Lighting and Climate Convergence:

A New Paradigm for Smarter Buildings

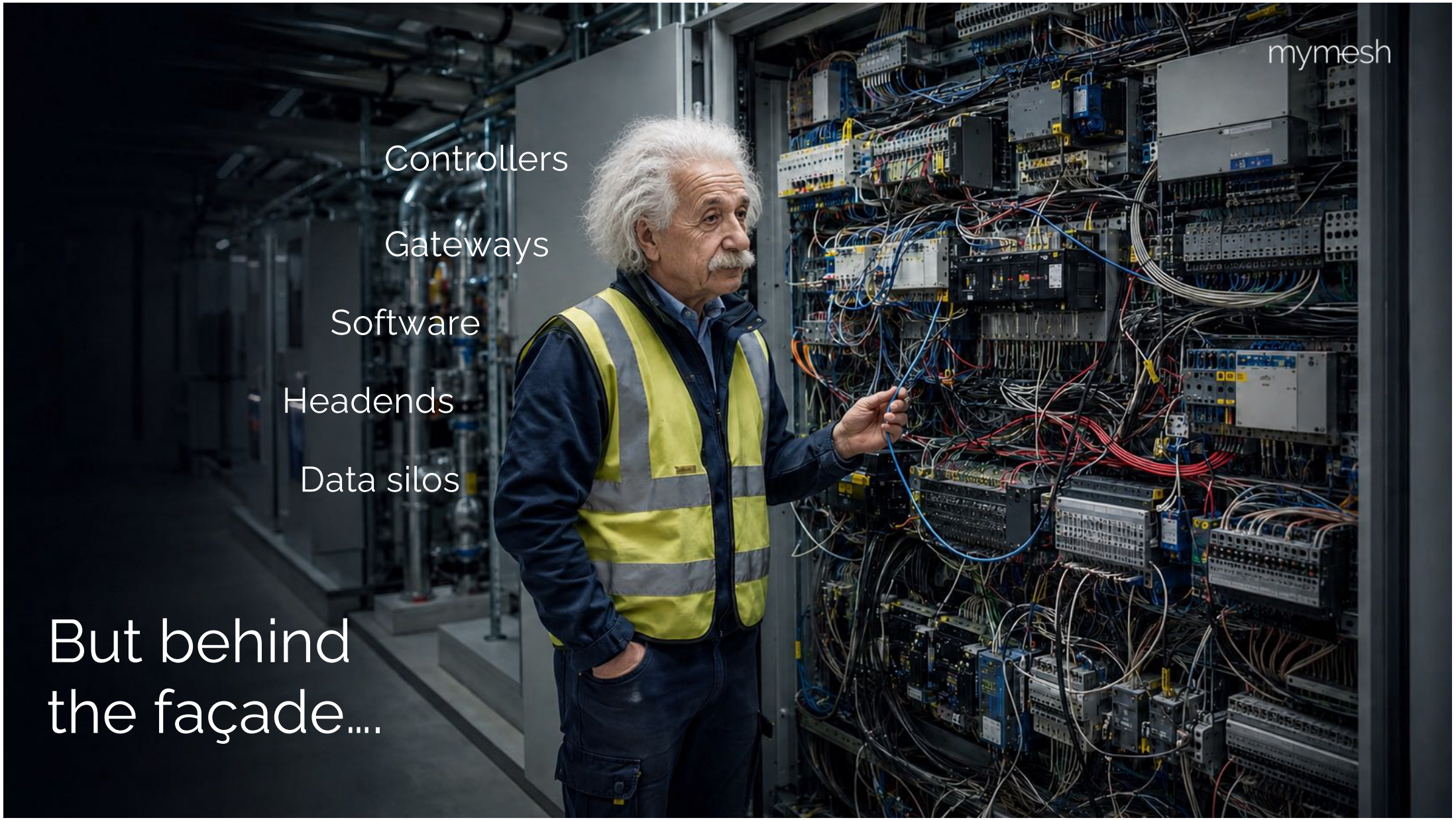
mymesh

Ashley Bateup - Director

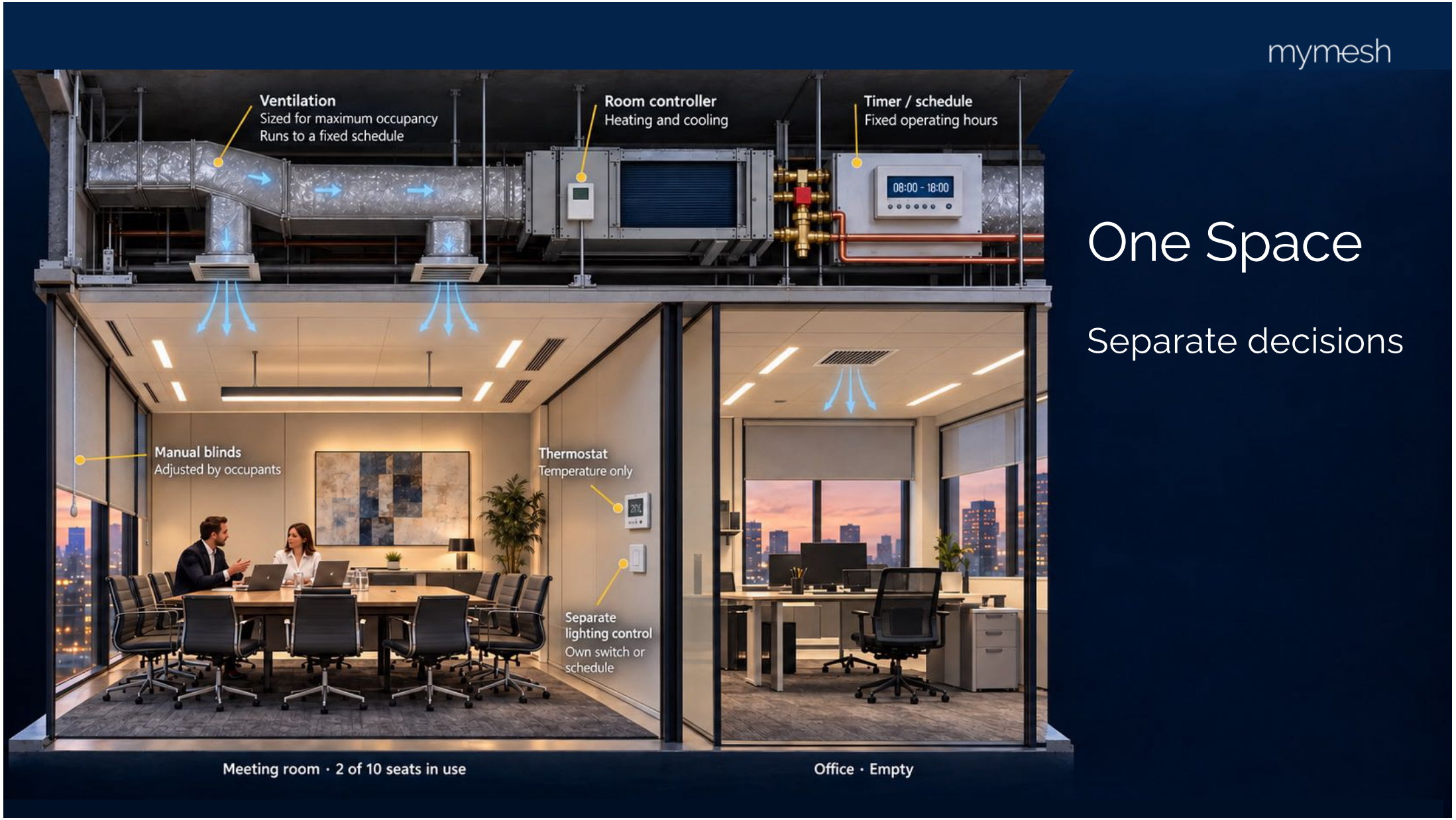


What is a smart building?




mymesh
Controllers
Gateways
Software
Headends
Data silos
But behind
the façade....

mymesh

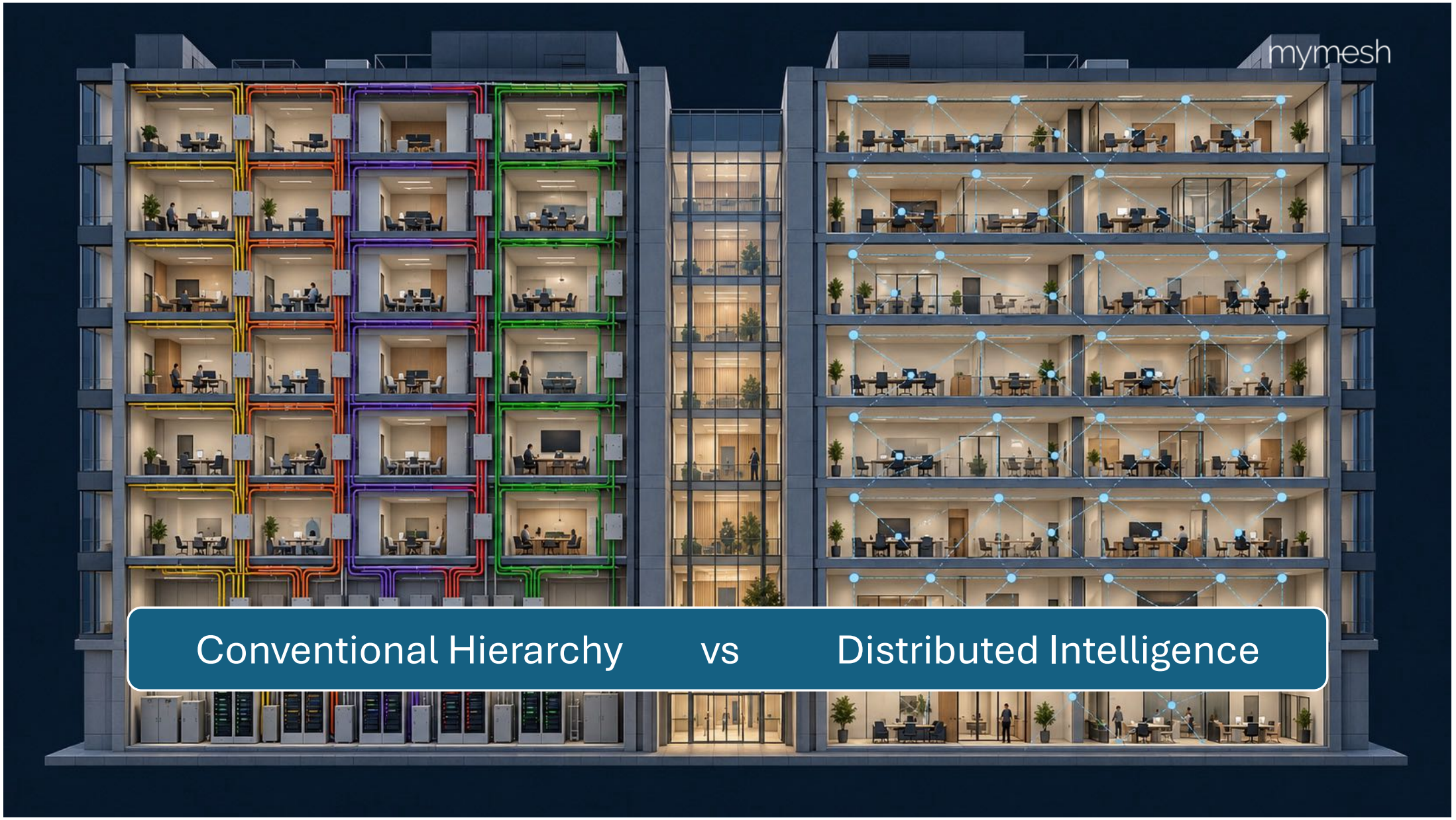


One Space

Separate decisions

Lighting is omnipresent




mymesh
Conventional Hierarchy
vs
Distributed Intelligence


mymesh
HVAC
mymesh
Lighting


mymesh
GIACOMINI
WATER E-MOTION
Mymesh

mymesh





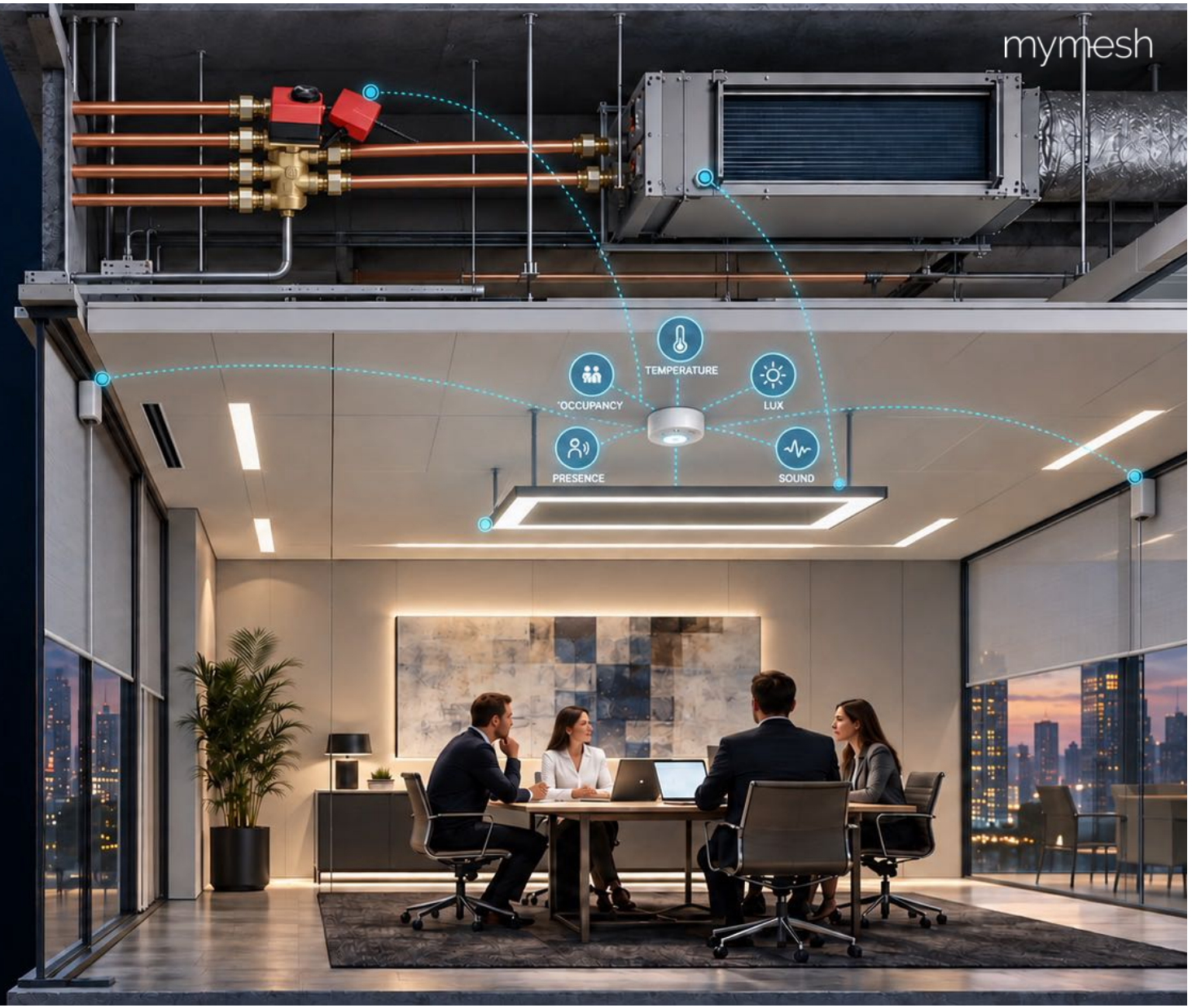
Separate controllers and additional wiring → Fewer separate control components

mymesh

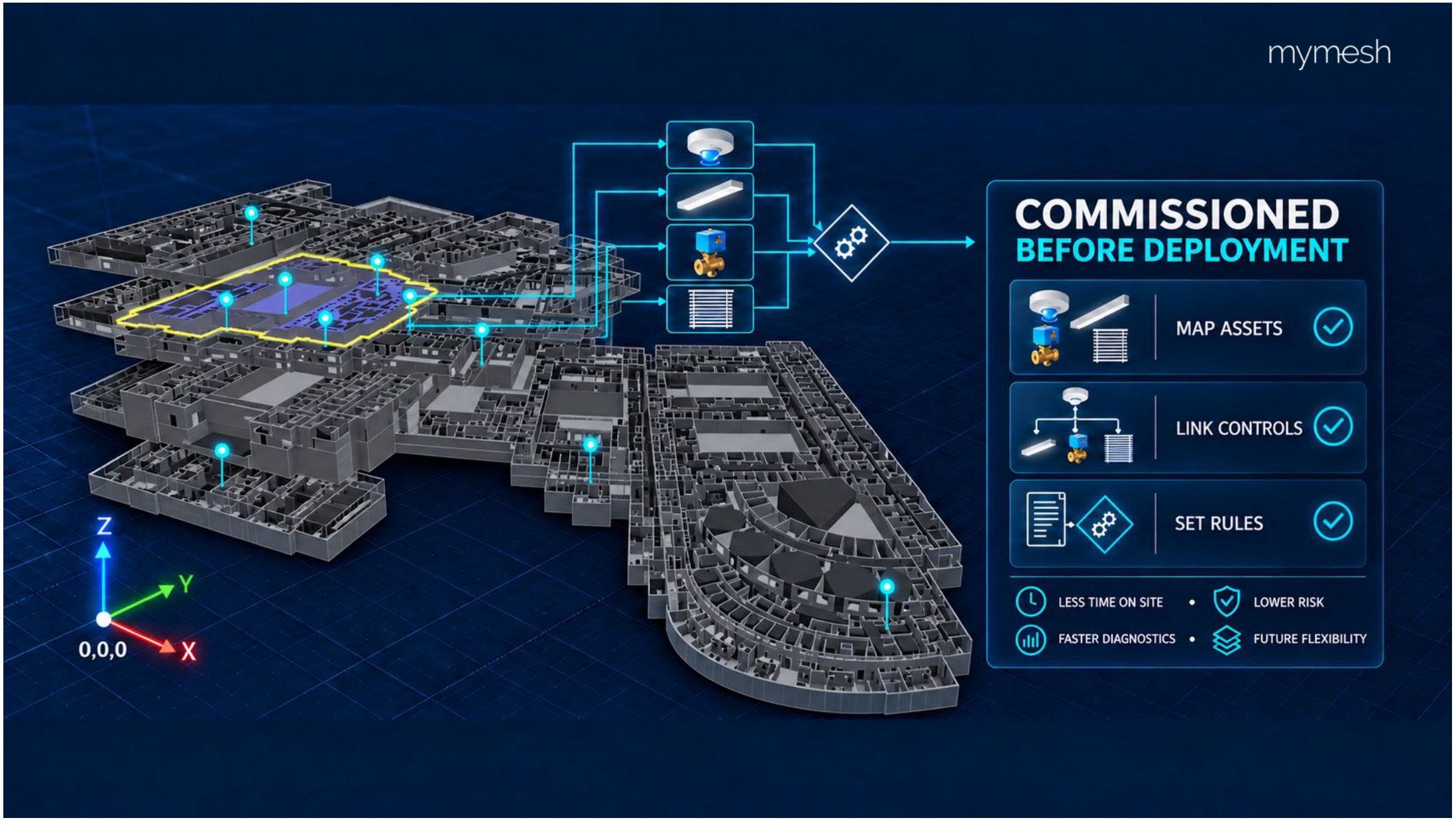

Presence
Occupancy
Humidity
% RH
Temperature
°C
Sound
dB
Lux (daylight)
lx

Convergence

One data backbone



mymesh



COMMISSIONED
BEFORE DEPLOYMENT

MAP ASSETS

LINK CONTROLS

SET RULES

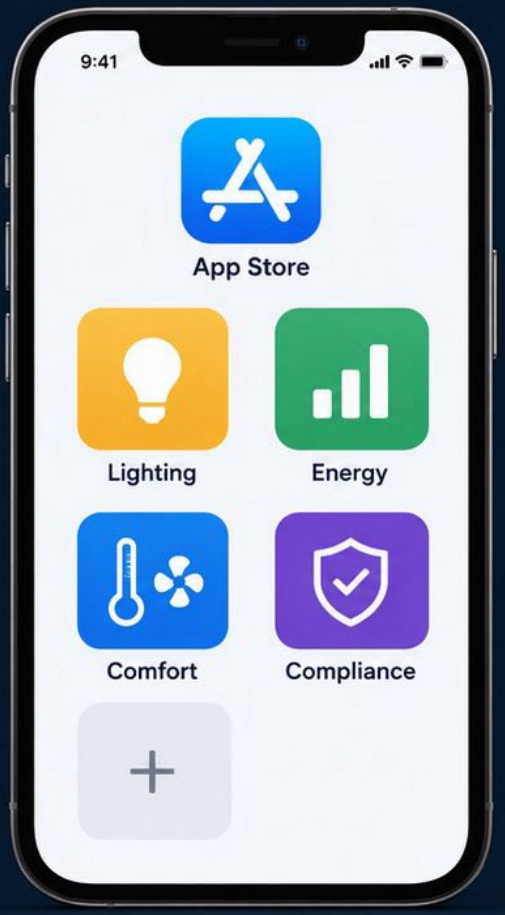
LESS TIME ON SITE • LOWER RISK

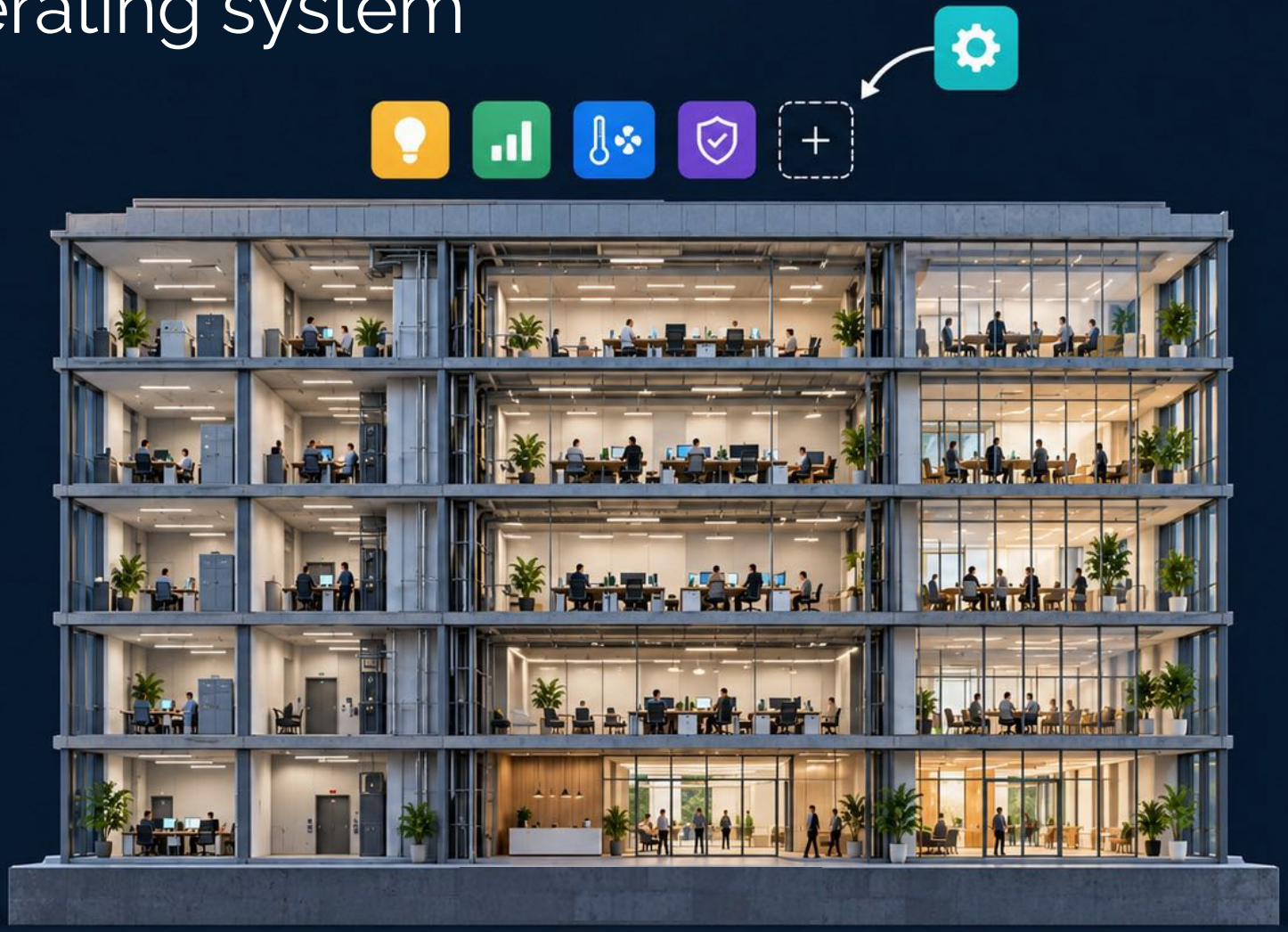
FASTER DIAGNOSTICS • FUTURE FLEXIBILITY


mymesh
Area demand
Floor 5 demand
Floor 4 demand
Floor 3 demand
Floor 2 demand
Floor 1 demand
Real time demand to BMS
BACnet
BMS
Boiler
Chiller
AHU
Mymesh
Lighting
Sensors
Climate
Shading

A building's operating system

mymesh

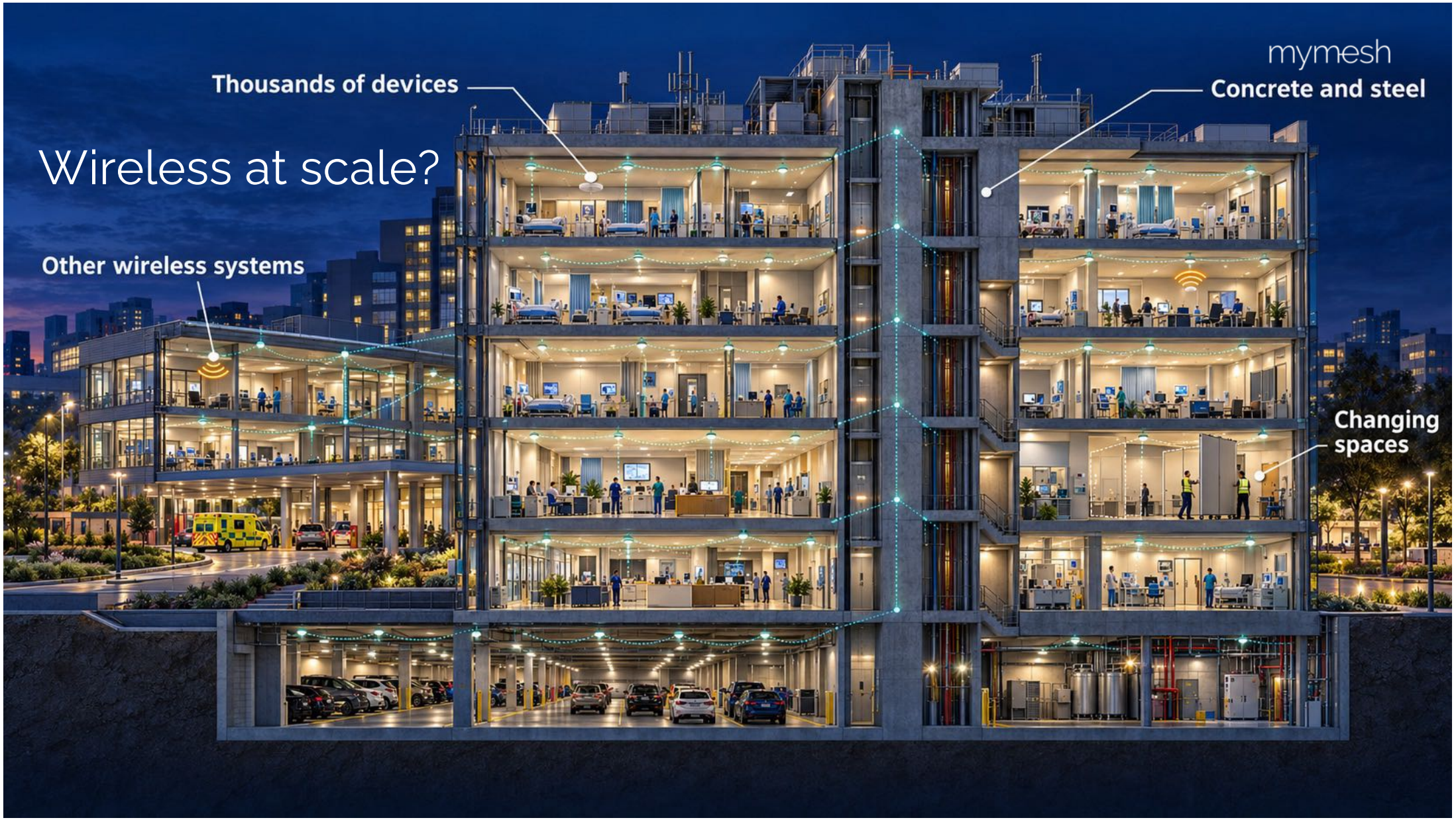




Endless possibilities

mymesh




mymesh
Thousands of devices
Concrete and steel
Wireless at scale?
Other wireless systems
Changing spaces

mymesh











THE CLIENT

Built for Land Securities' Business Needs

Land Securities owns and operates the buildings – Mymesh, Tridonic and Giacomini align to give them one thing: better tenant outcomes

Landsec

OWNER / OPERATOR

Turning an aligned platform into tenant efficiency, sustainability and wellbeing outcomes

mymesh




mymesh
Office
Destination Retail
Education
Healthcare
Industrial
One infrastructure - Different priorities - Different outcomes

From control to operational intelligence



mymesh

Lighting data and insights

Energy benchmarking
W, kWh, W/m²

Lighting optimisation
Dimming and operating hours



Driver health
Faults and temperatures

Planned maintenance
Usage and diagnostics

Emergency reporting*
Tests and battery status



Hydronic data and insights

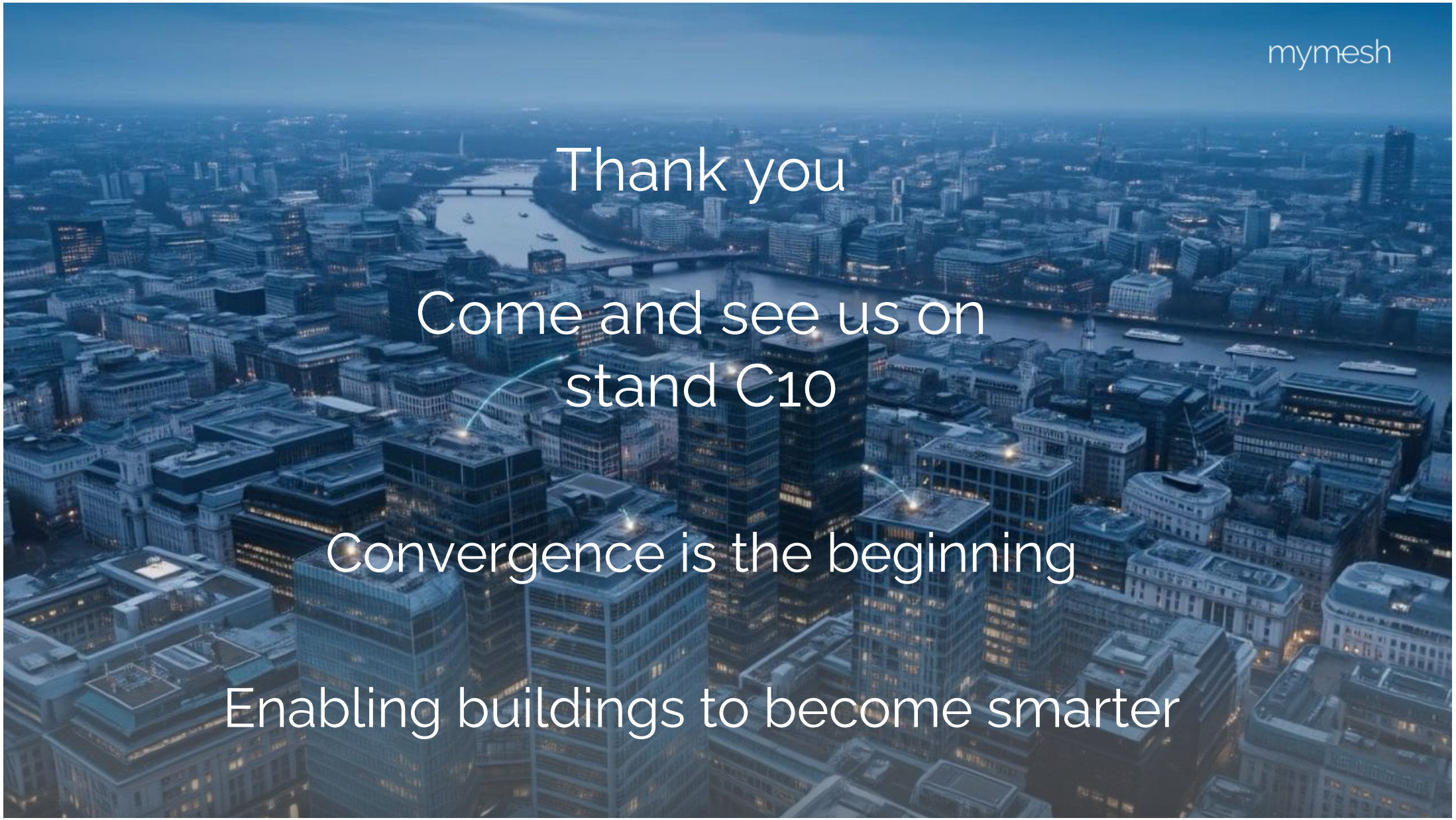
mymesh




mymesh
GIACOMINI
WATER E-MOTION
Continual Commissioning
Requested Flow > Actual Flow > Verified Delivery > Repeat
“If you cannot measure it, you cannot improve it”- Lord Kelvin


mymesh
EF-03
Extract Fan
B-01
Boiler
P-01
Chilled Water Pump
P-02
Chilled Water Pump
Mymesh
ASSET STATUS
ONLINE
UPTIME
AVAILABILITY
AGEING HEALTH
MAINTENANCE FACTOR
99.8%
98.6%
82%
74%
NEXT SERVICE
18 DAYS
CONDITION TREND
Healthy
Caution
Critical
AHU-01
AHU-01
Air Handling Unit
HVAC
Building Services
DB-1
Main Distribution


AHU-01
HEALTHY
EFFICIENCY 96%
AHU-01
P-02
DEGRADING
BEARING WEAR
SERVICE SOON
P-02
EF-03
FAULT
AIRFLOW LOW
ACTION REQUIRED
EF-03
CHILLED WATER
mymesh
Mymesh FDD
ASSET HEALTH
GREEN
18
AMBER
3
RED
1
FAULT DETECTED
Airflow low
PROBABLE CAUSE
Filter blockage
OPERATIONAL IMPACT
Reduced ventilation
RECOMMENDED ACTION
Inspect and clean filters
CONDITION TREND (EF-03)
100
75
50
25
Gradual deterioration
before failure
30 days ago
20 days ago
10 days ago
Now


mymesh
Thank you
Come and see us on
stand C10
Convergence is the beginning
Enabling buildings to become smarter