17° Foro de Eficiencia Energética en el Transporte

"Tecnología para construir ciudades inteligentes"|
CDMX, 21 Septiembre 2018
Patrice Rimond

siemens.com/light-building


With growing urbanization, often critical financial conditions and the challenges of climate change, cities carry a crucial part of development as a whole. What then does intelligent infrastructure mean for buildings, mobility solutions and energy management.
Video

The challenges of constant growth

Cities are growing
Each week
by 1.5 million
inhabitants, and by 2050 more than two thirds of the global population will be city dwellers, up from just one third in 1950

The requirements for a modern and sustainable infrastructure
Secure energy supplies, flexible mobility, energy efficient building control

Fit for purpose
the implementation of innovative solutions that make urban areas better places to live.

Digitalization drives infrastructure of tomorrow

Where technology makes the difference

… meet new drivers

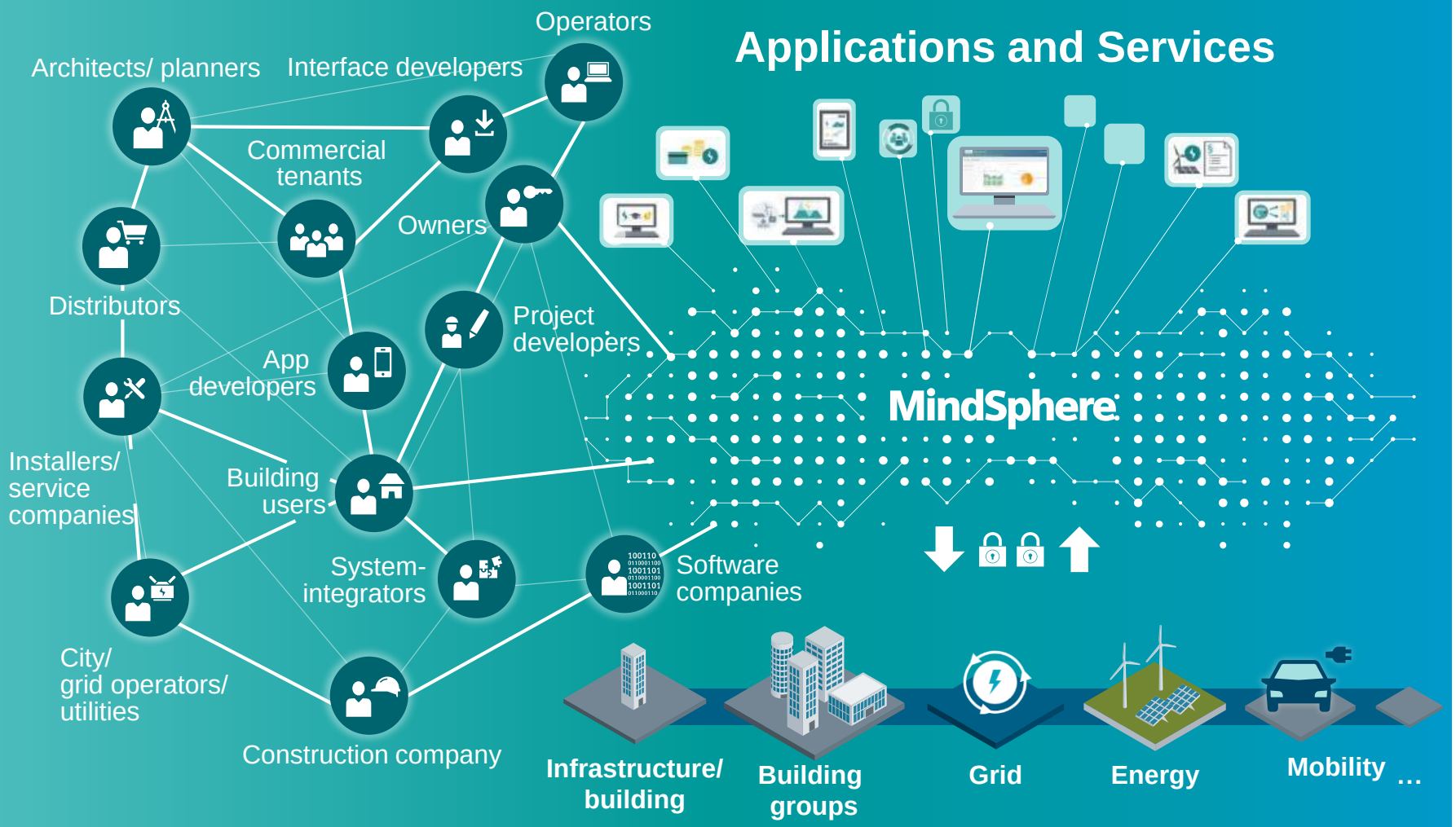
IoT technology
Sensors, Data Analytics, AI

Adaptive infrastructures
Forward-looking and flexible buildings

Convergence of infrastructures
New business models

Decarbonization
Electricity as the #1 energy source

IoT: An Open and Secure Ecosystem
Predictive optimization of energy requirements



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Open

Secure cloud infrastructure and ecosystem

- Open interfaces/APIs
- Open standards
- Plug and play
- Open partner network
- Cyber-Security “Charter of Trust”

Systemic

End-to-end solutions

- Scalability
- Definition of new value chains
- New data-driven services: predictive maintenance
- Cross-sector coverage

Electricity as the #1 energy source
Grid in Smart Cities

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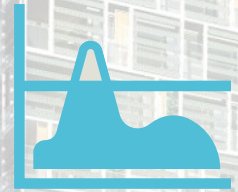
Networks of today and tomorrow have to perform higher:

Transporting more power



Dealing with higher peak loads

Bridging greater distances – even across national borders

Existing alongside self-sufficient power systems

Feeding in power from prosumers

Feeding in power from renewable resources

Distributed energy systems – holistic approach from generation to consumption

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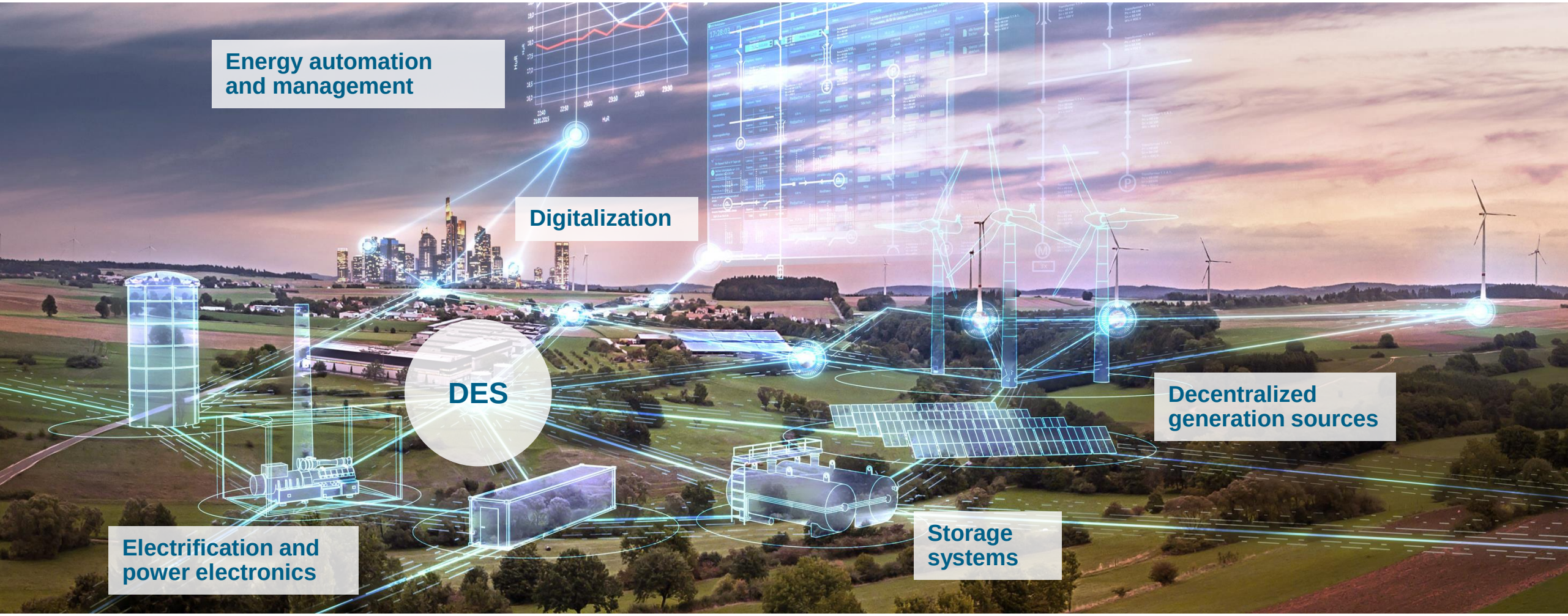

Distributed Energy Systems
Fully integrated Microgrid Management System

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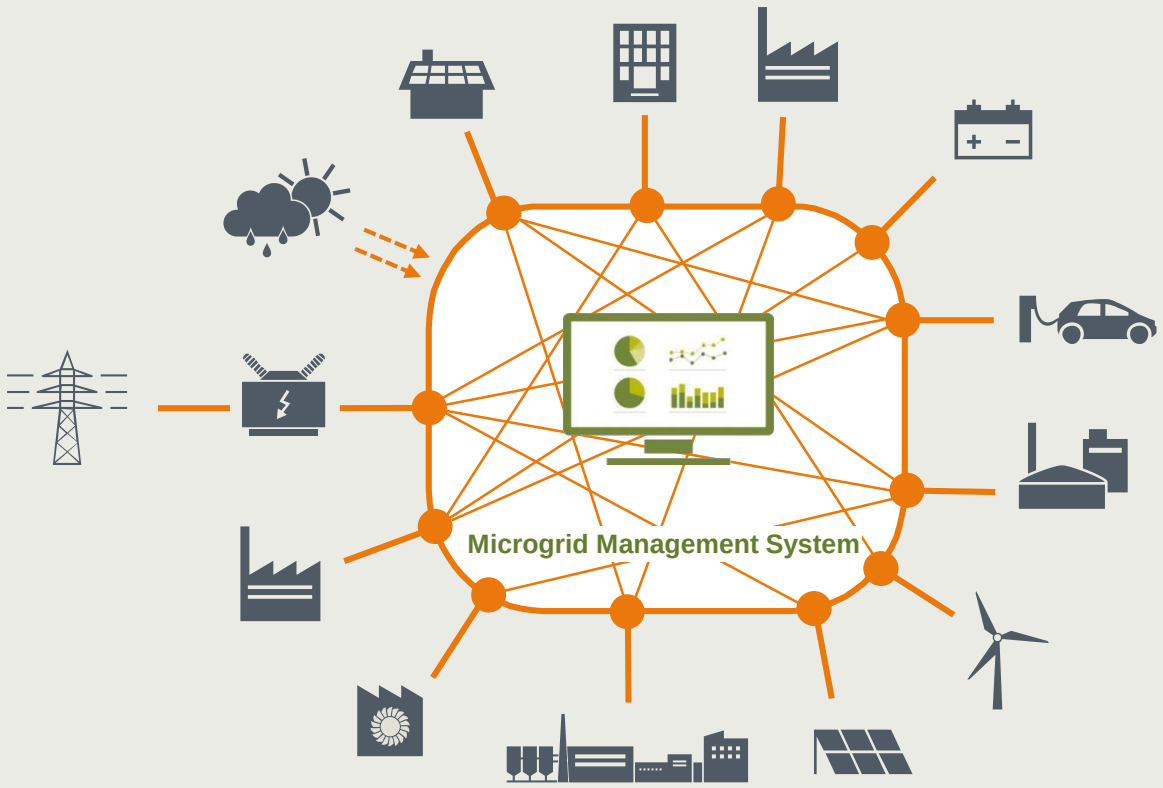

Features

- Distributed generator control also for renewable generation
- Network synchronisation
- Load control
- Storage control
- Online control via HMI
- Grid monitoring and control
- Generation forecast
- Load forecast
- Schedule optimization
- Enhanced SCADA functionality
- Dynamic grid constraint consideration using state estimator function

Totally Integrated Power (TIP) – Our comprehensive portfolio and extensive integration competence is unique

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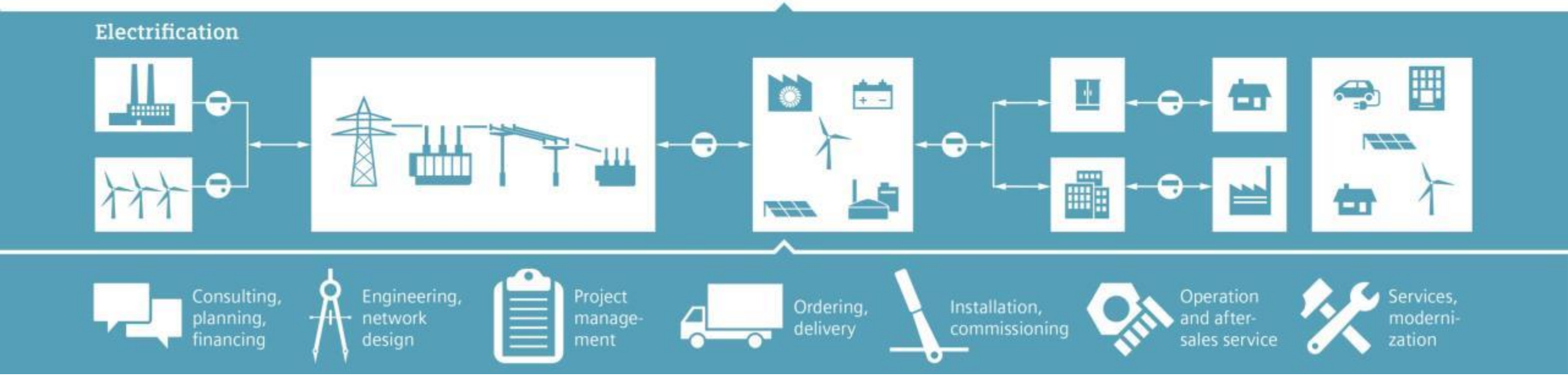

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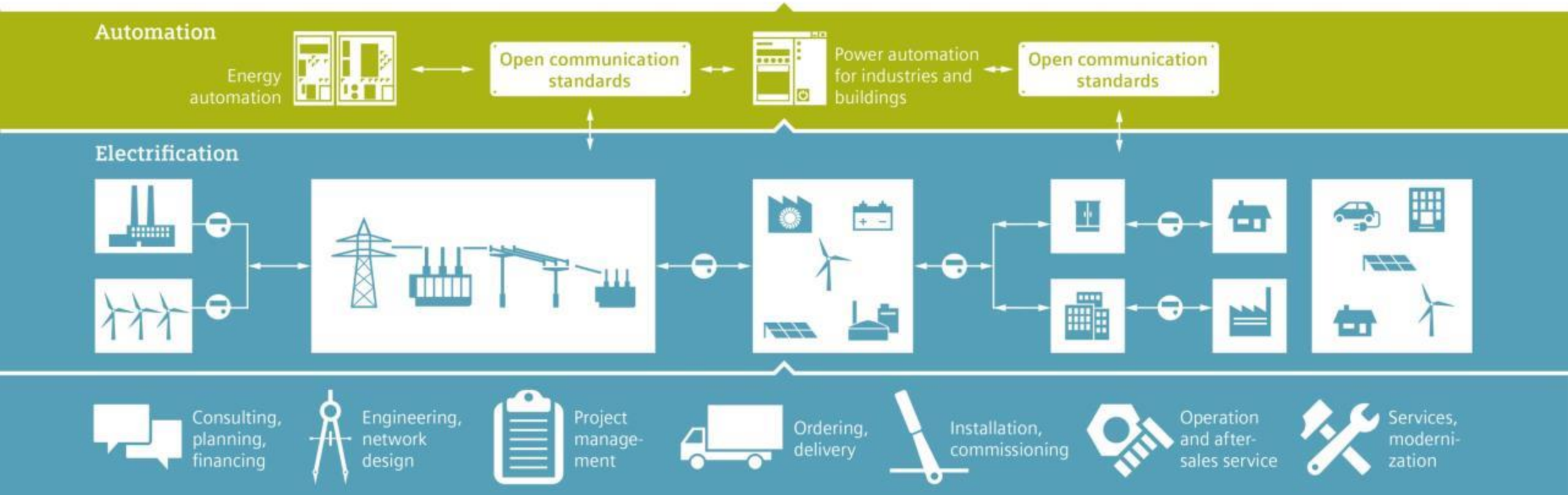

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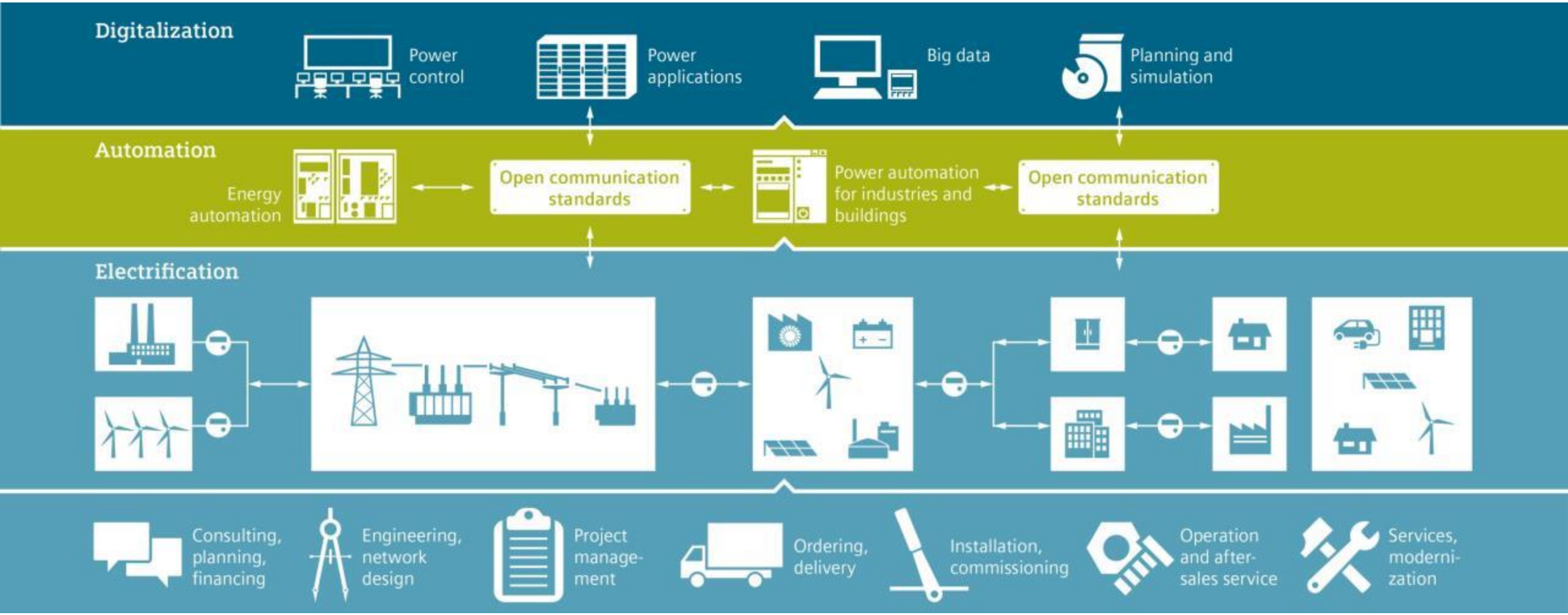

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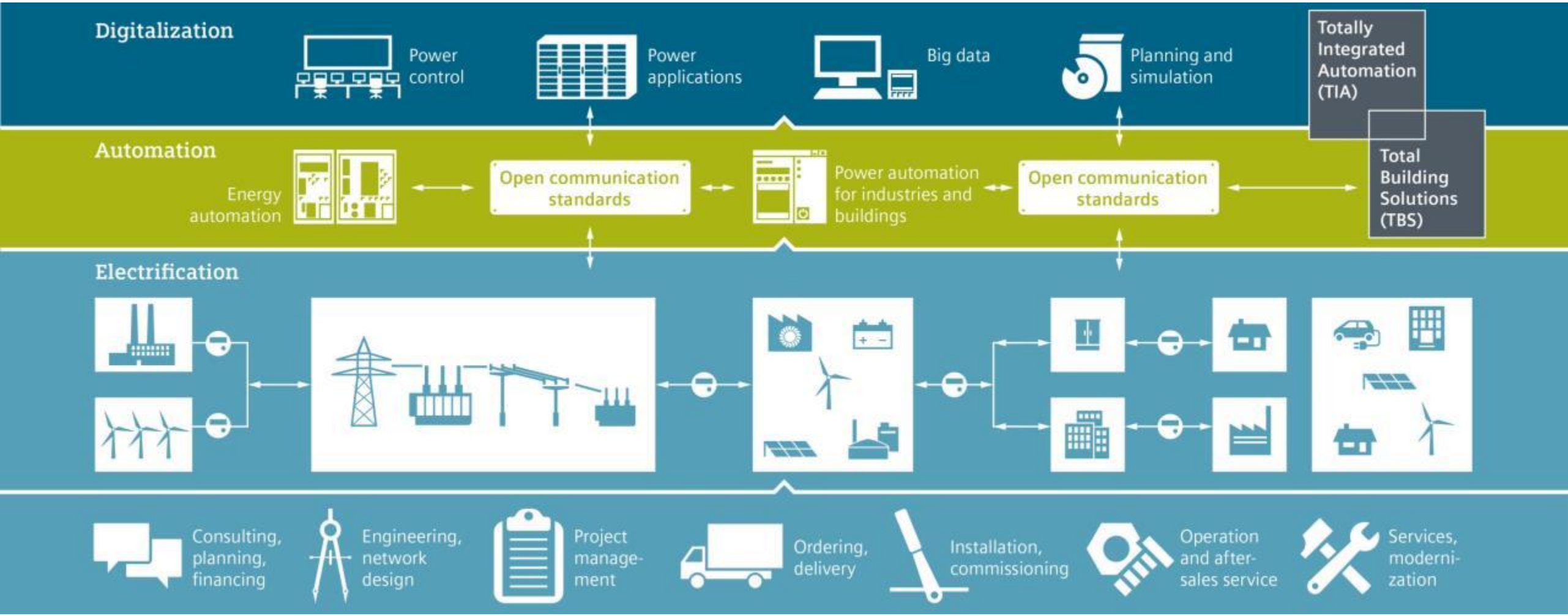


Smart City Seestadt Aspern

»Unique European project for intelligent energy consumption in a smart city quarter«

- 3 networked building complexes (housing, school campus, student home), energy provision on the basis of alternative generation, housing und school campus independently operable, building automation with predictive optimization
- Buildings fully integrated with the grid: 12 network stations with 24 transformers, >500 Smart Meters, >100 Grid Monitoring Devices, 6 storage batteries (each 100kWh)
- Networking of buildings and grid, central data station captures 1.5 million daily measurements in real-world conditions, continuous data analytics across domains
- Prototype demo-implementation (energy distribution monitoring) realized in MindSphere

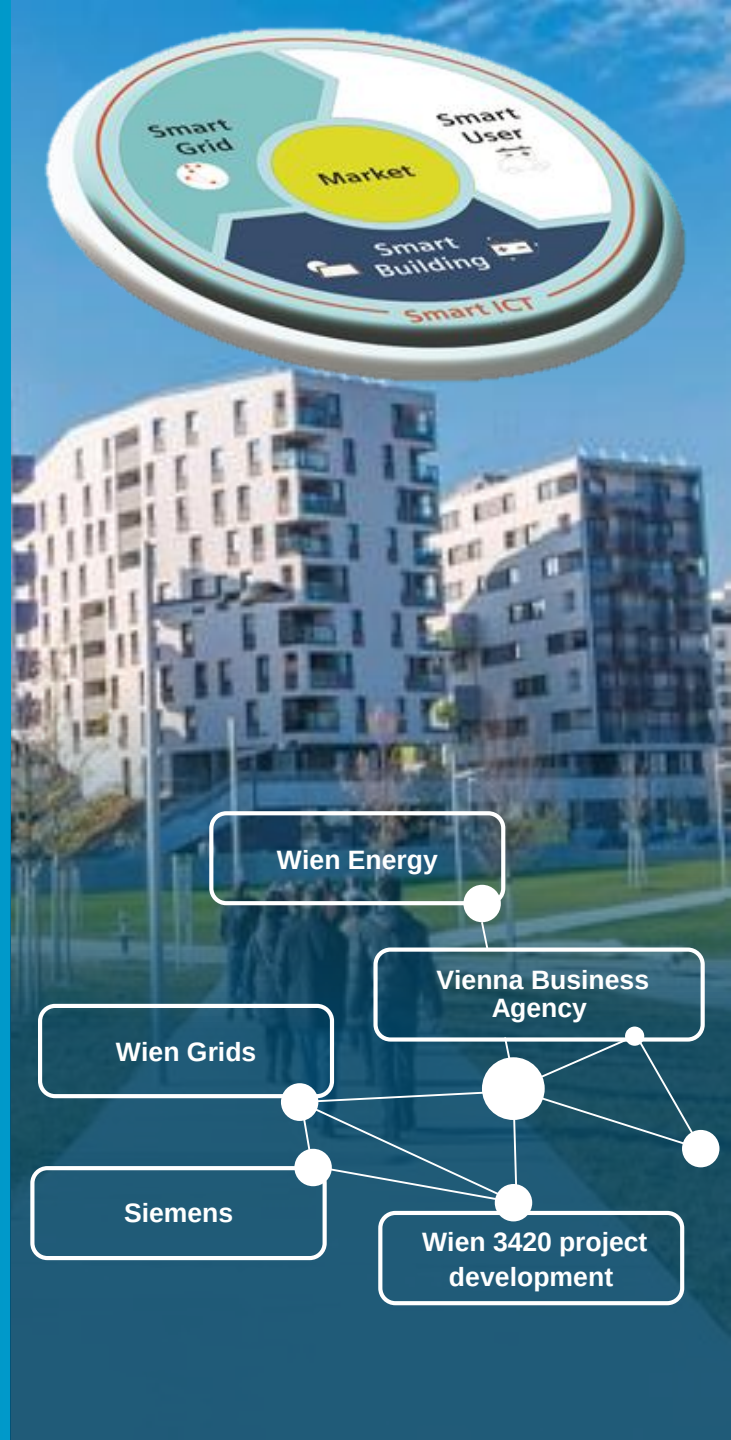
More reliable and secure operation

Up to 70% less energy consumption and CO_2

Reduction in outage duration and cost in low-voltage grid

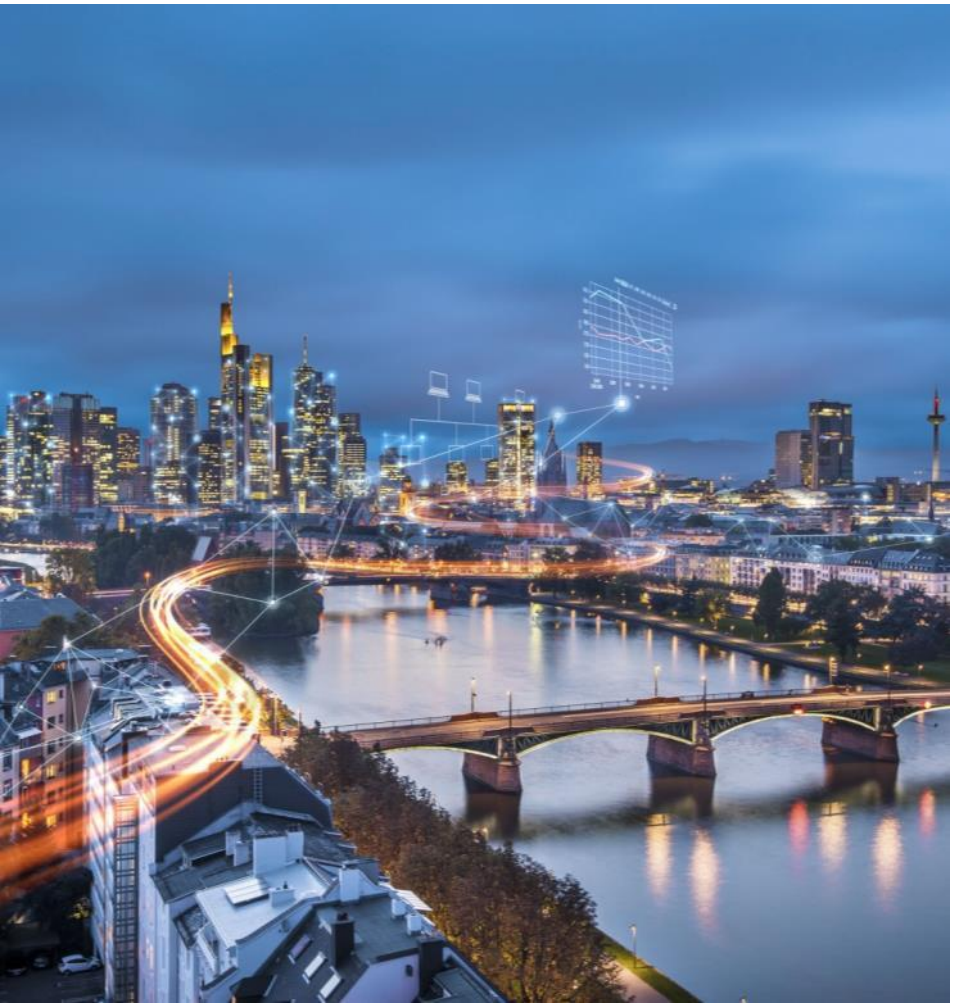
New business potential

Greater building flexibility enables participation in the energy market: potential > €30 million in Vienna



La urbanización crece exponencialmente en el planeta, estableciendo nuevos desafíos para las ciudades y sus habitantes. Asegurar la movilidad, mejorar la eficiencia energética y optimizar los edificios son prioridades al momento de diseñar y administrar infraestructuras urbanas. Siemens con su portfolio integral de productos y soluciones atiende estas áreas de acción.

Contact



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