Convenience & Flexibility

Digital systems that separately address each light fixture can be configured to suit many needs, eliminating the expense of serial retrofits.

the facts

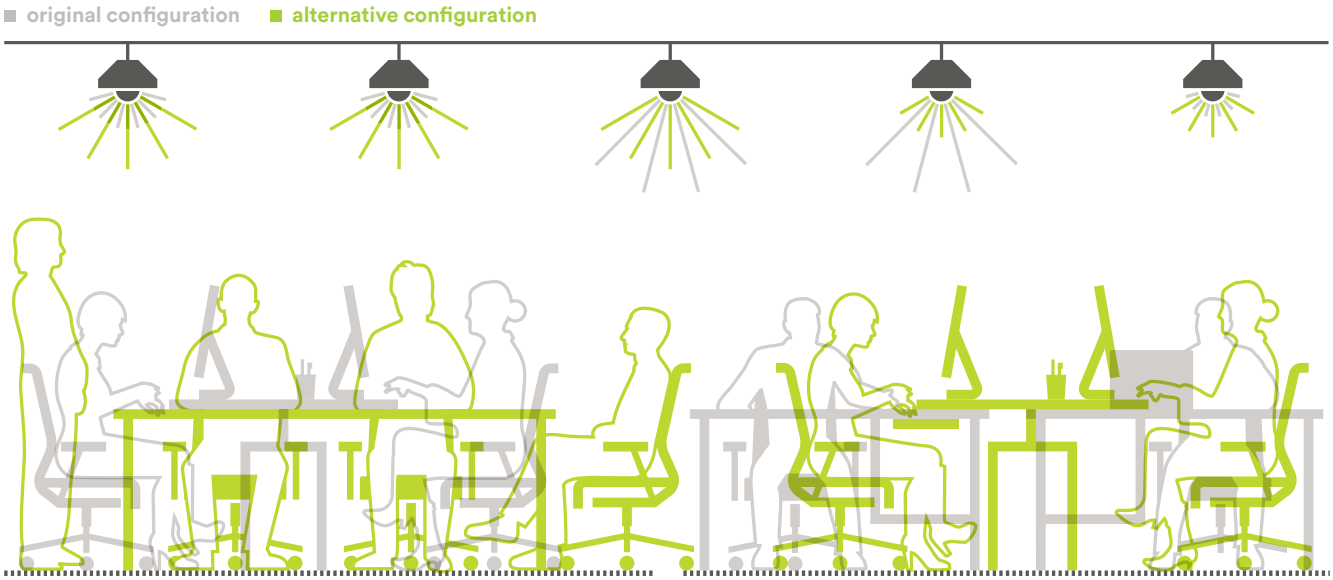
When choosing a lighting system for a retrofit or new construction, it is important to consider how the system may need to change over time. Digital Addressable Lighting Interface (DALI) systems provide deep flexibility to meet the changing needs of users.

how it works

A properly selected, installed, and programmed DALI system can accommodate growth and change, allowing the system manager to set zones and even fixtures individually. With an intuitive interface, it is easy to adjust settings to maximize energy savings and meet occupant needs.

benefits

- Once a DALI system and high performance LED fixtures have been installed, future retrofits will consist primarily of installing new software, rather than new hardware
- A DALI system offers flexibility to adapt a space to meet the changing needs of employees
- System can expand at any time



With individual controls and tuning, light levels can be adjusted to suit the needs of the space without needing to be replaced

Fixtures can be tuned to accommodate individual tasks without changing or replacing them

In the office area, less overhead light is necessary due to the use of computers

However, in the conference room, a lot of light is needed for the task at hand

Fixtures can be tuned to provide more light for a designer doing layout work or a user with poor eyesight

Fixtures can be tuned to provide less light for a user near a window or with light sensitivity

living lab link: granularity

Crestron controls & Fluxwerx fixtures

DALI technology makes energy-saving lighting control systems flexible and easy-to-use, expediting the successful implementation of a lighting retrofit. In this case study, installing DALI controls and LED fixtures reduced lighting energy use by 80%.

products/systems

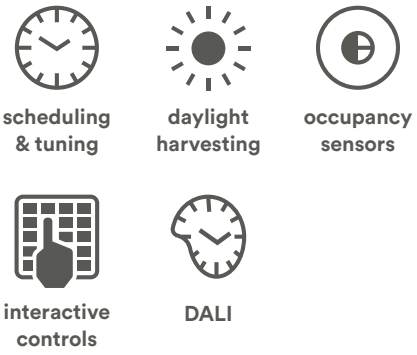
control system

Crestron's DALI-based system was installed and tested as part of BE-Ex's *Living Lab* project. Crestron worked with the project team to develop custom solutions that meet the specific needs of each space and retain easy integration with enterprise-wide monitoring and management. The system affords maximum flexibility while improving efficiency and scalability, allowing easy reconfiguration of lighting zones, monitoring of individual fixture and lamp status, and discrete personal control where desired. The system is controlled with an easy-to-use graphic interface.

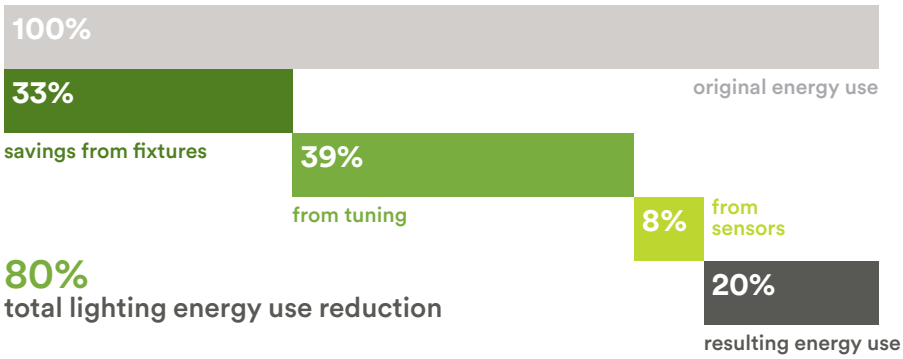
lighting fixture

The Crestron controls were paired with Fluxwerx's Profile fixture – a suspended linear lighting system that features a luminous interior with no horizontal lenses or diffusers. The fixture has unique optics that eliminate any direct or indirect view of the LED light source, reducing glare. The fixture's 40/60 breakdown of uplight/downlight provides an optimal lighting distribution for general area lighting.

The Crestron control system included the following features:



primary energy figures



80%
total lighting energy use reduction

The Fluxwerx fixtures reduced lighting energy use in the *Living Lab* space by 33%. The Crestron controls saved an additional 39% through tuning and 8% through use of occupancy and daylight sensors. The total reduction in lighting energy use was 80%.

---

be ex
building energy exchange

The Building Energy Exchange (BE-Ex) is a resource hub connecting the New York real estate community to energy efficiency solutions, through exhibits, education, research, and reports.

Call: (212) 349-3900
Visit: be-exchange.org
Email: info@be-exchange.org

The *Living Lab* demonstration project was a collaboration between BE-Ex and Lawrence Berkeley National Lab. The project installed and tested multiple lighting technologies at Goldman Sachs' flagship Manhattan office, 200 West Street.

Learn more at:
be-exchange.org/resources/project/46