Wireless Controls
Organic Response®

Whitecroft
lighting
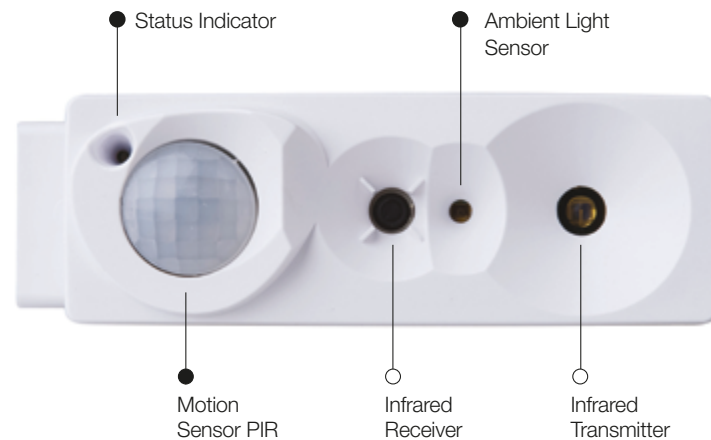
organic response

Organic Response®

Organic Response® uses an innovative Proximity Limited Communication system that reacts to occupancy and daylight sensed by a single luminaire detector and then transmits data to nearby luminaires. Those luminaires then communicate with their nearby luminaires creating a cascade effect across a building.

The detector is integrated into every luminaire and includes an infrared transmitter and receiver to create the send and receive signal for the building wide wireless communications. As the infrared signal can only travel 3 metres, every luminaire installed can only communicate with their neighbour, eliminating the need for onsite location commissioning.

The patented Proximity Limited Communication system will react to complex occupancy patterns and modify its behaviour as the building use changes.

● Status Indicator

● Ambient Light Sensor

Motion Sensor PIR

Infrared Receiver

Infrared Transmitter

○ The infrared transmitter and receiver in Organic Response® detectors delivers a unique Proximity Limited Communication system

● Commonly used detectors have functionality for occupancy and daylight sensing

Simple functionality

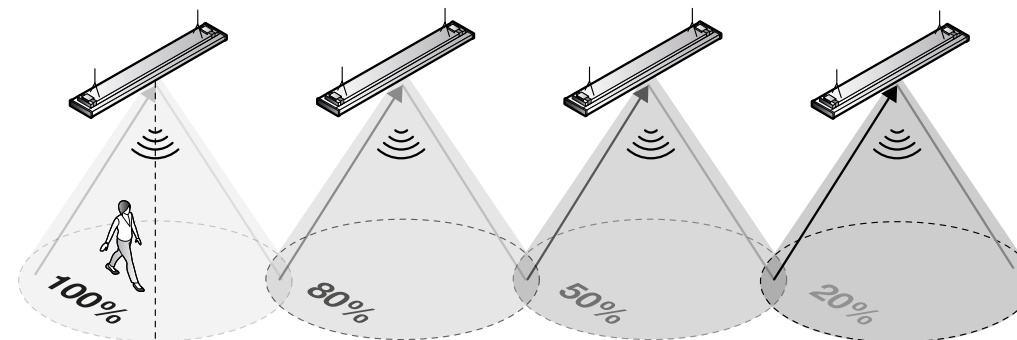Does not need additional controls wiring or on site commissioning.

Functionality can be optimised via a phone or tablet-based app.
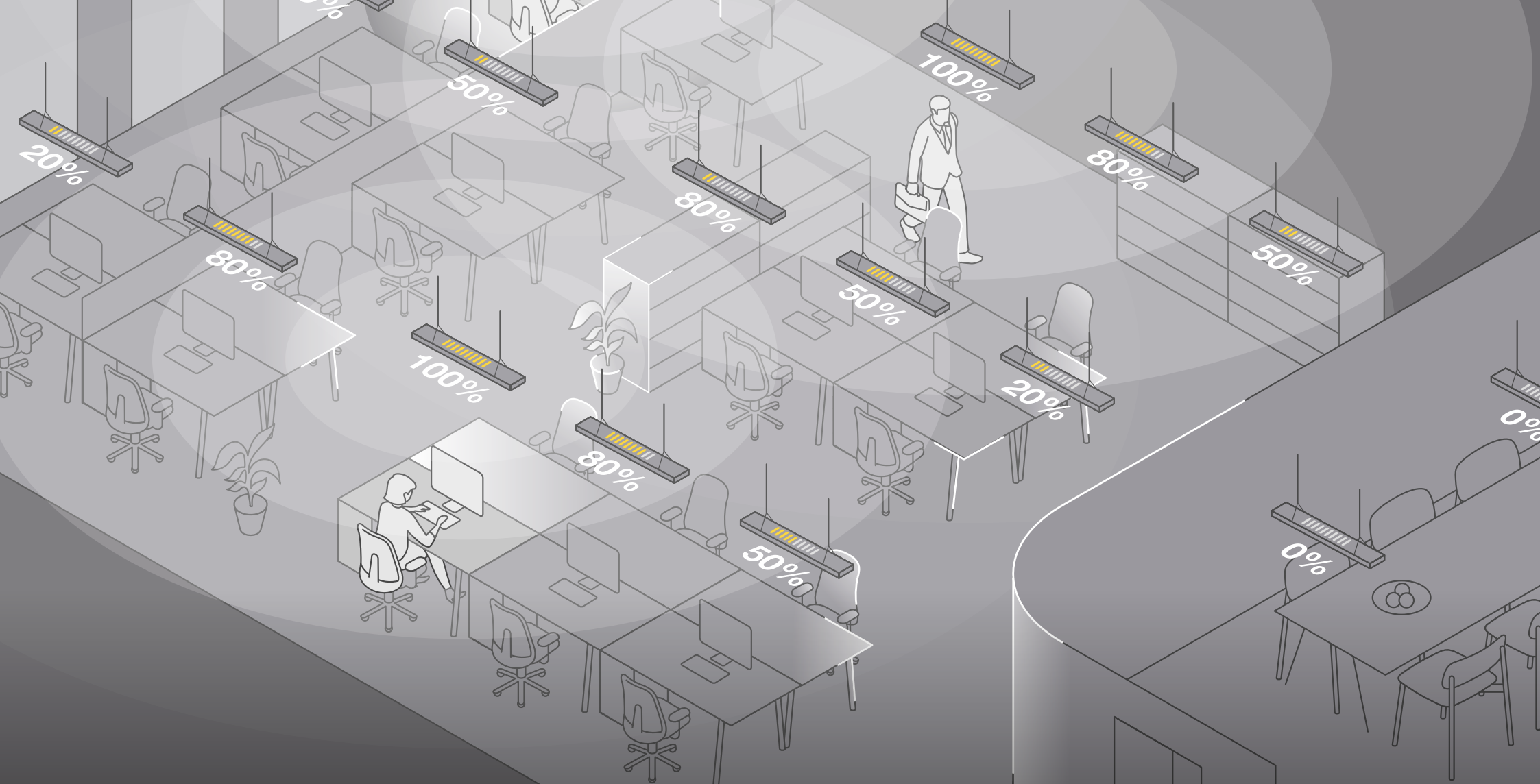
Can be linked to the cloud or Building Management System for high level functionality.

Proximity Limited Wireless Communications = Every luminaire knows where it is in relation to its neighbours

100% 80% 50% 20%

When movement is detected a signal is relayed via infrared to other Organic Response® luminaires in the area.
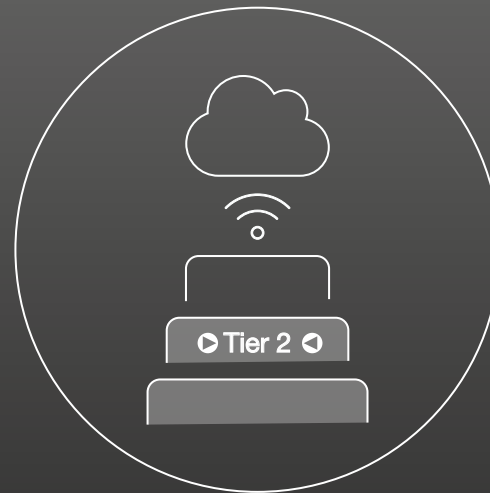
One sensor node, unlimited flexibility

Immediately accessible through a simple smartphone app, Tiers 1–3 for system Optimisation and Configuration are included as standard.

▶ Tier 1 ◀

▶ Tier 2 ◀

▶ Tier 3 ◀

Instant functionality

— Default operation delivers Proximity Limited Communication

— No need for expert commissioning services

— It just works!

Optimisation

Increase energy savings and improve occupancy comfort:

— Adjust light levels and dwell times

— Activate daylight dimming

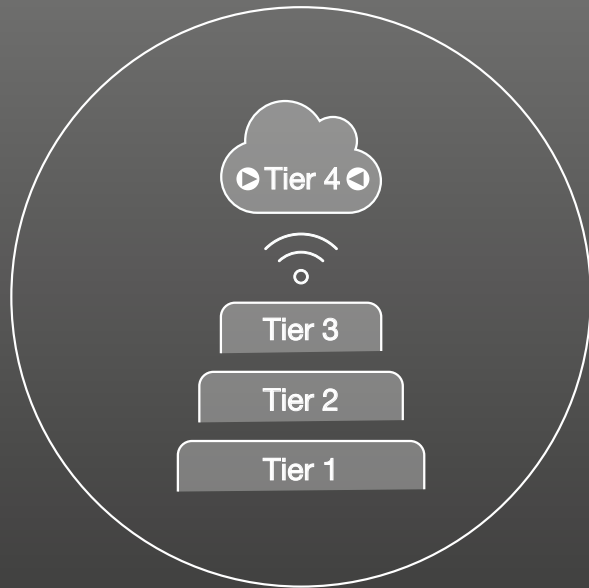— Select preset light "Personalities"

Configuration

Customise lighting behaviour for even more flexibility:

— Independent and dependent zones

— Create customised scenes for example in meeting rooms and for presentations

Connected systems

Tier 4

Tier 3

Tier 2

Tier 1

An upgrade to Tier 4 uses IoT cloud-based technology to future-proof your building, enhancing the end user's understanding of the changing environment and needs of the occupants.
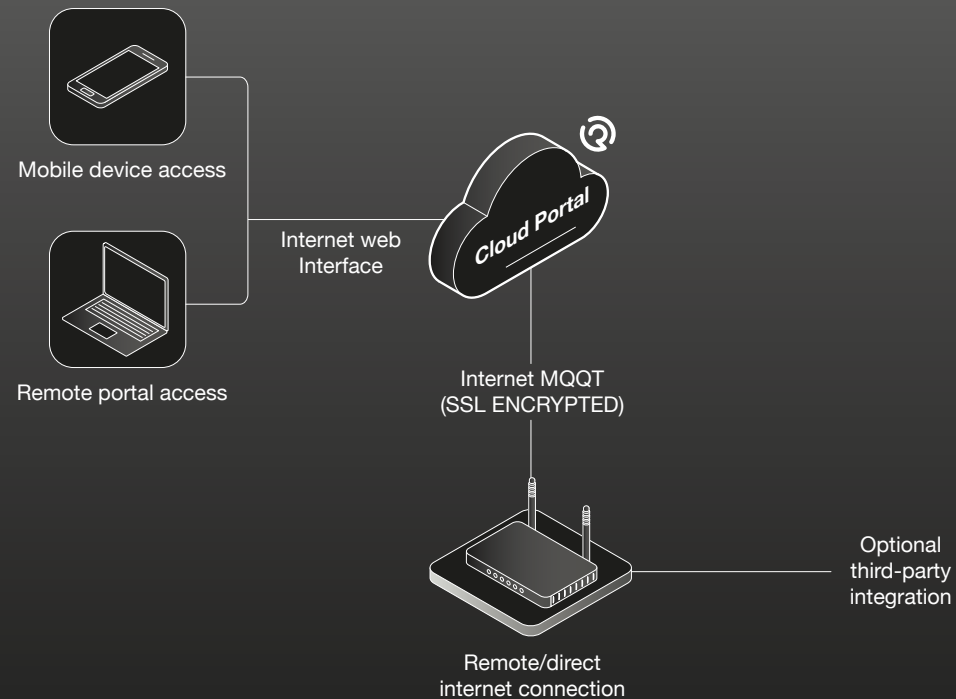
Automatic emergency testing

Emergency testing and reporting to deliver building compliance.

Data harvesting

Extract and analyse building data such as energy consumption and occupancy patterns and luminaire status.

Systems interoperability

Connectivity to Building Management Systems via open API and BACnet for enhanced building functionality.

Mobile device access

Remote portal access

Internet web Interface

Cloud Portal

Internet MQQT (SSL ENCRYPTED)

Optional third-party integration

Remote/direct internet connection

Organic Response® features that benefit all

Whatever your role, whatever sector you work in, Organic Response® has features that will benefit you and your organisation.

Installers

No more costly than a DALI integrated control system, yet much simpler and faster to install.

Because Organic Response® offers optimised response to the live environment, there's no conflict with the timing of your building control strategy.

Works out of the box: straightforward install with no complex wiring and little to no commissioning process.

Consultants

Easy to design and implement on drawings, technology is fitted into each luminaire in the factory eliminating the need for room based sensors and separate lighting control design.

Works instantaneously so configuration and optimisation can be done quickly and simply via the Organic Response® Express app.

No luminaire is ever on when it doesn't need to be helping to reduce energy costs through lower power consumption.

End users

Choose from 12 pre-loaded "Personalities" for the ultimate balance between occupancy, comfort, safety and energy efficiency at no extra cost.

Integration with building management systems and a web based user interface offers further improvements to building efficiency and extended asset life.

No need for expensive and disruptive commissioning or re-commissioning during life as the system intuitively adapts to users needs.
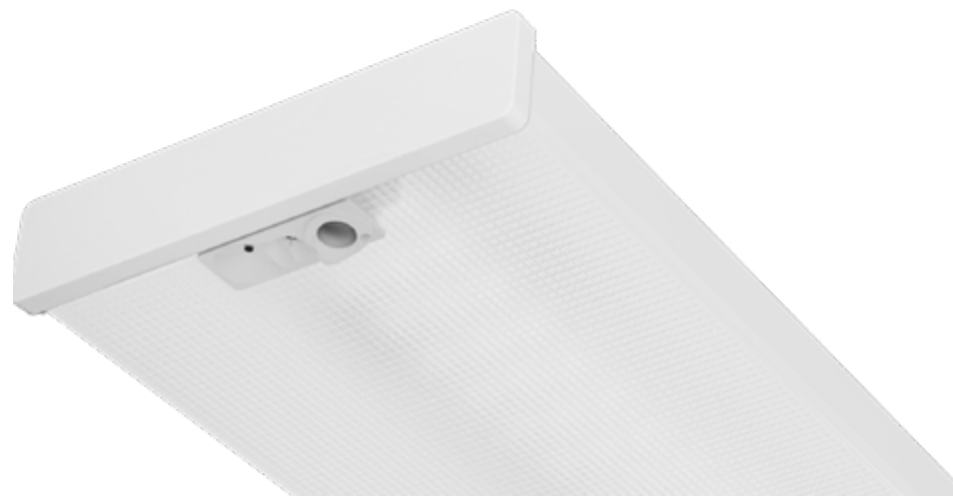
Organic Response® in action

Education

Delivering low energy consumption, cost savings and a well-lit, productive learning environment.

Automatic adjustment for occupancy and daylight contribution to maximise energy saving.

Pre-stored lighting behaviours accommodate variable teaching conditions, for ease of use the system is operated via wireless wall plate.

Eliminate blind spots with a sensor in each luminaire delivering full detection coverage across the space.

Healthcare

Reducing energy costs in any 24/7 operation can be challenging, autonomous operation across multiple spaces offers significant opportunity for savings.

Clever features such as "Min Light" deliver low-energy minimum light levels for assured occupant safety and patient comfort.

Modify delay times according to the space so that no luminaire is on when it doesn't need to be once no occupancy is detected.

Where luminaires are specified greater than IP44 protection, integration of passive mini node can be selected to maintain IP integrity.

Workspace

Achieve lower operating costs, an improved working environment and enhanced safety and security.

Lighting responds to occupancy using different parameters of light levels throughout the building.

Accommodate minor or major churn, the sensor node-to-node communication quickly responds to design layout and use of space changes.

Optimise the basic settings or configure for more sophisticated behaviours in house via a smartphone app.

Control every aspect of your lit environment through the Organic Response® Express app

A simple, intuitive user interface for optimising the lighting control system is up and running within minutes. All the Tier 2 and 3 features on this page can be managed through the Organic Response® Express app.
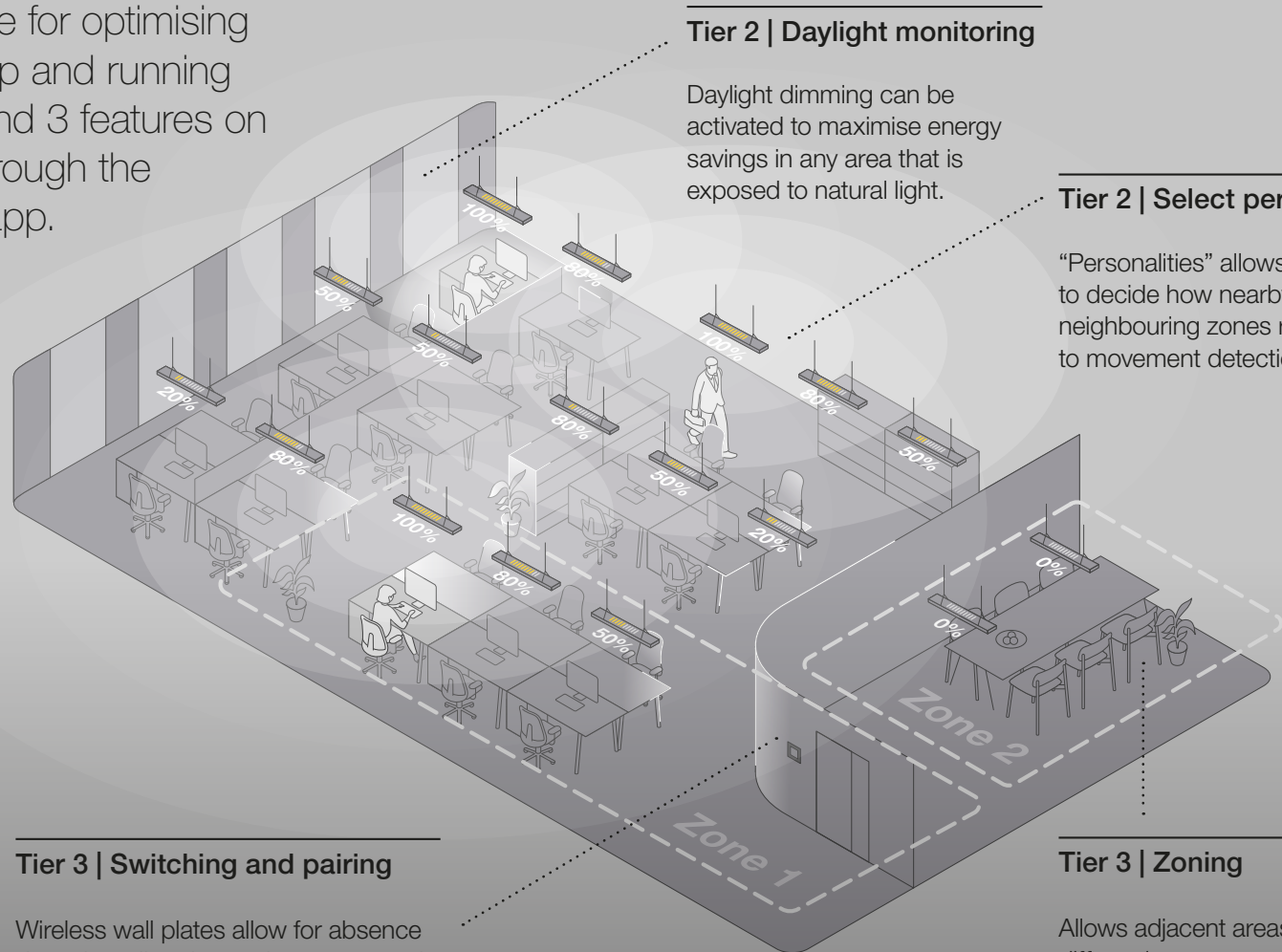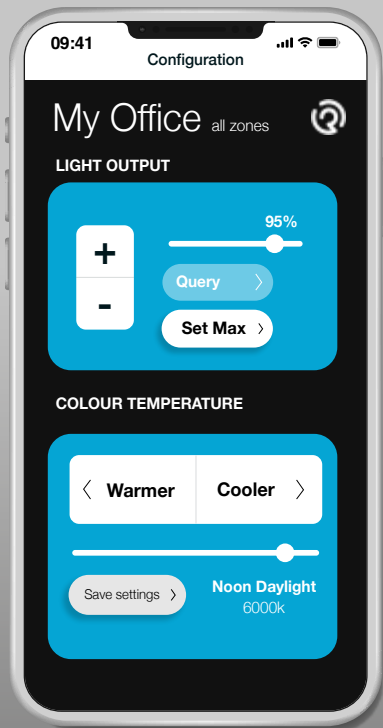
Tier 2 | Daylight monitoring

Daylight dimming can be activated to maximise energy savings in any area that is exposed to natural light.

Tier 2 | Select personality

"Personalities" allows the user to decide how nearby lights and neighbouring zones respond to movement detection.

Tier 3 | Switching and pairing

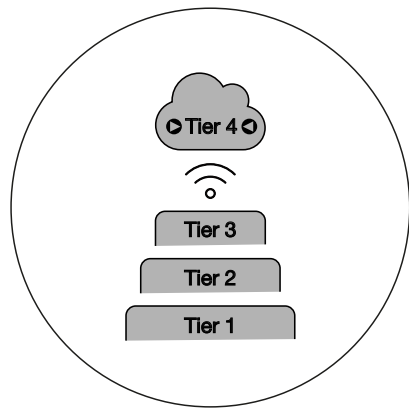Wireless wall plates allow for absence detection, dimming and scene control.

Tier 3 | Zoning

Allows adjacent areas to respond differently to occupancy. Zones can be entirely independent.
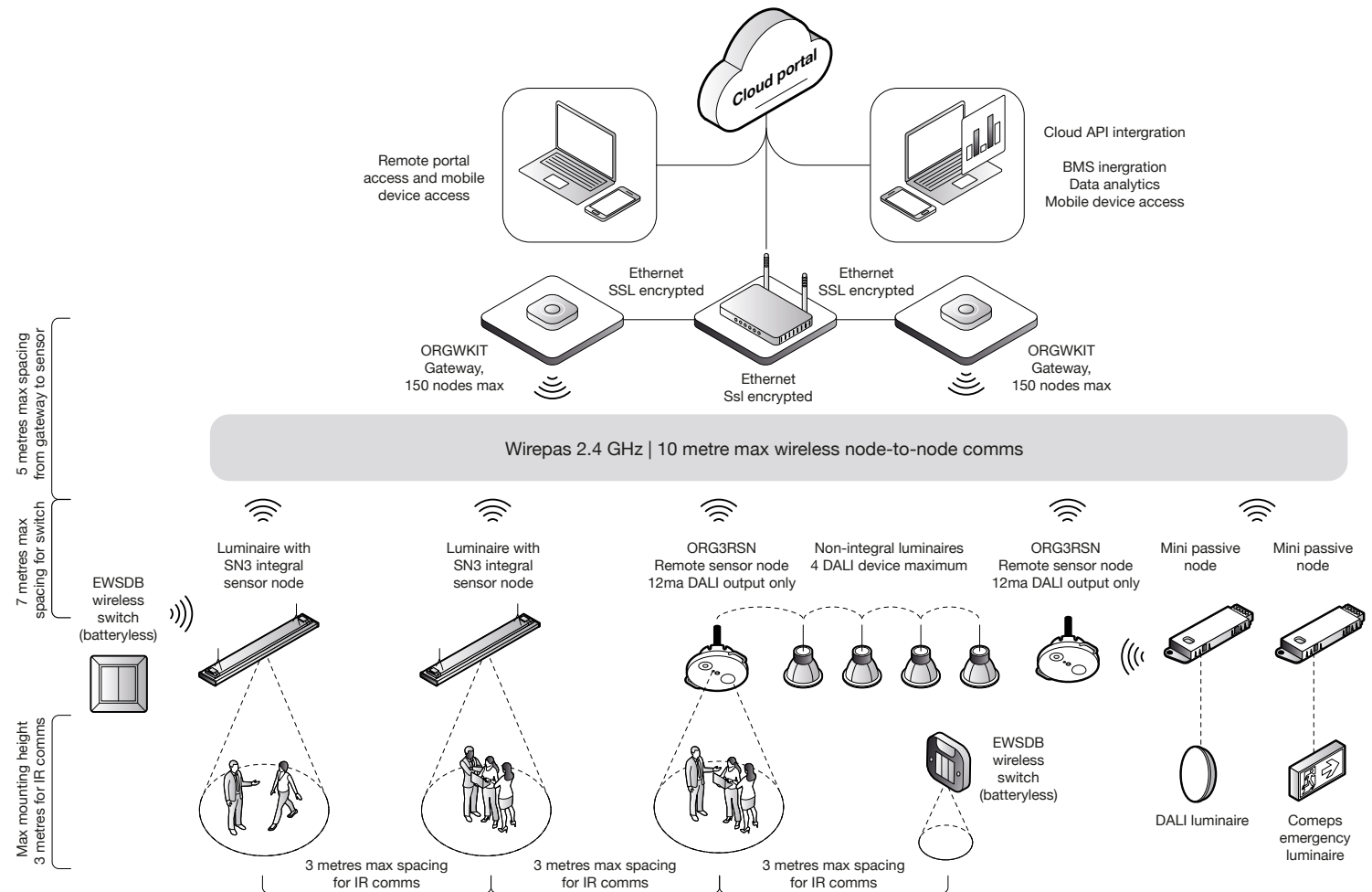
Creating connected spaces with the Organic Response® Portal platform

Organic Response®, using unique Proximity Limited Communication wireless technology can be customised as technology evolves to provide an interface with Building Management Systems and integration into Smart Building Applications to improve the functionality of the workplace.

Tier 4
Tier 3
Tier 2
Tier 1

Cloud portal

Remote portal access and mobile device access

Cloud API intergration

BMS inergration
Data analytics
Mobile device access

Ethernet
SSL encrypted

Ethernet
SSL encrypted

ORGWKIT
Gateway,
150 nodes max

Ethernet
Ssl encrypted

ORGWKIT
Gateway,
150 nodes max

Wirepas 2.4 GHz | 10 metre max wireless node-to-node comms

5 metres max spacing from gateway to sensor

7 metres max spacing for switch

Max mounting height 3 metres for IR comms

EWSDB wireless switch (batteryless)

Luminaire with SN3 integral sensor node

Luminaire with SN3 integral sensor node

ORG3RSN
Remote sensor node
12ma DALI output only

Non-integral luminaires
4 DALI device maximum

ORG3RSN
Remote sensor node
12ma DALI output only

Mini passive node

Mini passive node

EWSDB wireless switch (batteryless)

3 metres max spacing for IR comms

3 metres max spacing for IR comms

3 metres max spacing for IR comms

DALI luminaire

Comeps emergency luminaire

Organic Response®
Portal Platform

Emergency lighting testing and reporting

Schedules and emergency testing
Enabling testing to take place during periods of low occupancy.

Automatic emergency testing
To ensure testing to EN50172 is completed.

Record and report results
To ensure the integrity of every system is maintained.

Data harvesting

Energy performance
Compare energy consumption across functional areas/zones to identify opportunities to trim light levels or dwell times.

Occupancy heat mapping
Improve workspace utilisation in real time by mapping movement and occupancy within spaces.

Maintenance
Interrogate systems for luminaire data to understand performance parameters and specific fault status.

Systems interoperability

BMS integration
Data used in conjunction with BMS (Building Management Systems) will in the future contribute significantly to effective use of other services such as heating and ventilation, blinds, security, space management and overall maintenance programmes.

Open API
Simple APIs (Application Programme Interfaces) have been developed to provide seamless integration to existing building services.

Kildean Business Park
Stirling

In 2022, consultants Henderson Warnock appointed Whitecroft Lighting to supply lighting along with its wireless Organic Response® control system to a new 77,500 sq ft building for finance company M&G, at Kildean Business Park, Stirling, Scotland.

Kildean Business Park | Stirling

Organic Response® offers responsive wireless system for commercial office space

1.500
Installed luminaires with Organic Response®

BREEAM
rating 'excellent'

77,500
square ft of grade A office accommodation

The brief was to ensure that the lighting complimented the building's clean modern lines whilst making valuable commercial space as flexible as possible.

A clean, wireless solution was suited to the largely glass structure, with traditional cables replaced by slicker sensor nodes, that connect with neighbouring luminaires, so all lighting can seamlessly respond to changing environmental conditions.

Each sensor node contains a motion sensor, ambient light sensor, and infrared transmitter and receiver that allows seamless communication.

The system offers a range of benefits when compared to a wired or Bluetooth system. Time and financial savings were made from not having to purchase or install a wired system. Aesthetically there were no cables to manage or hide, and the wireless light switches could be located on any surface.

Organic Response® also assists in making the space as flexible as possible, as the system doesn't require recommissioning if the layout changes.

To meet sustainability targets and help achieve a minimum BREEAM rating of 'Excellent', Whitecroft installed low-energy high-lifetime LEDs, while the light fittings contained replaceable modular units that lengthen the lifespan of the product and materials.

Organic Response® enabled luminaires

A wide range of recessed, suspended and surface mounted luminaries are
available with integrated Organic Response® sensor nodes. These include:

Foil	Avenue Metro	Cascade Flex	Selene 2	Scribe

Organic Response® switch options

A selection of 2.4GHz RF low-energy switches and infrared Organic Response® scene plates are both
available in white or SEN-compliant contrasted finish (OR switch also available in 240v wired option).

Enocean switch white/white	Enocean switch white/silver	OR switch white	OR Education switch white/silver

Organic Response® sensor nodes

Our luminaire integrated solution with full occupancy and daylight sensing along with infrared proximity limited communications (limited communications [3m maximum] and wireless node-to-node [10m maximum]).

Sensor node mesh

Mini passive node

An integrated solution that can be fully concealed in the luminaire with full wireless node-to-node/ node-to-gateway communications.
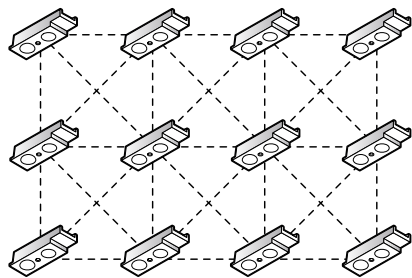
Must be paired to a sensor node. Maximum sensor node to passive node or passive node to passive node is 10m.

Passive node wireless comms

Remote sensor node
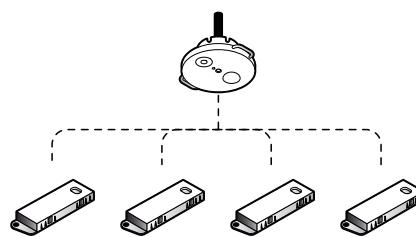

A remote sensor node is available and can be used with luminaires containing a passive node or hard wired to up to six DALI luminaires.
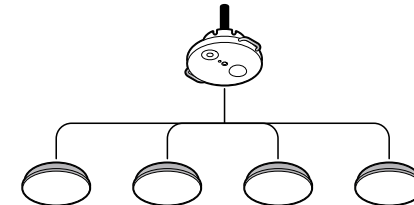
Remote sensor node wired DALI comms

Service and support

We provide the Bronze support package for your Organic Response® installation as standard. If you need a hand, other service levels are available where greater functionality or connectivity require direct on-site support.

In-house design services

— Lighting and controls design-in support through the provision of photometric and BIM data.

— Factory integration of Organic Response® into a wide range of luminaires to help deliver both compliance and creativity.

— PDF design documentation for controls functionality.

On-site service

Bronze
Basic on-site awareness and demonstration training to installation contractor.

Silver
As Bronze but with direct onsite support, the space will be set up according to predefined zones and personalities.

Gold
As Silver with additional assurance of 12-month soft landing support post installation with two on-site follow-up visits to ensure optimum system settings.

Support options included	Bronze	Silver	Gold
Organic Response® Express app	●	●	●
Telephone technical support	●	●	●
Full access to service	●	●	●
Basic on-site training	●	●	●
Zoned level and personality drawings		●	●
On-site set-up		●	●
On-site follow-up visits			●
Extended plan by negotiation			●

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