



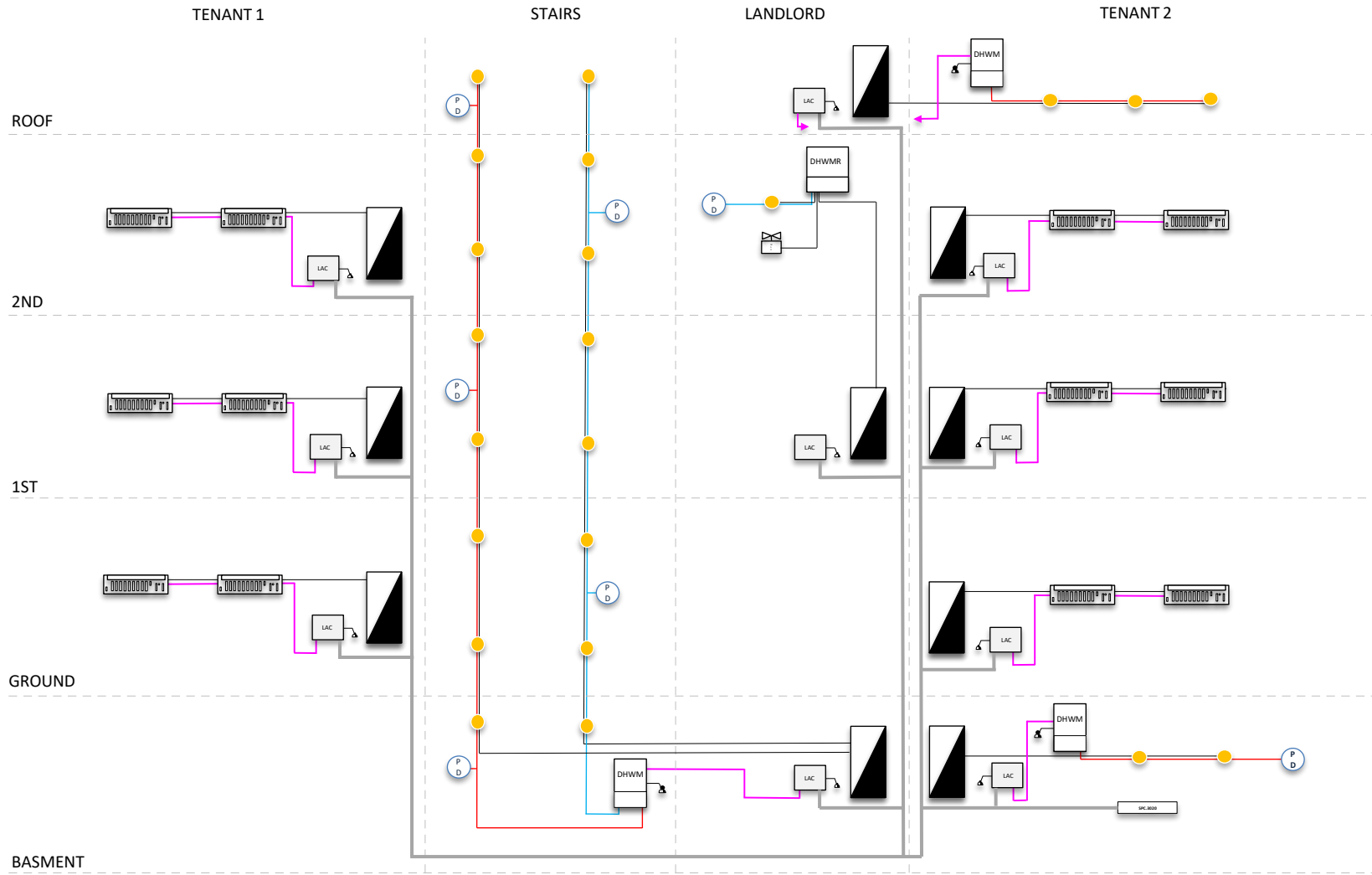
# SIMMETRONIC

LIGHTING YOUR



## **Networking (noun):**

The linking of devices to allow them to operate interactively



LIGHTING CONTROL SYSTEM ARCHITECTURE



DEVICE ACCESS



EMERGENCY FAULTS



LIVE OCCUPANCY



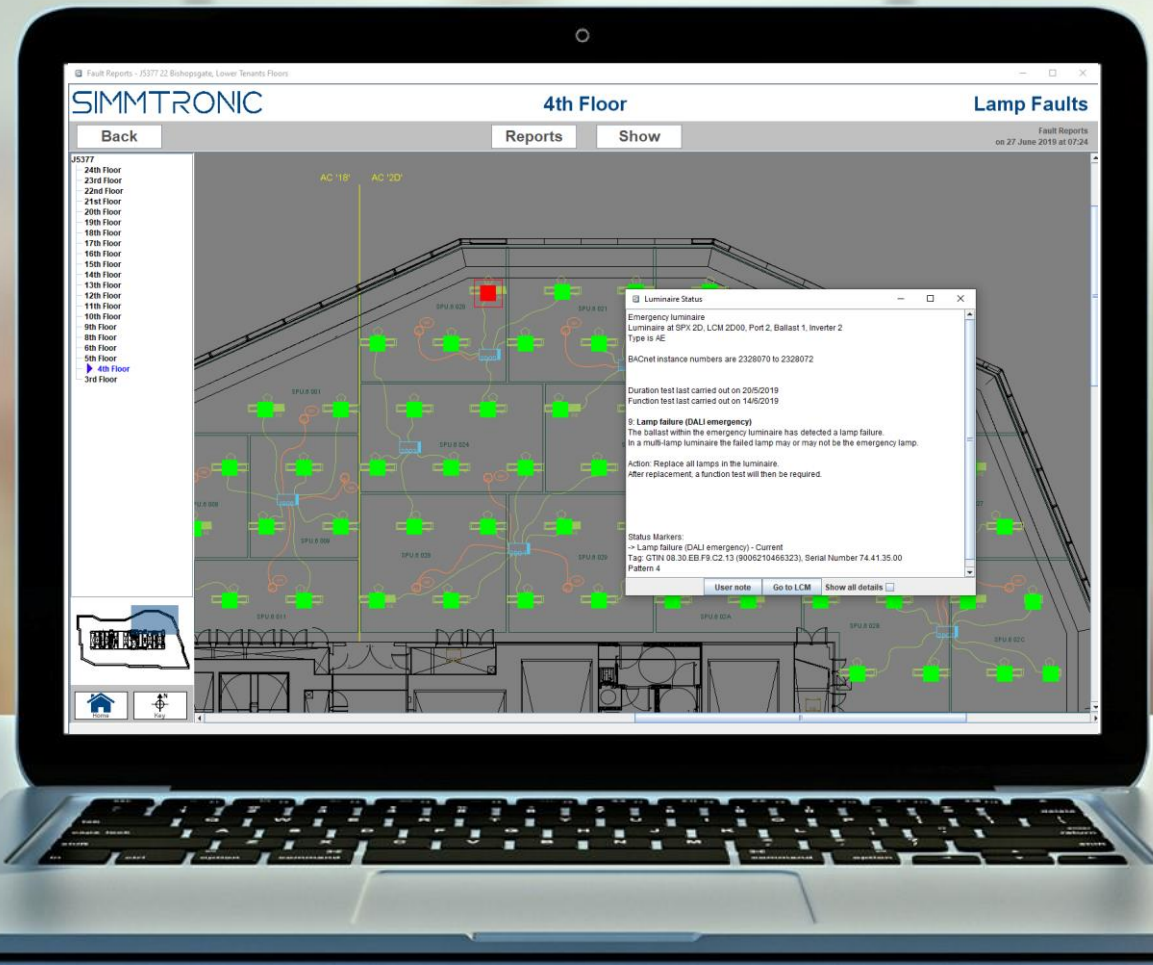
LIGHT LEVELS



LAMP FAULTS



EVENT HISTORY



- J5377
- 24th Floor
- 23rd Floor
- 22nd Floor
- 21st Floor
- 20th Floor
- 19th Floor
- 18th Floor
- 17th Floor
- 16th Floor
- 15th Floor
- 14th Floor
- 13th Floor
- 12th Floor
- 11th Floor
- 10th Floor
- 9th Floor
- 8th Floor
- 6th Floor
- 4th Floor
- 3rd Floor



**Luminaire Status**

Emergency luminaire  
Luminaire at SPX 2D, LCM 2D00, Port 2, Ballast 1, Inverter 2  
Type is AE  
BACnet instance numbers are 2328070 to 2328072

Duration test last carried out on 20/5/2019  
Function test last carried out on 14/6/2019

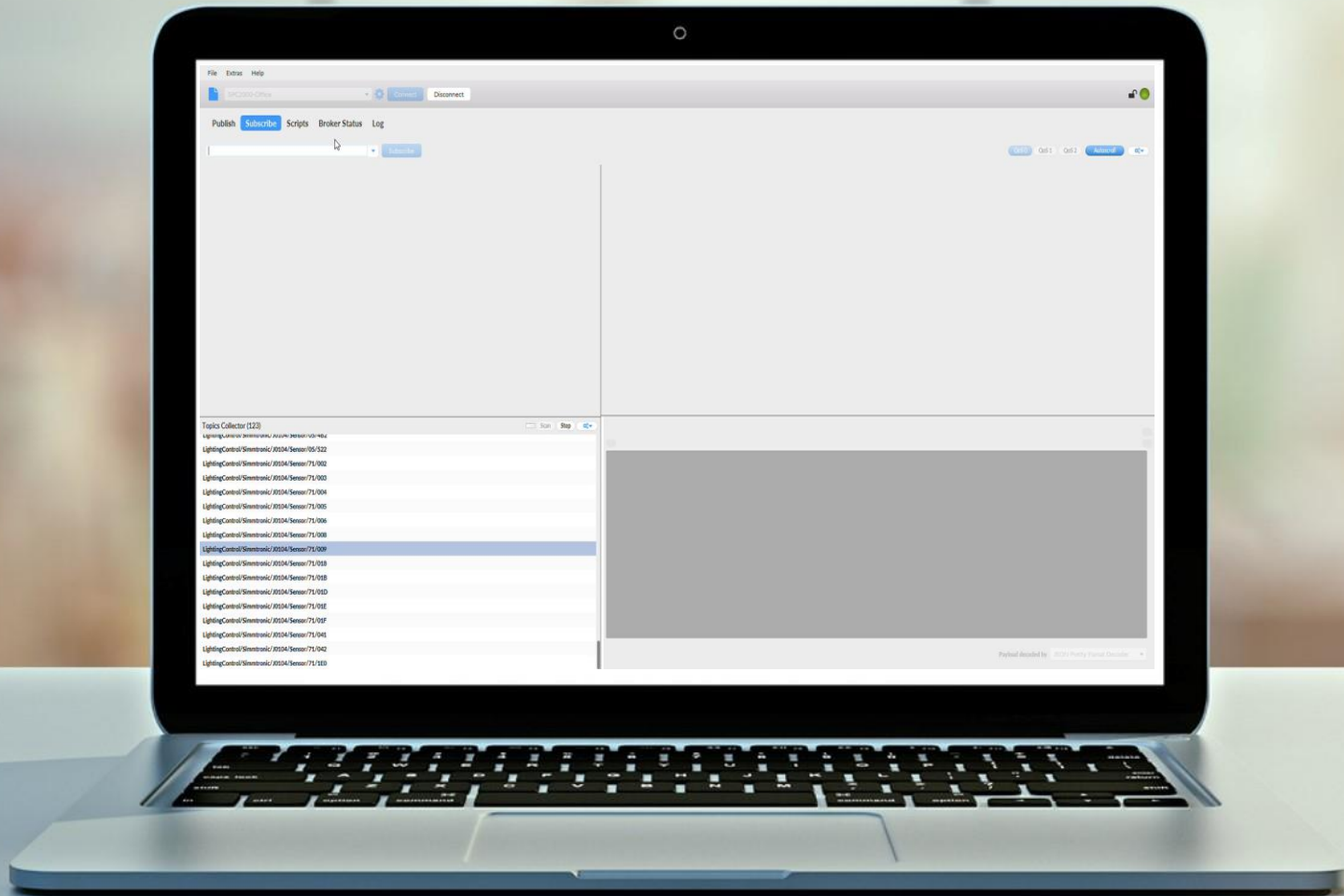
**! Lamp failure (DALI emergency)**  
The ballast within the emergency luminaire has detected a lamp failure.  
In a multi-lamp luminaire the failed lamp may or may not be the emergency lamp.

Action: Replace all lamps in the luminaire.  
After replacement, a function test will then be required.

Status Markers:  
-> Lamp failure (DALI emergency) - Current  
Tag: GTRV 08.30 EB F9 CZ 13 (9006210466323), Serial Number 74.41.35.00  
Pattern 4

User note Go to LCM Show all details





Energy Savings: Calculator using metered information for week commencing Monday 5 February 2018 - units are £ per year

| Area                   | Without controls | Add area occupancy control | Add local control | Add adjusted illuminance | Add daylight harvesting | Total savings |
|------------------------|------------------|----------------------------|-------------------|--------------------------|-------------------------|---------------|
| All Areas              | £4094            | £3142                      | £3001             | £1876                    | £4876                   | £4287         |
| Research & Development | £365             | £251                       | £42               | £38                      | £30                     | £326          |
| Back Stairs            | £64              | £42                        | £42               | £42                      | £42                     | £21           |
| Training Room          | £133             | £46                        | £41               | £37                      | £37                     | £95           |
| Unit Two Offices       | £385             | £270                       | £128              | £128                     | £128                    | £236          |
| Unit Two Communal      | £64              | £59                        | £50               | £50                      | £50                     | £43           |
| Head End Assembly      | £250             | £223                       | £106              | £106                     | £106                    | £144          |
| Production Office      | £703             | £697                       | £239              | £239                     | £239                    | £393          |
| After Sales            | £640             | £533                       | £214              | £111                     | £111                    | £528          |
| CAD Office             | £164             | £122                       | £112              | £106                     | £106                    | £100          |
| Major Finds            | £44              | £31                        | £22               | £22                      | £22                     | £21           |
| Lee's Office           | £29              | £21                        | £19               | £19                      | £19                     | £9            |
| Phil's Office          | £29              | £23                        | £23               | £23                      | £23                     | £6            |
| Sales Office           | £193             | £166                       | £163              | £163                     | £163                    | £30           |
| Mary's Office          | £29              | £13                        | £13               | £13                      | £13                     | £15           |
| Mario's Office         | £212             | £177                       | £155              | £155                     | £155                    | £57           |
| Small Meeting Room     | £60              | £44                        | £43               | £43                      | £43                     | £17           |
| Rugby Room             | £104             | £43                        | £31               | £23                      | £23                     | £81           |
| Loading Bay            | £60              | £11                        | £11               | £11                      | £11                     | £48           |
| Unit One Toilets       | £81              | £64                        | £42               | £42                      | £42                     | £38           |
| Unit One Corridors     | £466             | £397                       | £386              | £386                     | £386                    | £170          |

units per year
  cost per year
  incremental percent
  cumulative percent
  percent LEM limit
  savings per luminaire
  predicted LEM percent

Energy Savings: Calculator using metered information for week commencing Monday 5 February 2018 - units are cumulative percentage reduction

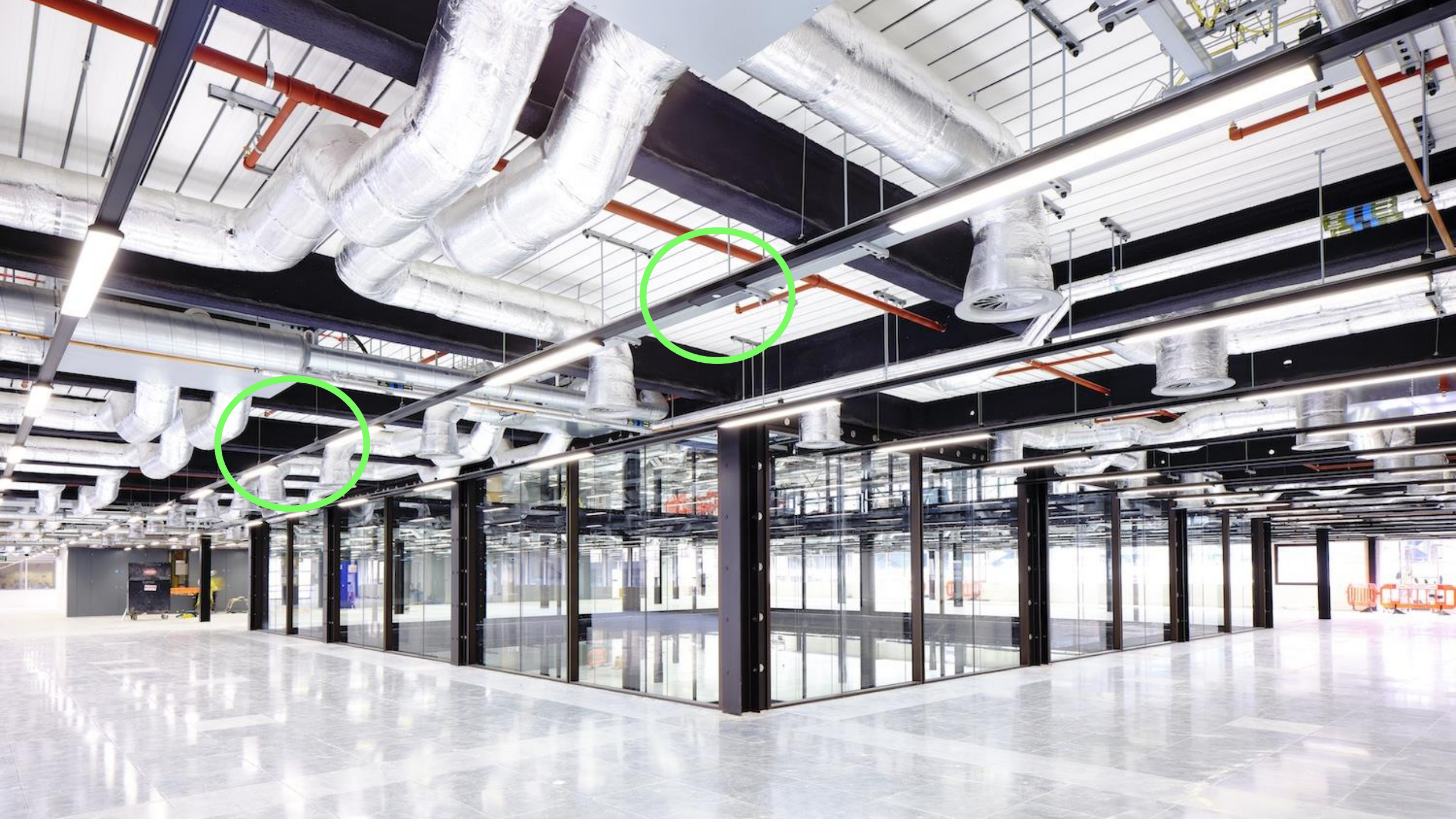
| Area                   | Without controls | Add area occupancy control | Add local control | Add adjusted illuminance | Add daylight harvesting | Total savings |
|------------------------|------------------|----------------------------|-------------------|--------------------------|-------------------------|---------------|
| All Areas              | 34121 kWh/year   | -29%                       | -61%              | -69%                     | -64%                    | 64%           |
| Research & Development | 3043 kWh/year    | -31%                       | -68%              | -69%                     | -69%                    | 69%           |
| Back Stairs            | 535 kWh/year     | -29%                       | -29%              | -29%                     | -29%                    | 29%           |
| Training Room          | 1109 kWh/year    | -65%                       | -69%              | -71%                     | -71%                    | 71%           |
| Unit Two Offices       | 3842 kWh/year    | -25%                       | -64%              | -64%                     | -64%                    | 64%           |
| Unit Two Communal      | 769 kWh/year     | -37%                       | -46%              | -46%                     | -46%                    | 46%           |
| Head End Assembly      | 2091 kWh/year    | -11%                       | -57%              | -57%                     | -57%                    | 57%           |
| Production Office      | 6959 kWh/year    | -14%                       | -61%              | -61%                     | -61%                    | 61%           |
| After Sales            | 5328 kWh/year    | -16%                       | -66%              | -62%                     | -62%                    | 62%           |
| CAD Office             | 1370 kWh/year    | -25%                       | -51%              | -51%                     | -51%                    | 51%           |
| Major Finds            | 370 kWh/year     | -29%                       | -49%              | -49%                     | -49%                    | 49%           |
| Lee's Office           | 246 kWh/year     | -27%                       | -27%              | -27%                     | -27%                    | 27%           |
| Phil's Office          | 246 kWh/year     | -20%                       | -20%              | -20%                     | -20%                    | 20%           |
| Sales Office           | 1616 kWh/year    | -14%                       | -16%              | -16%                     | -16%                    | 16%           |
| Mary's Office          | 246 kWh/year     | -63%                       | -63%              | -63%                     | -63%                    | 63%           |
| Mario's Office         | 1775 kWh/year    | -16%                       | -27%              | -27%                     | -27%                    | 27%           |
| Small Meeting Room     | 507 kWh/year     | -26%                       | -26%              | -26%                     | -26%                    | 26%           |
| Rugby Room             | 870 kWh/year     | -61%                       | -61%              | -61%                     | -61%                    | 61%           |
| Loading Bay            | 507 kWh/year     | -80%                       | -80%              | -80%                     | -80%                    | 80%           |
| Unit One Toilets       | 876 kWh/year     | -21%                       | -47%              | -47%                     | -47%                    | 47%           |
| Unit One Corridors     | 3887 kWh/year    | -14%                       | -15%              | -15%                     | -15%                    | 15%           |

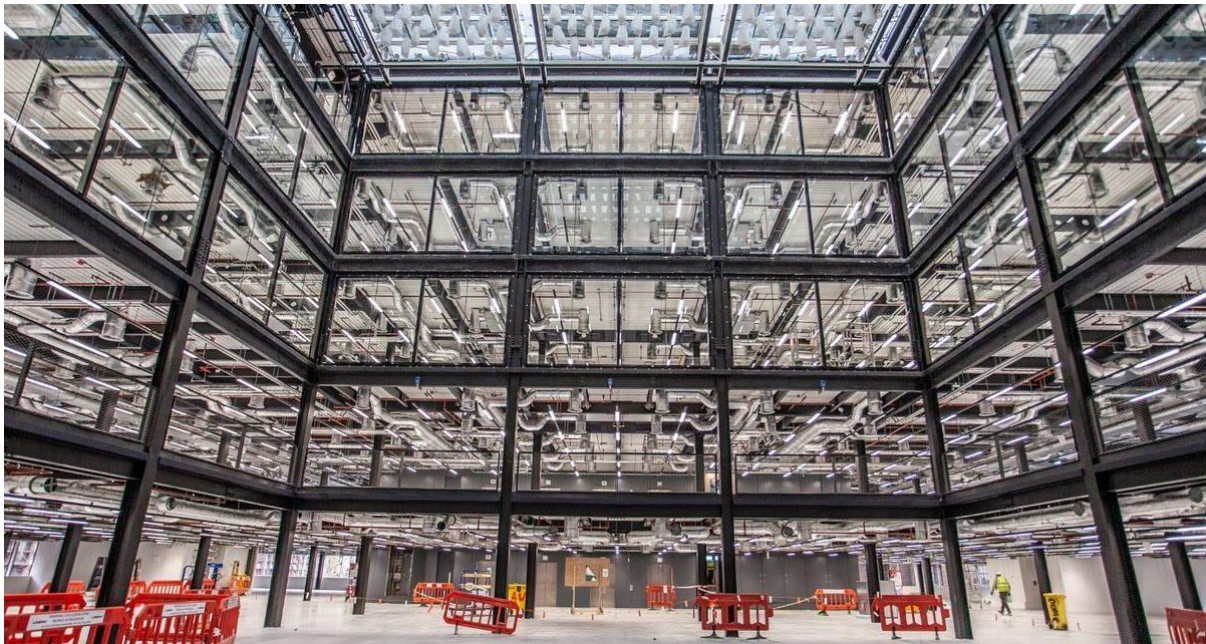
units per year
  cost per year
  incremental percent
  cumulative percent
  percent LEM limit
  savings per luminaire
  predicted LEM percent





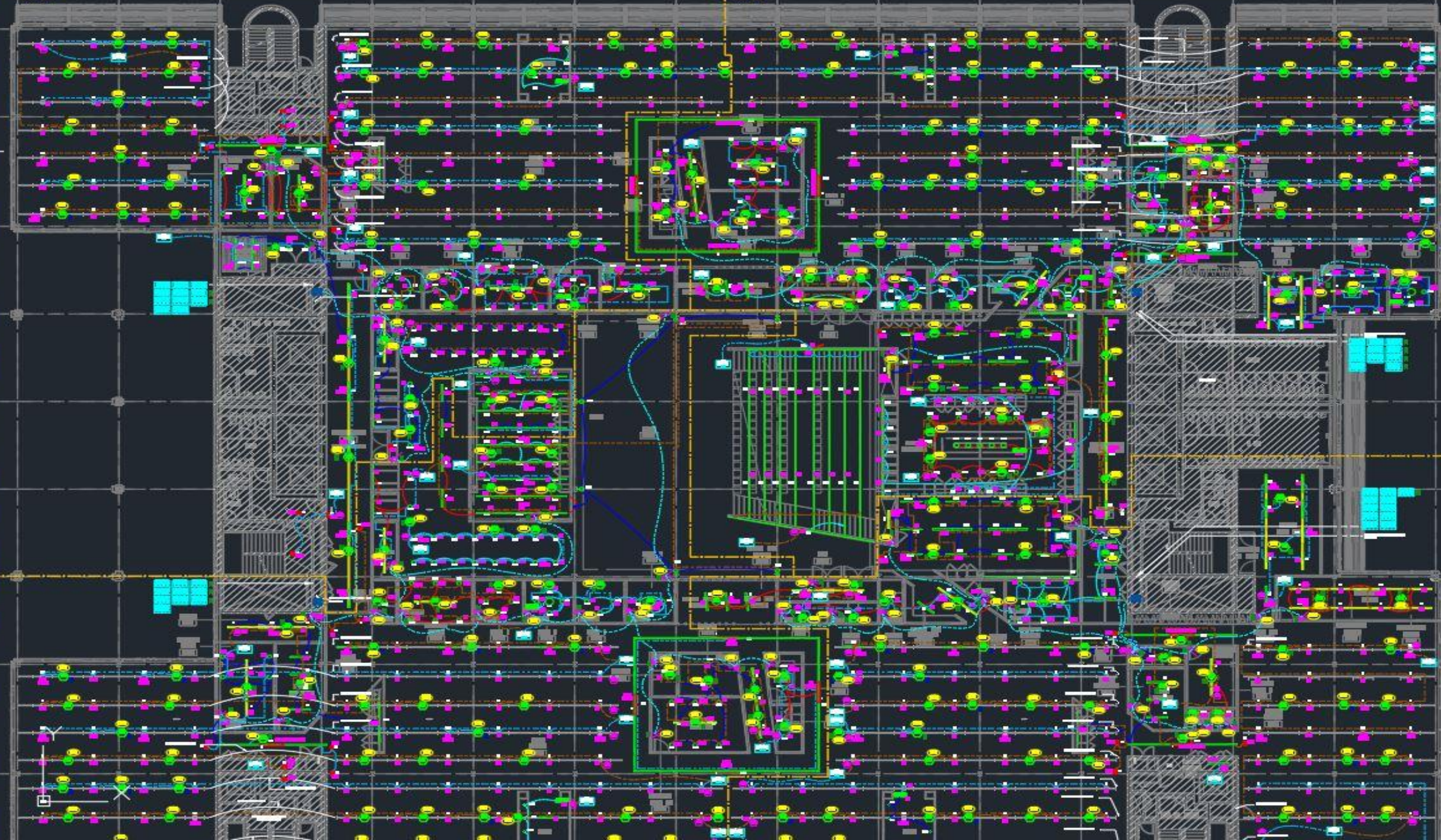
BASIC INTEGRATION OPTIONS





AC 1/A

AC 1/B



Y  
X

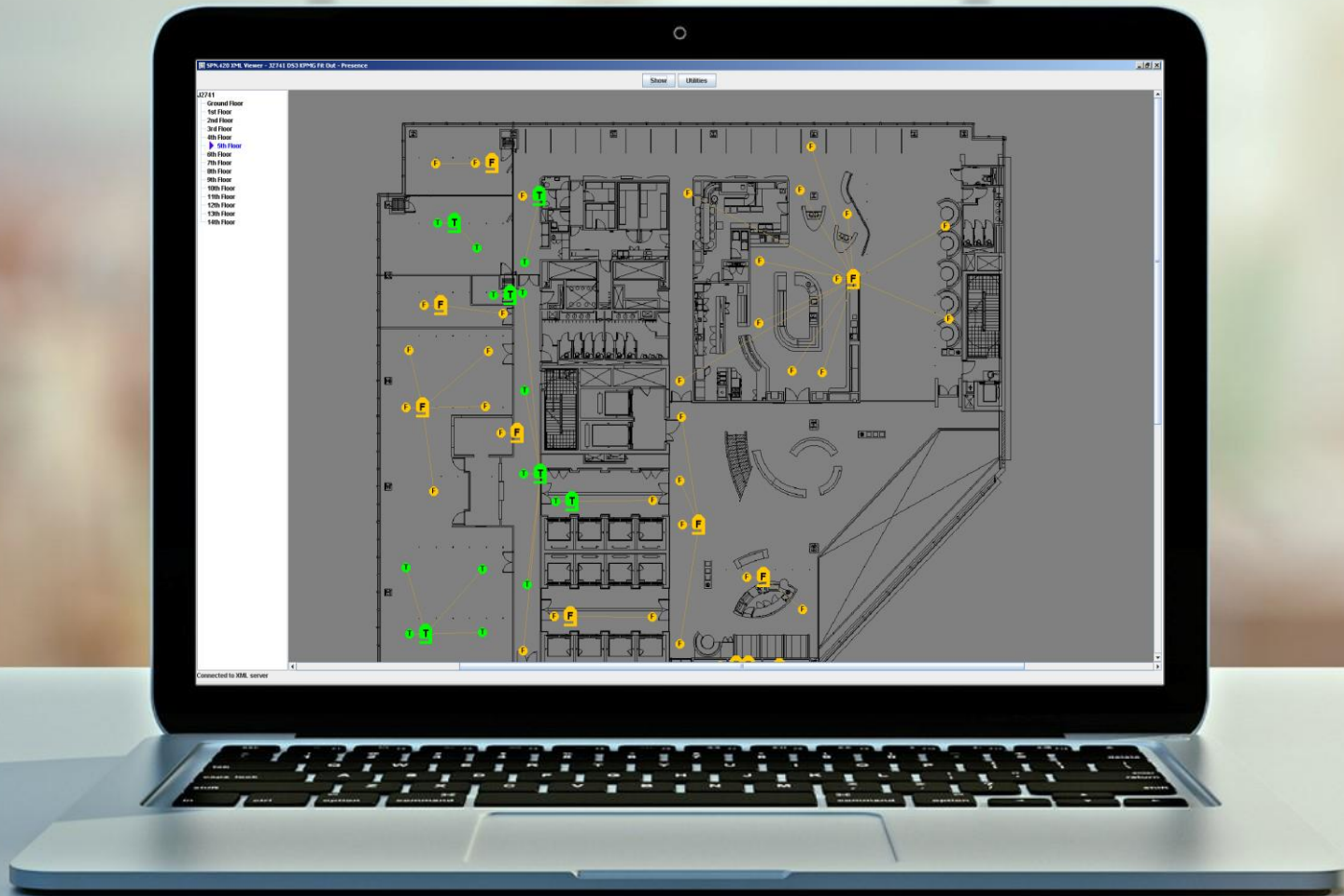
**DALI**



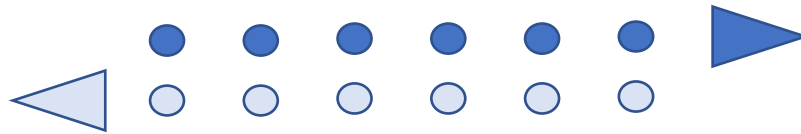
**BACnet**<sup>®</sup>

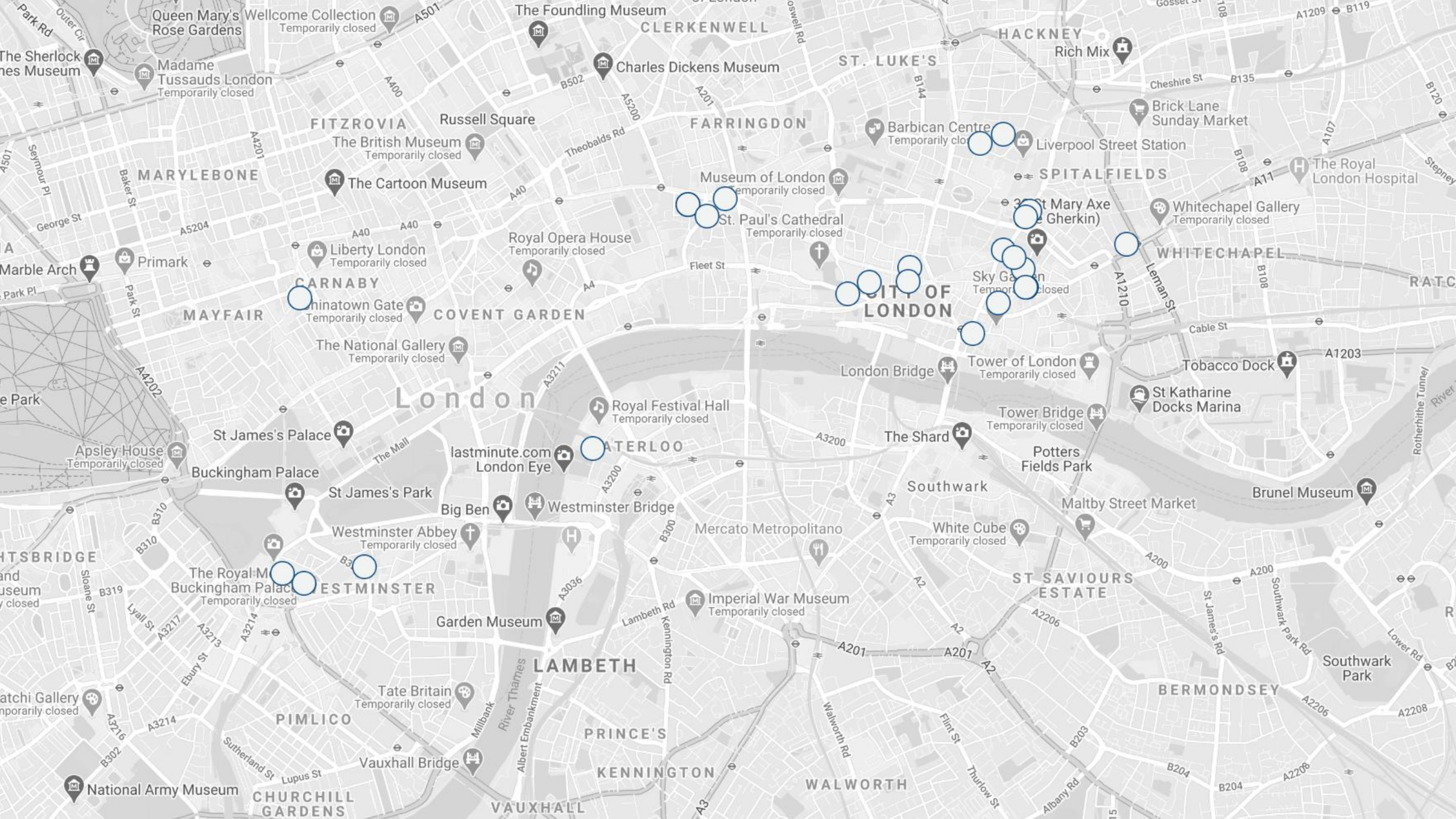


**MQTT**  
**.ORG**



**SIMMTRONIC**  
LIGHTING CONTROL SYSTEMS





Queen Mary's Rose Gardens

Madame Tussauds London  
Temporarily closed

FITZROVIA

The British Museum  
Temporarily closed

The Cartoon Museum

MARYLEBONE

Primark

MAYFAIR

COVENT GARDEN

The National Gallery  
Temporarily closed

Royal Opera House  
Temporarily closed

Museum of London  
Temporarily closed

St. Paul's Cathedral  
Temporarily closed

CITY OF LONDON

Sky Garden  
Temporarily closed

Tower of London  
Temporarily closed

Tower Bridge  
Temporarily closed

The Shard

Southwark

White Cube  
Temporarily closed

ST SAVIOURS ESTATE

Apsley House  
Temporarily closed

Buckingham Palace

St James's Park

lastminute.com  
London Eye

Big Ben

Westminster Bridge

WATERLOO

Westminster Abbey  
Temporarily closed

The Royal Mews  
Buckingham Palace  
Temporarily closed

WESTMINSTER

Garden Museum

LAMBETH

Imperial War Museum  
Temporarily closed

Tate Britain  
Temporarily closed

PIMLICO

PRINCE'S

KENNINGTON

WALWORTH

National Army Museum

CHURCHILL GARDENS

Vauxhall Bridge

VAUXHALL

BERMONDSEY

Southwark Park





INTEGRATION WITH SOLAR SHADING SYSTEMS FOR ENERGY SAVINGS

The Department of Energy & Climate Change study published by BRE in 2016 'New Insights into air conditioning in the UK'

'cooling in air conditioning systems may account for around a tenth of total UK electricity consumption'

**10% of the  
UK's Total Electricity  
Consumption**

## Building Regulation – Part L

*Approved Document L2A :*

### Criterion 3 – Limiting the effects of heat gains in summer

4.41 This section sets out the approach to limiting heat gains as required by paragraph L1(a)I of Schedule 1 to the Building Regulations.

### Limiting the effects of solar gains in summer

4.42 The following guidance applies to all buildings, irrespective of whether they are air conditioned or not. The intention is to limit solar gains during the summer period to either:

- a. reduce the need for air-conditioning; or
- b. reduce the installed capacity of any air-conditioning system that is installed.

(ADL2a) describes 3 possible design strategies to satisfy this requirement:

- Appropriate combination of window size and orientation
- **Solar protection through shading and other solar control measures**
- Using thermal capacity with night ventilation

**SOLTECH**

YOUR VISIONS | OUR SOLUTIONS



**MechoSystems**

Design with light®

 HM Government

The Building Regulations 2010

Conservation of  
fuel and power

APPROVED DOCUMENT

**L2A**

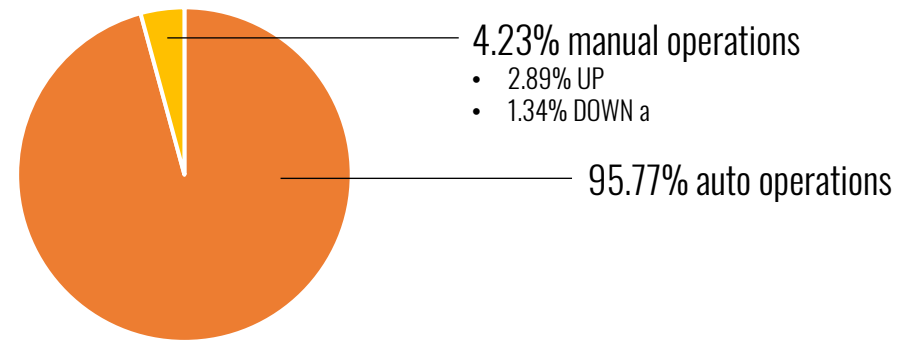
L2A Conservation of fuel and power  
in new buildings other than dwellings



## NEW YORK TIMES / POST OCCUPANCY

by Lawrence Berkley National Labs

- 43% lighting energy saved
- 23% cooling energy saved
- 22% peak-day energy saved
- 24% total energy saved





A NEW LEVEL OF INTEGRATION

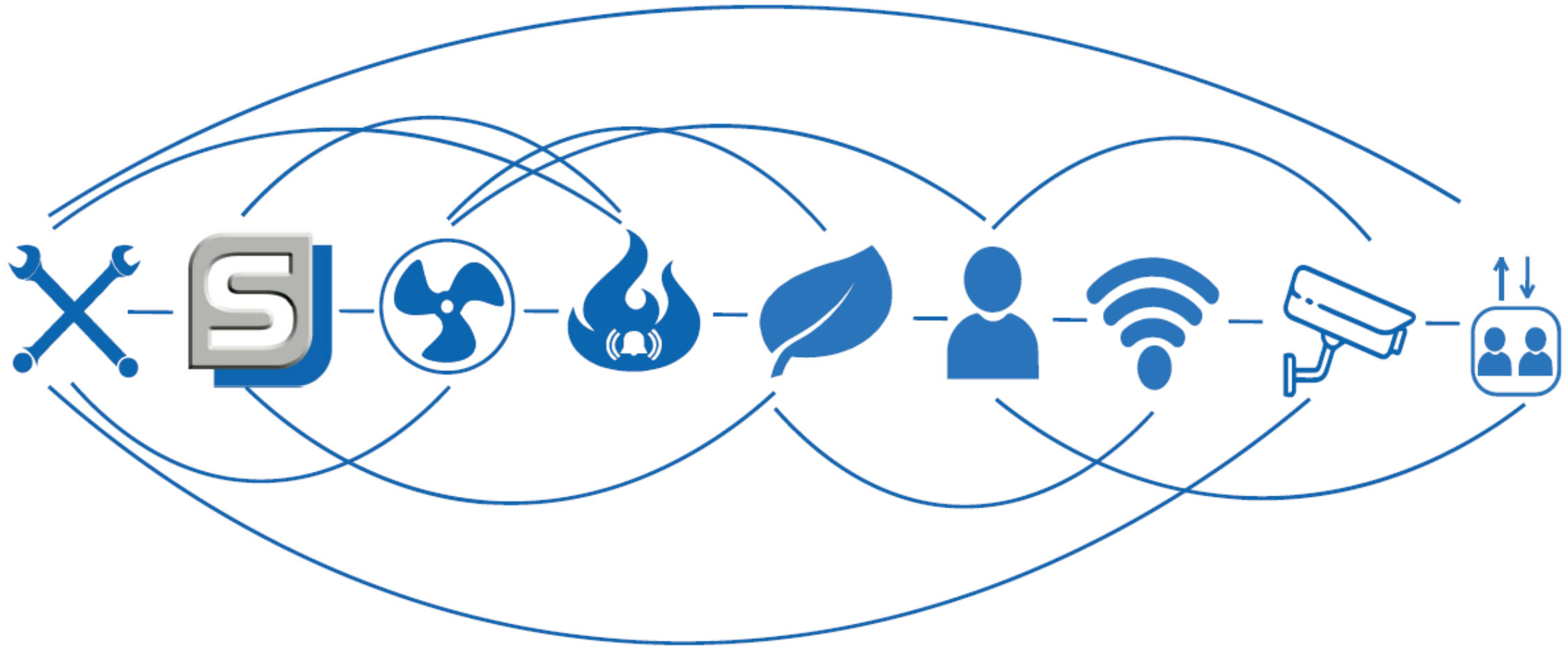


FIGURE ONE: SOME COMMON EXAMPLES OF POINT TO POINT HIGH LEVEL DATA EXCHANGE



# Deloitte.

SIZE | 95,000 M2

CONTROLS | DALI

INTEGRATION | BACnet, MQTT



“The Lighting Control System (LCS) will be based on a DALI addressable solution like Simmtronic’s and will be fully integrated to the IB system via BACnet.

The supplier will make sure that the status and health of all equipment (i.e. Electronic Control Gears (ECGs), Switches/Dimmers and Presence Infrared (PIR) Detectors) will be possible to be viewed and controlled from the IB system.

The connection with the IBMS is taking place at the LCS’s Data Processor Head End via the CNS. The Head End is complete with a BACnet IP interface.”



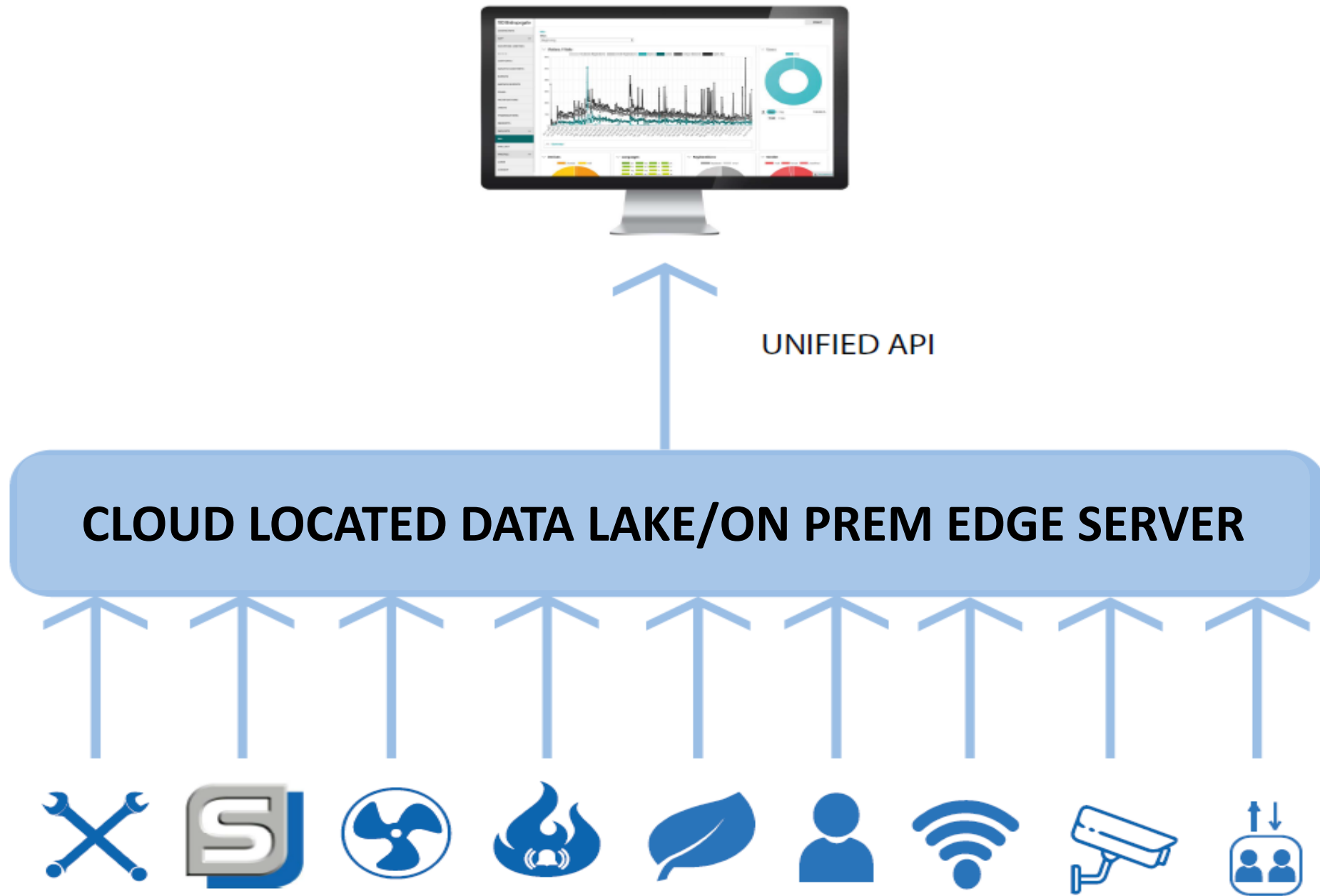
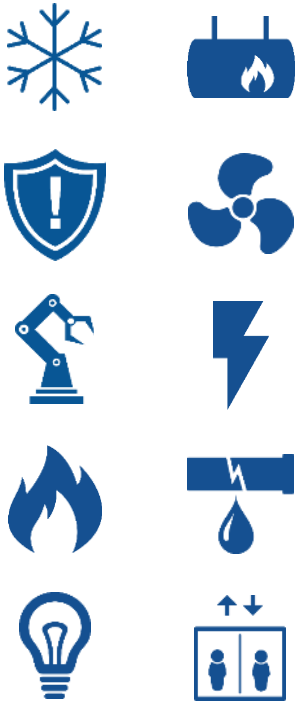


FIGURE ONE: UNIFIED APPROACH - CREATION OF A "SINGLE PANE OF GLASS"

## Equipment



## Sub Systems

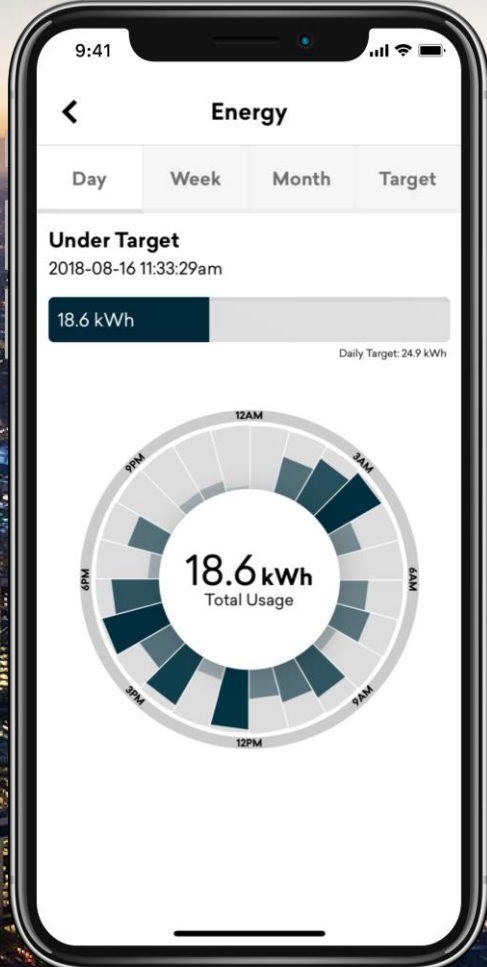
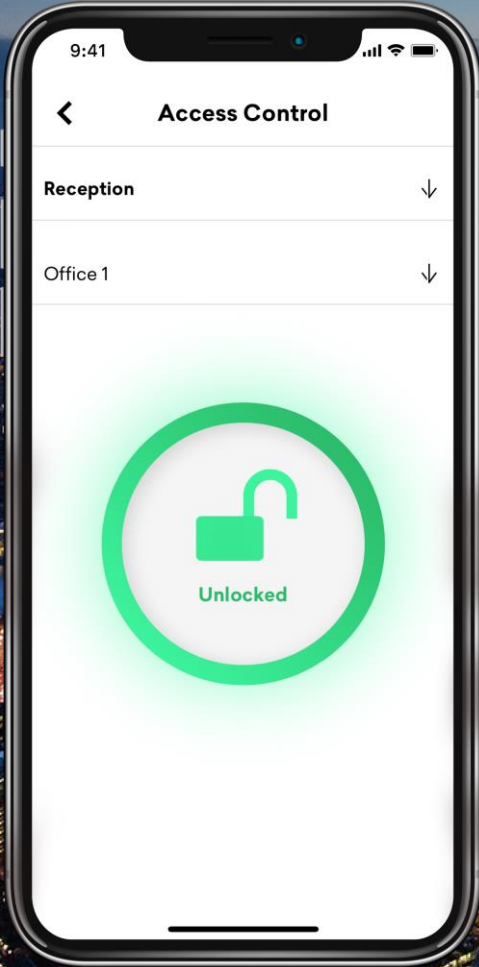


## Open Protocols



Centralized, Uniform Platform,  
delivering building information to  
a Single Pane of Glass







# SIMMETRONIC

LIGHTING YOUR