

Your
building
technology
partner



intelligent
environments

CREATING SMARTER BUILDINGS

What is an intelligent environment?

An **intelligent environment** is one that responds seemingly intuitively to the needs of those using the space.

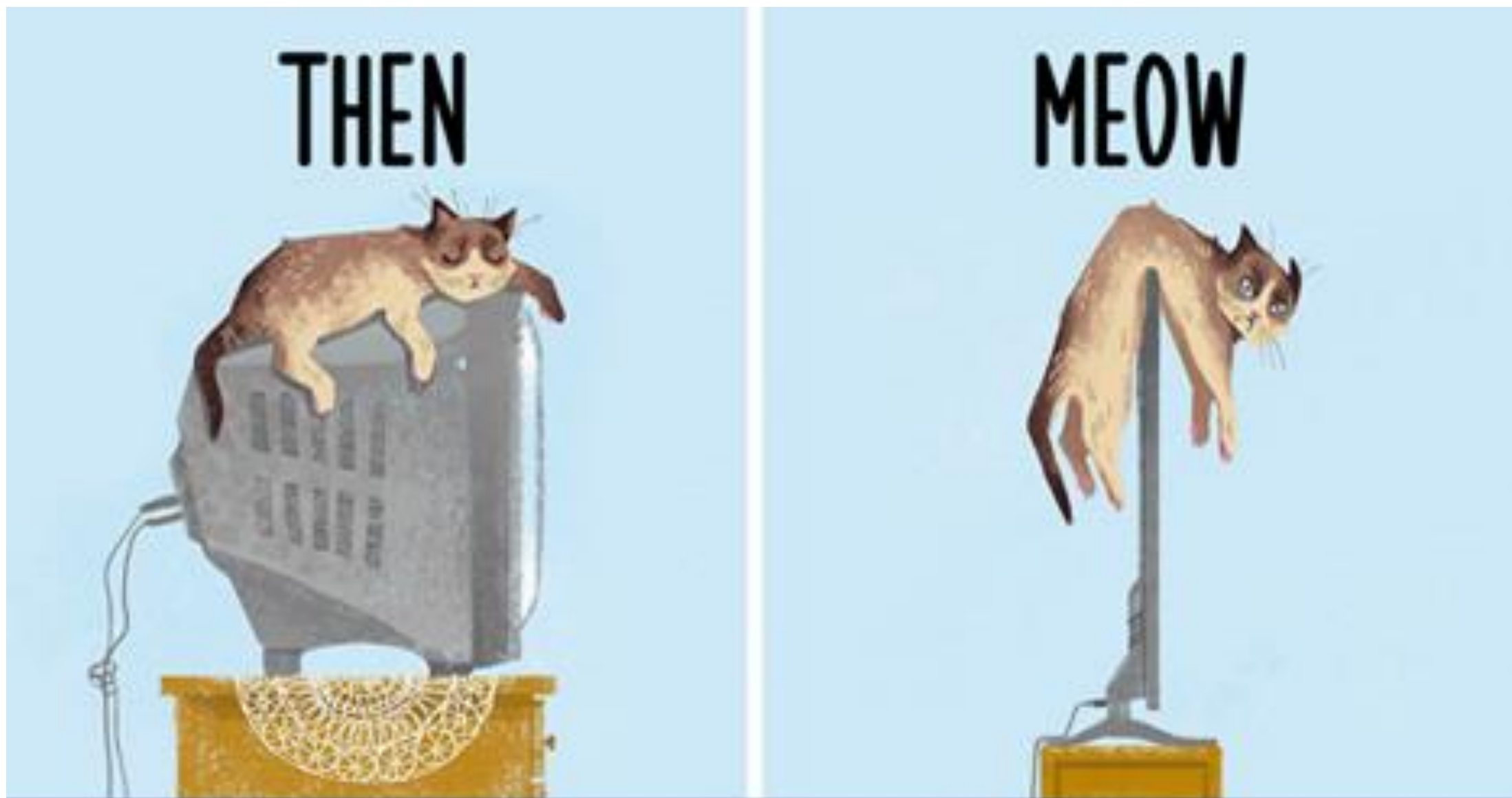
What does IEL (the company) do?

Consider us your building technology partner, together making buildings smarter!



Our business is constantly changing – it has to – we're in the building technology industry, and technology continues to leap forward.

Our biggest challenge is letting the industry know what is possible!

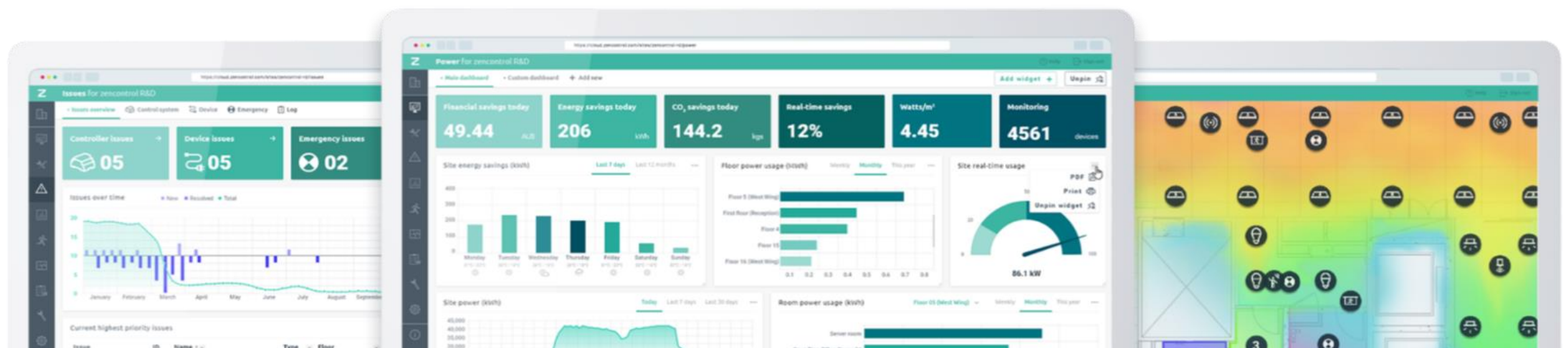


How do you make a building smarter?

1. Install an intelligent system

This can be through the automated control of lighting, temperature, ventilation etc in commercial buildings, providing building analytics with full visualisation for building owners or facility managers to understand and manage the energy use and health of their buildings.

Smart sensors measure and report on lighting, air quality, noise levels, humidity, occupancy and more.



2. Supply “stand alone” intelligent devices.

We also distribute “smart products” that assist businesses and homeowners in more simple ways - when a fully integrated “system” is not required or is beyond their budget. These include “out of the box” DALI-2 solutions.



We are very excited about our new wireless technology which will allow us to provide retrofit solutions to existing commercial buildings and even “intelligent home packages” that an electrician can install in any residence to make it smarter!





Adoption of DALI-2 as the new lighting control standard for New Zealand - What does this mean for the industry?

In November 2020 DALI-2 was adopted as the first, and at time of writing the *only*, AU/NZ lighting control standard.

With the adoption of this Australian/New Zealand standard, compliant systems will no longer have a proprietary lighting control wired bus, or proprietary wireless protocols. The DALI-2 standard defines an open DALI-2 bus, and DALI-2 wireless protocol where certified DALI-2 multi-vendor sensors and switches can communicate to a control system in both a wired and wireless manner.

It should be noted that in addition to lighting control, the standard covers emergency lighting and circadian rhythm lighting.



What does standard AS/NZS 62386 cover?

The new standard includes the additional categories below:

- Lighting Drivers – AS/NZS 62386-101
- Circadian Rhythm – AS/NZS 62386-209
- Switches – AS/NZS 62386-301/302
- Sensors – AS/NZS 62386-303/304
- Wireless – AS/NZS 62386-104
- Emergency – AS/NZS 62386-202

The benefits for the building owner or tenant are that it enables full interoperability, avoiding locking the customer into a single manufacturer's devices. This provides greater freedom of choice and ensures future-proofing of lighting control systems as DALI-2 certified devices from ANY manufacturer can be used to replace or upgrade the system at any time.



What does this mean for me and my company?

For New Zealand engineering consultants to propose a system that is compliant with the new AU/NZ standard, it is important that they should understand the implications of the standard, have a good knowledge around DALI-2 and then be able to make the necessary updates to all future lighting control specifications.

NZ consultant specifications based on proprietary lighting control systems are now redundant

DALI-2 versus DALI version-1

Introduction to DALI – “Digital Addressable Lighting Interface”

- DALI was developed to replace the basic, one-way operation of 0-10V analogue control of fluorescent ballasts and proprietary digital systems such as DSI.
- A DALI the system allows digital control, configuration and two-way communication, with broadcast options still available.
- Importantly, each DALI device can be assigned a separate address allowing control of individual devices or grouping together to allow those ‘groups’ to be controlled independently or together.
- DALI provides total flexibility to reconfigure lighting setups without any requirement to change the wiring. It’s therefore popular with consultants and clients alike, as changes in the use of internal space no longer require a complete ‘re-wire’. Changes from open plan to partitioned are easily accommodated. If warehouse racking is changed, lights are simply re-programmed to suit the new arrangement.



DALI-2 versus DALI version-1

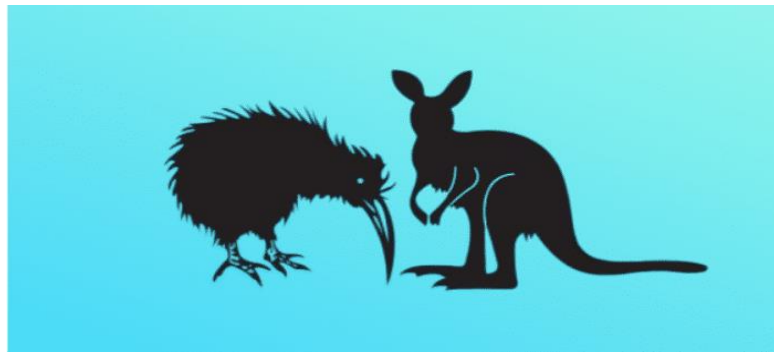
Introduction to DALI (continued)

- DALI's digital nature offers the ability for two-way communication between devices. This allows a device to report on its status for example, or report a failure. A big step forward towards providing automated monitoring and reporting for easier building maintenance and compliance.
- For the electrical contractor installing the lighting, wiring is very simple. DALI power and data is carried by the same pair of wires, with no need for a separate bus cable. The polarity of the wires does not have to be observed. There are however certain "DALI Rules" that must be followed, but these apply to every DALI installation.



Why DALI-2?

- The original DALI protocol was drafted over 20 years ago and has undergone several revisions over that time. These revisions have resulted in the release of a second version of the DALI standard IEC 62386, known as DALI-2, which has been adopted as the new lighting control standard for Australia and New Zealand.
- DALI-2 certification provides significantly improved interoperability between DALI devices. The DALI-2 test sequences — the parameters for testing on approved test equipment — are much more detailed than for version-1 and fill in many of the gaps that have been known to cause interoperability problems in the past.
- As we see the use of DALI-2 certified products within a DALI system, there should be far fewer issues and better control in the quality and functionality of certified products.
- To display the DALI-2 logo the product must be tested for compatibility with standardised test equipment and certified by the DiiA. All certified/verified DALI-2 products are listed on a searchable DiiA database available at www.dali2.org/products
- Testing can be carried out either by a manufacturer (assuming they have invested in the correct test equipment) or by a test house. In either case, test results are independently verified by DiiA before DALI-2 certification is granted.



Intelligent Environments prefer to propose zencontrol for DALI-2 systems

What are the benefits of zencontrol?

For Building Users

- ✓ Intuitive control
- ✓ Easy maintenance
- ✓ Site security
- ✓ Manage multiple sites
- ✓ Independent tenancy management
- ✓ Recommendations on energy savings
- ✓ Track payback on upgraded products
- ✓ View site from plan-based UI
- ✓ Local support from manufacturer
- ✓ Open protocol, not locked in – future proofed

For Specifiers

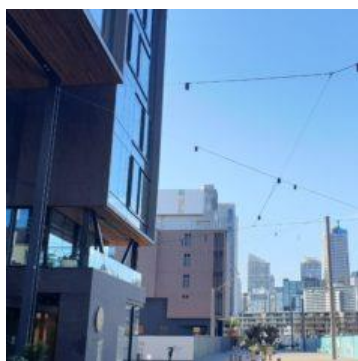
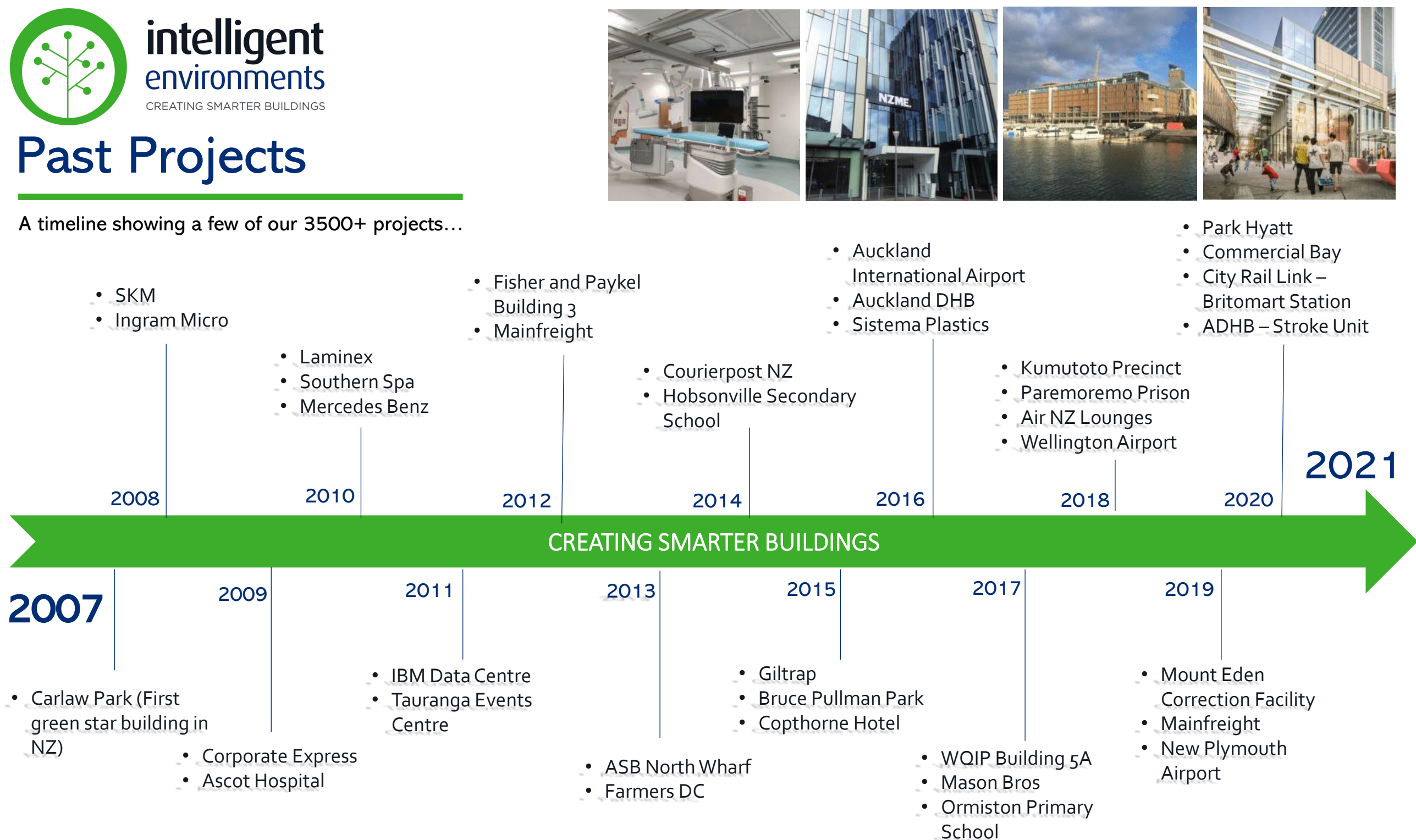
- ✓ DALI-2 compliant
- ✓ Secure system design with TLS 1.2
- ✓ Supports circadian rhythm
- ✓ Advanced analytics
- ✓ Occupancy heatmaps
- ✓ Easy integration to third party systems (AV, BMS, etc)
- ✓ Hybrid systems possible (wired and wireless)
- ✓ Feedback on site conditions, such as colour shift, lamp lifetime, and more
- ✓ Open DALI-2 protocol – not locked in - future proofed

For Installers

- ✓ Simplified wiring
- ✓ Easy to install
- ✓ Quick fault finding
- ✓ No re-wiring required for changes in use of space
- ✓ Onsite and offsite commissioning
- ✓ Offsite maintenance
- ✓ Automated fault reports
- ✓ Back compatible
- ✓ Hybrid systems possible (wired and wireless)

Past Projects

A timeline showing a few of our 3500+ projects...



Our Proudest Moment . . .

In January we learned that our project for Auckland District Health Board: the Adult Rehabilitation Integrated Stroke Unit (ARISU), Taio Ora, had received an award in this prestigious international arena.



Not only did our project receive recognition, but ours is the only New Zealand project to receive an award. Not just this year, but EVER!

DALI is a leading protocol in lighting control, and is in fact the only lighting control system complying with the recently released AS/NZS standard for lighting control. We are very excited by the advanced features DALI-2 offers and we now operate almost exclusively with DALI-2 systems.

In the Cloud . . .

As the world has come to terms with operating under COVID-19 restrictions, the ability to program control systems remotely, with no need to attend site has become invaluable.

The Stroke Unit project was commenced while New Zealand was under level 4 lockdown.

It was considered an essential project as it may have become necessary to use the critical care beds for COVID-19 patients.

We were able to supply the equipment to the electrical contractors for installation and then program the system remotely via the cloud.

Changes and maintenance can also be carried out with no site visits required.



What makes us unique in our industry?

We believe it is the combination of the following that makes us unique in what we can offer to our New Zealand clients:

- 1. Product** – we are the sole distributor of zencontrols in NZ. A DALI-2 system fully compliant with the new AU/NZ standard for lighting control. This Australian manufacturer leads the world with innovative products and systems bringing building technology into IoT.
- 2. Price** – zencontrol solutions offer much much more than anything else in the market, yet the price remains very competitive. The client genuinely gets “more for less” with a system that is expandable to meet future needs.
- 3. Lifetime Relationships** – historically projects are completed, and the companies involved move on. Our service is not only about initial design and programming, but lifelong assistance with monitoring and managing your building’s performance. Making compliance easy.



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2021-2022

The world crisis of COVID-19 has made us all re-evaluate what is important.

For many organisations, that is the wellbeing of their staff and customers.

We believe this industry is well positioned to step forward confidently with the new technologies available to ensure buildings are not only performing as they should, but are providing an optimum environment for wellbeing.

Time for some ups, to compensate for the downs!

We invite you all to enjoy the ride!