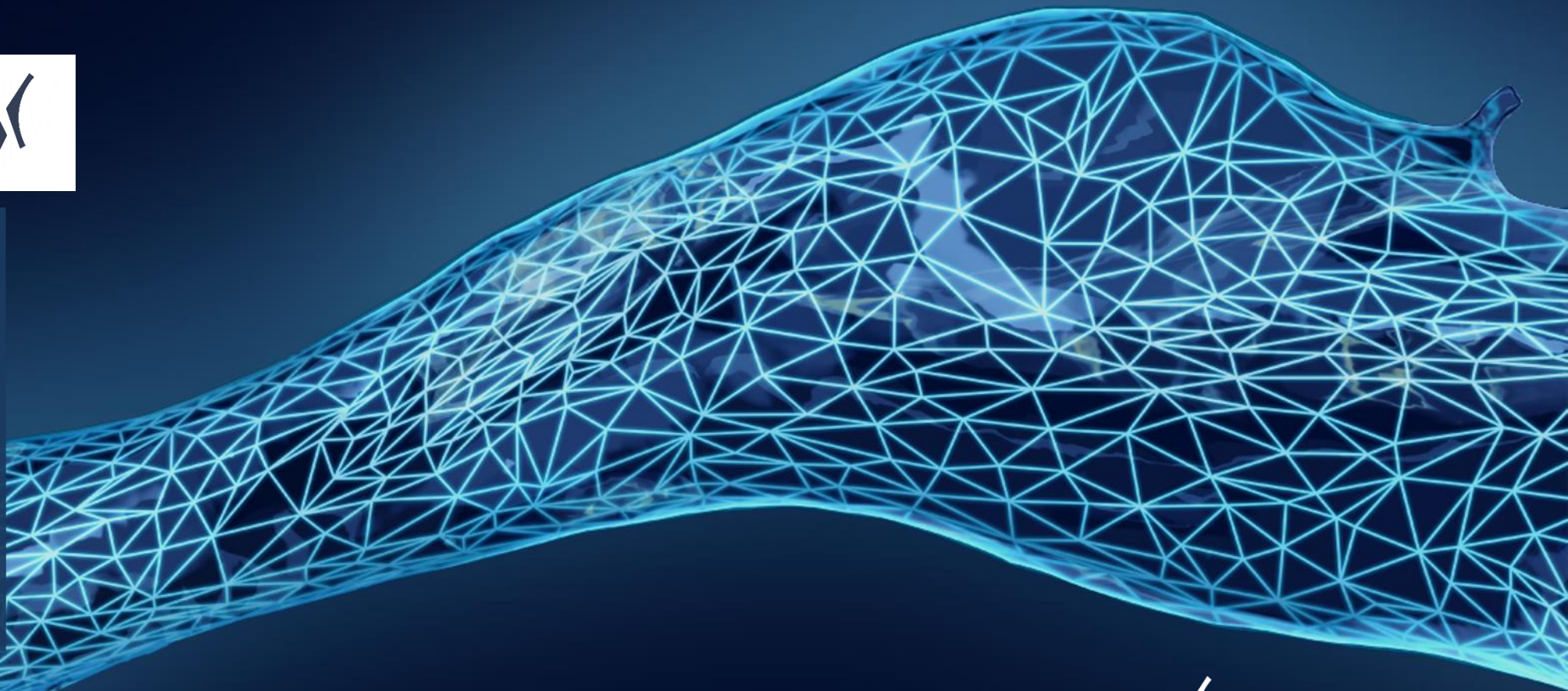




# Digitalisation



Erstellt von: SYSKRON X  
Datum: 06.07.2018



## Focus of digitalisation at Krones

### Focus today

Software solutions  
for our customers in  
the beverage  
industry

- Production related software solutions

Software solutions  
for our Service  
business

- IoT-Platforms
- AI and Data Science

Digitalisation of the  
Krones Supply Chain



## Where and how much we invest

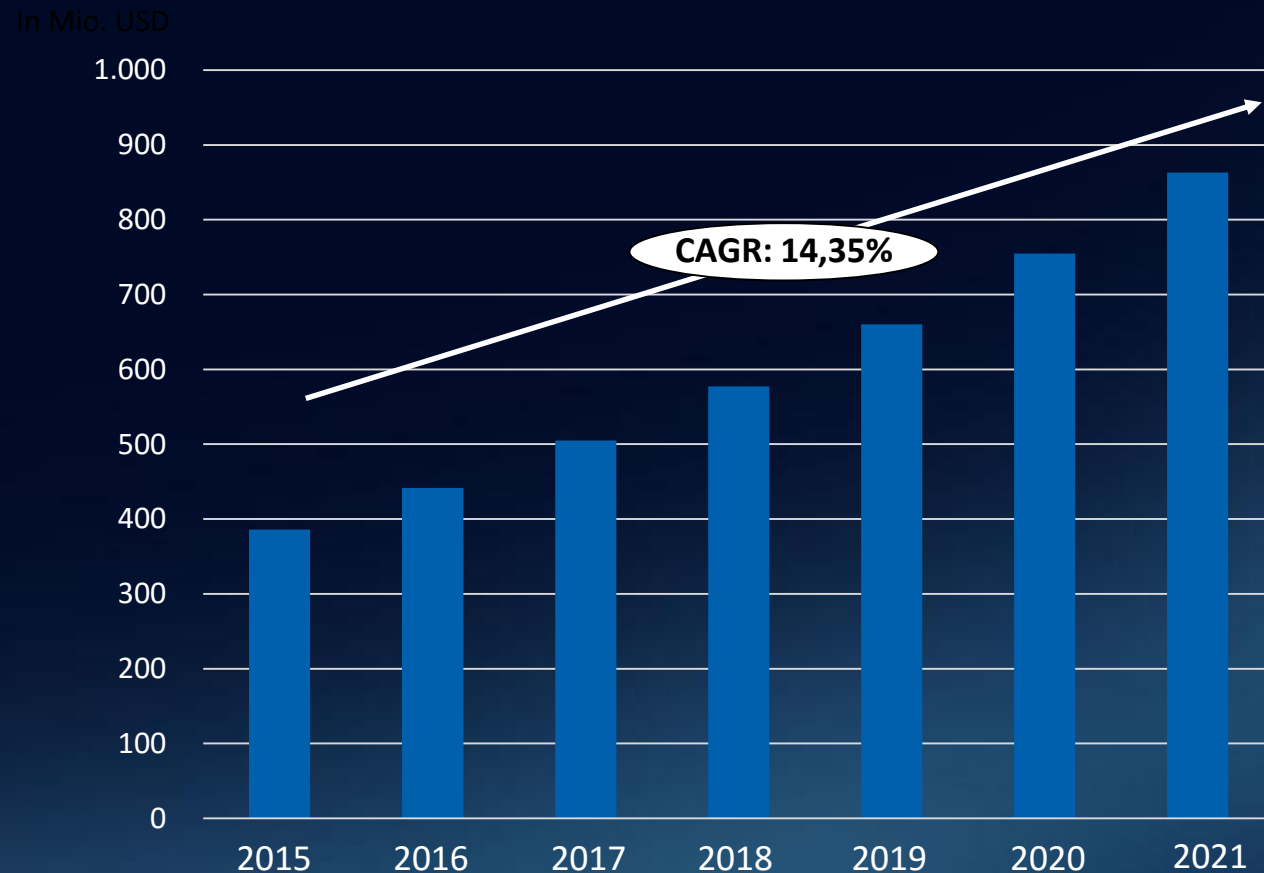




## The market for MES in the liquid food and beverage industry

### Growth MES Markt - Global

Liquid food and beverage industry



### Growth drivers in the markets

#### Main drivers by MarketsandMarkets.com

- Increasing demand for "paperless" operation of the plants, process automation, etc.
- Increasing demand or focus on "real time" data analysis, eg. production platforms, visualization tools etc.
- Compliance with legal requirements, consumer protection, security etc.

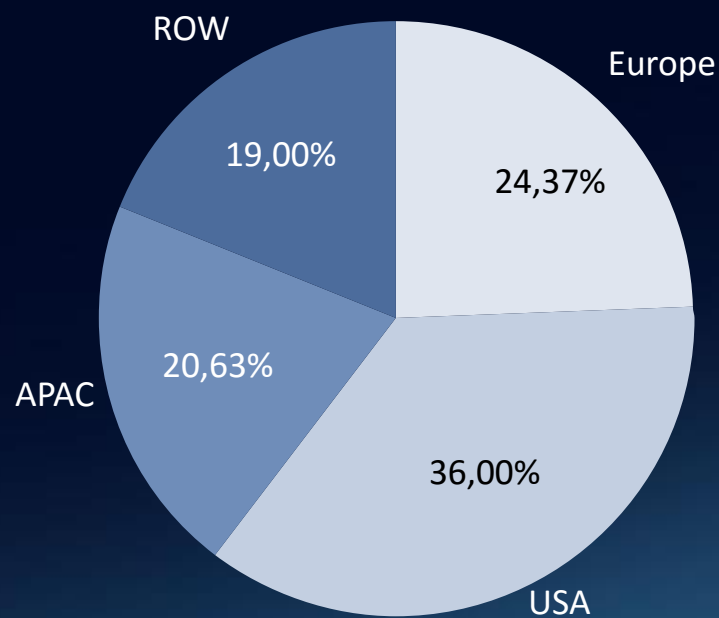
**Influencing factors for growth are greater automation and the need for transparent performance indicators in production**



## The US market MES is the largest in relation to the other regions

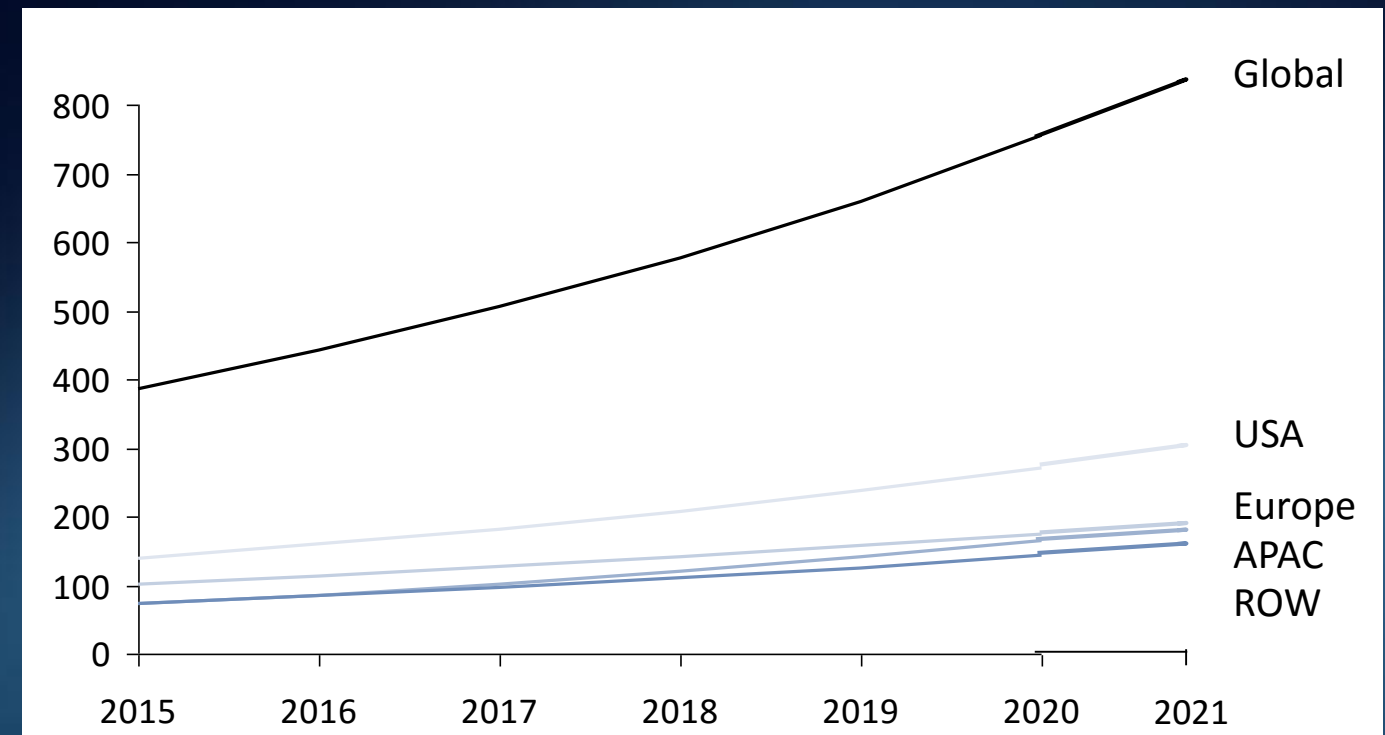
### Market share MES – by region

Liquid food and beverage industry 2018<sup>1)</sup>



### Growth by region

Liquid food and beverage industry 2018



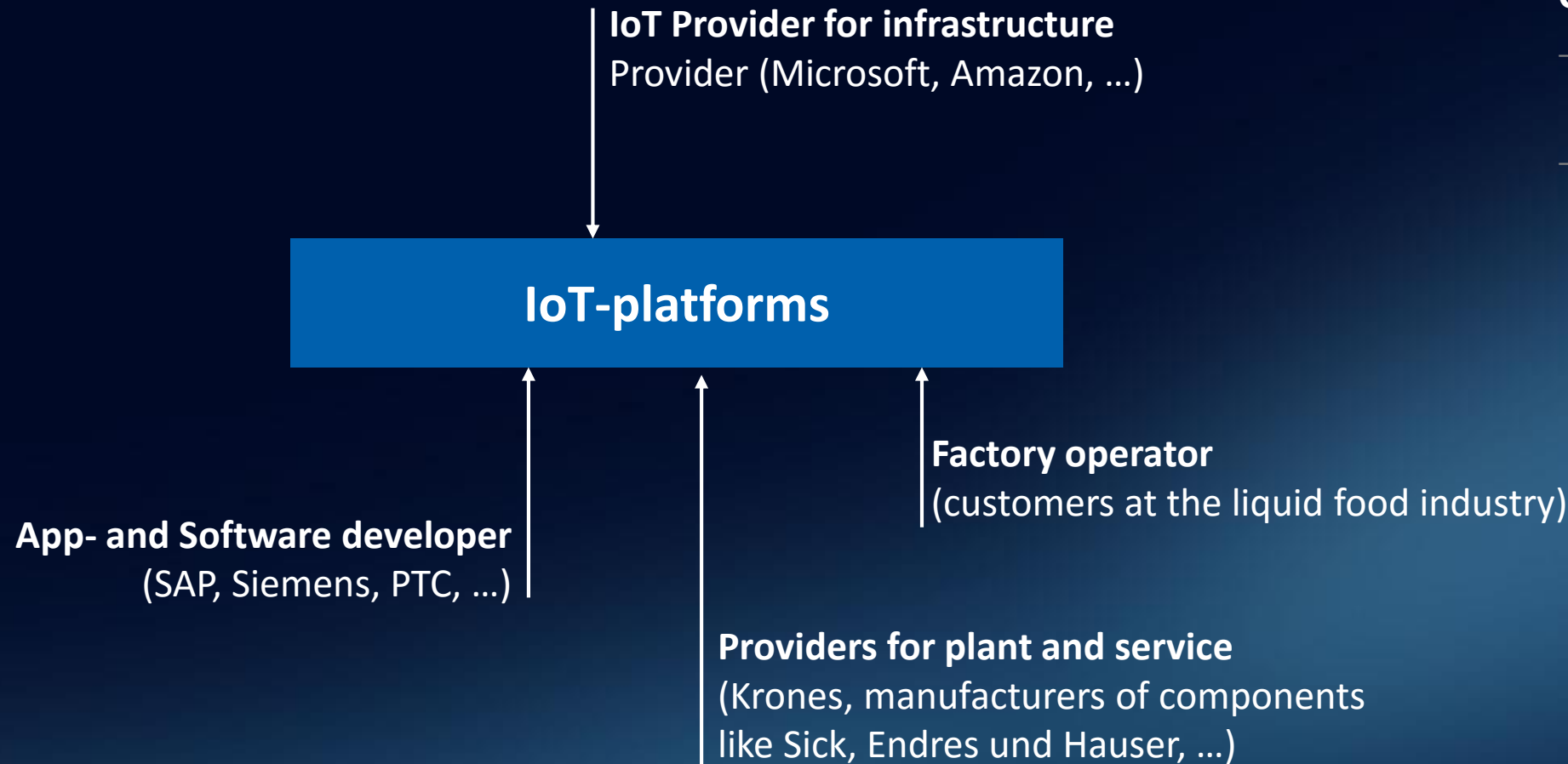
Focus markets are Europe, Northamerica and China

Quelle: E&Y; MarketsandMarkets.com

1) Allgemeine Aufstellung; Zahlen entsprechen nicht den Zahlen bzw. der Installed Base von Krones



## Competitive situation at IoT-platforms



### Comments

- Different providers enter the market for IoT-platforms
- Based on the collected data on the condition of the machines the optimization of the production processes and increase of the availability of the plants take place

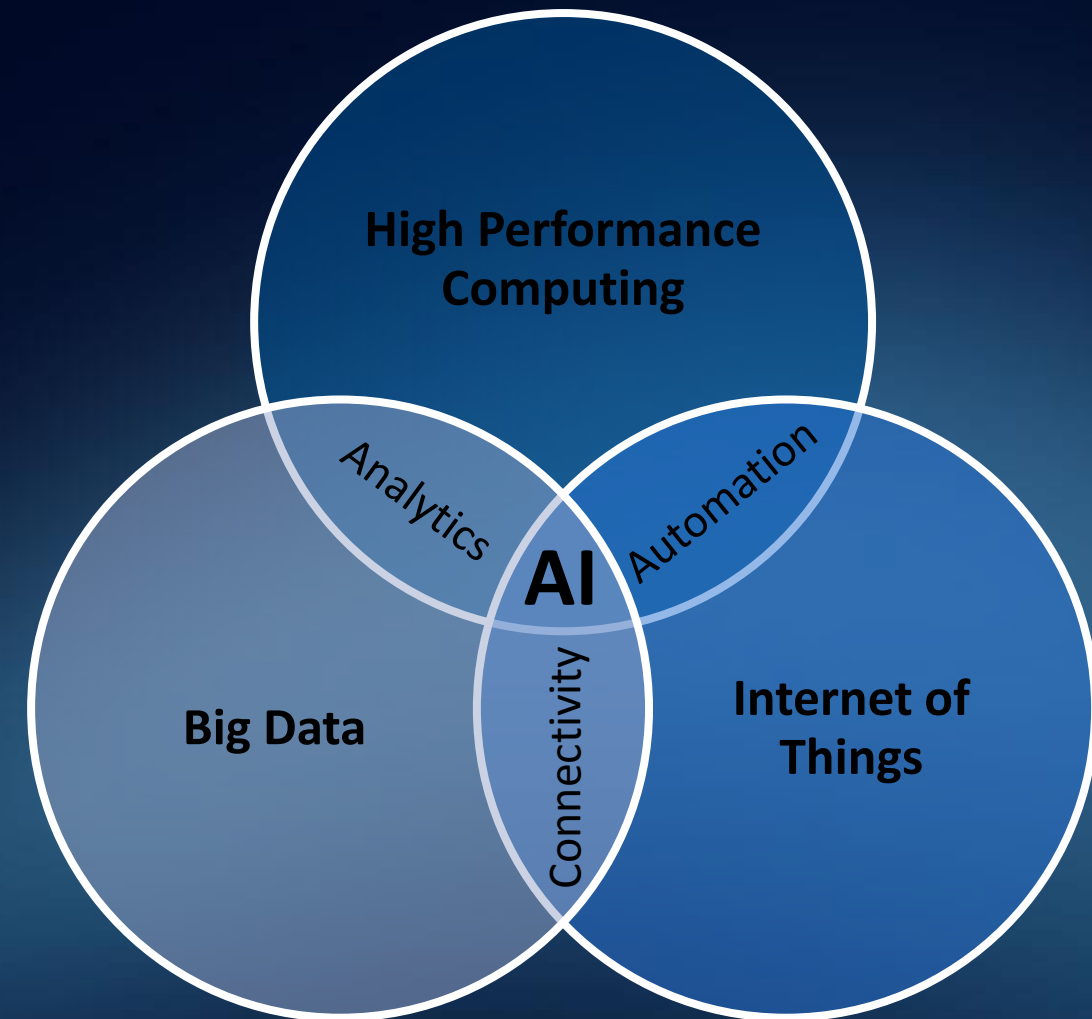
There are different scenarios of the future development of IoT-platforms possible. Most probable, the scenario is the coexistence of different platforms that are networked together



## The role of artificial intelligence (AI) according to IoT-platforms (1/2)

### Note

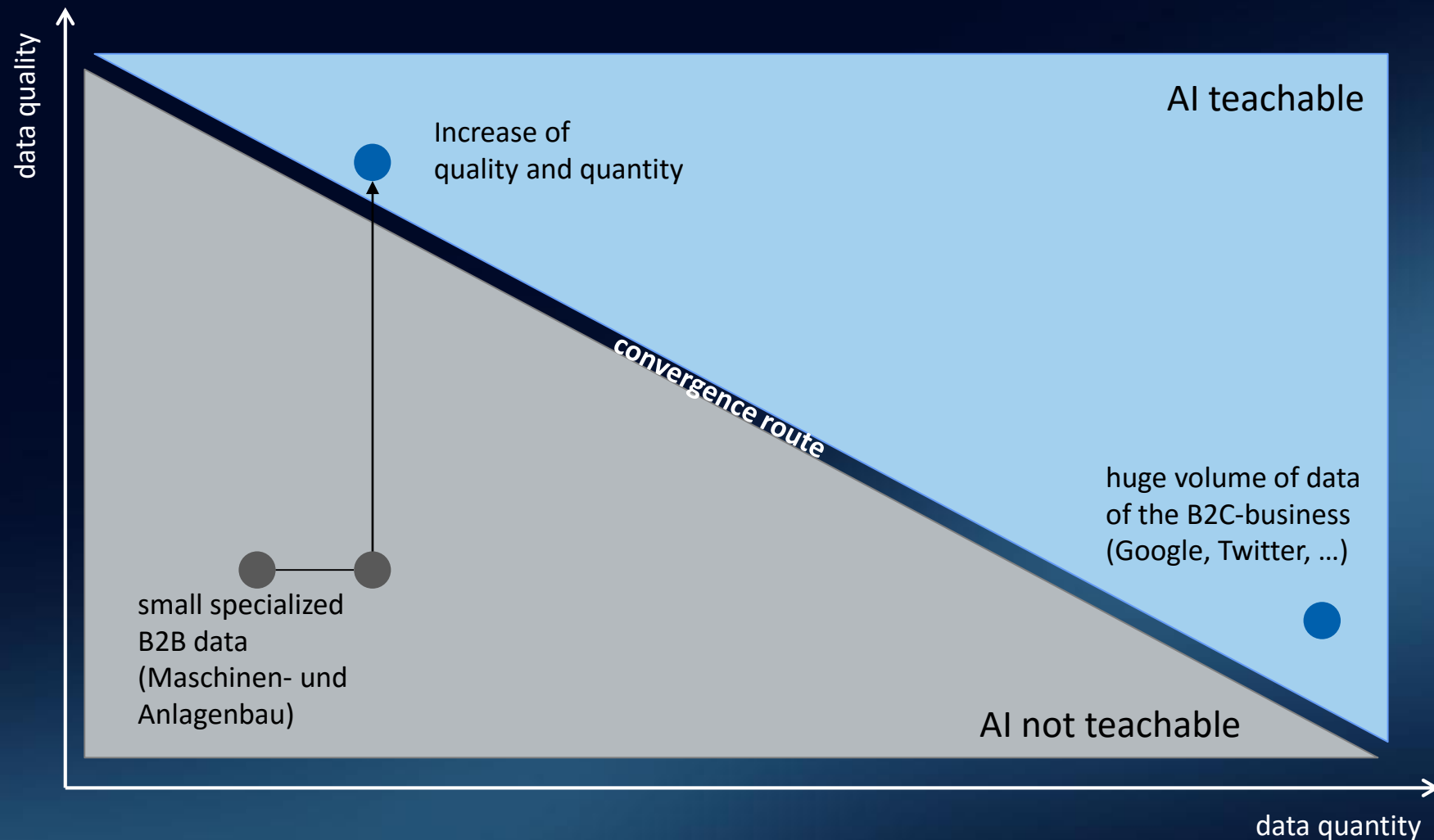
- AI combines different elements to automate processes, e.g for increasing the production
- The aim is to raise the productivity in the production for the customers in the liquid food industry



Syskron uses all elements in their IoT-platform Share2Act.



## AI: data quality is more important than data quantity







# Workplace creates creativity





# IoT-Plattformen

Erstellt von: SYSKRON X  
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A high-angle, night-time photograph of Earth from space, showing a curved horizon and a dense network of city lights across a continent. A semi-transparent blue rectangular box is overlaid on the lower-left portion of the image, containing white text.

## WHAT WE DO

We know the beverage industry!

That's why we built a flexible open platform, integrating customers assets, facilitating pro-active decision making, to help our customers achieve competitive advantage along the beverage supply chain.



# Our Vision



Digital functions



Digitalized Supply Chain



## Open platform for the beverage industry

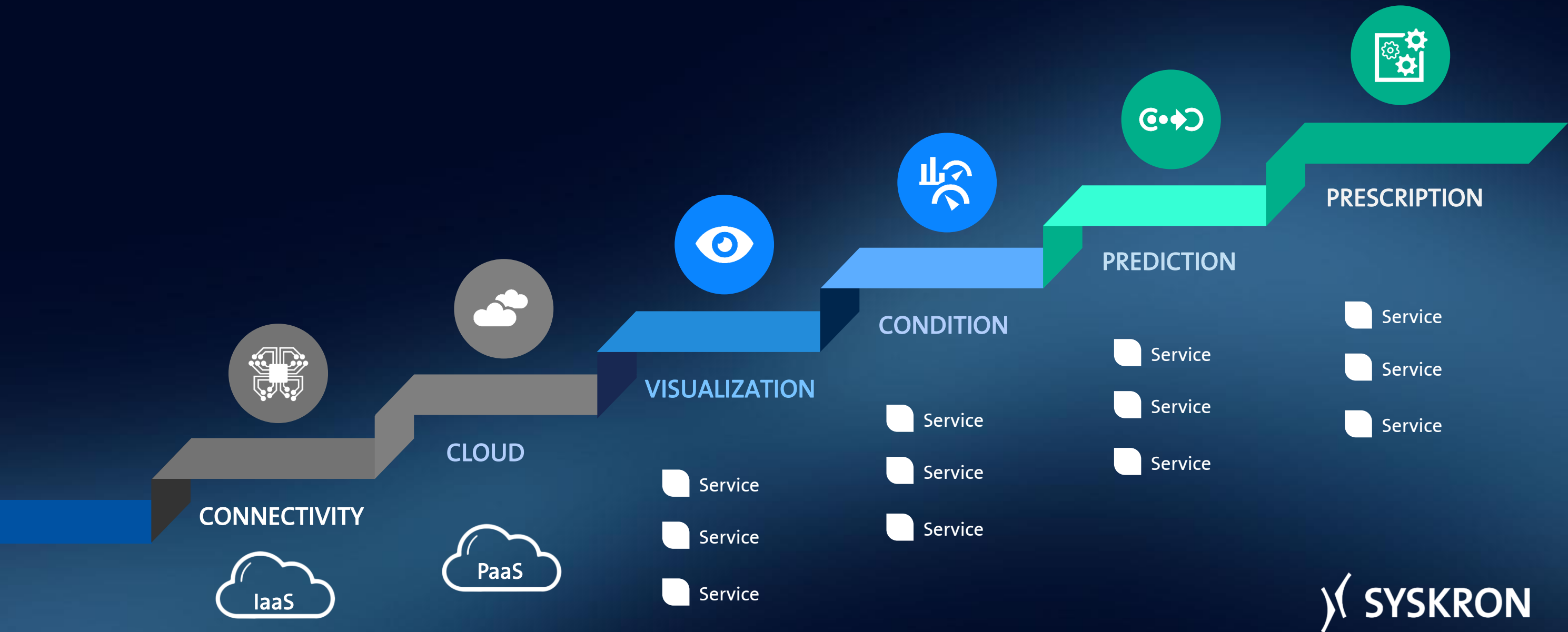


## Partner Network Service Development

- Utilize pre-built models from Syskron and world-class partners
- Create modules using Share2Act DevOps environment and services
- Leverage Share2Act developer tools, training, and community
- Engage Syskron professional services for IoT solution expertise



# Step by step to more efficiency with SYSKRON





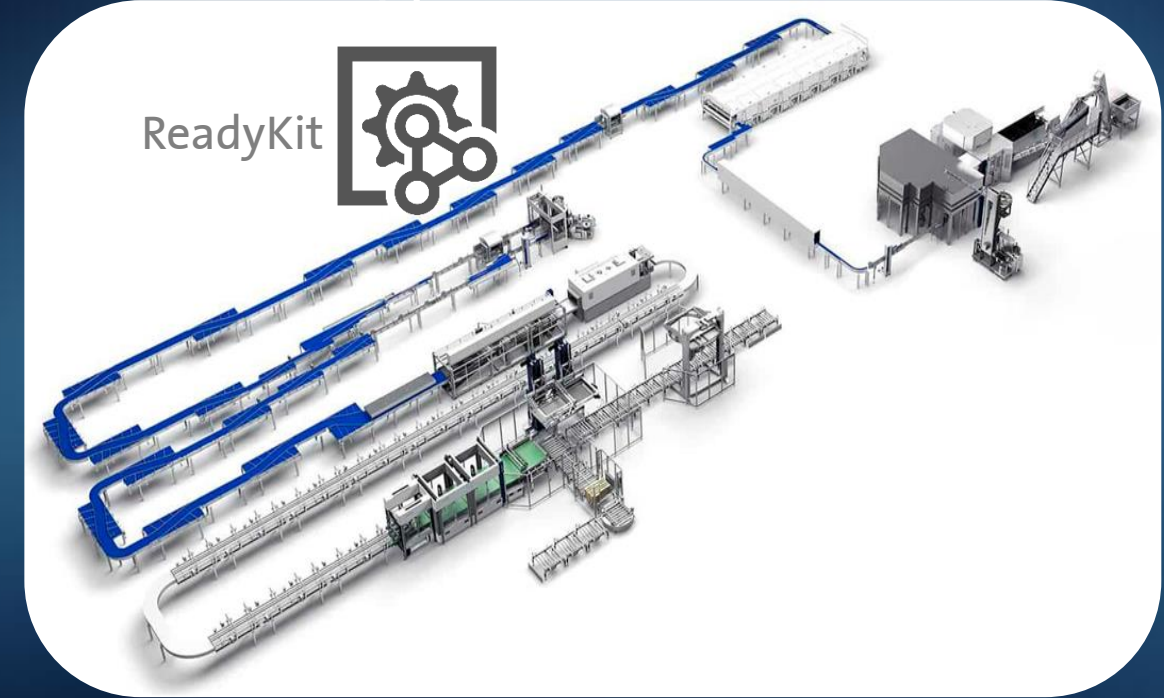
# Share2Act – the dynamic factory platform



# Connected line



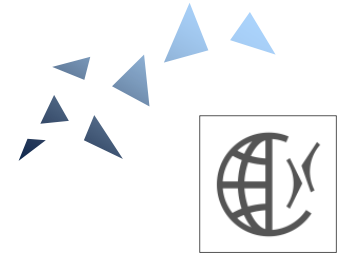
Data Points





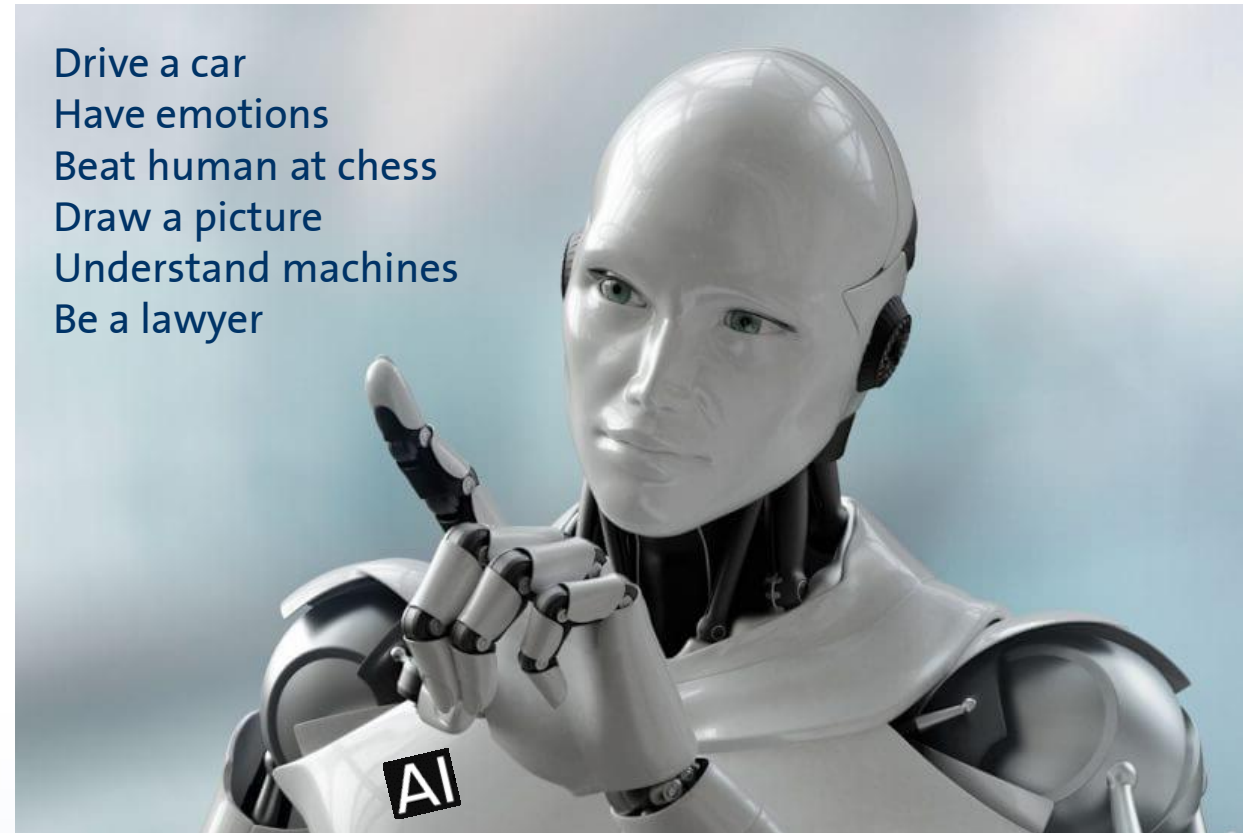


Data Science

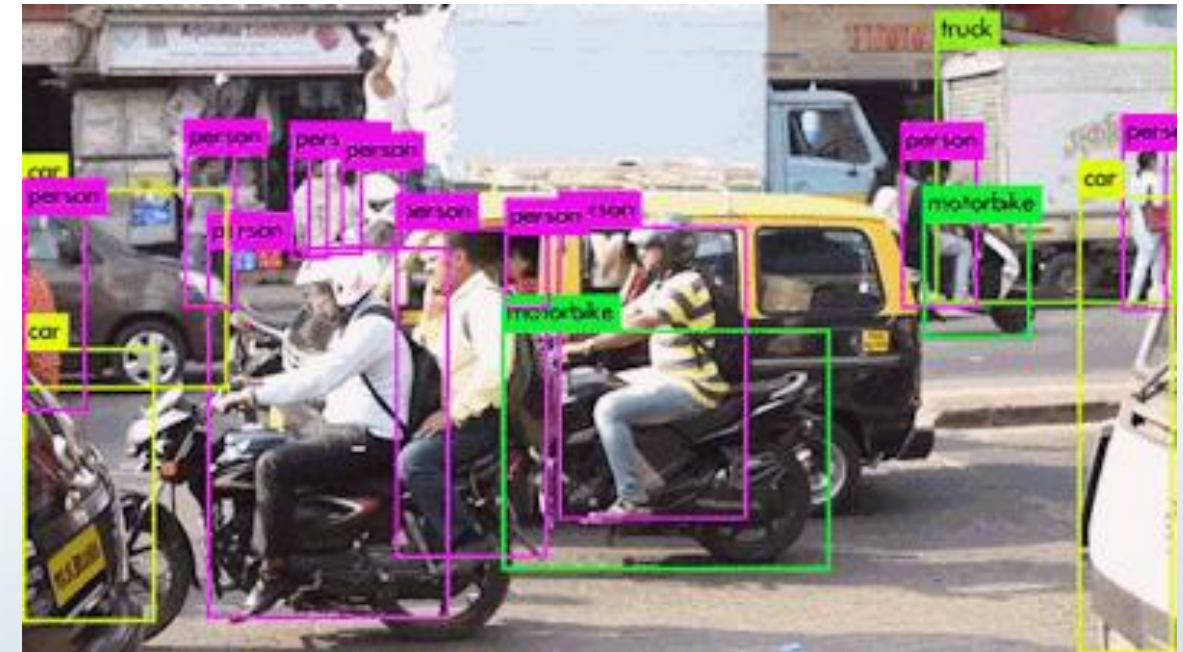


# Artificial Intelligence – A reality check

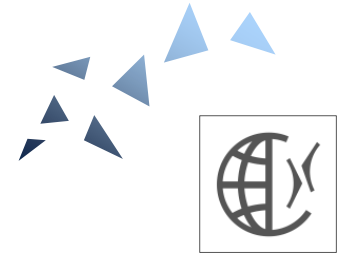
## Marketing



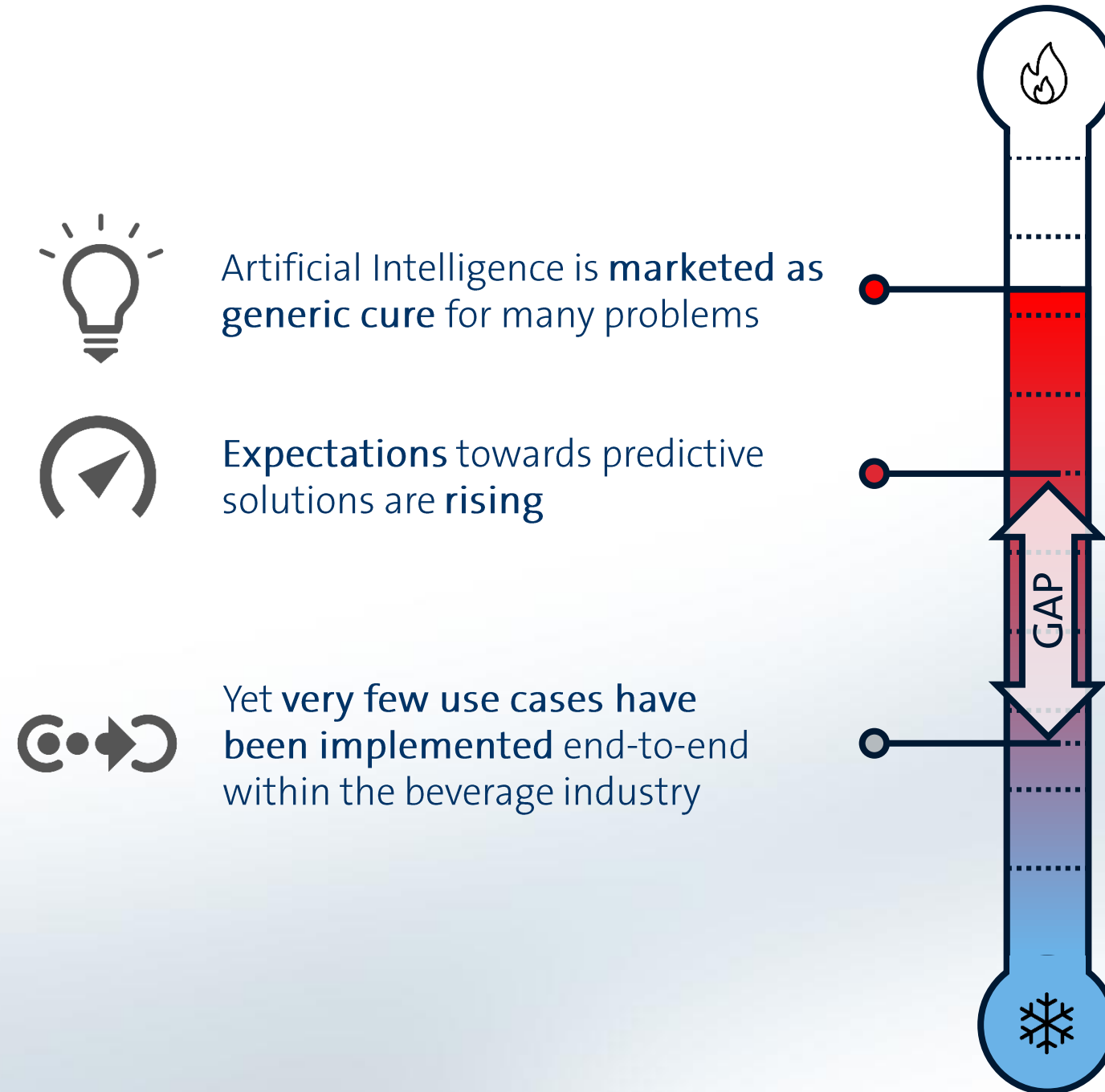
## Reality





AI can be trained for specific purposes. With hard work and good data.





# Artificial Intelligence and the beverage industry

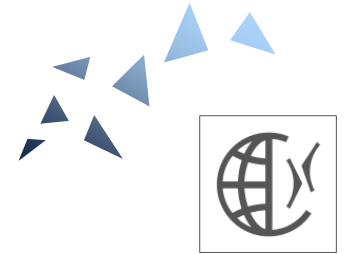


## Not only a beverage thing ...

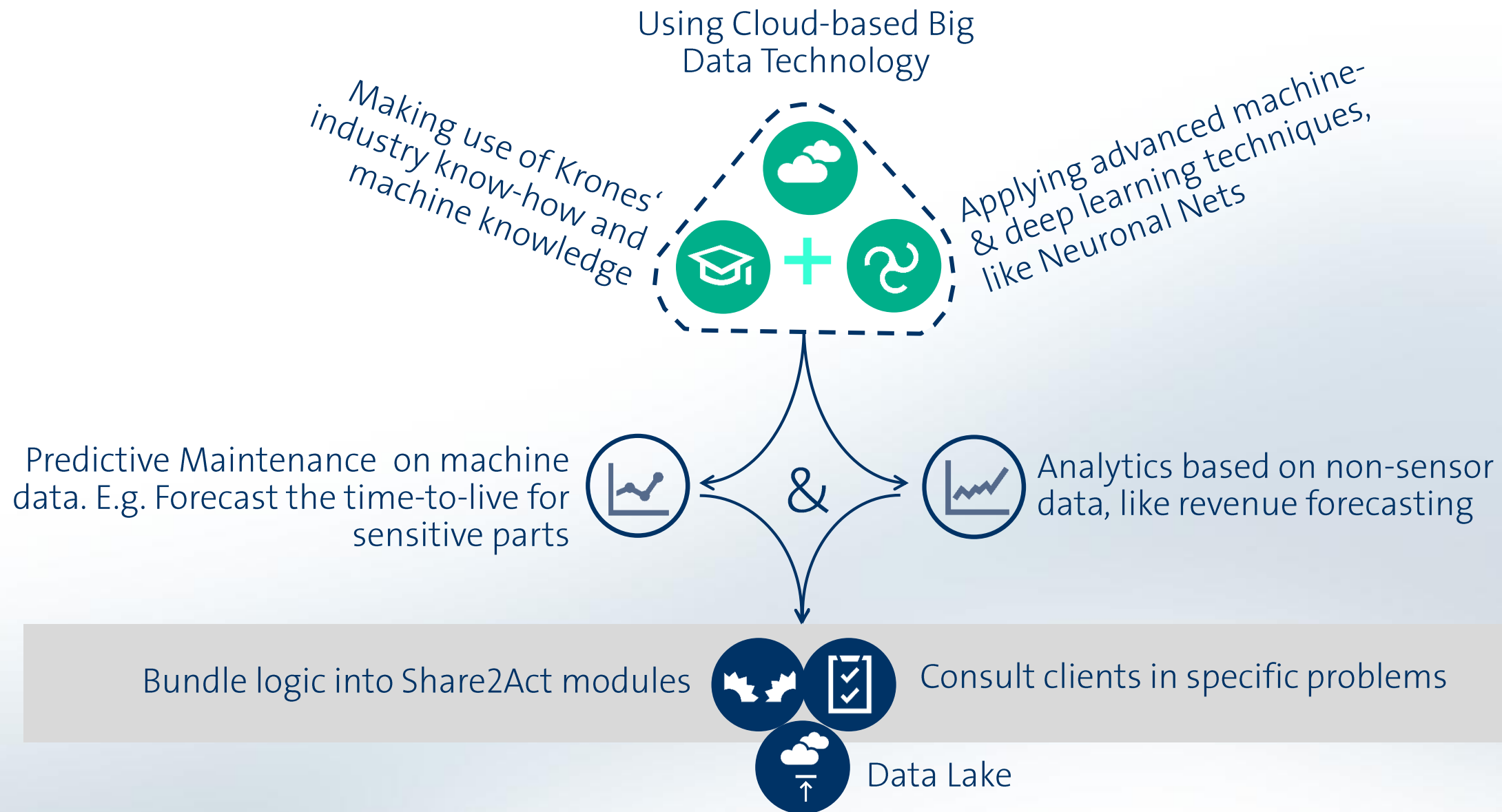
-  Elevator company collected data for the **last 30 years**
-  Still no relevant predictive use cases

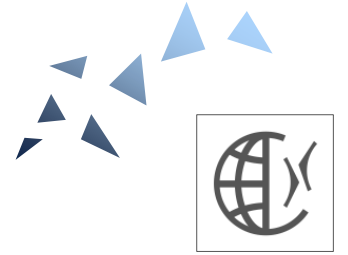
## But why does this problem exist?

-  Missing data: “What went wrong?”
-  Lack of data standardization across machines



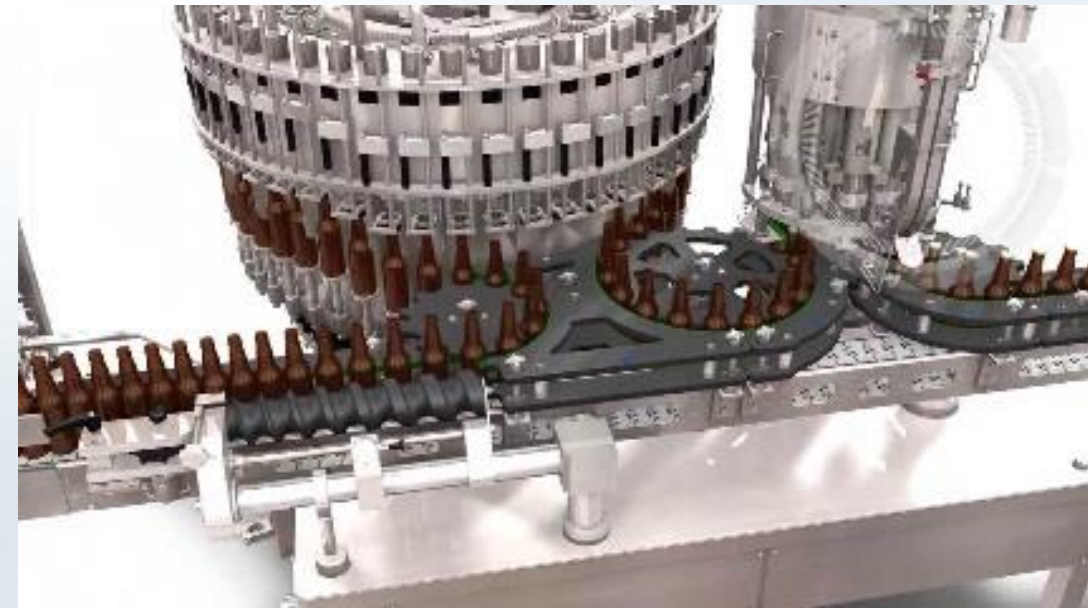
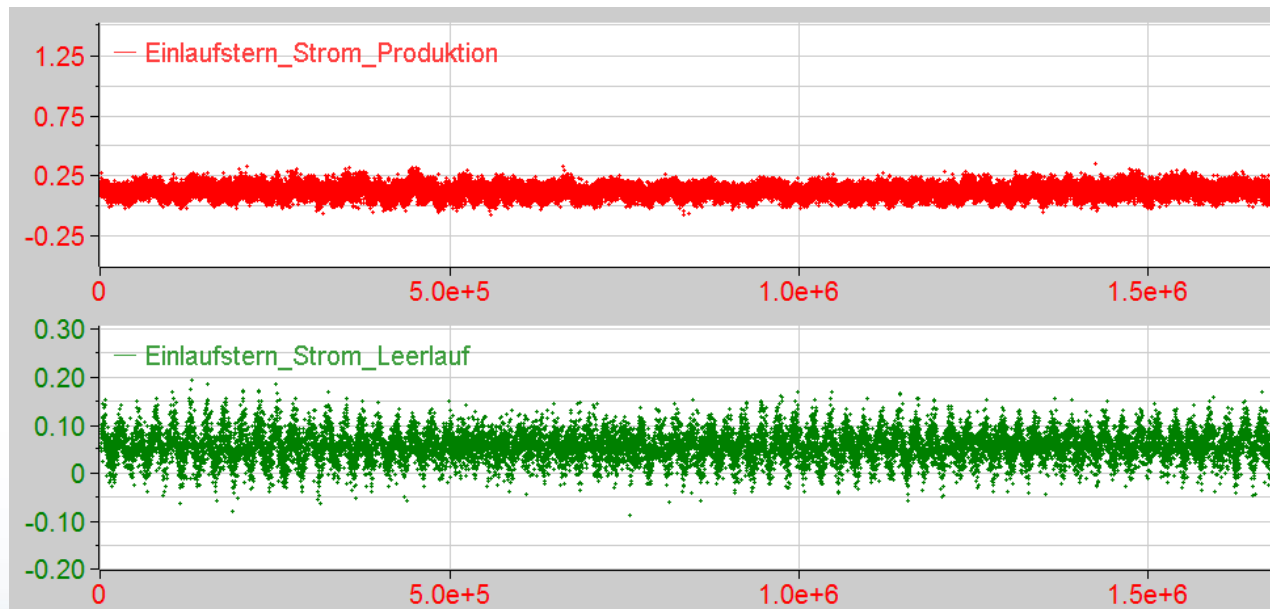
# Why do we have a Data Science Team?

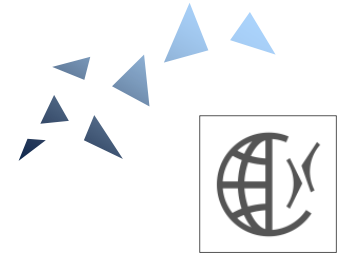




## How does Data Science look like? Example

We train statistical models on historical data to identify and act on patterns & anomalies in the ongoing production:





## What makes our Data Science team so strong?

- Cross-functional team with backgrounds in math, physics, statistics, psychology and software development
- We know what drives and slows the beverage industry. We focus on these painpoints
- While being customer centric, we still hold strong connections with newest research in these areas



