

Shaping the Digital Enterprise

デジタルエンタープライズの実現に向けて

Siemens K.K. PD PA Taro Kanzawa

28.11.2017 日独デジタル化社会へ向けての対話

**Global company with a strong regional footprint –
Active in more than 200 countries**



€86.5bn

Orders

€79.6bn

Revenue

351,000

Employees

**One of the world's
largest producers of
energy-efficient,
resource-saving
technologies**

**Among the top 10
largest software
companies worldwide**

**World leader in the
field of automation**

All figures refer to continuing operations (as of 30. September 2016)

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130 years history in Japan

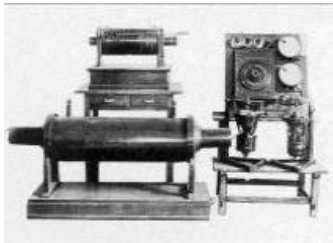


1887: Established Tokyo office



1861:

Pointer telegraph presented to Tokugawa-Bakuhu



1898: First X-ray equipment in Japan



1902: Enoshima-dentetsu

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Vision 2020 is our strategy – And our answer to changing environments

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Global trends



Digitalization



Globalization



Urbanization

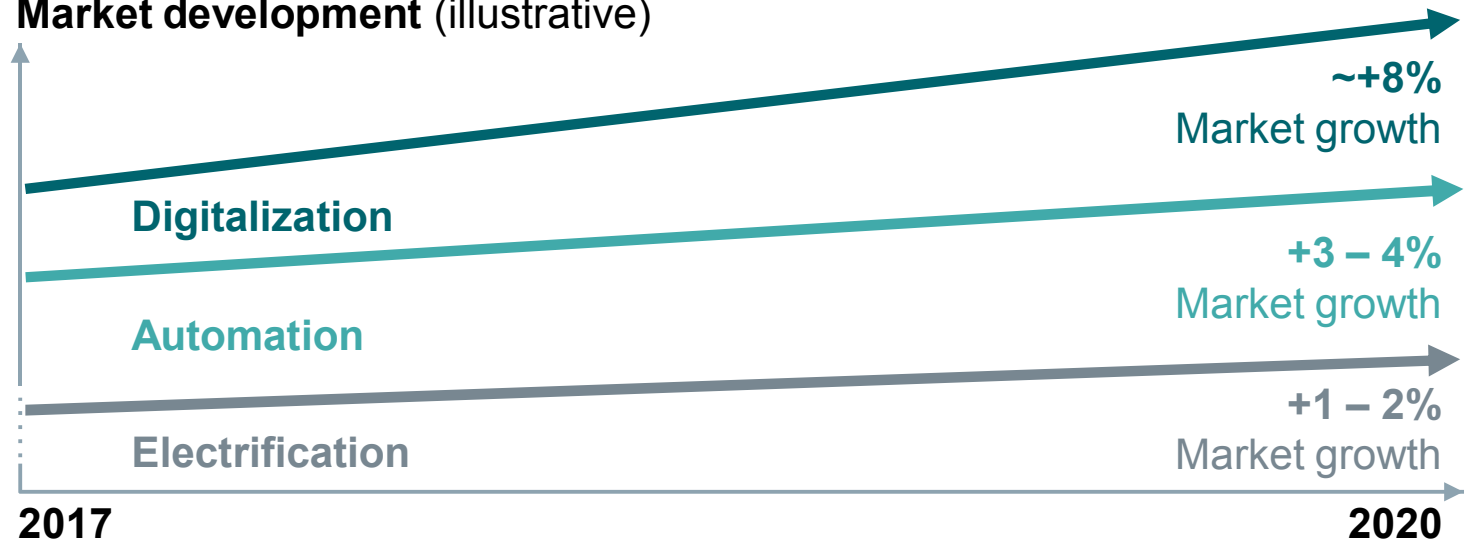


Demographic
Change



Climate Change

Market development (illustrative)



Power
generation

Power
transmission,
power distribution
and smart grids

Efficient use
of energy

Efficient
healthcare
delivery

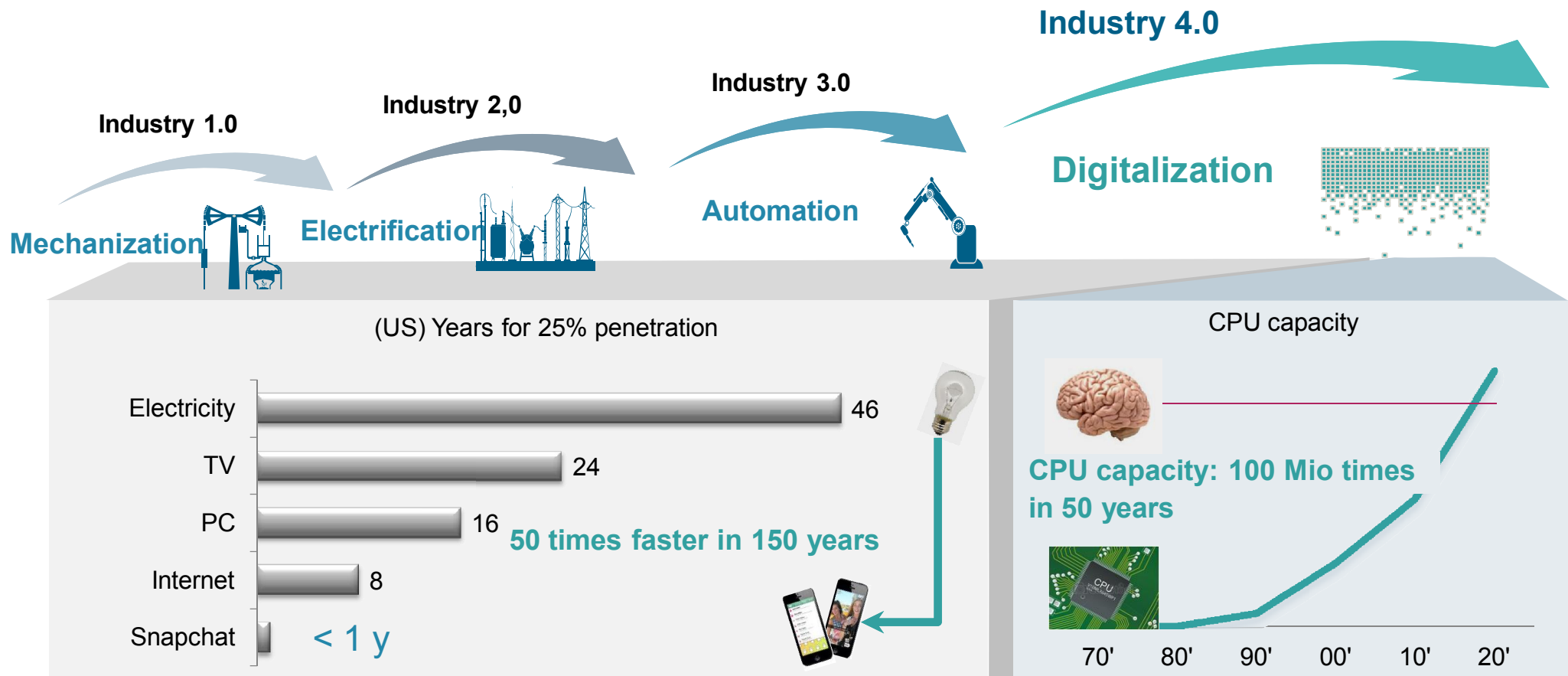


Digitalization

changes
everything

Incredibly rapidly changing business infrastructure

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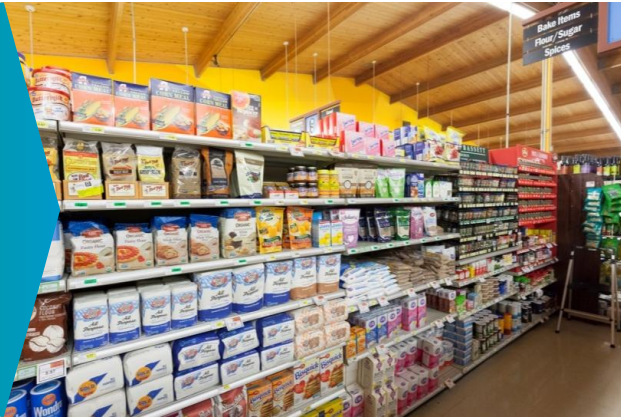


Customer demand for individual products in smaller batch sizes and greater variety leads to digitalization ...

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... in the
food/beverage
and consumer
goods
industries

– individual
packaging –



... in the auto
industry

– freely selectable
options –



... in
medicine

– drug formulas tailored
to the patient –



... even the
complete home

– planned and built
to customer
specifications –

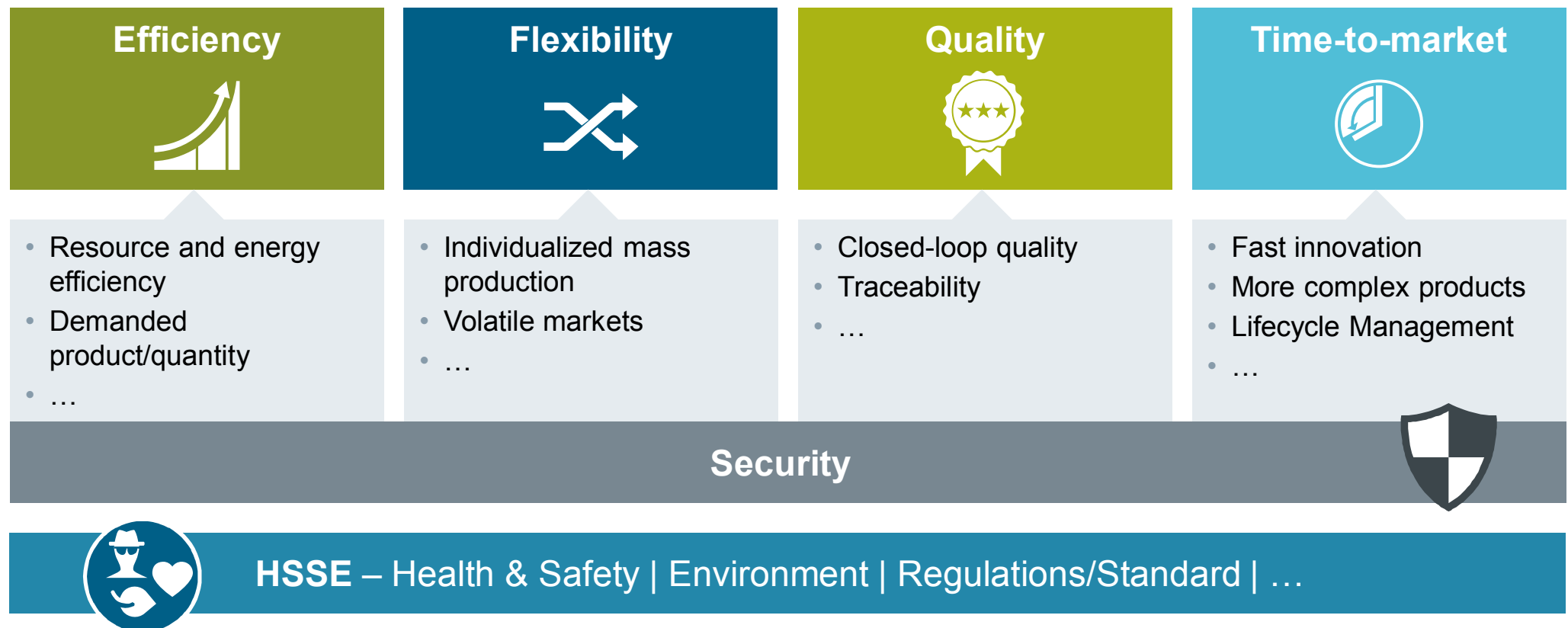


Source: Keller HCW

Challenges for manufacturing industries which can be solved only with the Power of Digitalization

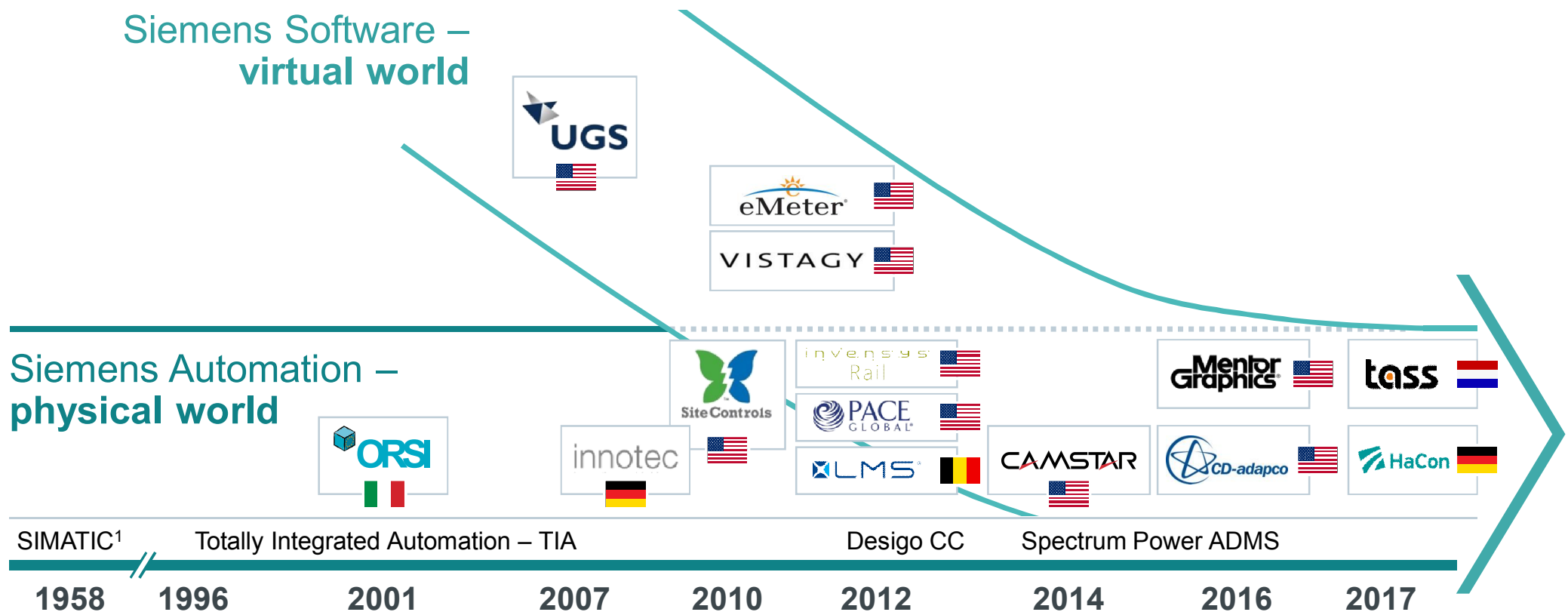


Industry trends



Long-standing #1 position in automation – Now combined with the power of Siemens Software

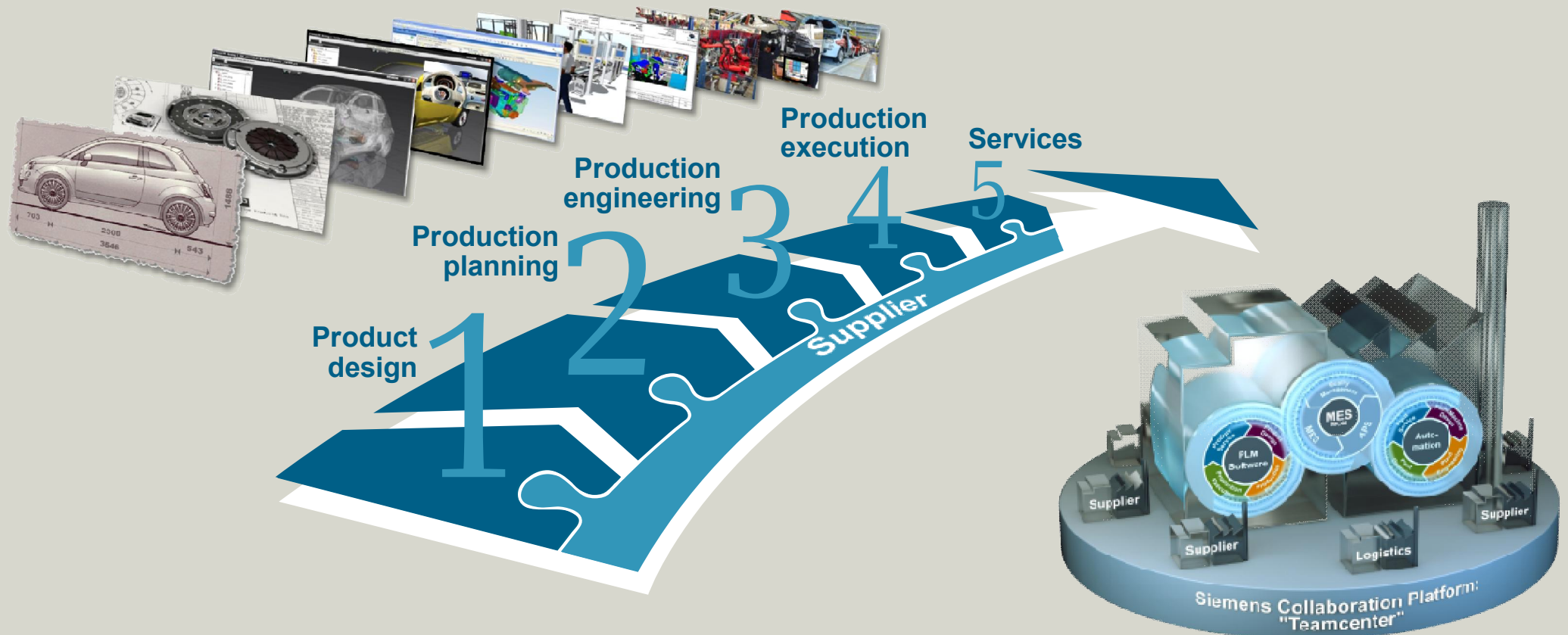
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¹ In-house developments/digital upgrades

Only a holistic approach improving all processes along the entire value chain will fulfill the targets

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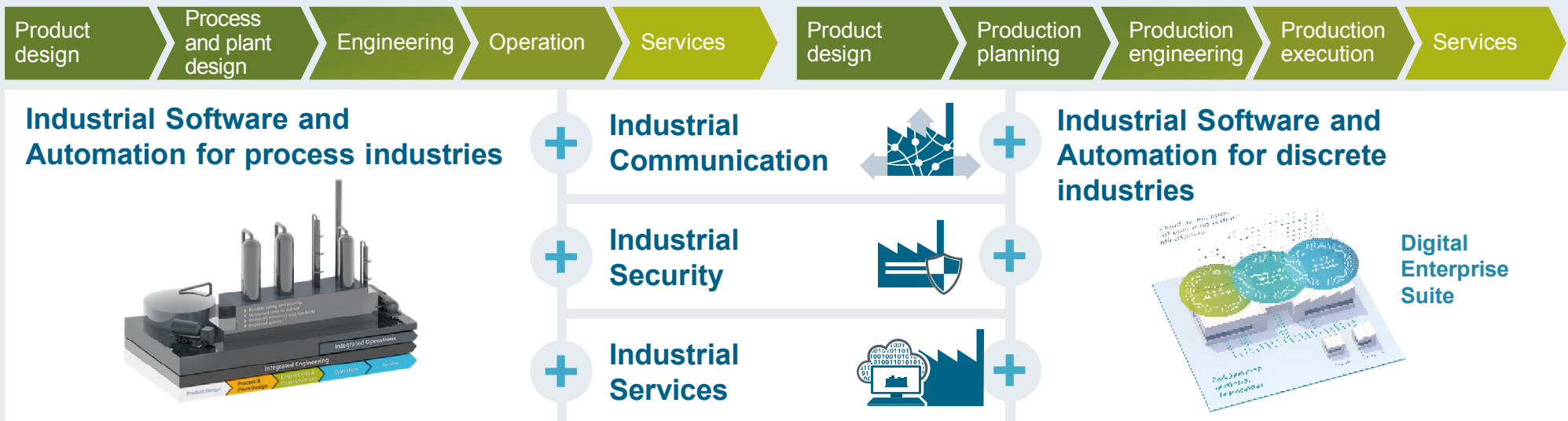
Digital Enterprise is our portfolio of solutions for the digital transformation – in both discrete industry and process industry



Digital Enterprise

Process Industries

Discrete Industries



Digitalization of the field level

Totally Integrated Automation (TIA)

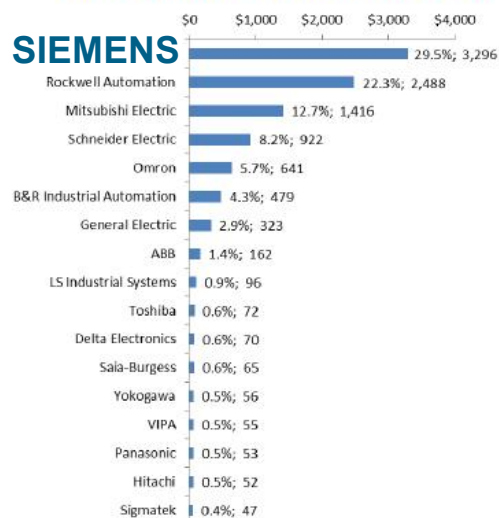
Global #1 market share for PLC and PLC based PAC

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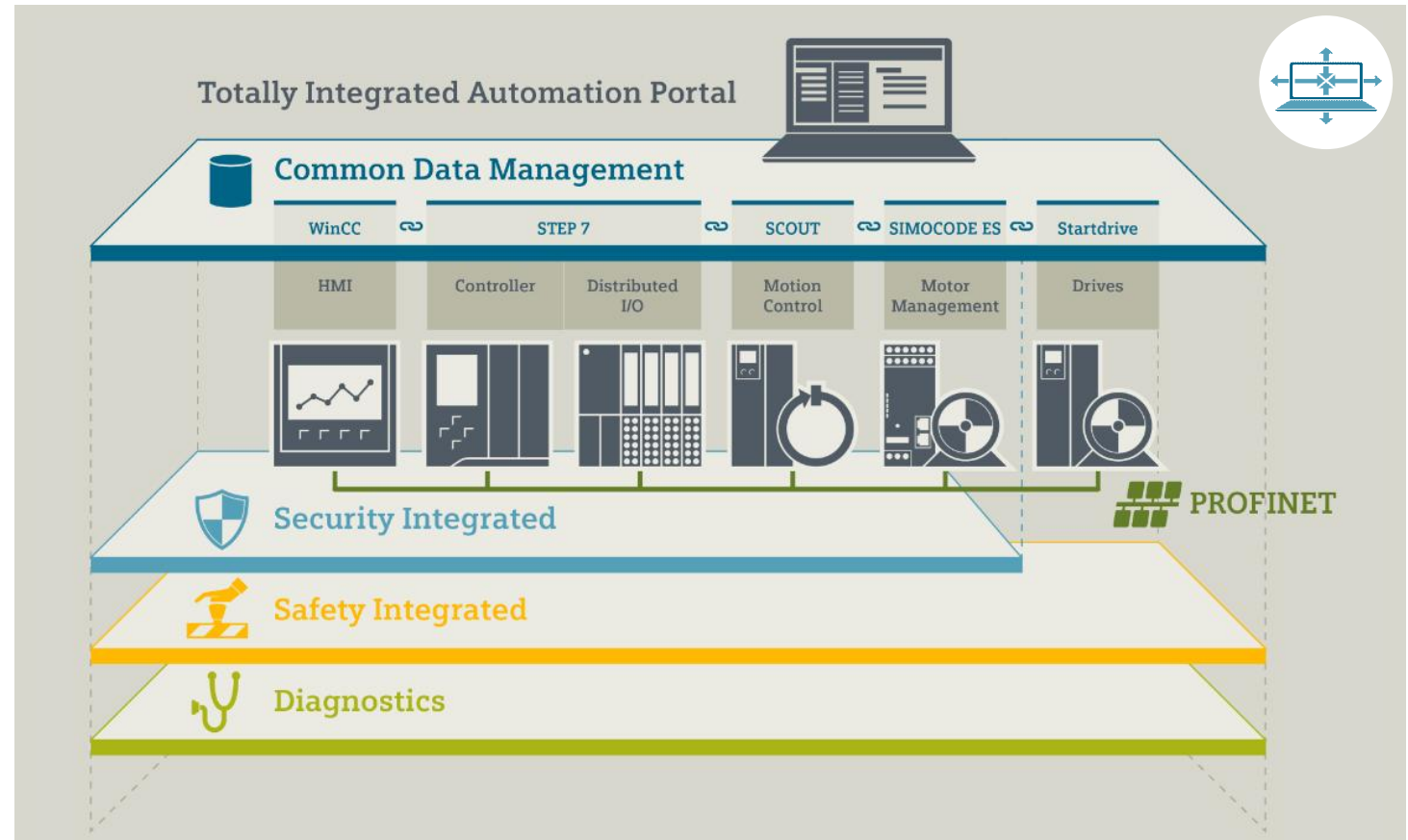
A single engineering platform

Integrates all Automation Software Tools within a single development environment

Worldwide Market Shares 2016

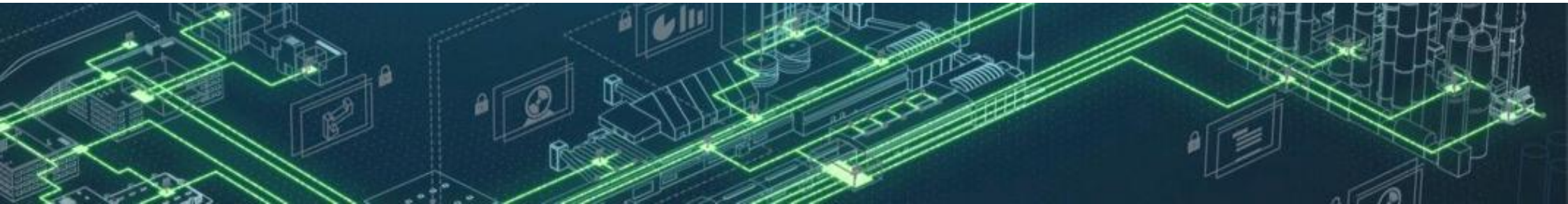


Source) ARC



Driving the Digital Enterprise – Industrial Communication

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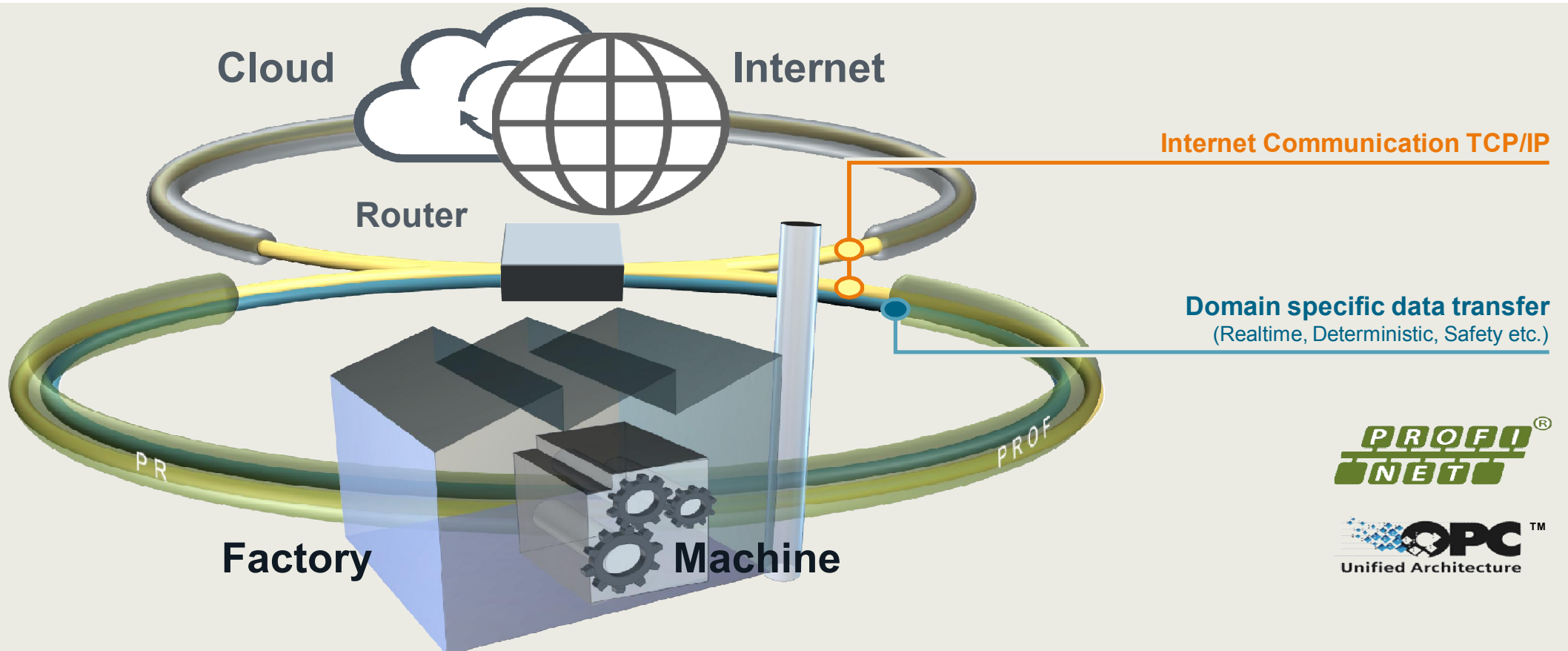
Industrial Communication

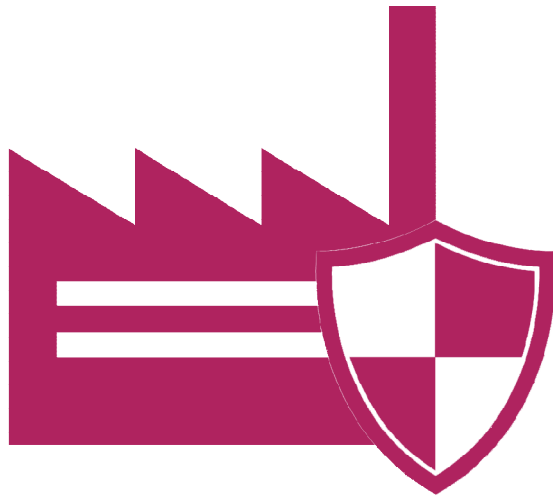
- Connecting all elements of the value chain through efficient networks based on proven standards
- Ensuring a fast and reliable horizontal and vertical data transfer
- Meeting the growing demands in production and logistics management through industrial identification



Communication and data transfer for digital factory TCP/IP, PROFINET and OPC UA over one cable

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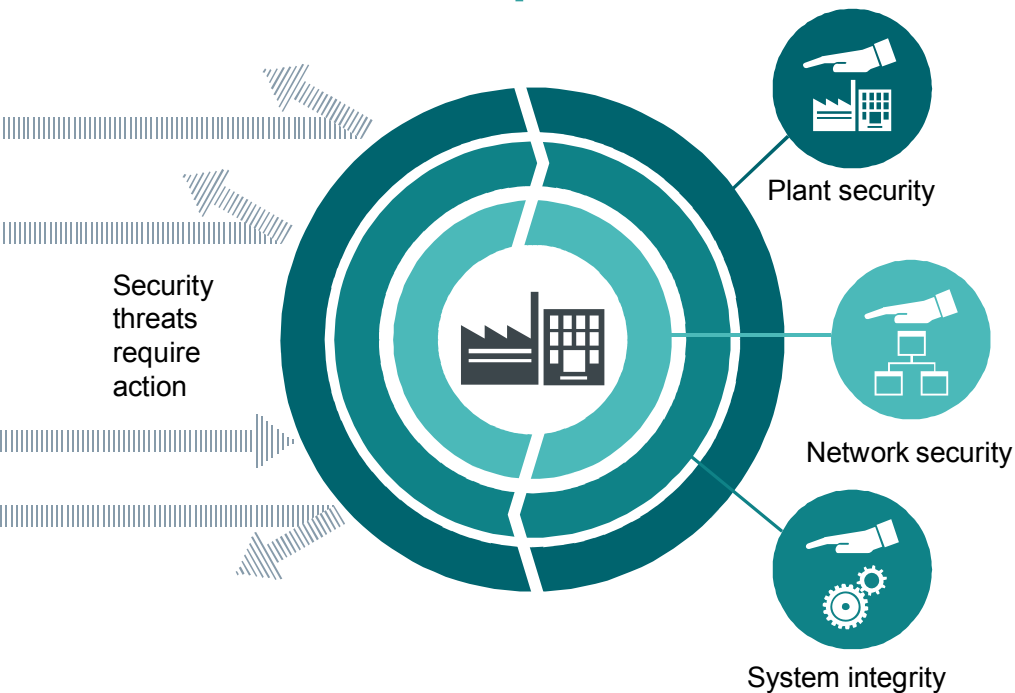
Industrial Security

- Protection of industrial plants from cyber attacks
- Productivity through in-depth defense concepts
- Network security and system integrity for plants

Digitalization requires maximum industrial security – Our cyber security portfolio



Siemens security concept – “Defense in Depth”



Siemens products and systems offer integrated security



Knowledge and
copy protection
User management



Firewalls and VPN

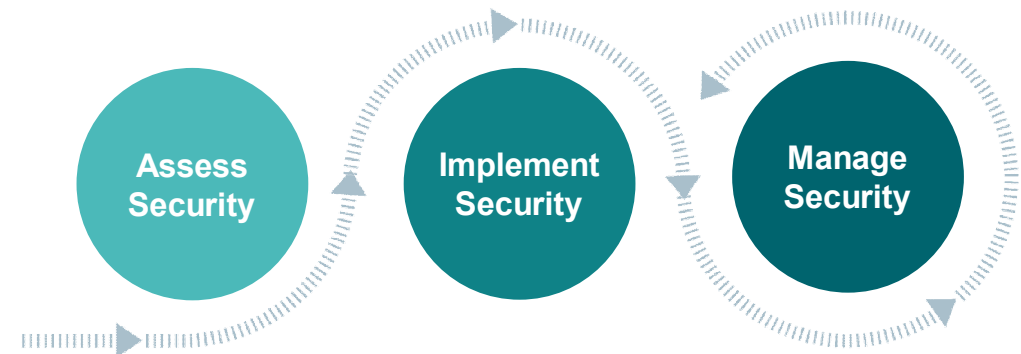


Physical protection
Processes and
guidelines



System improve-
ments, Continuous
monitoring

Siemens Plant Security Services



Certified security in the development process for Siemens automation products

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2016-Aug-26

As the first company to receive TÜV SÜD certification based on **IEC 62443-4-1** for the interdisciplinary process of developing Siemens automation and drive products, including industrial software, Siemens received the certification at seven development sites in Germany.

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Driving the Digital Enterprise – Industrial Services



Industrial Services

- Optimizing plant and machinery as well as energy and resource consumption
- Implementing smart service and support concepts
- Providing the basis for new, data-based service business models with MindSphere – the cloud-based, open operating system for the Internet of Things – from Siemens

Manufacturing IT Services – Increased productivity through transparency

Customer's drivers and goals

- Ensure and increase machine availability
- Avoid waste in production processes
- Ensure and increase quality, speed and productivity
- Reduce operating costs for the end customer

Ensure availability



Create sustainability



Reduce costs



Improve productivity



Optimize Asset Management



Customer benefits

KPIs	Actual	Goal
Production time	100h	133h
Downtime	20h	17h
Machine not used	40h	34h

Manufacturing IT detects potentials for productivity improvements up to 30%

Siemens offering

- One-hand-solution including consulting, project management, training and production-related services
- Based on Siemens Software suite SINUMERIK Integrate with main functions machine data coverage and -analysis, NC-Program-Management, Tool-Management and maintenance support, Machine-Management, machine condition coverage and -analysis

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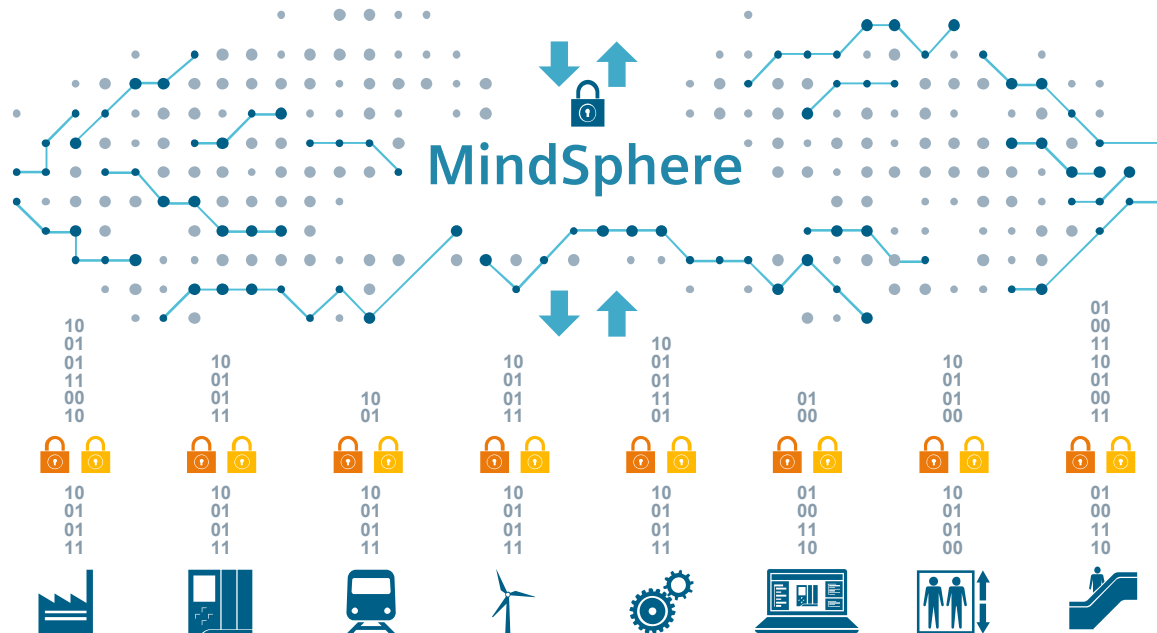
Why Siemens?

- Excellent control and IT know-how from one source
- Worldwide service availability
- Customized financing models (Siemens Financial Services)

References



MindSphere – the cloud-based, open IoT operating system offers a solid foundation for new, data-based business models



MindApps

- Asset transparency and analytical insights, e.g. predictive maintenance
- Subscription based pricing model
- Fleet management

MindSphere

- Open interface for development of customer specific apps (MindApps)
- Various cloud infrastructures: Public, private or on-premise

MindConnect

- Open standards (e.g. OPC UA) for connectivity (also to 3rd party products)
- Plug and play connection of Siemens products



MindSphere- Open Eco-system with strong partners



Siemens Automation Cooperates with Education (SCE): Globalize your Industrie 4.0 and IoT Education



Courses for Teachers

- Customized and on-demand
- Convey practice-oriented automation knowledge
 - Vocational education: Syllabus-aligned
 - Higher education: Technology-oriented
- Classroom courses with practical exercises



- Global education system originating from Germany
- Developed by Siemens, the technology leader in automation
- Aligned with Japanese initiatives to raise digital skills

Trainer Packages

- For use in classes and laboratories
- > 80 pre-configured, low-cost hardware/software packages from industrial products including accessories
- Can be purchased only for schools, universities and in-house vocational training departments



World/National Skills

- WorldSkills promotes the quality of vocational education for > 60 years
- Siemens has been a Global Industry Partner and a Product Sponsor since 2010
- Siemens KK is exclusively supporting National Skill "Industrial Control" in Japan since 2016



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With our digital portfolio, we are supporting our customers in Japan to shape the digital transformation

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Digitalization and co-creation are crucial for realizing Japan's vision of a digital future

Thank you