# Case Study

## Ivy League Research University Enhances Campus Connectivity with Highway 9 Private Mobile Networks

***Client Overview:***

**Customer:** Ivy League Research University

**Sector:** Higher Education

**Location:** United States

**Project Type:** Private Mobile Network (PMN) for athletics streaming, pop-up events, and campus operations

## Background

An Ivy League research university, known for its academic excellence, vibrant campus community, and commitment to innovation and interdisciplinary learning sought to enhance its campus-wide wireless connectivity to better support event-driven operations and critical campus functions. Existing Wi-Fi and public carrier networks did not consistently meet the demands of high-density venues, pop-up events, and live athletics streaming. To enable reliable, scalable, and centrally managed connectivity, university embarked on deploying a dedicated Private Mobile Network tailored to their unique campus needs with plans for future expansion.

## Challenge

The university faced critical challenges related to ensuring pervasive and reliable connectivity for modern campus operations, particularly in non-traditional areas and high-density events:

1. **Inconsistent Wi-Fi Coverage:** The university experienced connectivity access problems in specific spots around the buildings where Wi-Fi coverage did not reach. They required a solution to leverage connectivity in these difficult-to-access areas.
2. **Reliability for Remote Commerce:** The university needed a robust solution to facilitate remote payment systems and ticketing, enabling reliable card swiping and payment system technology for pop-up events (such as setting up a tent for commencement ticketing) and within the dining facility and other locations.
3. **Uplink Streaming Demands:** The athletics department sought a stable system to enable cameras for sports events at Brown Stadium, requiring reliable uplink streaming capabilities for live footage.

The university required reliable, high-performance connectivity to support campus-wide events and operational systems:

- **Athletics live streaming:** Stadiums and sports complexes needed seamless coverage to broadcast games without buffering or interruption.

- **Pop-up events:** Commencement, dining hall events, and other temporary gatherings required ticketing devices and payment systems to operate reliably.
- **Device reliability:** Existing Wi-Fi and public carrier networks were inconsistent during high-density events, impacting user experience and event operations.
- **IT efficiency:** Campus IT needed centralized control over multiple device types and event locations without deploying temporary infrastructure each time.
- **Future security expansion:** Plans to add cameras and monitoring systems require a network capable of scaling additional mission-critical applications.

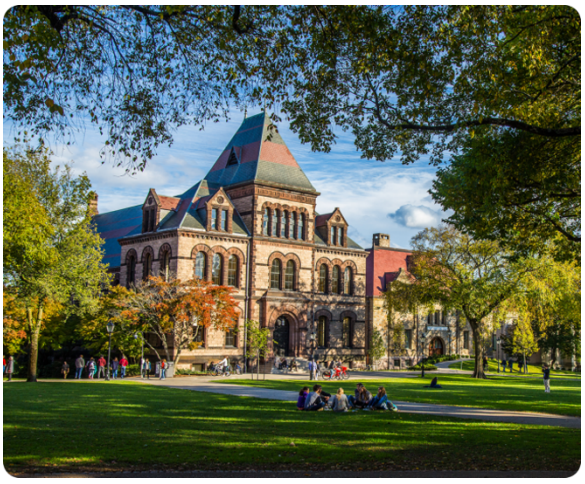
They sought a dedicated, centrally managed Private Mobile Network that could reliably support current event-focused use cases while being scalable for future security and campus operations.

## Highway 9 Solution

The university deployed a Private Mobile Network (PMN) with plans to expand into Hybrid Mobile Network as a Service (HMNaaS) for additional capacity and future security coverage.

### Solution Highlights:

- **PMN:** Dedicated network supporting:
  - Commencement ticketing devices for pop-up events
  - Dining services payment systems for campus events
  - Athletics live streaming at stadiums
- **Future HMNaaS:** Planned hybrid deployment for carrier extension (CX) to support larger events.
- **Centralized orchestration:** Single management platform for IT to monitor performance, prioritize traffic, and optimize connectivity across campus.



*Core Use Cases*

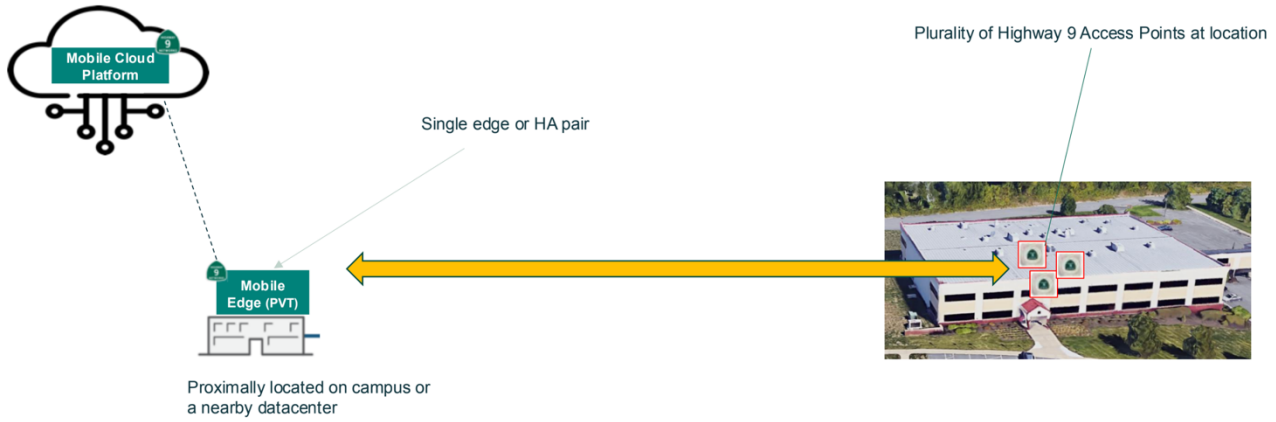
1. **Commencement Ticketing Devices –** Seamless operation during pop-up events, ensuring smooth sales and access control.
2. **Dining Services Payment Devices –** Reliable connectivity for temporary point-of-sale systems across campus events.

3. **Athletics Live Streaming –** High-quality video broadcast from stadiums without interruptions.
4. **Future Security Cameras –** Planned integration of indoor/outdoor cameras into the PMN/HMNaaS network for centralized monitoring.

## Outcomes & Benefits

| Challenge | Solution | Value Delivered |
|---|---|---|
| Unreliable connectivity for pop-up devices | PMN | Smooth ticketing and payment operations at events |
| Athletics streaming interruptions | PMN | High-quality, uninterrupted live video for fans and staff |
| Fragmented event infrastructure | Centralized PMN | Reduced IT overhead, simplified device management |
| Future security integration | HMNaaS (planned) | Scalable network ready for cameras and monitoring systems |

HIGHWAY 9 MOBILE CLOUD DEPLOYMENT ARCHITECTURE




The university's deployment of Highway 9's Private Mobile Network (PMN) provided reliable, high-performance connectivity that transformed campus event operations and core systems:

- **Seamless Ticketing and Payments:** PMN ensured smooth operation of commencement ticketing devices and dining services payment systems during high-density pop-up events, eliminating previous connectivity disruptions.
- **Uninterrupted Athletics Streaming:** The network delivered high-quality, low-latency video streaming for live sports events at stadiums, enhancing fan and staff experience without buffering or dropouts.

- **Future-Ready Scalability:** The planned expansion into Hybrid Mobile Network as a Service (HMNaaS) will enable seamless carrier extension and integration of indoor/outdoor security cameras, ensuring the network scales with evolving campus security and operational needs.

## In Customers' Words

Highway 9's private mobile network has given us the reliability and performance we were missing. From seamless ticketing and payments during commencement to uninterrupted live streaming for athletics, our teams now have confidence in the network. Just as important, we have a clear path to scale into a hybrid model for larger events and future security needs, without adding complexity for our IT staff.

– Director, Network Technology, Ivy League University

## Looking Ahead

The University plans to:

- **Expand HMNaaS Coverage**: Scale network capacity and coverage for larger campus events and high-traffic venues using hybrid cloud-hosted mobile core capabilities.
- **Integrate Advanced Security Applications**: Deploy indoor and outdoor security cameras centrally managed through the network to enhance campus safety and monitoring.
- **Sustain Reliable Connectivity**: Continue supporting critical campus applications including athletics streaming, pop-up ticketing, and dining payment systems with consistent, high-quality wireless performance.
- **Explore Broader Use Cases**: Leverage the private mobile network infrastructure for academic and operational innovations, driving further digital transformation across campus.

### *Get started today*

*Embark on your journey to unlock smart connectivity in higher education.*

**Get a Demo**

***Contact Us:*** *info@highway9.com*