MHT Technologies

CASE STUDY

NJIOT

New Jersey Office of Information Technology

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Project Details

NJIOT launched a phased modernization initiative to transition its facility to Power over Ethernet (PoE) lighting and environmental monitoring. Phase 1 upgrades office and utility areas to improve efficiency and comfort, while Phase 2 expands the deployment into data center and warehouse spaces to support controlled environments and enhanced operational visibility.

Project Name: New Jersey Office of Information Technology

Vertical: Government

Date of Completion: 2026

Location: Trenton, NJ

Primary Use Case: Office Environment & Data Center Infrastructure

Project Size: Approximately 35,000 sq ft

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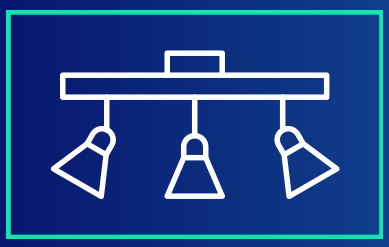
Project Needs

NJOIT required a modernization strategy that would support both administrative office operations and highly sensitive data center environments. Existing lighting and controls lacked flexibility, centralized management, and the ability to monitor environmental conditions in real time.



Install PoE-enabled energy-efficient fixtures

Install smart sensors & wall switches

Improve energy use & operational goals

Solution

MHT Technologies delivered a PoE lighting infrastructure utilizing Inspextor hardware nodes and intelligent fixtures, enabling low-voltage power distribution, streamlined cabling, and granular control. Environmental sensors were integrated to help maintain consistent comfort levels in office areas while ensuring data center conditions remain within operational thresholds.

Process

The project was structured across two phases to minimize disruption. Phase 1 upgrades are nearing completion, while Phase 2 infrastructure components, including PoE nodes shipped in December 2025, are staged for deployment alongside upcoming luminaire installations. Careful planning and coordination allowed NJOIT to transition toward a smarter building environment without interrupting mission-critical operations.

Project Proposal → **Need Assessment** → **Installation/ Completion**

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njoit

New Jersey Office of Information Technology

Overview:

The New Jersey Office of Information Technology, located in Trenton, New Jersey, embarked on a multi-phase modernization initiative aimed at improving efficiency, resiliency, and building intelligence across its facility. Supporting both office staff and data center operations, the project required a solution that could deliver advanced lighting control while maintaining strict environmental performance standards.

MHT Technologies partnered with NJOIT to deploy a scalable PoE lighting infrastructure designed to enhance operational visibility, simplify installation, and reduce long-term energy consumption. By transitioning to low-voltage lighting powered through networked nodes, the organization gains improved flexibility while aligning with modern infrastructure strategies adopted across government facilities.

Scope of Work:

Phase 1 focused on office spaces and select utility areas, introducing PoE-enabled lighting fixtures, smart sensors, and wall-mounted controls to enhance usability and workplace comfort. A total of 266 PoE fixtures and 152 nodes were installed during this phase, alongside environmental monitoring devices that enable responsive adjustments based on occupancy and environmental conditions.

Phase 2 extends the deployment into NJOIT's data center and warehouse environments. Once complete, the project will include an additional 289 fixtures and 181 nodes, expanding the intelligent infrastructure footprint throughout the facility. Emergency and security lighting systems are also integrated into the PoE architecture, supporting consistent performance across operational zones.

Together, both phases will deliver a unified lighting and control environment powered by 555 PoE fixtures, 333 nodes, and 204 smart sensors and switches, creating a consistent infrastructure across approximately 35,000 square feet.

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Project Inception:

NJOIT's modernization initiative was driven by the need to support evolving workplace requirements while maintaining strict environmental standards for critical infrastructure. By adopting PoE lighting, the organization aimed to simplify installation processes, reduce energy usage, and introduce advanced monitoring capabilities across both administrative and technical environments.

- **Energy Efficiency:** PoE systems deliver low-voltage, efficient DC power and bi-directional data over a single Ethernet cable, reducing energy consumption and operational costs.
- **Simplified Installation:** Utilizing Ethernet cabling simplifies the installation process, reducing the need for extensive electrical infrastructure.
- **Environmental Awareness:** Integrated sensors enable ongoing monitoring of temperature, occupancy, and environmental conditions, helping maintain consistent operational performance.
- **Scalability:** The phased deployment strategy ensures the infrastructure can evolve alongside future technology needs without requiring major redesigns.

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Smart Control and Integration:

NJOIT utilized MHT Technologies' Inspextor hardware, an intelligent PoE-based solution for smart buildings. This platform provided:

- **Real-Time Monitoring:** Continuous insight into lighting performance and environmental metrics across office and data center spaces.
- **Automated Adjustments:** Lighting responses driven by occupancy and operational schedules help maintain consistency while reducing unnecessary energy usage.
- **Environmental Sensors:** Smart sensors help ensure workplace comfort and maintain stable conditions required for data center reliability.
- **User Control:** Wall-mounted controls allow staff to make manual adjustments where needed, balancing automation with flexibility.

Key Benefits and Outcomes:

- **Improved Energy Efficiency:** Efficient PoE lighting and smart controls reduce energy consumption while supporting modern operational goals.
- **Enhanced Workplace Environment:** Consistent lighting and environmental monitoring improve comfort for employees while supporting productivity.
- **Operational Visibility:** Centralized infrastructure provides facility managers with better insight into system performance and building conditions.
- **Scalable Infrastructure:** The phased approach creates a foundation that can adapt to additional upgrades or evolving building requirements over time.

> **“Our goal with this project was to create a smarter, more efficient workplace that improves comfort for staff while supporting the performance and reliability required for critical data center operations.”**

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Quick Facts

The NJOIT deployment demonstrates how government facilities can modernize infrastructure through phased PoE adoption, combining energy-efficient lighting with environmental monitoring to support both office and technical environments.

Key Benefits

Improves operations with energy-efficient PoE lighting, intelligent controls, and centralized infrastructure. Lighting and environmental monitoring enhance workplace comfort while providing visibility into system performance. The phased approach establishes a scalable foundation that supports ongoing modernization and evolving facility needs.

Customization

Energy-efficient

Control

Conclusion

The New Jersey Office of Information Technology's phased transition to PoE lighting reflects a strategic approach to modernizing government infrastructure. By integrating intelligent lighting, environmental monitoring, and scalable hardware platforms, the organization has created a more adaptable and efficient workplace while supporting the strict operational requirements of its data center environments.

Through collaboration with MHT Technologies, NJOIT has established a consistent infrastructure across its facility that improves operational visibility, enhances workplace comfort, and simplifies long-term management. The phased deployment also positions the organization to expand intelligent building capabilities over time, supporting evolving technology needs while maintaining reliability across critical spaces.

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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 powers 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, holding ETL, UL, and ISO 9001:2015 accreditations. 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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