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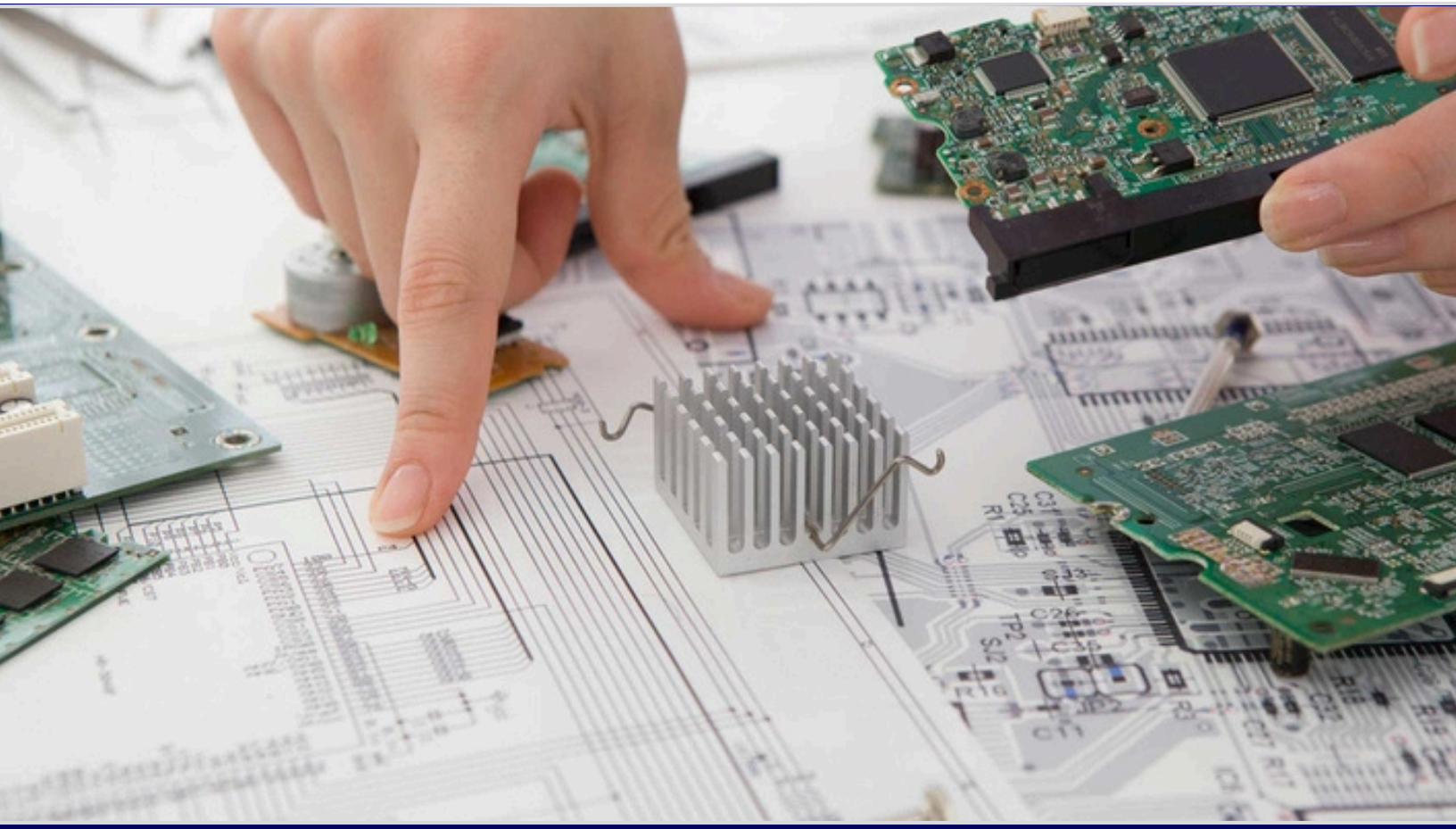


Intelligent Infrastructure Case Study

MHT Technologies

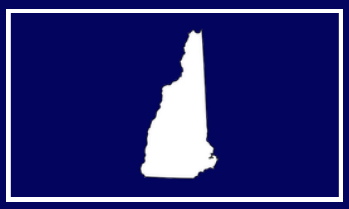
EPtAC Corporation

Intelligent Infrastructure Case Study

Project Overview

EPtAC Corporation undertook a renovation of approximately 12,500 square feet within its multi-story office building in Salem, New Hampshire. The project focused on modernizing the workplace through energy-efficient lighting, automated shading, and intelligent controls designed to improve comfort, flexibility, and operational performance.

MHT Technologies was selected to design and deliver the property's Power over Ethernet (PoE) lighting and control infrastructure, combining tunable white luminaires, Inspextor technology, and centralized management to create a connected, adaptable office environment.



Project Details

Project Name: EPtAC Corporation

Vertical: Private Office

Publication Date: October 2026

Location: Salem, New Hampshire

Primary Use Case: Intelligent PoE lighting, automated shading, and centralized controls for a modern office environment

Project Size: Approximately 12,500 square feet of renovated office space

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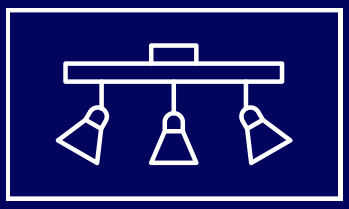
Project Needs

EPtAC required a modern lighting and shading infrastructure capable of supporting a flexible, energy-efficient workplace. The renovated office floor needed responsive lighting, intelligent controls, and simplified system management while minimizing electrical complexity and creating a more comfortable environment for employees.

Intelligent Lighting & Shading
Integrate smart sensors, wall switches, and automated shading to improve occupant comfort and provide flexible control throughout the office.



Energy-Efficient Lighting
Install PoE-powered, tunable white luminaires that provide adjustable lighting to support different workplace activities and employee needs.

Centralized System Management
Establish a unified low-voltage infrastructure that simplifies lighting management, supports energy efficiency, and accommodates future workplace changes.

Solution & Process

MHT Technologies designed and delivered an integrated PoE lighting and shading solution combining Inspextor nodes, tunable white luminaires, and intelligent controls. The network-based infrastructure provides centralized management and flexible lighting operation throughout the renovated office floor.

Planning
Evaluated requirements and developed the PoE lighting and shading system design.

Deployment
Integrated Inspextor nodes, tunable white fixtures, sensors, and controls.

Commissioning
Coordinated installation and completion with the office renovation schedule.

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Project Challenge

EPtAC needed to modernize an existing office floor with intelligent lighting and automated shading while maintaining a streamlined infrastructure. The renovation required flexible lighting control, improved workplace comfort, and centralized management without the complexity of separate electrical and control systems.

Scope of Work

MHT Technologies designed and delivered a PoE lighting infrastructure supporting 277 fixtures across approximately 12,500 square feet of renovated office space. The deployment includes 177 Inspextor nodes and 129 smart sensors and wall switches, providing tunable white lighting and occupancy-based controls.

The solution incorporates 11 Cisco Catalyst C9300-24H-E switches to provide the power and data backbone for MHT's Inspextor nodes and connected lighting fixtures. Emergency and security lighting remain separate from the PoE system, while the primary lighting infrastructure supports centralized management and flexible workplace operations.

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Why Power over Ethernet?

Power over Ethernet (PoE) provides an efficient approach to modern office lighting by delivering power, data, and intelligent control through Ethernet infrastructure. This reduces the need for separate lighting control systems while supporting centralized management and greater workplace flexibility.

For EPtAC's office renovation, PoE created a connected foundation for tunable white lighting, automated shading, and intelligent building controls.

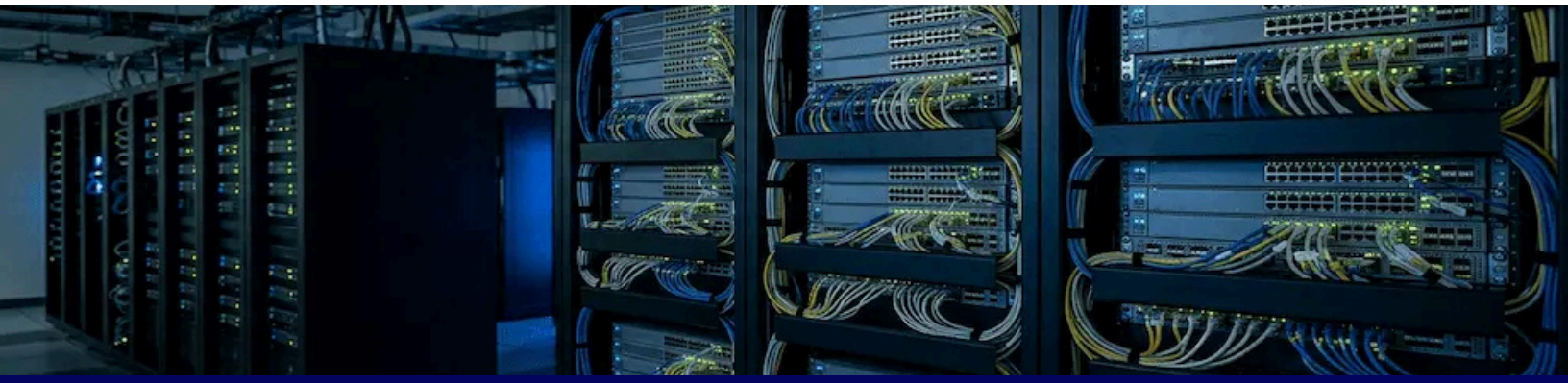
Unified Infrastructure
Lighting, sensors, and controls operate through a common low-voltage network, simplifying system design and deployment.

Centralized Management
Lighting can be monitored and adjusted through a centralized platform rather than relying on isolated controls.

Flexible Control
Tunable white lighting, occupancy sensors, and wall switches allow lighting conditions to adapt to workplace activities.

Enterprise-Grade Network
Cisco Catalyst network technology provides a reliable foundation for distributing power and data to connected lighting devices.

Scalable Architecture
The network-based infrastructure supports future office modifications and additional intelligent building technologies.



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Smart Control & Integration

MHT Technologies' Inspextor hardware provides intelligent control of EPtAC's PoE lighting and shading systems, supporting centralized management and flexible workplace operation.

Integrated sensors and wall switches allow lighting conditions to respond to occupancy and employee preferences while simplifying day-to-day system management.

- **Tunable White Control:** Adjust color temperature to support visual comfort and different workplace activities.
- **Automated Scheduling:** Configure lighting schedules around office operations and occupancy patterns.
- **Occupancy-Based Control:** Smart sensors automatically adjust lighting to reduce unnecessary energy use.
- **Local User Control:** Wall switches allow employees to adjust lighting to meet individual preferences.
- **Software-Based Configuration:** Lighting settings can be modified as workspace requirements change.

Key Benefits & Outcomes:

- Improved workplace comfort
- Centralized lighting management
- Greater operational efficiency
- Simplified system maintenance
- Energy-efficient lighting
- Flexible, scalable infrastructure

> Our goal with this project was to modernize the workspace with intelligent lighting and controls that improve employee comfort while providing the flexibility and performance expected in today's office environments."
>
> — **Burak Gokmen**, Building Owner

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Quick Facts

The EPtAC renovation demonstrates how PoE lighting, tunable white technology, and intelligent controls can modernize an existing office environment. MHT's Inspextor infrastructure provides connected lighting and flexible control throughout the renovated floor, supporting workplace comfort and efficient building operations.

12,500 sq. ft. of renovated office space	**277** PoE-connected lighting fixtures	**177** Inspextor lighting control nodes
129 smart sensors and wall switches	**11** Cisco Catalyst C9300-24H-E switches	**1** unified PoE lighting & shading system

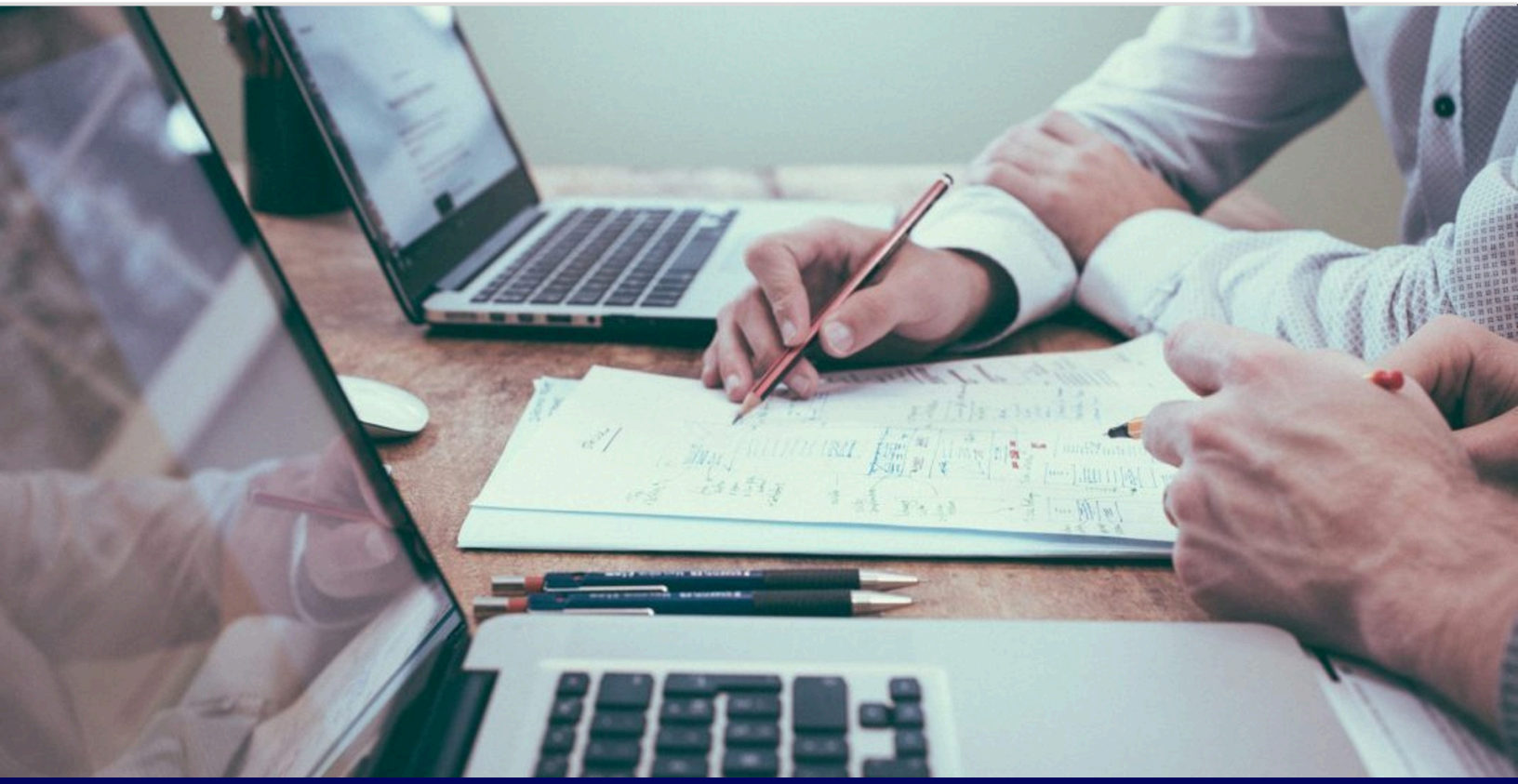
Conclusion

The EPtAC Corporation renovation demonstrates how intelligent infrastructure can transform an existing office environment. By bringing lighting, shading, sensing, and control together through a Power over Ethernet platform, the project establishes a connected workplace designed for comfort, flexibility, and operational efficiency.

Across approximately 12,500 square feet, 277 PoE lighting fixtures, 177 Inspextor nodes, and 129 smart sensors and wall switches provide the foundation for tunable white lighting, occupancy-based automation, and centralized system management.

The renovation provides employees with adjustable lighting and responsive controls while giving building operators a streamlined infrastructure that can accommodate changing workplace requirements.

The EPtAC project illustrates the value of network-based building systems in commercial office renovations. By integrating intelligent lighting and low-voltage technology into an existing facility, MHT Technologies helped create a modern workplace with improved lighting flexibility, simplified operations, and a foundation for future building enhancements.



MHT Technologies

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About MHT Technologies

MHT Technologies (MHT) was founded in 2009 with a focus on advancing low-voltage and Power over Ethernet (PoE) solutions for modern buildings. What began as MHT Lighting quickly evolved into a technology-driven organization specializing in intelligent infrastructure that enables connected environments.

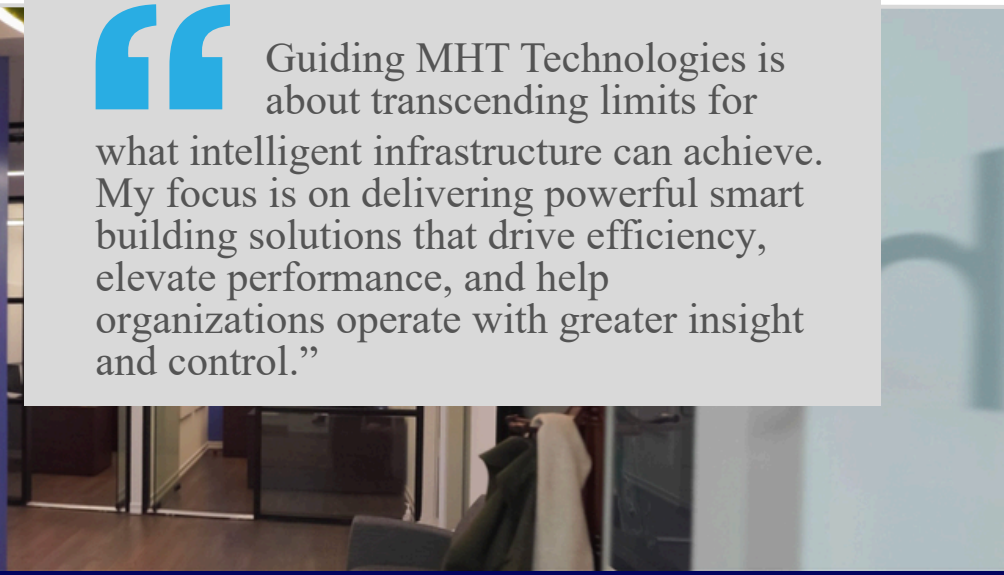
Today, MHT delivers PoE hardware platforms, including its Inspextor nodes and controllers, enabling efficient lighting, environmental monitoring, and smart building integration across commercial, government, and enterprise spaces. By combining intelligent power distribution with scalable infrastructure design, MHT simplifies deployment, improves operations, and enhances overall building performance.

Headquartered in Manhattan, MHT operates a 55,000 sq. ft. engineering and manufacturing facility in Staten Island, with ETL and UL certifications and ISO 9001:2015 accreditation. MHT designs and manufactures PoE and line-voltage lighting solutions while supporting clients through engineering expertise, system design, and project delivery.

AKRAM "AK" KHALIS

MHT Technologies CEO & Inspextor Co-founder

"Guiding MHT Technologies is about transcending limits for what intelligent infrastructure can achieve. My focus is on delivering powerful smart building solutions that drive efficiency, elevate performance, and help organizations operate with greater insight and control."



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