TURN-KEY
TECHNOLOGIES

CASE STUDY

INFRASTRUCTURE BUILT FOR AN URBAN CAMPUS

How Turn-key Technologies helped a large New York City higher-education institution modernize its network infrastructure for growing connectivity demands.

THE PROJECT AT A GLANCE

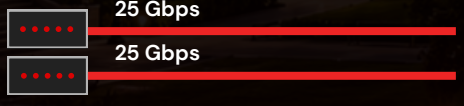
50 Gbps
Core-to-IDF Connectivity

Wi-Fi 6E
Wireless Technology

2.5 Gbps
Maximum Reported 6 GHz Data Rate

HIGH-AVAILABILITY CORE ARCHITECTURE

VSX CHASSIS PAIR
Dual 25 Gbps multi-chassis LAGs (MC-LAGs)



50 Gbps
AGGREGATED THROUGHPUT

THE CHALLENGE & THE PLAN

THE CLIENT ENVIRONMENT

A large, multi-building college in New York City relied on its campus network for learning platforms, research, administrative operations, and everyday access by students, faculty, and staff. A growing mix of personal devices put additional pressure on both wireless coverage and the wired infrastructure behind it.

THE CHALLENGE

Inconsistent coverage and aging infrastructure. Legacy wireless equipment and older switching could not consistently meet demand. The college needed to improve campus-wide connectivity while addressing capacity, network access, and long-term maintainability.

WHAT NEEDED TO CHANGE

- More consistent wireless coverage
- Higher wired-network capacity
- Secure access for varied user groups
- A manageable platform for future expansion

TTI'S APPROACH

01

Assess the environment

Work with the institution's networking team and technology partner to review existing systems and align the modernization plan with operational goals and budget.

02

Modernize the foundation

Upgrade campus switching and expand core-to-IDF connectivity to support greater wired capacity and the institution's evolving wireless infrastructure.

03

Strengthen access and oversight

Support the adoption of centralized access policies, device onboarding, and guest connectivity management for wired and wireless users.

THE PROJECT & ITS IMPACT

DOCUMENTED INFRASTRUCTURE UPGRADES

Following its initial network modernization, the institution continued investing in infrastructure improvements to support increasing connectivity demands. Subsequent upgrades have strengthened the campus network backbone and introduced newer wireless technology.

50 Gbps
Current Core-to-IDF Connectivity

Wi-Fi 6E
Updated Wireless Access Point Technology

2.5 Gbps
Maximum Reported 6 GHz Wireless Data Rate*

**Reported wireless capability; actual performance depends on device compatibility, supporting interfaces, network conditions, and configuration.*

HIGH-AVAILABILITY CORE ARCHITECTURE

VSX CHASSIS PAIR
Dual 25 Gbps multi-chassis LAGs (MC-LAGs)



50 Gbps
AGGREGATED THROUGHPUT

Redundant core architecture designed to support resilient campus connectivity.

WHAT THE MODERNIZATION ENABLED

These upgrades provide the college with a stronger network foundation to support high-density connectivity, modern wireless applications, and future infrastructure requirements.

With 50 Gbps core-to-IDF connectivity and a high-availability core architecture providing 50 Gbps of aggregated throughput, the college has strengthened its wired network capacity and resilience. Wi-Fi 6E access points further support connectivity in the 6 GHz spectrum for modern campus devices.

For other New York City organizations, the lesson is practical: modern wireless performance depends on the capacity and readiness of the underlying wired infrastructure. Network switching, cabling, distribution infrastructure, and wireless technologies must work together to support reliable, scalable connectivity.

BUILD A STRONGER FOUNDATION FOR YOUR NETWORK

From structured cabling upgrades to campus-wide network modernization, Turn-key Technologies delivers reliable, scalable infrastructure built for your organization's future.

LET'S DISCUSS YOUR NEXT PROJECT →

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