

# Creating perfect places with the power of data

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# Smart buildings help our customers become even more competitive

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*Ingenuity for life*



**41%**

of energy worldwide  
is consumed by  
buildings

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**80%**

of total lifecycle  
cost of a building  
occur in the  
operation phase

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**30%**

of corporate real  
estate portfolios will  
consist of flexible  
office space

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**50%**

of workforce  
will be millennials  
by 2020

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## Owner

Occupancy rate



Increase in property value



Compliance with standards and regulations



Reducing costs



## Operators

Operational efficiency



High reliability of the facility and its equipment



Lower maintenance costs



## Tenants

Productivity of employees



Safe and secure workplace



## Visitors

Feeling welcome, safe, and secure



Easy navigation in a new building





# Comfortable and safe

- Optimized room conditions
- Enhanced air quality
- Safe and secure place to be
- Intuitive operation





# Energy and asset efficient

- Asset availability
- Maintenance costs
- Preventive/predictive maintenance
- Optimized energy footprint (CO<sub>2</sub>)



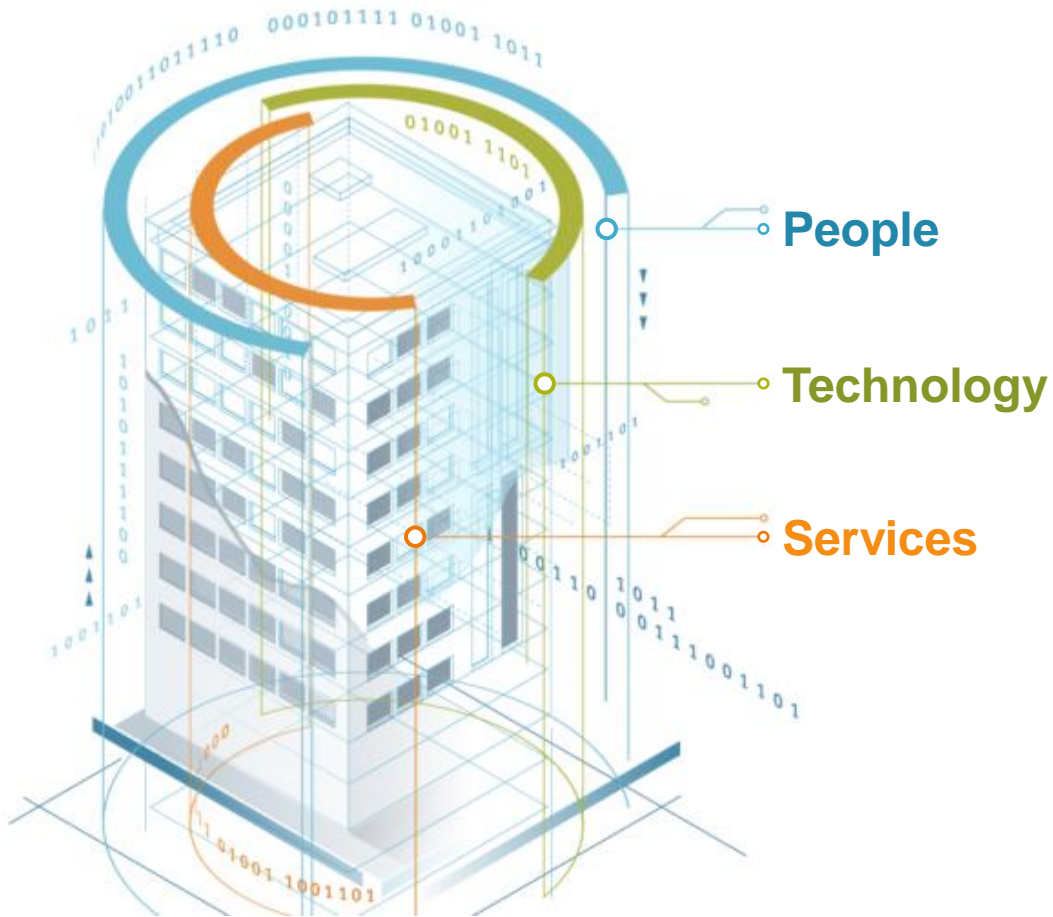


# Space and user efficient

- Transparency on space occupancy
- Asset tracking
- Indoor navigation
- Intelligent evacuation



# Enhancing building performance with unique domain know-how





**10,000**

service  
technicians

**200**

performance  
engineers

**4** locations

MindSphere  
Application  
Center

**200**

services  
overall

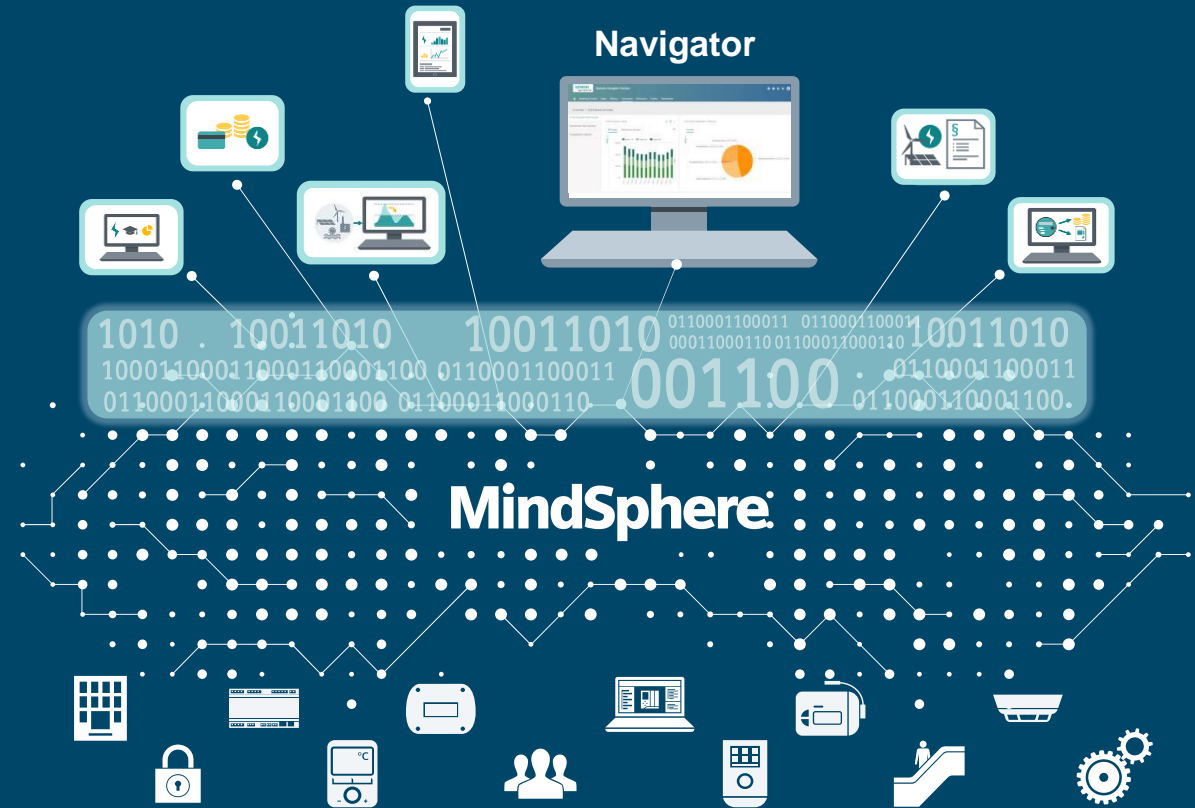
thereof **70**

digital  
services

# Navigator powered by MindSphere

...based on  
domain know-how and  
built-in data analytics

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# Navigator powered by MindSphere

**580,000**  
data points  
connected

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**80,000**  
connected  
buildings

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**400 million**  
data values  
analyzed per day

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“We want to stop the effects of time and create a condition where things no longer deteriorate so the next-generation can know our story, too.”

**John Patten**

Manager of Bunjilaka Aboriginal Cultural Centre  
at Melbourne Museum



## Customer challenges:



Reducing electricity, natural gas and water usage across the various facilities



Public perception and visitor satisfaction



Greater control of the thermal conditioning of the facility

**35%**

CO<sub>2</sub> and greenhouse gas reduction

**31%**

project utility cost reduction

“We earn our money  
by managing 170 shops  
and therefore renting out  
102,000 m<sup>2</sup>.”

Marianne Harjula  
Sello Event Manager



# Customer challenges:



Tenant satisfaction  
and retention



Public perception and  
visitor satisfaction



Modernization and efficiency  
(€/sqm.)

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**€118,000**

savings in energy efficiency  
and maintenance per year

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**50%**

immediate reduction of the  
district heating

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Premium office

Data centers

Industrial

Hotels

Corporate real estate

Universities

Schools

Hospitals

Life science



# Siemens Real Estate

Customer view

Zsolt Sluitner

Head of Siemens Real Estate

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## Key figures FY17



**€6.1 bn**  
assets under  
management

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**€2.5 bn**  
revenue

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**13.9 m**  
square meters  
rentable building  
space

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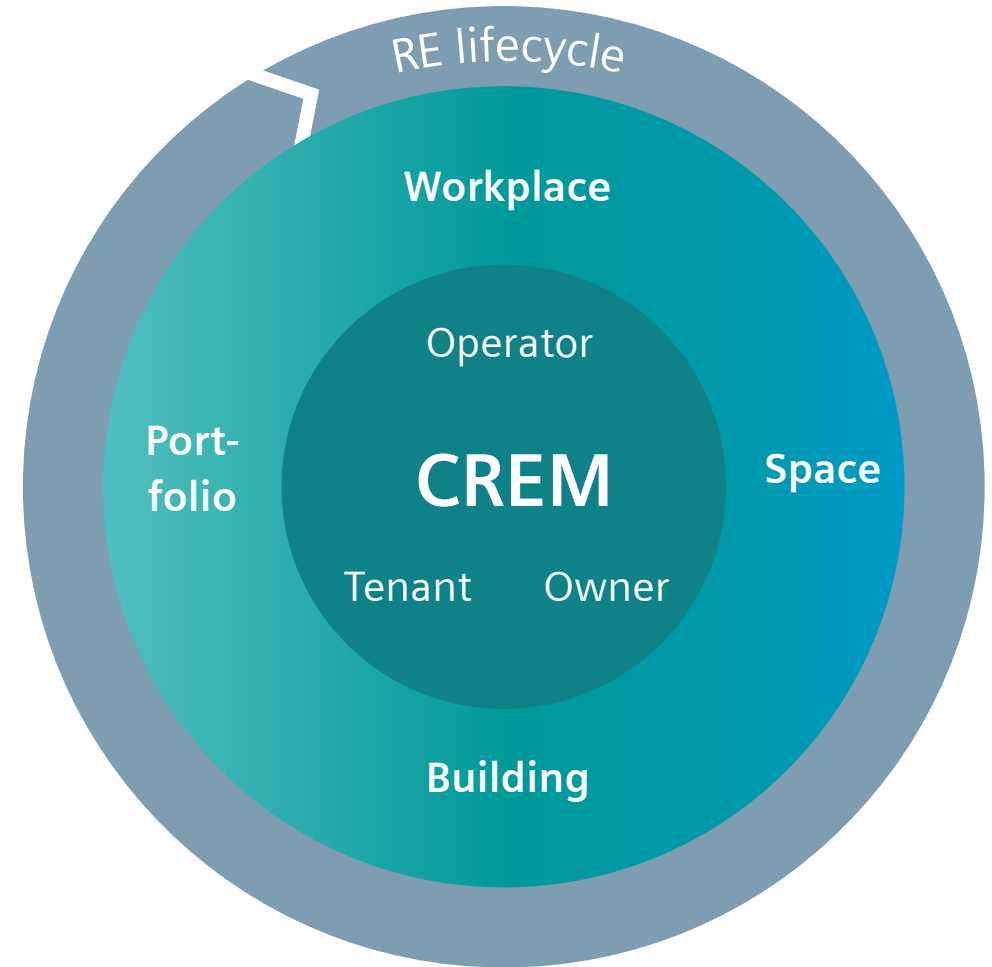
**2,000**  
locations

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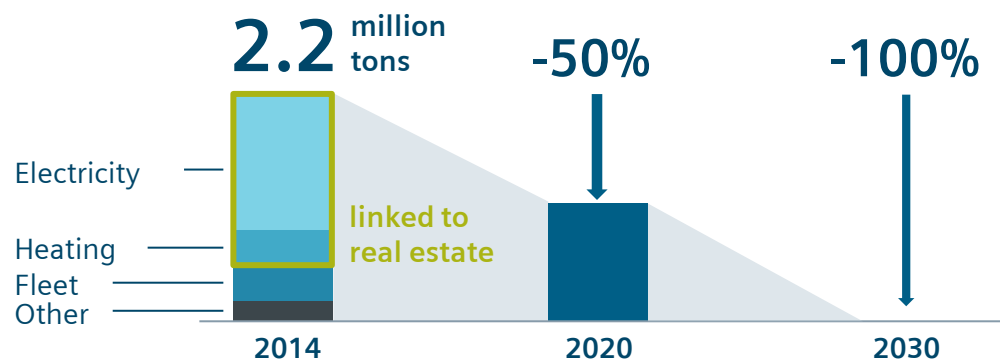


# Game changer

- Digitalization
- Connectivity and agility
- New ways of working
- Health and wellbeing
- Sustainability



# Carbon Neutral Program



## Energy Efficiency Program

€100 m Investment  
€20 m OPEX reduction  
~5 yrs. Return on invest





# Space efficiency



Better utilization of space



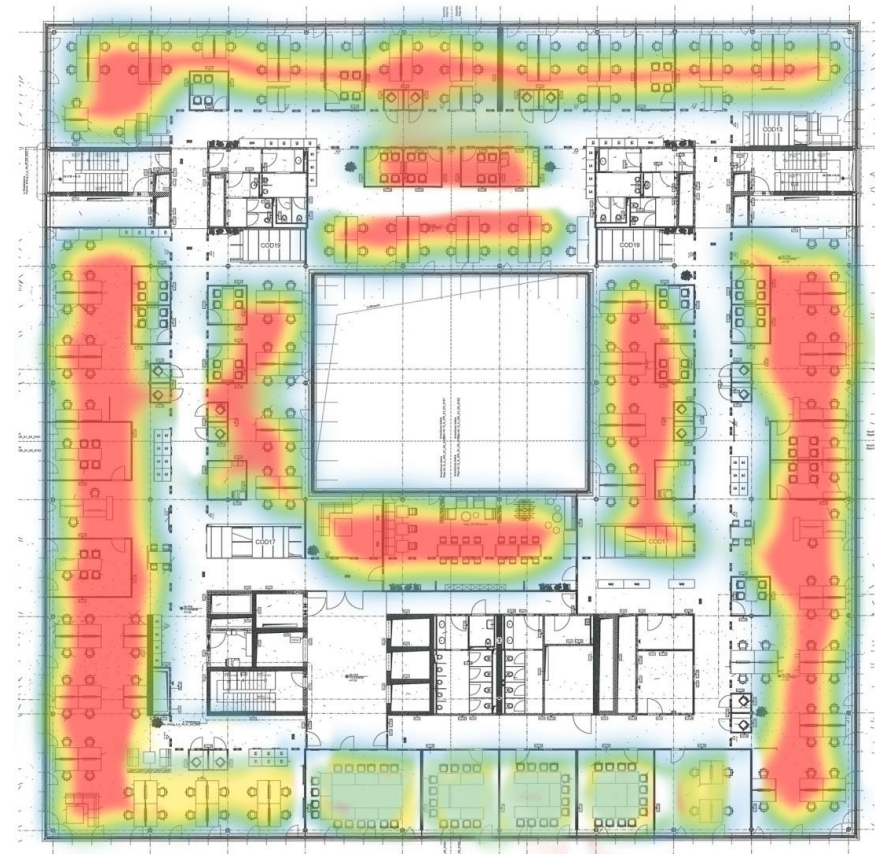
Improvement of operating expenses and services

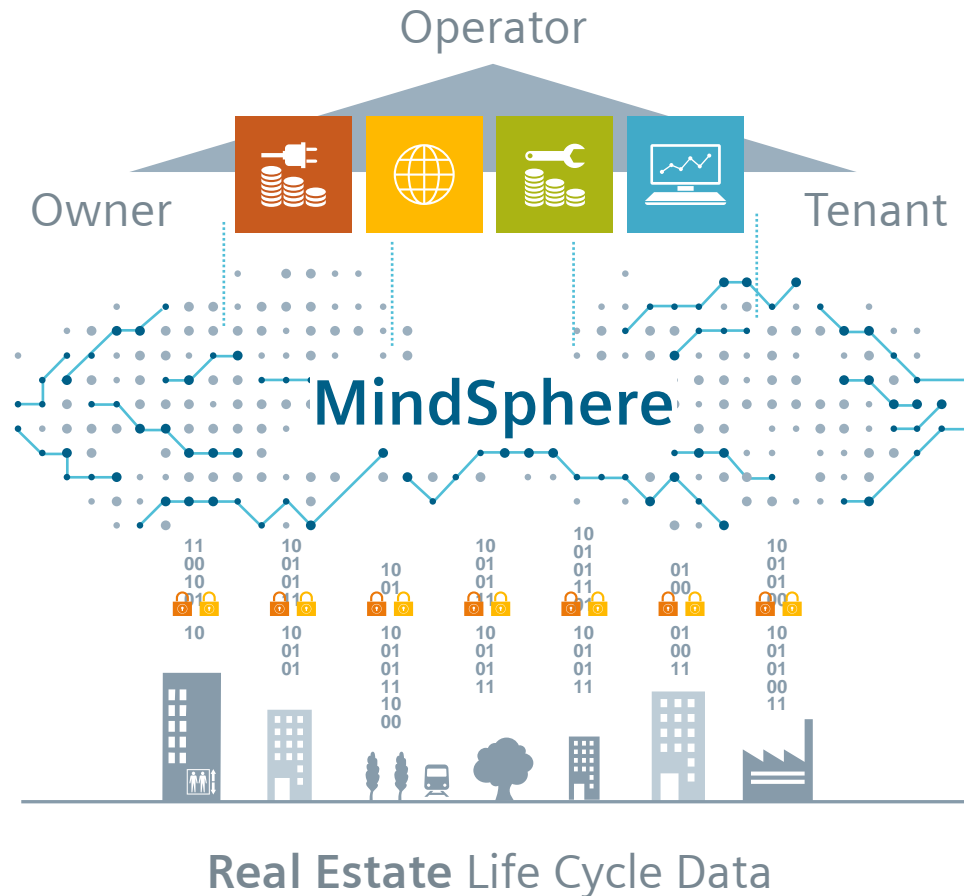


Optimization of footprint

Enabled by suite of services and applications from Building Technologies

Example: Occupancy detection





# Digital CREM

- Individual workplace control and personalized comfort
- Competitive advantage through smart building technology
- High asset and system performance

Enabled by Building Information Modeling, sensors and suite of applications from Building Technologies



# Connected real estate assets drive efficiency and productivity.

Workplace

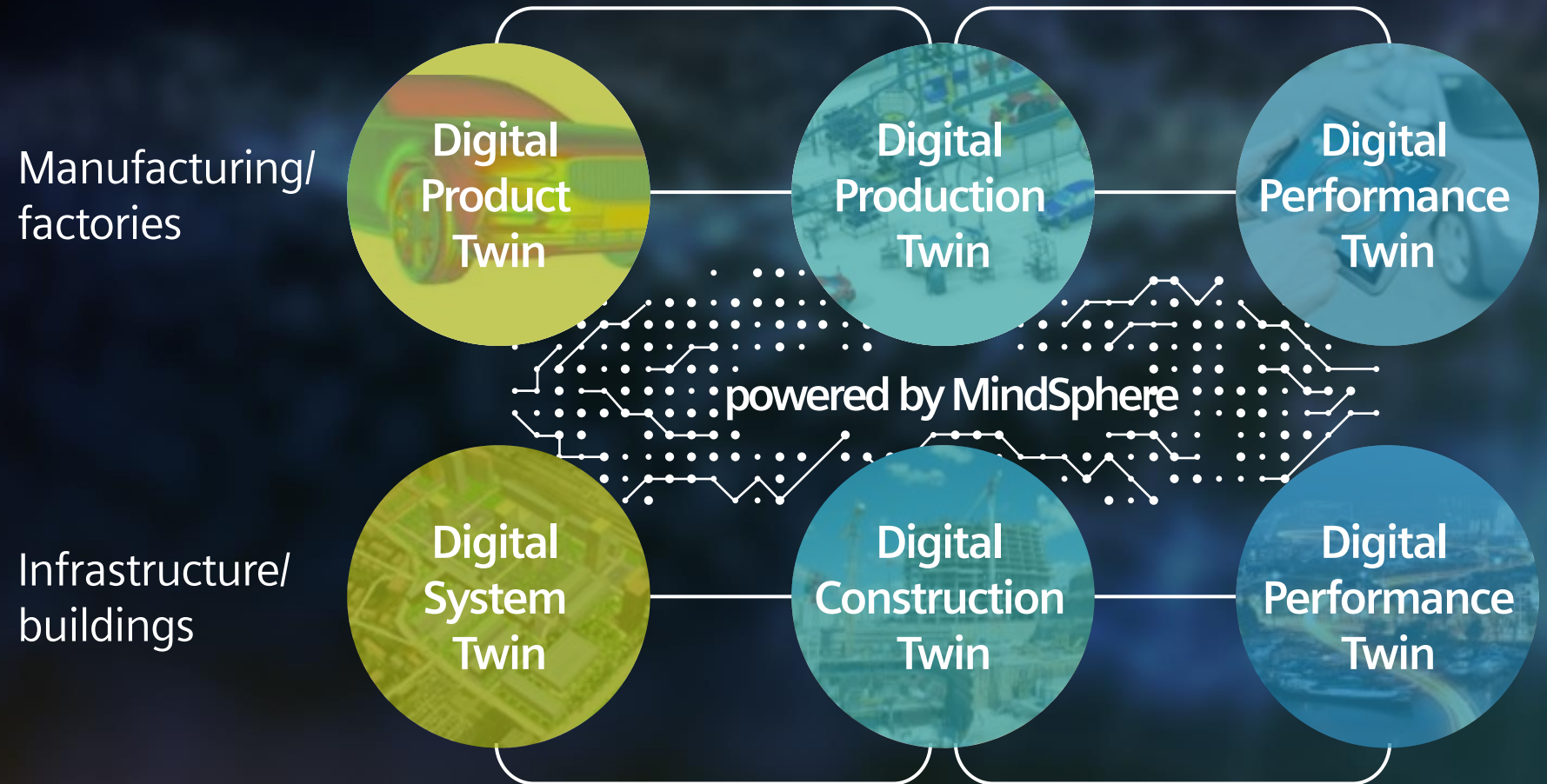
Space

Building

Portfolio

# Closed loop innovation – the digital twin improves development, construction and operation

MindSphere connects the virtual with the real world – from factories to infrastructure





By enabling our customers to be more competitive, we create additional business potential for Building Technologies:

- Digital Business of €300 million in FY17, growing by more than 20% p.a. in the next 5 years
- Drives continued overall growth more than market

#CreatingPerfectPlaces