



njoit

New Jersey Office of Information Technology

INTELLIGENT INFRASTRUCTURE CASE STUDY

New Jersey Office of Information Technology

Cisco Catalyst PoE infrastructure + the aida smart building platform



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Project Overview

The New Jersey Office of Information Technology (NJOIT) initiated a phased modernization of its approximately 35,000-square-foot facility in Trenton, New Jersey. Supporting government offices, data center operations and warehouse environments, the project introduces intelligent lighting and environmental monitoring to improve efficiency, workplace comfort and operational visibility.

aida, the smart building platform from Building AI Solutions, was selected as the control and monitoring layer for the facility's Power over Ethernet (PoE) lighting and environmental sensors, running on Cisco Catalyst switching with Inspextor nodes, fixtures and sensors supplied by MHT Technologies.

At a Glance

CUSTOMER NEED	Energy-efficient lighting and environmental monitoring across offices, a data center and warehouse space, upgraded without disrupting critical government operations.
CISCO SOLUTION	25 Cisco Catalyst 9300 Series switches provide the PoE power and data backbone for 555 connected fixtures.
AIDA SOLUTION	aida provides centralized lighting control and real-time monitoring of facility conditions, running on MHT Inspextor nodes, fixtures and sensors over the Cisco network.
OUTCOME	Phase 1 is live in the office and utility areas, with deployment continuing into the data center, delivering centralized lighting control and real-time monitoring of facility conditions.

Project Details

Project Name: New Jersey Office of Information Technology (NJOIT)

Vertical: Government

Date of Commission: January 2026

Expected Completion: November 2026

Location: Trenton, New Jersey

Primary Use Case: Intelligent PoE lighting and environmental monitoring for government offices and data center infrastructure, managed by aida

Project Size: Approximately 35,000 square feet of renovated space

Project Needs

NJOIT required an intelligent lighting infrastructure capable of supporting administrative offices and sensitive data center environments. The system needed to improve energy efficiency, provide centralized lighting control and monitor environmental conditions while allowing upgrades to proceed without disrupting critical government operations.

1

Energy-Efficient Infrastructure

Establish a common PoE foundation for delivering power, connectivity and intelligent lighting control across office and technical spaces.

2

Environmental Monitoring

Integrate smart sensors to monitor temperature, occupancy and building conditions in administrative and data center environments.

3

Centralized System Management

Provide greater visibility and control through a network-based platform that supports efficient operations and future expansion.

Solution & Process

aida and MHT Technologies designed a Cisco-enabled PoE lighting solution combining the aida platform, Inspextor nodes, intelligent fixtures and environmental sensors. The phased deployment supports centralized control and flexible expansion across office, data center and warehouse environments.

1. Planning

Defined project requirements and developed a phased infrastructure strategy.

2. Deployment

Installed Phase 1 lighting and controls, managed through aida, while preparing Phase 2.

3. Commissioning

Tested and phased the installation to minimize operational disruption.



Project Challenge

NJOIT required a modern lighting infrastructure capable of supporting administrative offices, data center operations and warehouse environments within a unified platform. The phased deployment needed to improve lighting efficiency, environmental monitoring and centralized management while minimizing disruption to mission-critical government operations.

Scope of Work

The design supports 555 PoE fixtures across approximately 35,000 square feet. Phase 1 includes 266 fixtures and 152 MHT Inspextor nodes, and Phase 2 adds 289 fixtures and 181 nodes. The complete system incorporates 204 smart sensors and wall switches.

25 Cisco Catalyst 9300 Series switches provide the power and data backbone for the Inspextor nodes and connected fixtures, and aida provides the control and monitoring layer, supporting centralized lighting control, environmental monitoring and scalable infrastructure across office and technical environments.



**Optimizing IT Infrastructure to Support
and Connect the State of New Jersey
Government Departments and Agencies**

Why Power over Ethernet?

Power over Ethernet provides an efficient approach to modern building infrastructure by combining power, data and intelligent control over a common Ethernet network. Rather than relying on separate lighting and control systems, PoE enables centralized management while simplifying deployment and supporting future expansion.

For NJOIT, this approach provides the flexibility to modernize government offices and technical environments through a coordinated, phased deployment.

Unified Infrastructure

Lighting, sensors and controls operate across a common Ethernet-based network, reducing infrastructure complexity.

Centralized Management

Lighting and environmental conditions are monitored and managed in aida rather than through isolated systems.

Flexible Control

Lighting schedules, occupancy response and local settings can be adjusted to suit office and technical requirements.

Enterprise-Grade Network

Cisco Catalyst switches provide a reliable power and data foundation for connected lighting and control devices.

Scalable Architecture

The phased PoE infrastructure supports future upgrades and expansion across government facilities.



Smart Control with aida

aida works with the Cisco network and Inspextor hardware to deliver intelligent lighting control and environmental monitoring across NJOIT's facility.

The platform gives facility personnel centralized visibility into lighting and building conditions, helping them manage office environments while supporting the requirements of critical technical spaces.

- **Real-Time Monitoring:** Monitor connected lighting devices and environmental conditions from a centralized interface.
- **Automated Scheduling:** Configure lighting schedules around building operations and space requirements.
- **Occupancy-Based Control:** Smart sensors adjust lighting based on occupancy to reduce unnecessary energy use.
- **Local User Control:** Wall switches let staff adjust lighting where manual operation is preferred.
- **Environmental Monitoring:** Integrated sensors provide temperature and environmental data to support facility operations.

Key Benefits & Outcomes

- ✓ Improved workplace comfort
- ✓ Centralized facility management
- ✓ Greater operational visibility
- ✓ Simplified long-term maintenance
- ✓ Energy-efficient lighting
- ✓ Scalable government infrastructure



Quick Facts

The NJOIT project shows how government facilities can modernize through phased PoE adoption, combining intelligent lighting, environmental monitoring, the aida platform and Cisco network infrastructure.

35,000

sq. ft. of renovated space

555

PoE-connected lighting fixtures

333

MHT Inspextor nodes

204

smart sensors and wall switches

25

Cisco Catalyst 9300 Series switches

2

deployment phases

Conclusion

The New Jersey Office of Information Technology project shows how intelligent infrastructure can modernize government facilities while supporting demanding operational environments. By integrating lighting, sensing and control through a Power over Ethernet platform managed by aida, the project establishes a connected foundation supported by Cisco network technology.

Across approximately 35,000 square feet, the two-phase deployment encompasses 555 connected fixtures, 333 Inspextor nodes and 204 smart sensors and wall switches, providing a coordinated infrastructure for lighting control and environmental monitoring.

The phased approach lets NJOIT modernize administrative offices while extending intelligent infrastructure into data center and warehouse environments, with centralized management, occupancy-based lighting and environmental monitoring supporting more efficient operations.

About aida

aida™ by Building AI Solutions is a smart building platform that brings lighting, shading, HVAC and sensors under one intelligent control layer. The aida Controller runs at the edge of the building network, so schedules, occupancy automation and daylight control keep working even when the internet does not, while the aida cloud platform gives operators centralized visibility across every site.

aida is built for Cisco networks. It runs PoE lighting and devices powered by Cisco Catalyst switching, and integrates with Webex (room controls on Room Navigator), Cisco Spaces (floor plans) and Splunk (building events and energy data).

Project Partners

Building AI Solutions (aida) — Smart building platform: lighting and shading control, scheduling, occupancy automation and monitoring.

Cisco — Catalyst 9300 Series switching: PoE power and data for every connected fixture.

MHT Technologies — PoE hardware, including Inspextor nodes and fixtures, plus system design and installation.

About Building AI Solutions

Building AI Solutions Inc. is headquartered in New York City. aida is deployed with partners MHT Technologies and Digital Building Solutions.



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