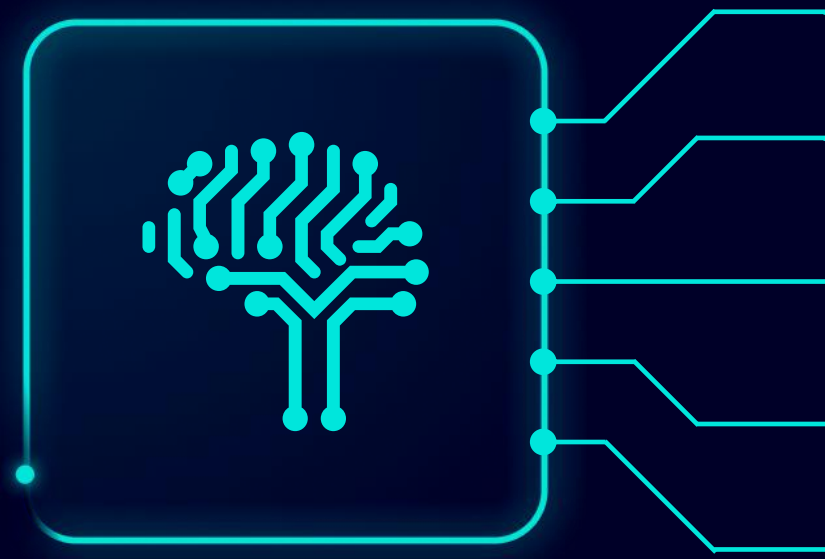
Die Automatisierung automatisieren

Der Weg zur KI-gestützten, autonomen Produktion

Ü:MO – ARENA2036 | 18. Juni 2026

Rainer Brehm, DI CTO and DI COO automation business



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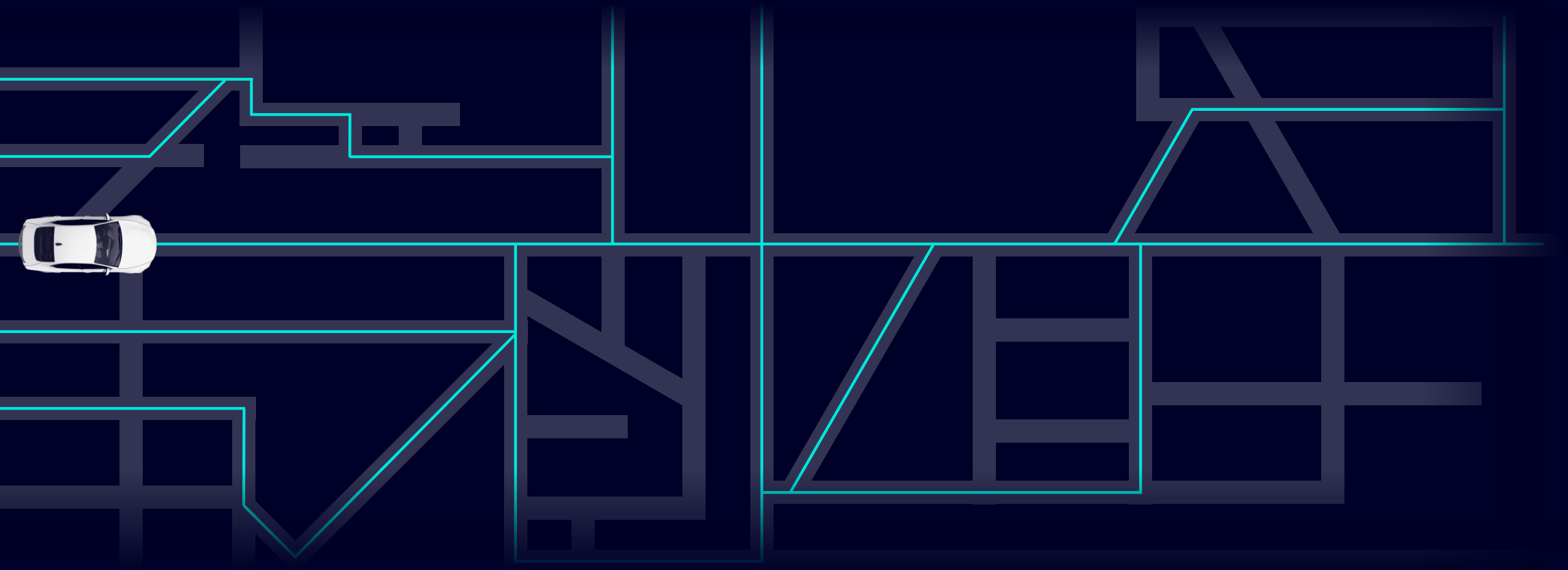
We navigate the unknown every day



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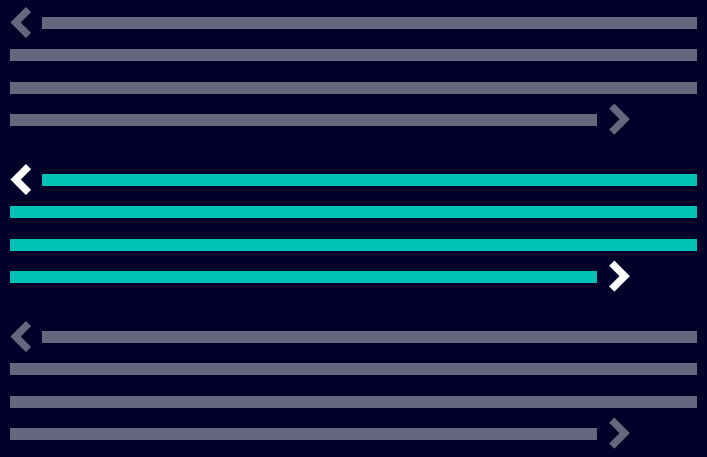
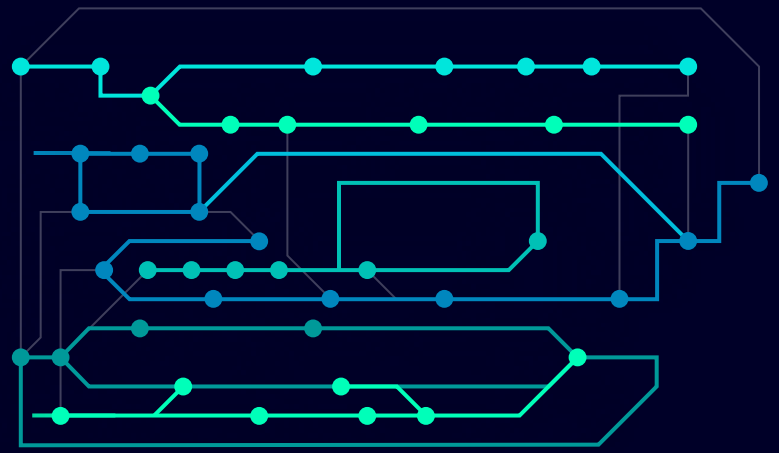
Automate the unknown by automating automation



Hard-coded tasks



Goal-driven workflows

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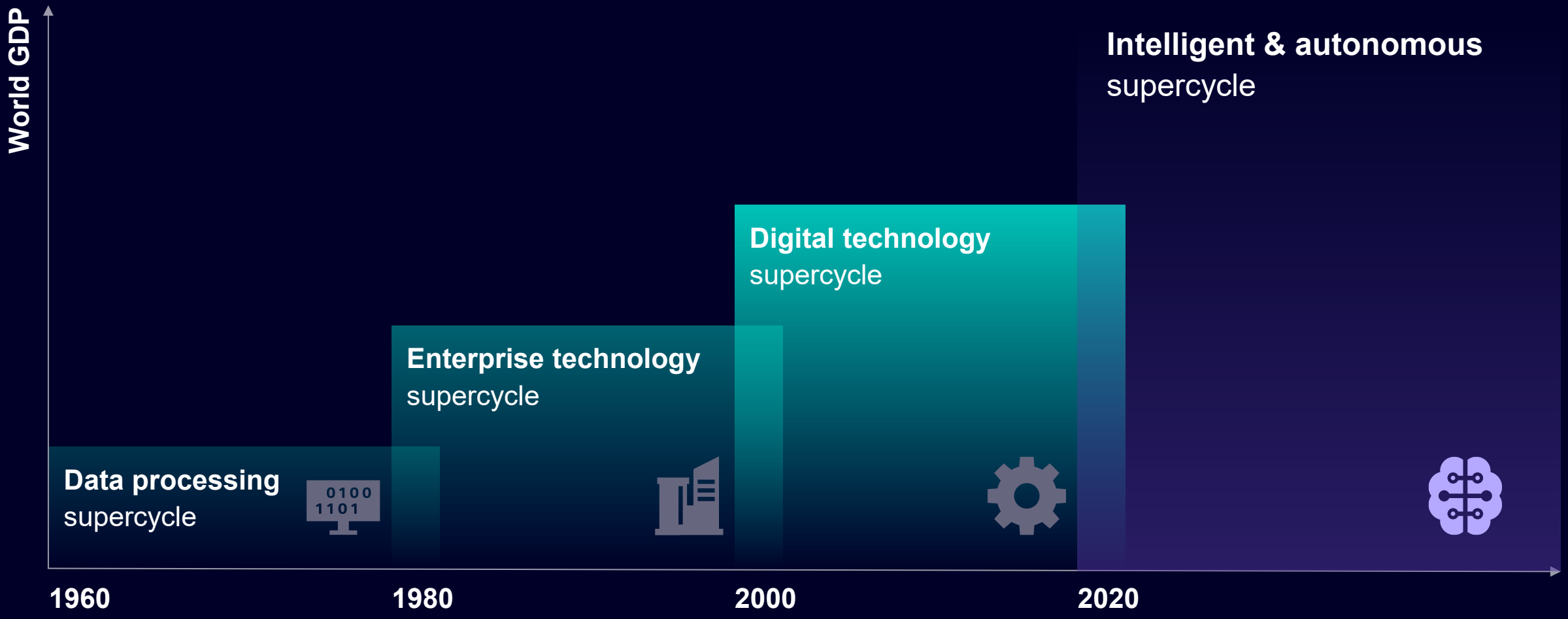
The next technological supercycle has begun



Source: Gartner

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Innovation through collaboration at ARENA2036

EcoFrame
(2024-2028)

Framework for sustainable development for product & production

Connect4HCA
(2024-2028)

Human at the center of industrial automation

Industrial Metaverse
(2024-2027)

Real production in a virtual environment

IPCEI-AI
(2027-2029)

Development of a cognitive factory

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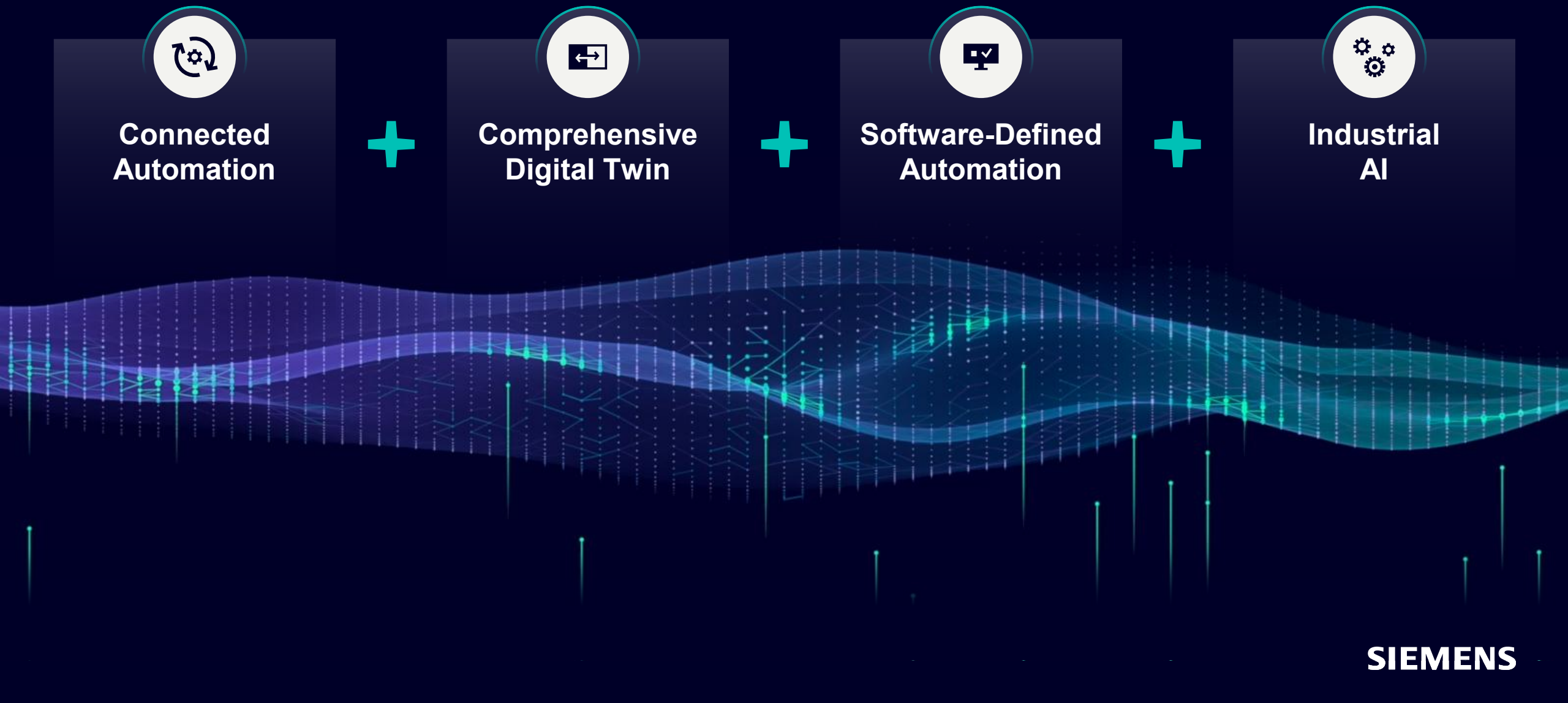
Connected Automation
+
Comprehensive Digital Twin
+
Software-Defined Automation
+
Industrial AI

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Software-Defined Automation

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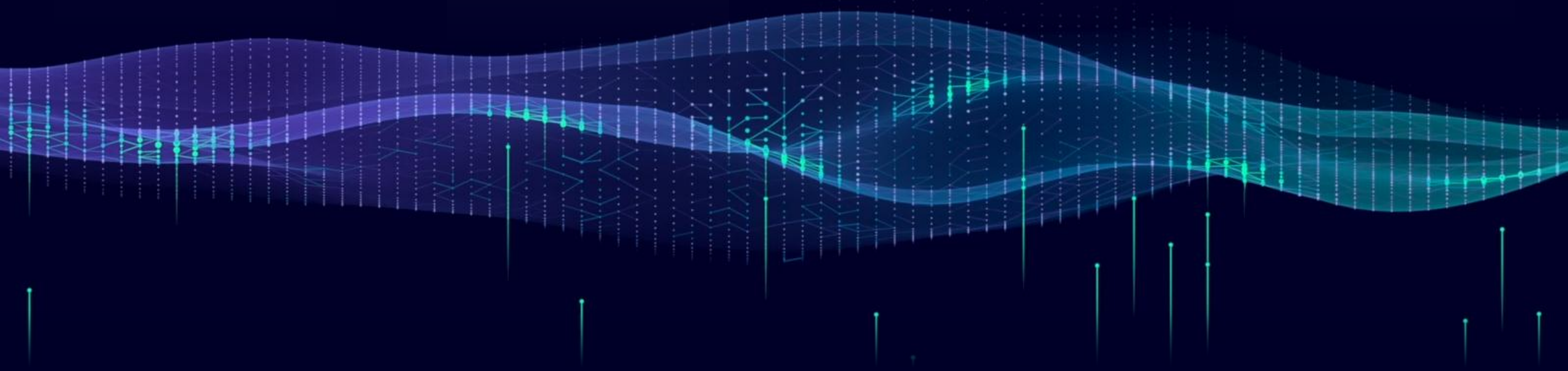
Industrial AI



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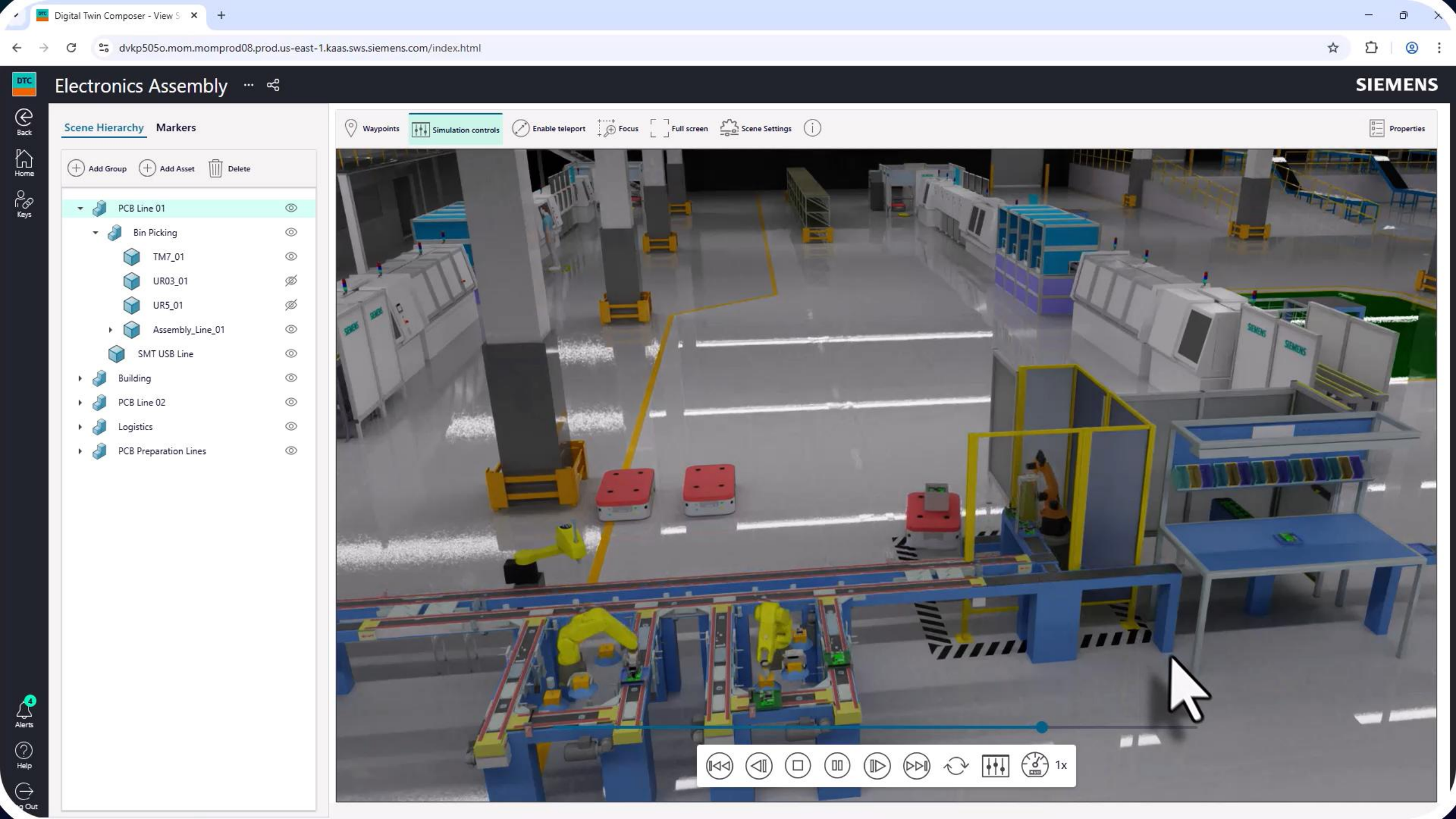
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Add Asset
Delete
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Bin Picking
TM7_01
UR03_01
UR5_01
Assembly_Line_01
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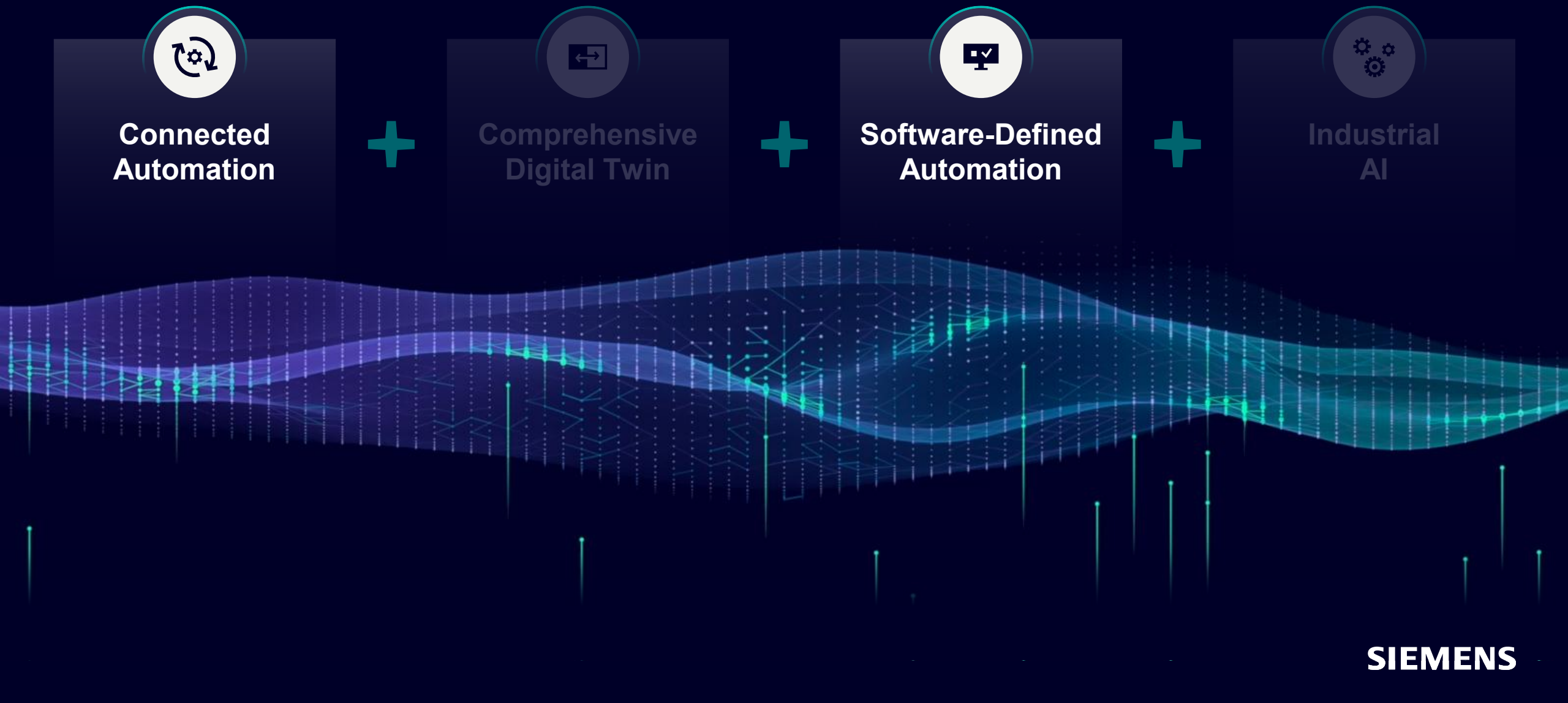
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efficient wireless power
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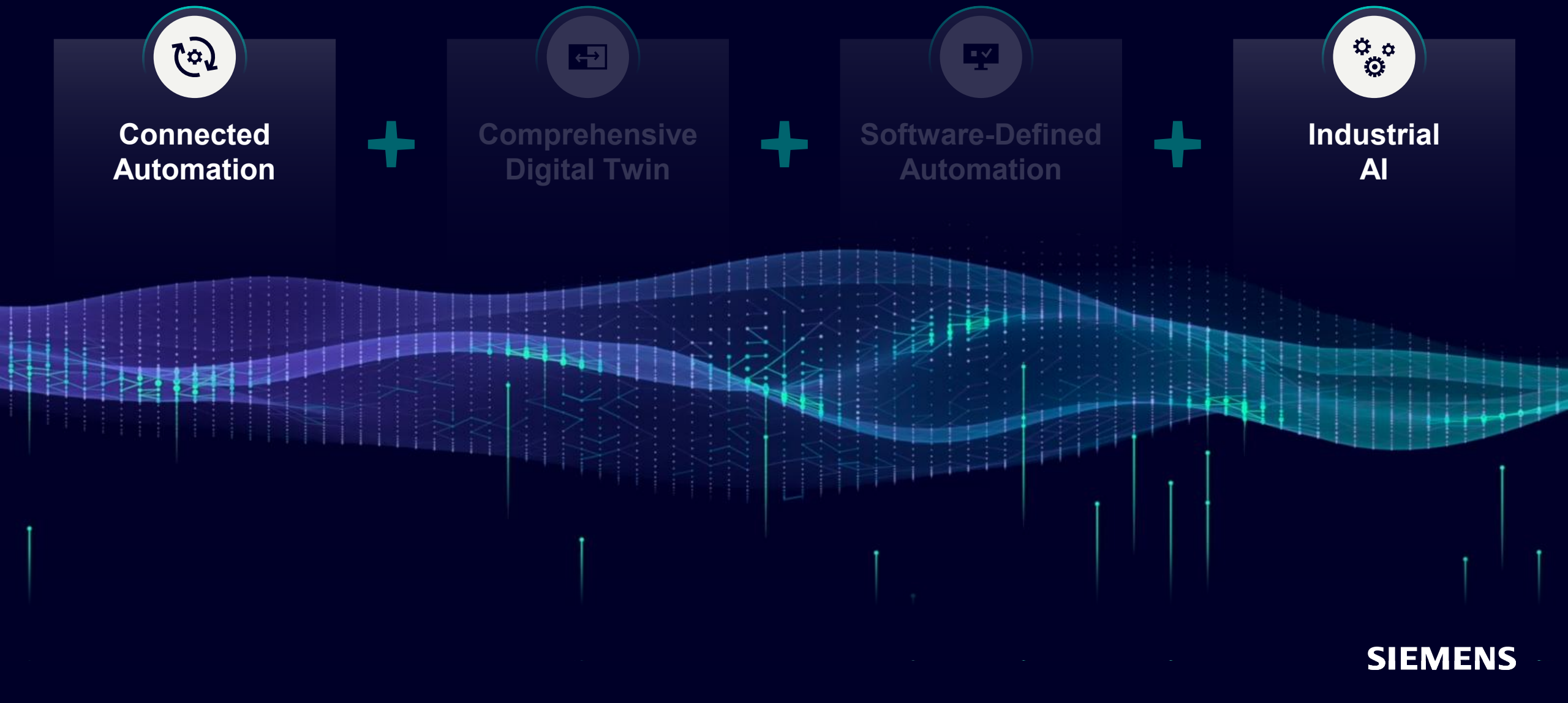
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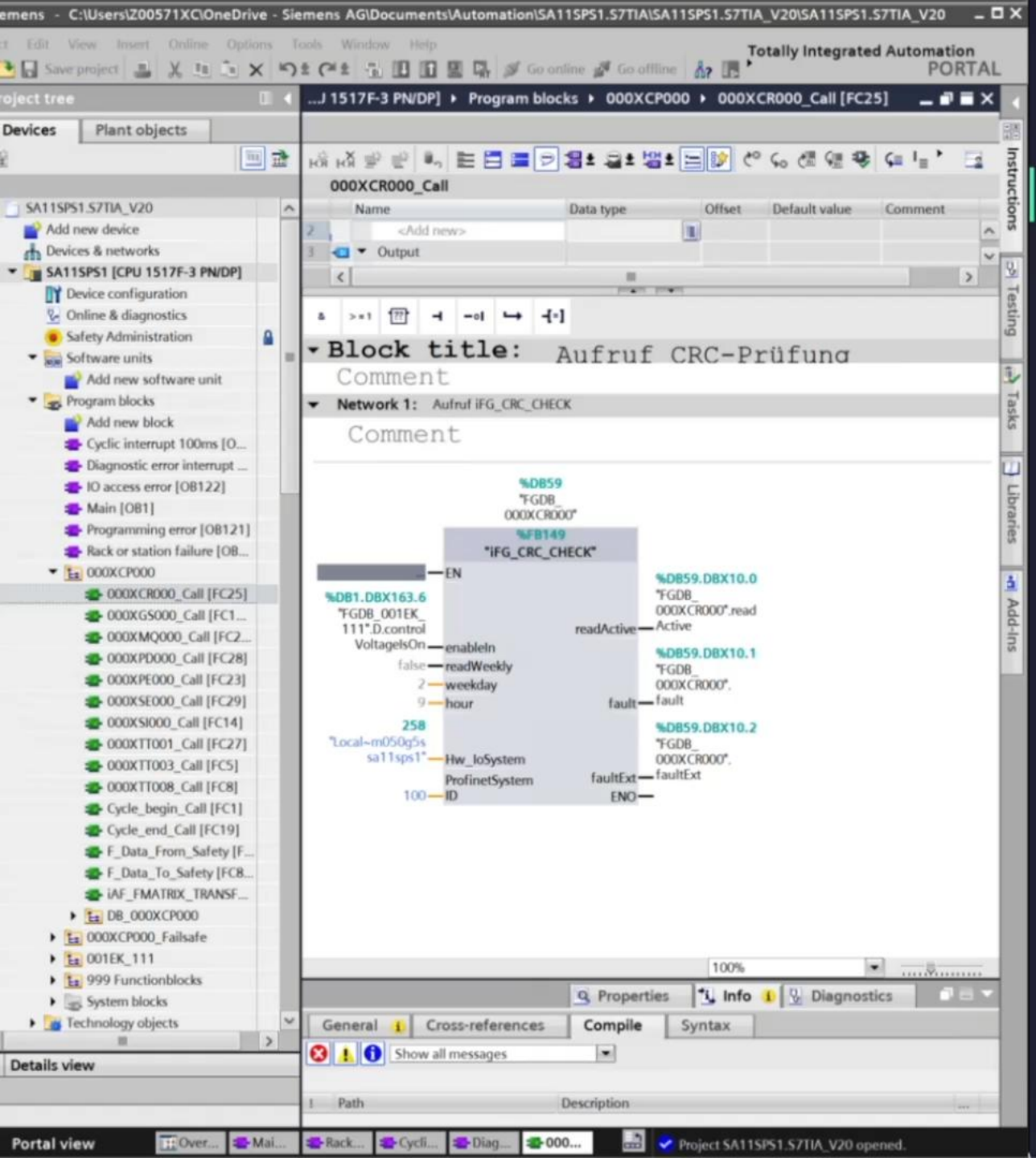

SIEMENS Eigen Engineering Agent

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- Siemens PN/PN Couplers (2 units)
- RFID readers (Siemens RF68xR, 12 units)
- Ident systems (MV4xx, 2 units)
- Markator marking devices (2 units)

PLC Program Structure

Category	Count	Description
Failsafe Blocks	~50	Safety functions (ESTOP, Robot safety, Gate, Lenze)
Standard Functions	~100	Basic software, General functions, System blocks
Subsystems	~150	Robots, TCP communication, MQTT, RFID, Valves
Station Calls	~400	Individual station control blocks
Data Blocks	~200	Instance DBs, System DBs, User data

Key Programming Languages: FBD, F_FBD, SCL, GRAPH, STL

Network Features

- PROFINET IO (real-time communication)
- PROFIsafe (safety communication)
- OPC UA
- MQTT/TCP/IP communication
- IoT Publisher functionality

This appears to be a large-scale **automated manufacturing/assembly system** with multiple robots, conveyor systems, safety functions, and comprehensive monitoring/control infrastructure.

Would you like me to dive deeper into any specific aspect (hardware details, specific PLC blocks, network configuration, etc.)?

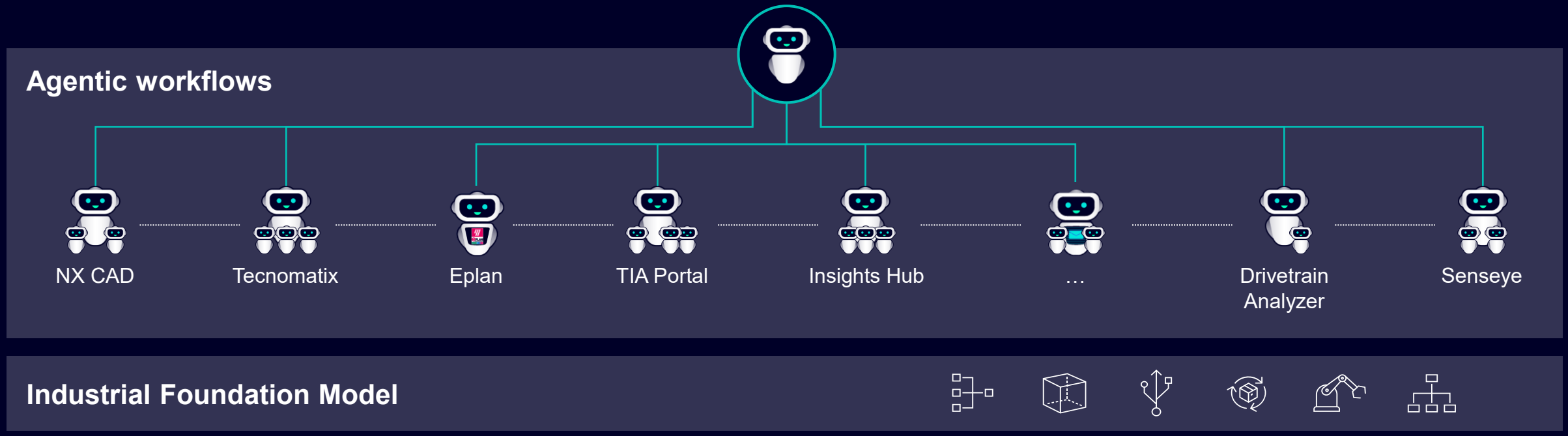
Let's start by generating an SCL function block for a body-in-white station controller. I need it to handle a full welding cycle — clamping the workpiece, verifying clamp position, running the weld sequence, unclamping, and signaling that the station is ready for transfer.

0% till compaction

This content is AI-generated.

Agentic AI will orchestrate industrial workflows end-to-end

Design	Planning	Engineering	Operations	Service
Design plants and Products	Plan and Simulate processes	Automate machines	Operate processes	Maintain Asset infrastructure



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from
hard-coded
to
goal-based
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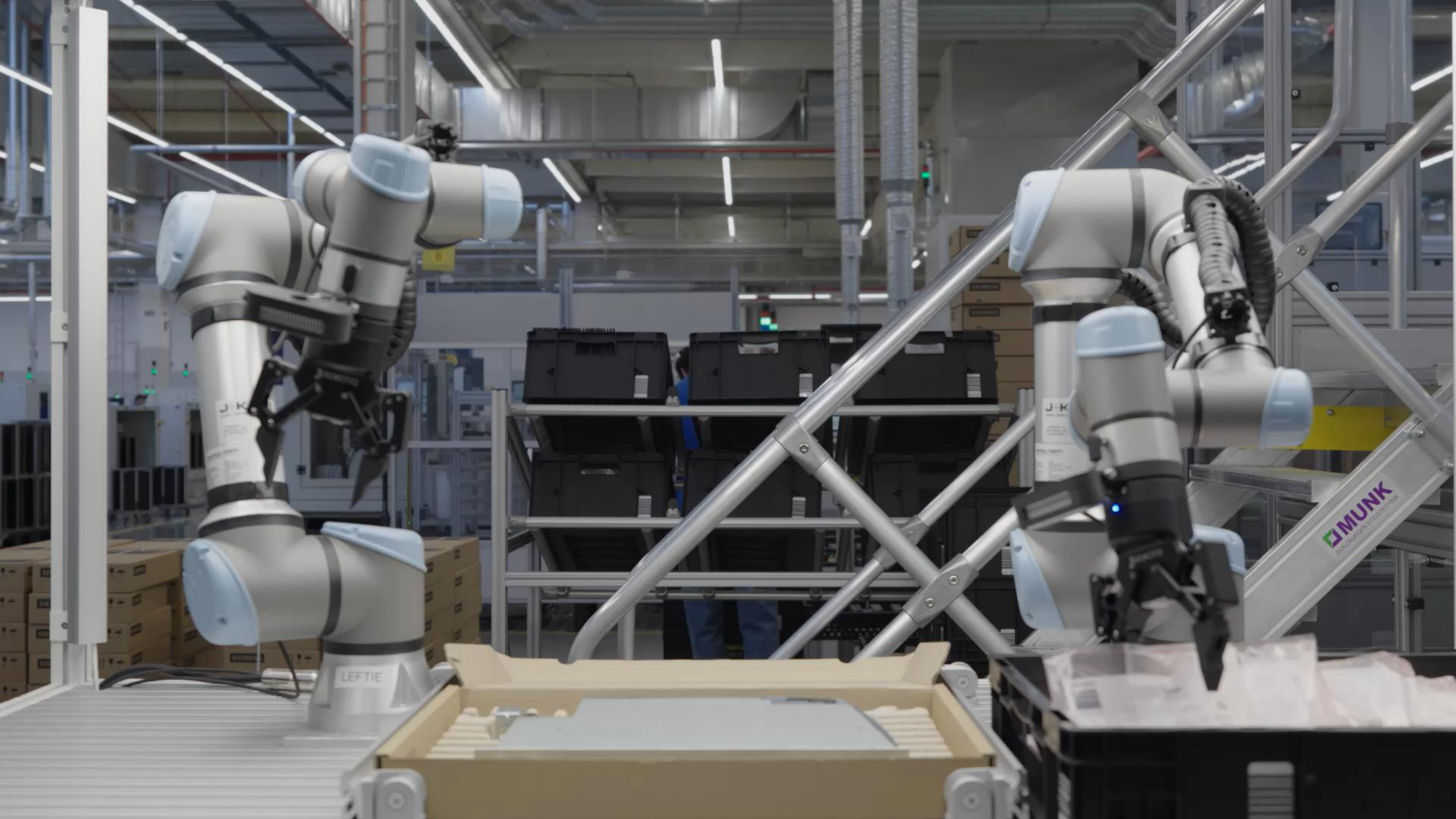
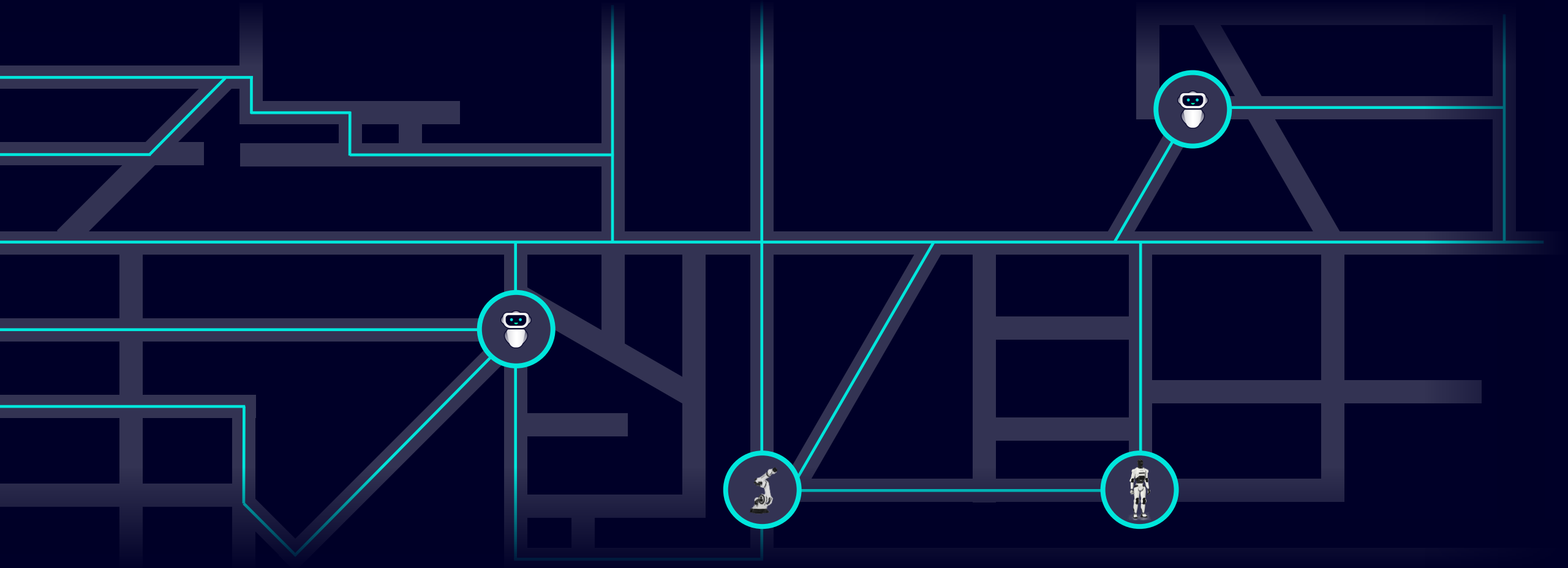

LEFTIE
MUNK

No matter what's coming.
We are the ones managing it – together.



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