

# Smart Lighting | Commercial Building

Case Study



LEADING THE FUTURE OF  
**LIGHTING + TECHNOLOGY**

# Smart Lighting | Commercial Building Case Study

A Saint Paul, Minnesota, financial services company wanted to further advance its efforts to provide a healthy work environment at its headquarters for its employees and 16 tenants. It sought customized lighting scheduling and dimming capabilities to both optimize employee work environments and futureproof its facility investment.

## Project Scope

22  
Story Office Building

470,317  
Square Feet

3,600  
Fixtures

\$1,334,883  
Project Savings\*

\*Project savings is a calculation of 10 years of energy, maintenance and HVAC savings combined with utility incentives.

## The Project

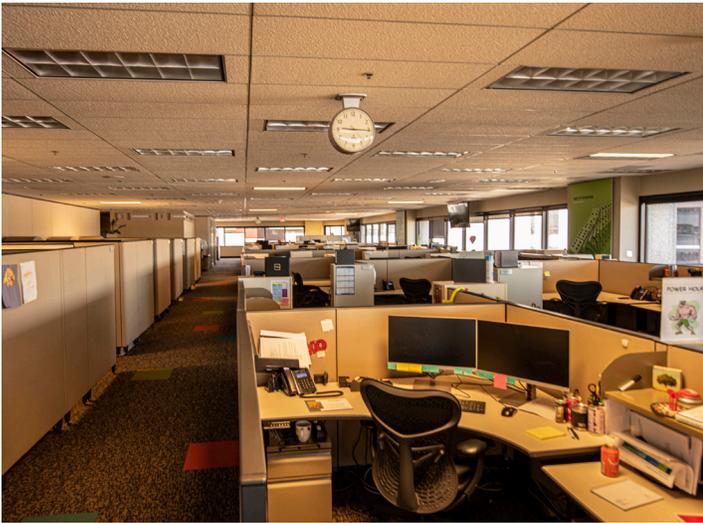
The project, led by EMC in partnership with Internet of Things (IoT) solutions providers Silvair and McWong, resulted in the largest Bluetooth® mesh lighting control installation in the world.

Bluetooth mesh delivers remote, luminaire-level lighting controls and allows for wireless reconfiguration of fixture zones and behaviors. EMC provided turnkey project management throughout the installation to retrofit troffer lighting fixtures over employee cubicle areas. Extra focus and planning addressed the headquarters' unique floor layouts, specific tenant needs and non-standard troffers. Working with Silvair, who built the underlying technology using Bluetooth mesh open standard, EMC commissioned the project to connect each upgraded troffer, now equipped with motion and light sensors, under a Bluetooth mesh "smart" controller.

## The Solution

The company wanted to further advance its efforts to provide a healthy work environment at its headquarters. With the building already Fitwel certified, the company sought to expand its support of its employees' physical, mental and social health by adding customized lighting scheduling and dimming capabilities. Using the new system, the company task tuned lighting to 70% output, immediately increasing energy savings and optimizing occupant comfort. Light levels will be maintained over the life of the fixtures by increasing output as needed. Employees with offices can adjust light levels to meet their specific lighting preferences using controls.

The new system can be wirelessly rezoned as needed to accommodate future reconfigurations of floor layouts. It is also positioned to add capabilities in the future including occupancy tracking for space utilization and restroom maintenance needs as well as energy consumption monitoring to reduce energy costs and enhance building sustainability.



Before



After



Before



After

## Annual Environmental Impact



851,047  
pounds of CO<sub>2</sub>



43,437  
gallons of gasoline



425,350  
pounds of coal

# Realize the Full Value

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## Commercial Settings

Take a total approach to LED Lighting + Technology for all your locations. EMC has the project management expertise, quality and speed you need to optimize environments and maximize energy and bottom-line savings for your business.

Since 2003 we've helped multinational businesses save billions of kilowatt-hours of energy and maximize their investment in LED Lighting + Technology to:

- Attract and retain tenants
- Ensure consistent implementations for hundreds of locations
- Reduce dependence on on costly, routine service calls
- Deliver superior utility savings and incentive values
- Create safe, attractive environments that increase property value
- Zone and re-zone office space to meet changing needs
- Maximize the full benefits of product warranties



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