Connected Line

Make your line fit for the future

—

)((KRONES

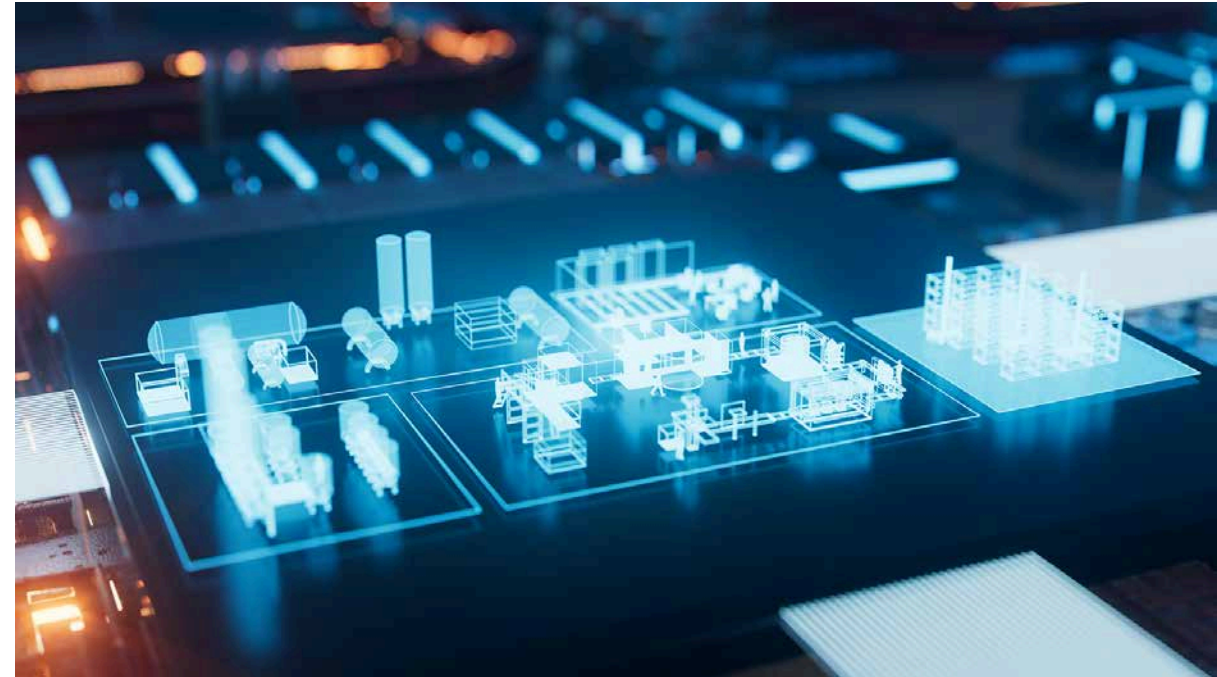# Your line as part of a digitalized value chain

Connected Line represents a groundbreaking step in the direction of digitalization in the beverage industry and makes your line fit for the future. Regardless of whether you wish to handle production or line data, or information from employees or other stakeholders: Connected Line provides the necessary connectivity, groups together the information you really need and makes it available on a central, standardised platform.
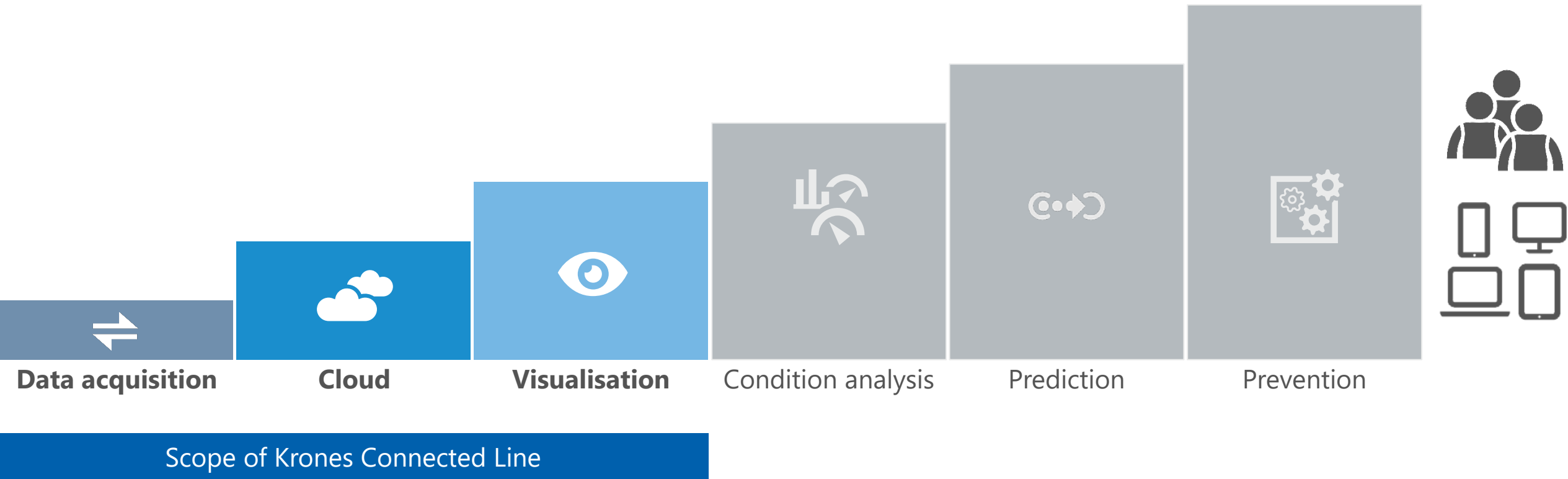
At a glance

– Free integration of the ReadyKit edge devices into all new Krones lines
– IIoT platform as a central connection point for all services
  – Already during commissioning: used by the Krones team
  – During operation: subscription for the services required for daily work
– Secure data storage in the cloud: access possible at all times – regardless of the location and end device used

KRONES

Connected Line today and in the future

Data acquisition   **Cloud**   **Visualisation**   Condition analysis   Prediction   Prevention

Scope of Krones Connected Line

KRONES

Data acquisition

ReadyKit

= edge device (industrial PC) installed in the network cabinet of the Krones machine

– Collects raw data of the machines
– Calculates data with added value
– Sends data to the IIoT platform

Technical details

– Secure, certified IT system with Linux operating system
– Connected to …
  – the internet: updates via the cloud for the most current software versions
  – the line management switch via a separate network (VLAN): provides the routing between the machines and ReadyKit

KRONES

Secure data storage in the cloud

IIoT platform

Industrial Internet of Things platform

- "Control centre" in the cloud for services in the production environment
- Contains a digital twin of all connected lines and machines
- Access possible from everywhere with various end devices

Technical details

- In new lines: Hardware and network basics already included
- Secure AWS cloud, hosted in Germany

KRONES

Use as part of commissioning

Cloud services in the IIoT platform

Advanced Analytics

– Live data of all connected machines
– Smart reports and KPIs
– Automated downtime management
– Dashboard, trends and analyses

Benefits to you

– Improvement of the Overall Equipment Effectiveness
– Less management work
– Makes it possible to draw conclusions
– Benchmarking and transparency

Smart commissioning

The Krones team can utilise the following:
– Service Advanced Analytics
– VPN connection to the machines
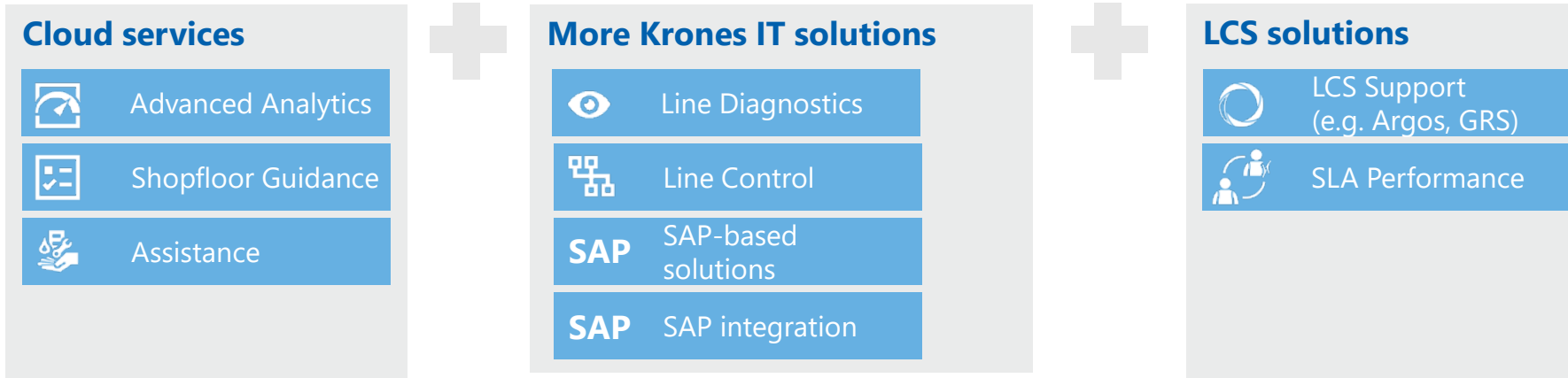– Argos Augmented Reality Support

Benefits to you

– Machine data analysis from the first bottle
– Improved transparency of the line progress
– Faster troubleshooting
– Efficient production start-up

KRONES

While production is in progress

Compile your own individual digitalization package from a range of services and solutions:

Cloud services

- Advanced Analytics
- Shopfloor Guidance
- Assistance

More Krones IT solutions

- Line Diagnostics
- Line Control
- **SAP** SAP-based solutions
- **SAP** SAP integration

LCS solutions

- LCS Support (e.g. Argos, GRS)
- SLA Performance

Benefits to you

– Modular subscription to services to put together the necessary functions both individually and with flexibility

– Access to services via the central IIoT platform

– Continuous function expansions for existing services (multiple releases per year)

KRONES

Benefits to you

Cost-efficiency

"Software as a service" is an inexpensive model for using, maintaining and upgrading IT solutions. Thanks to the modular selection of the services, you only pay for what you actually need.

Security

The use of the cloud is governed by the highest (and continually tested) security standards. The ReadyKit edge device is also certified and its use thus secure.

Easy access

Whether on a PC, laptop, tablet or smartphone – the IIoT platform is available on all end devices. All you need is internet access.

Easy scalability

Practically unlimited storage capacity is available in the cloud. The computing power is variably scaleable.

Automatic updates

Thanks to cloud updates (for no extra charge) you always have the latest software version – and always receive continuous improvements as regards stability and for existing functions. New features are thus also automatically imported.

Remote support

The Krones support specialists can also gain access to your line data – thus allowing the identification and elimination of problems from remote locations.

KRONES

Connected Line: future road map

New services

- New applications developed together with customers and Krones experts
- New modular services on the Krones IIoT platform
- Use of new technologies
- Continuous function expansions for existing services (multiple releases per year)

Krones LCS Digital Service Center

- Use of the Krones IIoT platform to allow the Krones Service team to be as effective and efficient as possible
- Full integration in the remote support environment
- Quick identification, analysis and elimination of problems

KRONES

Added value for our customers
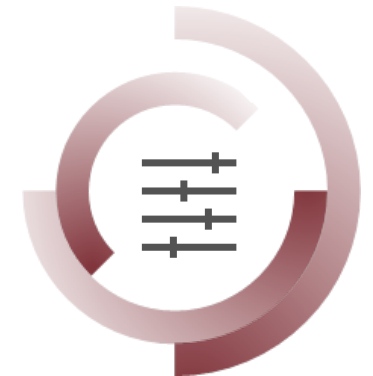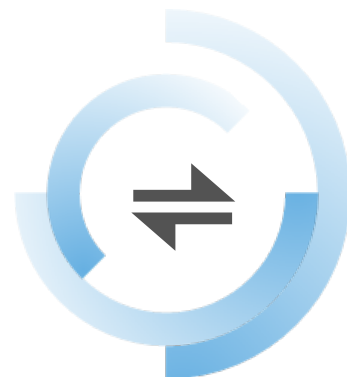

Downtimes

Waste

Maintenance planning

Production parameters

Employee training and knowledge

Change-overs

Consumption

Material management

KRONES

Our solutions

To make complexity manageable, lower costs and maximise output through intelligent solutions

Shopfloor Guidance
Notification – prioritisation – instruction

Analytics
Lean – Advanced – Integrated – Track and Trace Analytics

Line Control
Managing complex production – reducing manual interventions – scaleability

SLA Performance
Krones Service supports customers – mutual transparency – causes – action plans

SAP-Based Solutions | SAP Integration
Standard solutions – development – engineering – implementation

Automated Parameter Optimisation
Services for intelligent machine generation – AI – machine learning

KRONES

SOLUTIONS BEYOND TOMORROW

)(KRONES