

An aerial view of a city skyline, likely Shanghai, with numerous skyscrapers and buildings. Overlaid on the city are glowing blue digital network lines and nodes, representing smart infrastructure. The sky is bright and hazy. In the top right corner, there is a white box containing the Siemens logo and tagline.

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Ingenuity for life

Smart Infrastructure –

Creating environments that care

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[siemens.com/smart-infrastructure](https://www.siemens.com/smart-infrastructure)

Global megatrends are changing our markets – structurally and profoundly

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Smart Infrastructure – our broad portfolio

Control Products



- Switching and protecting with contactors and motor starter protectors
- Electronic starting devices for motors
- Push buttons and position switches
- Functional and safety relays, motor management devices

Low Voltage Products



- Low-voltage protection devices, switching devices, measuring and monitoring devices
- Low-voltage distribution boards and systems
- Medium-voltage vacuum circuit breakers, contactors and interrupters
- EV¹) charging and storage for residential

Building Products



- **Integrated building management software and platforms for automation, fire safety, security and other domains**
- **Building automation**
- **Room automation and lighting control**
- **Sensors, valves and actuators**
- **HVAC²) OEM controls and devices**
- **Fire safety**
- **Cloud applications and gateways**

Distribution Systems



- Medium-voltage primary and secondary switchgear/ generator breaker systems/ outdoor systems
- Low-voltage switchboards, motor control center and busbar trunking systems
- Distribution and traction transformers
- Energy storage systems
- PV³) inverter systems
- eMobility charging infrastructure
- Distribution solutions
- Service

Digital Grid



- Substation automation, protection and smart communications
- Grid operation and control
- Smart grid applications, analytics and IoT offerings
- Grid planning and simulation

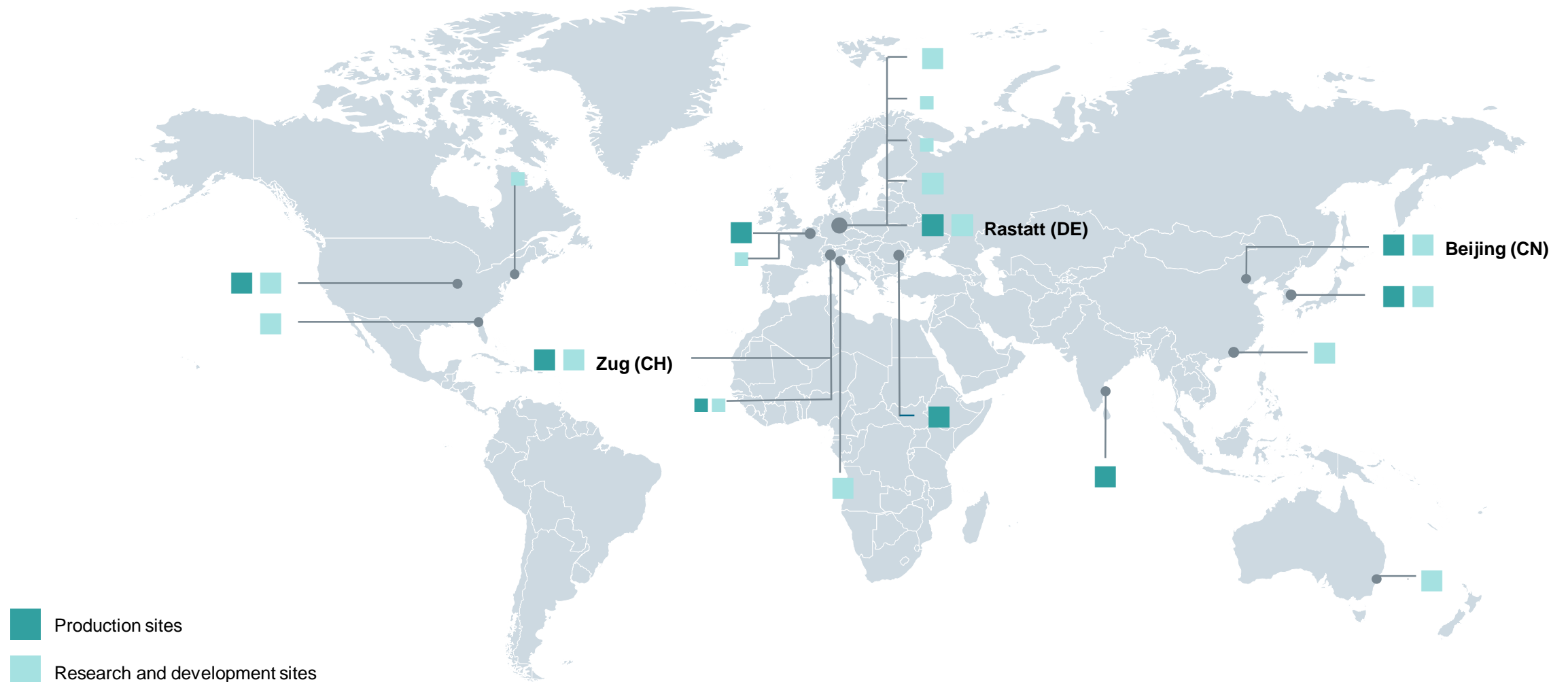
Solution and Service Portfolio



- Digital Twin architecture
- Building operations
- Security
- Service/ Migration
- Building performance
- Smart Spaces
- Distributed Energy Systems
- Vertical markets specific portfolio (e.g. for Data Centers and Life Science)

¹ EV: Electric vehicle | ² HVAC: Heating, Ventilation and Air Conditioning | ³ PV: Photovoltaics

Driving research and development of new products and solutions in **16 R&D** and **9 production sites** around the globe



Products @ Factory Zug

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New business models



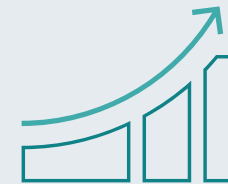
Speed



Flexibility



Quality

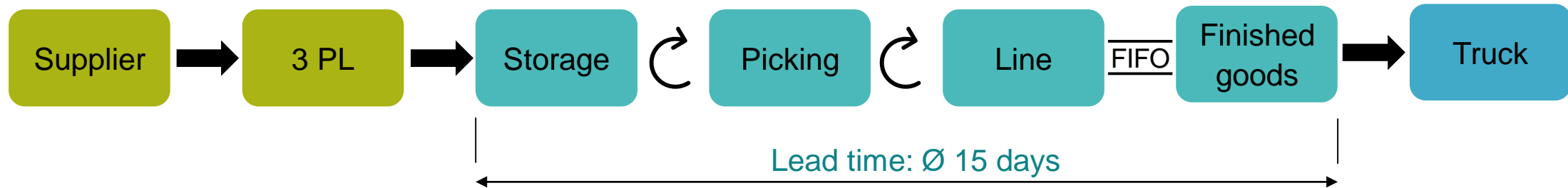


Efficiency



Security

Value stream analysis of the initial situation



- Long lead time of Ø 15 days
- Space of more than 5'000 sqm in the factory for storage
- Inefficient handling process (multiple transports and handling)
- No automatization
- Millions of papers per year for kanban cards and picking

We created a powerful Digital Twin with Tecnomatix



Predict product and production performance

Run what-if scenarios

Reduce the number of physical prototypes

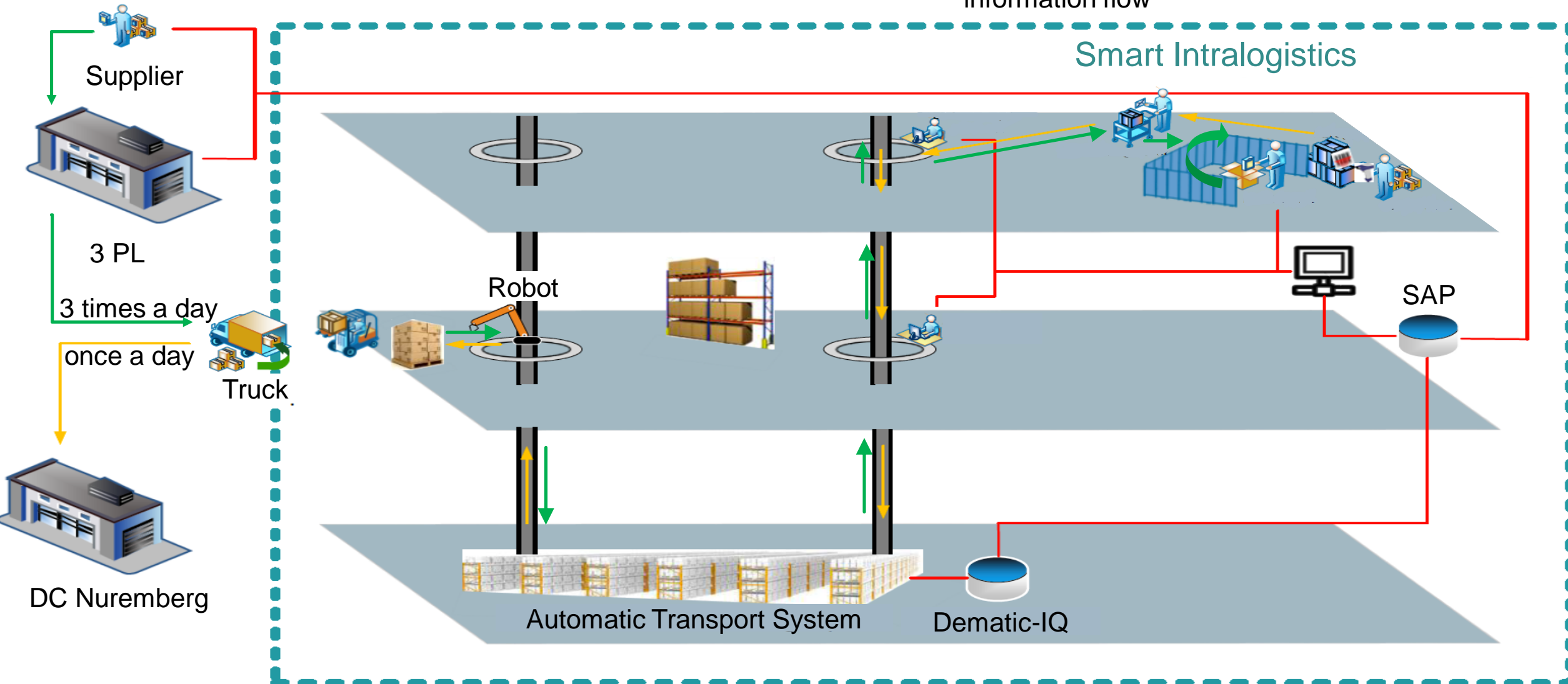
Ensure you've met customer requirements

Material & Information Flow

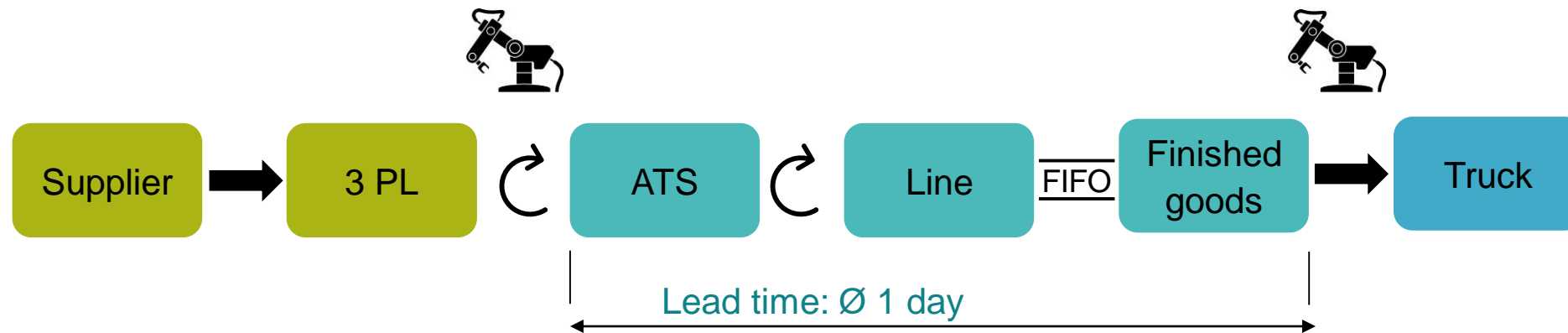
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- material flow
- ← finish products
- information flow

Smart Intralogistics



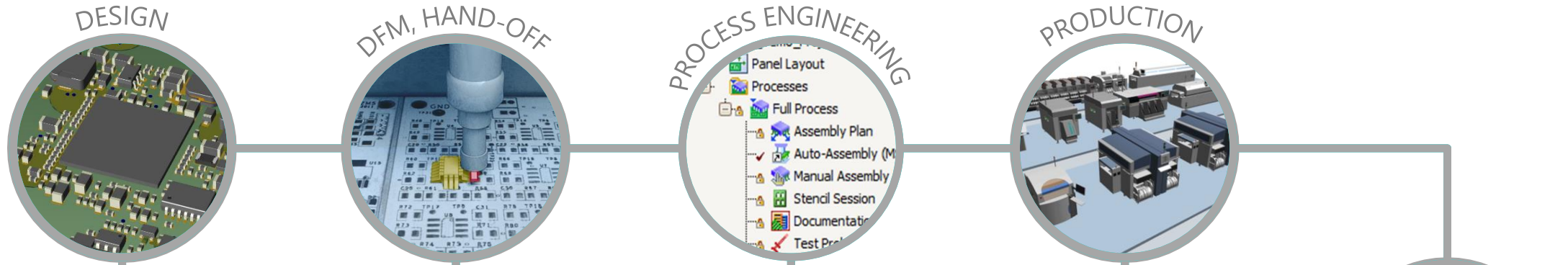
Digitalization & automatization as key levers: Value stream mapping after optimization



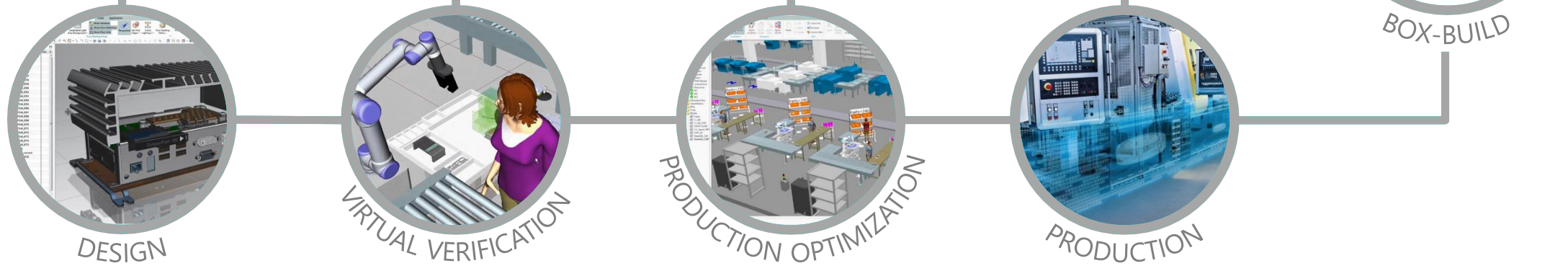
- Digital picking process at 3PL
- Reduction of one storage level and handling step
- Paperless material replenishment and delivery based on handling unit identification via barcode (HU ID)
- Hourly planning in production
- Lead time reduction of 90%
- Space reduction of 5'000 sqm
- Automatization of incoming- and outgoing goods process
- Automatization of internal transport process
- Digital mizusumashi process – paperless material handling

Vision & Mission: Synchronized Electronic and Mechanical flow from ideation to realization...

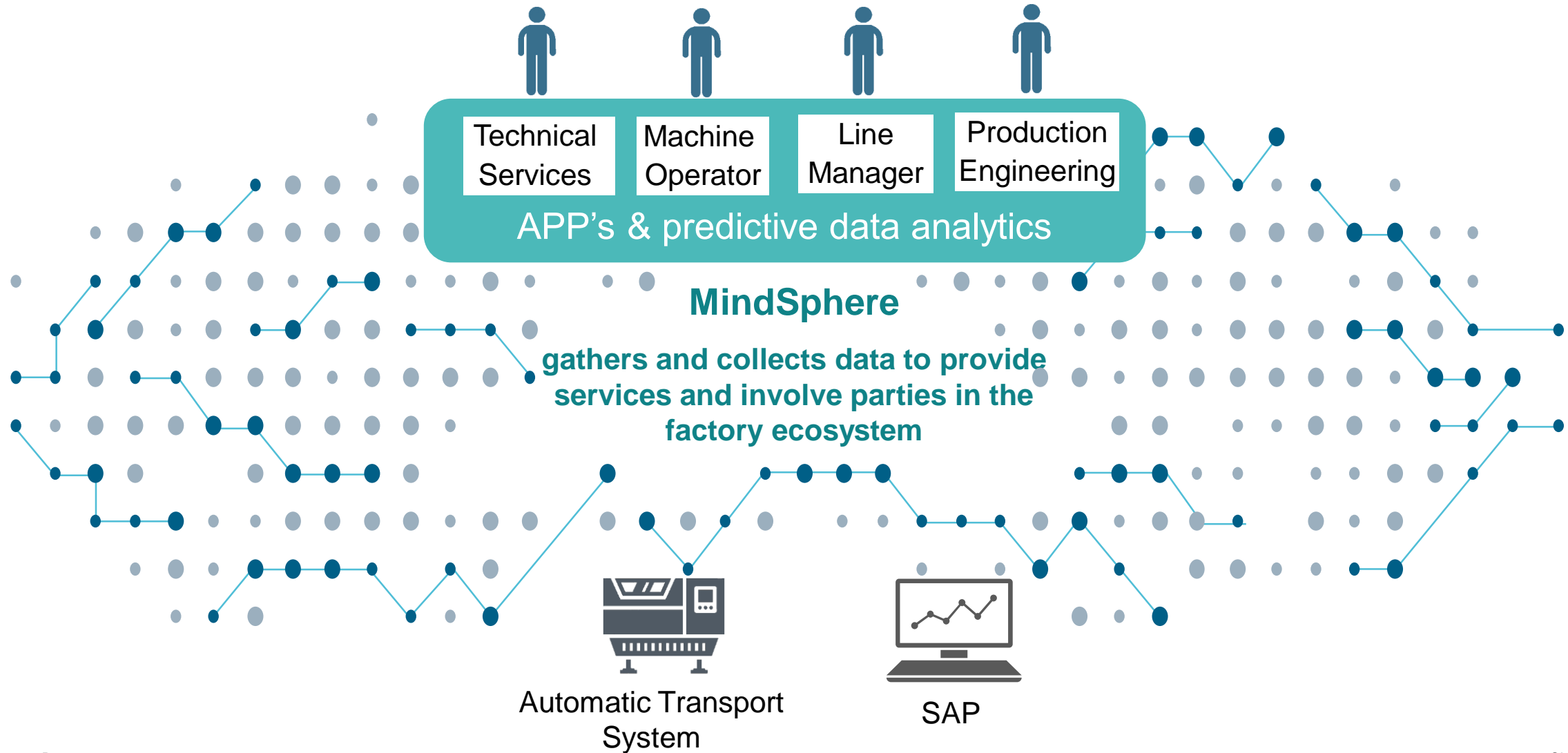
ELECTRONIC



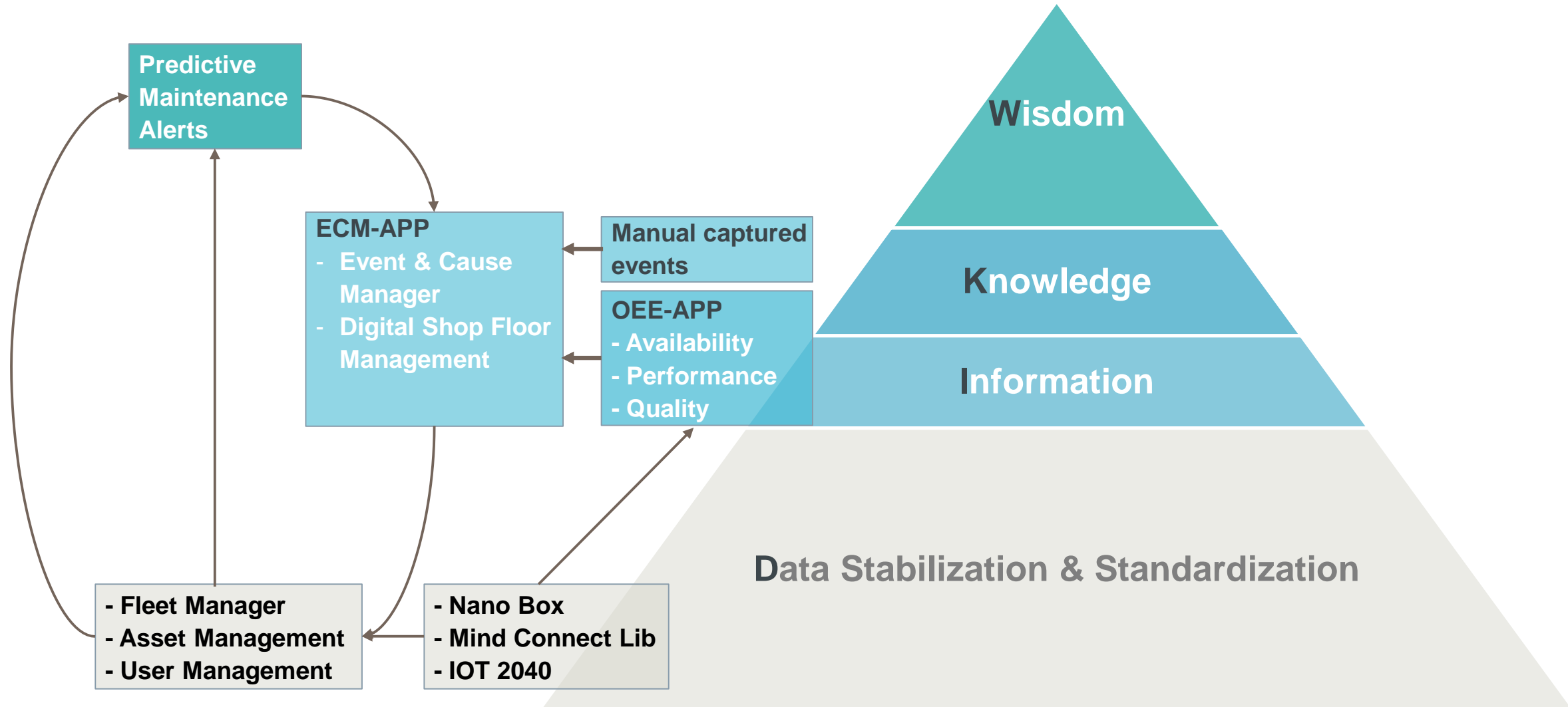
MECHANICAL



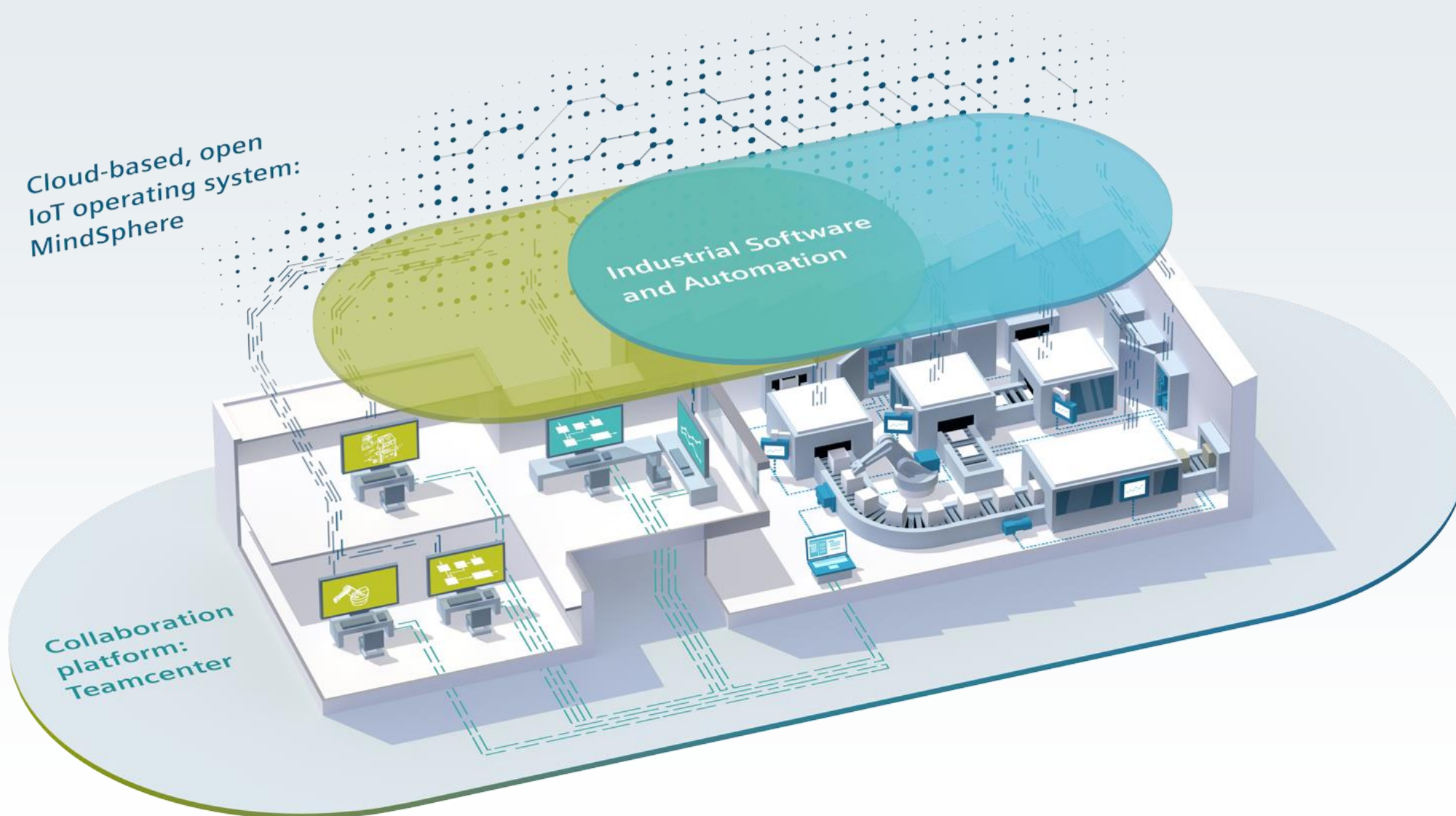
Digital Twin of the performance: to monitor the OEE of the ATS and visualize the logistic process with dashboards



Connect the ATS to MindSphere and increase the OEE



Digital Enterprise Suite





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