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SMART BUILDING EXPO

19 | 20 | 21
NOVEMBRE 2025
FIERA MILANO

# FUTURE PROOF BUILDINGS

## Transizione digitale negli edifici tra efficientamento, sostenibilità e benessere delle persone

A CURA

SBA
SMART BUILDINGS **ALLIANCE**
**FOR** SMART CITIES

# Speakers


## Alberto Biundo

EMEA Business Development

**Molex**

alberto.biundo@molex.com

## Giuseppe Santoro

Technical Director

**CBRE GWS Technical Div.**

giuseppe.santoro@cbre.com

# 2030: Obsolete offices risk

SBA SMART BUILDINGS ALLIANCE FOR SMART CITIES

**170 Million sqm**

office stock at risk of becoming obsolete by 2030

**6 London**

office stock equivalent

| MARKET | % OFFICE STOCK AT RISK OF OBSOLESCENCE |
|---|---|
| MILAN | 86% |
| BARCELONA | 81% |
| STOCKHOLM | 81% |
| PARIS | 80% |
| MADRID | 77% |
| AMSTERDAM | 77% |
| LONDON | 76% |
| BRUSSELS | 70% |
| FRANKFURT | 70% |
| BERLIN | 65% |
| LISBON | 64% |
| DUBLIN | 64% |
| MUNICH | 60% |
| PRAGUE | 47% |
| BUDAPEST | 43% |
| WARSAW | 40% |

# 2030: Obsolete offices risk

**CARBON**

High building standards to meet ESG goals:
- energy efficiency
- carbon emission targets

**COMMUNITY**

Highest quality Grade A buildings in the best locations
- to espouse corporate persona
- to attract the best talents

**COST**

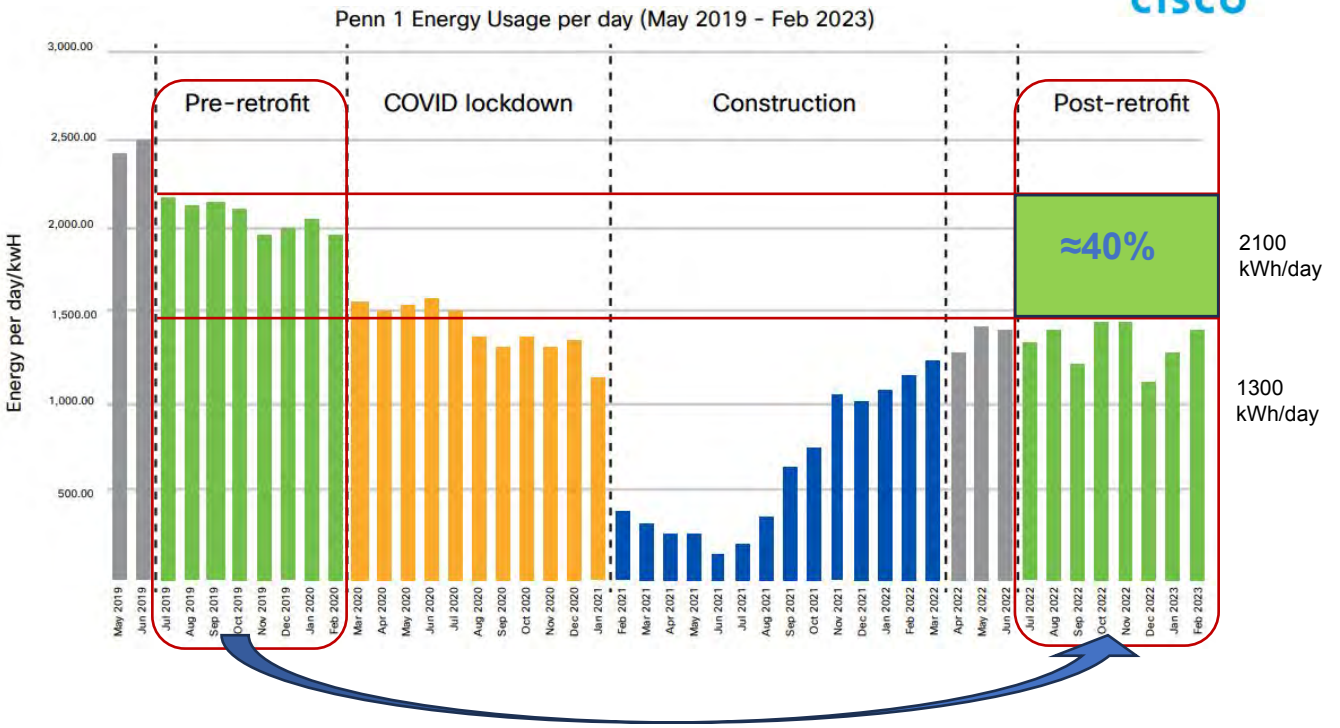
Improving buildings according to market prices
Holding vacant space for long periods of time

# 1. Energy Price increase

Real time control

Efficiency

Penn 1 retrofitting: **energy saving**



# 2. Future-Proof Buildings

- **Sustainability & ESG**
- **Flexibility**

**Energy efficiency standards / Building Regulations**
(lighting management system, energy metering kWh, etc)

**Measurable performance:**
Smart Readiness Indicator (SRI) (comfort, energy efficiency, flexibility, interoperability, connectivity).

**ESG & Building certifications:**
LEED, WELL, BREEAM (Molex contribution: up to 34/110)

# 3. New Working Models

- **Smart working**
- **digital collaboration**
- **hybrid working**

**Efficiency & Comfort**

Functional new layout

Smart technological equipment

# Value Proposition

# DC Advantages

**PoE** - 100W power through a single Ethernet cable

## BENEFIT

- Carbon reduction
- Energy saving
- Ease of design & installation
- 3rd parties / BMS integration
- Multi protocols convergence

1. Smart Lighting, Shading, Plug Loads Controls
2. Granular Presence: Occupancy/Vacancy
3. Temperature, Humidity, Relative Pressure
4. VOC, Smoke, CO, CO2, PM2.5, PM10
5. Power Monitoring, Space Utilization, Wellbeing
6. PoE Power Saving

**POE INFRASTRUCTURE**

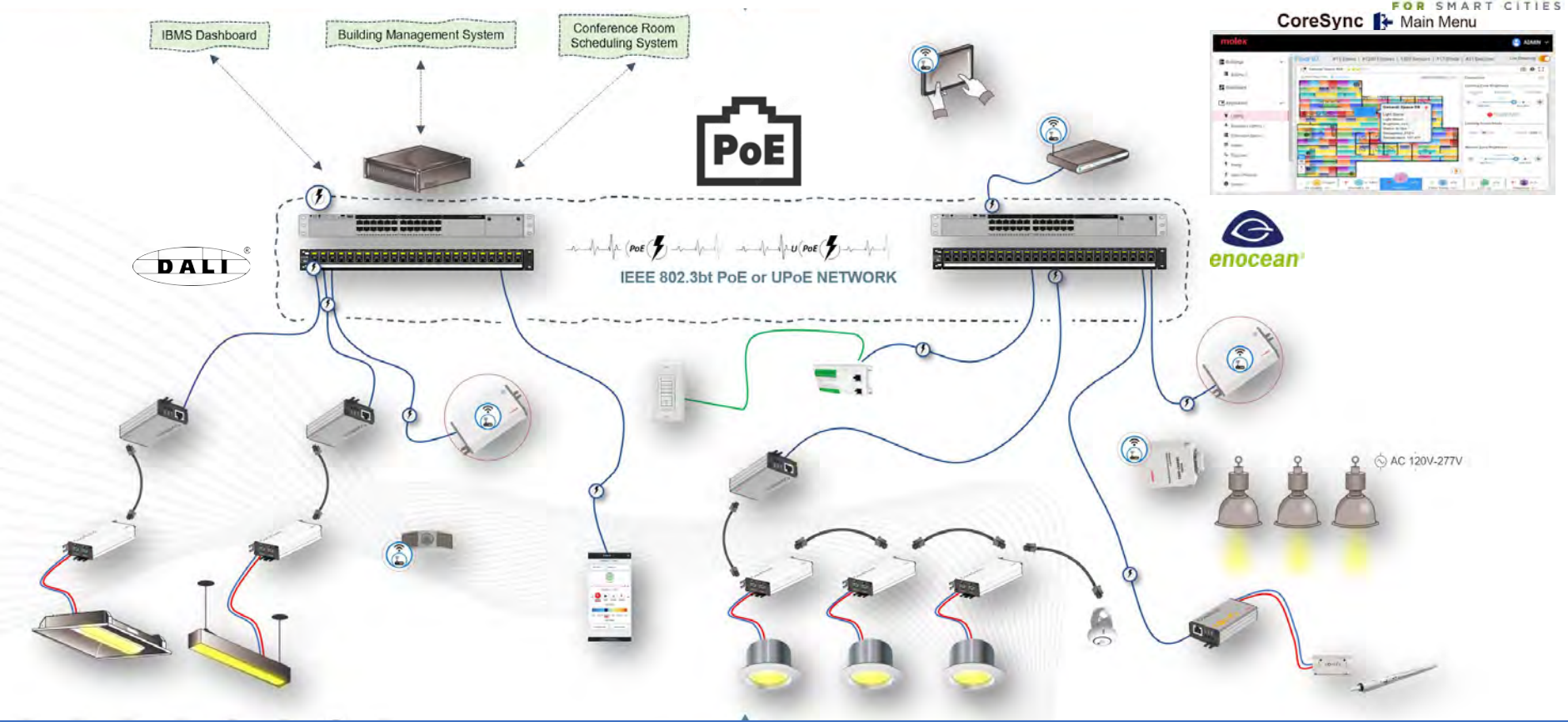
**HUMAN CENTRIC LIGHTING CIRCADIAN CYCLE**

**SMART BUILDING DASHBOARD**

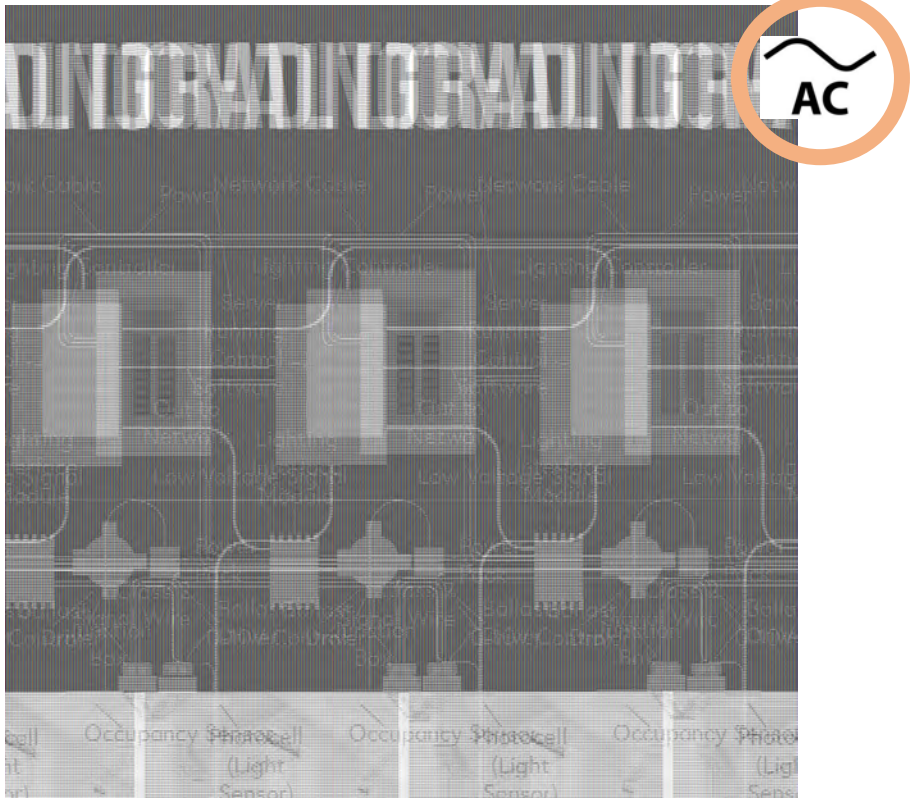
**BMS/AV INTEGRATION**

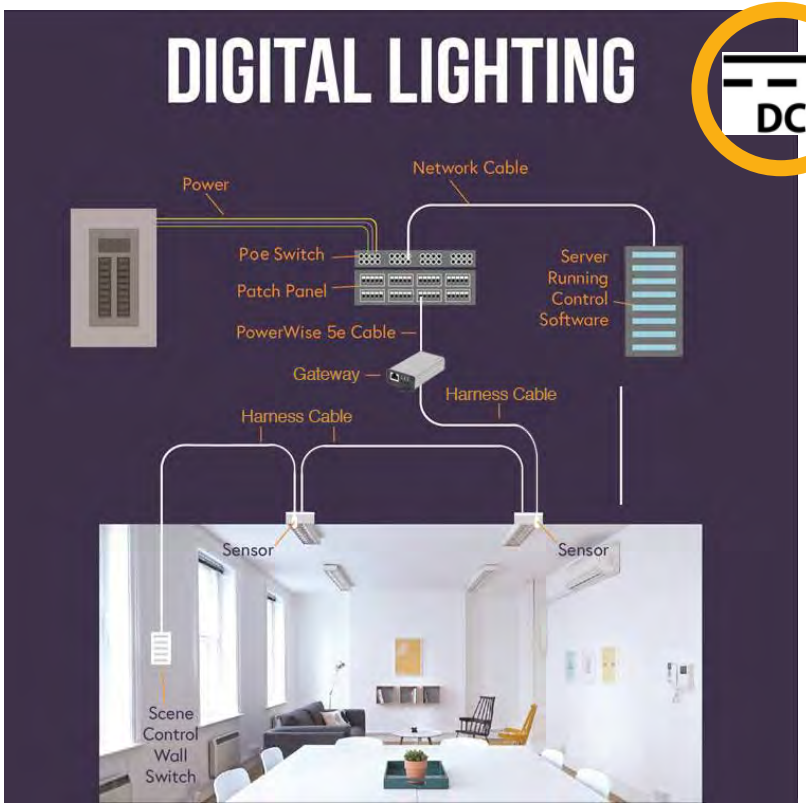
**INSIGHTS**

# CoreSync – High Level Physical Architecture



# Traditional vs Digital



# CISCO LONDON OFFICE

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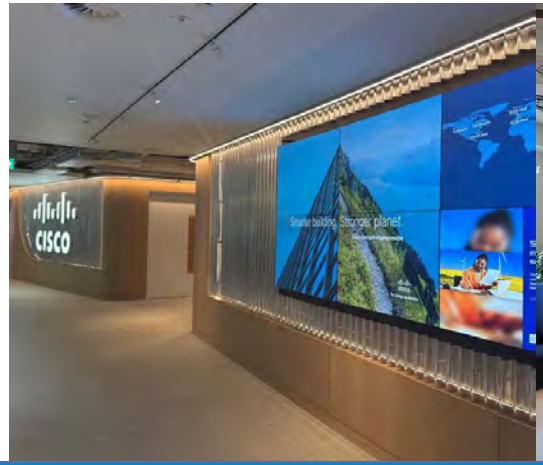
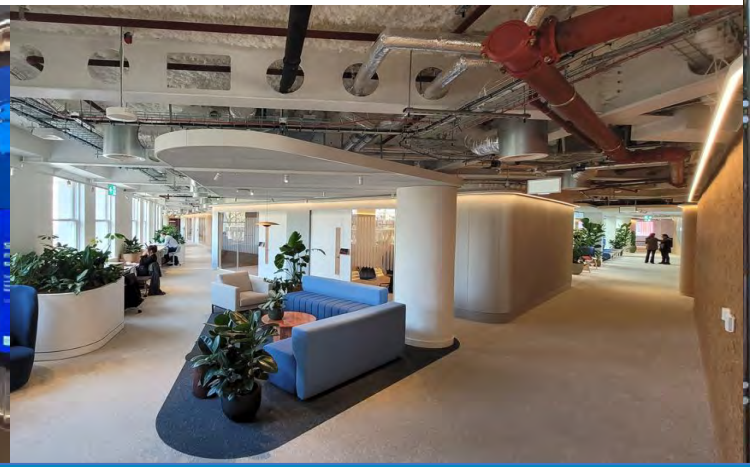
# Modern Workplace – historic city setting

- London City:  the most connected, sustainable, and collaborative work environments ever created
- Multi-floor renovation
- 4,000 m²



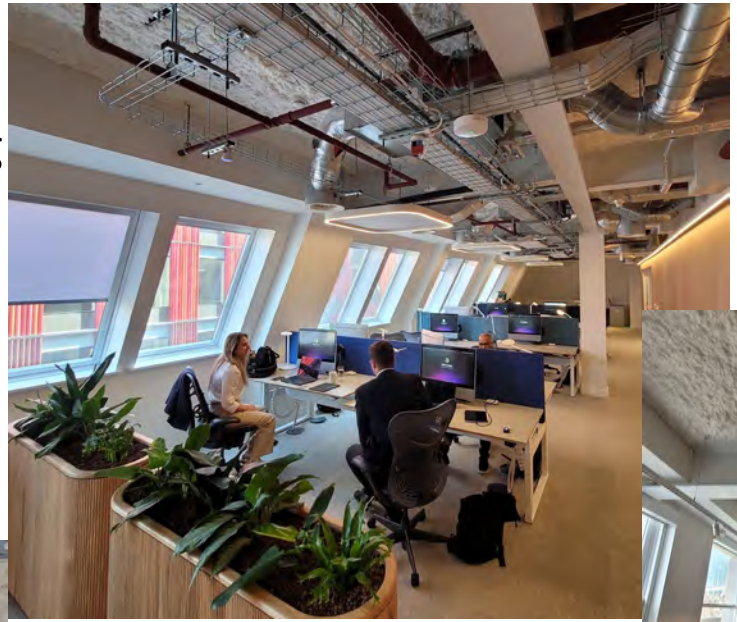



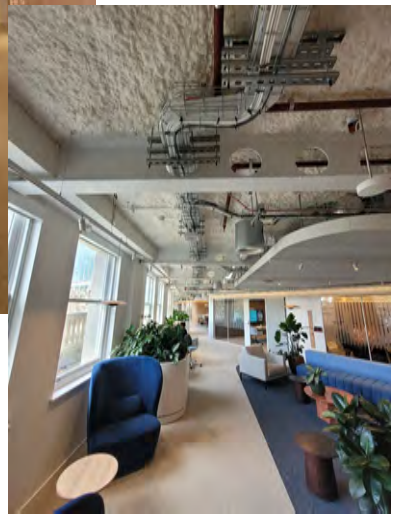
# 100% Power over Ethernet

Molex PoE foundation

100% low-voltage lighting and shading powered by Molex:

- efficiency goals **(LEED Gold)**
- People well-being **(WELL Platinum)**





# ULTRA-ENERGY EFFICIENT PASSIVE BUILDING OFFICE

## BOSTON, USA

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# Winthrop Center: 80K sqm

The world's largest Passive House office space

**WELL Gold** + **LEED Platinum** status

**Molex** main benefits:
- **indoor air quality**
- **natural smart lighting control**

to reduce stress and increase performance.

# CAMPUS, UAE

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# Projec Brief:

- 75.000 sqm Offices / 3.500 workstations
- Sustainability, efficiency and comfort
- LEED **Gold** certification
- 20% Clean Energy
- 1.400 tones of CO2 savings / year

Ethernet cable, smaller and lighter than traditional mains power, reduces the amount of required material (-80% weight)

**PoE**

When it is not needed PoE ports are turned off to save power  LEED certification

**Ultra Power Saving**

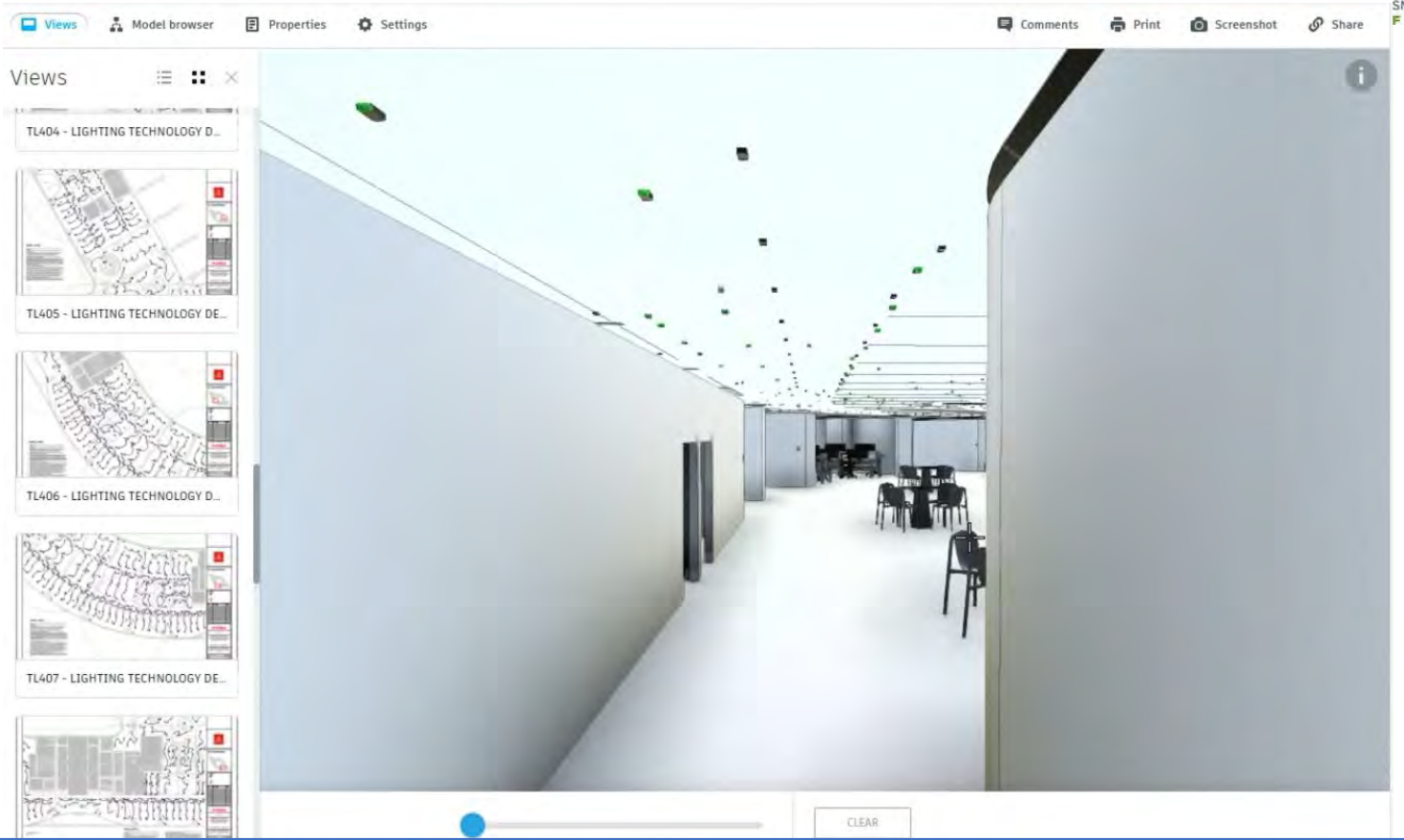
3rd party integrations (Cisco, BMS, etc) via BacNet, Rest API

**Interoperability**

PoE can achieve the best in class energy saving: 2,7 time better CO2 saving vs Dali design

**CO2 saving**

# BIM Model


Views
Model browser
Properties
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Print
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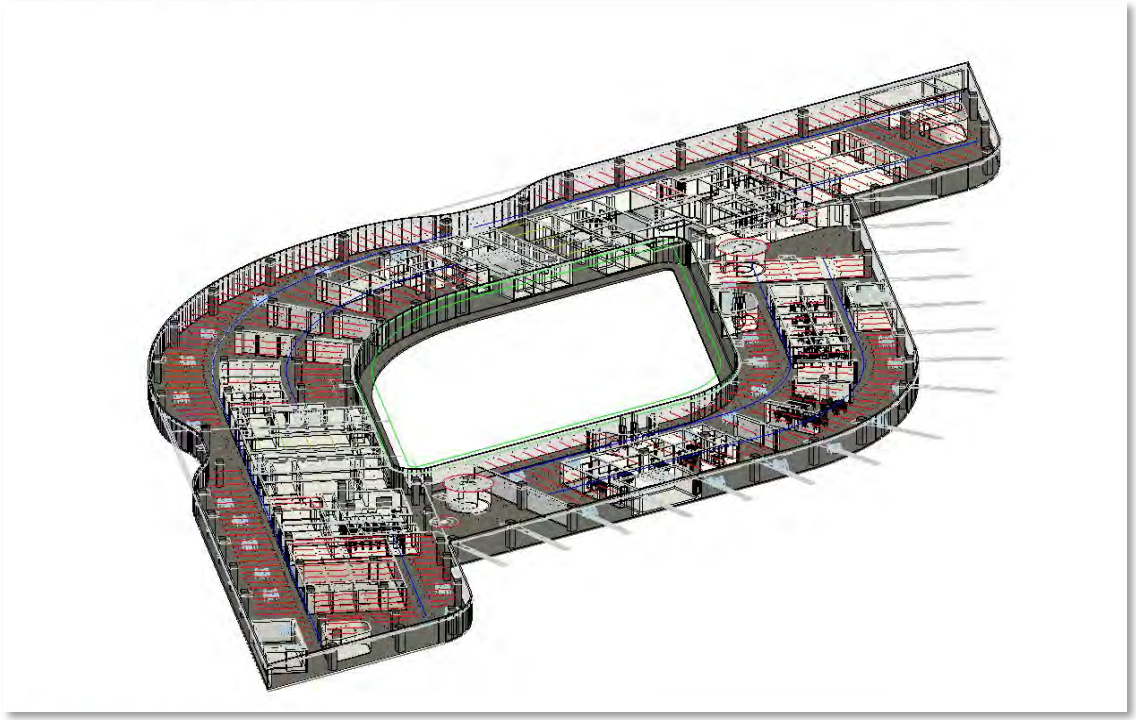
TL404 - LIGHTING TECHNOLOGY D...
TL405 - LIGHTING TECHNOLOGY DE...
TL406 - LIGHTING TECHNOLOGY D...
TL407 - LIGHTING TECHNOLOGY DE...
CLEAR

# Preliminary Assessment



**Installation, commissioning and maintenance**

**Energy, material and components**

**CO2 Emissions and environmental KPI**

# Preliminary Assessment

SBA
SMART BUILDINGS ALLIANCE FOR SMART CITIES

Installation, commissioning & maintenance

**-50%** Installation time

**-80%** Maintenance time

Energy, material and components

**-80%** Weight (Kg)

**-26%** Length (m)

**-75%** Copper

CO2 Emissions and environmental KPI

**-33%** KgCO2 / $
Carbon Intensity

**-40%** Kwh/year
EUI

**2,7** time better
CO2 Saving
PoE vs Dali

# CBRE HQ
# ITALY

CBRE

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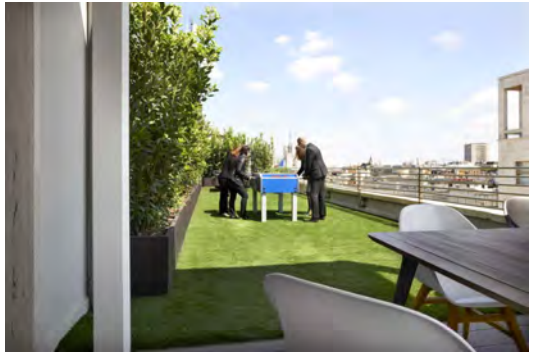
# CBRE GWS HQ

Office building renovation

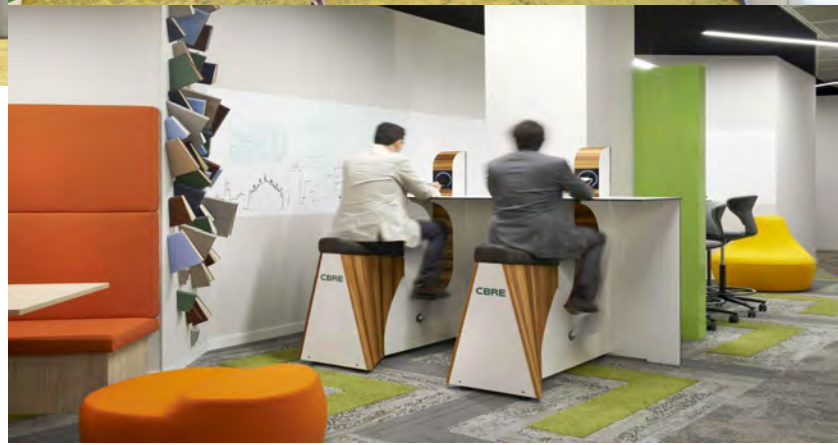
**Key drivers**

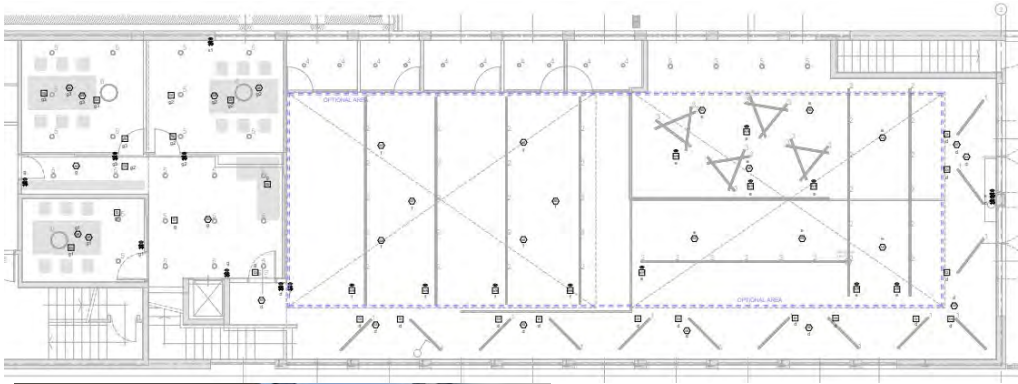
- Multifunctional space
- Sustainability & space occupancy
- Power metering



## Natural lights:

- Green: concentration
- Warm colors: brainstorming and interaction





TRADITIONAL LIGHTING
DIGITAL LIGHTING

CBRE

molex
NA

# Grazie