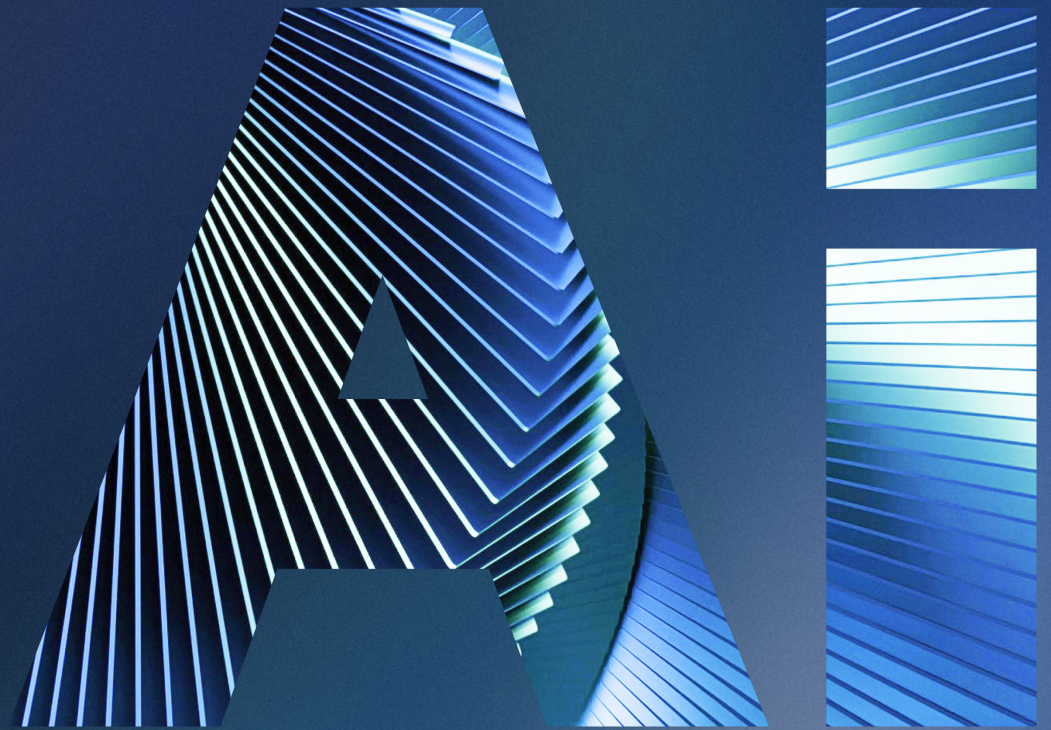


Industrial Generative AI

Julian Busch

Senior Key Expert AI, Siemens



Our purpose

We create **technology** to
transform the everyday,
for **everyone**

Businesses and Services of Siemens AG

Industrial Business

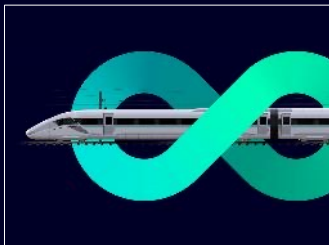
Digital Industries



Smart Infrastructure



Mobility



Siemens Healthineers¹



Siemens Advanta



Services

Siemens Financial Services



Siemens Real Estate



Global Business Services



Foundational Technologies



¹ Publicly listed subsidiary of Siemens; Siemens' share in Siemens Healthineers is 73%

Innovation is the basis for our success

€6.3 bn

R&D expenditures¹

51,600

R&D employees²

5,250

inventions¹

2,900

patent applications¹

Cooperation

with universities, research
institutes, and start-ups

16

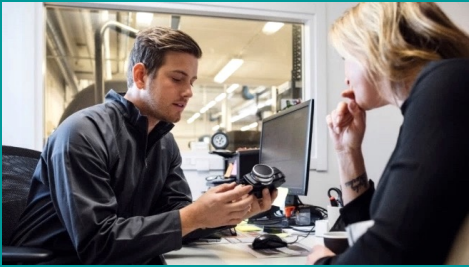
Siemens Research and Innovation
Ecosystems (Siemens RIEs)

¹ In FY 2024 | ² On average during FY 2024



Industry trends

Complexity of customer demands



Globalization and volatile markets



Growing sustainability requirements



Lack of talent



Productivity



Cost pressure and efficiency



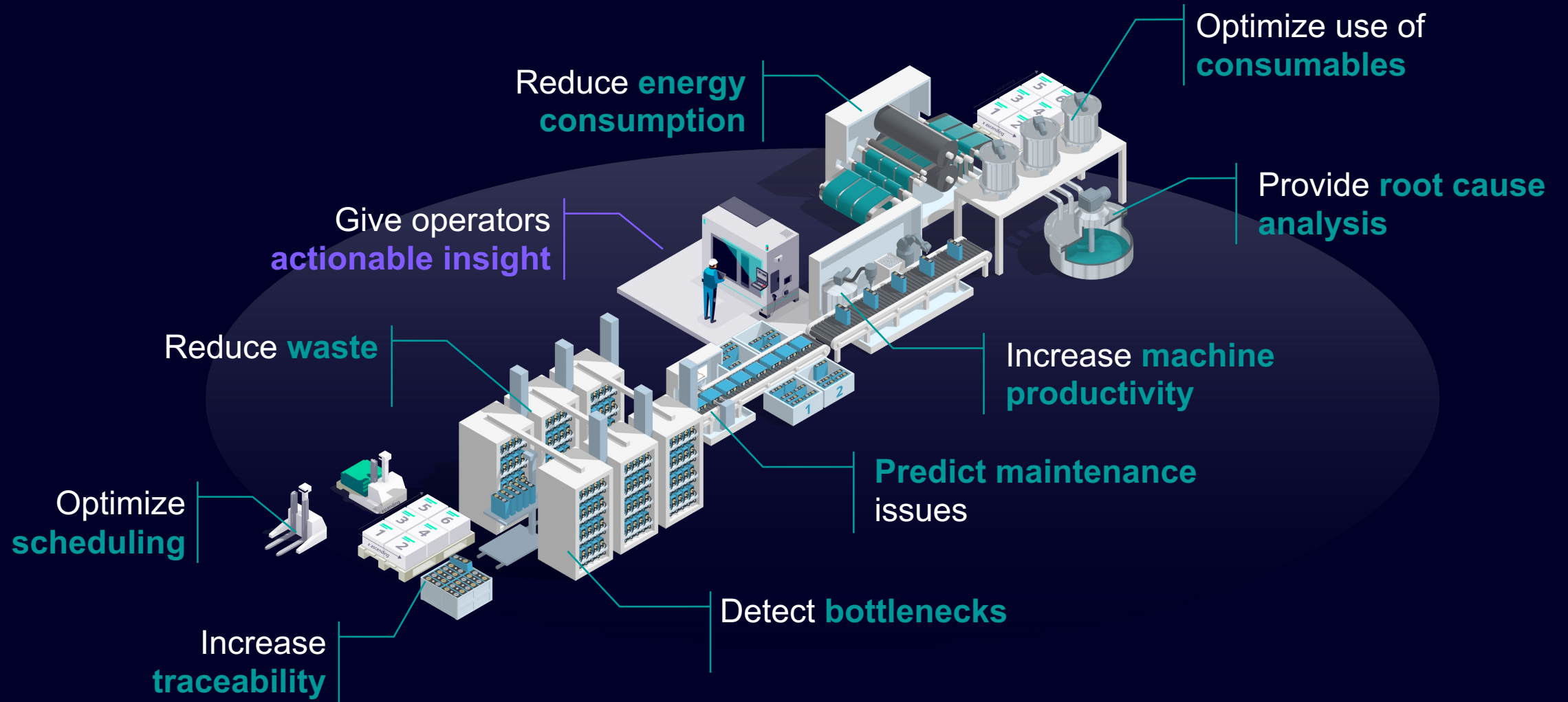
Faster time-to-market



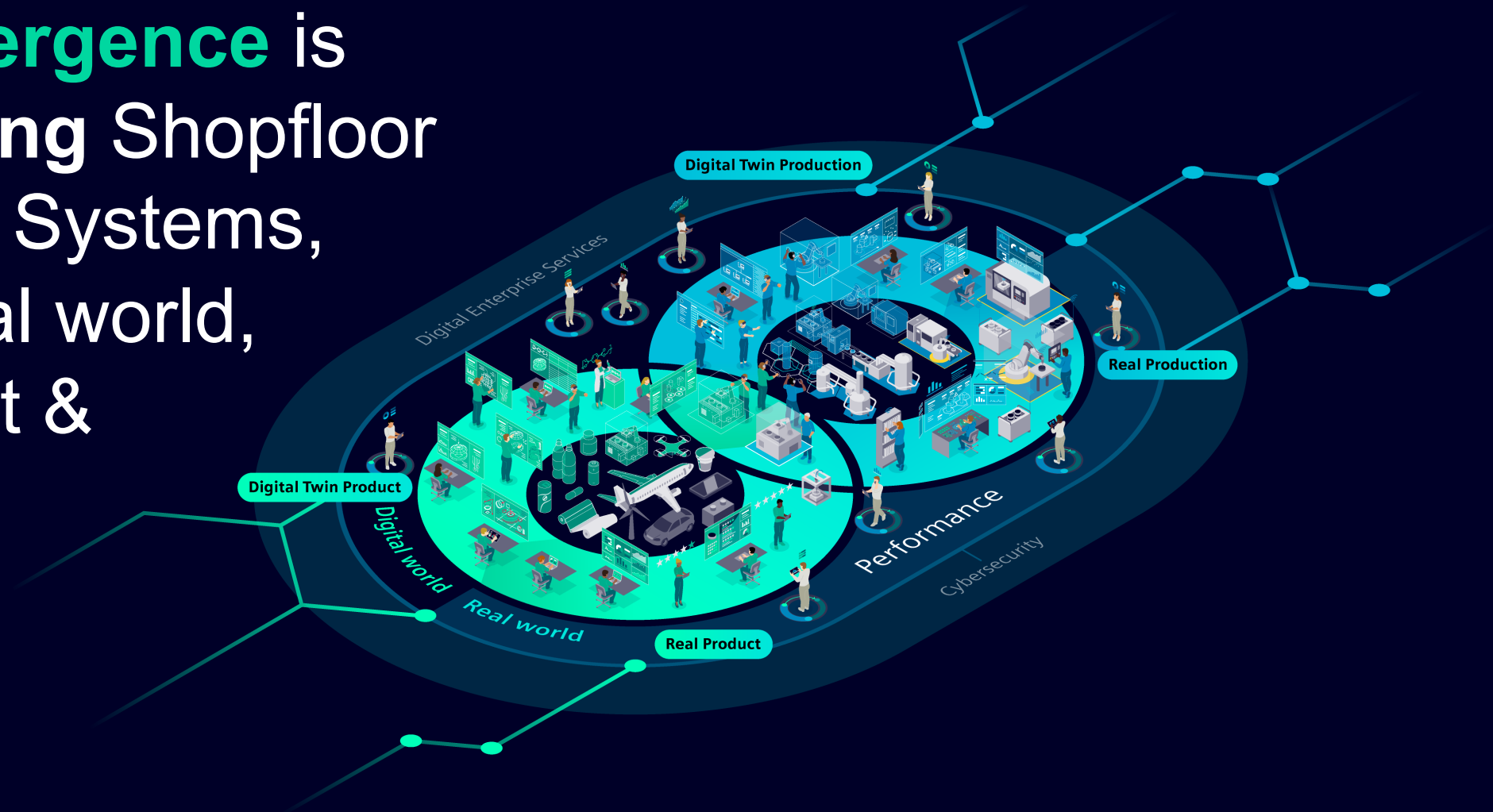
Quality



Resource efficiency challenges are everywhere...



IT/OT Convergence is about bringing Shopfloor & Enterprise Systems, Digital & Real world, Development & Operations together



Drive Optimal Production Efficiency

across energy, assets and plant staff

Predictive Maintenance



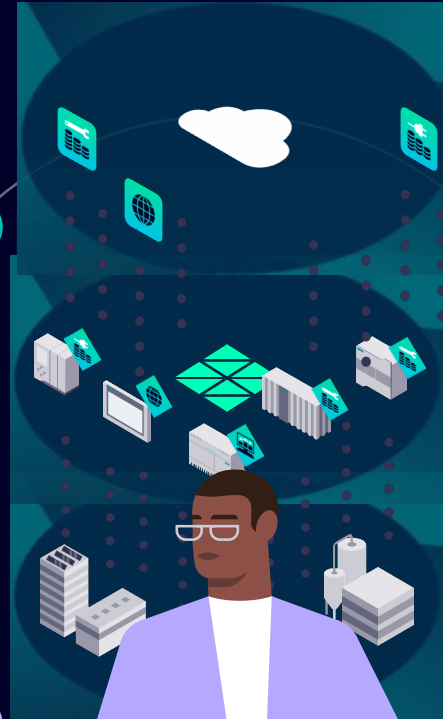
Send the right workers with the right skillsets to the right place, at the right time.

Golden Batch Analysis



Understand which of your plants performs best and why, so you can replicate these setpoints everywhere!

Make manufacturing an exciting workplace



Energy management



Understand your drivers for energy consumption and act on industrial decarbonization, now.

Intelligent Operator Assistance



Provide tailored AI-based action recommendations for plant operators or managers to augment troubleshoot issues in case of downtime or bottlenecks.

Make your production the most engaging place to work in and attract skilled & motivated labor!



Our Approach (Proof-of-concept)

Generative AI-powered assistant for the shopfloor

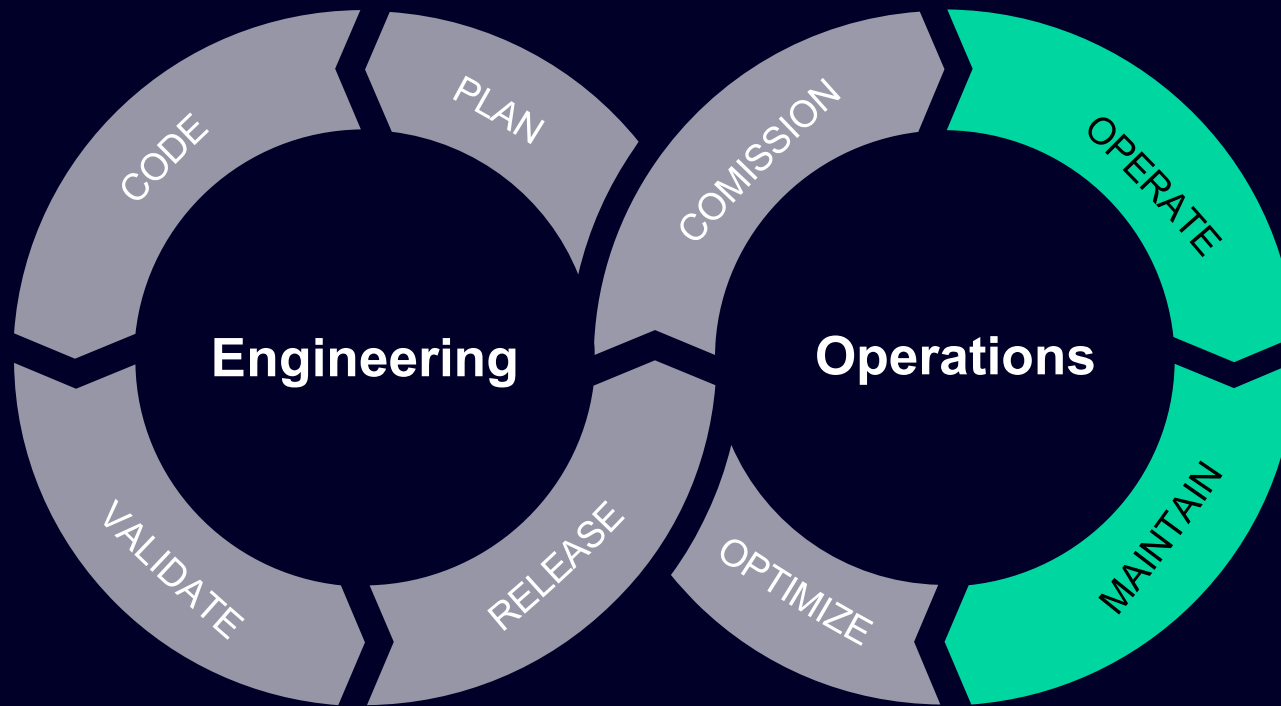
The Industrial Copilot for Operations uses a chatbot interface to interact with users via natural language. It supports multimodal input and can be deployed on-premise to meet specific security or infrastructure needs.

Its knowledge base pulls from dynamic data (process and sensor data via IIoT and edge) and static data (documentation, manuals, or worker instructions).

Benefits

- Reduce downtime with diagnosis support, root cause analysis, and actionable recommendations from Copilot.
- Enhance worker abilities by providing instant access to machine info and expert knowledge via an intuitive natural language system.
- Maintain control over sensitive data with on-premise deployment.

We offer AI Assistance across the entire life-cycle
for Operation and Maintenance of machines on your shopfloor



Shift and Operations Assistant



Maintenance and Repair Assistant

Maintenance and Operational Assistance

Using the power of Generative AI to amplify operator abilities



An interactive chatbot system which

- Supports **operators** and **maintenance engineers** to identify and solve machine issues
- Gives **guidance** and **recommendations** in production
- Generates **KPIs** and **statistics** in the appropriate context.
- Compares and correlates **behavior over time**.

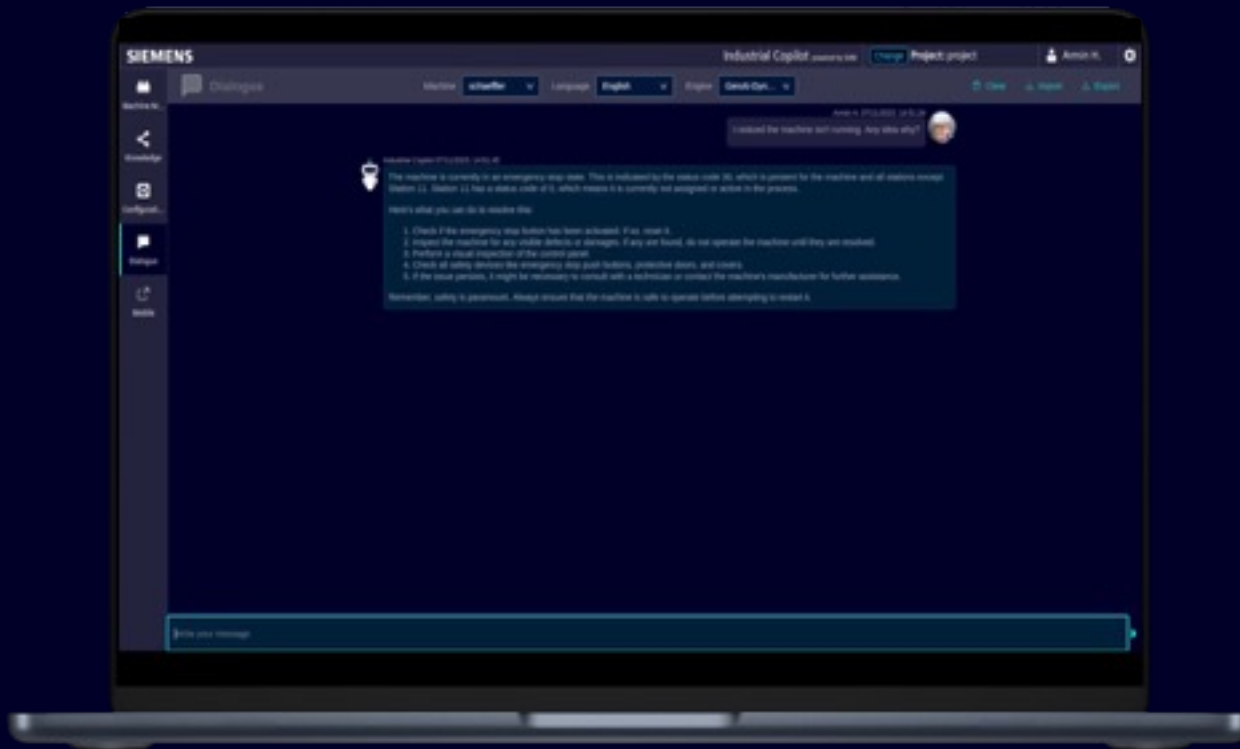


An interactive chatbot system which

- Supports the **whole operations team**
- Gives **access** to all relevant information during operations and shifts
- Creates awareness to all **critical events**
- Minimizes effort of **shift handover**
- Compares and correlators behavior of **different machines and lines**

Maintenance and repair assistant

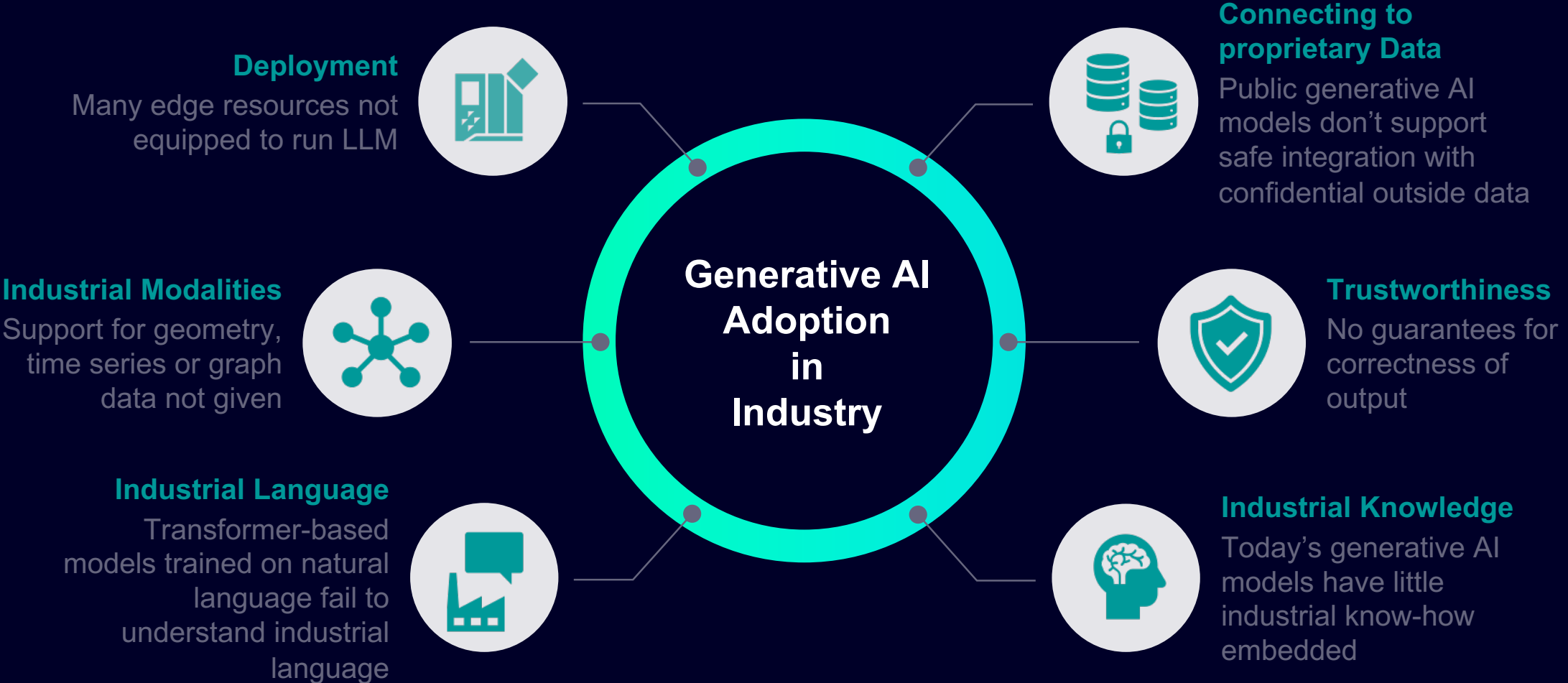
What the Industrial Copilot does for you



Core Features

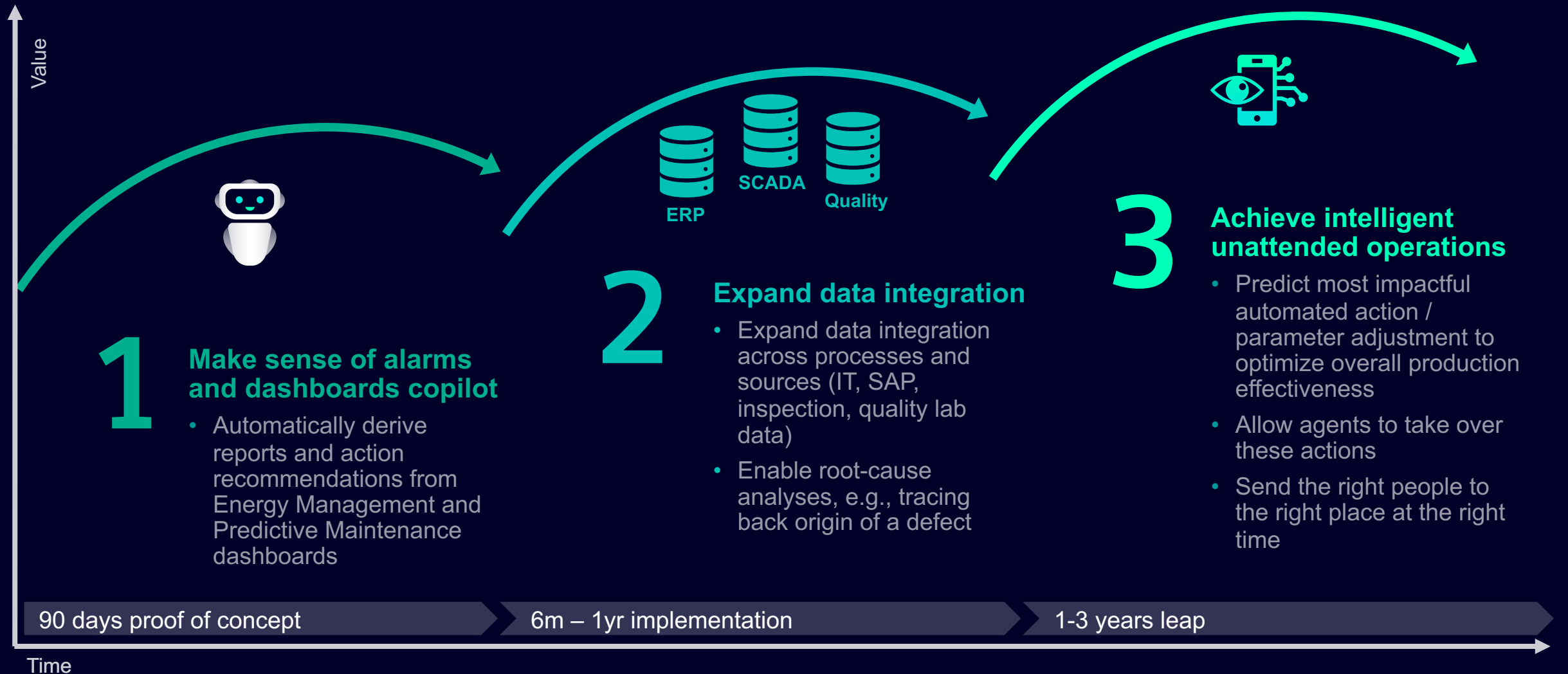
- **Intuitive** chat interface allows iterative machine exploration
- **Context-sensitive information retrieval** to find relevant static and dynamic information
- **Advanced data interpretation** to diagnose machine behavior
- **Recommendations** in the appropriate context
- Intuitive **summaries and statistics**

Challenges for Industrial GenAI



Why make a step change when you can make a leap?

Optimize overall production efficiency



Contact



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