Technology with purpose to Transform the Manufacturing and Energy Landscapes in the Digital Age

Erdal Elver | President and CEO | Siemens Ltd. Taiwan

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Merging the virtual and the physical world

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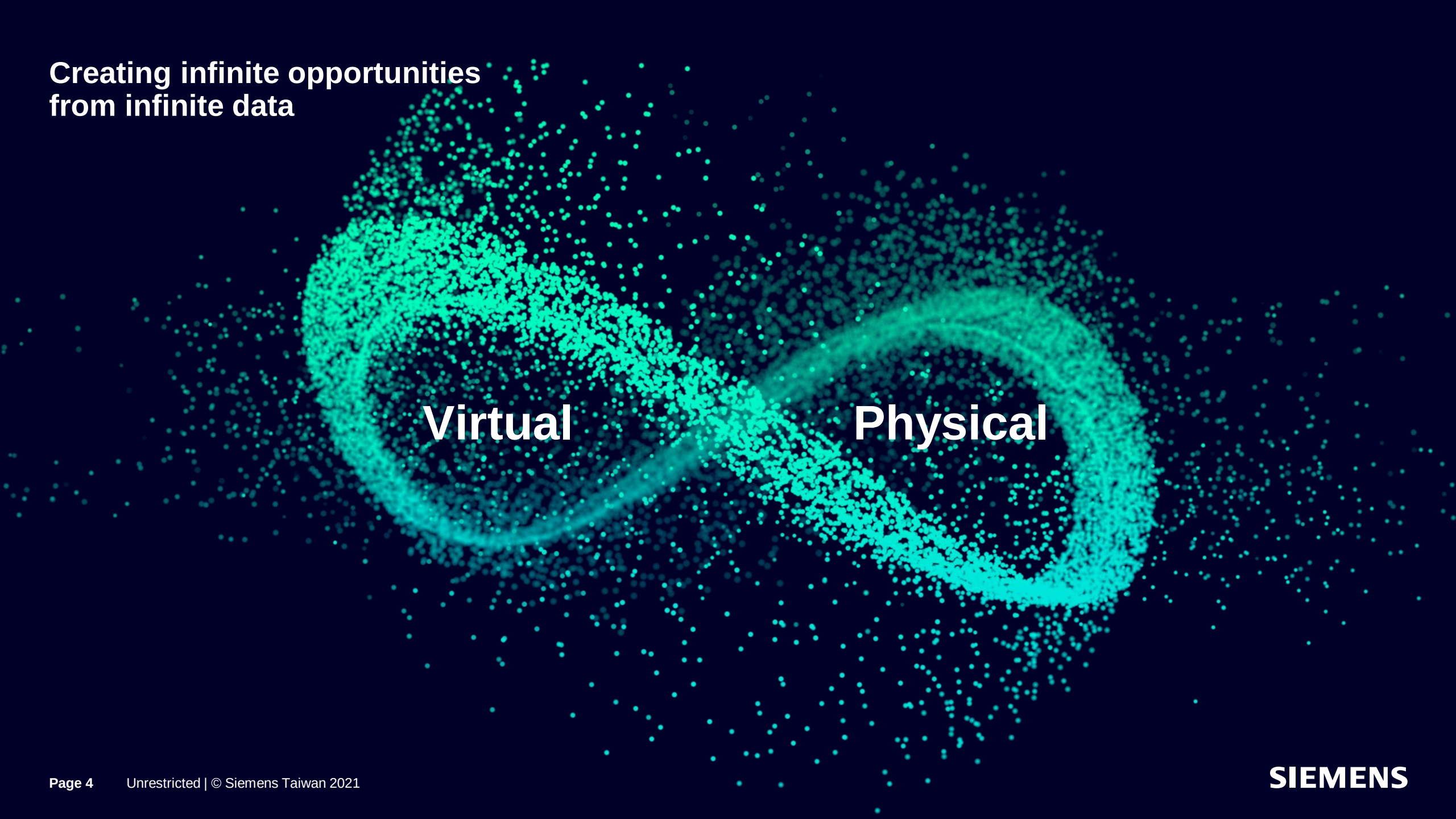
Creating infinite opportunities from infinite data



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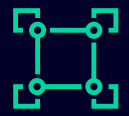
Technology with purpose

The areas our research and development to shape a digital future

Additive manufacturing

Autonomous robotics



Blockchain applications

Connected (e)mobility

Connectivity and edge

Cybersecurity

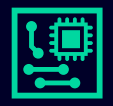
Data analytics, artificial intelligence

Distributed energy systems

Energy storage

Future of automation

Materials



Power electronics

Simulation and digital twins

Software systems and processes

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Technology with purpose

The areas our research and development to shape a digital future

Distributed
energy systems

Future of
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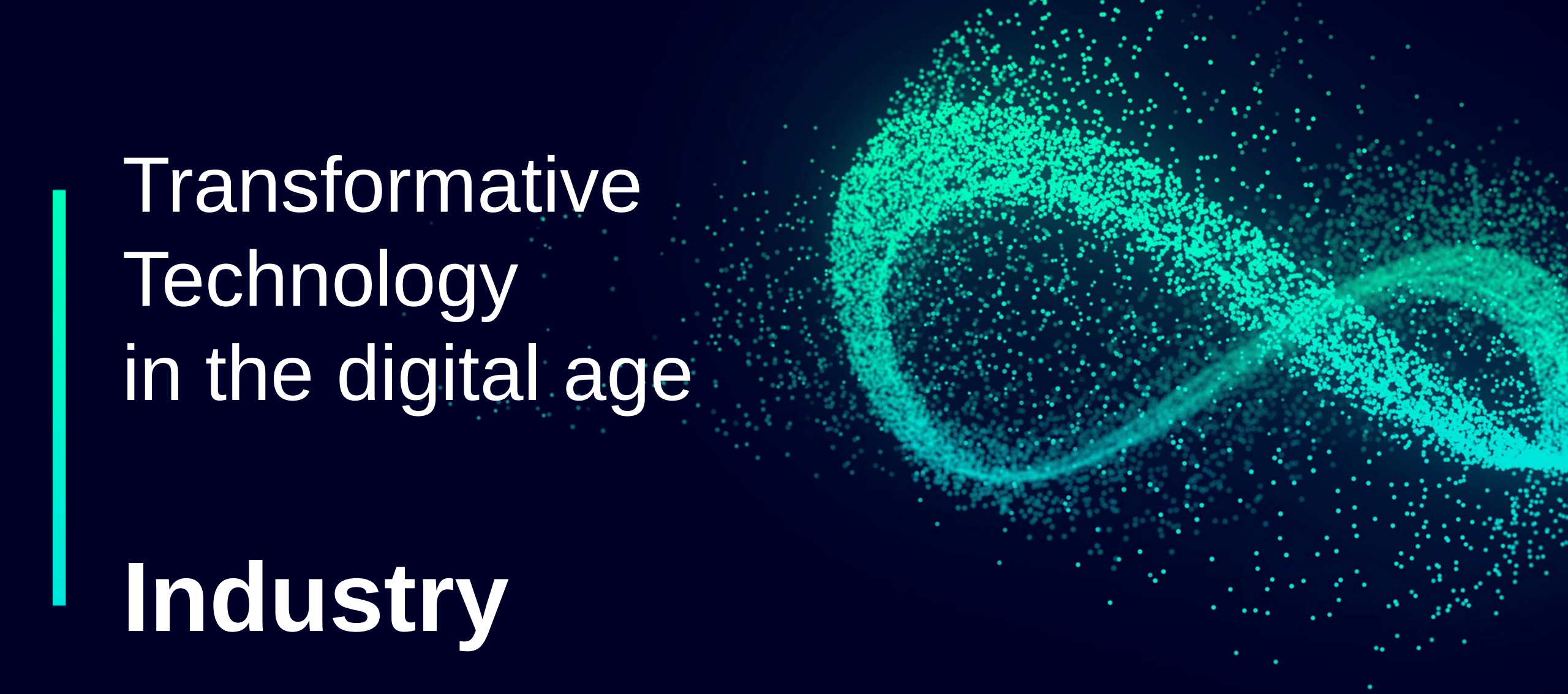

Transformative Technology in the digital age

Industry

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Industry faces fast-changing market demands – urgent challenges for the manufacturing sector

connected

adaptable

safe

personalized

efficient

healthy

integrated

smart

sustainable

global

flexible

scalable

secure

profitable

high-quality

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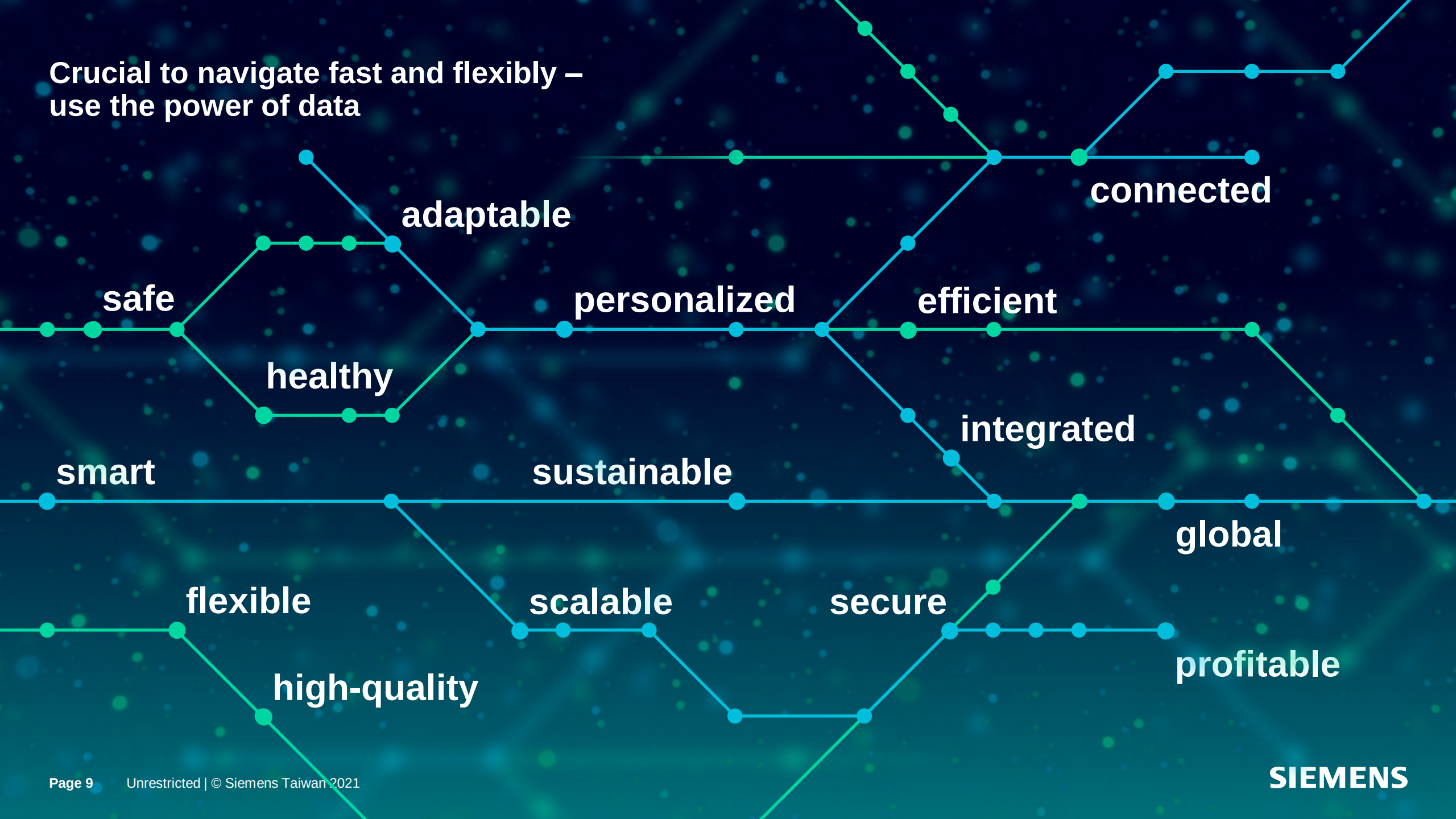
Crucial to navigate fast and flexibly – use the power of data



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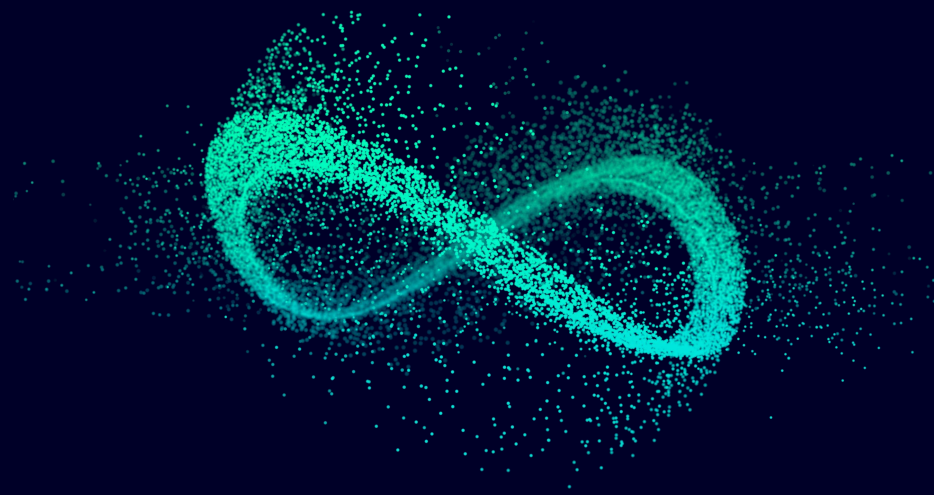
Data integration combined with deep domain know-how for each industry

Marine
Glass
Food and Beverage
Electronics
Aerospace
Minerals
Pharmaceuticals
Automotive

Chemicals

Water and Wastewater

Virtual world



Physical world

Machine Building

Intralogistics

Oil and Gas
Power and Utilities
Paper
Tire
Additive Manufacturing
Cranes
Batteries
Wind
Robotics

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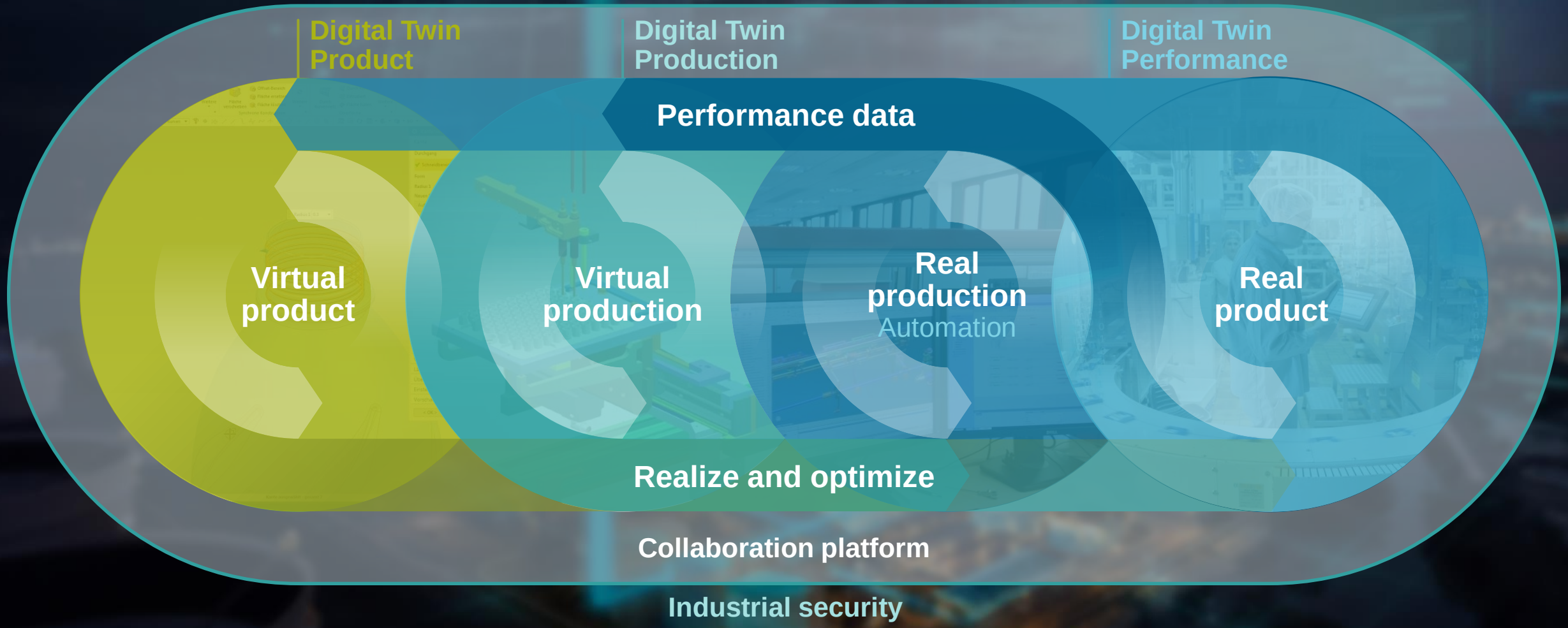
Digital Twin: the basis for continuous optimization



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Unleash new customer value by combining the physical and digital worlds in Industry

Digital world

Combining the physical and digital worlds

Physical world

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Digital Twin

- Enable product & process development, implementation, and optimization along the entire value chain

- Assist **Tera Autotech** to ramp up Mask 4.0 production and improve productivity by 50%, in preventing COVID-19 spread

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Industrial 5G. The Wireless Network of the Future.

Enhanced Mobile Broadband (eMBB)

Ultra-Reliable Low-Latency Communication (URLLC)

Massive Machine-Type Communication (mMTC)

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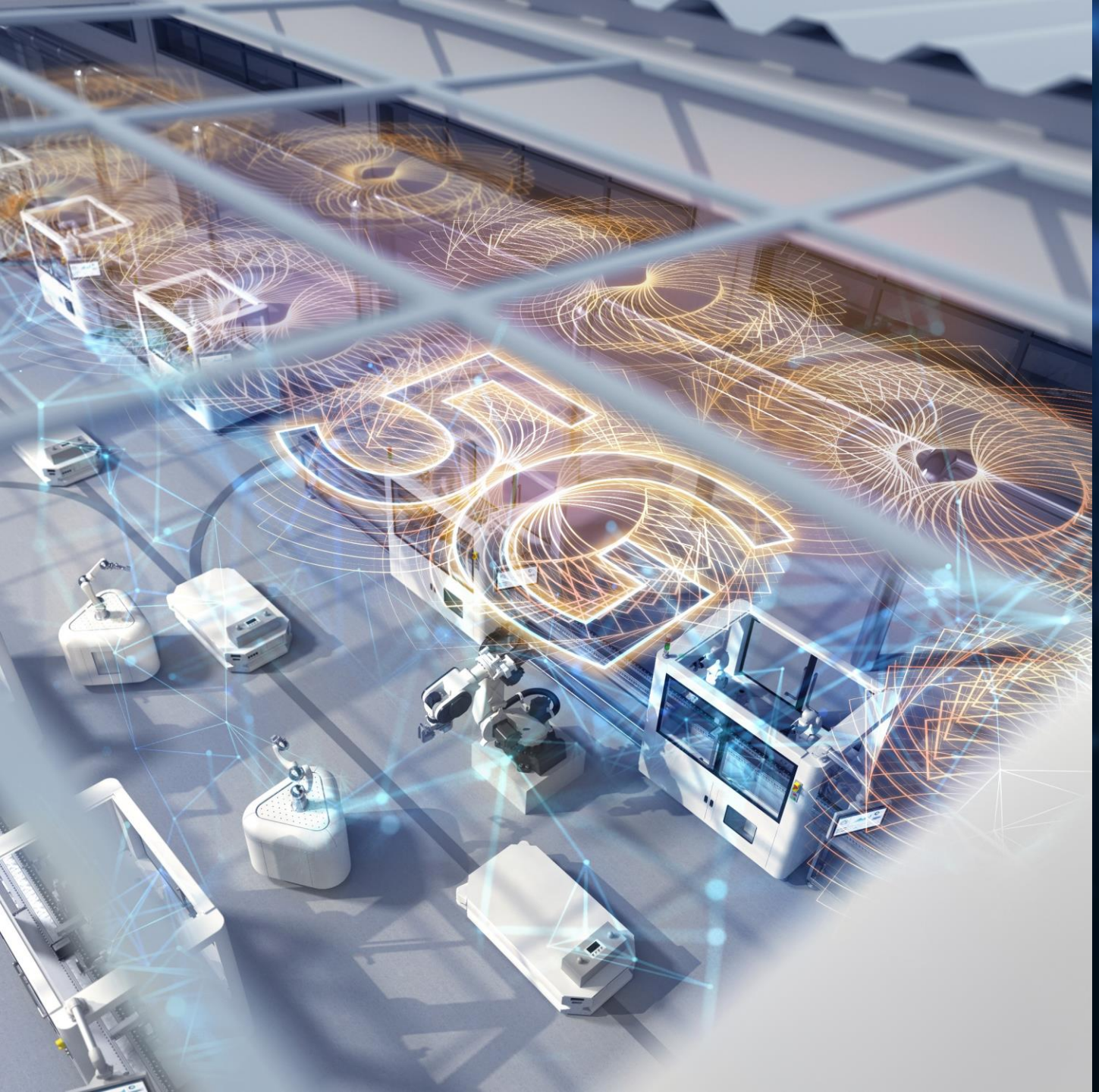

Industrial 5G

- 5G’s high data rates, ultra-reliable transmission, and low latencies allow greater efficiency and flexibility

- Cooperation for public and private 5G with Taiwanese major enterprises and telecommunication companies

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Transformative Technology in the digital age

Energy

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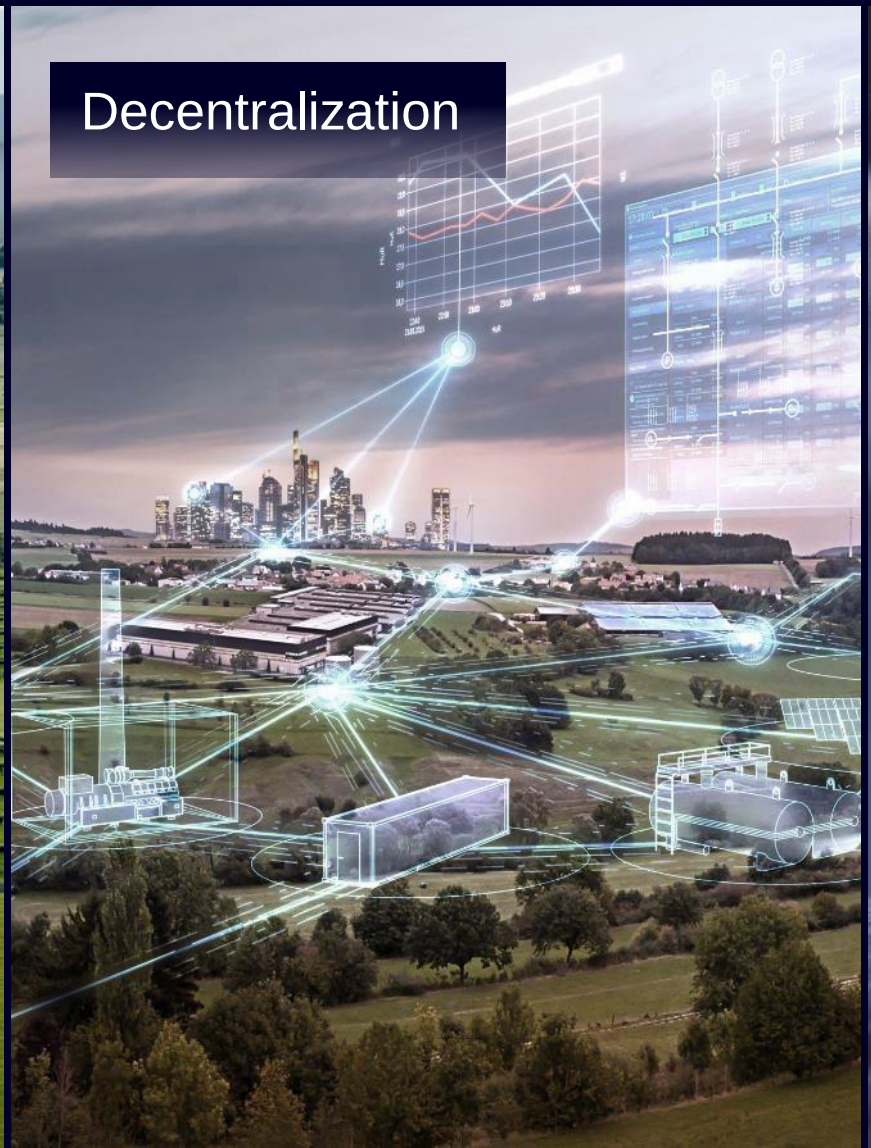
Decarbonization, decentralization and digitalization are accelerating the countdown to a new energy world faster than expected



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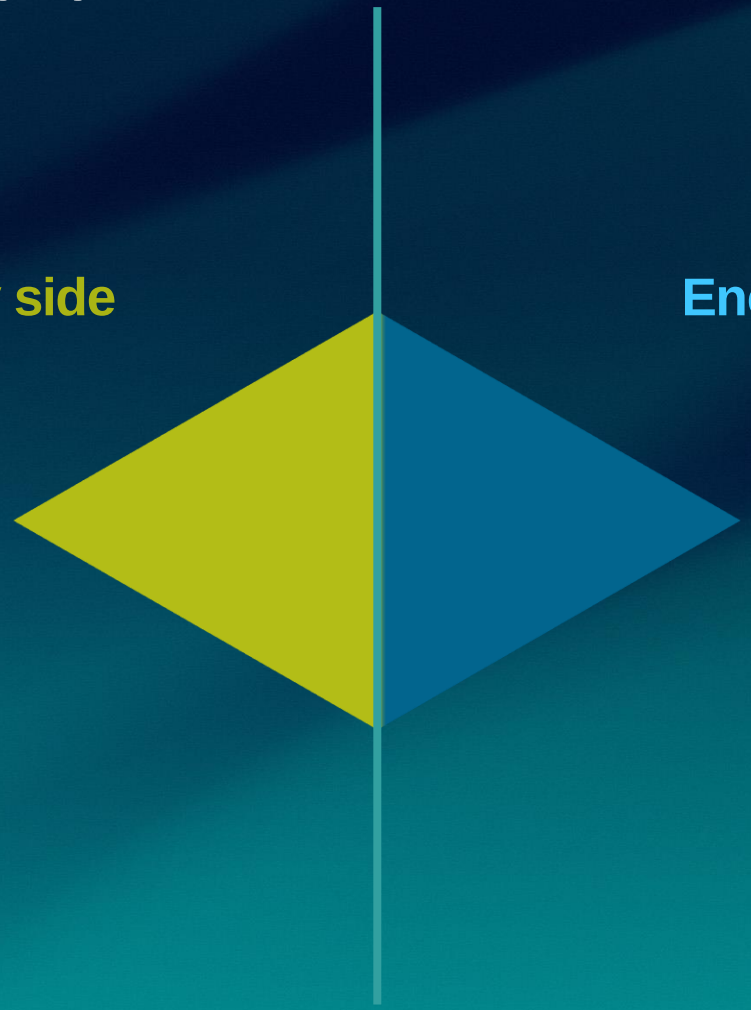
Driving energy intelligence & efficiency through the new center of energy systems

Energy supply side
Smart grids



Energy demand side
Smart buildings
and industries

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Grid edge – the new energy system where the consumer, prosumer and intelligent grid interact

Energy supply side
Smart grids

Energy demand side
Smart buildings
and industries

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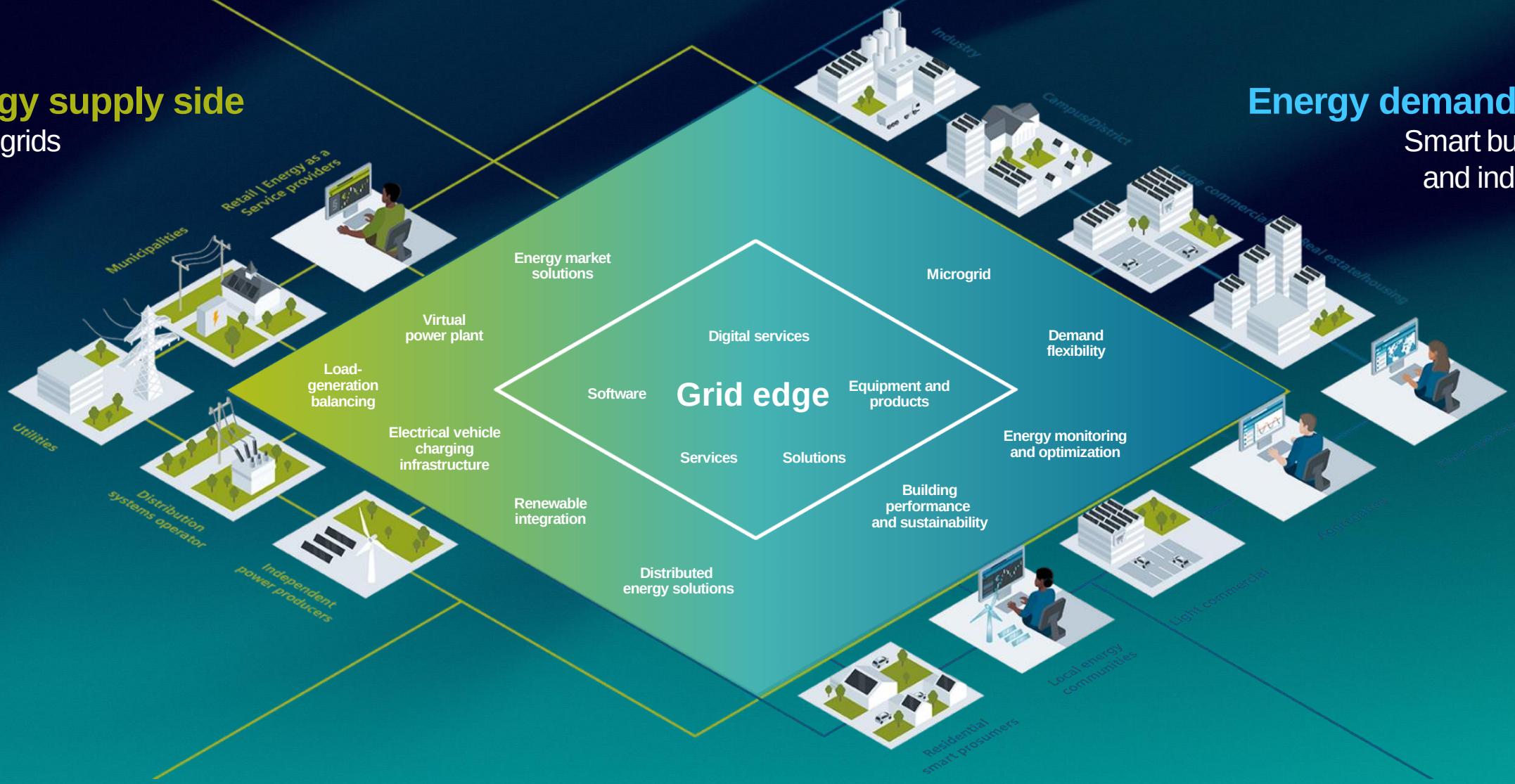
Ecosystem across energy supply, buildings and industry

Energy supply side
Smart grids

Energy demand side
Smart buildings and industries



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Fingrid

Digital twin of Finland’s power grid

Our partner Fingrid wanted a new information system that supports asset and operation management and allows for product-based solutions.

Siemens enabled Fingrid to complete the undertaking by finding a way to create a digital twin of Finland’s power network as a single digital grid model.

Manual time to create grid models reduced from

80% to 20%

99.996%

grid availability

100 times

more detailed digital grid model than the old one

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Sello

Energy efficient shopping center

Sello is Finland's most visited and most sustainable shopping center. This mall strives to optimize power use and achieve a low carbon footprint. It is also active in the electricity market.

The virtual power plant developed and maintained by Siemens optimizes energy consumption and reduces the load on the main grid. Besides energy savings, indoor air quality in the restaurants and commercial spaces has been improved, increasing customer comfort.

20%
CO_2 reduction per year

€480,000
from energy sales

€100,000
energy savings per year

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Taiwan Power Company

Energy efficiency and stability throughout Taiwan

Siemens provided Taiwan Power Company with **Energy IP**, **a powerful IoT platform** with Meter Data Management System (MDMS) software that optimizes power transmission efficiency and power supply quality.

This will be crucial in the management of over 3 million smart meters installed throughout Taiwan by 2022 and ensuring the transmission stability of renewable energies.

3 million

Smart meters by 2022

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Digitalization is changing our business landscapes...

Adaptability is the key to survive!

Contact

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