



ConnX AI

Transit Network Assessment & Audit

Unifying Visibility Across Transit IT, OT, and Communications

The Challenge Transit Agencies Face

Modern transit operations depend on a highly interconnected ecosystem that includes:

- **Onboard vehicle systems**
- **Mobile and wireless communications**
- **Station, yard, and facility networks**
- **Command and control platforms**
- **Converged IT and Operational Technology (OT) environments**

These systems often evolve independently, creating **visibility gaps, operational blind spots, data inaccuracies, and cybersecurity exposure.** While assessments can reveal what exists, agencies increasingly require **audit-level validation** to confirm that systems are performing as intended.

OPERATIONAL CONFIDENCE REQUIRES BOTH INSIGHT AND VERIFICATION.

SEE YOUR TRANSIT NETWORK CLEARLY. VALIDATE IT WITH CONFIDENCE.



A comprehensive assessment and audit of transit IT, OT, and communications systems designed to improve operational reliability, enhance safety, and reduce risk across bus and rail operations.

What the ConnX Transit Network Assessment Delivers

The ConnX Transit Network Assessment & Audit provides a **unified engagement** that combines:

Audit-grade validation to verify performance, resilience, and operational integrity

Assessment-level visibility to understand the full transit network environment

The ConnX Difference

ConnX combines transit-specific expertise, network engineering rigor, and operational awareness.

- ☑ **In-Depth understanding of bus & rail operational environments**
- ☑ **Integrated assessment and audit methodology**
- ☑ **Experience across IT, OT, and communications convergence**
- ☑ **Operational Resilience**
- ☑ **Clear translation of technical findings into operational impact**

THIS ENGAGEMENT HELPS ANSWER CRITICAL QUESTIONS SUCH AS:

How do our transit networks truly operate day to day?

Where do IT, OT, and communications systems introduce risk?

Are CAD/AVL, CCTV, and passenger information systems accurate and reliable?

What corrective actions will most improve safety, service reliability, and resilience?

www.connxai.com +1-609-438-6100 connxsales@connxai.com

ConnX AI

Scope of the Assessment

IT & OT Network Architecture
- Review of transit IT and OT network design
- Validation of segmentation and security controls
- Evaluation of redundancy, failover, and resiliency for mission-critical systems

Bus & Rail Operational Networks
- Onboard networks supporting vehicle control, monitoring, and telemetry
- Fare systems, onboard computing platforms, and communications equipment
- Reliability, latency, and bandwidth utilization

Mobile Carrier Connectivity
- Cellular connectivity supporting CAD/AVL, CCTV backhaul, and passenger systems
- Carrier coverage, signal quality, handoff performance, and redundancy
- SIM management, carrier diversity, and failover strategies

Wi-Fi Networks (Onboard & Facilities)
- Onboard Wi-Fi for buses and rail vehicles
- Station, depot, and yard Wi-Fi coverage and performance
- Traffic segmentation between operational and passenger use

CCTV & Video Systems
- Onboard and station video surveillance systems
- Video quality, storage, retention, and access workflows
- Backhaul performance and real-time monitoring capabilities

CAD / AVL Accuracy & Data Integrity
- GPS accuracy, latency, and update frequency
- Data synchronization across vehicles, networks, and control systems
- Impacts on service reliability and passenger information

Digital Signage & Passenger Information
- Accuracy and timeliness of real-time passenger data
- Redundancy and failover mechanisms
- Operational impacts of data delays or failures

Command & Control Operations
- Control room tools, dashboards, and workflows
- System integration and situational awareness
- Cybersecurity and access controls supporting operations

Deliverables

Executive Summary
Transit network health and risk posture

Current-State Architecture Overview
IT, OT, and communications systems

Assessment Findings
Visibility gaps and dependencies

Audit Findings
Performance, accuracy, and resilience validation

Corrective Action Roadmap
Practical, prioritized remediation guidance

The Outcome

- **Clear visibility across the entire transit network ecosystem**
- **Verified confidence in system performance and data accuracy**
- **Reduced operational, safety, and cybersecurity risk**
- **Improved reliability for riders and operators**
- **A defensible roadmap for modernization and resilience**

The ConnX Assessment & Audit Process

Discovery & Intake
- Stakeholder interviews
- Review of architecture, documentation, and operational workflows
- Identification of service-critical systems and risks

Assessment: Visibility & Baseline Analysis
- End-to-end mapping of transit networks and systems
- Identification of gaps, dependencies, and constraints
- Establishment of a clear current-state baseline

Audit: Validation & Performance Review
- Verification of system performance and resilience
- Validation of data accuracy and operational behavior
- Identification of failure points and control gaps

Findings & Corrective Action Roadmap
- Risk-based prioritization of findings
- Short-, mid-, and long-term corrective actions
- Alignment to operational priorities and modernization goals

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