Simply automate – innovations for a future-proof industry

SPS 2023 Press Conference
Rainer Brehm, CEO Factory Automation at Siemens
Simply automate

Industry can now automate **much more easily** with Siemens

Siemens is driving a sustainable **circular economy**

Siemens is making **artificial intelligence**

Industrial-grade
Hannover Messe 2023: A resilient industry must be able to adapt its processes faster

- Cost pressure and efficiency
- Quality
- Shorter innovation cycles
- Flexibility
- Sustainability
- Circular economy
- Supply chains
- Glocalization
- Lack of workforce
- Aged society
- Adaptability
Industry must now rigorously automate

- **45%** by 2030
  emissions from production and logistics

- **~85 million** shortfall
  of skilled workers worldwide by 2030

- **>40%** glocalization
  by producing companies worldwide

- **Productivity** stagnating
  in Germany

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1 Necessary to achieve the goals of the Paris Accord. Source: The Boston Consulting Group | 2 43% of all companies surveyed. Source: BCG, Flex Factory, WHU | 3 Source: Korn Ferry | 4 -1% productivity/hour during 1st quarter of 2023 compared to same quarter of previous year. Source: Institut für Arbeitsmarkt und Berufsforschung
Future-proof investment
Totally Integrated Automation, enhanced by Industrial Operations X

- Totally Integrated Automation
- IT-empowered automation
- Automated production
- Adaptive production
- Future production (e.g. Autonomous Factory, Industrial Metaverse)
Future-proof investment:
Totally Integrated Automation, enhanced by Industrial Operations X
Resource efficiency through the circular economy
Sorting of plastic waste for recycling requires massive expansion

>60% of plastic waste in Germany is burned.

Hard physical labor
Dangerous work environment
Error-prone
Tremendous quantities

Delta picker identifies and sorts at high speeds
Highest demands on automation technology – easy to implement and use

Delta picker

1. Motion processes
2. Resource efficiency
3. Modular apps
4. Artificial intelligence
Simply automate

Motion processes
Engineering, control, and drives for motion processes easier than ever

TIA Portal V19

NEW

All core motion functions from individual axes to complex kinematics
Graphical user interfaces

SIEMENS
Engineering, control, and drives for motion processes easier than ever

**NEW**

Simatic Motion Interpreter

- Simple programming without specialized knowledge
- Changes without intervening in the PLC program
Engineering, control, and drives for motion processes easier than ever

NEW

**Sinamics S200 & S210**

**Sinamics S200:**
- Performance-optimized for standard servo drives
- Simple engineering via TIA Portal integration

**Sinamics S210:**
- Safety Integrated thanks to SIL3 safety functions
- Virtual tests with a digital twin
Simply automate

Resource efficiency
Greater resource efficiency in motion processes
Produce more sustainably with Siemens

NEW
Sinamics G220
Saves money and space: 95% less harmonic distortion
Virtual tests thanks to Digital Twin
Connectivity to Edge and Cloud
Fulfill legal requirements more easily with Siemens
On the path to the Digital Product Passport

ID Link with EPD data

Digital Product Information

Lifesyle Choices – Sustainability

We apply our technologies and solutions to advance growth toward a sustainable future

General Information

- Product Carbon Footprint: 254 kg CO₂ eq
- Water Use: 57.9 m³ world eq
- Fossil Ressource Use: 4300 MJ

Further Information in the "Environmental Product Declaration (EPD)"

Digital Product Passport

... based on

AAS

incl. VDI 2770, ECLASS, etc.

1) Environmental Product Declaration

Siemens in German and international initiatives
Simply automate

Modular apps
Faster create apps tailored for the OT environment
Make or buy with Mendix and Industrial Edge

App development with Mendix Studio Pro
App execution on Industrial Edge

NEW
Mendix on Edge
Seamless integration from IT to OT
Reusable modules for quick and easy app development
Quick and easy integration of machine vision

Partnership with Basler and MVTec

Integrate Basler cameras in Siemens hardware
Bring your own AI models to the shop floor
MVTec: end-to-end anomaly detection on Industrial Edge
No additional stand-alone solutions in operation
Simply automate

Artificial intelligence
AI Revolution
Certainly! To multiply 1234 by 2345, you would perform the following steps:

```
 1234
× 2345
```

- 6170 (1234 multiplied by 5)
- 4936 (1234 multiplied by 4, shifted one position to the left)
- 2468 (1234 multiplied by 3, shifted two positions to the left)
- 1234 (1234 multiplied by 2, shifted three positions to the left)

__________
2885230 (Sum of all the partial products)

The product of 1234 multiplied by 2345 is 2,889,530.

Can you explain the result? Please tell me what 1234 times 2345 is.
Challenges in AI
We make AI industrial-grade
I am your Industrial Copilot.
Siemens Industrial Copilot
Code at the press of a button

Engineering
- Plan
- Release
- Validate

Operation
- Monitor
- Deploy
- Optimize

CODE
OPERATE
MONITOR
DEPLOY
OPTIMIZE
RELEASE
VALIDATE
PLAN
CODE
Hi! How can I help you today?

Hi! Is there anything you want to do?
Siemens Industrial Copilot
Supporting maintenance staff
Siemens Industrial Copilot
Giving automation experts superpowers
Simply automate

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Siemens is making **artificial intelligence** Industrial-grade

- Simple motion integration
- Resource-efficient processes
- Modular apps
- Advancing TIA and Industrial Operations X
- Fulfillment of legal requirements
- Generative AI