



# Capital Market Day

15<sup>th</sup> September 2022

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Christoph Klenk, CEO

Norbert Broger, CFO

Thomas Ricker, CSO

Markus Tischer, Board Member IOS

Bülent Bayraktar, Head of Process Technology

Luigi Panzetti, System Logistics CEO

# Agenda



**01** Welcome

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**02** Strategic Overview and Target Picture 2025 and beyond – Christoph Klenk

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**03** Deep dive: Filling and Packaging Technology – Thomas Ricker/Markus Tischer

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**04** Deep dive: Process Technology – Bülent Bayraktar

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**05** Deep dive: Intralogistics – Luigi Panzetti

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**06** Financial Overview – Confirmation of Targets 2025 – Norbert Broger

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**07** Discussion/Q&As

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01

Welcome

# Speakers



**Christoph Klenk**  
CEO



**Norbert Broger**  
CFO



**Markus Tischer**  
Board Member  
IOS



**Thomas Ricker**  
CSO



**Bülent Bayraktar**  
Head of Process  
Technology



**Luigi Panzetti**  
System Logistics  
CEO



02

# Strategic Overview and Target Picture 2025 and beyond

Christoph Klenk

# Krones major pillars to drive further success



## Customer Satisfaction

We **keep our promises** in **project execution** and **after sales** - even in difficult times

We take **changing customer requirements** to proactively create **new solutions**

## Innovation & Technology

Our solutions **drive customer costs** in operation **down**

Our innovations **manage and track CO<sub>2</sub> footprint targets** of our customers

## Target Picture 2025+

Our new target picture **drives spirit** and **purpose** to **deliver solutions beyond tomorrow**

## Economics

We **manage profitability** by

- › adapting **scenario planning**
- › **pricing power**
- › robust **cost cutting programmes**

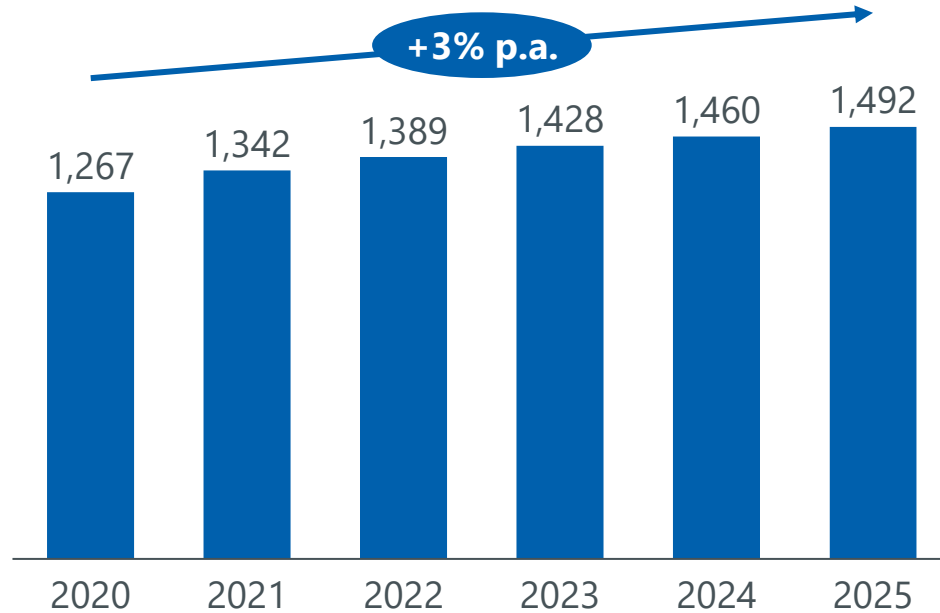
**based on our No. 1 position in bottling and packaging!**

# Krones markets provide continuous and sustainable growth



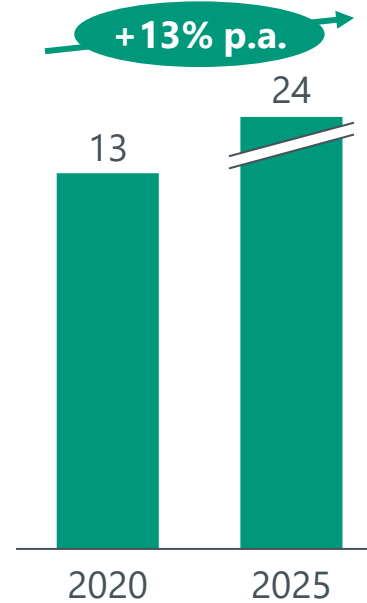
## Beverage Consumption

Global volume, bn liters<sup>1</sup>



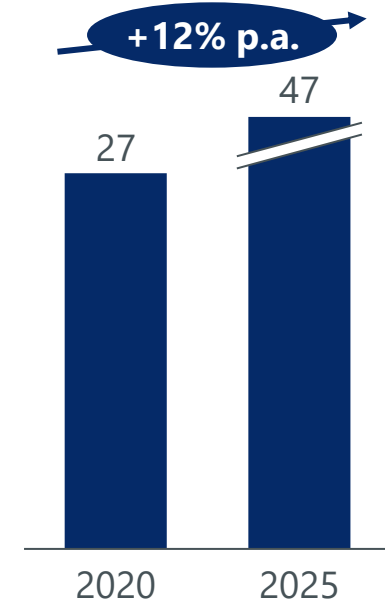
## Alternative Proteins

Global consumption, bn tons<sup>2</sup>



## Intralogistics

Warehouse Automation market, bn €<sup>3</sup>



Bottling and Packaging

Processing

Intralogistics

Sources: 1. Global Data 2. BCG, 2021 3. BNP Paribas, 2022 (own extrapolation)

# Changing customer needs provide new opportunities for Krones



**Agenda on climate change**



**Resource efficiency**



**Digital operating and business models**



**Circular packaging solutions**

## New Normal

## Opportunities for Krones

**"must have"**

**Energy and CO<sub>2</sub> footprint reduction**

**obligation**

**Water and food waste reduction**

**essential**

**Increasing OEE<sup>1</sup>**

**delivered**

**Savings in raw materials**

**Significant growth potential**

1. Overall Equipment Effectiveness

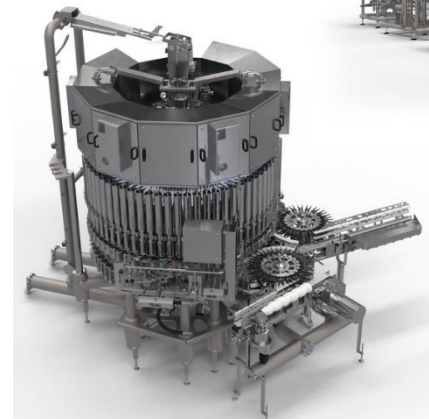
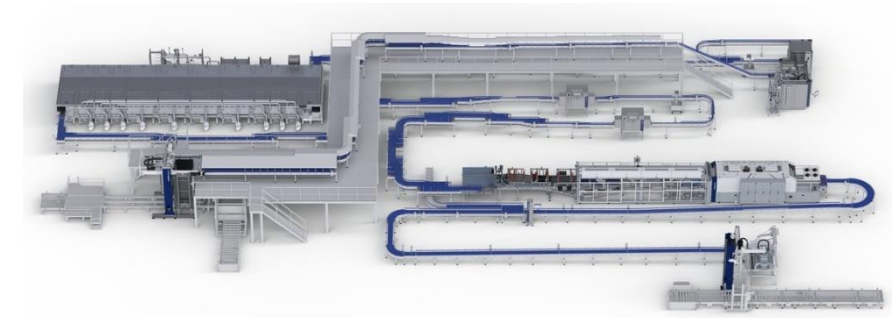


# Innovation and internationalization drive Krones growth strategy



Innovation & Technology	2021	2025
R&D spending	€ 174m	+40%
Krones digital	450 people	+50%
IP	6,440 IPs	+15%
New line installation time	100 days	-30% reduction in duration

Internationalization	2021	2025
Global footprint operations	80% Germany 20% international	+50% more international
Global service technicians	3,000 people	+15%



# New Target Picture

...to exploit the full value of our future opportunities and to drive transformation!



## Our Vision

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**Sustainable and affordable beverages, food and essentials for everyone and everywhere**

We develop solutions beyond expectations for our customers, humanity and our planet

## Our Mission

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**We lead with innovative solutions to empower our customers, meeting their goals and beyond, making them successful and sustainable**

We enforce our creative power to preserve nature and safeguard society



**Solutions beyond  
tomorrow**

# Solutions beyond tomorrow – Our strategic focus



## Process Technology



**Drive food and beverage innovation**

## Filling and Packaging Technology



**Implement integrated packaging solutions**

## Intralogistics



**Provide fully automated, flexible intralogistics**



**Deliver superior services**



**Shape sustainability**



**Enabled by digitalization**

# Krones transformation journey to drive value for our customers

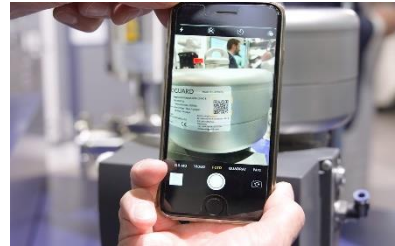


## Sustainability Transformation



- › Energy and water reduction
- › Sustainable food / Alternative protein
- › Circular economy based on usage of recycled packaging material

## Digital Transformation



- › Modular line and business models of the future
- › Cloud-based Service Level Agreements
- › Homogeneous automation and digitalization

## Product Transformation



- › Innovation on line-level
- › Standardization for base-line growth
- › Modularization for scalability of digital solutions

## Organisational & Process Transformation



- › Supply Chain optimization
- › Learning Organization
- › Global Collaboration
- › State of the art internal IT

**Krones continues its successful way to strengthen its market leader position**



# Digitalization at Krones – Core topics



## Transformation into digital lines

for filling and packaging product portfolio



## Cloud-based software platform

with portfolio of value apps



## Data driven customer support

to improve performance by Krones Digital Service Center



## Performance-based business models

(SLA) based on digital lines and software



## Internal Performance

by process automation, innovative working methods and a state-of-the-art software landscape

**Digitalization is fully integrated in all our business areas**

# Krones.digital: Driving the digital transformation



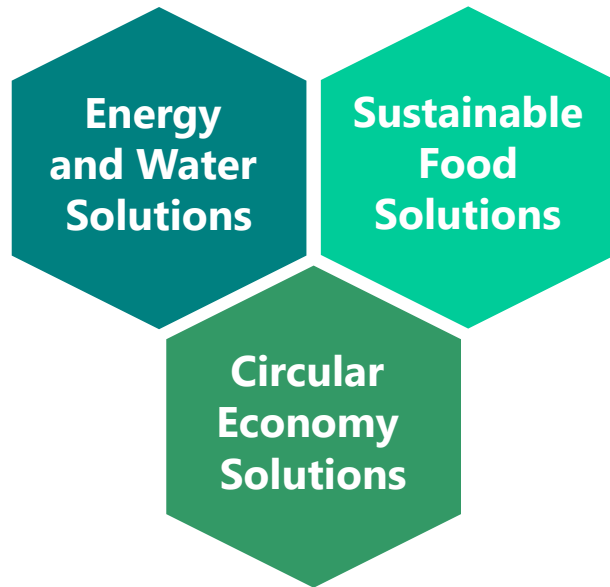
## KRONES .digital

- › **450 digital experts** lead our digital transformation
- › **One organization** ensures best system architecture
- › **One architecture** seamless from automation to digital cloud services
- › **~ 1,000 additional IT specialists** ensure efficient execution



**All digital competencies bundled at Krones to lead the beverage and liquid food industry into a digital future**

# Sustainability at Krones – Core topics



In terms of Sustainability, Solutions beyond tomorrow means: **KRONES enables a climate-neutral, circular customer production plant for sustainable drinks and food**

Together with our customers we can tackle the most urgent global challenges



**Climate Change**



**Plastic Littering**



**Feeding the World**

# Steering Sustainability Transformation and Performance



Challenges



**ESG performance**



**Climate Change**



**Plastic Littering**



**Feeding the World**

Solutions

**Sustainable Value Chain**

**Energy and Media**

**Circular Economy**

**Sustainable Food**

Next Steps

- Developing and pursuing a **Net Zero Emissions Target**
- **Assessing suppliers** by their sustainability performance
- **Implementing transformation matrices** for each material topic to reach Sustainability Goals 2030

- Bringing **Future Line concepts** to life
- **Green Consulting** activities with additional manpower
- **Focus on projects** for energy and media savings

- **Strengthen Recycling solutions** (For details see Recycling Solutions)
- Handling of **additional plastics volume** (e.g., HDPE, LDPE)

- **Focusing on plant-based drinks and food** (See Process Technology)
- **Enhancing technology** to reduce losses within the production process
- **Pushing forward aseptic filling**

Targets

**- 80% CO<sub>2</sub> reduction** at Operations Scope 1 & 2

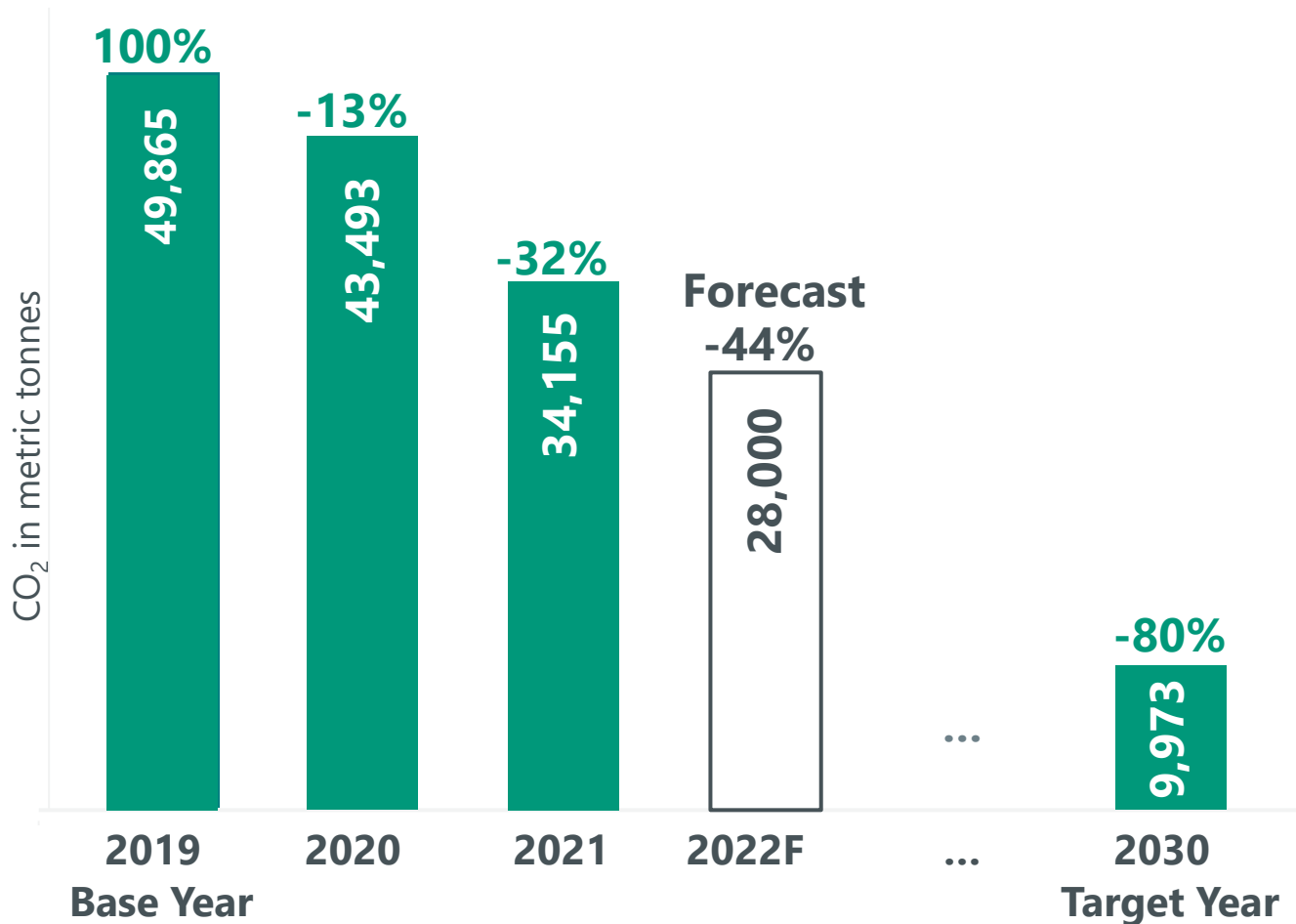
**- 25% CO<sub>2</sub> reduction** Scope 3

**>50% of plastics volume recycled** by Krones

**Market leader** in plant-based drinks and aseptics



# Our performance: Carbon emissions (Scope 1 and Scope 2)



Reducing the **absolute Corporate Carbon Footprint** (Scope 1 + Scope 2) of the KRONES Group by

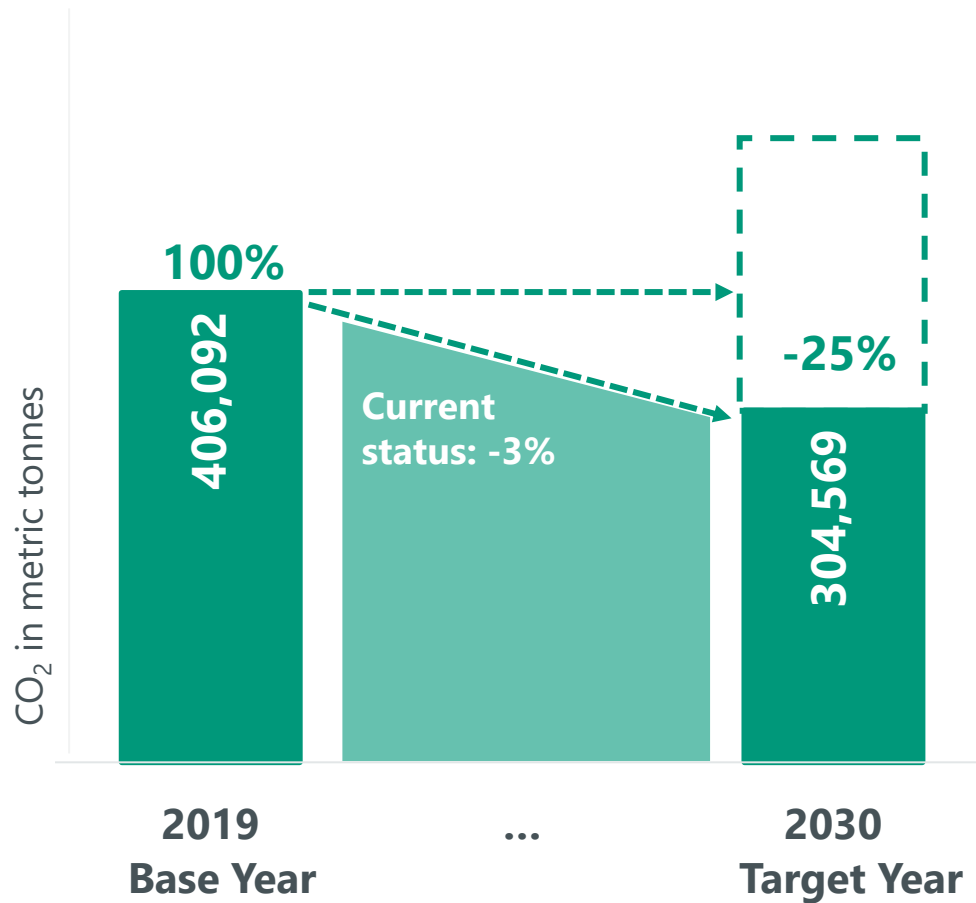
**-80%** ↓

by the year 2030 (base year: 2019) and reaching **operational climate neutrality** by the year 2040

**Current status (2021): -32%** ↓

~ **Half of the reduction target will already be achieved in 2022**

# Sustainability goals Scope 3 downstream



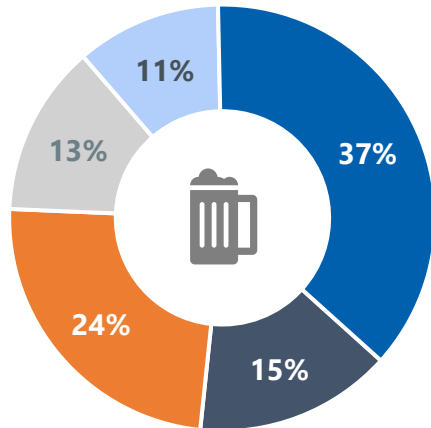
- › with **energy efficiency projects** and **future line concepts**
- › incl. **all measures**:
  - green energy supply,
  - digitally enabled energy saving solutions

**Our transformation for a sustainable portfolio is consistently pursued with our development programmes**

# Krones levers to reduce the product carbon footprint of beer



## CO<sub>2</sub> allocation of a brewery, in %<sup>1</sup>



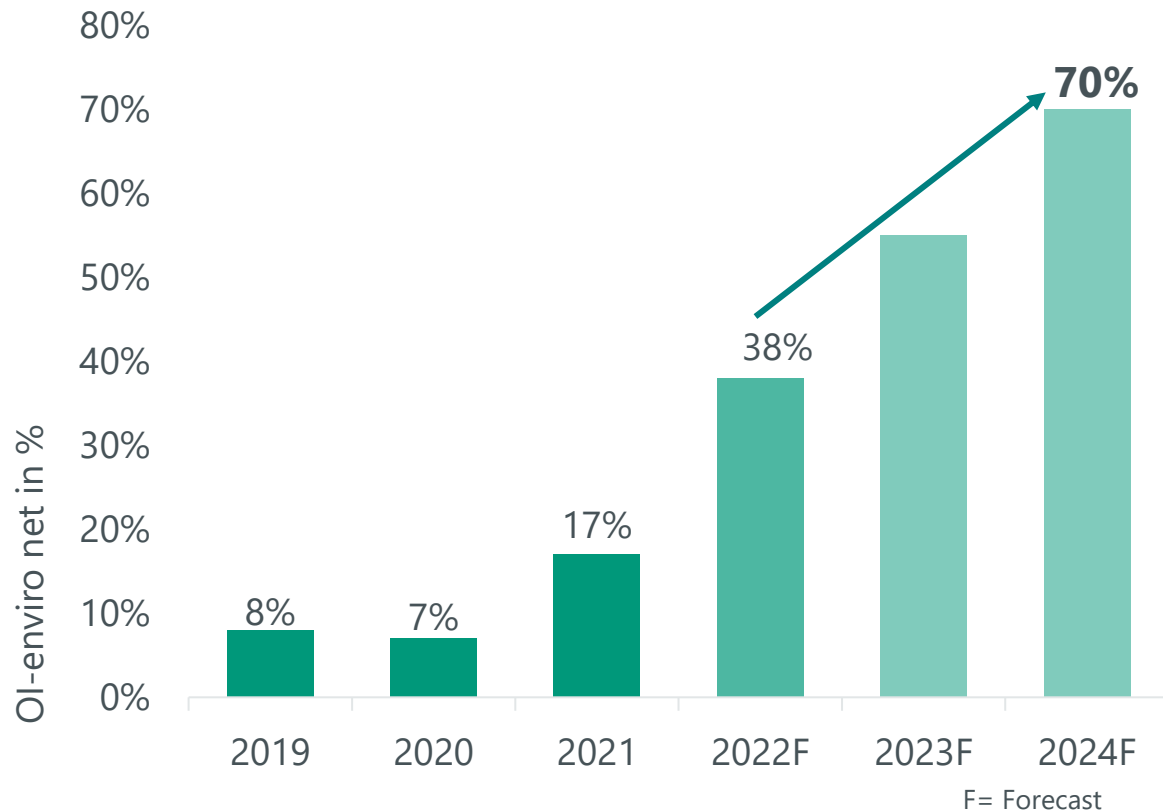
- Packaging
- Production Process
- Ingredients/ Agriculture
- Cooling
- Logistics

<sup>1</sup> Own illustration from CSR Reports Breweries 2021

## Krones levers to reduce CO<sub>2</sub>

<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #0056b3; margin-right: 5px;"></div> <div> <p><b>Packaging</b></p> <p>Circular Economy</p> <ul style="list-style-type: none"> <li>› Light-weighting</li> <li>› Handling of recycled material</li> </ul> </div> </div> <div style="margin-left: 20px; vertical-align: middle;"> <p><b>-25%</b></p> </div>
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #333333; margin-right: 5px;"></div> <div> <p><b>Production Process</b></p> <p>Energy and Media</p> <ul style="list-style-type: none"> <li>› Energy efficiency</li> <li>› Use of renewable energies</li> </ul> </div> </div> <div style="margin-left: 20px; vertical-align: middle;"> <p><b>&gt; -25%</b></p> </div>
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #e67e22; margin-right: 5px;"></div> <div> <p><b>Ingredients/ Agriculture</b></p> <p>Sustainable Food</p> <ul style="list-style-type: none"> <li>› Better yield of processes</li> <li>› Extraction of proteins from residuals</li> </ul> </div> </div> <div style="margin-left: 20px; vertical-align: middle;"> <p><b>-10%</b></p> </div>

# enviro - Energy and Water Solutions for a green customer production



- › **Conversion** to an even more energy- and water-saving portfolio
- › Increasing **sales potential**
- › **CO<sub>2</sub> target achievements** for Krones and our customers

**Share of enviro machines order intake to reach 70% of machine portfolio in 2024 (forecast)**

# Krones sustainability ranking



**ecovadis**  
Business Sustainability Ratings

Industry  
average

**KRONES**  
2021

**KRONES**  
Ambition long-term

No medal



Industry average  
**KRONES**  
2021

**KRONES**  
Ambition long-term

**D**

**C**

**B**

**A**

**External benchmarks confirm our strong sustainability performance and we are striving for more**



03

Deep dive:

# Filling and Packaging Technology

Thomas Ricker/Markus Tischer

# Measures at a glance: segment Filling and Packaging Technology



## 2022 expectation

**Revenue** ~ € 3.2bn

**EBITDA** 9% - 10%



## 2025 target

**Revenue** ~ € 3.7bn

**EBITDA** 12% - 14%

## Programmes to improve growth and efficiency

Program	Structure and process	Global footprint	Portfolio	Growth
Topics	<ul style="list-style-type: none"> <li>› Adjust structure and processes for digitalization and new business models</li> <li>› Automation of supplier and customer transactions</li> </ul>	<ul style="list-style-type: none"> <li>› Expand production in Hungary and China</li> <li>› Localize supply chains</li> <li>› Localize and digitalize service</li> </ul>	<ul style="list-style-type: none"> <li>› Reshape product portfolio in filling and packaging – focus on line level</li> <li>› New products and innovations to increase efficiency and sustainability</li> </ul>	<ul style="list-style-type: none"> <li>› Market growth, especially in Asia/Pacific and Africa regions</li> <li>› Pricing</li> <li>› Further increase customer loyalty with Service Level Agreements</li> </ul>
Rev			<b>€150 – 250m</b>	<b>€250 – 450m</b>
EBITDA	<b>0.5% – 1.0%</b>	<b>1.0% – 1.5%</b>	<b>1.0% – 1.5%</b>	<b>0.5% – 1.0%</b>

# Product and market trends driving our products



## PET is back

### Underlying driver

- › Greater availability
- › Global recycling initiatives
- › Reduced CO<sub>2</sub> footprint compared to other packaging types
- › Highly attractive products due to shape and design options



## Aseptic gains momentum

- › US hotfill market to be converted to aseptic, leading to:
  - CO<sub>2</sub> footprint reduction
  - Savings in plastic consumption and littering



## Success of cans ongoing

- › High customer acceptance of cans in mature markets
- › “Cool and fresh” perception as unique feature



# Market drivers for innovation and lifecycle services



## Energy reduction and CO<sub>2</sub> footprint

### Underlying driver

- › Strong demand for any solution to reduce energy and resource consumption, driven by
  - ESG compliance
  - Cost savings



## Water reduction

- › “Saving water” is among top management priorities
- › Tailor-made process and cleaning cycles to meet the “real need” only



## Plastic reduction

- › Light-weighting of bottles and caps
- › Elimination of plastics in secondary packaging










## Digital services

- › Availability of skilled operators
- › Increased efficiency and safety

# Future requirements of a PET line



	Today	Tomorrow	Change in %
	20-70 products (SKUs)	> 100 products (SKUs)	+100%
	Ø 5h product change frequency	<1h product change frequency	-80%
	3 operators	1 operator	-66%
	50 bottles/m <sup>2</sup> (per hour)	>70 bottles/m <sup>2</sup> (per hour)	+40%
	Converter business for preforms	On-site preform manufacturing	-
	Emissions for filling process 5.6 kg CO <sub>2</sub> /1000 bottles	Emissions for filling process 4.2 kg CO <sub>2</sub> /1000 bottles	-25%
	Installation 100 days	Installation 70 days	-30%

# Update: Customer expectations fulfilled



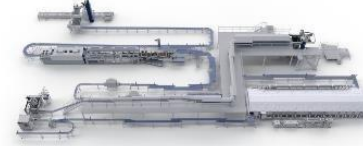
## PET lines



## Glass lines



## Can lines



## Aseptic PET lines



Focus industries

Water

CSD



CSD

Beer



CSD

Beer



Sensitives

Dairy



Solutions highlights

High-speed PET line



Flexible filling system



AI-based inspection



Hygienic filling



Sustainable sec. packaging



New filler generation



Dairy alternatives



Enlarged performance range



**#1 market position globally**

**#1 market position globally**

**Now! #1 or #2 market position globally**

**#1 or #2 market position depending on region**



# New Can Line design

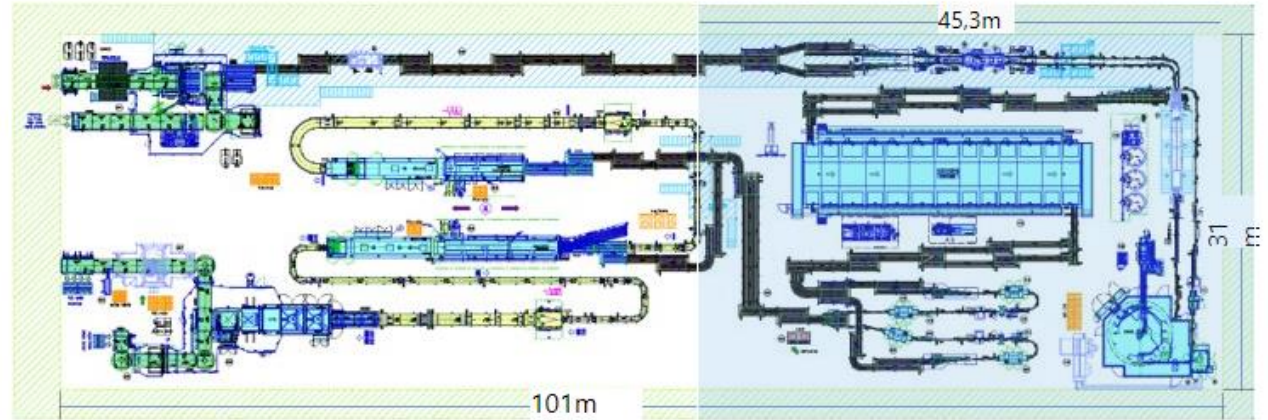


New Block System **combining filling and pasteurizing** due to new line control:

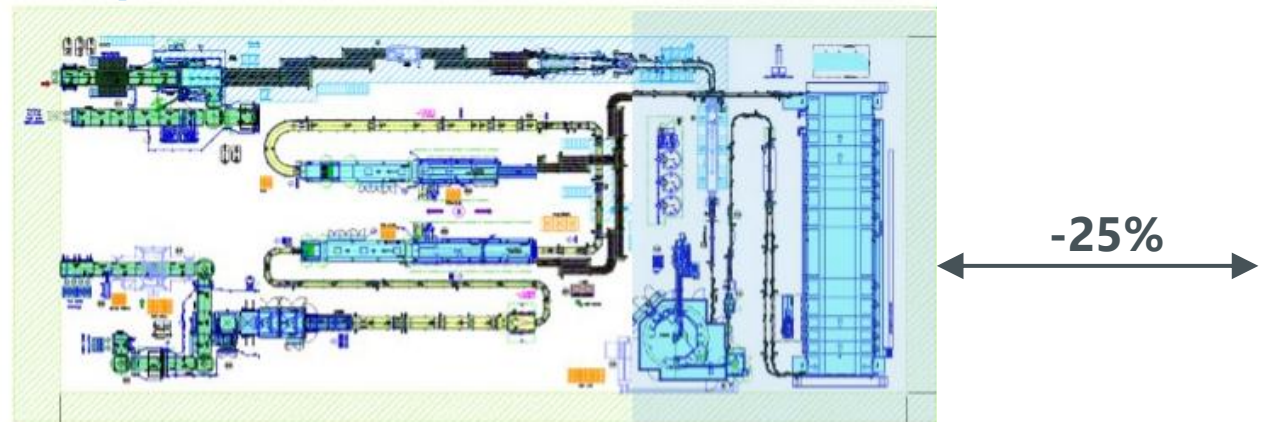
Up to **25%** smaller footprint

- › **Less resources** for the lines
- › Further **light-weighting** of cans
- › **Reduced energy consumption**

## Compact Can Line - 2021



## Compact Can Line - 2023

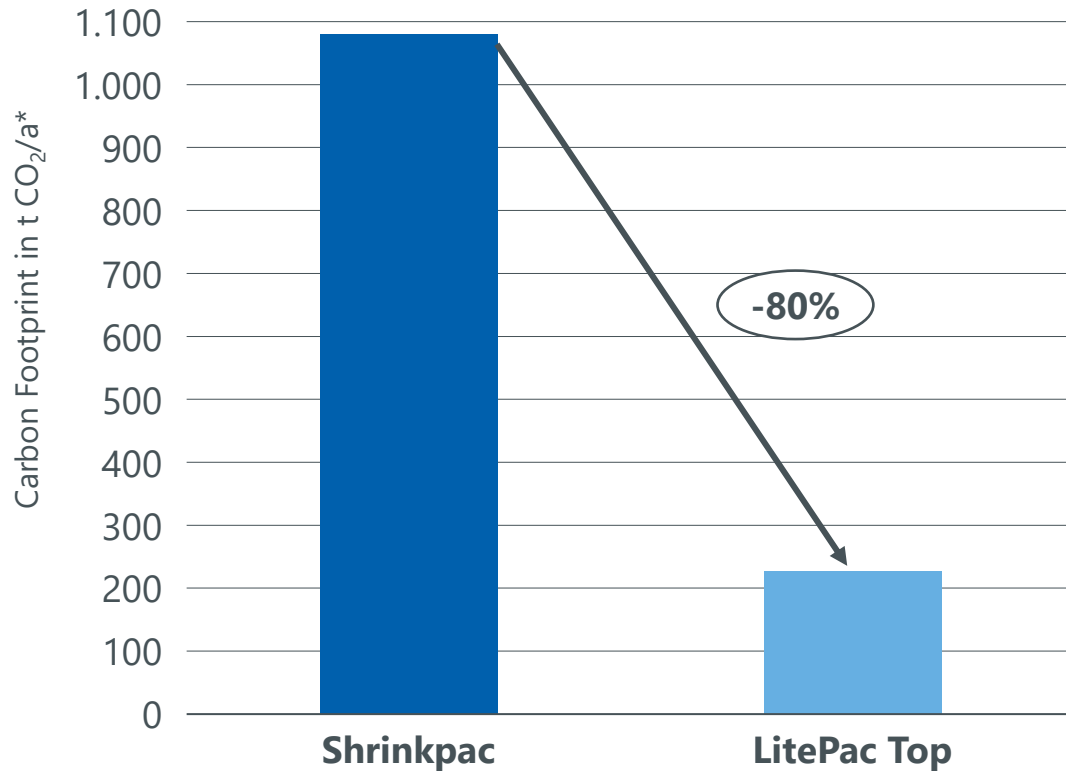




# Sustainable Solutions reduce carbon footprint of our customers (1): New LitePac Top Secondary Packaging



Effect of chosen secondary packaging on dry part



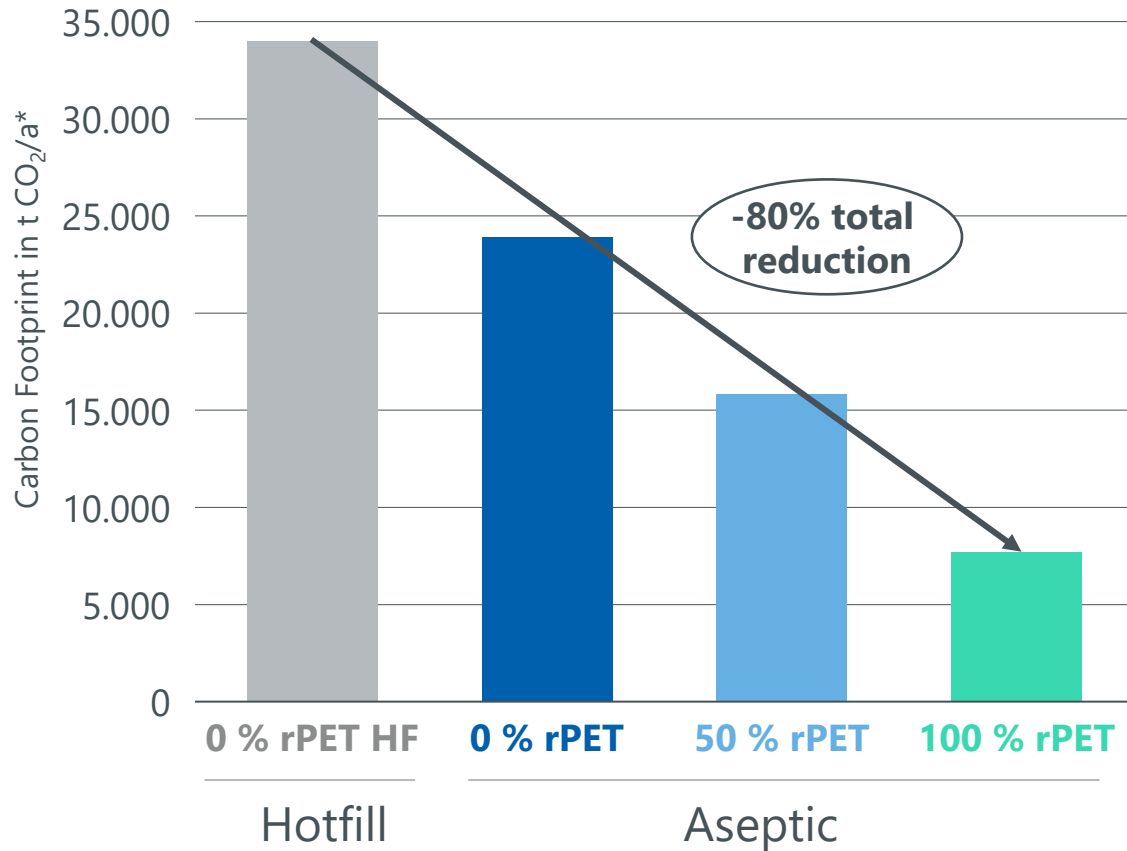
**Krones Vision: no secondary packaging from plastic material**

\*Including packaging process and material, 3x2 0,5l PET bottle; 36.000.000 packs/a

# Sustainable Solutions reduce carbon footprint of our customers (2): Aseptic and rPET replace Hotfill



Effect of chosen filling process and bottle material



**Krones Vision: Replacing all Hotfill lines with the latest Aseptic technology to handle 100% recycled materials on Krones Aseptic lines**

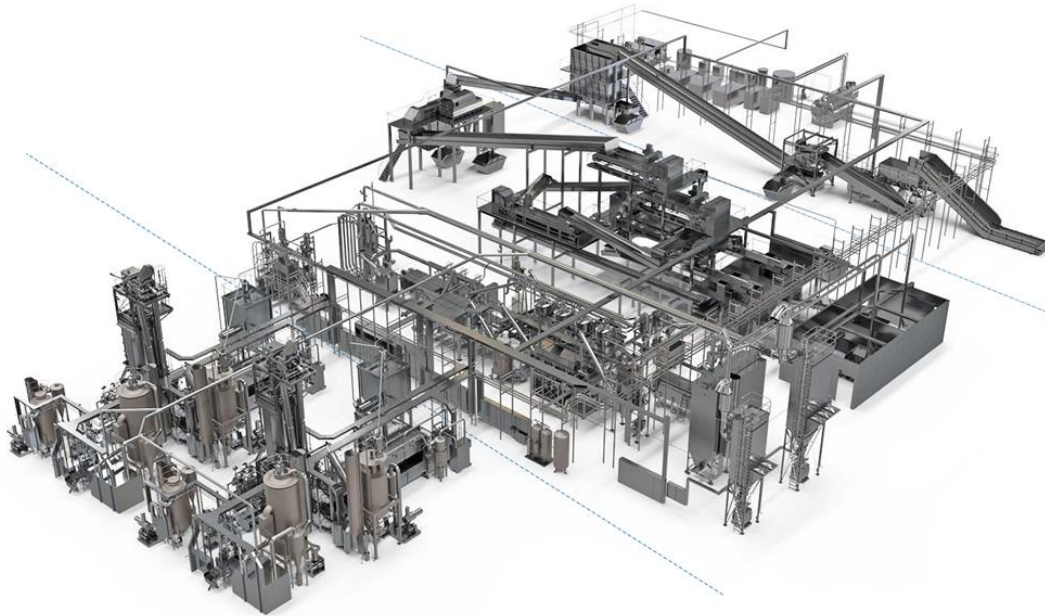
\* Example based on hotfill technology versus aseptic filling: Figures include filling process incl. bottle material

# Circular Economy Solutions – Recycling Solutions



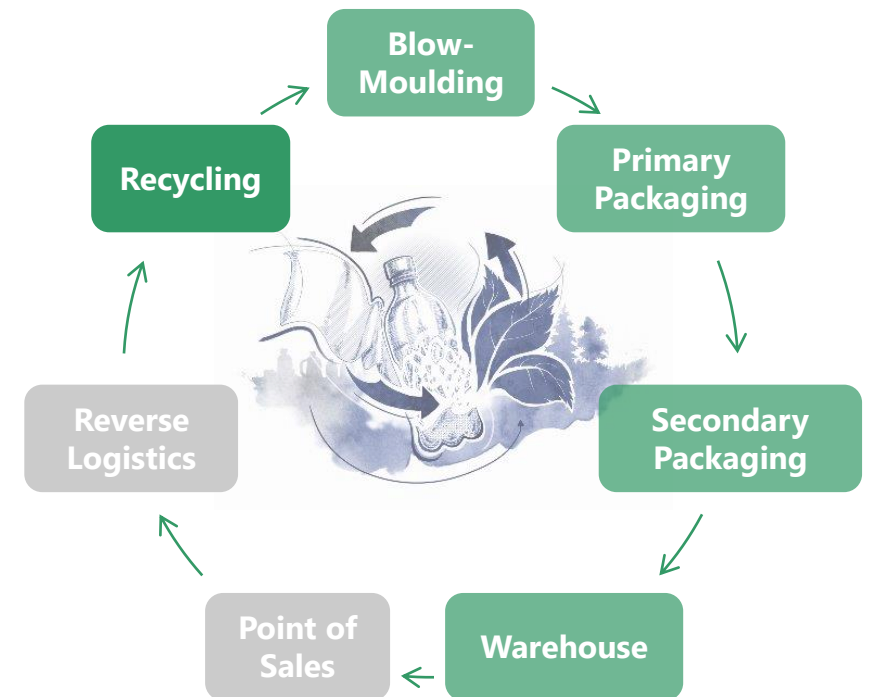
## Recycling as a USP

With its unique portfolio and know-how, Krones offers both packaging and recycling solutions



## Closed-loop recycling for different materials:

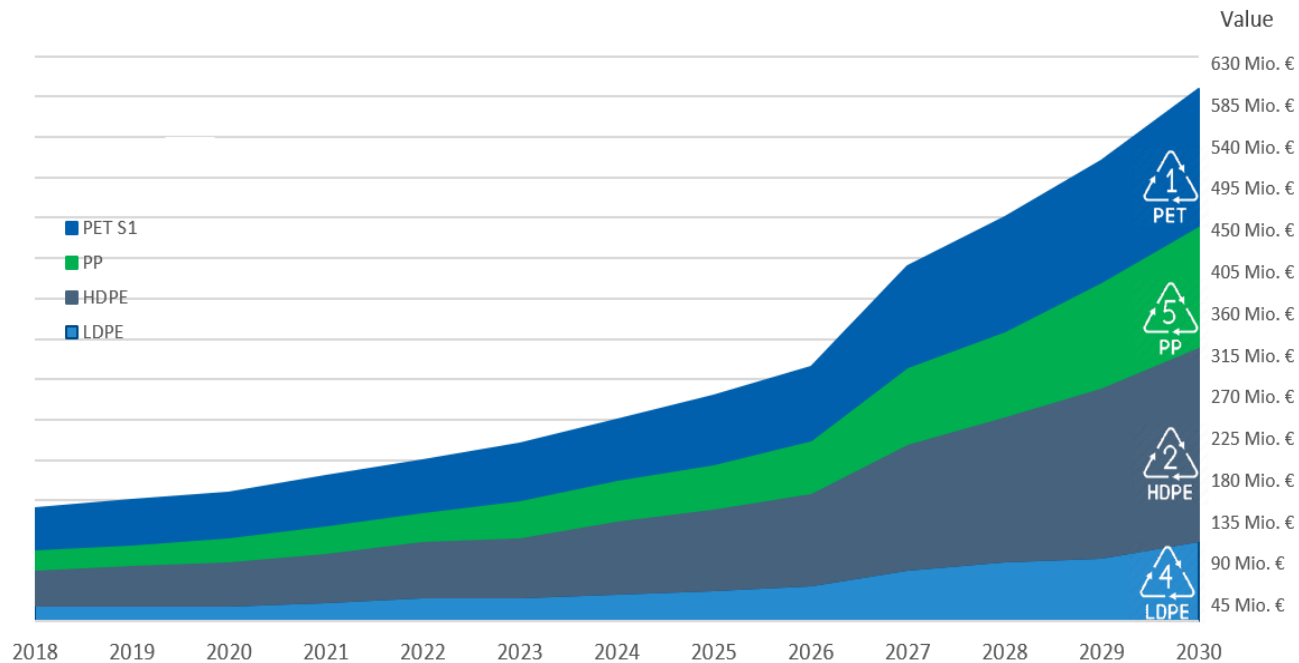
PET and a variety of other rigid and flexible plastics



# Market potential for Krones recycling business



## Market potential, €m



## Recycling business growth

driven by

- › consumer awareness
- › legal requirements
- › diversification of recycling materials

**€100 m**

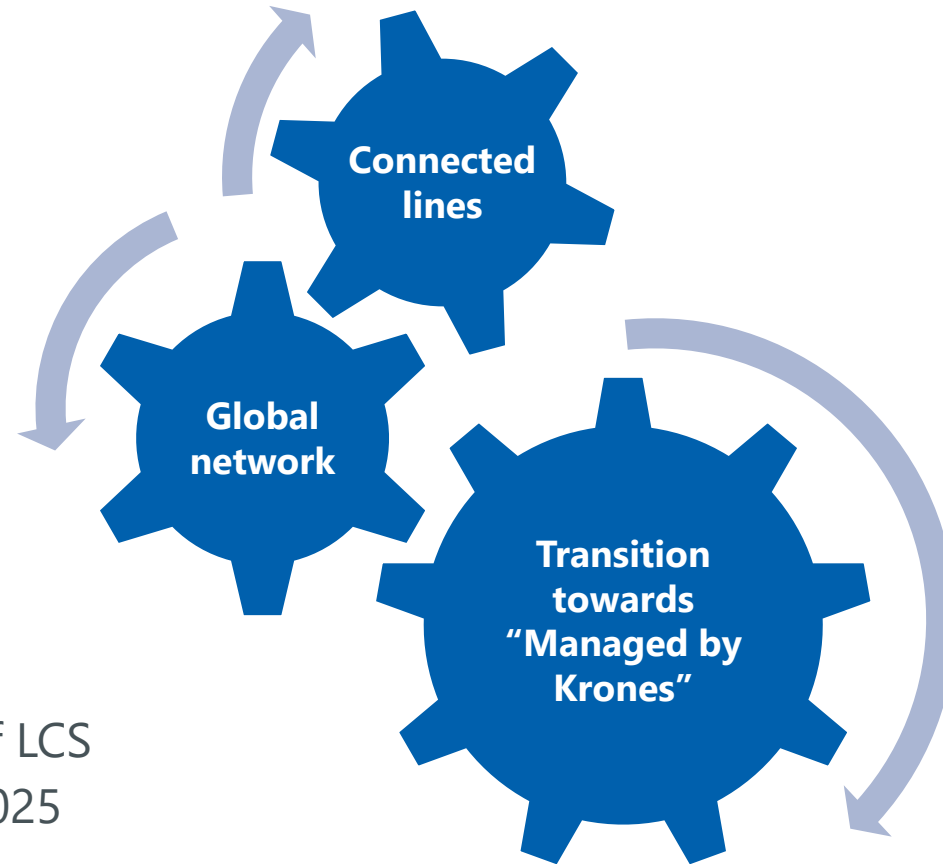
targeted turnover recycling solutions by 2025 with PET, PP, HDPE, LDPE, PS

## Krones pushes recycling business as a growth opportunity

Source: Own illustration based on Frost & Sullivan (2021)



# Strong momentum for Lifecycle Services (LCS) driven by growing line base and superior customer service

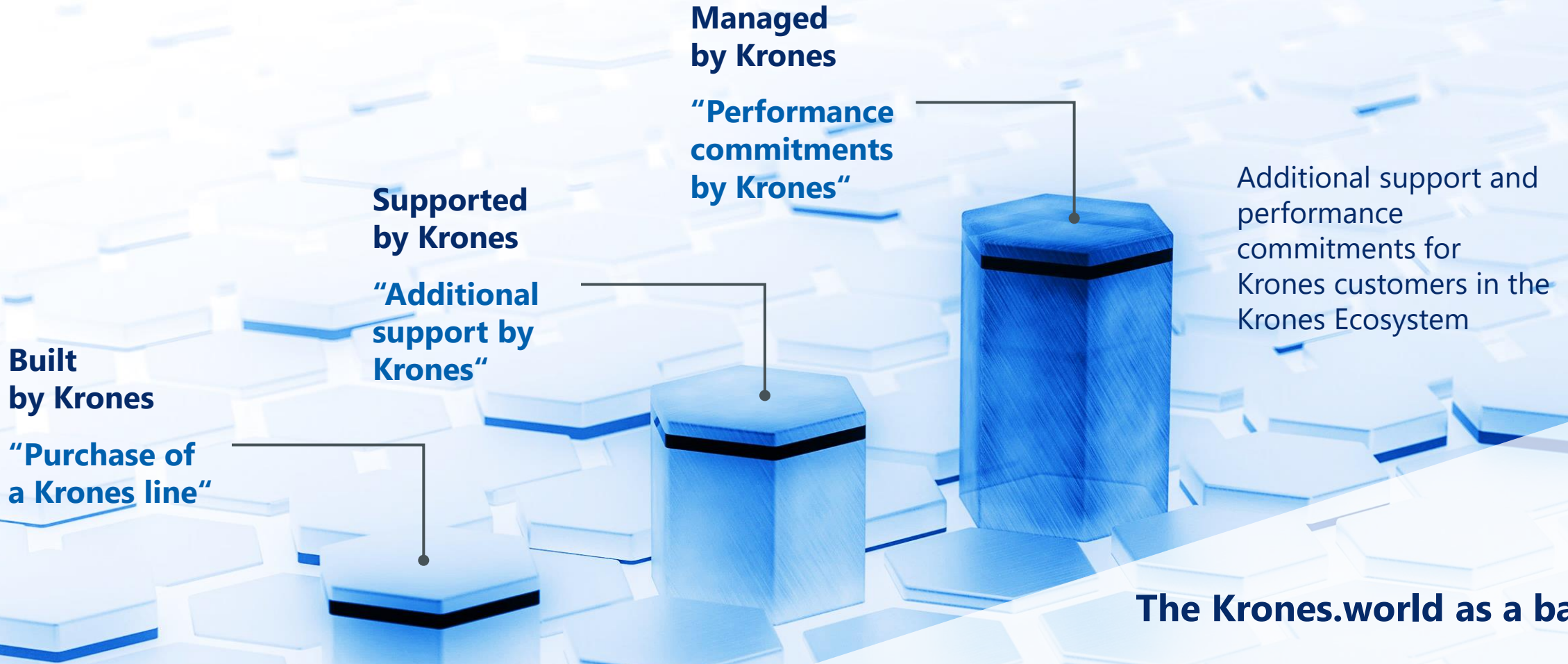


## Increasing LCS

market share leads to over-proportional growth

**+ 4.5% CAGR** of LCS  
relevant line base 2020 to 2025

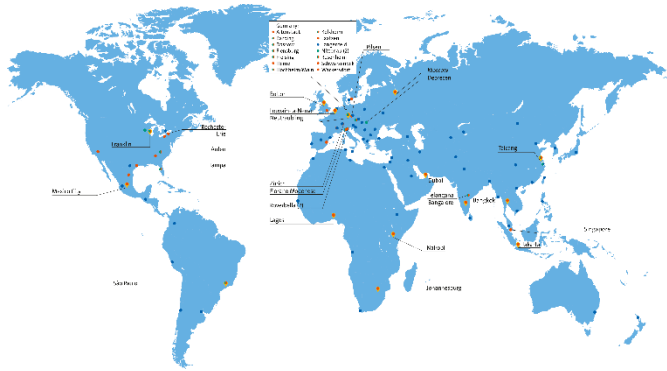
# Krones continues its chosen strategy towards “Managed by Krones” to gain further market shares



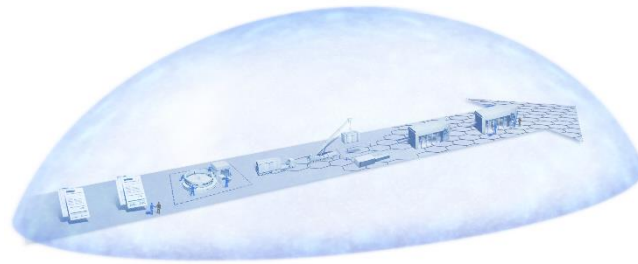
# Based on our connected line base, we deliver superior customer services



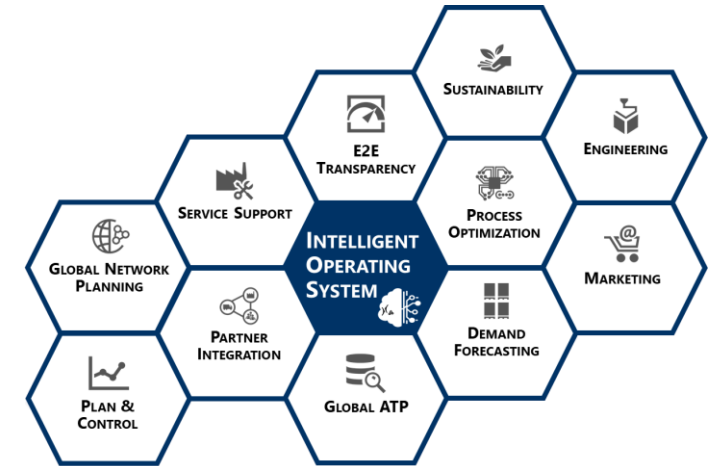
## Krones Network supports customers globally



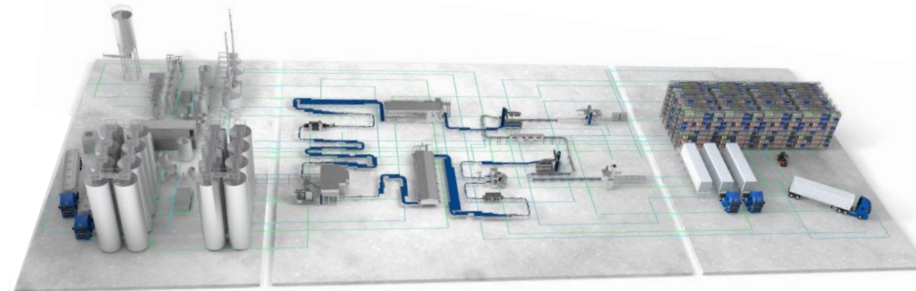
## Krones.world drives digital services



## Intelligent Operating System enables smart supply chain mgmt



## Connected line base



# Krones network ensures customer proximity around the globe

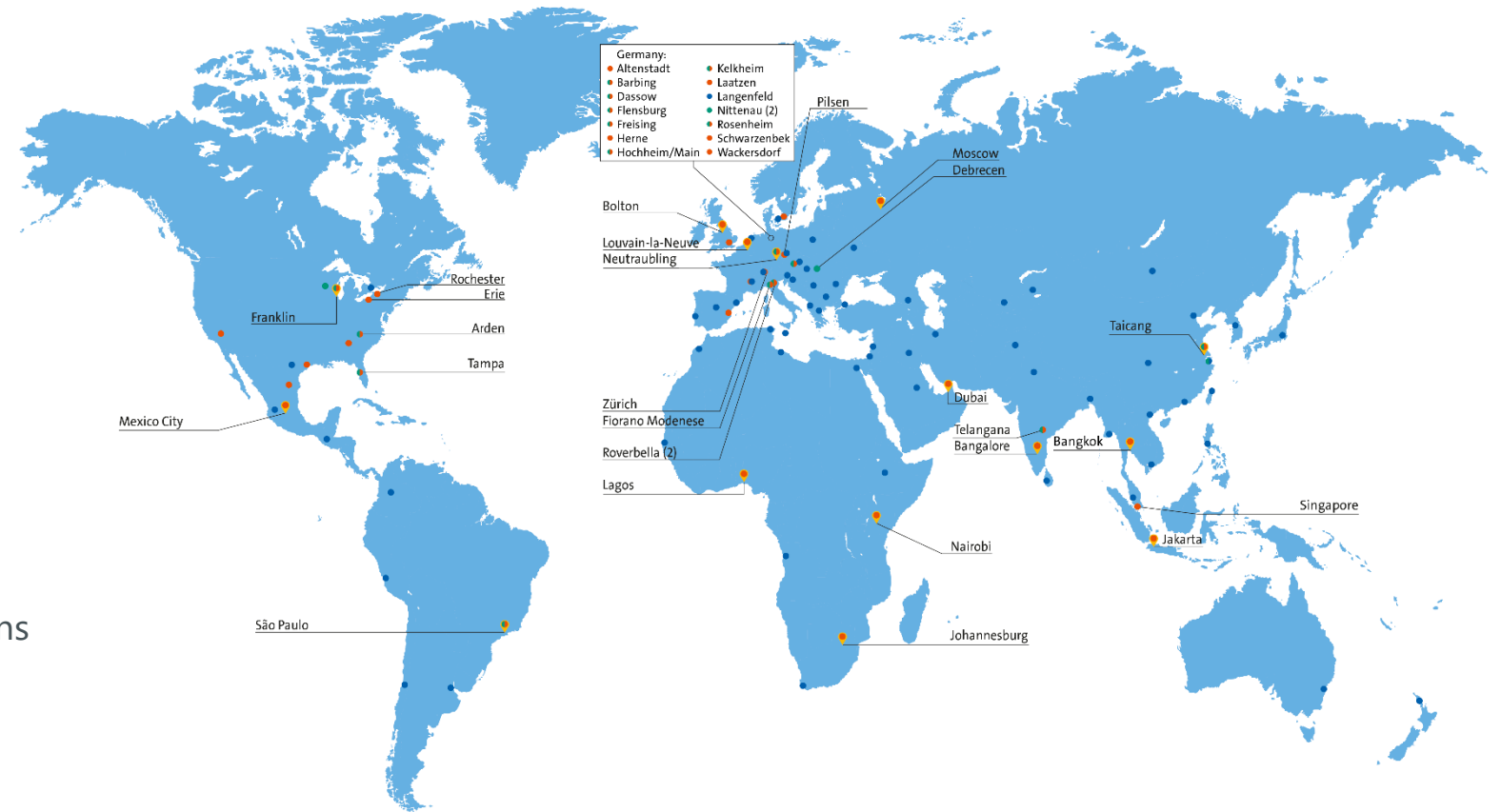


~ **3,000** service engineers globally

> **100** subsidiaries and locations across the globe

**Global** spare part availability

**Digitalized** support solutions



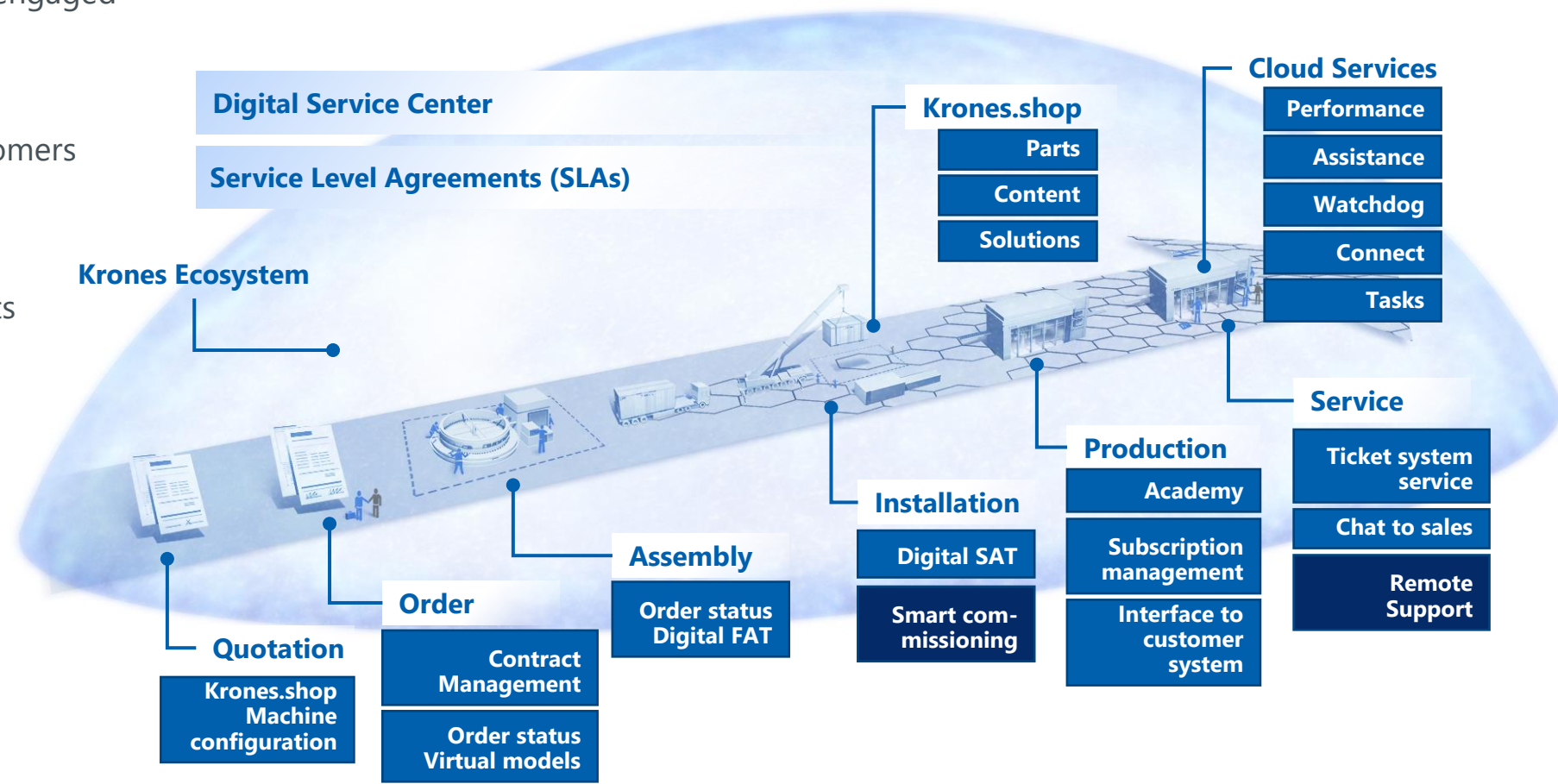
The Krones network proved a success factor during the Covid-19 pandemic and will also provide the fundament for any kind of future services

# Krones.world bundles all digital customer services along the supply chain in one platform and is highly appreciated by our customers



■ Detailed next

- > **17%** of LCS business fully engaged in Krones.world
- > **29,000** registered customers
- > **100,000** monthly visits
- > **1,000** Service Contracts
- > **150** Lines Connected

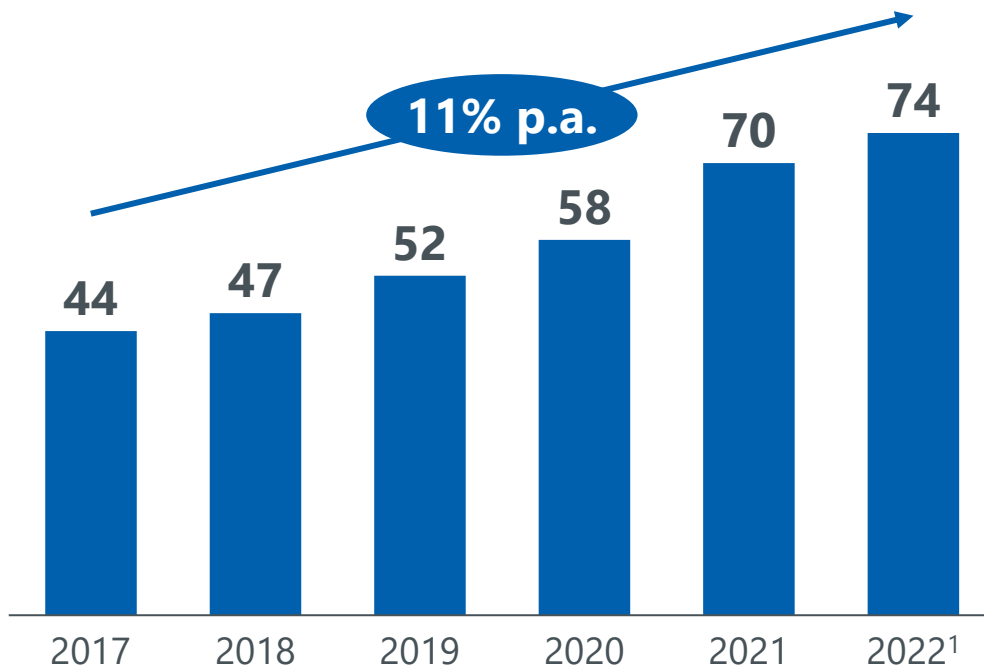


# Central elements of Krones.world (1): Remote Support



## Remote Support is high in demand

Yearly remote access in thd



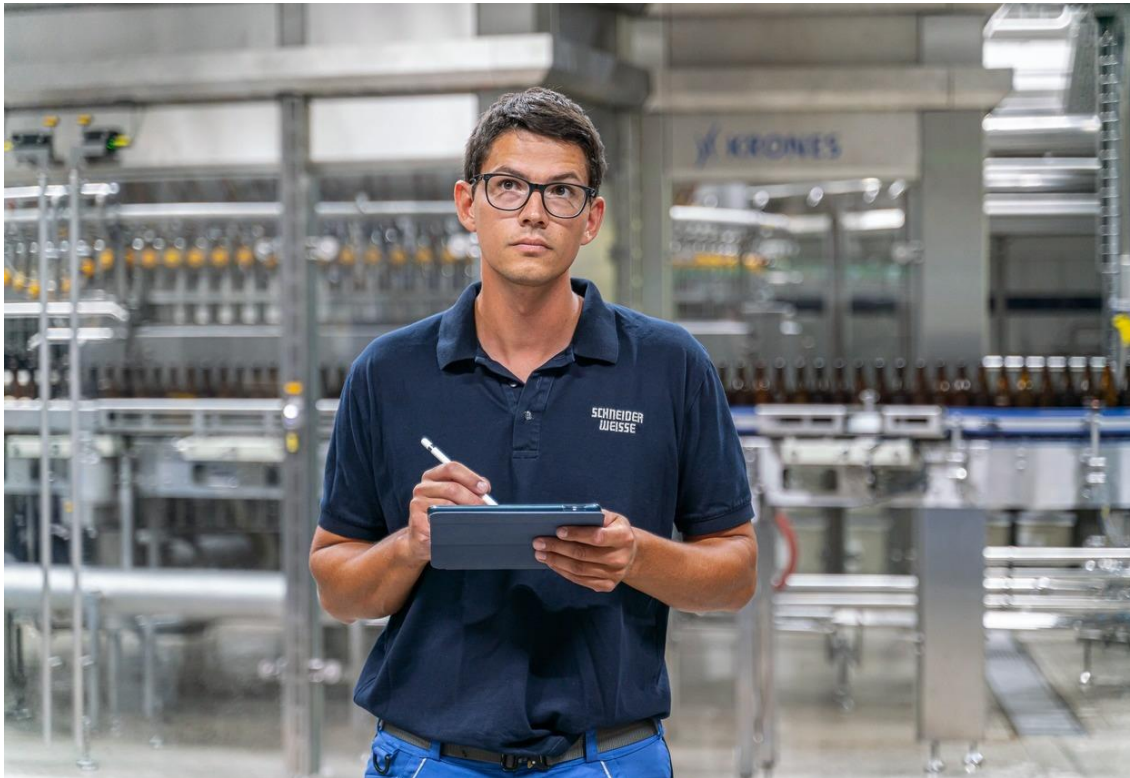
## Main customer and Krones benefits

- › Response time
- › Costs savings
- › No travel time and cost
- › Availability of best experts
- › Independence of Covid-19 travel restrictions

**Krones delivers best-in-class Remote Support, as it is part of “New Normal” after Covid-19**



# Central elements of Krones.world (2): Smart Commissioning



## Main customer and Krones benefits








- › Systematic commissioning approach based on real-time data and advanced analytics by using the Krones.world IIOT solutions
- › Upscaling of service expertise
- › Significant reduction of commissioning costs
- › Faster ramp up and commercial production

**Up to 30% reduced commissioning time saves cost and enables faster commercial production**

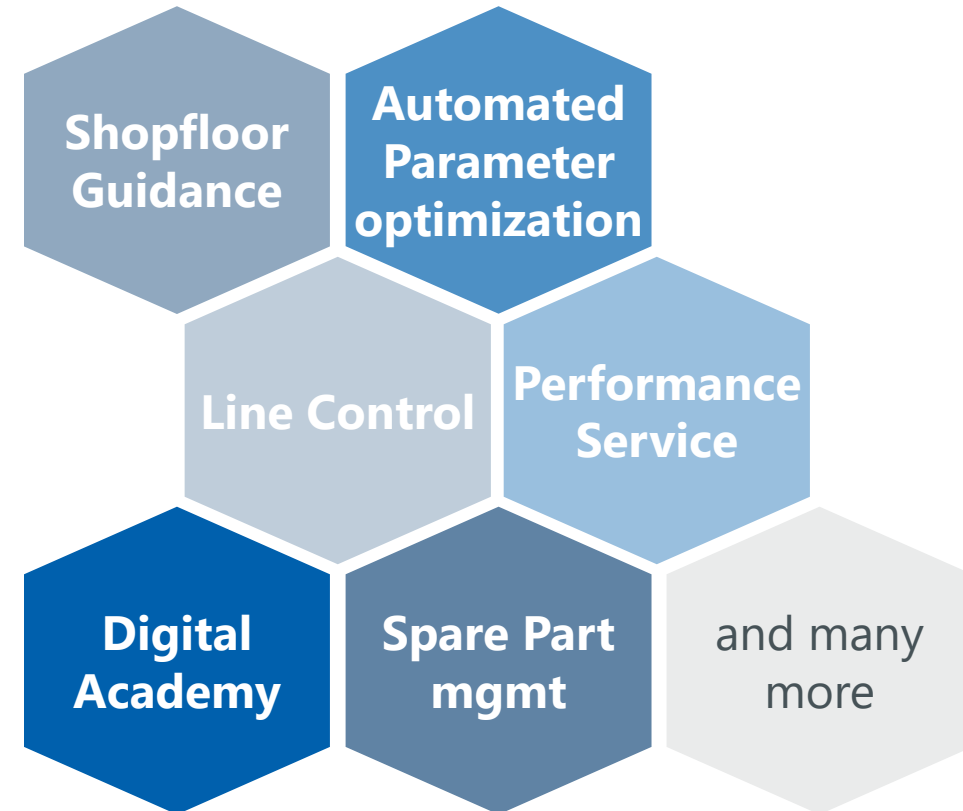
# Krones.world solutions to face customer challenges



## Customer challenges

-  Downtimes
-  Waste
-  Maintenance Planning
-  Production Parameters
-  Employee Training and Knowledge
-  Changeovers
-  Consumption

## Selective Krones solutions



**Krones.world provides customer solutions to manage complexity, reduce costs and maximize output**



# Our intelligent operating system enables smart, efficient and sustainable supply chain management focused on Lifecycle Service



**AI-based**

demand forecasting

**Automated**

partner integration

**> 2 Mio SKU**

shipped p.a.

**> 130,000 SKU**

on stock (LCS)

# Cloud-based Service Level Agreements

## Digital safety rope and performance booster



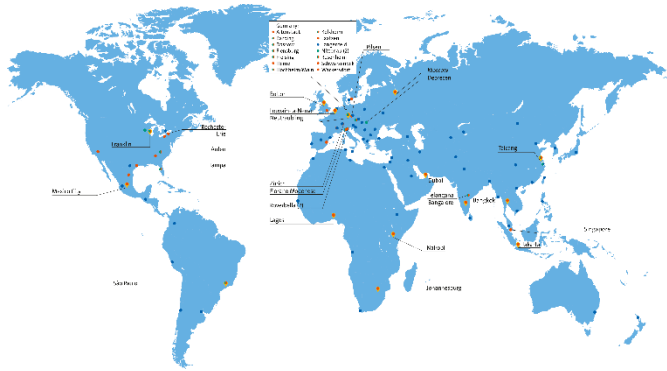
*The Service Level Agreement gives us the reassurance and reliability we need, not least because Iceland is a remote island. We can hook up with Kronos online at any time. Their staff see the same data as we do and can guide us.*

Andri Þór Guðmundsson  
CEO at Ölgerðin Egill Skallagrímsson

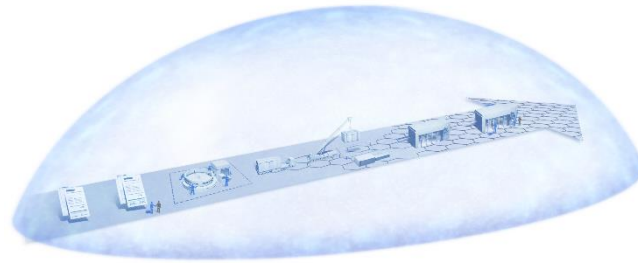
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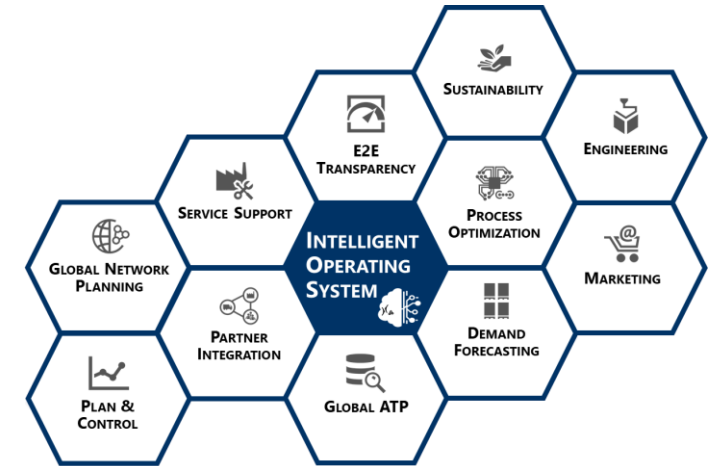
## Krones Network supports customers globally



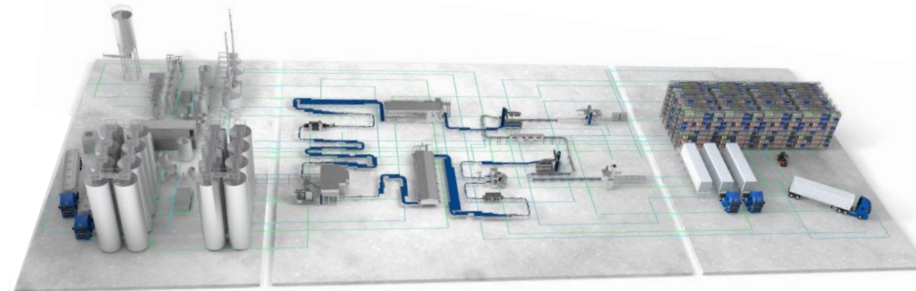
## Krones.world drives digital services



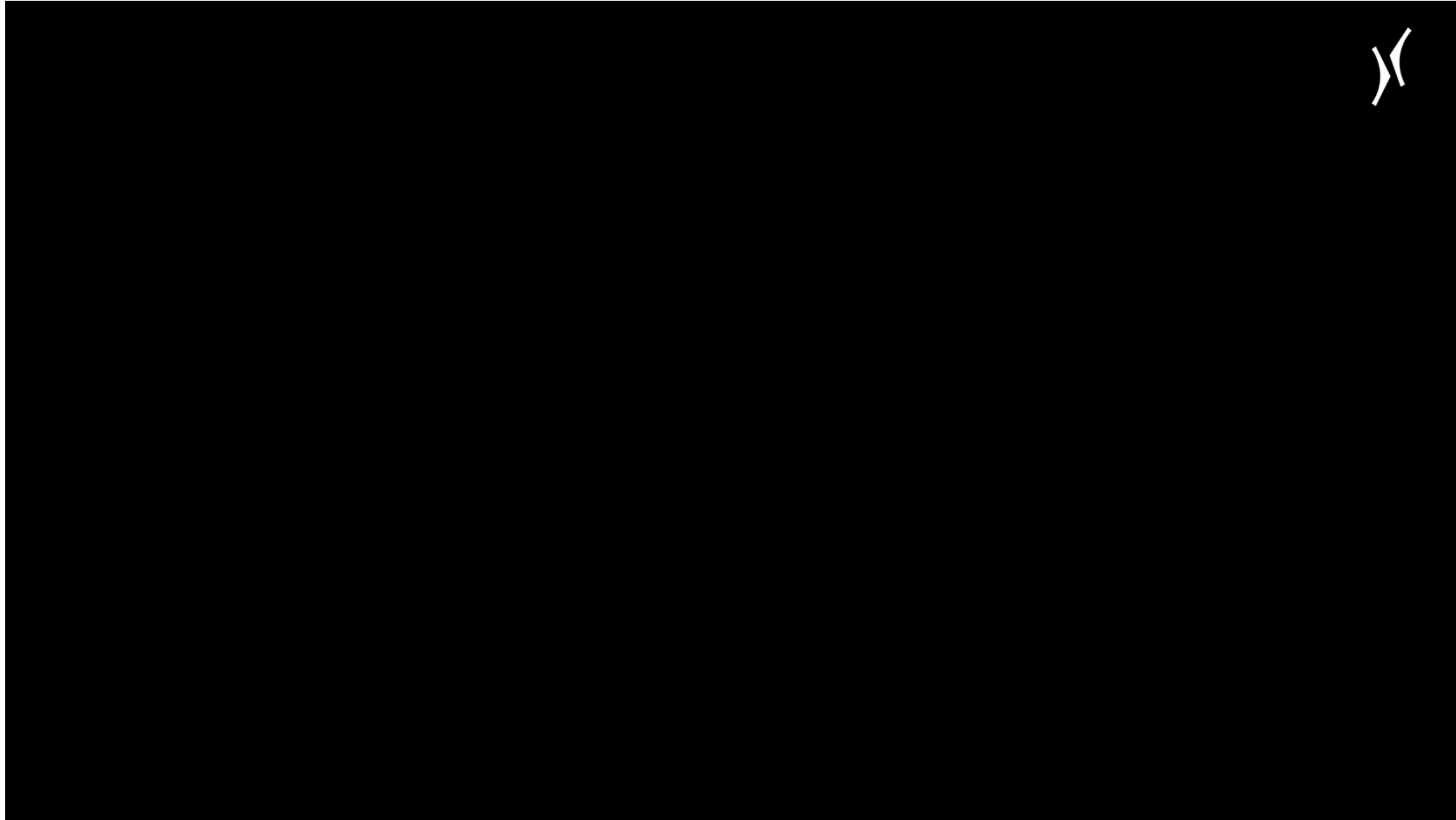
## Intelligent Operating System enables smart supply chain mgmt



## Connected line base



# In timeline through the pandemic – Client example Petrópolis, Uberaba



For reference: Youtube „In Timeline durch die Pandemie“, [https://youtu.be/uWJmqQs\\_vXQ](https://youtu.be/uWJmqQs_vXQ)



04

Deep dive:  
Process Technology

Bülent Bayraktar

# Measures at a glance: segment Process Technology



## 2022 expectation

**Revenue** ~ € 360m

**EBITDA** >5%



## 2025 target

**Revenue** ~ € 500m

**EBITDA** 7% – 9%

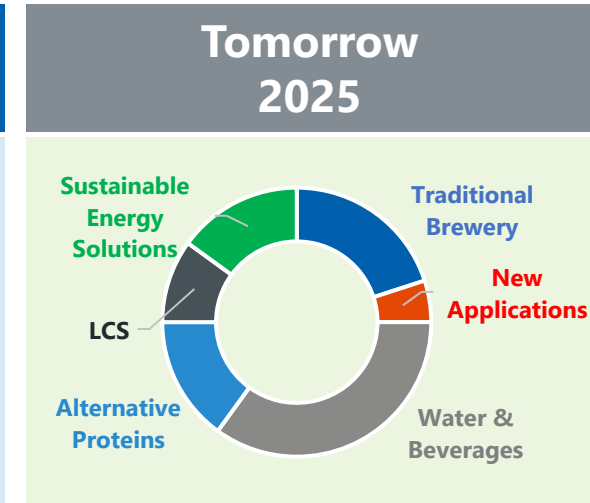
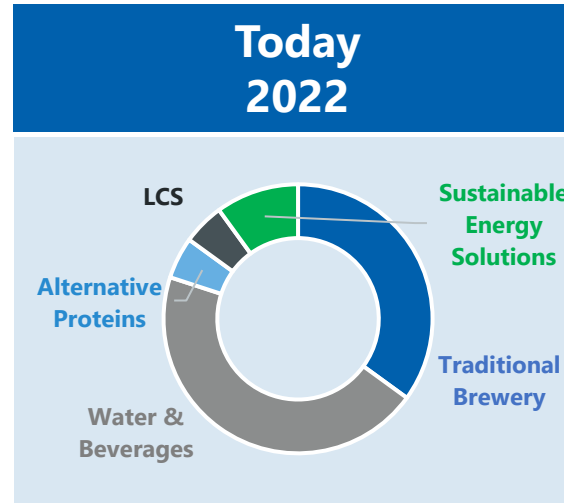
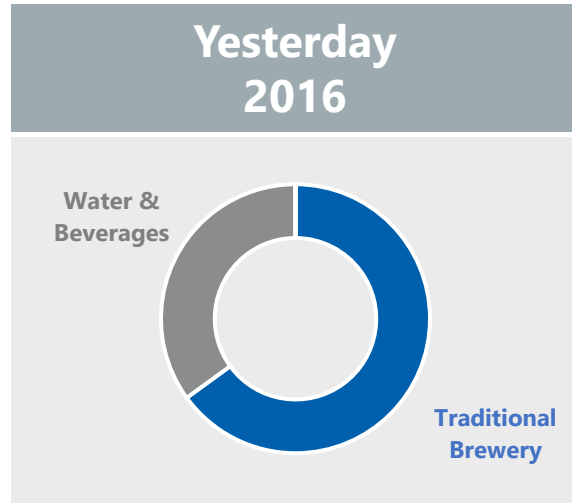
## Programmes to improve growth and efficiency

Program	Structure and process	Global footprint	Portfolio	Growth
Topics	<ul style="list-style-type: none"> <li>› Adjust structure and processes for digitalization</li> <li>› Bottom line synergies across entities</li> <li>› Best-cost country sourcing</li> <li>› Leveraging US potential</li> </ul>	<ul style="list-style-type: none"> <li>› Increase collaboration across regions</li> <li>› Leverage cost competitive manufacturing hubs</li> <li>› Africa focus</li> </ul>	<ul style="list-style-type: none"> <li>› Increased focus on after-sales</li> <li>› New products &amp; innovations to increase efficiency and sustainability</li> </ul>	<ul style="list-style-type: none"> <li>› Market growth, especially APAC, Africa &amp; NAM</li> <li>› Extended scope: home/personal care and liquid food</li> <li>› Alternative proteins</li> <li>› Water initiative</li> </ul>
Rev			€ 40 – 60m	€ 80 – 100m
EBITDA	0.5% – 1.0%	0.25% – 0.5%	1.0% – 1.5%	0.25% – 1.0%

# PT - Technology diversification & global setup drive growth



Revenue Mix  
(approximation) 



Structure 

3 stand-alone entities

9 stand-alone entities

Flexible, regional setup

After-Sales 

Opportunistic LCS Business

Systematic LCS Business

Integral LCS Business

Technology Focus 

Brewery  
Soft drinks/spirits  
(*water treatment*)

Brewery  
Soft drinks/Spirits  
**+ Dairy**  
**+ Water treatment**  
**+ Liquid food**  
  
**+ Alternative Proteins**

Brewery  
Soft drinks/spirits  
Dairy  
Water treatment  
Liquid food  
Alternative Proteins  
**+ HPC**



# Process Technology markets - Strategic growth beyond tomorrow



## Alternative Protein Technology

Plant-based & advanced fermentation

## Water Technology

Water treatment & water design

## Sustainable Energy Solutions

Energy efficiency & fossil fuel substitution



**CAGR > 15%**

Boston Consulting Group 2020 - 2030

**CAGR > 6%**

MDC Research 2022 - 2030

**CAGR > 20%**

Fortune Business Insights 2022 - 2029

# Beyond Dairy - Krones Alternative Protein Technology Landscape



## Plant-Based

Proteins from plants are processed to drinks

Key Technology → **Enzymatic Reactions**

Krones Background → **Mashing & Mixing**



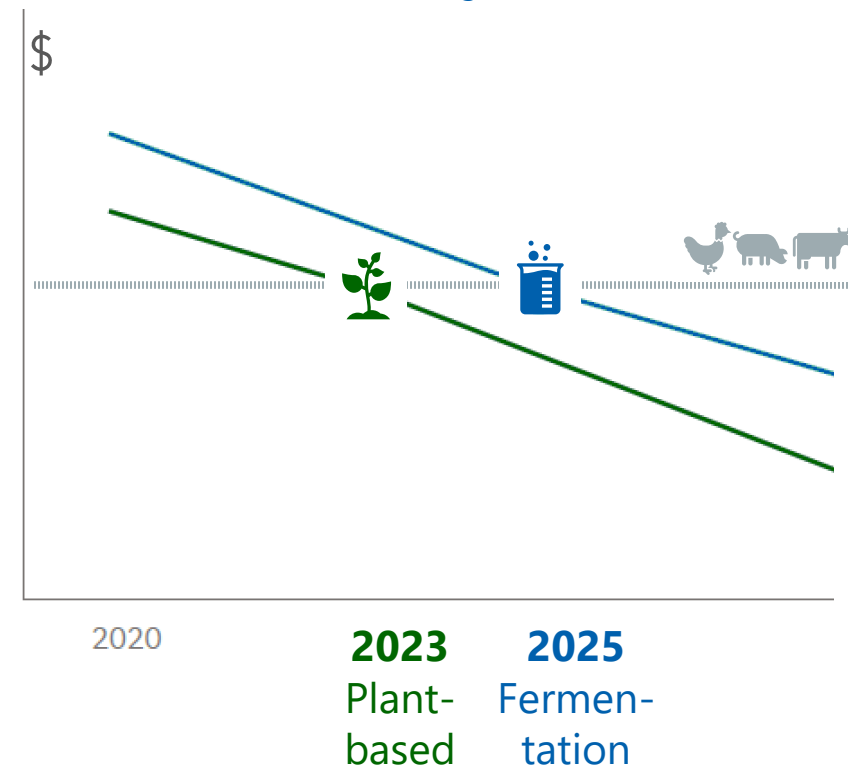
## Advanced Fermentation

Yeasts and bacteria processed to replace animal products

Key Technology → **Fermentation**

Krones Background → **Yeast Management**

**Expected cost parity with conventional protein products**  
BCG (2021) Food for Thought: The Protein Transformation



**Enzymatic reactions & fermentation are key – Krones is an expert in these fields**



# Plant-based Dairy alternatives

## Turn-key solutions from Krones



### from legumes

(e.g. soy, peas, lupins)



### from nuts

(e.g. almond, coconut)



### from grains

(e.g. oats, rice, spelt)



## Krones Technology

Turn-key facilities  
for plant-based dairy  
alternatives

**From solid to liquid – Krones provides technology for all plant-based dairy alternatives**



# Advanced Fermentation

The protein source more efficient than animals



Bacteria, yeast,  
fungi or algae



Animal-free  
proteins



Liquid  
carbohydrate feedstock



**Krones is leveraging beer fermentation know-how to create food solutions beyond tomorrow**



## Advanced Fermentation

Emerging industry leaders partner with Kronos



**meati**

produces **delicious, nutritious & sustainable** meat alternatives made from **mushroom root**

### Sales

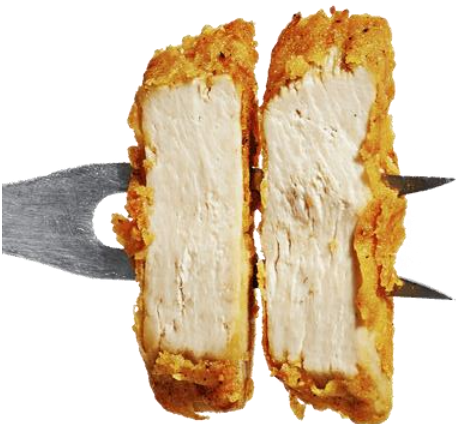
Meati's steaks & cutlets were an instant hit and **sold out quickly** across the United States

### Funding

Since 2020, investors provided **\$>200m funding**, latest C-round with \$150m in 2022

### Production

Large facility built in 2022 - the **Mega Ranch**; even bigger **Giga Ranch** already planned



Processing Group North America supports meati's **production scale-up** with **fermentation technology**

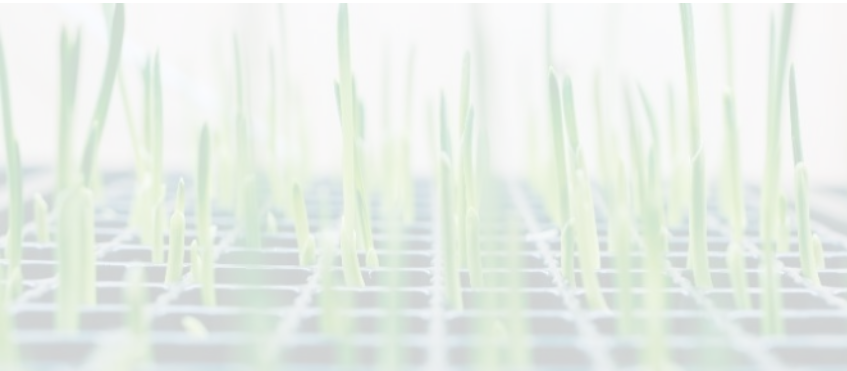


# Process Technology markets - Strategic growth beyond tomorrow



## Alternative Protein Technology

Plant-based & advanced fermentation



**CAGR > 15%**

Boston Consulting Group 2020 - 2030



## Water Technology

Water treatment & water design



**CAGR > 6%**

MDC Research 2022 - 2030



## Sustainable Energy Solutions

Energy efficiency & fossil fuel substitution



**CAGR > 20%**

Fortune Business Insights 2022 - 2029



# Water technology

## Krones value chain beyond equipment sales



### Ingredients Supply

generates recurring sales of pre-formulated salt recipes

### Engineering Services

R&D and water design for costumers

### Equipment Business

Hydronic machines







# Water technology

## Makkah Water KSA – large-scale water treatment by Kronos



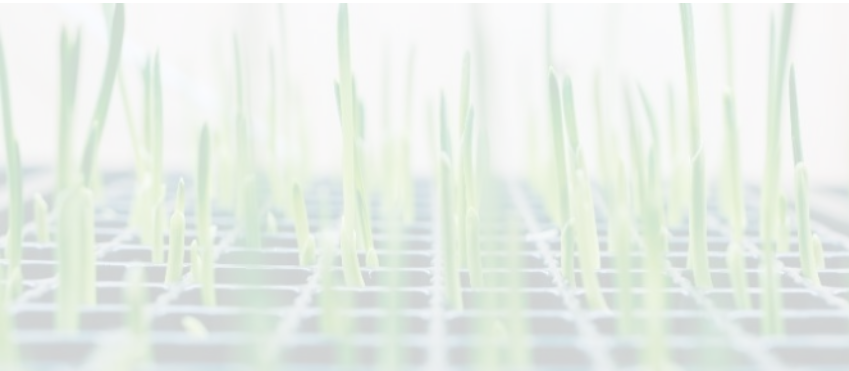
**330,000 litres**  
*of water per hour*

# Process Technology markets – Strategic growth beyond tomorrow



## Alternative Protein Technology

Plant-based & advanced fermentation



**CAGR > 15%**

Boston Consulting Group 2020 - 2030



## Water Technology

Water treatment & water design



**CAGR > 6%**

MDC Research 2022 - 2030



## Sustainable Energy Solutions

Energy efficiency & fossil fuel substitution



**CAGR > 20%**

Fortune Business Insights 2022 - 2029

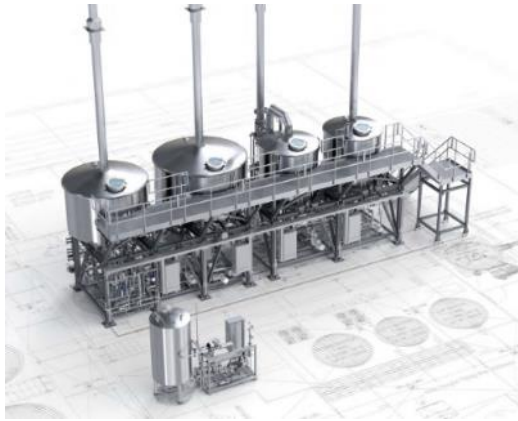




# Brewnomic – Concept beer beyond net-zero emissions

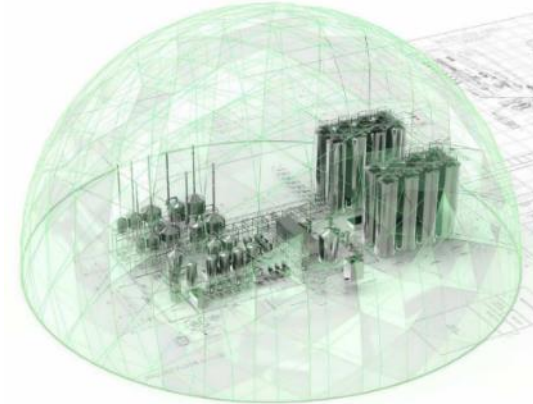


## Conventional Brewhouse



Heat source  
**Natural gas**  
(fossil fuel)

## Brewnomic Modules + Biomass Conversion



Heat source  
**Spent grain**  
(side stream)



**Direct emissions**  
Burning natural gas



**Indirect emissions**  
Animal feed for cows



**Saved emissions**  
Sustainable fertilizer



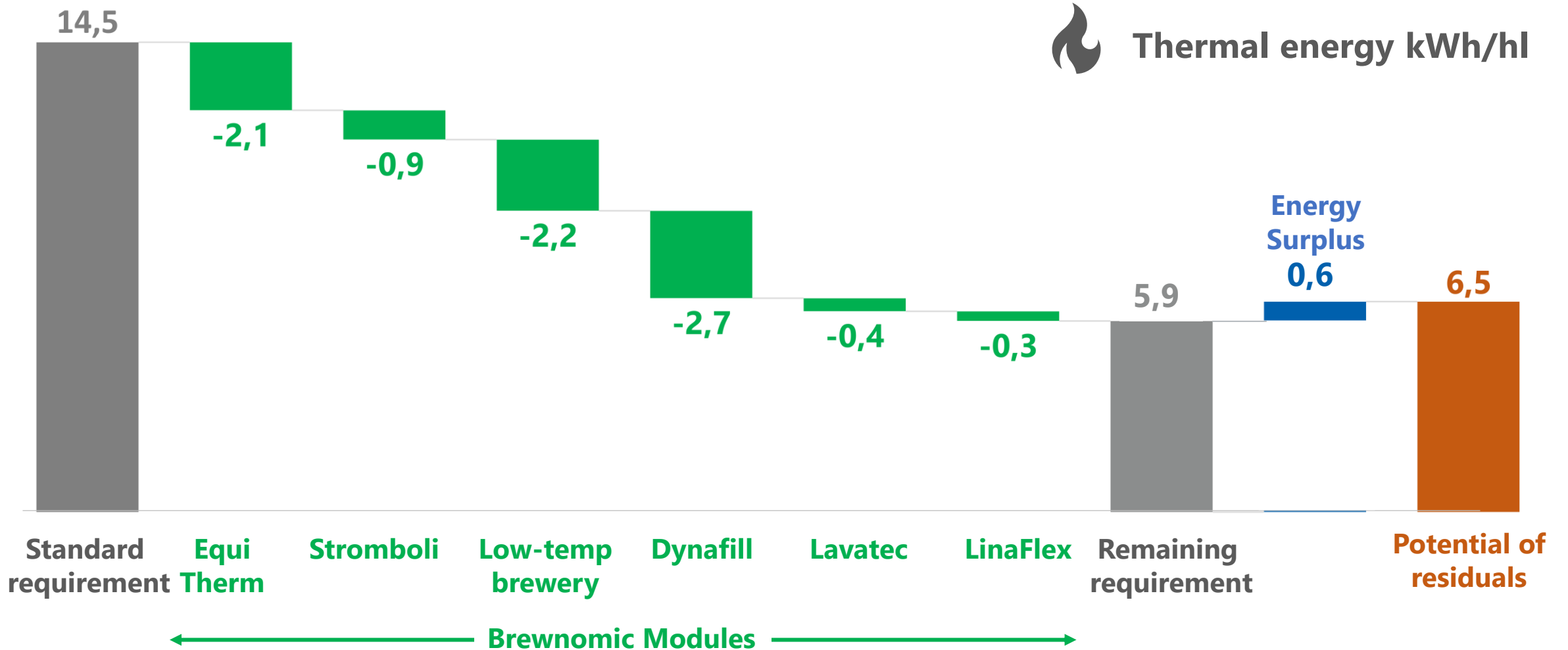
**Saved emissions**  
Sustainable protein



# Brewnomic – Self-sufficient energy flows in brewing



Exemplary Thermal energy breakdown (depending on implemented solutions)



# Krones Process Technology – Solutions beyond tomorrow



- ✓ Persistent **profitable** business unit through decisive action
- ✓ Flexible **resilient** setup built to master a volatile world
- ✓ Clear focus on high **growth** future industries





05

Deep dive:  
Intralogistics

Luigi Panzetti

# Measures at a glance: segment Intralogistics



## 2022 expectation

**Revenue** ~ € 330m

**EBITDA** > 5.0%



## 2025 target

**Revenue** ~ € 500m

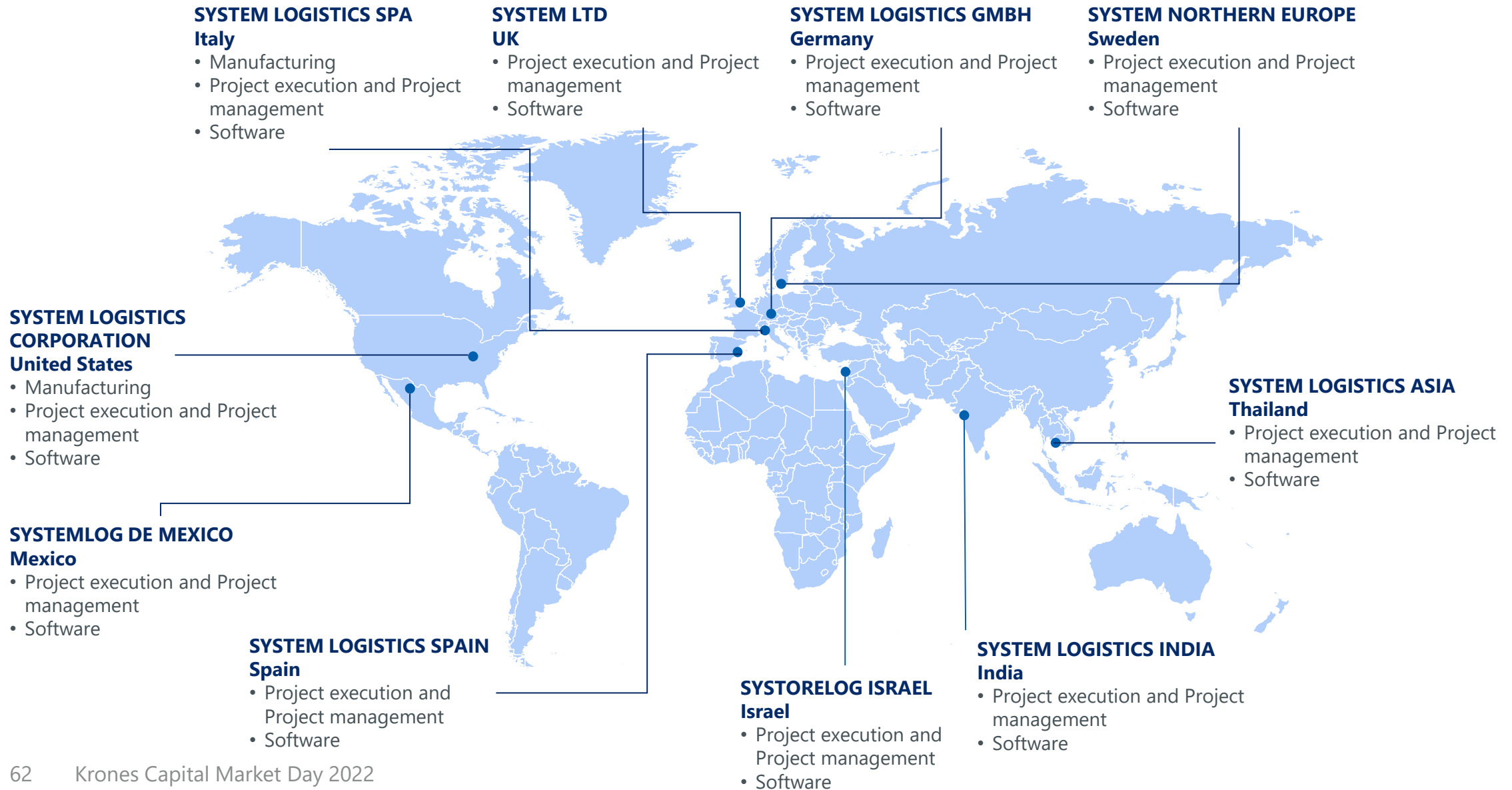
**EBITDA** 7% – 9%

## Programmes to improve growth and efficiency

Program	Structure and process	Global footprint	Portfolio	Growth
Topics	<ul style="list-style-type: none"> <li>› Improve project execution</li> <li>› Extend software and project management skills and capacity</li> <li>› Talents development</li> </ul>	<ul style="list-style-type: none"> <li>› Leverage Mexican hub for US business</li> <li>› Extend China and Asia Pacific set up</li> <li>› Extend Indian set up</li> </ul>	<ul style="list-style-type: none"> <li>› Mix change to more flexible and scalable projects (AGVs/AMRs<sup>1</sup>)</li> <li>› Robotic solutions for order picking</li> </ul>	<ul style="list-style-type: none"> <li>› Dynamic market growth</li> <li>› Increase service business</li> <li>› Opportunities in groceries</li> <li>› Pricing</li> </ul>
Rev		<b>€20-40m</b>	<b>€60 – 80m</b>	<b>€80 – 120m</b>
EBITDA	<b>0.5% – 1.0%</b>		<b>0.5% – 1.5%</b>	<b>0.5% – 1.0%</b>



# System Logistics network ensures global customer proximity

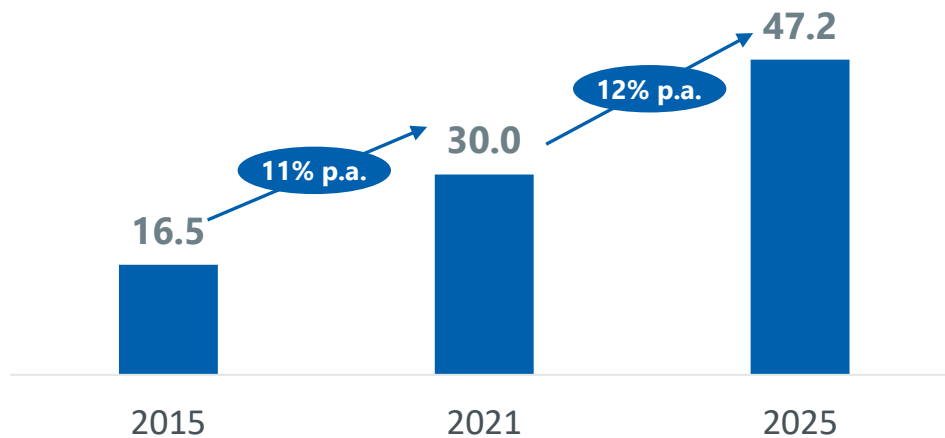


# Warehouse Automation market growth

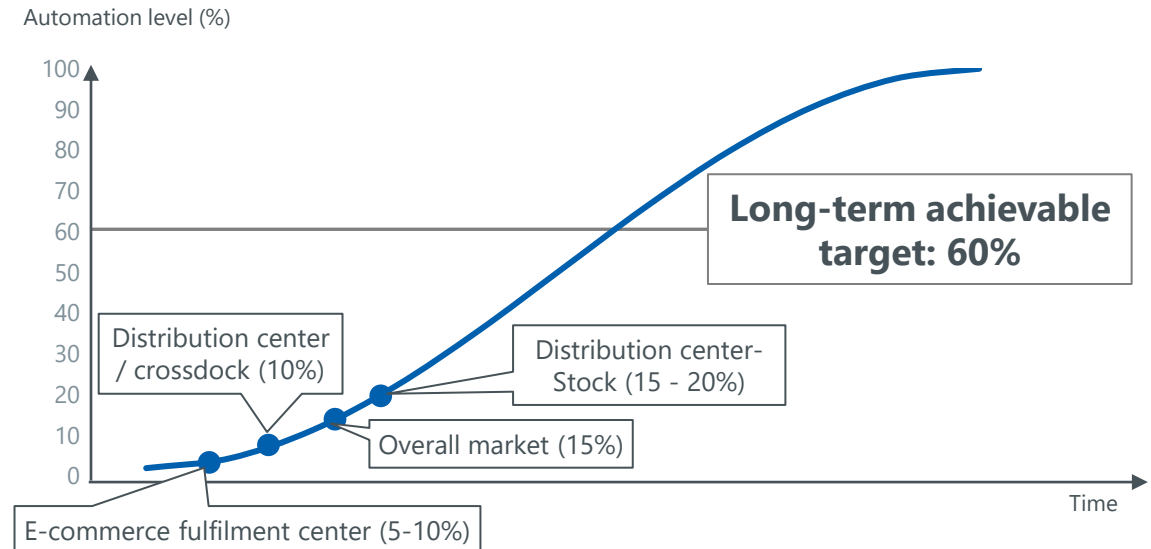


## Warehouse Automation Market is growing...<sup>1</sup>

EUR bn



## ... however Automation penetration in warehouses is still low<sup>1</sup>



## Main drivers for growth

- › Necessary **optimization of storage facilities** thanks to rising E-commerce penetration
- › Aging population and rising labour costs led to an **acceleration of skilled labour shortages**
- › Increasing care for **health and safety** of heavy duty operators
- › Increasing **production costs** and **increasing complexity of logistics**
- › Need for **enlarged warehouse capacity** in emerging markets
- › Higher **demand for automation** coming from political and corporate focus on **digitalization**
- › SKUs increase due to **new market trends**

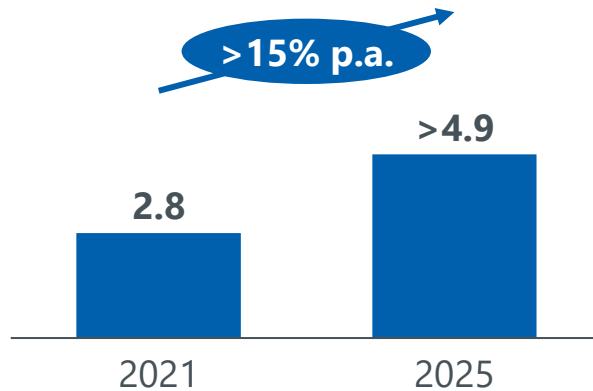
Source: 1. BNP Paribas, 2022

# Trends & technologies driving the intralogistics growth



## Rise of E-commerce<sup>1</sup>

Global market USD tn

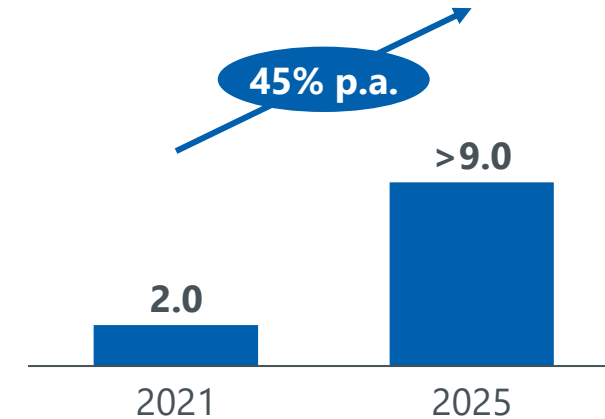


**E-commerce growing** and driving Warehouse automation

- › Increased **consumer expectations** lead to higher **E-commerce volumes**, causing the need of **enlarged warehouse capacity**
- › Through automation, **higher quantities in shorter time** and **more warehouses** in facilities closer to cities can be managed

## Growing AMR<sup>2</sup> market<sup>3</sup>

Global market USD bn



**AMR<sup>2</sup> grows strongly**, creating new opportunities especially in lower value and strenuous supply chain operations

- › **Intralogistics** is expected to become the largest end market for AMRs
- › **Cost efficiencies** enabled by innovation, increasing productivity, eliminating errors and improving material monitoring
- › **AMRs are key** to affordable, scalable & flexible solutions

1. BNP Paribas, 2022; 2. AMR = Autonomous mobile robots; 3. Innok Robotics, 2022

# System Logistics ambition until 2025



2022



€ ~330 m revenues  
> 5% EBITDA

2025



€ ~500 m revenues  
7 -9 % EBITDA

## Main drivers for growth

- › Develop new **market segments** in the regions (**Grocery, E-Commerce, ...**)
- › Increase share of **automated picking systems**
- › Switch **from CAPEX offering to OPEX offering** for specific solutions (SortMate, AGV)
- › Customer require new solutions to achieve **sustainability targets** (CO2, health and safety)

# Intralogistics – Core topics



## Increase Energy Efficiency



**Up to 40% reduction** in energy consumption

## Enhance Labour Health and Safety



**Up to 50% reduction** in FTEs and accident-free operations

## Promote Smarter Logistics



**Up to 20% savings** in logistics cost savings

## Face Increasing Complexity



**From hundreds to Tens of thousands** SKUs

**Krones is an expert in Intralogistics – providing more efficient, safer, smarter and simpler solutions to its customers**



# Intralogistics solutions to increase energy efficiency



## Energy efficiency levers

- › Improved Weight Ratio Machine vs Payload
- › Install systems to recover the potential and kinetic energy accumulated during lifting or accelerating phases: **Super Capacitors**
- › Enhance Motion Systems efficiency



**Krones solutions can save up to 40% of energy\***

\* depending on system solution

# Intralogistics solutions to enhance labour health and safety



## Labour health and safety levers

- › Increased automation in logistics processes to compensate labour shortage
- › Relieve heavy works with robotics
- › Increase safety by reducing traffic of manual driven vehicles

**Krones technology relieves from heavy works, compensates labour shortage and avoids accidents**

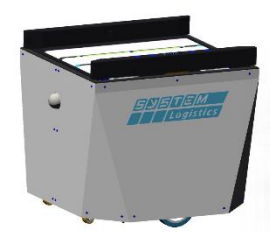


# Intralogistics solutions to enable smarter logistics



AGVs<sup>1</sup>

Light formats  
Storage and  
Sequencing



AMRs<sup>2</sup>



## Smarter logistics levers

- › Create easy, affordable, scalable & flexible solutions
- › OPEX vs. CAPEX option
- › Modularity and standardization
- › De-materialize Transport Systems
- › Multiple AGV Solutions
- › Smart AMR Solutions

**Krones supports its customers in achieving up to 20% cost savings in logistics**

1. Automated guided vehicle 2. Autonomous mobile robots

# Intralogistics solutions to face increasing complexity



## Flexible logistics levers

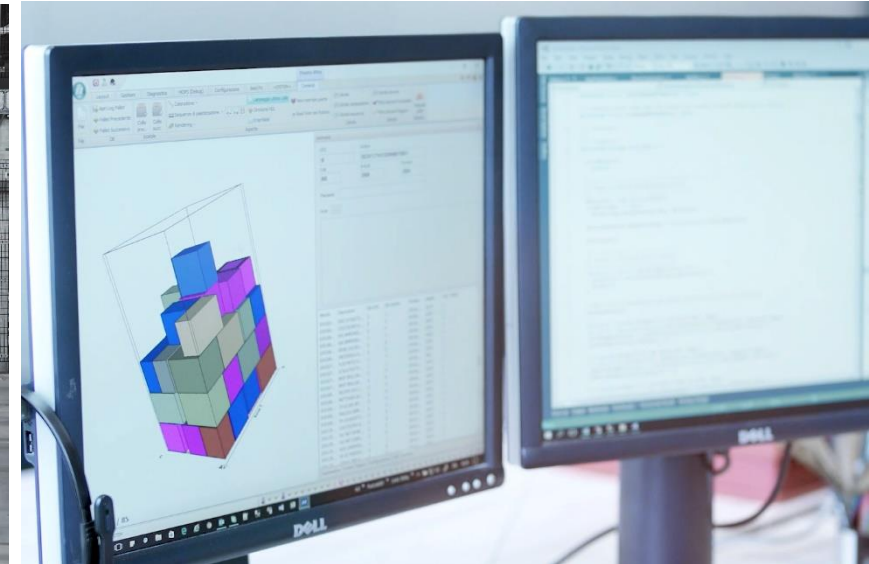
- › Multi-format Plastic bins & Carton boxes
- › Single-Case Storage, Sequencing and Palletizing
- › Increase Storage Efficiency vs Footprint
- › Automatic multi-SKUs pallet forming
- › AGVs/AMRs for flexible material flow layouts

**Krones has profound capabilities to manage multi-SKUs pallet forming in the Food & Beverage industry**

# Intralogistics – Solutions beyond tomorrow



- ✓ **Robust Growth** supported by high market potential and target industries differentiation
- ✓ **Bigger share of higher margin solutions** creates **Increased profitability**
- ✓ **Leveraging on superior software and robotics capability**





06

# Financial Overview – Confirmation of Targets 2025

Norbert Broger



# Krones Group: 1st HY Key Financials (€ m)




- › **Fast and strong order and sales recovery – significant gains in market shares 2022**
- › **Reduction of order backlog expected not before 2024**

## Krones Group: 1st HY Key Financials (€ m)

**RECAP**  
**1st HY 2022**



<b>EBITDA margin:</b>	<b>+0.8 PP to PY</b>	7.0%	8.0%	8.8%	
<b>Working Capital:</b>	<b>-6.5 PP to PY</b>	27.6%	28.1%	21.6%	
<b>ROCE:</b>	<b>+3.5 PP to PY</b>	4.0%	8.3%	11.8%	
		2020 1st HY	2021 1st HY	2022 1st HY	

- › **Significant improvements in profitability and capital utilization as promised**
- › **Impacts of price increases:**
  - › **08/2021: starting to be effective with revenues Q4 2022**
  - › **04/2022: starting to be effective with revenues Q3 2023**



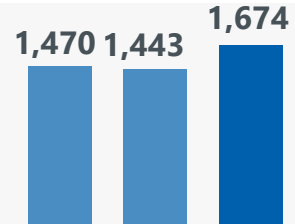
# Krones Group: 1st HY Segments

**RECAP**  
1st HY 2022

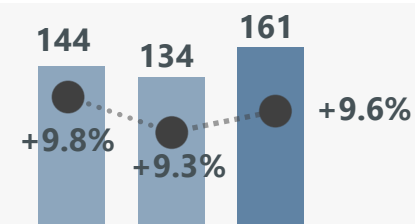



**Filling and Packaging Technology:**  
Profitable growth continues

Revenue development (€ m)



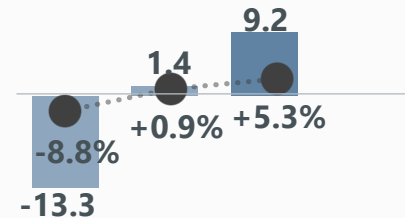
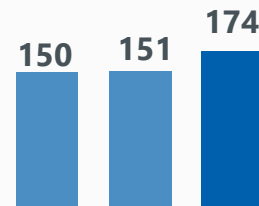
Segment EBITDA (€ m) and EBITDA margin (%)



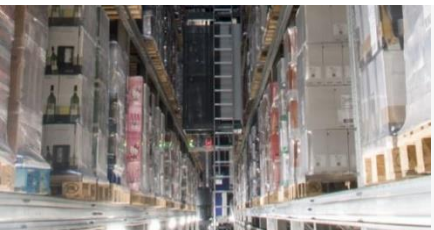
EBITDA Target 2022  
**9-10%**



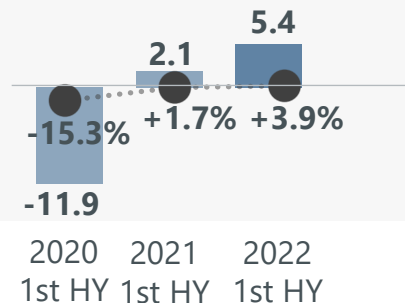
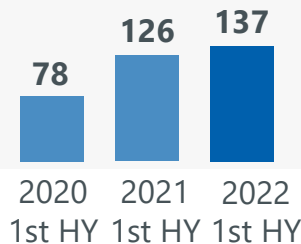
**Process Technology:**  
Successful turnaround



EBITDA Target 2022  
**5-7%**



**Intralogistics:**  
Successful turnaround and segment with biggest growth potentials



EBITDA Target 2022  
**4-6%**

**All three segments with positive developments in revenues and profitability and in line with 2022 targets**

# Krones Outlook 2022



**5% – 8%**

---

Revenue growth

**8% – 9%**

---

EBITDA margin

**10% – 12%**

---

ROCE

**We absolutely confirm to achieve our 2022 targets in challenging times**

# Efficiency improvement programmes successfully executed

**RECAP**  
1st HY 2022



2020	Programmes to improve efficiencies – current status				2023
Status: 11/2020	Program	Structure and Process	Global footprint	Portfolio	Growth
<b>Sales exp.</b> ~ €3.3bn	<b>Topics</b>	› Adjust capacities ✓	› Hungary plant ✓	› Reshape product portfolio ✓	› Pricing ✓
		› Product cost reduction ✓	› China plant ✓	› Address future of brewery business (✓)	› Innovations in sustainable filling and packaging ✓
		› Reduce internal added value in manufacturing (✓)	› Localize supply chains and increase BCC sources (✓)	› Increase profitability of intralogistics (✓)	› Digital and remote service Ecosystem (✓)
		› Accelerate project lead time —	› Localize service (✓)		› Localize sales activities (✓)
<b>EBITDA*</b> 5.5% – 6.0%*	<b>Impact</b>	1.5 – 2.0%	1.0 – 1.5%	0.5 – 1.0%	0.5 – 1.5%
		Program status as of 9/2022: <span style="color: green;">✓</span> Finished <span style="color: green;">(✓)</span> Ongoing with good progress <span style="color: red;">—</span> Behind set targets			

**Sales**  
€3.7bn  
to  
€4.0bn

**EBITDA**  
9 – 12%

- › **Revenue target will be achieved one year earlier**
- › **Profitability will be achieved in 2023 as promised**

\* w/o one-time expenses (structural adjustments) ~ €72m

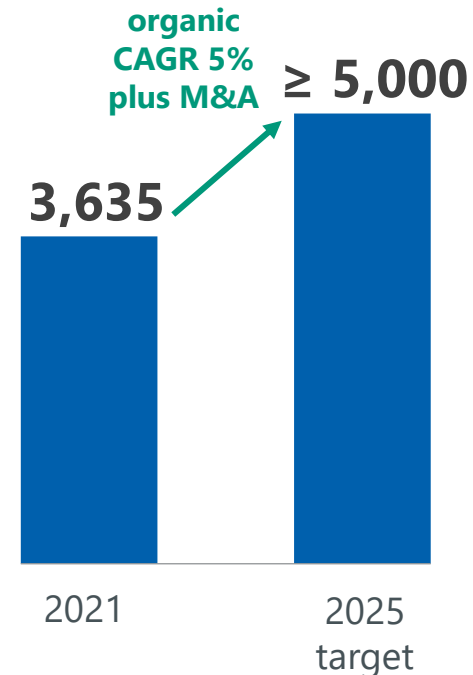
# Financial targets for 2025 remain unchanged



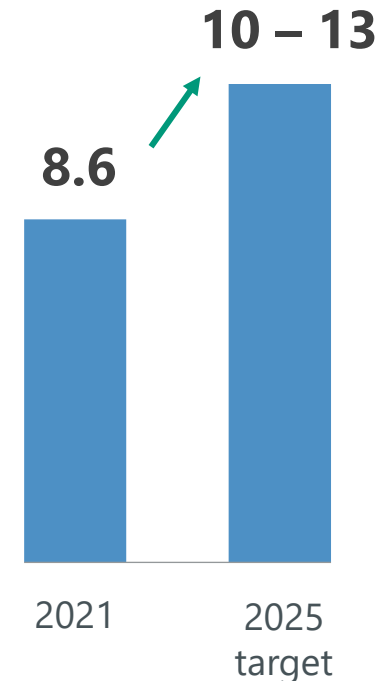
## We have set ourselves challenging but realistic financial targets for 2025:

- › **Sales**  $\geq$  €5bn, including minimum €4.5bn due to organic growth
- › **EBITDA** 10% – 13%
- › **ROCE**  $\geq$  20%

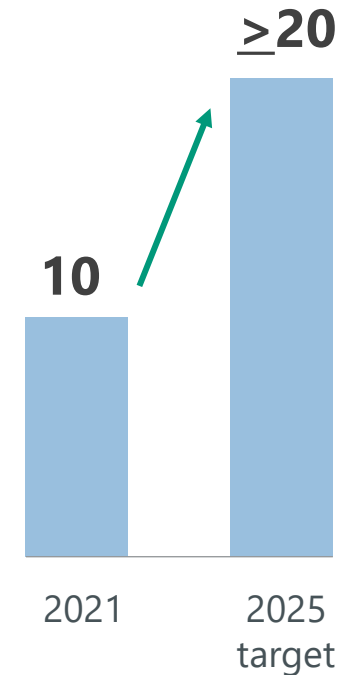
Sales (€m)



EBITDA margin (%)



ROCE (%)



**Despite all challenges in the world, we currently see more chances than risks to achieve our targets 2025**

# Sales targets 2025 by segments



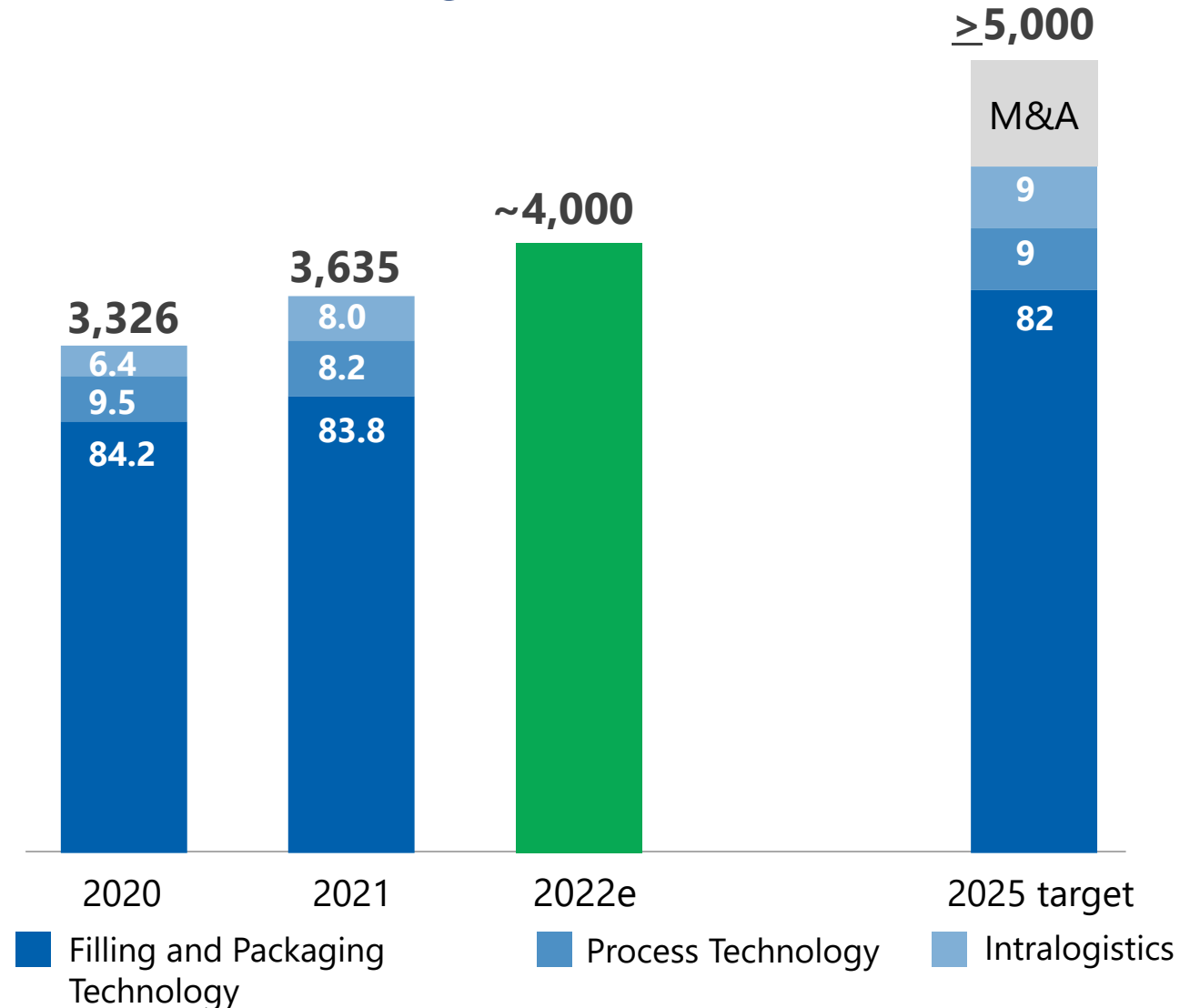
## Growth

- › 3% Global Beverage Market
  - › + Sustainability centred solutions
  - › + Digital and service solutions
  - › + Increased packaging scope
  - › + Innovation
- = 5% CAGR

## M&A Focus

- › High growth and high margin business
- › Leading technology & quality
- › Increase resilience by investing also in food, health and personal care, pharma and plastic recycling

## Sales (€m) and segment share (in %)



# EBITDA\* targets 2025 by segments - unchanged



## Filling and Packaging Technology:

**Actual\* 9.6% to target 12 – 14%**

- › Increase global production footprint
- › Reshape product portfolio
- › Innovation in sustainable filling & packaging
- › Digital products and services
- › Pricing and customer development concepts

## Process Technology:

**Actual\* 5.3% to target 7 – 9%**

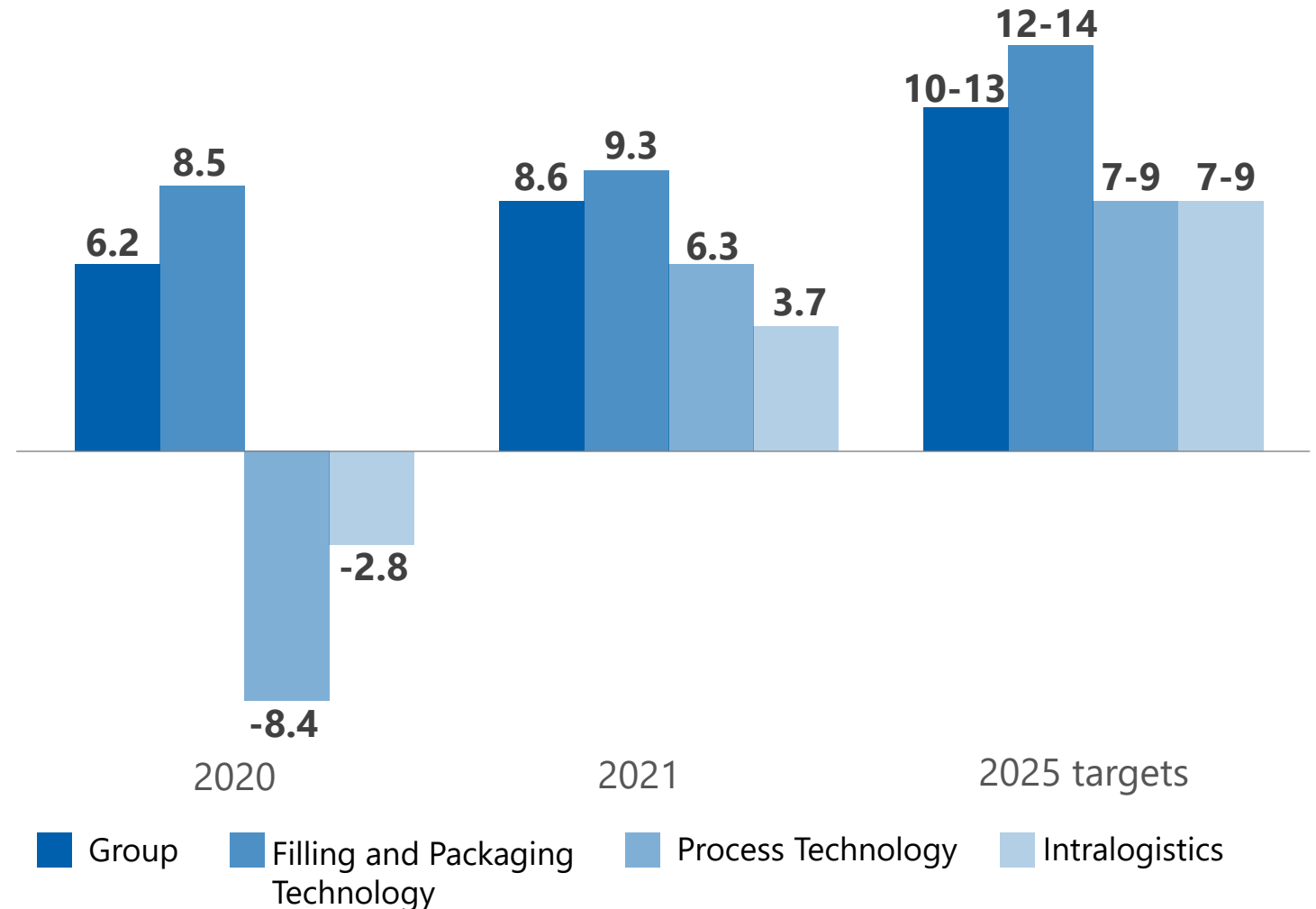
- › Increase share of service business
- › Increase share of component business
- › Reduce high-risk projects
- › Transform portfolio
- › Sustainable energy solutions
- › Grow alternative protein technologies

## Intralogistics:

**Actual\* 3.9% to target 7 – 9%**

- › Increase share of AGV's/AMR's
- › Innovations in robotized automated picking systems
- › Increase share of service business

EBITDA (in %)





# Krones Group: cashflow and cash conversion rate

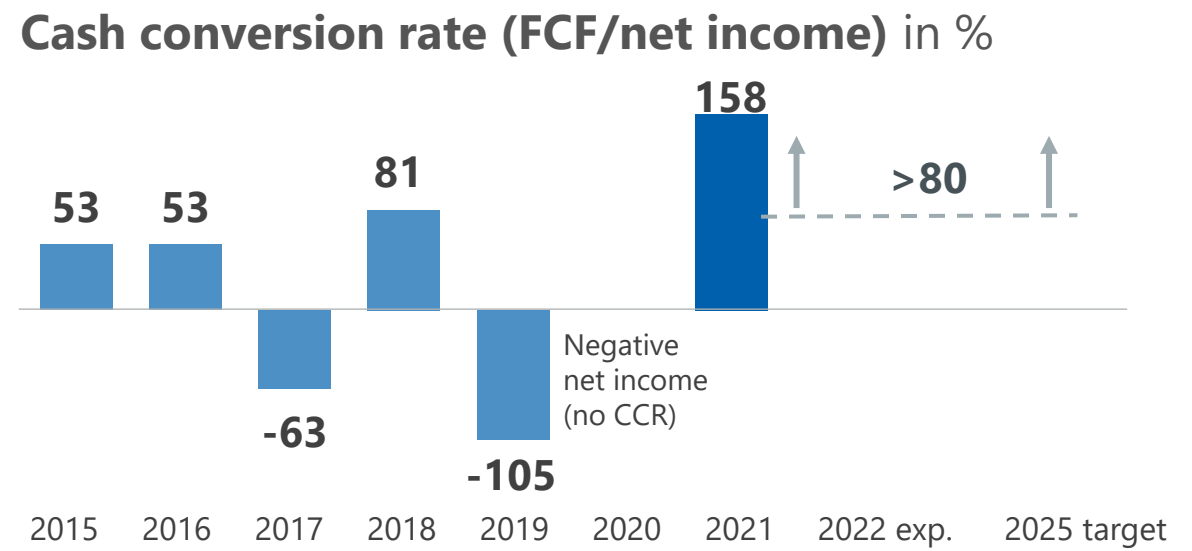
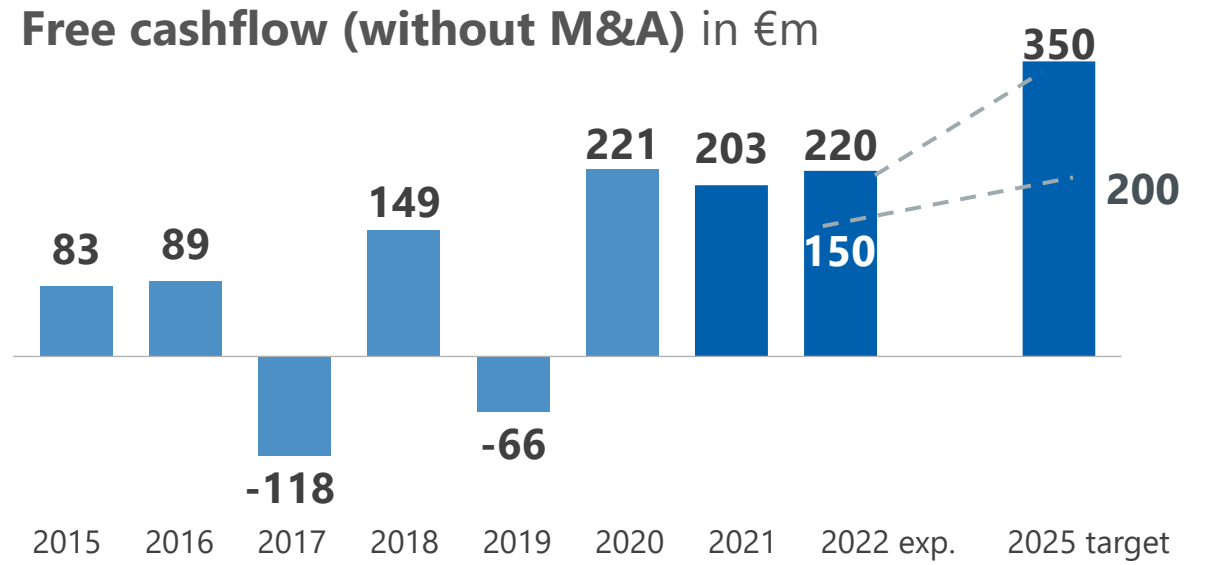


## Free cashflow and cash conversion rate significantly improving

- › Strong internal focus on free cashflow established
- › High discipline in investments
- › Improvements on working capital to be continued

## Cash will be used for

- › Dividends
- › M&A
- › Resilience



# New performance programmes will improve our earnings and free cash flow to achieve our 2025 targets



## Improve sales performance



- › New value added **pricing system implemented** in 2021/2022 with first positive impacts in 2022
- › **Next level CRM**  with rollout 2022/2023
- › Process mining & optimization
- › Specific **customer development concepts** based on forward-looking classification
- › Focus on high-margin products, customers and regions

## Drive innovation in products and processes



- › New solutions for today, tomorrow and beyond, such as:
  - › **world's most sustainable can filling line**
  - › **Brewnomic** for zero carbon brewery
  - › new **sustainable packaging alternative protein** technologies
  - › new **digital services** and business models
  - › .... and many more to come

## Decrease proportional and fixed costs



- › Improve global **manufacturing footprint**
- › Increase speed of **internal processes** in all areas
- › Increase efficiencies in engineering, manufacturing, sales and admin processes by **enhancing level of digitalization**
- › Continuation of **consequent cost management** in all areas

## Optimize investment allocation and working capital



- › Increase investments in profitable service business
- › Strengthen resilience by **investing „beyond beverages“**: Food-, Health And Personal Care-, Pharma- and Plastic Recycling business
- › **Improvements in working capital** management to be continued
- › **Capex 2.5% – 3.5%** of sales

# Investor perspective

## Dividend payouts

- › Continuous growth in dividend payments until 2019 reflecting the profitable growth path of Krones
- › Strong recovery 2021 after crisis 2019/2020
- › Based on approx. 30% of annual net income

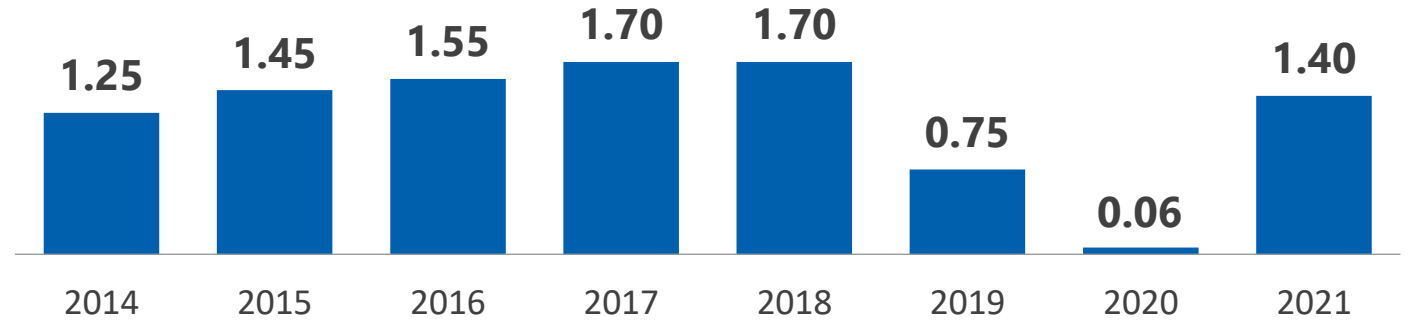
## Share price development since CMD 2020

- › With +52.5% strong development since the CMD 2020 vs. losses in SDAX (-6.9%)
- › Based on most analyst recommendations, additional strong potential in Krones share price

1 Closing price XETRA, 12<sup>th</sup> September 2022



## Dividend payouts in €



## Share price development in €



CMD 2020  
€ 55.95

+52.5%

CMD 2022<sup>1</sup>  
€ 85.30

# Krones – an attractive investment



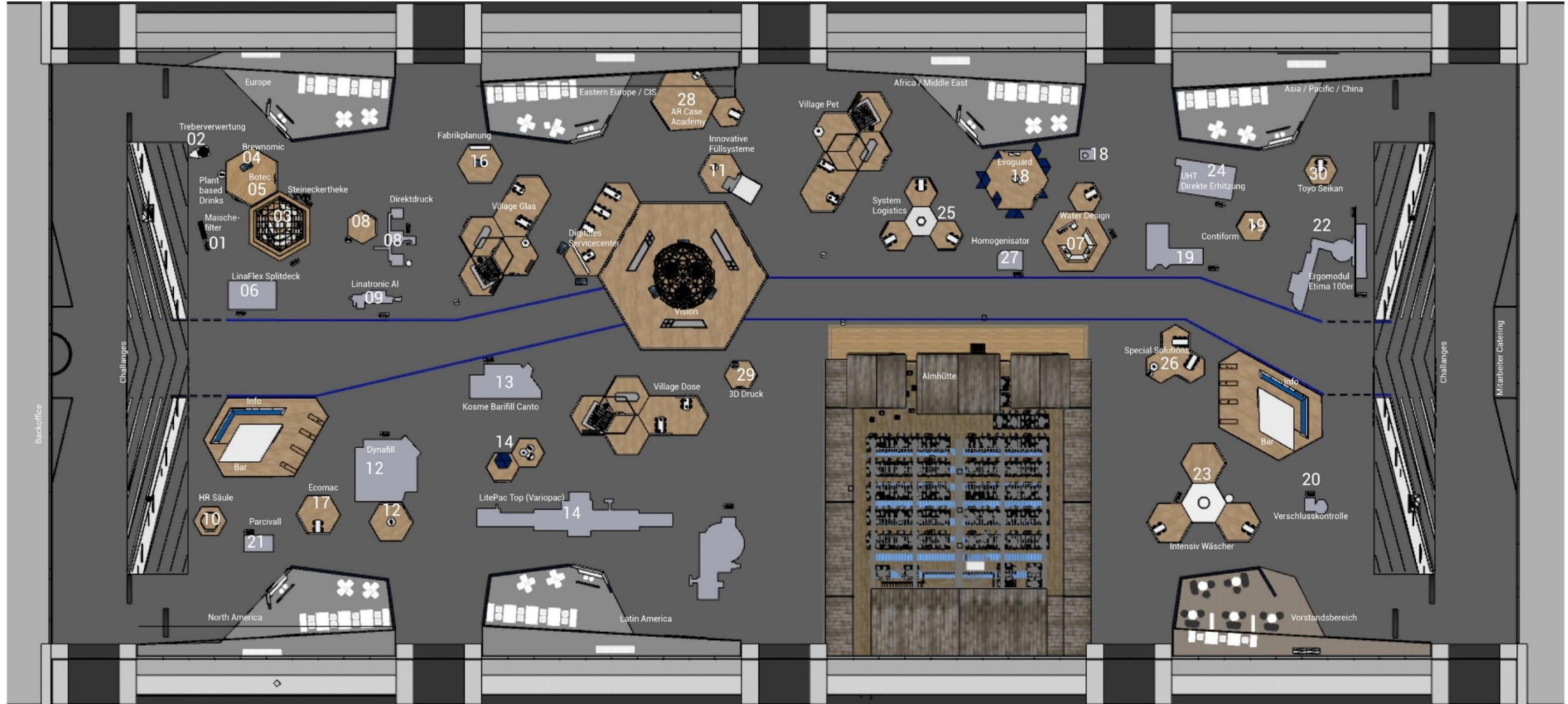
- ✓ Sustainability seen as the biggest innovation and growth driver for years to come (CO<sub>2</sub> and waste reduction)
- ✓ Digitalization, technology & innovation leader in filling and packaging
- ✓ Leading position in attractive and growing beverage and food market
- ✓ Clear growth path and profitability improvement plan
- ✓ Financial stability and strong cash generation
- ✓ Reliable dividend pay-outs



07

# Discussion/Q&As

# Krones – Booth plan







**Thank you**  
for your attention!

# Financial calendar 2022 and 2023



<b>November 4, 2022</b>	Conference Call Group Quarterly statement for the period from 1 January to September 30, 2022
<b>February 23, 2023</b>	Conference Call Group Preliminary figures FY 2022
<b>May 5, 2023</b>	Conference Call Group Quarterly statement for the period from 1 January to March 31, 2023
<b>May 23, 2023</b>	Annual General Meeting
<b>August 1, 2022</b>	Conference Call Group Quarterly statement for the period from 1 January to June 30, 2023
<b>November 3, 2023</b>	Conference Call Group Quarterly statement for the period from 1 January to September 30, 2023



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