

Enabling digitalization to drive smart cities

Creating environments that care

Urbanization and sustainability

An isometric illustration of a sustainable city. The scene features a variety of buildings, including tall skyscrapers and smaller residential or commercial structures. Many buildings have solar panels on their roofs. There are several wind turbines scattered throughout the city, some on the ground and others integrated into the architecture. Green spaces with trees are interspersed among the buildings. A large cooling tower and industrial-looking building are visible in the upper left. The overall color palette is dominated by teal and blue, with white and grey for the buildings.

70%

of global
population
will live in
cities by 2050

36%

of energy
consumed by
buildings

Decarbonization and decentralization

An isometric illustration of a sustainable city. It features a variety of buildings, including a large industrial facility with a cooling tower, several wind turbines, and numerous residential and commercial buildings with solar panels on their roofs. There are also green spaces with trees and a central area labeled 'DISTRICT HEATING' with a large cylindrical tank. The overall theme is decarbonization and decentralization.

2x

electricity
consumption
by 2050

>50%

renewable
annual energy
by 2035

Understanding the threats within cities

SIEMENS
Ingenuity for life



Disease caused by
air pollution



Limited water
supplies



Congestion leading
to stagnation



Vulnerability and
exposure to crime



Imploding
healthcare system



Evacuation in the
event of disaster



Bottlenecks in
trade routes



Loss of energy
supply

The future of cities depends on smart solutions

SIEMENS
Ingenuity for life

Smart Building

- Integrated building management
- Energy optimization
- Predictive maintenance

Smart grid

- Energy efficiency

Smart mobility

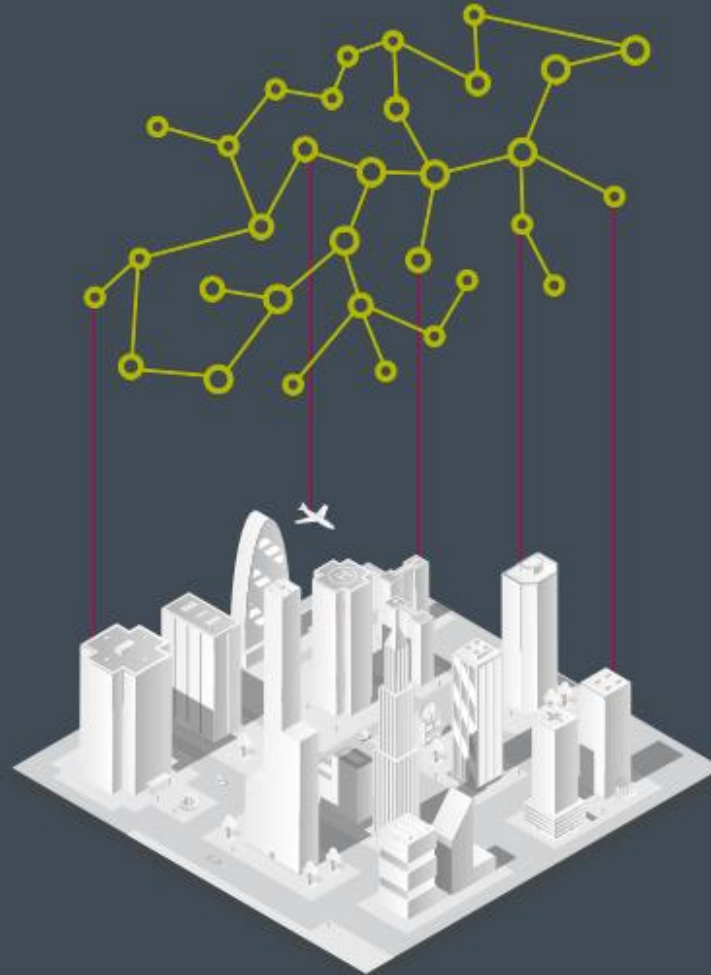
- Autonomous driving
- Smart travel services

Smart health

- Ambient living
- Urban health
- Integrated hospital information systems

Smart living / smart home

- Land use and urban planning
- Integrated energy management
- Education & capacity building of citizens
- Emergency management



Smart cities will be recognised by the level of integration through the use of digital technologies.

Greater connectivity between different sectors such as infrastructure, healthcare, energy, mobility and governance will lead to higher productivity and efficiency of the city.

Improved
quality of life

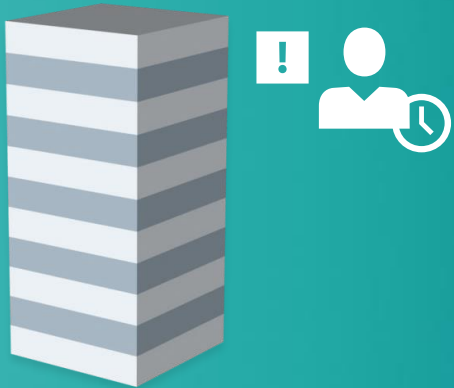
Sustainable
environment

Competitive
economy

The journey towards smart buildings

...before

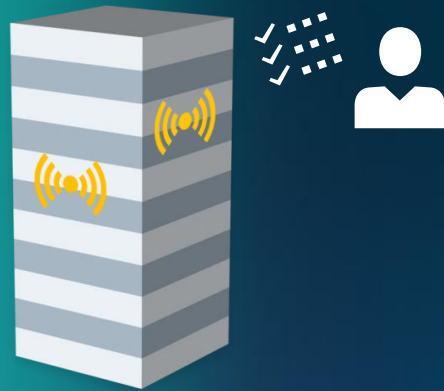
Traditional building



Reactive maintenance
based on a paper calendar

~2000

Automated building



Preventive maintenance
Systems start providing first
help – checklists

2020

Smart building



Predictive maintenance
100% predefined checklists
Fully connected

202?

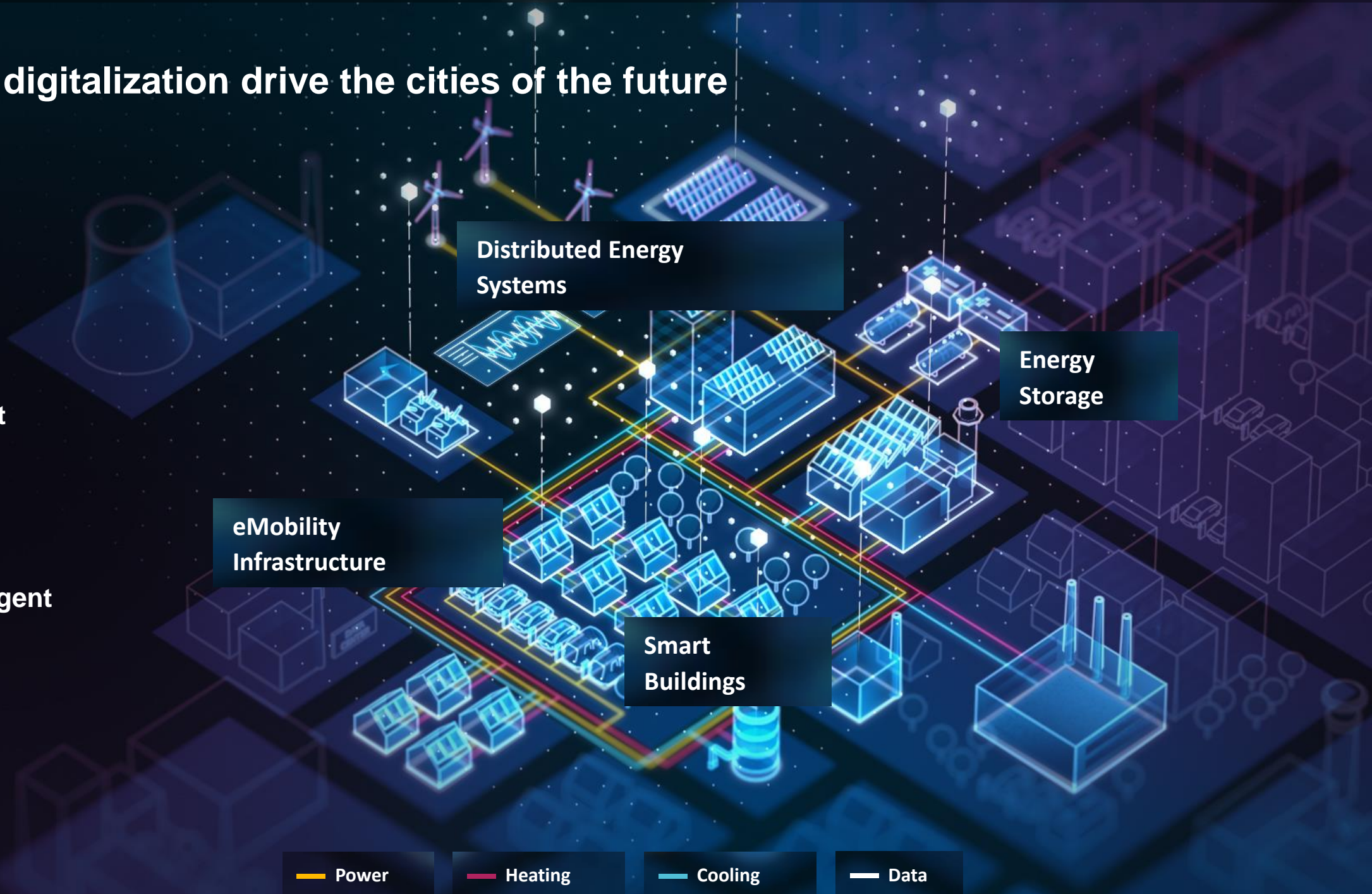
Smart building
Self-adaptive




Prescriptive maintenance
The building calls out for
the technician

Enabling digitalization drive the cities of the future

- Comfortable and safe
- Energy and asset efficient
- Space and user efficient
- Energy intelligent and resilient



An aerial night view of a futuristic smart city. The city is built on a peninsula or island, surrounded by water. It features a river with several bridges, including a prominent cable-stayed bridge on the right. The city is densely packed with buildings, many of which are illuminated with bright lights. A large, circular, illuminated structure is visible in the center. The sky is dark, and the sun or moon is visible on the horizon, creating a dramatic glow. The overall scene depicts a highly advanced, interconnected urban environment.

A Smart City applies state-of-the-art solutions enabled and improved by holistic integration for the sake of the people, of the administration, of the business as well as of the environment.



Elangovan Karuppiah

CEO, Regional Solutions & Services
Middle-East/Asia Pacific
Smart Infrastructure

Head of Smart Infrastructure (ASEAN)
Siemens Pte Ltd

Email: karuppiah.elangovan@siemens.com