

QUANTUM

12345
BRAND Commercial

Lighting · Specification · Controls

Certified Lutron Commercial System Integrator (LCSI)

UNLIMITED CAPABILITY

FOR HIGH-PERFORMANCE BUILDINGS



 **LUTRON**



Designing for the people in the space

Smart building technology and the Internet of Things are changing the way we think about the design and implementation of today's high-performance buildings.

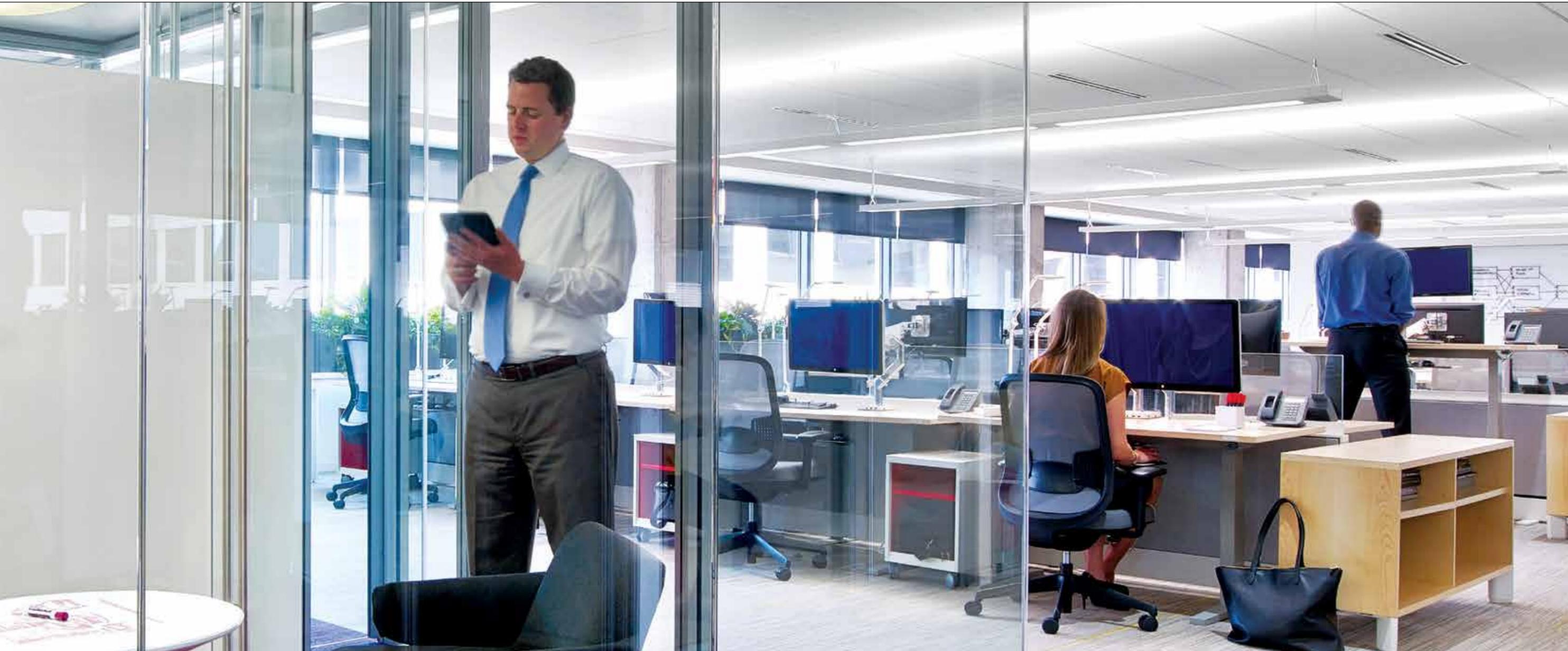
Owners, architects, and contractors are increasingly focused on improving the occupant experience and reducing operating costs as the keys to better buildings and a better bottom line.

The lighting control strategies specified in today's building projects are chosen to optimise the environment for the people in the space, improve building operations, and provide superior energy performance.

Lighting, both electric light and daylight, impacts every space within a building. Smart light and blind control is essential to achieving building performance, and delivering the right environment on every project.

CREATE THE RIGHT ENVIRONMENT WITH QUANTUM

QUANTUM



Lutron Quantum systems support dynamic, beautiful, productive spaces.

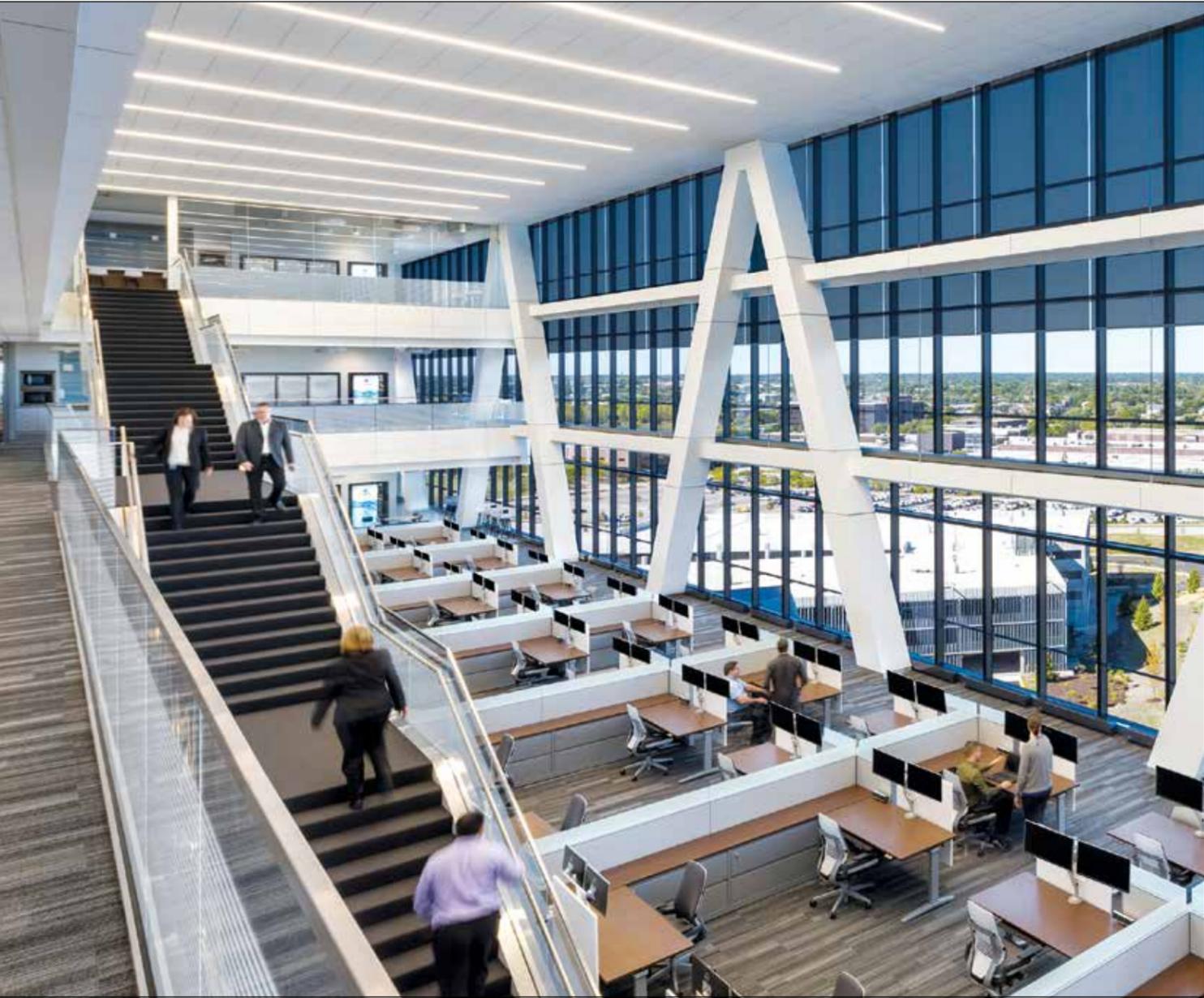
With Quantum, you can design, configure, monitor and adjust all the light in your space to create the right environment, at the right time, on every project.

Quantum systems are designed to accommodate a wide variety of lighting control requirements with embedded smart technology that delivers actionable data, simplifying building operation and optimising building performance.

Simple, third-party integration with other building systems, an intuitive graphical user interface, and smart control strategies are hallmarks of the Quantum system.

Engineered to ensure total design freedom, Quantum offers flexible control solutions for any size space and every budget including integrated lighting control, personal control solutions, solar-adaptive automated blind control, state-of-the-art LED control technologies, and space utilisation tools.

REDUCE COSTS, IMPROVE COMFORT, ENHANCE BUILDING VALUE

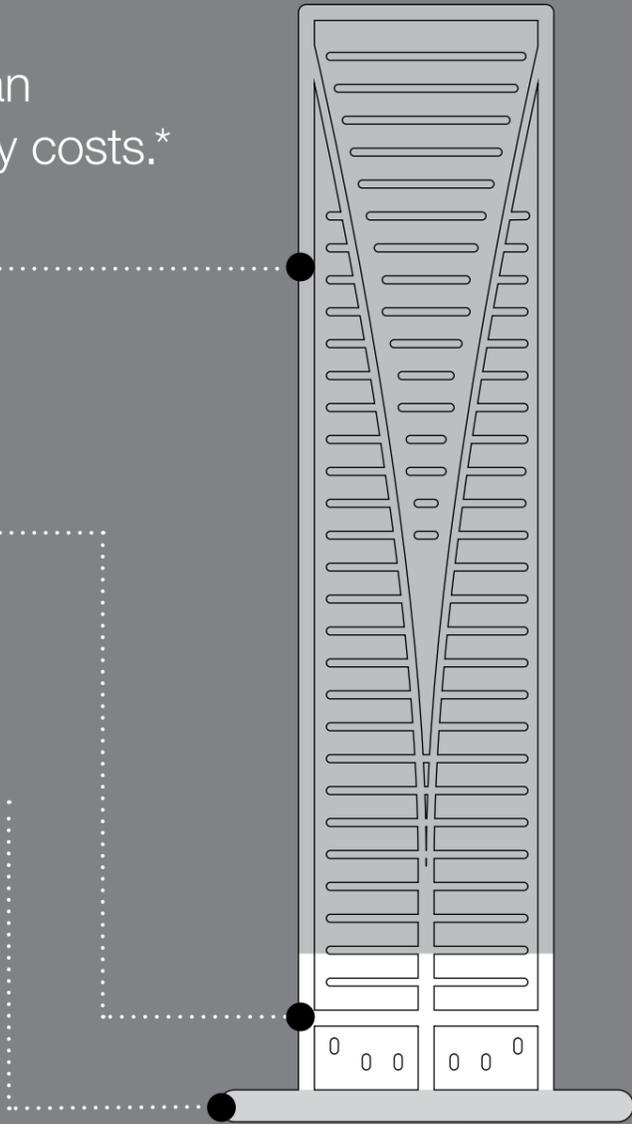


A typical breakdown of an organisation's occupancy costs.*

- PEOPLE: 90%**
- Personal control
 - Reorganise interior layout
 - Automated blinds (view, glare, daylight)

- OPERATIONS/RENT: 9%**
- Better space utilisation
 - Reduce cost of maintenance
 - Integration with other building systems

- ENERGY: 1%**
- Light/blind control savings
 - HVAC integration savings
 - Peak demand savings



Optimise your lighting control to optimise performance.

Smart lighting control can significantly decrease lighting energy use, and helps towards BREEAM and WELL accreditation. Yet the greatest values integrated lighting systems can add for both the owner and tenant are to enhance comfort and employee productivity, and reduce building operating costs.

A Quantum system incorporates advanced lighting and blind control strategies and intuitive software to directly impact all three areas of building cost. It provides facilities managers and owners with the ability to collect and manage data that drives building decisions, simplifies and speeds system adjustments, and maximises building value.

*Cited by property management firm JLL in "A surprising way to cut real estate costs" us.jll.com/en/trends-and-insights/workplace/a-surprising-way-to-cut-real-estate-costs

DESIGN FOR THE PEOPLE IN THE SPACE

QUANTUM

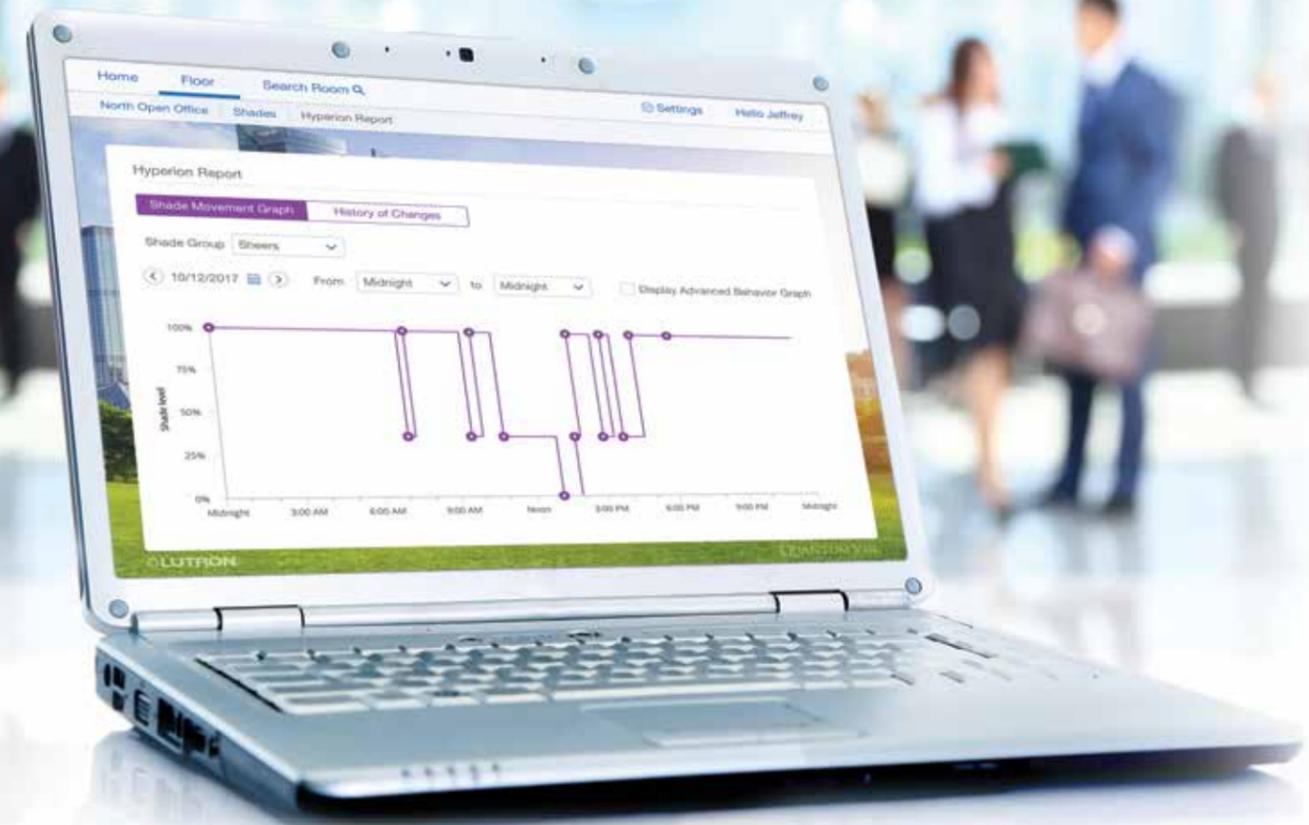
PEOPLE



Quantum solutions help you unlock your building's full potential and deliver a superior environment throughout the day.

Quantum offers a broad range of control strategies and capabilities to manage all the light in your building – automated lighting and daylight control, simple integration with time clocks and HVAC systems, and personal control to tune lighting to individual preferences for every situation.

Advanced capabilities, such as tunable white control and solar-responsive shading software, ensure a responsive system able to provide the right environment today, and easily adapt over time to meet changing occupant needs.



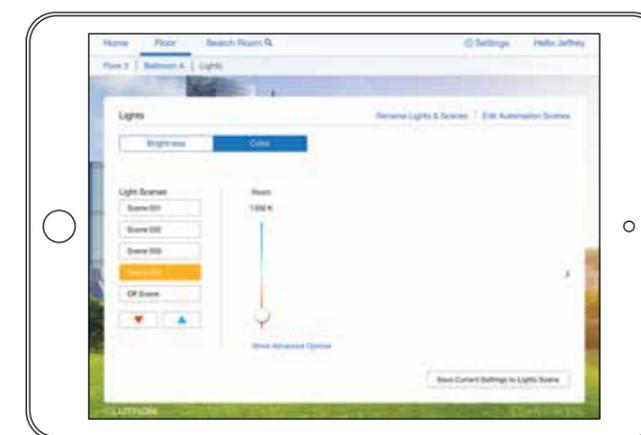
PEOPLE



Tunable white solutions

Delivering beautiful, functional lighting environments.

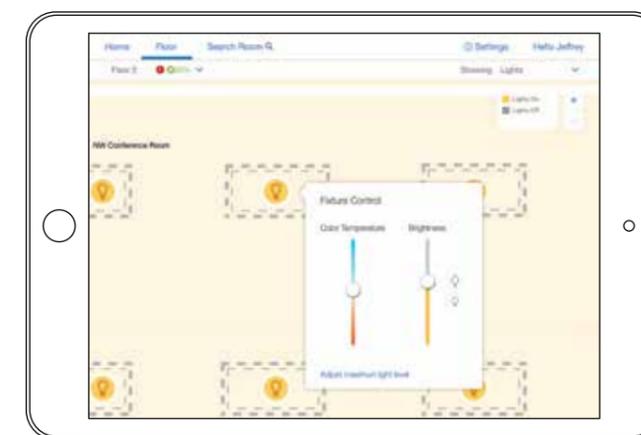
In response to an emerging trend in building design, tunable white control allows you to adjust colour temperature and intensity to best suit the occupants in the space.



Tunable white control

Ensures a customisable, flexible, comfortable environment

- Adjust fixture colour temperature and intensity on a pre-defined schedule
- Adjust colour temperature on an individual fixture basis, or as a group
- Simulate natural changes in daylight for a desirable connection to the outdoors



Individual fixture control

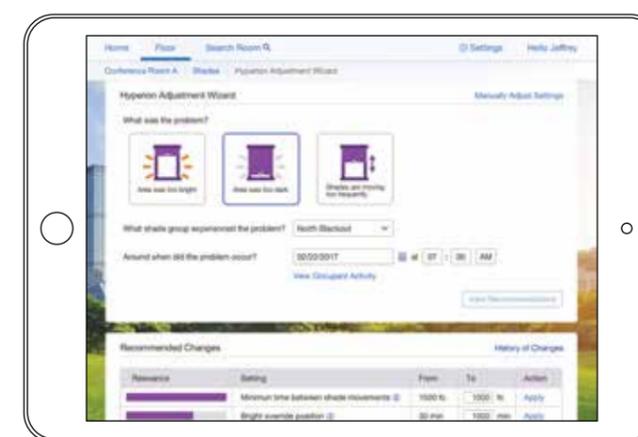
Design dynamic spaces that can evolve and change over time

- Tailor the environment to individual preferences
- Easily make lighting adjustments on a graphical floorplan



Automated blind control

The Hyperion solar-adaptive shading system reduces glare and heat gain, and saves energy by automatically adjusting Lutron blinds in response to the changing position of the sun.



Hyperion blind control

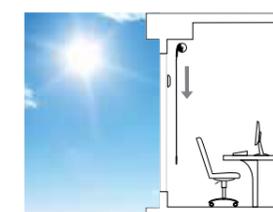
Increase comfort, productivity, and energy savings, while preserving views to the outside.

- Maintain a glare-free environment to keep occupants comfortable
- Allow blinds to be open more often to maximise views and daylight harvesting
- Provide confidence that blinds receiving direct sun are closed during peak cooling periods
- Create and modify shading groups through software, with no need to alter wiring

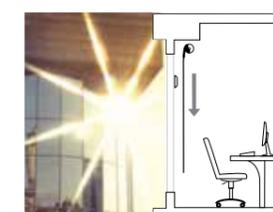


Radio Window Sensor

Intelligently adapts Hyperion for local conditions



DIRECT SUN: Blinds lower to keep the sun's rays from penetrating your work area



REFLECTED SUN: Blinds close to block reflections from large surfaces



BRIGHT SKY: Blinds move to a predetermined position to minimise the contrast from the bright sky



OVERCAST/DARK: Blinds open to maximise views and available daylight when overcast or when in a shadow

SIMPLIFY BUILDING OPERATIONS

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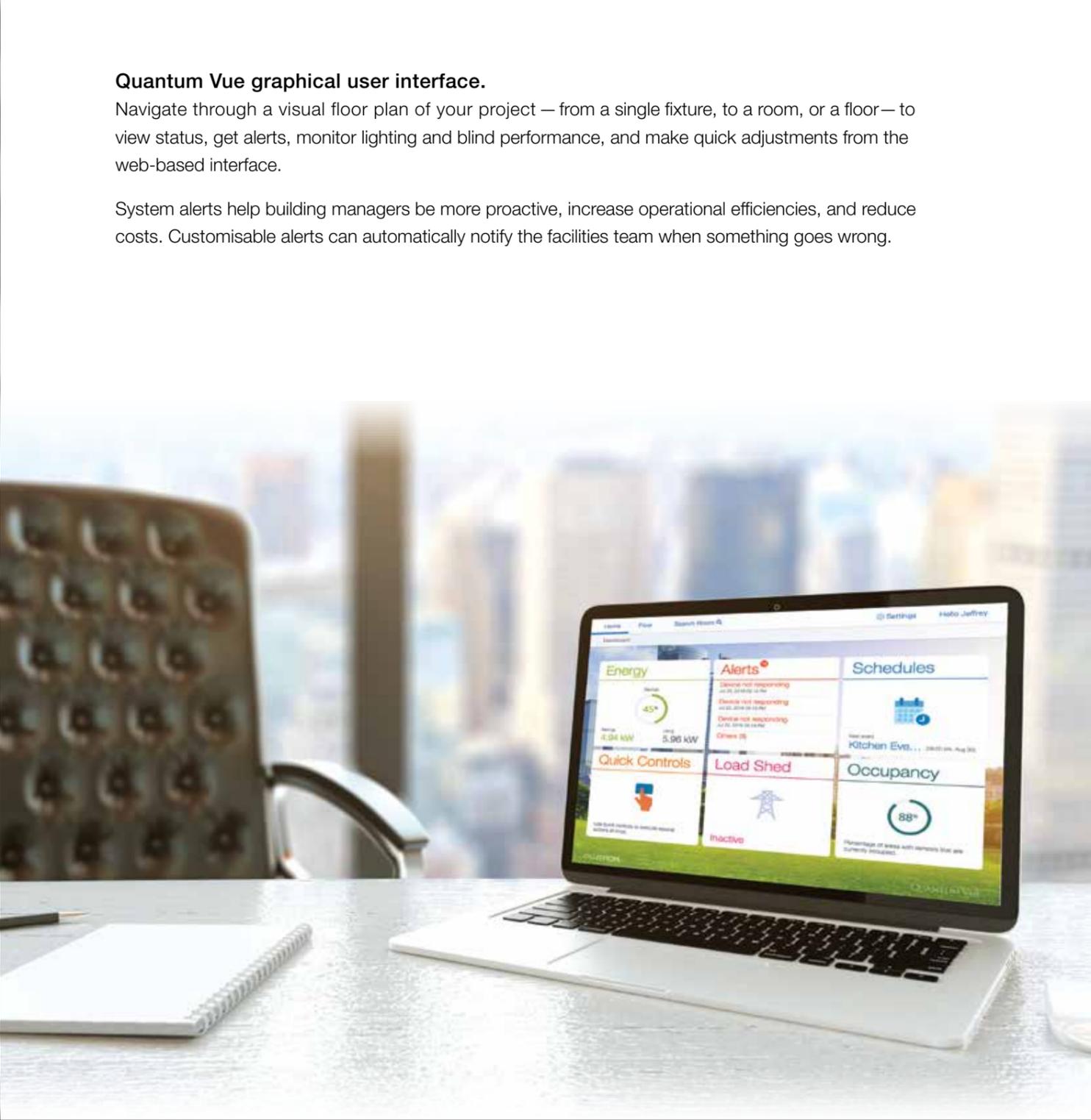
OPERATIONS



Quantum Vue graphical user interface.

Navigate through a visual floor plan of your project — from a single fixture, to a room, or a floor— to view status, get alerts, monitor lighting and blind performance, and make quick adjustments from the web-based interface.

System alerts help building managers be more proactive, increase operational efficiencies, and reduce costs. Customisable alerts can automatically notify the facilities team when something goes wrong.

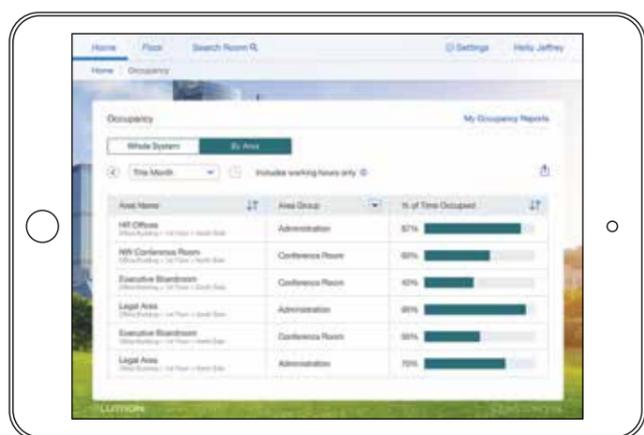


OPERATIONS

Actionable Data

Quantum offers a wide variety of data-driven reports and alerts.

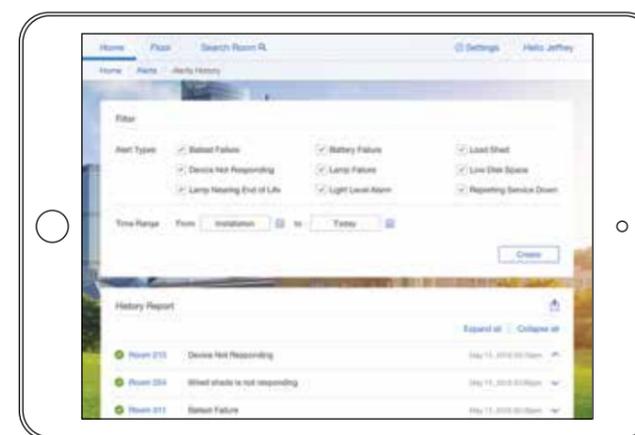
Help improve building layout, defer capital expenditures, deliver a more efficient space, and reduce your building's carbon footprint.



Space utilisation reports

Helps optimise under-utilised spaces

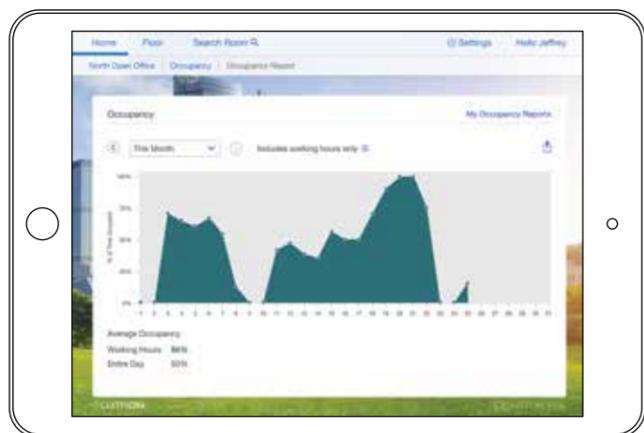
- Get reports by individual area
- Make more informed decisions about space layout



Customisable alerts

Allow your team to select which issues should be immediately emailed for attention

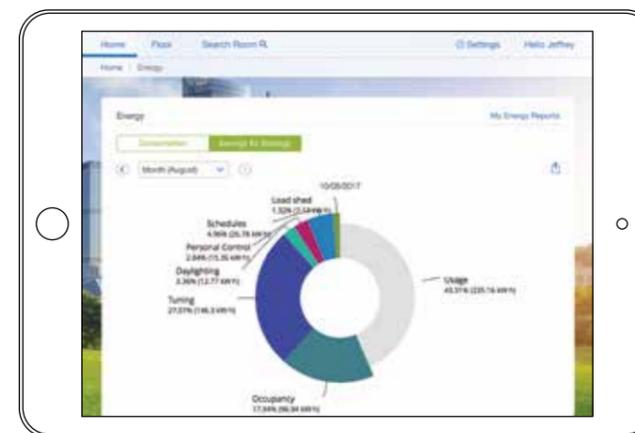
- Alerts can pinpoint exact location and nature of concern
- Alerts can include improperly functioning equipment, low batteries, lamp outages, loadshed events, and more



Occupancy trends

Improve efficiency by viewing occupancy trends over time

- Adjust building operations (e.g. cleaning schedules) based on space occupancy patterns
- Monitor and analyse occupancy trends with no need for third-party evaluations



Energy reports

Energy savings by strategy – understand how you're saving energy

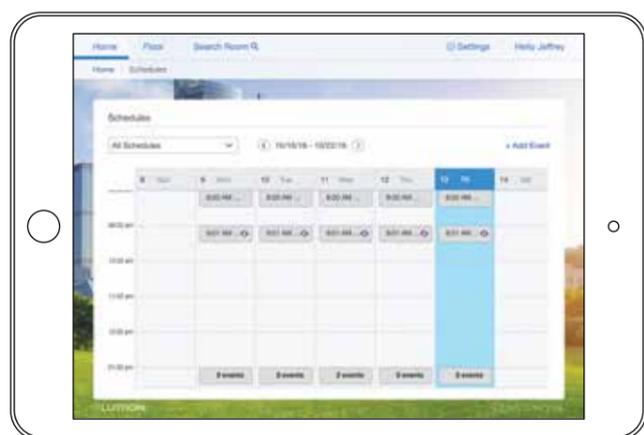
- Interactive reports allow you to see the full picture, and evaluate the specific performance of each strategy
- Reduce costs and drive better decision making

OPERATIONS

Scheduling

Automatically control all lighting and blinds with time-based events.

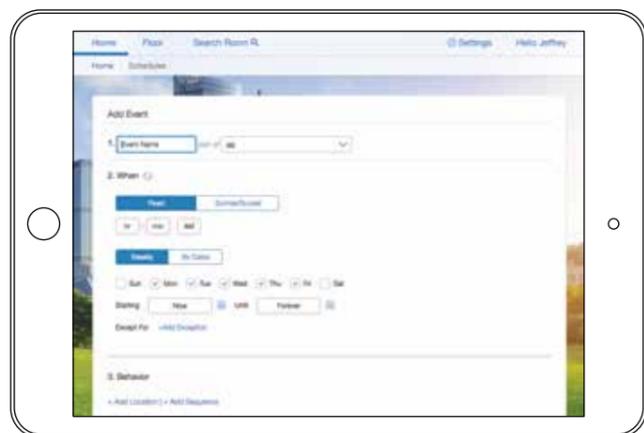
Set a preset level, or turn on or off lights in certain spaces, based on the time-of-day or astronomic events like sunrise or sunset.



Weekly event summary

Time-based control of facility lighting

- Colour coded schedules provide a simple overview
- Scheduling allows easy modification of events



Simple event scheduling

Modifying daily schedules for special events

- Modify light settings for single events or recurring events
- Change functionality of sensors based on specific day or time requirements

Simple user interface

Easily manage electric light and daylight.

Enable intuitive identification of the lighting areas, individual fixtures, or shading groups you want to adjust.



Graphical floorplan

Monitor and adjust lighting and blinds remotely

- View alerts, lighting status, occupancy, or energy usage on a floor plan



Fixture control

Deliver personalised lighting

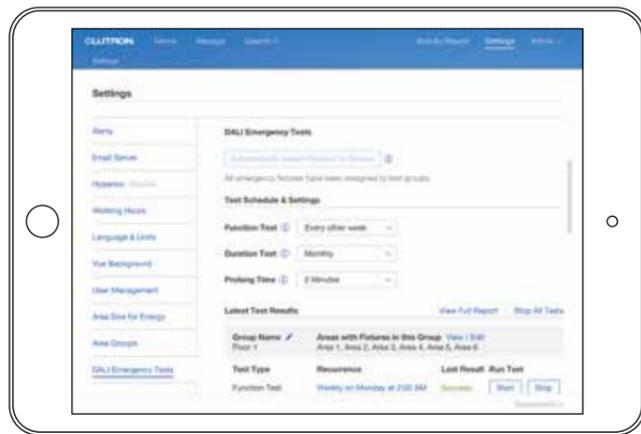
- Trim the brightness level for individual fixtures to meet occupant preferences
- Identify and resolve issues quickly and efficiently with individual fixture monitoring with Lutron EcoSystem or DALI controls

DALI EMERGENCY TESTING

Emergency Testing & Monitoring

Automatically test and monitor emergency lighting with time-based events.

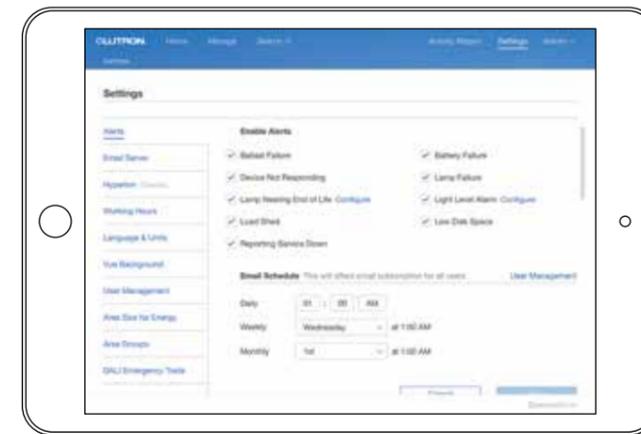
Use Quantum Vue scheduling and reporting tools to set automated testing of DALI emergency fixtures, receive reports and automated alerts.



Function and Duration Tests

Schedule tests for any emergency lighting installation

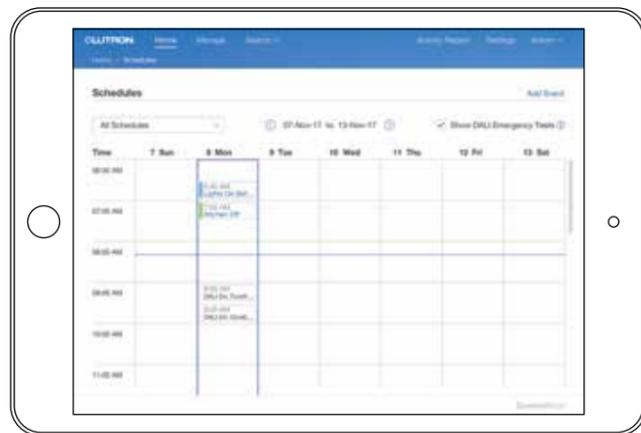
- Function Test provides instant feedback on the current status of emergency luminaires
- Duration Tests verify battery life in advance of a real emergency
- Test results are reported in Quantum Vue



Alerts

Automatically receive alerts of system failures

- Reports and sends alerts of lamp failures
- Reports and sends alerts of emergency lamp failures
- E-mail notification and visible alerts on the Quantum Vue dashboard



Scheduling

Manage frequency and time of system testing

- Easily manage scheduling of emergency tests
- Access and adjust timing as necessary

SAVE ENERGY

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ENERGY



Reduce lighting energy use and meet code without sacrificing comfort or productivity.

Quantum systems allow you to combine the ideal mix of energy-saving lighting control strategies e.g. integrated occupancy and daylight sensors, automated blinds that reduce glare and heat gain, load shed and more.

The Quantum solution helps you meet energy and sustainability goals, and gives you the tools you need to easily monitor and adjust system performance over time.



Energy Optimisation

Create more efficient spaces by utilising data-driven reports and alerts.

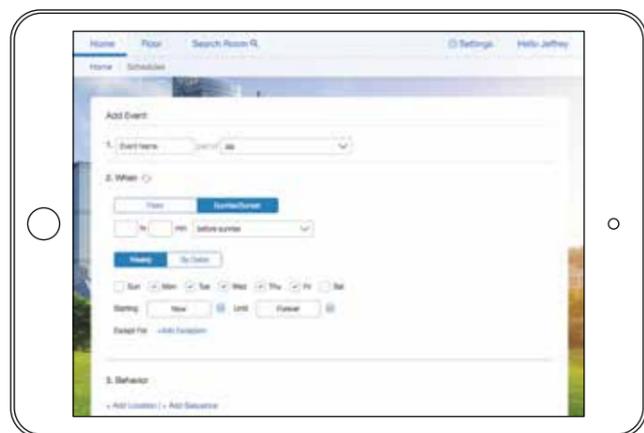
Schedule events and view performance of areas throughout your building to maximise energy savings.



Building performance

Custom reports allow comparison of energy savings strategies

- Easily evaluate strategies across buildings to optimise performance
- Track the impact of changes to lighting control strategies, and identify opportunities for additional savings



Today's schedule of events

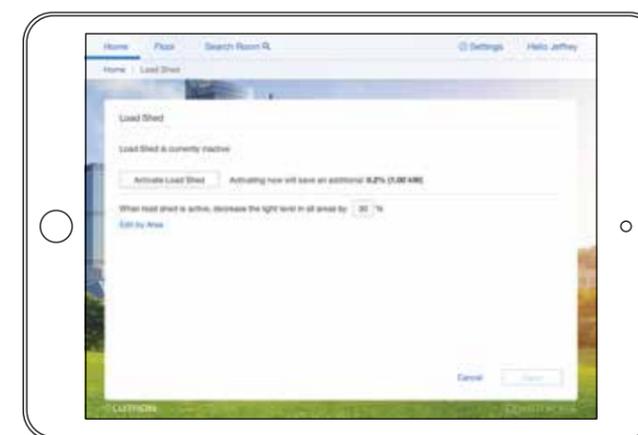
Colour-coded schedules provide a simple overview

- Minimise energy use by scheduling events based on astronomical time clock such as sunrise and sunset
- Modify light settings for single events or recurring events

Load shed

Allows facility managers to shed a percentage of the system's lighting output.

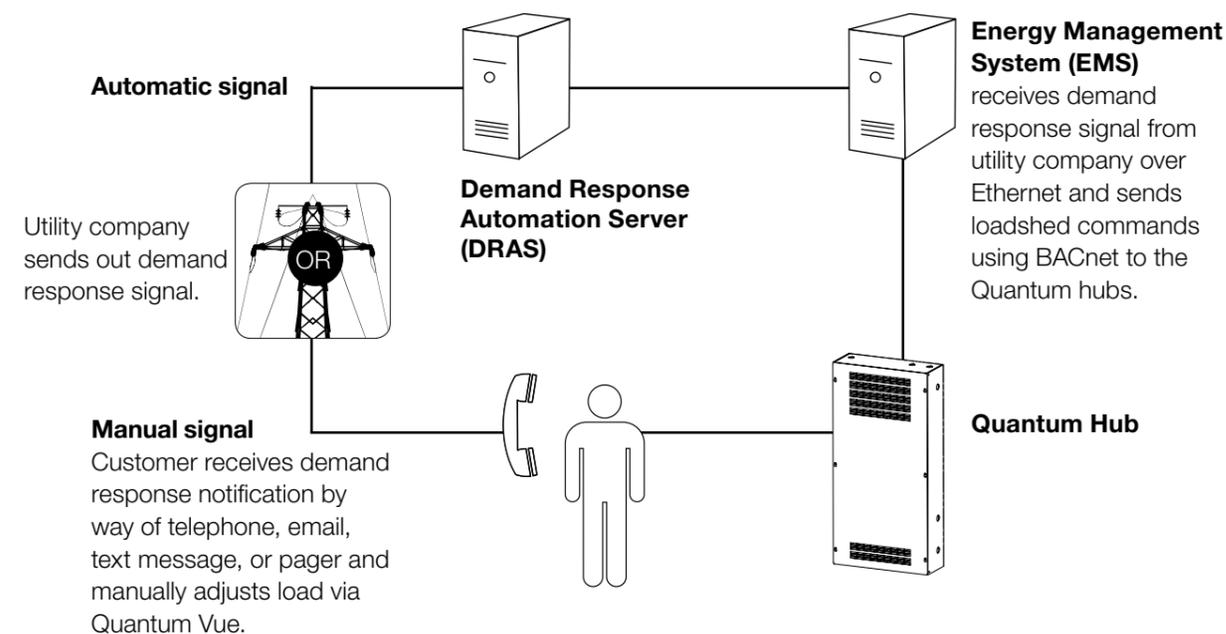
Reduce energy costs in your facility.



Lower electricity rates

Improve ROI

- Take advantage of rebates from utility companies and energy aggregators who offer demand-response programs
- Respond to load shed requests automatically, or at the touch of a button





Seamless interoperability

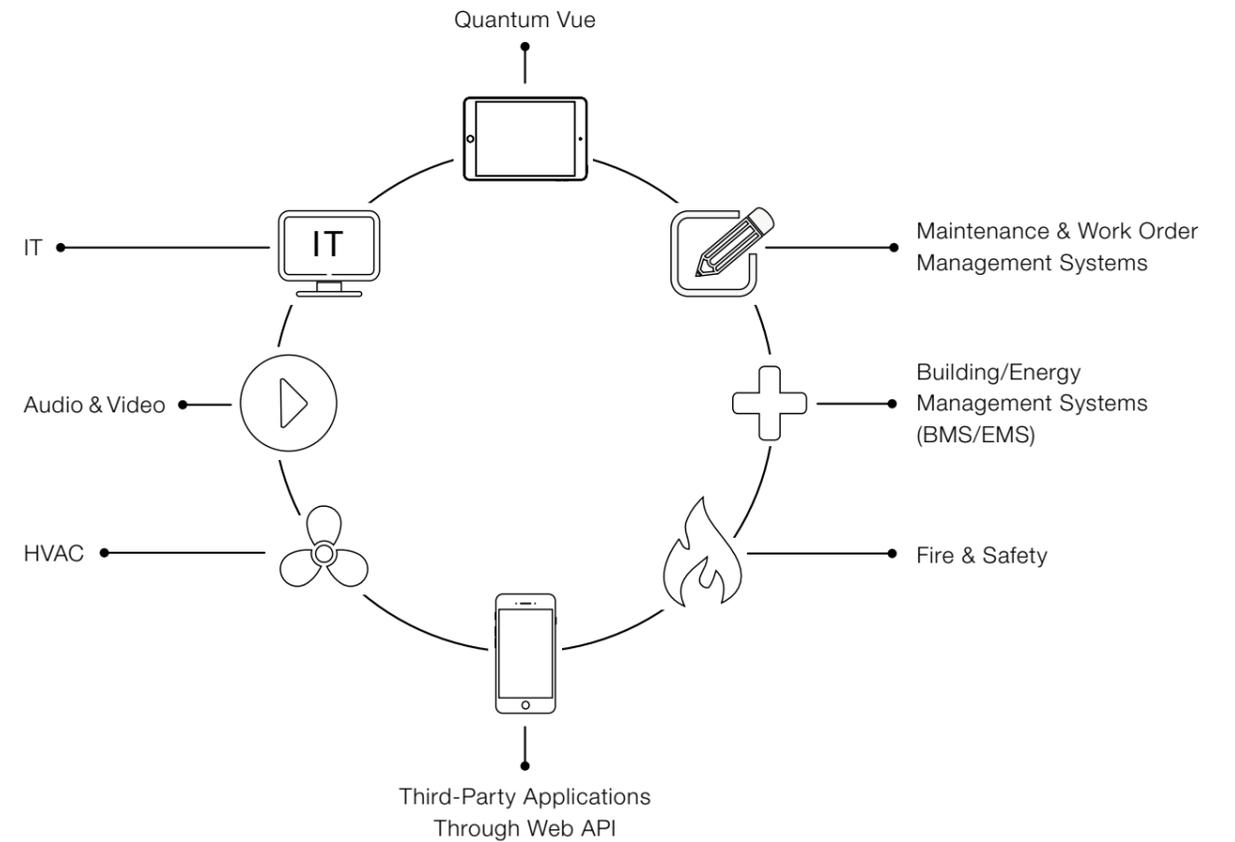
Efficient, sustainable buildings rely on integrated systems – not individual silos of information.

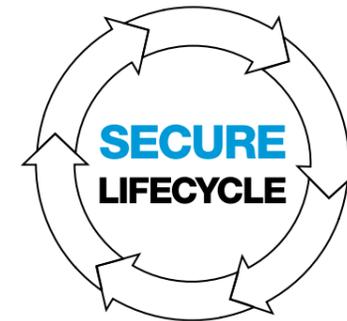
Quantum systems seamlessly and reliably integrate Lutron lighting and automated blind control with building management systems (BMS), security systems, and HVAC, delivering a secure, total building environment.

Quantum integrates through BACnet, RS232, Ethernet TCP/IP, and contact closures.



Third-party integration





We build security into the product and the process.

From conception to installation, and through the lifetime of the system, everything we do is backed by Lutron's first, and guiding, principle — Take Care of the Customer with Superior Goods and Services. Every product, every system, and every solution is designed, manufactured and tested to work as expected.

Security by Design

When building any new system, Lutron utilises a dedicated security team to ensure best practices are implemented. Security is built-in. It is not an afterthought or add-on.

3rd Party Validation

Security is complicated. Lutron has a dedicated team of internal experts, but we also leverage external experts to double- and triple-check our process.

Continuous Monitoring and Improvements

Security is a constantly moving target. Lutron uses a dedicated security team to continuously monitor the market for potential threats and, when needed, send out security patches to update installed systems.

Ongoing Support

Lutron has the resources you need to answer questions about security when they arise.

System and network integration consultation

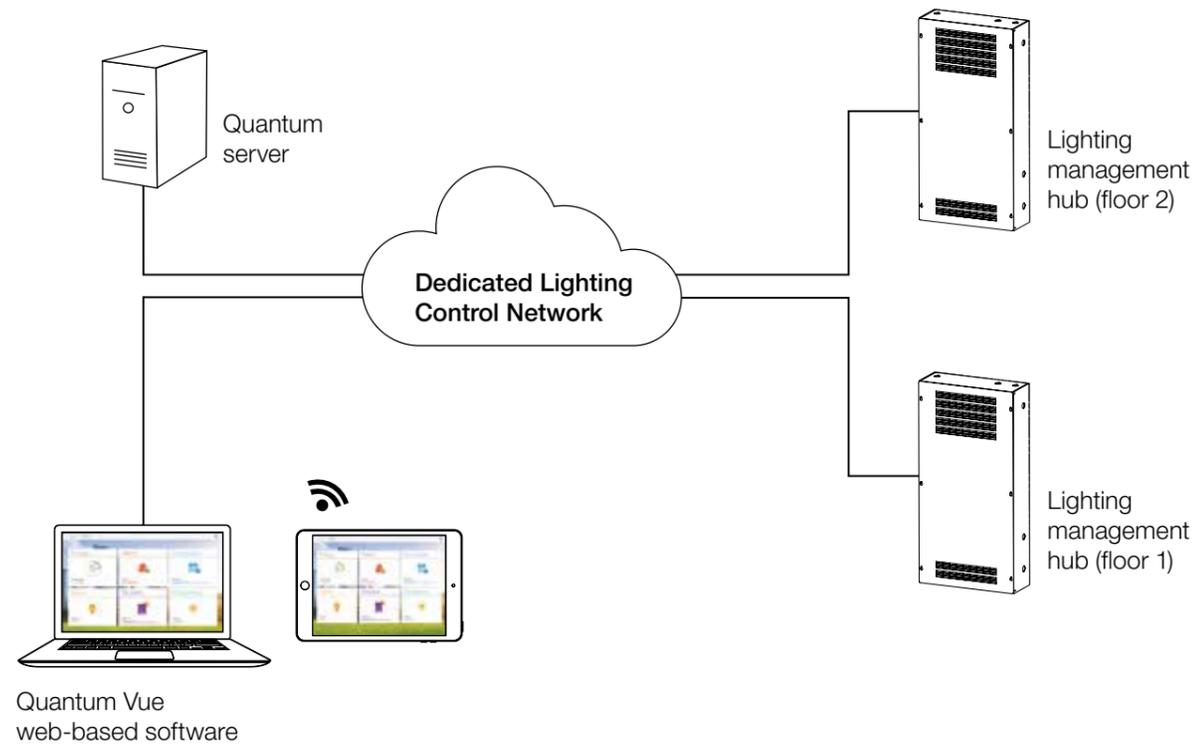
Lutron is committed to a smooth project process. To ensure integration protocol requirements are aligned among Lutron and third-party vendors, and to avoid delays over the course of your project, the Lutron Services Company can work directly with your IT team to ensure the system configuration meets your IT needs.

Quantum can be implemented flexibly to address a variety of network configurations to suit the IT landscape in the building.

Option 1: Using a dedicated lighting control network

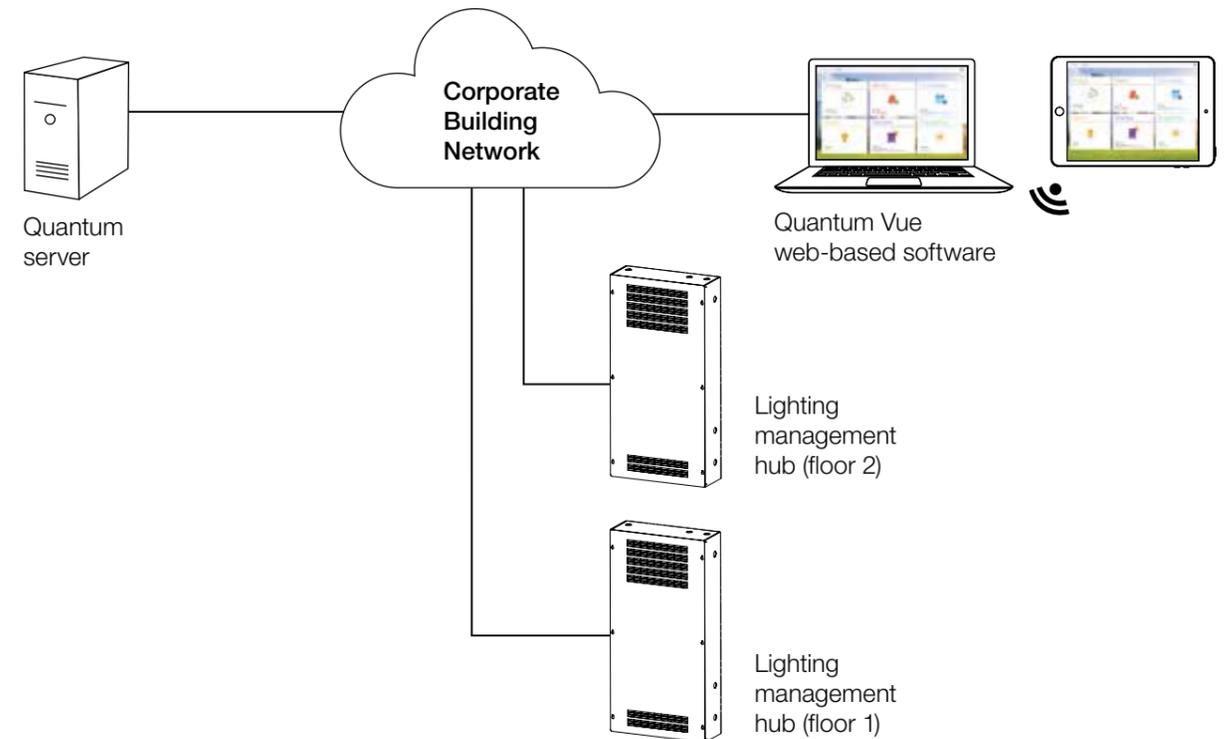
The Quantum lighting management hubs are connected to the Quantum server via a dedicated lighting control network. This provides the highest security.

For detailed network configuration information, have your IT administrator contact Lutron at techapps@lutron.com.



Option 2: Integrating with the Corporate network

The Quantum lighting management hubs are connected to the Quantum server via the Corporate Building Network. When using this option, all routers/switches connecting the Quantum lighting management hubs and the Quantum server must be properly configured to allow messages to be passed between the hubs and the server.



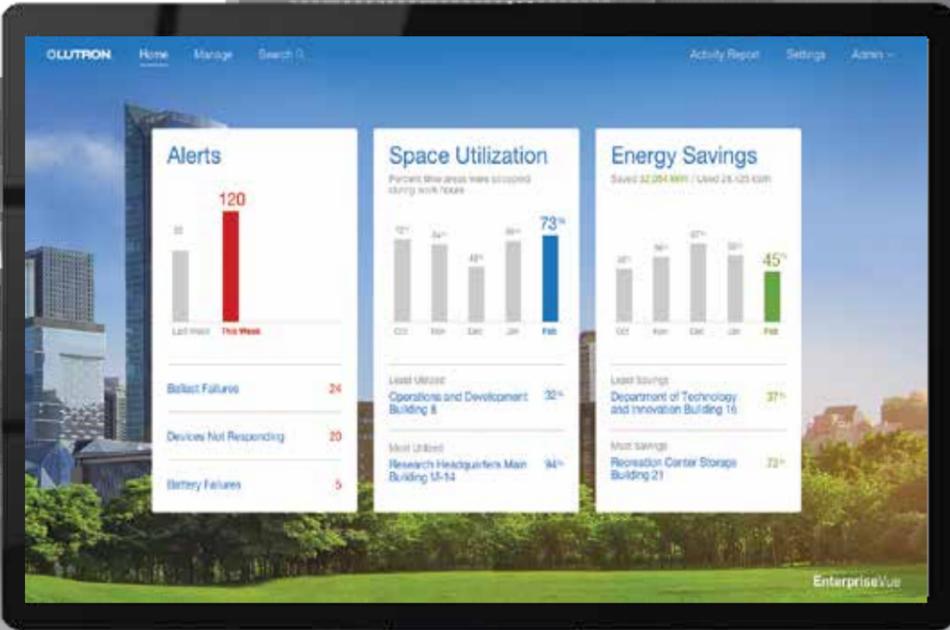
Manage data and operations for multiple Lutron lighting and blind control solutions

- A single data and management platform for your connected buildings
- The system interface delivers a simple, consistent user experience from any PC or tablet
- Open, easy integration with BACnet and web APIs leverages the IoT to enhance smart-building performance

Enterprise Vue

vive

QUANTUM



Enterprise Vue home screen



The Lutron services and support team simplifies design and specification

At Lutron, our first company principle is Take Care of the Customer with Superior Goods and Services. Our services and support team is fully committed to supporting every project and every client from initial design through occupancy and beyond.



DESIGN



CONSTRUCTION



OPERATION & MAINTENANCE



RENOVATION & RETROFIT



Designer+ Tool

Specifiers, contractors, distributors, Lutron reps, or other commercial building professionals can use this tool to design Lutron lighting control systems and generate comprehensive system design documentation (e.g. Bill of Material, One-line Diagram, and Sequence of Operations).



Project Management Teams

Lutron representatives and project management teams are ready to help design and specify the right lighting control system for your project, and to commission the installation.

LED Control Centre of Excellence

The LED Control Centre of Excellence is your comprehensive source for all things LED. From our LED compatibility tool, to fixture selection and solutions tools, to our fixture design tools, Lutron is committed to LED excellence by offering the latest information in an easy-to-use, plain-language format. As LED technology continues to change, the Centre of Excellence will keep you up to date.

Quantum provides total light management by tying together the most complete line of lighting controls, window blinds, digital ballasts, and LED drivers and sensors under one system and software umbrella. Many of the system components are available in both wired and wireless options. Here are the key components.

Controls

Wired



Palladiom



seeTouch QS keypad



Signature Series



Architrave



GRAFIK Eye QS

Wireless



Pico remotes



Pico wireless controls

Blinds



Sivoia QS roller blinds



Sivoia QS skylight blinds

Sensors

Wired



Occupancy/vacancy sensor



Daylight sensor

Wireless



Radio Powr Savr occupancy/vacancy sensor



Radio Powr Savr daylight sensor



Radio Window sensor

Quantum Software



Quantum Vue facility management software



Q-Control+ app

Digital LED Drivers & Fluorescent Ballasts



EcoSystem H-Series ballast



EcoSystem 5-Series LED driver



Hi-lume 1% constant voltage driver

Quantum Hubs/Power Panels



Quantum hubs



DIN modules (EcoSystem, DALI-2, phase, 0-10V, switching)



Energi Savr Node (EcoSystem, DALI-2, 0-10V, switching)

Note: Contact your Lutron sales representative for product availability in your region

QUANTUM

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