00
Steinecker GmbH, Freising, Germany	100.00
Syskron GmbH, Wackersdorf, Germany	100.00
Syskron Holding GmbH, Wackersdorf, Germany	100.00
System Logistics GmbH, Wackersdorf, Germany	100.00
Technologisches Institut für angewandte künstliche Intelligenz GmbH, Weiden i.d.Opf., Germany	31.15
Triacos Consulting & Engineering GmbH, Altenstadt an der Waldnaab, Germany	100.00
Kosme FBA SA , Charleroi, Belgium	100.00
S.A. Krones N.V., Louvain-la-Neuve, Belgium	100.00
Krones Service Europe Eood, Sofia, Bulgaria	100.00
Krones Nordic APS, Holte, Denmark	100.00
Kosme FBA SAS, Lyon, France	100.00
Krones S.A.R.L., Viviers-du-Lac, France	100.00

*Direct and indirect shareholdings

Name and location of the company	Share in Capital held by Krones AG (%*)
Krones UK LTD., Bolton, UK	100.00
System LTD., London, UK	80.00
Kosme S.R.L., Roverbella (MN), Italy	100.00
Krones Italia S.R.L., Garda (VR), Italy	100.00
Krones S.R.L., Garda (VR), Italy	100.00
System Logistics S.P.A., Fiorano Modenese (MD), Italy	80.00
Krones Kazakhstan TOO, Almaty, Kazakhstan	100.00
Krones Nederland B.V., Bodegraven, Netherlands	100.00
Kosme Gesellschaft mbH, Sollenau, Austria	100.00
Krones Spólka z.o.o., Warsaw, Polan	100.00
Krones Portugal Equipamentos Industriais LDA., Barcarena, Portugal	100.00
Krones Romania Prod. S.R.L., Bucharest, Romania	100.00
Krones Service Europe SRL, Bucharest, Romania	100.00
Krones o.o.o., Moscow, Russia	100.00
System Northern Europe AB, Malmö, Sweden	80.00
Integrated Plastics Systems AG, Baar, Switzerland	100.00
Krones AG, Buttwil, Switzerland	100.00
Krones Iberica, S.A.U., Barcelona, Spain	100.00
System Logistics Spain SL, Castellon, Spain	80.00
Konplan S.R.O., Pilsen, Czech Republic	100.00
Krones S.R.O., Prague, Czech Republic	100.00
Krones Makina Sanayi Ve Tikaret Ltd. Sirketi, Istanbul, Turkey	100.00
Krones Ukraine LLC, Kyiv, Ukraine	100.00
Krones Hungary KFT., Debrecen, Hungary	100.00
Krones Service Europe KFT., Budapest, Hungary	100.00
Krones Angola – Representacoes, Comercio E Industria, LDA., Luanda, Angola	100.00
Krones Surlatina S.A., Buenos Aires, Argentina	100.00
Krones Pacific PTY Limited, Sydney, Australia	100.00

*Direct and indirect shareholdings

Name and location of the company	Share in Capital held by Krones AG (%*)
Krones Bangladesh Limited, Dhaka, Bangladesh	100.00
Krones Do Brazil LTDA., São Paulo, Brazil	100.00
Krones S.A., São Paulo, Brazil	100.00
Krones Chile SPA., Santiago de Chile, Chile	100.00
Krones Asia LTD., Hong Kong, China	100.00
Krones Machinery (Taicang) Co. Ltd., Taicang, China	100.00
Krones Processing (Shanghai) Co. Ltd., Shanghai, China	100.00
Krones Sales (Beijing) Co. Ltd., Beijing, China	100.00
Automata S.A., Guatemala-City, Guatemala	100.00
Krones India PVT. Ltd., Bangalore, India	100.00
System Logistics India Private Limited, Mumbai, India	80.00
Unicorn Industries Ltd., Secunderabad, India	60.00
PT. Krones Machinery Indonesia, Jakarta, Indonesia	100.00
IPS Japan Co. Ltd., Tokyo, Japan	100.00
Krones Japan Co. Ltd., Tokyo, Japan	100.00
Krones (Cambodia) Co. Ltd., Phnom Penh, Cambodia	100.00
Krones Machinery Co. Ltd., Mississauga, Ontario, Canada	100.00
Krones LCS Center East Africa Limited, Nairobi, Kenya	100.00
Krones Andina S.A.S., Bogotá, Colombia	100.00
Krones Korea Ltd., Seoul, Korea	100.00
Krones Machinery Malaysia Sdn. Bhd., Kuala Lumpur, Malaysia	100.00
Krones North West Africa (SARL), Casablanca, Morocco	100.00
Krones Mex S.A. DE C.V., Mexico-City, Mexico	100.00
Systemlog De Mexico S.A. DE C.V., Santa Caterina, Nuevo Leon, Mexico	80.00
Krones Myanmar Ltd., Sanchaung Township, Myanmar	100.00
Krones New Zealand Limited, Auckland, New Zealand	100.00
Krones LCS Center West Africa Limited, Lagos, Nigeria	100.00

*Direct and indirect shareholdings

Name and location of the company	Share in Capital held by Krones AG (%*)
Krones Pakistan (Private) Limited, Lahore, Pakistan	100.00
Krones Filipinas Inc., Taguig City, Philippines	100.00
Krones-Izumi Processing Pte Ltd., Singapore, Singapore	73.00
Krones Singapore Ltd., Singapore, Singapore	100.00
Krones Middle East Maintenance LLC, Riad, Saudi Arabia	100.00
Krones Southern Africa (Prop.) Ltd., Johannesburg, South Africa	100.00
Krones (Thailand) Co. Ltd., Bangkok, Thailand	100.00
System Logistics Asia Co. Ltd., Bangkok, Thailand	80.00
Javlyn Process Systems LLC, Rochester, New York, USA	100.00
Krones Inc., Franklin, Wisconsin, USA	100.00
MHT USA LLC., Peachtree City, Georgia, USA	100.00
Process and Data Automation LLC, Erie, Pennsylvania, USA	100.00
System Logistics Corporation, Arden, North Carolina, USA	80.00
Trans-Market Llc, Tampa, Florida, USA	100.00
W.m. Sprinkman Llc, Waukesha, Wisconsin, USA	100.00
Maquinarias Krones de Venezuela S.A., Caracas, Venezuela	100.00
Integrated Packaging Systems (IPS) FZCO, Dubai, Arab Emirates	100.00
Krones Meatech FZCO, Dubai, Arab Emirates	100.00
Krones Middle East Africa FZCO, Dubai, Arab Emirates	100.00
Krones Vietnam Co. Ltd., Ho-Chi-Minh-City, Vietnam	100.00

*Direct and indirect shareholdings

Use of exemptions

The following fully consolidated German group companies made use of the exemption in Section 264 (3) HGB in the 2021 financial year.

Name and location of the company
Krones Beteiligungsgesellschaft mbH, Neutraubling, Germany
Dekron GmbH, Kelkheim, Germany
Ecomac Gebrauchtmaschinen GmbH, Neutraubling, Germany
Evoguard GmbH, Nittenau, Germany
Gernep GmbH Etikettiertechnik, Barbing, Germany
HST Maschinenbau GmbH, Dassow, Germany
KIC Krones Internationale Cooperations-Gesellschaft mbH, Neutraubling, Germany
Krones Service Europe GmbH, Neutraubling, Germany
Milkron GmbH, Laatzen, Germany
System Logistics GmbH, Wackersdorf, Germany
Steinecker GmbH, Freising, Germany

The Companies are directly and/or indirectly affiliated with Krones AG by a profit transfer agreement.

Members of the **Supervisory Board** and the **Executive Board**

Pursuant to Section 8 (1) of the articles of association, eight members of the Supervisory Board are elected by the shareholders in accordance with the German Stock Corporation Act (Sections 96 (1) and 101). Eight members are elected by the employees pursuant to Section 1 (1) and Section 7 (1) Sentence 1 Number 1 of the Codetermination Act.

Supervisory Board

Volker Kronseder
Chairman of the Supervisory Board
* Universitätsklinikum Regensburg
* Wirtschaftsbeirat Bayerische Landesbank

Josef Weitzer**
Deputy Chairman of the Supervisory Board, Chairman of Group Central Works Council
Chairman of the Works Council Neutraubling
* Bay. Betriebskrankenkassen

Markus Hüttner**
Deputy Chairman of the Central Works Council
Deputy Chairman of the Works Council
Neutraubling

Nora Diepold
Chief Executive Officer
NK Immobilienverwaltungs GmbH, Regensburg
(since 17 May 2021)

Dr. Verena Di Pasquale**
Deputy Chairperson of DGB Bayern (the German Trade Union Confederation in Bavaria)

Robert Friedmann
Spokesman for the central managing board of the Würth Group
* ZF Friedrichshafen AG

Klaus Gerlach**
Head of Central International Operations and Services
(until 31 December 2021)

Oliver Grober**
Chairman of the Employees' Council, Rosenheim

Thomas Hiltl**
Chairman of the Employees' Council, Nittenau

Norman Kronseder
Farmer and forester
* Bayerische Futtersaatbau GmbH
(until 17 May 2021)

Professor Dr. jur. Susanne Nonnast
Professor at Ostbayerische Technische Hochschule (OTH) Regensburg

Beate Eva Maria Pöpperl**
Independent Member of the Employees' Council

Stefan Raith**
Head of Business Line, Line Solutions
*re-sult AG
(since 1 January 2022)

Norbert Samhammer
Chief executive of Samhammer Holding Gmbh
*Samhammer AG

Petra Schadeberg-Herrmann
Managing partner
Krombacher Brauerei
Bernhard Schadeberg GmbH & co. KG,
Krombacher Finance GmbH,
Schawei GmbH,
Diversum Holding GmbH & Co. KG

Jürgen Scholz**
First authorised representative
IG Metall administrative office, Regensburg
* Infineon Technologies AG

Hans-Jürgen Thaus
* Maschinenfabrik Reinhausen GmbH

Matthias Winkler
Managing partner at WW+KN Steuerberatungs-gesellschaft mbH
Managing partner at WW+KN Treuhand GmbH

Executive Board

Christoph Klenk
CEO
Intralogistics
Process Technology

Norbert Broger
CFO

Thomas Ricker
CSO

Markus Tischer
International Operations and Services
Digitalisation

Ralf Goldbrunner
Bottling and Packaging Equipment
Compact Class

* Other Supervisory Board seats held, pursuant to Section 125 (1) Sentence 5 of the German Stock Corporation Act ** Elected by the employees
In addition, each of the group companies is the responsibility of two members of the Executive Board.

Proposal for the appropriation of **Krones AG's earnings available for distribution**

Krones AG had earnings available for distribution as of 31 December 2021 of €195,033,683.69.

We propose to the annual general meeting on 31 May 2022 that this amount be used as follows:

Proposal for the appropriation of earnings available for distribution	€195,033,683.69
Dividend of €1.40 per share (for 31,593,072 shares)	€44,230,300.80
Amount brought forward to new account	€150,803,382.89

Neutraubling, 16 March 2022
Krones AG

The Executive Board

Christoph Klenk
CEO

Norbert Broger
CFO

Thomas Ricker
CSO

Markus Tischer

Ralf Goldbrunner

6

OTHER INFORMATION

Responsibility statement

"To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position, and profit or loss of the group, and the consolidated management report includes a fair review of the development and performance of the business and the position of the group, together with a description of the principal opportunities and risks associated with the expected development of the group."

Neutraubling, 16 March 2022
Krones AG
The Executive Board

Christoph Klenk
CEO

Norbert Broger

Thomas Ricker

Markus Tischer

Ralf Goldbrunner

Translation of the German independent auditor's report concerning the audit of the consolidated financial statements and group management report prepared in German

Independent auditor's report

To Krones Aktiengesellschaft

Report on the audit of the consolidated financial statements and of the group management report

Opinions

We have audited the consolidated financial statements of Krones Aktiengesellschaft, Neutraubling, and its subsidiaries (the Group), which comprise the consolidated statement of profit and loss and the consolidated statement of comprehensive income for the fiscal year from 1 January 2021 to 31 December 2021, the consolidated statement of financial position as of 31 December 2021, the consolidated statement of cash flows for the fiscal year from 1 January 2021 to 31 December 2021, the consolidated statement of changes in equity for the fiscal year from 1 January 2021 to 31 December 2021, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Krones Aktiengesellschaft for the fiscal year from 1 January 2021 to 31 December 2021. In accordance with the German legal requirements, we have not audited the content of the group statement on corporate governance pursuant to Sec. 315d HGB ["Handelsgesetzbuch": German Commercial Code], which is published on the website stated in the group management report and is part of the group management report. We have not audited the following information not typical of management reports, which is part of other information:

- Section "Fundamental information about the group", subsection "Research and development", extracts from presentations of several innovations on pages 66–70

Information not typical of management reports in the group management report relates to information that is not required by Secs. 315, 315a or Secs. 315b to 315d HGB or German Accounting Standard (GAS) 20.

In our opinion, on the basis of the knowledge obtained in the audit,

- he accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2021 and of its financial performance for the fiscal year from 1 January 2021 to 31 December 2021, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the group management report referred to above does not cover the group statement on corporate governance or the information not typical of management reports referred to above.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Art. 10 (2) f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Art. 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters.

Below, we describe what we consider to be the key audit matters:

1. Revenue recognition for customer-specific construction contracts

Reasons why the matter was determined to be a key audit matter

The major part of group revenue is generated from customer projects involving machines and lines for product filling and beverage production. The performance comprising the design and manufacture together with the installation and commissioning on site is considered as a single performance obligation. As contracts for these machines and lines are customer-specific, the Group's performance creates an asset that does not have an alternative use to the Group. The Group has a legal right to payment for the performance completed to date, including an appropriate margin. In accordance with IFRS 15, revenue is therefore recognized over time on the basis of the percentage of completion method. The percentage of completion is calculated on the basis of the costs incurred as of the reporting date in relation to the expected total costs of the respective project. There is a particular risk of error when estimating total costs. The significance of revenue for the consolidated financial statements, the judgment involved in estimating total costs and the fact that revenue is one of the financial performance indicators for the Group in terms of corporate management and forecasts meant that the recognition of revenue as of the reporting date was a key audit matter.

Auditor's response

During the reporting period, we performed tests to assess the design and operating effectiveness of the significant controls implemented by the executive directors in the area of reporting of costs accrued and the estimate of total contract costs. In this context, we tested both transaction-level controls and entity-level controls, such as regular review meetings.

For a sample of projects, we obtained an overview of the content of the contracts and the status of the respective fulfillment of contracts and analyzed the actual costs incurred and the total costs over the period of the project's progress. We also reviewed the analysis of planning variance of total costs of projects over time performed by the Executive Board in terms of mathematical accuracy and obtained explanations for deviations on a sample basis. Furthermore, we compared the transaction prices used with their applicable contractual bases.

Our audit procedures did not lead to any reservations relating to the recognition of revenue for customer-specific construction contracts allocated to the period.

Reference to related disclosures

The disclosures on the principles of revenue recognition are contained in chapter "General disclosures", section "Revenue", of the notes to the consolidated financial statements.

2. Impairment testing of goodwill

Reasons why the matter was determined to be a key audit matter

The executive directors perform an impairment test to test impairment of goodwill at least once each year. A complex calculation model is used for the test, which particularly involves a number of assumptions subject to judgment and values derived therefrom. This also includes the expected development of business and earnings, the assumed long-term growth rates and the discount rates applied.

Against the background of the underlying complexity of impairment tests as well as the judgment exercised during valuation and the associated high risk for accounting misstatement, impairment testing of goodwill, which is a significant item of the statement of financial position in the consolidated financial statements, was a key audit matter.

Auditor's response

During the audit of the impairment testing of goodwill, we used a substantive audit approach.

We involved internal valuation specialists to verify the DCF models applied in terms of clerical accuracy and methods used and investigated whether these were calculated using the relevant financial reporting standards in accordance with IAS 36. We assessed the derivation of the weighted average cost of capital (WACC) by evaluating the beta factor used for the benchmark companies involved and comparing the interest rates for equity and liabilities with available market data.

We also analyzed the corporate planning applied for impairment testing of goodwill by comparing the actual earnings recorded in the past with current developments in the business figures. For the appraisal of the underlying corporate planning, we also obtained explanations related to the estimates and assumptions on growth and business development, also taking into account potential knock-on effects of the COVID-19 pandemic.

Our audit procedures did not lead to any reservations regarding the impairment of goodwill.

Reference to related disclosures

For more information on the impairment tests performed and underlying assumptions, please refer to the disclosures in chapter "General disclosures", section "Estimates and judgments", section "Goodwill" as well as chapter "Notes to the consolidated statement of financial position", note 1 "Intangible assets", of the notes to the consolidated financial statements.

3. Recoverability of recognized deferred tax assets on unused tax losses

Reasons why the matter was determined to be a key audit matter

The entities within the Krones Group carry out their business activities in numerous countries with varying local tax laws. In this regard, in some of these countries there are unused tax losses, for which, pursuant to IAS 12, a deferred tax asset should be recognized to the extent that it is probable that a future taxable profit will be available against which the unused tax losses can be utilized. This assessment is subject to a great deal of judgment and estimates by the executive directors, primarily in cases in which the affected companies have recognized a series of losses in the recent past, and consequently subject to judgment to a great extent in particular also in light of the effects of the COVID-19 pandemic.

The executive directors of Krones Aktiengesellschaft have recognized a deferred tax asset on unused tax losses in an amount that is material for the consolidated financial statements of Krones Aktiengesellschaft. Deferred tax assets on unused tax losses in Germany, which were still classified as not recoverable in the prior year, were partially recognized in the reporting year. In light of this, the recoverability of recognized deferred tax assets was a key audit matter.

Auditor's response

As part of our audit, we analyzed the process implemented by the executive directors of Krones Aktiengesellschaft and the accounting policies for determining the deferred tax assets to be recognized on unused tax losses, including impairment testing, to identify any risks of material misstatement and obtained an understanding of the process steps.

In respect of the assessment of the executive directors regarding the probability of whether a taxable result will be available, against which the unused tax losses can be utilized, we analyzed the corporate planning underlying the assessment by comparing the earnings generated in the past and current developments in business figures. In this regard, based on the responsibility statement, we verified that the unused tax losses result from identifiable causes which are unlikely to recur. For companies that have had several loss-making years in the recent past, we obtained evidence that there are convincing indications that sufficient taxable income will be available in the future. We analyzed the declarations and evidence received as to whether both positive and negative indications were taken into account equally. We also considered the changes in the market in the fiscal year and the forecasts made of its future development. In this regard, effects attributable to the COVID-19 pandemic were also taken into consideration.

When assessing the likelihood of whether taxable income will be available, against which the unused tax losses can be utilized, taxable temporary differences in relation to the same tax authority and the same taxable entity were also taken into account, from which the taxable income, against which the unused tax losses can be utilized, will result. Our audit procedures did not lead to any reservations regarding the recoverability of recognized deferred tax assets on unused tax losses.

Reference to related disclosures

For more information on the impairment tests performed and underlying assumptions, please refer to the disclosures in chapter "General disclosures", section "Estimates and judgments", as well as chapter "Notes to the consolidated statement of financial position", note 8 "Income tax", of the notes to the consolidated financial statements.

Other information

The Supervisory Board is responsible for the Report of the Supervisory Board. The executive directors and the Supervisory Board are responsible for the declaration pursuant to Sec. 161 AktG ["Aktiengesetz": German Stock Corporation Act] on the German Corporate Governance Code, which is part of the group statement on corporate governance. In all other respects, the executive directors are responsible for the other information.

Other information comprises the group statement on corporate governance mentioned above, the information not typical of management reports in the group management report, the combined, separate group non-financial report published online and also other components designated for the annual report, of which we received a version prior to issuing this auditor's report, particularly

- Section "Highlights 2021"
- Chapter 1 "To our shareholders"
- Chapter 3 "Declaration on corporate governance"
- Chapter 6 "Other information"

but not the consolidated financial statements, not the disclosures in the group management report included in the audit of content and not our auditor's report.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the executive directors and the Supervisory Board for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Report on the assurance on the electronic rendering of the consolidated financial statements and the group management report prepared for publication purposes in accordance with Sec. 317 (3a) HGB

Opinion

We have performed assurance work in accordance with Sec. 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the group management report (hereinafter the "ESEF documents") contained in the file Krones_AG_KA+KLB_ESEF-2021-12-31.zip (SHA-256 checksum: fea7a2d87d69a01a3839ed5961832dad64ff1336dcf100ba-7b94a0d066fc9125) and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the group management report contained in the file identified above and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinions on the accompanying consolidated financial statements and the accompanying group management report for the fiscal year from 1 January 2021 to 31 December 2021 contained in the "Report on the audit of the consolidated financial statements and of the group management report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the file identified above.

Basis for the opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the group management report contained in the file identified above in accordance with Sec. 317 (3a) HGB and the *IDW Assurance Standard: Assurance on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Sec. 317 (3a) HGB (IDW AsS 410) (10.2021)* and the International Standard on Assurance Engagements 3000 (Revised).

Our responsibility in accordance therewith is further described in the "Group auditor's responsibilities for the assurance work on the ESEF documents" section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the executive directors and the Supervisory Board for the ESEF documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the group management report in accordance with Sec. 328 (1) Sentence 4 No. 1 HGB and for the tagging of the consolidated financial statements in accordance with Sec. 328 (1) Sentence 4 No. 2 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have determined necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group auditor's responsibilities for the assurance work on the ESEF documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.
- Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- Evaluate the technical validity of the ESEF documents, i.e., whether the file containing the ESEF documents meets the requirements of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, on the technical specification for this file.
- Evaluate whether the ESEF documents enable an XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited group management report.

Further information pursuant to Art. 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 17 May 2021. We were engaged by the Supervisory Board on 2 June 2021. We have been the group auditor of Krones Aktiengesellschaft without interruption since fiscal year 2019.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Art. 11 of the EU Audit Regulation (long-form audit report).

Other matter – use of the auditor's report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited group management report as well as the assured ESEF documents. The consolidated financial statements and the group management report converted to the ESEF format – including the versions to be published in the Bundesanzeiger [German Federal Gazette] – are merely electronic renderings of the audited consolidated financial statements and the audited group management report and do not take their place. In particular, the ESEF report and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Udo Schuberth.

Nuremberg, 16 March 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Schuberth Wirtschaftsprüfer [German Public Auditor]	Schütz Wirtschaftsprüfer [German Public Auditor]

Financial glossary

Cash flow	All inflows and outflows of cash and cash equivalents during a period.
Corporate governance	A framework for responsible corporate management and supervision that is oriented towards sustainability.
Depreciation and amortisation	Non-cash expenses that represent the cost of current and non-current assets being used over time.
EBITDA	Earnings before interest, taxes, depreciation and amortisation.
EBITDA margin	Ratio of earnings before interest, taxes, depreciation and amortisation to revenue.
EBIT	Earnings before interest and taxes.
EBT	Earnings before taxes.
EBT margin	Ratio of earnings before taxes to revenue.
Equity	Funds made available to the company by the owners by way of contribution and/or investment, plus retained earnings.
Free cash flow	Measure of financial performance calculated as the cash flow from operating activities minus cash flow from investing activities. It is the cash available to pay dividends, reduce debt, or be retained.
IFRS	International Financial Reporting Standards. Accounting standards issued by the International Accounting Standards Board (IASB) that are harmonised and applied internationally.
Net cash	Cash and highly liquid securities under current assets less liabilities to banks.
Return on equity before taxes	Ratio of earnings before taxes to average equity.
ROCE	Return on capital employed, calculated as the ratio of EBIT to average capital employed (total assets less non-interest-bearing liabilities and non-interest-bearing other provisions).
TCO	Total cost of ownership, including the purchase price and all direct and indirect costs over the entire product lifecycle (such as costs of energy, repairs, maintenance and disposal).
Total debt	Combined term for the provisions, liabilities and deferred income stated on the liabilities side of the balance sheet.
Working capital	Working capital is calculated as follows: (inventories + trade receivables + contract assets) – (trade payables + contract liabilities).
Working capital to revenue	The ratio of working capital to revenue indicates how much capital is needed to finance revenue generation.

Technical glossary

Artificial intelligence (AI)	Artificial intelligence (AI) is a branch of computer science that deals with the automation of intelligent behaviour and machine learning. It involves programming machines to emulate human decision-making structures.
Aseptic beverage filling	Germ-free filling of beverages at ambient temperature.
Bottle-to-bottle recycling	Process to produce new PET bottles from used PET bottles. Used PET bottles are reduced to clean PET flakes, which are processed into preforms (see below) and then into new PET bottles.
Cloud	The cloud or cloud computing is the provision of data storage space, computing power or application software online as a service.
Digitalisation	Digitalisation in general is the conversion of analogue information into digital data. Digital data can be processed and exchanged faster and more easily than analogue information. Many new technologies, such as cloud computing, artificial intelligence and the Internet of Things (IoT), are based digital data.
Energy drink	A beverage that acts as a stimulant. The main ingredients are sugar and caffeine.
enviro	Krones' sustainability programme enviro was launched in 2008 and certified by TÜV SÜD in 2009. This independent certification enables Krones to award the enviro seal for efficient use of energy and media and the environmental performance of its machines and lines. All new developments at Krones are aligned with the criteria of our enviro sustainability programme.
IIoT	IIoT (Industrial Internet of Things) refers to industrial applications of the Internet of Things. The Internet of Things aims to interconnect objects so that they work together using information and communication technology.
Intralogistics	The internal flow of materials and goods within a company, including warehouse, order picking and conveyance systems.
Line expertise	Filling and packaging lines are made up of many individual machines and systems. Krones has the expertise to ensure perfect interoperation between components. This is referred to as line expertise.
PET	Polyethylene terephthalate, a thermoplastic material from the polyester family used, among other things, for producing beverage bottles.
Preform	PET blank from which PET bottles are produced (blown).
rPET	Recycled PET. Although rPET is chemically identical to virgin PET, there are differences in processing.

Key figures for the Krones group **2017–2021**

		2021	2020	2019	2018	2017
Revenue						
Revenue	€ million	3,635	3,323	3,959	3,854	3,691
Germany	€ million	376	329	468	362	388
Outside Germany	€ million	3,259	2,994	3,491	3,492	3,303
Export share	%	90	90	88	91	89
Earnings						
Earnings before interest, taxes, depreciation and amortization (EBITDA)	€ million	313	133	227	306	340
Earnings before taxes (EBT)	€ million	177	−37	42	204	259
Consolidated net income	€ million	141	−80	9	151	187
Earnings per share	€	4.47	−2.52	0.30	4,78	5.97
Assets and capital structure						
Non-current assets	€ million	1,133	1,093	1,154	1,010	882
of which fixed assets	€ million	1,001	990	1,070	936	797
Current assets	€ million	2,362	1,957	2,165	2,312	2,158
of which cash and equivalents	€ million	383	217	110	219	182
Equity	€ million	1,392	1,200	1,370	1,433	1,330
Total debt	€ million	2,103	1,850	1,949	1,888	1,710
Non-current liabilities	€ million	434	476	452	359	314
Current liabilities	€ million	1,669	1,374	1,497	1,529	1,396
Total assets	€ million	3,495	3,050	3,319	3,321	3,040
Cash flow/capital expenditure						
Free cash flow	€ million	203	221	−94	121	−151
Capital expenditure for PP&E and intangible assets	€ million	105	94	169	179	134
Depreciation, amortisation and impairments	€ million	142	174	183	103	95
Net cash position (cash and cash equivalents less debt)	€ million	378	185	38	215	157
Profitability ratios						
EBITDA margin	%	8.6	4.0	5.7	7.9	9.2
EBT margin	%	4.9	−1.1	1.1	5.3	7.0
Working capital to revenue*	%	24.8	28.3	26.9	27.3	27.3
ROCE	%	10.0	−2.2	2.2	11.5	14.9
Employees (at 31 December)		16,303	16,736	17,353	16,545	15,299
Germany		9,821	10,364	10,733	10,887	10,366
Outside Germany		6,482	6,372	6,620	5,658	4,933
Dividend						
Dividend per share	€	1.40**	0.06	0.75	1.70	1.70

* Average over 4 quarters ** As per proposal for appropriation of earnings available for distribution

Public information

Published by	Krones AG Böhmerwaldstrasse 5 93073 Neutraubling Germany
Project lead	Olaf Scholz, Head of Investor Relations, Treasury and M&A
Design	Büro Benseler
Text	Krones AG InvestorPress GmbH
Photography	Krones AG

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

We would be happy to mail you a copy of the original German version of this Annual Report on request. You can also find it in the Investor Relations section at krones.com.

Financial calendar

6 May 2022	Quarterly statement for the period ended 31 March 2022
31 May 2022	Annual general meeting
2 August 2022	Interim report for the period ended 30 June 2022
4 November 2022	Quarterly statement for the period ended 30 September 2022

Contact

Krones AG
Investor Relations
Olaf Scholz
Phone +49 9401 70-1169
E-mail olaf.scholz@krones.com
Böhmerwaldstrasse 5
93073 Neutraubling
Germany