REQUEST FOR BOARD ACTION

HENDERSON COUNTY
BOARD OF COMMISSIONERS

MEETING DATE: March 19, 2025

SUBJECT: Automatic Passenger Counters and Automatic Vehicle Locator Technology Vendor Selection

PRESENTER: Janna Bianculli, Senior Planner
Lee Stevens, Planner III

ATTACHMENTS: Yes
1) Connexionz APC software and CAD/AVL technology Proposal
2) Proposal Scoring Matrix

SUMMARY OF REQUEST:

Henderson County conducted a Request for Proposals for the procurement of Automatic Passenger Counters (APC) software and Automatic Vehicle Locators (CAD/AVL) technology for the Apple Country Public Transit system. The County followed all required federal and local procurement rules and procedures for an RFP process. Connexionz provided the highest-scoring proposal using the evaluation criteria defined in the County's RFP. The cost of the APC software and CAD/AVL technology has already been approved in the budget, and the cost will be reimbursed by the Federal Transit Administration (FTA) 5307 grant funding at a rate of 80%.

BOARD ACTION REQUESTED:

The Board is requested to approve the proposal from Connexionz to procure the County's APC software and CAD/AVL technology for the Apple Country Public Transit system.

Suggested Motion:

I move the Board approve the proposal from Connexionz and select them as the winner of the County's APC and CAD/AVL Request for Proposals.

Henderson County – Apple Country Public Transit

Automatic Passenger Counting Software and Automatic Vehicle Location Technology for Fixed-Route Fleet

In response

by:	Henderson County
for:	Apple Country Public Transit Fixed Route CAD/AVL APC
Date of this Proposal:	21, January 2025

connexionz
SMARTER TRANSIT SOLUTIONS

Connexionz Limited
27720 Avenue Scott
Unit 190
Santa Clarita CA, 91355
United States
www.connexionz.com

21 January 2025

Lee Stevens, Planner III

100 N. King St.

Hendersonville, NC 28792

Dear Lee and Procurement team,

After reviewing your documents with our developers, technicians, and management team, Connexionz is confident that we can support your strategy and mission.

By enhancing your CAD/AVL, you can provide Safe, Secure, Reliable, Effective, and Accessible public transport choices that enhance the quality of life for ridership at Apple Country Transit. Our understanding of your requirements is as follows:

- Computer-Aided Dispatch (CAD)
- Automatic Vehicle Location (AVL)
- Integration with UTA's Automatic Passenger Counters (APCs)
- Easy to use Patron Mobile App
- Reporting
- General Transit Feed Specification (GTFS)
- 24/7/365 Support & Maintenance
- Training
- Standard Warranty

What sets us apart is our extensive experience and the unique features of our system. We have provided CAD/AVL intelligent transport systems for over 20 years. Currently, 28 clients utilize the proposed product we are offering you.

Connexionz is recognized for having well-trained, highly motivated, customer-focused, and community-minded employees. Our team harnesses the power of our solutions to fulfil their commitment to enhancing the quality of life for all who use public transit.

Our objective with this proposal is to demonstrate how Connexionz is uniquely qualified to be your right partner and detail how we will make this project a success and your vision a reality. Our solution is anchored in the following key attributes that will benefit you:

Simple, Straightforward, Long-Term Solution

Our system is a cloud-based platform. This means you will always have the latest features and improvements without needing manual updates or additional expenses.

A cloud-based CAD/AVL system will also enable your team to monitor and manage your operations easily from anywhere.

We produce and use highly accurate GPS data to tell you where your vehicles are, have been, and where they will be. This is the basis for all tools that allow you to plan and implement new services, manage them once they go operational, keep your team informed on their performance, and let your riders confidently plan and manage their journeys.

Reliable Service Delivery

At Connexionz, we will continue to thoroughly explore your needs, goals, and unique challenges, laying the foundation for a strong working relationship. Establishing trust and clear communication from the outset is paramount, ensuring alignment on expectations and strategies.

> "When we went looking for a new system, we wanted to find a partner, not just a vendor. After all these years with Connexionz, I want to tell you that I can say we found that partner".

- Steve Pont, Former COO Tri Delta Transit

Reliable and Experienced Team

During your project, our Customer Success Team will look after you. Nune Arslanian will serve as your single point of contact throughout the project and take excellent care of you. She will organize regular and frequent meetings to ensure your project is well coordinated with you and your team.

Nune will also coordinate a team of well-qualified and experienced technicians to manage your deployment. Once the project is up and running, Hugo Valdovinos will be your Account Manager and first point of contact.

> "Nune and Hugo and their staff have been so wonderful overall this time. And we look forward to seeing things continuing".

- Nick Love, Former Assistant Manager of Operations, StarTran, Lincoln, Nebraska.

On behalf of Connexionz, I would like to thank everyone at Henderson County – Apple Country Public Transit for the opportunity to submit the following proposal in response to the above-referenced RFP with no known conflicts of interest.

We are available for any clarifications or a demonstration of our system. We look forward to discussing our proposal with you in more detail.

Sincerely,

Patrick O'Donnell

Patrick O'Donnell
Head of Sales – North America
Tel: (712) 242-8688
patrick.odonnell@connexionz.com

This Proposal shall remain valid for at least 90 days from the submittal date. If Henderson County receives a Freedom of Information Act request, please advise us, and we will provide you with a redacted copy.

Index

Executive Summary

Our understanding of your requirements

Apple Country Transit is looking to outfit its fleet with APC technology, and Connexionz will offer this in a unique direct partnership with UTA to provide both APC technology and a CAD/AVL system. You operate six fixed-route buses and two cutaway vans in commuter service.

A key request in your RFQ is that our service integrate with APCs. And as mentioned above, Connexionz has a tested and proven solution to provide both.

We have evaluated your RFQ and developed a response that will meet your requirements and future-proof your CAD/AVL system for expansion and upgrades.

Our Solution

An easy-to-use customer-facing app: The Connexionz Mobile App, which will carry your branding and offer many benefits. Users can access the transit industry's most accurate Real-Time Passenger Information (RTPI), enhancing their travel experience. The app's live load occupancy feature provides real-time information, helping users plan their journeys more effectively. By engaging with the community more effectively and boosting ridership with a more positive rider experience, the app contributes to a more efficient and popular transit service.

SCENARIO 2 – Software and Rider Mobile App

Connexionz Position: Fixed Route App Today, Fare Collection, and Demand Response as Options. There are optional methods and abilities to expand the application functionality for fare purchasing or working with technology or partners if needed to request paratransit pick-ups. The requirements for this solution would be evaluated, estimated, (including project planning), and a proposal would be provided to Apple Country Transit for consideration.

Computer-aided dispatch with instant replay: Our system serves up all the real-time data and information your dispatchers need in the most practical and accessible manner. The 'instant replay' feature allows you to review, save, and share a 'replay' of historical data, providing valuable insights and aiding decision-making. We offer the data and information dispatchers need without clutter, ensuring a streamlined and efficient operation.

> "One word to describe my experience with Connexionz would be reliability. All the other bells and whistles are terrific, but none of that works unless the system works, and it does, it works 99.99% of the time."

- Tim Bates, Transit Coordinator, City of Corvallis

Useful reports: Connexionz's integrated system stores large amounts of data from the CAD/AVL system and APC sensors. This data fulfills all reporting and certification needs while being organized cohesively.

The ability to integrate with UTA passenger counters: We have built a strong partnership with UTA and consulted with them as we developed this proposal. Our proposal includes seeing bus counts in real-time.

The UTA-APC/Connexionz-AVL combination is a mature configuration that has been successfully operating in six transit agencies:

- Kings Area Regional Transit,
- Golden Empire Transit, Bakersfield,
- Santa Clarita Transit,
- Solano Country Transit (SolTrans),
- Muskegon Area Transit System, and
- San Luis Obispo (SLORTA).

> "When it comes to data quality, Connexionz stands above its competitors. Connexionz is a strong, proven integrator of UTA's systems and makes data transfer easier and data quality higher."

- Tom Kowalski, CEO – Urban Transit Associates.

As mentioned, our partnership is strong. That said, the specific understanding of agencies who have successfully certified with the NTD Requirements involves various parameters that the agency and UTA alone manage. The key part of the NTD requirements is the UTA software and services alone, well beyond the agencies that use both Connexionz and UTA.

In addition, the initial and continued testing plus calibration of the APC System will be arranged in cooperation with our UTA partner. More information about the UAT arrangement is described in Products and Services.

A Static and live GTFS feed: GTFS data comes out of the box and is automatically created and updated by the system to reflect route and schedule changes; no manual intervention or waiting is required to get the latest GTFS, which is critical when 3rd party GTFS consumers rely on the data being accurate.

> "Our experience with Connexionz has been nothing short of exceptional. As the team responsible for setting up and supporting our GTFS schedules, they have consistently demonstrated their expertise, reliability, and dedication to our success."

- Vincent Tamuzza - Director of Information Systems - NY Waterway

Responsive customer service: Our team is available to you 24/7/365. Our support is second to none:

- Over the last year, our customers have rated their overall support satisfaction at 4.9 out of five.
- Our average response time in the last quarter has been 1.23hrs and within the previous seven days, it has been 2.9 minutes.
- *This data was pulled on November 30, 2024.*

In-person training: Our experience tells us it is prudent to time for onsite training, particularly for individuals in anchor roles.

Our value proposition is clear: We don't just deliver training; we provide real-world, hands-on, practical education from trainers with extensive experience and transit knowledge.

> "We don't have to worry about our service dropping down… and the service [field] technicians that you all have sent have become like family with us… we appreciate the help, and I can't ask for any better."

- Linuel (Lynn) Wilhoite, Transit Director

Firm's Capabilities and Experience

Overview and History of the Company

Connexionz is a limited liability company registered in the United States. Established in 1996, Connexionz has over 28 years of experience delivering global CAD/AVL Intelligent Transportation Systems (ITS). Our primary focus has always been making a valuable difference to small and medium agencies across the USA.

We design, deliver, and support global end-to-end CAD/AVL Intelligent Transportation Systems solutions for public transportation agencies. Connexionz also specializes in consultancy for Bus Transit Centers and Business Intelligence for long-range technology planning.

Connexionz remains wholly owned by a small number of shareholders. The corporation is registered in the state of California. Our Head office is 27720 Avenue Scott, Santa Clarita, California 91355.

Our California office is responsible for account management, deployment, and support of the installation of Intelligent Transportation Systems into US transit agencies, while our international office fronts all development. The organization's total number of full-time personnel is twenty (20) plus four (3) Board of Directors representing the shareholders.

No judgments, litigation, licensing violations, or other violations concerning Connexionz are outstanding or resolved.

Connexionz Qualifications

We have built an incredible team of dedicated hardware and software engineers, project managers, and field technicians to ensure successful project deployment with unparalleled service and support.

We design, deliver, and support end-to-end ITS solutions for transportation providers like yourself. Currently, 28 clients utilize the Connexionz proposed product we are offering you in the United States. Our cloud-based solutions mean that our system will evolve as new features are added, giving you flexibility should you wish to adopt them.

> **"Connexionz took our wants and ideas and developed them into a multi-faceted project that includes Automatic Vehicle Location Tracking, an Electronic Farebox, an Automated Passenger Counter, a Camera System, a Mobile App, and probably more that I forget at the moment. So, whether it is a larger project like ours or a more specific project that you might like information about, I highly recommend them."**

- Linuel Wilhoite, Transit Director, Pigeon Forge Mass Transit.

We pride ourselves on two key differentiators: long-standing customer relationships that have been renewed multiple times and our unique ability to work very well with third-party hardware and software for integration purposes. We will manage your projects now and easily implement added value as your objectives and visions continue to become reality.

For example, we have worked with Pasadena CA Transit and have served them since 2012. Similar stories can be told about Tri-Delta Transit in Northern California, a customer for over 18 years, and Santa Clarita Transit, also in California, a client for over 16 years.

Developing long-standing relationships

Support and Training

We offer 24/7/365 online and phone support so customers can get assistance any time of the day or night. Our support is second to none:

- Over the last year, our customers have rated their overall support satisfaction at 4.9 out of five.
- Our average response time in the last quarter has been 1.23hrs and within the previous seven days, it has been 2.9 minutes.
- *This data was pulled in November 2024.*

> **"You've given us people who we can go directly to, so we don't have to put in tickets if we don't want to. We can go straight to a couple of folks for immediate help. But we do use your help desk and the ticketing system, and you'll respond to that very quickly. That part's been great."**
>
> *- Linuel (Lynn) Wilhoite, Transit Director Pigeon Forge Mass Transit (2024).*

Our CORE system platform and helpdesk have built-in training documentation and videos to help users help themselves.

We provide remote training built into our support program and are happy to facilitate in-person and onsite training on a time and materials basis if required.

Reliability

Clients rely on us to deliver robust, dependable solutions that meet their needs. This reliability stems from our commitment to rigorous testing, quality assurance protocols, and timely proactive support, which ensure that our products and services consistently perform at the highest level.

Flexibility

We recognize that each project is unique, so we work closely with clients to tailor solutions that align with their goals and constraints. Whether adapting to changing requirements or integrating with existing systems, we excel at finding innovative and flexible solutions to meet our clients' needs.

On-time and within budget

The company's project management processes are finely tuned to ensure efficient execution and timely delivery. With a focus on clear communication, proactive problem-solving, and diligent planning, our team consistently meets or exceeds project deadlines, earning the trust and satisfaction of clients.

Personnel Assigned

Resources

At Connexionz, it's our people who make the difference. Our entire team is dedicated to serving mid-size transit agencies like yours.

Our team provides knowledge and a robust set of values. The strength and talent of our transit technology professionals, combined with our company-wide values, allow us to deliver our services to a high standard.

Nune Arslanian PMP ™ will be Apple Country Transits Project Manager. Nune has a lot of experience in delivering similar projects and will remain your point of contact throughout the project's life.

The success of our projects is built on the strength of our collaborative and flexible approach, efficient and effective management systems, clear and concise communications, and quality reporting.

We recognize that every project is unique and tailor our delivery approach to each project's specific requirements, taking time and care to understand the functional needs and operational environment.

We are confident that our high level of attention to project management is one of the main reasons Connexionz will be your best choice.

Where relevant, Nune will submit Project Phase Acceptance Certificates to you for approval, which acts as a stage gate to subsequent project phases.

During the final Project Closure phase, Nune will review all compliance items with you to ensure the system has been delivered as specified and then present a Project Acceptance Certificate for your approval. Once signed, this certificate will signify the closure of the project.

Once the implementation for this project is signed off, Hugo Valdovinos will be your account manager, and Marcos Mendez will be your Customer Support Technician.

Marcos will be your main point of contact for business-as-usual support activities and will schedule regular meetings, provide monthly support update reports, and address any concerns you may have. Hugo will be your support escalation point and regularly check in to ensure your current and future needs are met. The Connexionz Customer Success Team backs up Marcos and Hugo, who are responsible for providing support and advice for the deployed solution.

> "You've given us people who we can go directly to, that we don't have to put in tickets if we don't want to, we can go straight to a couple of folks for immediate help. But we do use your help desk and the ticketing system, and you'll respond to that very quickly; that part's been great."

- Linuel (Lynn) Wilhoite, Transit Director - Pigeon Forge Mass Transit.

Our Team

This section showcases our team, which will work with you to develop a Transit Computer-Aided Dispatch and Automated Vehicle Location (CAD/AVL) System to meet your requirements. We have included resumes of the individuals in charge of the service.

Vaughan Keenan I Chief Operating Officer

Vaughan is a certified PRINCE2 Practitioner with a 15-year history of making significant contributions—both technical and project-discipline-related—to successfully delivering software and technology products.

Key Responsibilities:

As your Chief Operating Officer, he will work with Nune to ensure that hardware, software, and key resources are available for your project.

Key Projects:

- Chief Operations Executive/Project Manager for ITS implementation of CAD/AVL systems at Yakima Transit
- Chief Operations Executive/Project Manager for ITS implementation of CAD/AVL systems at Solano County Transit (SolTrans)
- Chief Operations Executive for ITS implementation of CAD/AVL systems at the City of Racine
- Chief Operations Executive for ITS implementation of CAD/AVL systems at the City of Lincoln (StarTran)

Nune Arslanian I Project Manager

Nune has over 5+ years of IT project management experience and is a Certified Project Manager Professional (PMP) and Certified Scrum Master CSM®, experienced in Agile Development Methodology and System Analysis.

Key Responsibilities:

As your project manager, she will be responsible for the overall success of the team and project. Within this, she will develop the project schedule and project charter and work with you to ensure all goals and deliverables are scoped. She will direct the work, document reports, control change, and monitor quality throughout the project. Additional responsibilities include balancing the scope and schedule and utilizing key resources while overseeing the cost of the project, as well as the entire installation phase and testing of all equipment.

Key Projects:

- Project Manager of ITS implementation of CAD/AVL systems for Yakima Transit
- Project Manager of ITS implementation of CAD/AVL systems for Muskegon Area Transit System
- Project Manager of ITS implementation of CAD/AVL systems for the City of Lincoln (StarTrans)
- Project Manager of ITS implementation of CAD/AVL systems for the City of Racine

Hugo Valdovinos I Account Manager

Hugo has over six years of Computer Science experience and a passion for Transit. He has four years of transit experience, starting as an accessory technician with MV Transportation and then moving on to Regional Support and Project Manager, where he worked closely with the maintenance crew.

Key Responsibilities:

Hugos is responsible for account management and will ensure you and your team are supported, and your system is fully working following go-live so you and your riders can realize the benefits.

Key Projects:

- CST Account Manager of ITS implementation of CAD/AVL systems for Yakima Transit
- CST Account Manager of ITS implementation of CAD/AVL systems for Muskegon Area Transit System
- CST Account Manager of ITS implementation of CAD/AVL systems for the City of Lincoln (StarTrans)
- CST Account Manager of ITS implementation of CAD/AVL systems for the City of Racine

Marcos Mendez I Lead Field Technician

Marcos's strength is in information technology, focusing on computer/information technology administration and management from California State University-Northridge.

Attention to detail and a natural problem solver, Marcos's exceptional versatility and knowledge of mechanical engineering and computer science make him invaluable as your lead Field Technician.

Key Responsibilities:

As Lead Field Technician for you, Marcos will ensure all hardware has been configured and tested before installation and participate in hardware deployment and final testing after installation to ensure it meets the Agencies and our quality assurance procedures.

Throughout your relationship with us, Marcos will provide preventative maintenance as needed to hardware and ensure all firmware is kept up to date.

Key Projects:

- City of Lincoln (SolTrans) – Senior Field Technician in ITS implementation of CAD/AVL systems and the deployment of related hardware.
- Yamhill County Transit Area – Senior Field Technician in ITS implementation of CAD/AVL systems and the deployment of related hardware.
- Pigeon Forge – Senior Field Technician in ITS implementation of CAD/AVL systems and the deployment of related hardware.
- Star Tran – Senior Field Technician in ITS implementation of CAD/AVL systems and the deployment of related hardware.

Tomas Hedman I Technical Support Manager

Tomas has been providing technical support for Connexionz for 17 years. He has a background in radio and electronics engineering, testing, and support and has held roles with major communication, technology, and radio companies like Tait Electronics.

Key Responsibilities:

Responsible for supervising the field technicians and providing technical, electronic, and electrical guidelines for successful and timely project deployment while working collaboratively with internal and external stakeholders to ensure all resources needed are delivered on time for installation.

Tomas's role extends to engineering the ITS system hardware configuration, conducting on-site/vehicle surveys, and creating technical system drawings. He will also be involved in the delivery and deployment process, specifying all hardware and procuring Connexionz and 3rd party items.

Key Projects:

- Technical Manager for the Integrated Transportation Systems (ITS) implementation of CAD/AVL system and deployment of hardware at the City of Racine
- Technical Manager for the ITS implementation of CAD/AVL system and deployment of hardware at Pigeon Forge Mass Transit
- Technical Manager for the ITS implementation of CAD/AVL system and deployment of hardware at the City of Pasadena
- Technical Manager for ITS implementation of CAD/AVL system and deployment of hardware at Tri-Delta Transit

References

Solano Country Transit (SolTrans) – Integrated Transit Solution

Client	Solano Country Transit (SolTrans)
Contact	Bisi Ibrahim, Senior Analyst - Technology, Planning & Operations bisi@soltransride.com I 707 – 736 - 6985
Date	2023 – Present
Overview	Connexionz services SolTrans's 56 fixed-route public buses and eight tracking-only Para Transit vehicles.
Services	
Logical Scope Item	Deliverable Description
System Software Suite	Dispatch – system features for fixed route dispatch services: • Computer Aided Dispatch – tools to dispatch buses. • GPS Automatic Vehicle Location – tools to track buses and view historical trip data.
	Bus Stop, Route & Schedule Management – tools to manage bus stops, routes, and schedules.
	Reporting – tools to provide analysis of key transit metrics, e.g., on-time performance.
	GTFS, GTFS-RT, and 511 GTFS+ generation.

Bus Onboard Services & Hardware	Driver Tablets – driver tablets provide the following onboard features: • Diver login • Trip and route information • Dispatch to driver canned messaging	
	Driver Tablet RAM Mount to securely fit the tablets to the bus.	
Advanced Vehicle Functionality	Medius and hardware integration configuration to enable the following advanced vehicle functionality on buses: • Automatic Announcements with Driver Microphone Override • Automatic Passenger Counters integration with UTA • Headsign automatic route and destination • Next Stop Sign Integration • Stop Request Integration • Multimedia/Infotainment Integration with LCD monitors • Engine Diagnostic Integration • GFI FastFare Farebox Integration • Cubic Clipper 2 Payment System Integration • Duress/Emergency Button Alarm (switch), emergency Headsign integration where available • REI ARMOR Cloud Live View Video Surveillance with Event Marker Integration	
Personnel	Chief Operating Officer	Vaughan Keenan
	Chief Technology Officer	Paul Stevens
	Technical Team	Neil Riley
	Project Manager	Nune Arslanian
	Lead Filed Tech	Jorge Gutierrez
	Operational Team	Marcos Mendez Tomas Hedman

City of Racine - Racine Transit (RYDE) - Intelligent Transportation System – Automatic Vehicle Locator (AVL)/Computer Aided Dispatch (CAD)

Client	City of Racine - Racine Transit (RYDE)
Contact	Trevor Jung, Transit Manager trevor.jung@cityofracine.org | 262-636-9123
Date	2022 To Present
Overview	Racine Transit (RYDE) services 35 fixed-route buses, 10 local routes, and 400 stops.
Services	

Logical Scope Item	Deliverable Description	
Software Suite	Dispatch – system features for fixed route dispatch services: • Computer Aided Dispatch – tools to dispatch buses. • GPS Automatic Vehicle Location – tools to track buses and view historical trip data.	
	Bus Stop, Route & Schedule Management – tools to manage bus stops, routes, and schedules.	
	Reporting – tools to provide analysis of key transit metrics, e.g., on-time performance.	
	Real-Time Passenger Information –via the following methods: • Public Transit Website • Real-Time Information white-labeled Branded Mobile Applications • Service Alerts (SMS) • ETA Subscriptions (email and SMS)	
	Real-time APIs (Data feeds - GTFS, GTFS-RT, XML, API's)	
Bus Onboard Services & Hardware	Driver Tablets – driver tablets provide the following onboard features: • Diver login • Trip and route information • Dispatch to driver canned messaging • Fare type counts	
	Driver Tablet RAM Mount to securely fit the tablets to the bus.	
Advanced Vehicle Functionality	Medius and hardware integration configuration to enable the following advanced vehicle functionality on buses: • Automatic Announcements with Driver Microphone Override • Automatic Passenger Counters integration with UTA • Headsign Automatic Route and Destination (integration with the existing) • Engine diagnostics • Next Stop Sign Integration	
Website	https://racine.connexionz.net/rtt/public/	
Personnel	Chief Operating Officer	Vaughan Keenan
	Chief Technology Officer	Paul Stevens
	Project Manager	Nune Arslanian
	Lead Field Technician	Jorge Gutierrez
	Technical Team	Jared Sork Neil Riley
	Operational Team	Jorge Gutierrez Marcos Mendez Mynor Rustrian Tomas Hedman

San Luis Obispo (SLO) Regional Transit Authority – Integrated Transit Solution

Client	San Luis Obispo Regional Transit Authority
Contact	Omar McPherson, Grants and Financial Manager omcpherson@slorta.org I 805-781-1171
Date	2015 to Present
Overview	SLO Transit is a mass transportation provider in San Luis Obispo, California. It operates 43 vehicles along 16 fixed routes within 23 square miles of the city limits of San Luis Obispo and California Polytechnic State University (Cal Poly).
Services	
Logical Scope Item	Deliverable Description
System Software Suite	Dispatch – system features for fixed route dispatch services: • Computer Aided Dispatch – tools to dispatch buses. • GPS Automatic Vehicle Location – tools to track buses and view historical trip data.
	Bus Stop, Route & Schedule Management – tools to manage bus stops, routes, and schedules.
	Reporting – tools to provide analysis of key transit metrics, e.g., on-time performance.
	Real-Time Passenger Information –via the following methods: • Public Transit Website • Real-Time Information White-labeled Branded Mobile Applications • SMS Service Alert Notification Subscriptions • SMS On-Demand ETA Notifications • ETA Subscriptions (email and SMS) • Streetside Push TV LED Stop ETAs • Streetside Radio eInk Busfinder Displays Stop ETAs
	GTFS and GTFS-RT generation

<table>
<tr><td>Advanced Vehicle Functionality</td><td colspan="3">Medius and hardware integration configuration to enable the following advanced vehicle functionality on buses:
Automatic Announcements with Driver Microphone Override.
UTA Automatic Passenger Counters Integration
Headsign Automatic Route and Destination (integration with the existing Twinvision).
Next Stop Sign Integration
Stop Request Integration
Multimedia/Infotainment Integration on 23.8” HD Monitor
Engine Diagnostics Integration
GFI Fast Fare Farebox Integration
Duress/Emergency Button Alarm (switch), emergency headsign integration where available</td></tr>
<tr><td>Website</td><td colspan="3">https://slo.connexionz.net/rtt/public/</td></tr>
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Hugo Valdovinos</td></tr>
<tr><td>Operational Team</td><td>Jorge Gutierrez
Marcos Mendez</td><td>Mynor Rustrian
Tomas Hedman</td></tr>
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Products and Services

Computer-Aided Dispatch/Automated Vehicle Locator System

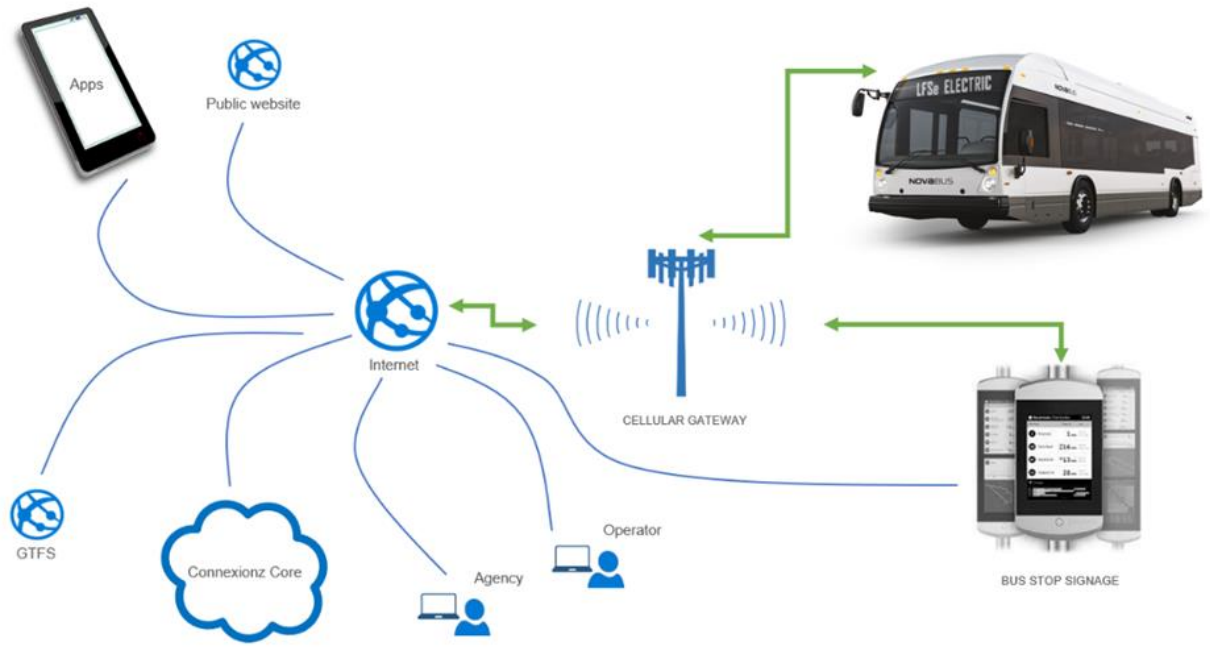


Figure 1 Overview of the Connexionz Integrated Transit System.

Our CAD/AVL intelligent transportation system (ITS) is cloud-based and enables you to monitor and manage your operations easily anywhere, anytime.

We use highly accurate GPS data to let you know where your vehicles have been, where they are, and where they will be in the future. This is the basis for all the tools and services that allow you to plan and implement new services, manage them once they go operational, keep everybody informed on how well they are performing, and allow your riders to plan and manage their journeys with confidence.

Our customers provide over 32 million trips per year on land and water. Being cloud-based means you always have the latest features you've selected without having to pay extra.

Connexionz CORE

Connexionz Core is the web application that hosts your ITS applications, including:

- Route Planner
- Dispatch
- Schedule Import
- Analysis
- Publisher
- Notify
- System Admin

Your team is set up in Connexionz Core and given access to applications by system administrators.

Users must use 2-factor authentication (2FA) to log in and access Connexionz Core applications, which helps ensure the system's security.

Route Planner

Route Planner is the application hosted in Connexionz Core that provides your team with a visual map-based interface to simplify the management of your route network and provides tools to:

- Update existing stops and routes.
- Configure detours.
- Create new stops and routes.
- Configure location-based audio and visual announcements.
- Configure destination codes to set head signs.
- Configure public information network stop-specific destination titles.
- Creates route driver turn-by-turn run sheets/driver paddles.
- Configure fare zones and fares for GTFS and farebox integrations.
- Configure GTFS, GTFS-RT feeds, and 3rd party feeds.
- Configure route colors.
- GTFS and GTFS-RT data are automatically updated to reflect system changes, e.g., route, schedule, and service calendar.

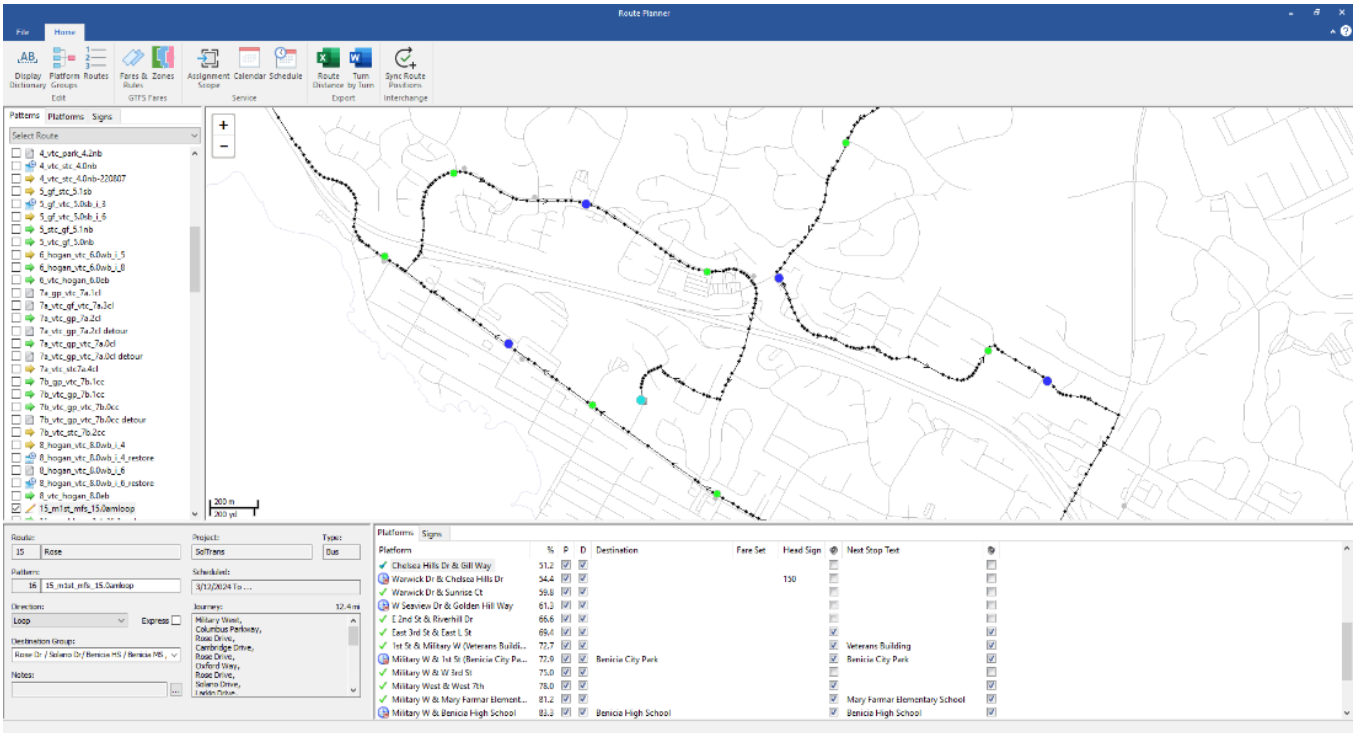


Figure 2 This image depicts a screenshot of our Route Planner Application.

PLEASE NOTE: We have assumed your stop data is correct and up to date. If this data is not correct and up to date, we recommend a "stop survey" to capture accurate stop GPS coordinates for optimal operation.

Dispatch

A web-based software that enables Dispatchers to accurately monitor and manage fleet activity in real-time. ***Dispatch*** allows system users to review real-time operations and replay historical data.

Monitoring	Monitor all fleet operations in real-time. Filter trips that might be late, early, or off route.
Tracking	View live vehicle position, speed, and on-time performance. Replay historical vehicle position, speed, and on-time performance. View by individual vehicles or stops, by trip, by route, or entire. Fleet management.
Management	Assign vehicles to routes, blocks, trips, etc. Assign replacement vehicles on trips or blocks. Assign vehicles assist trips for overloaded trips.
Analysis Reports	View and generate a wide array of system analysis reports. Audit trip exceptions and notes, and conditionally accept the documented cause/s. Review OTP. Review trip exceptions.
System Controls	Distribute important service alert information to the public. Monitor headway routes to ensure optimal vehicle spacing and schedule adherence.

Supervisory, management, and operator staff can access dispatch when on the road via any cellular broadband network.

Information is displayed in tabular and map views, both of which can be configured to suit the specific dispatcher or supervisor using the program. All tracked vehicles, whether fixed-route, paratransit, or support vehicles, are shown on the map, while more detailed information on fixed-route trips appears in a “list” view.

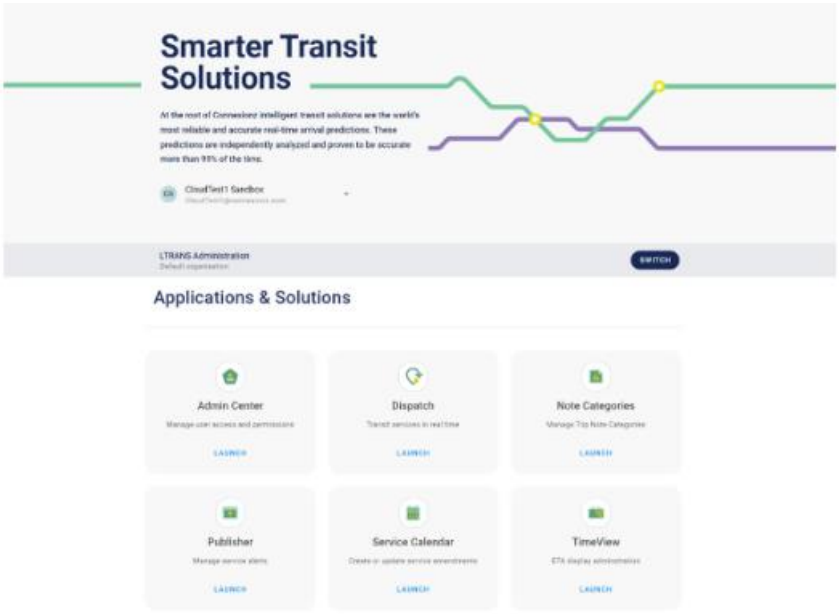


Figure 3 ITS portal home screen.

Web-based Sign-on to CORE Portal.

The user is provided with a secure URL address to access the CORE portal. To secure the solution, 2-factor authentication is used to access and use the functionality within it. The user has specific permission rights, ensuring they stay within the parameters of their roles.

Help & Hints

Dispatch has a useful Help & Hints widget. You can navigate these on your own in real-time to help users with software functionality issues.

Screen overview and navigation

When the Dispatch application is opened, the screen defaults to the current day's activities. The initial entry screen is divided into panels, with a ribbon at the top and three panels underneath. Menu – access to areas the Dispatch user needs for monitoring and updating transit information.

List Pane – displays information that relates to the menu option selection.

Map View – a geographical representation of either active trips, routes, or vehicles.

All active and idle trips are shown on the Active Trips list, and in this view, it is easy to distinguish trips running on time and trips with exceptions warning. Trip exceptions are identified by trip warnings symbols, which display a hover-over text with further information of each trip exception warning.

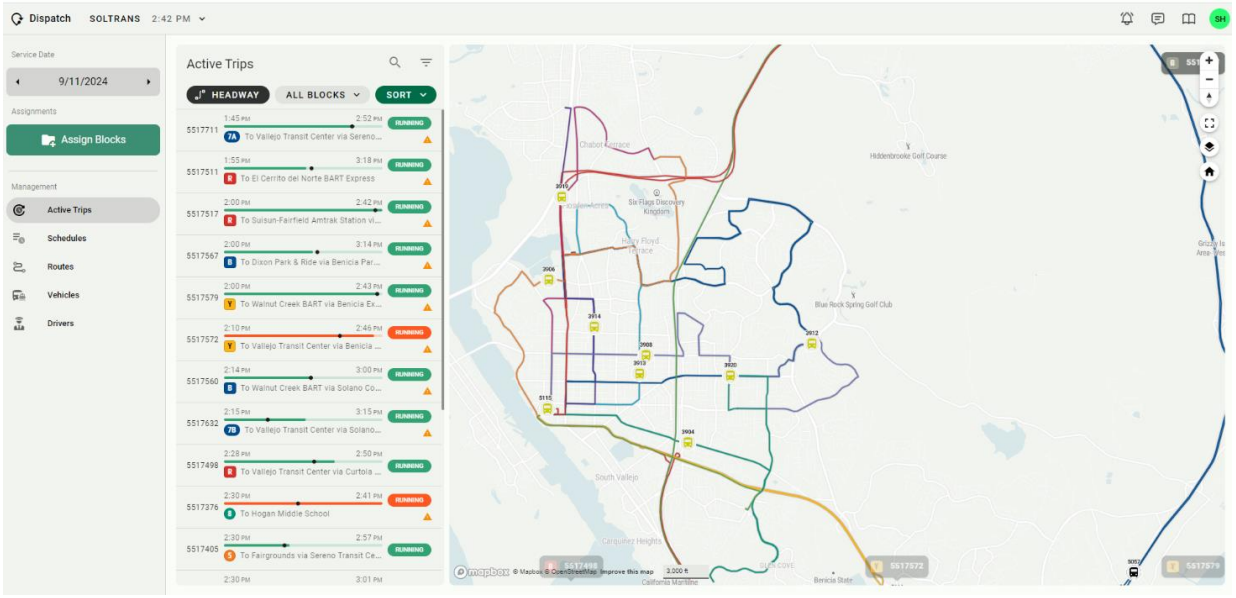


Figure 3 Screen overview and navigation.

In the screenshot below, the Dispatcher has clicked on an "active trip" to check that everything is okay. The vehicle is meeting its time points, and they can see it is halfway through its trip. They can see all trip GPS locations and passenger loading in trip time order. Further information about trip exception warnings can be viewed and investigated in detail.

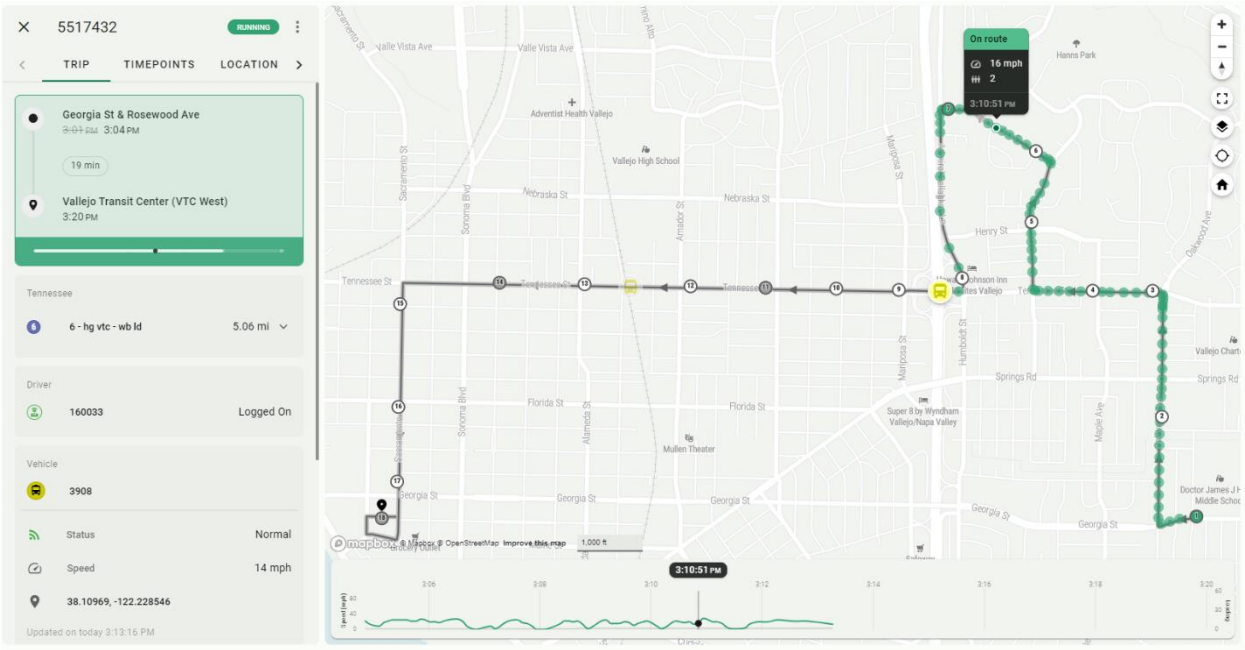


Figure 4 Active Trip with Tracker.

Active Trip with Trip Tracker: Dispatch user has left clicked and dragged their mouse across the part of the trip to view in more detail. The system will play back that part of the Trip tracker.

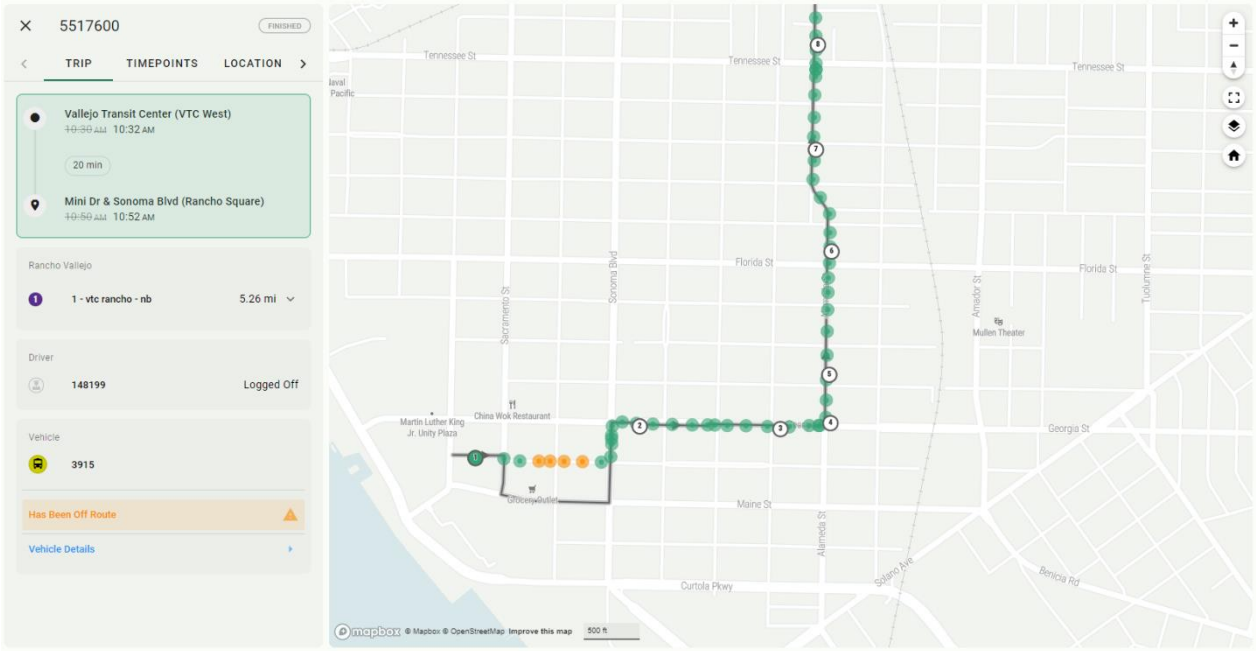
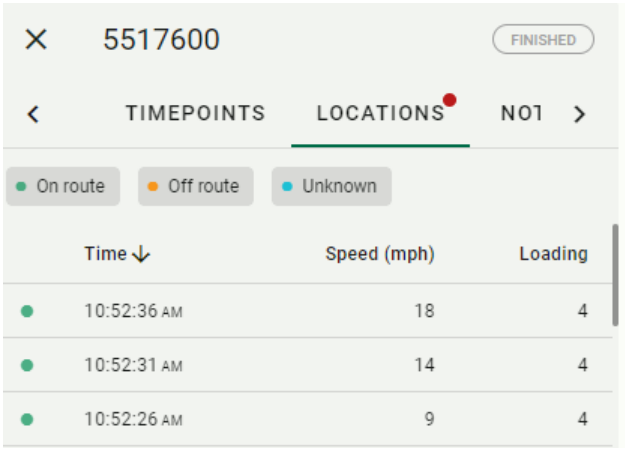


Figure 4 Trip Details with Warning

Trip Details with Warning—The user has clicked on the "Active Trip" with a warning that notes the vehicle has been off route. The yellow and green dots are the GPS unit tracking its whereabouts. The yellow dots show that the bus has gone off route, and the green dots show where the bus has stayed on route.



GPS triggered pings - If a vehicle goes "off route," the GPS triggers to provide "pings" every 1 second instead of the usual 5 seconds.

Figure 5 GPS triggered pings.

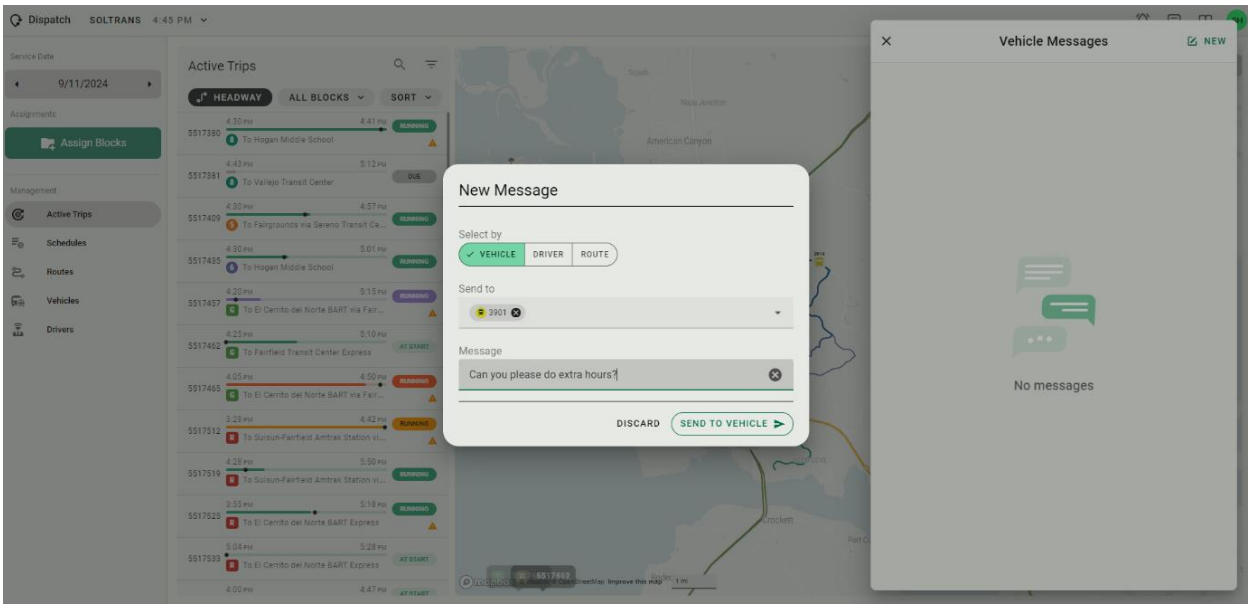


Figure 6 Message tab in Dispatch - Dispatchers can create free-form messages to send to drivers.

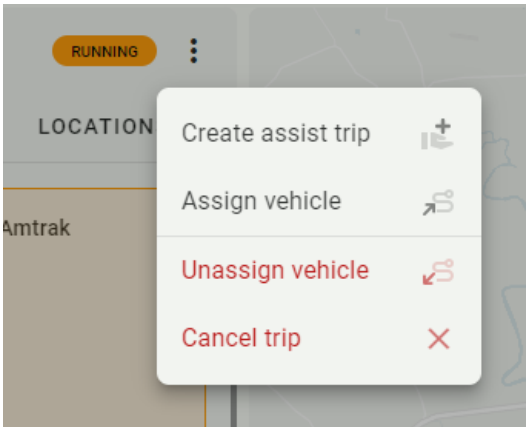


Figure 7 If the vehicle has broken down, the Dispatcher would either reassign the trip or create an assist trip. Cancelling is only ever done when the scheduled trip is not going to run.

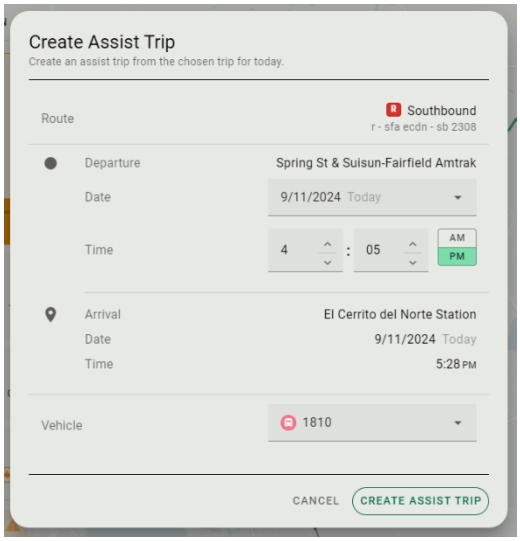


Figure 8 Create Assist Trip: A Dispatcher needs to assign a new vehicle due to the incumbent broken down vehicle or vehicle is at load capacity and needs an assist trip.

Headway management is the process of controlling the spacing and timing of vehicles in a transit system, such as buses, trains, or ferries. Headway management aims to optimize the service quality, efficiency, and reliability of transit operations, as well as to enhance the safety and comfort of passengers and operators.

For projects that include loop or circuit routes the 'HEADWAY' tab will be present in Active Trips. If your project does not include such routes the tab will not appear.

The tab 'HEADWAY' is located in the list pane and can be selected. Upon clicking it, the screen will update to display current headway trips and vehicles moving together.

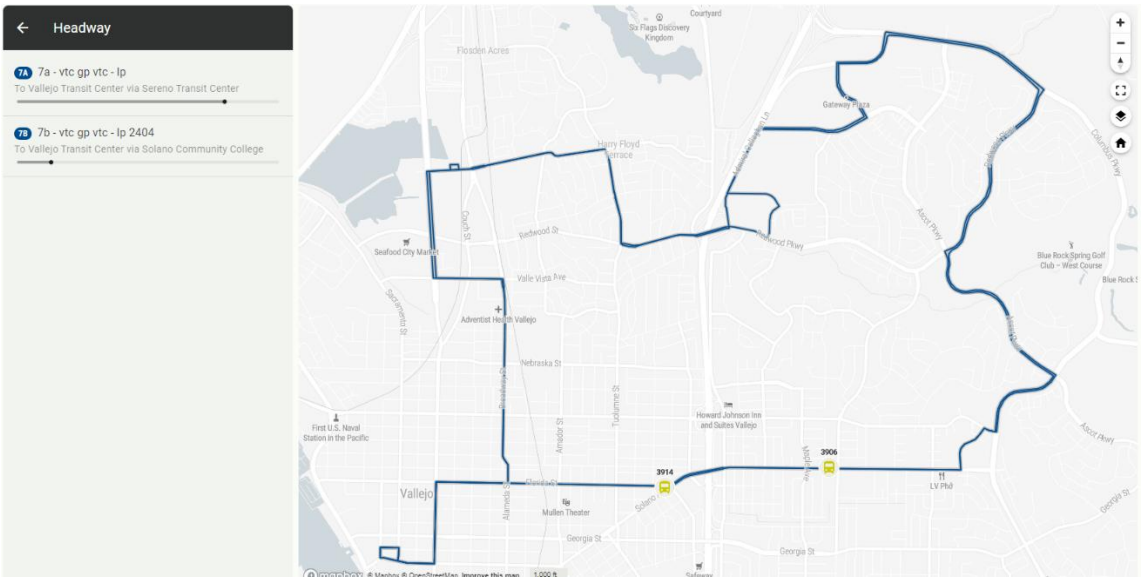


Figure 9 Headway via Dispatch Application.

Select each route pattern to drill down into the specific timings of the vehicles involved. Additional tabs appear HEADWAY, TRIPS (the trip numbers involved), and VEHICLES (vehicles involved):

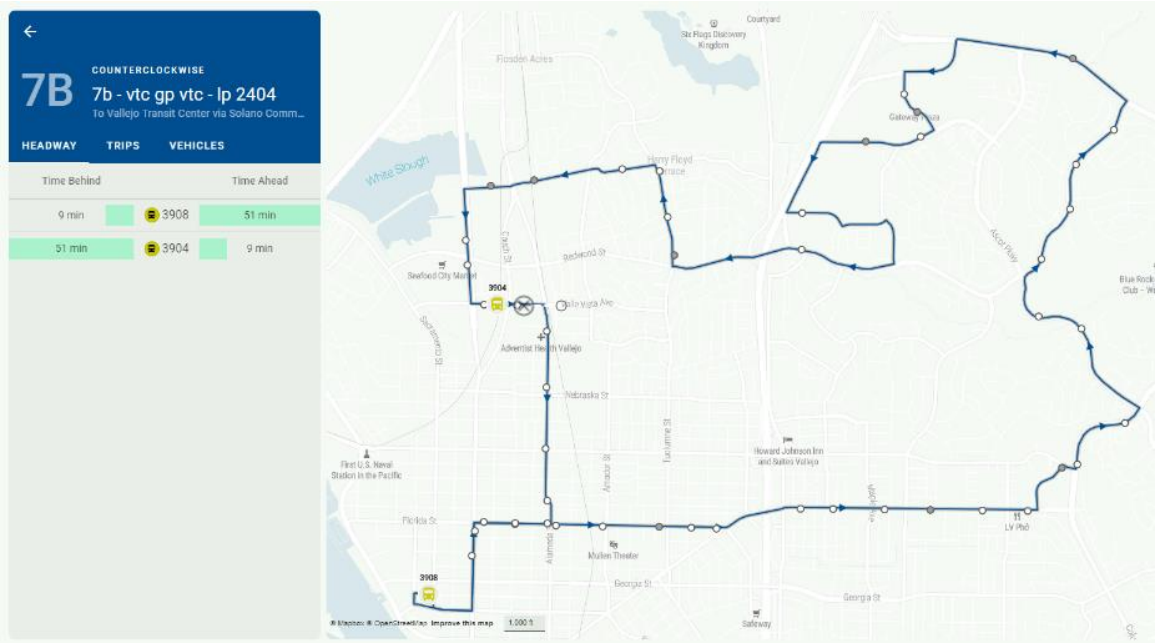


Figure 10 Headway list view via the Dispatch Application.

This view provides the 'time behind' and 'time ahead' between vehicles, helping you determine whether the trips are evenly paced.

This information is crucial for managing regular passenger flows, preventing vehicles from becoming overcrowded, and ensuring predictable arrival times from the passenger's perspective.

Note: When only one vehicle is on the map and the time ahead or behind is zero, this indicates that only one vehicle is active on that circuit at the moment.

If a vehicle is moving too slowly or too quickly, you can click on the VEHICLE tab and find the vehicle number. Then, click on the message icon in the dispatch ribbon and send a message to the vehicle, such as 'Running too quickly, slow down' or any other relevant instruction.

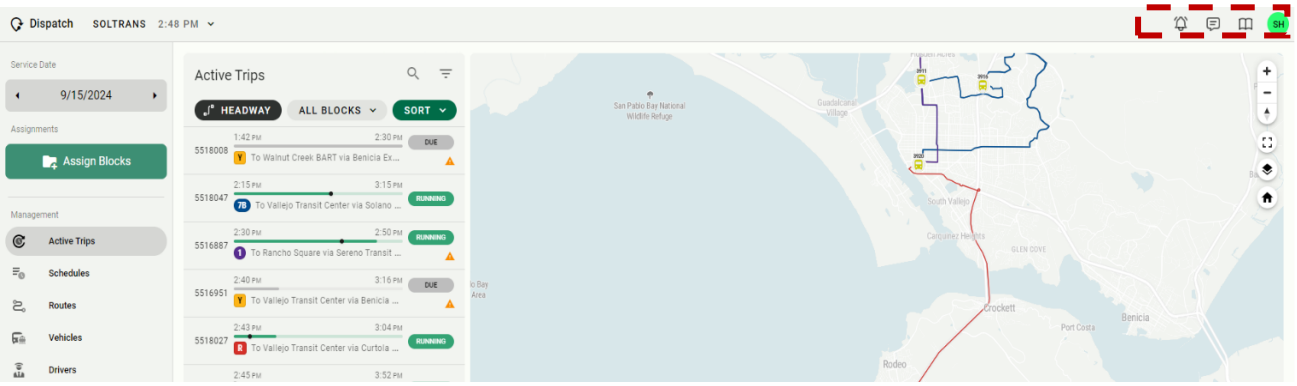


Figure 5 Dispatch —Help & Hints Widget. On the far-right corner of dispatch, you will find a book icon; clicking on this icon will take you to the Help & Hints section of the application.

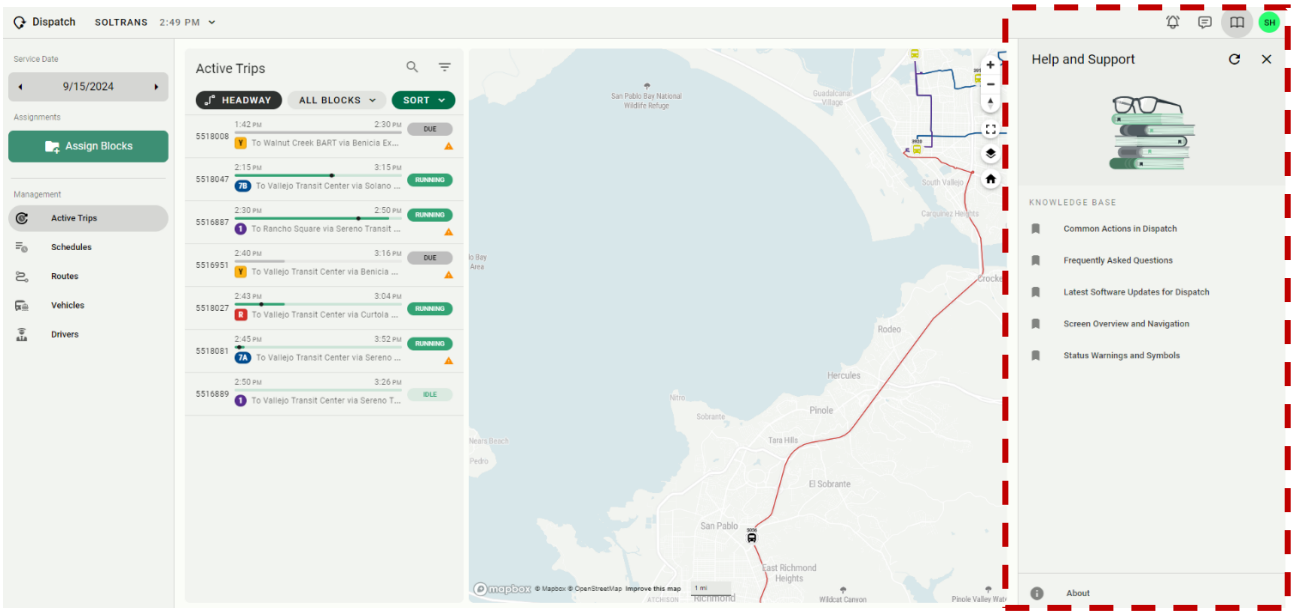


Figure 6 Once you click on the book icon, the Help and Support pop-up opens. From there, you can select which Knowledge Base you would like to inquire into.

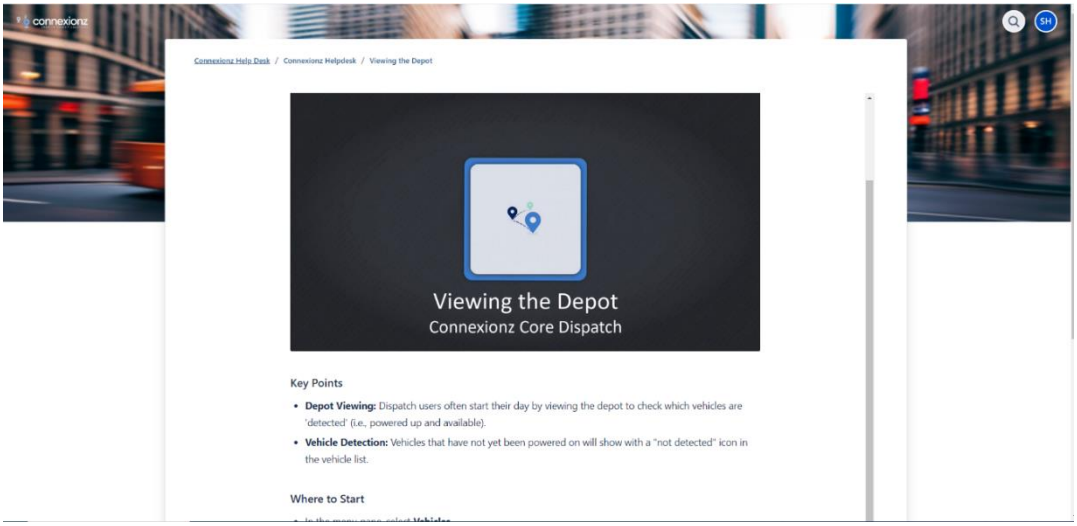


Figure 7 The knowledge base leads you to the information that will assist you in completing a task. Our knowledge base also includes an instructional video to assist.

Schedule Import

The Schedule Import application is the tool your team will use to:

- Import schedules – schedules can be imported in CSV format.
- Schedule start date - set the start date for the schedule to start operating.
- Validate schedule files—You will receive an email report explaining the impact of importing the schedule, e.g., routes removed for the system resulting from the new schedule.

Analysis

The Analysis module allows easy querying and manipulation of system data to fulfill your detailed reporting requirements. Reports are structured into reporting subjects that include preconfigured canned reports that operate as interactive Excel pivot tables.

Users are granted access to reports based on their role, so they only see the data relevant to them. Users can drill into data to view specific information, move or add data elements within the table,

and create calculated fields to customize reports to suit their reporting requirements. Customized reports can then be saved as a new version to ensure they can be easily run on-demand.

A sample of our reports include:

- Travel Times
    - Deadhead
        - Deadhead by day, hour, and origin and destination.
        - Distance by driver (YTD), month, and vehicle.
        - Duration by driver (YTD), month, and vehicle (YTD)
        - Deadhead travel time
    - Timpoint
        - Timepoints early and late departure by route, vehicle, layover, revenue distance, travel times, etc.
    - Trip
        - Early departure by route & hour (latest)
        - Late departure by route & hour with early at start (latest)
        - Late departure by route & trip with early at start (latest)
        - Layover, departure & arrival stats by driver (YTD), month, and route
        - Revenue distance by driver (YTD), route (YTD) and vehicle (YTD)
        - Speed by route & day
        - Travel times by day & hour
- Trip Exceptions
    - % early and late departure by route
    - % timepoint metrics by month and route
    - Early departures by route (YTD) and Late departures by route (YTD)
    - Operator notes by day (YTD)
    - Trip exceptions by driver (YTD), month, and by route (latest)

Our Analysis module also provides native NTD and Passenger Count reporting, but for this proposal, we have not included them, as UTA will provide these reporting functions to you.

Dispatch Data

Dispatch provides useful real-time information to help you effectively manage your operations and answer questions and queries about your services.

Some examples of System Data Collected:

- Vehicle block and trip assignments.
- Vehicle locations.
- Vehicle passenger loads.
- Trip on-time/schedule performance exceptions.
- Trip Off-route visibility.
- Headway visibility.

Publisher

Publisher is where your team can create service alert messages to offer timely and relevant details to your riders regarding transit operations and other important messages. When a service alert is created, users will be able to specify:

- Service alert title.
- Service alert text to display.
- Service alert destination/s – users can select one or more of the following options to target where service alerts are displayed:
    - GTFS real-time service alert data feed
    - Public website/web portal and mobile app
    - Vehicle onboard signage and text-to-speech announcements
    - SMS (if the option is selected)
- Recurrences – users can set the following options to specify when a service alert is active:
    - Date range
    - Days of the week
    - All day or a specific start and end time
- Routes:
    - One or more routes can be selected to target the service alert at a specific route or route.
    - When individual routes are selected, this will flow down to all select destinations, such as vehicles, which will only perform the relevant announcements on vehicles running active trips related to the selected routes.

Notify

Notify is where your team subscribes to receive email alerts of system events. Users can specify the event type for which they are interested in receiving email alerts and the date, day, and time to suit, so they only receive notifications when they are working.

GTFS and GTFS Real-time Data

Connexionz has remained at the forefront of GTFS and GTFS-RT data, including being one of the only vendors to share GTFS since its inception and consistently managing change as it evolves.

Once the system is configured, compliant GTFS static data is automatically produced by the system to reflect your configured routes and active schedule.

Following the initial system configuration, to ensure your GTFS static data is up to date, you can maintain your routes and schedules through our tools and let the system do the rest.

Your Connexionz system automatically creates and manages compliant GTFS-RT data matching your GTFS static data when you dispatch buses on trips.

Available feeds provided out of the box:

- GTFS: Agency, Calendar, Calendar Dates, Fare Attributes, Feed Info, Routes, Shapes, Stop Times, Stops, and Trips
- GTFS-RT: Trip Update, Vehicle Position, Alerts

We have included integrating your GTFS and GTFS-RT data feeds with Google Transit as part of the project, so riders using Google's tools for ETAs and trip planning will have access to the most accurate data available.

All GTFS and GTFS-RT data will be freely available to all required third-party consumers. The GTFS and GTFS-RT APIs are the methods used for static and real-time data integration with third-party applications.

We are also happy to discuss other real-time integration requirements you may have that are not satisfied through GTFS and GTFS-RT data integration and will provide pricing to fulfill them once the full scope is known.

Connexionz uses Real-time and Historical Data Methodology.

Connexionz calculates system ETAs using a set of linear regression (real-time and historical travel time) arrival prediction algorithms. Our prediction algorithm continuously 'learns' the nuances of your operations so riders can confidently rely on the arrival predictions our system generates and publishes.

The estimated travel time is calculated by route segment, trip number, and the mean time of day. Predictions are based on current bus location, calculated, and made available for every bus stop in the system.

As vehicle updates come in, the prediction is recalculated, and new arrival times are distributed. Predictions are established from historical travel time data for that trip number, and the system can check these predictions at random and report on them.

Arrival Time Prediction	
Range of actual arrival time from prediction	Frequency actual arrival falls within the predicted range
+ 1.5 minutes – 1 minute	95% of the time when the estimated arrival time is <2 minutes
+ 2.0 minutes – 1 minute	95% of the time when the estimated arrival time is < 5 minutes
+3.0 minutes – 1 minute	95% of the time when the estimated arrival time is < 15 minutes

Mobile Application

According to research, over 84% of Americans own smartphones. The biggest reason transit riders don't choose public transport is the risk of missing their meeting or event on time. Putting journey planners, real-time ETAs, and live maps on your riders' phones will significantly enhance their transit experience by putting them back in control.

Our mobile app allows your passengers to plan their trips, view the expected time of arrival (ETA) for any trip, follow trips along the route, and view service alerts.

Your proposed mobile app will carry your branding while app users enjoy access to Real-Time Passenger Information. Engage with the community more effectively while boosting passenger numbers with a more positive rider experience.

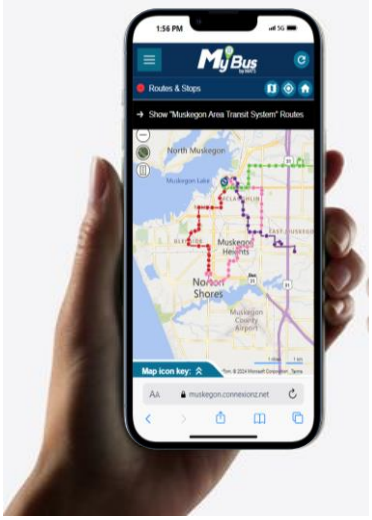


Figure 8 Depiction of My Bus by Muskegon (MATS) Mobile App https://muskegon.connexionz.net/rtt/public/.

Designed for ease of use in both iOS and Android, the white-label approach means each app has your desired branding. The app is easily located in the app or Play Store. Most riders' intuitive instinct is to search "Apple Country Transit" (or similar) in the app store, allowing them to easily reach and download your new app.

Serve up Real-Time Passenger Information while reducing customer service calls. The app can also relay public information, alerts, and bulletins system-wide or at a route level.

The mobile app uses the phone's current GPS location to hover over a user's current position, so the nearest real-time transit options can be easily found. The image to the right is from one of our in-house, white-labeled app solutions for our customer, Muskegon.

The mobile app also accommodates user accessibility requirements via an E-Reader-compatible ETA screen.

Cellular Data Plan

Cellular data is included in the project pricing for six fixed routes and two paratransit buses.

Please note that the Paratransit buses will be set up as tracking only vehicles.

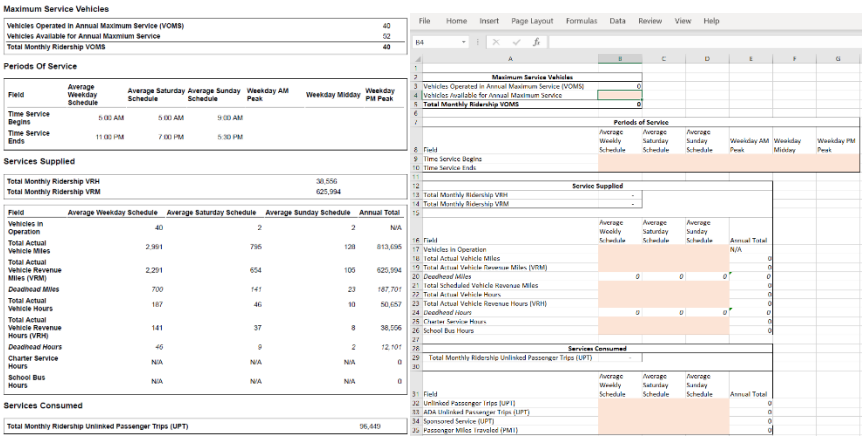
FTA National Transit Database (NTD) Reporting

For more than three (3) decades, UTA APC users have been meeting NTD (previously Section 15) reporting requirements using UTA APC data. Critical to UTA's NTD Reporting are the highly developed APC Administrative Control software modules that assure high quality APC data being available for NTD Reporting. UTA's APC Diagnostics, Data Quality Codes, Filter/Edit Algorithms, Sampling Status, Deployment Plans, Reference File Quality Control are but a few of UTA APC Administrative Control elements that result in high quality APC data for both NTD and non-NTD reporting.

NTD Reporting is a natural by-product of a UTA APC system. The UTA APC Reporting Software has ensured the 100% FTA approval rating by recognizing and filtering out any potential bias of Unlinked Passenger Trips (UPT) and Passenger Miles Travelled (PMT) due to non-revenue door activity from operators/passengers and APC hardware malfunctions.

Critical to successful NTD Reporting is the calculation of Passenger Miles. UTA's APC Software automatically calculates Passenger Miles for each bus stop by multiplying the Passenger Load by the Inter-Stop Distance. With highly refined EOL Load Balancing algorithms assuring an accurate Passenger Load at each Bus Stop and algorithms that convert Lat/Long change into Inter-Stop Distance, UTA's APC Passenger Mile variable is highly accurate and auditable down to the bus stop level. Along with accurate UTA APC-generated Ridership, Passenger Trip Length (PTL) is a standard output of UTA's Route Ridership Report.

UTA and FTA NTD staff meet periodically to discuss the application of UTA's APC system to NTD Reporting. FTA staff noticed the large number of UTA APC users that were successfully generating NTD Reports in contrast to the number of transit agencies utilizing non-UTA APC systems that were not able to generate NTD reports.



UTA APC System Accuracy

For more than thirty (30) years and in virtually all UTA APC applications, APC Accuracy evaluations (formal or informal) have taken place at each site. UTA's APC Accuracy has consistently been evaluated to meet or exceed the specifications of the local transit agency.

Presented below is a table of past accuracy evaluations illustrating UTA APC accuracy as compared with skilled manual checkers. Passenger count data collected by UTA's APC system regularly concurs with manual counts in excess of 98% both in Boardings and Alightings.

Overall, UTA APC vs. Manual concurrence over 30,000 Boarding/Alighting observations exceeds 98%.

Transit Agency	Manual Ridership	APC Ridership	Manual/APC Concurrence	Manual Passenger Miles	APC Passenger Miles	Manual/APC Passenger Mile Concurrence
Tampa, FL	194	197	98.5%	876	910	96.2%
Miami, FL	2,260	2,278	99.2%	9,814	10,125	96.9%
Charlottesville, VA	339	342	99.1%	1,177	1,153	98.0%
Monterey, CA	567	590	96.1%	3,893	3,815	98.0%
Salisbury, NC	144	145	99.3%	539	559	96.4%
Columbia, MO	98	101	97.0%	255	258	98.8%
Jacksonville, FL	814	856	95.1%	4,292	4,131	96.1%
Mishawaka, IN	182	179	98.3%	1,173	1,188	98.7%
Albuquerque, NM	565	579	97.6%	2,151	2,168	99.2%
Boise, ID	337	329	97.6%	2,013	2,007	99.7%
Napa, CA	124	126	98.4%	886	896	98.9%
Hanford, CA	230	240	95.8%	2,143	2,115	98.7%
Thousand Oaks, CA	194	198	98.0%	955	959	99.6%
Antioch, CA	397	414	95.9%	1,989	1,958	98.4%
San Luis Obispo, CA	494	497	99.4%	7,143	7,112	99.6%
Bloomington, IL	378	397	95.2%	907	898	99.0%
Asheville, NC	170	178	95.5%	596	584	97.9%
Columbus, OH	1,125	1,094	97.2%	5,344	5,329	99.7%
Fayetteville, NC	356	372	95.7%	1,478	1,428	96.5%

Durham, NC	664	657	98.9%	2,167	2,210	98.1%
Gainesville, FL	1,785	1,786	99.9%	4,947	5,186	95.4%
Greensboro, NC	441	440	99.8%	1,879	1,961	95.8%
Highpoint, NC	200	208	96.2%	542	557	97.3%
NCSU	753	757	99.5%	1,224	1,263	96.9%
Piedmont, NC	139	145	95.9%	2,501	2,409	96.2%
Racine, WI	242	251	96.4%	838	869	96.4%
Williamsburg, VA	302	302	100.0%	1,635	1,566	95.6%
Dallas, TX	1,172	1,175	99.7%	5,611	5,539	98.7%
Ventura, CA	303	317	95.6%	6,667	6,959	95.8%
Bradenton, FL	681	700	97.3%	3,779	3,617	95.5%
Missoula, MT	578	599	96.5%	2,172	2,244	96.8%

During the hardware installation phase of the project, we will calibrate and test the APC system to ensure its accuracy. We have also included an allowance to maintain the APC system's accuracy as required to support NTD certification.

Installation and Training

Implementation Plan

The following sections describe each project phase from the project schedule. Please refer to the project schedule on page 37 for the proposed timeframe to complete the tasks and the estimated number of hours per assigned individual or specific service.

Notice to Proceed - NTP

We will work with you to finalize, approve, and execute documents and plan the project kick-off meeting.

Phase One - Project Initiation

Following the NTP, our Project Manager will facilitate and run a remote workshop to review and approve the Project Initiation documentation consisting of:

- Project Charter.
- Project Schedule.
- Communication Lines.
- Meeting Dates.
- Project Issues, Risks, and Change Management Plans Review.
- Risk Identification & Ownership.

As part of this process, the project team will run a risk workshop with you to identify and document relevant project risks, define appropriate mitigation strategies, and assign an appropriate risk owner to each risk recorded.

As actions from this meeting, you will be requested to approve the Project Schedule before we move to the next phase.

Phase Two - Discovery & Design

Solution Discovery & Design Prep

Solution Discovery Planning & Bookings

Our Project Manager will work with you to schedule an appropriate time to conduct a discovery workshop/s to confirm the configuration requirements and integrations necessary to deliver the project.

Solution Discovery

ITS Configuration & Integration Requirements Workshop

Our Project Manager will lead the discovery workshop and walk you through the available configuration and customization options so the system can be customized to meet your requirements.

Vehicle Hardware Requirements Survey

We will work with you to remotely survey your vehicles to confirm the installation requirements and location

Solution Design Creation, Review & Approval

ITS Solution Configuration & Integration Specification Creation

We will take the findings from the discovery workshops and create a System Configuration and Integration Specification.

The System Configuration and Integration Specification will include details on how the solution will be configured to meet functional requirements and includes details on:

- Integrations.
- System Architecture and Network Diagrams.
- Configurations.
- Customer-Specific Customizations.

ITS Solution Configuration & Integration Specification Updates/Clarifications

We will then conduct a review meeting with you to ensure understanding / answer any questions and make any required updates before submitting the document for review and approval. You will then be required to review the System Configuration and Integration Specification and approve it before the project can proceed to the next phase.

This document will form the functional requirements baseline for the project.

Phase Three - Procurement, Configuration, Testing, & Shipping

Procurement, Configuration, Testing & Shipping

Following the approval of the System Configuration and Integration Specification, all hardware will be ordered and shipped to your office ready for the installation team.

Our Project Manager will keep you informed and provide the shipping details so that you can appropriately receive the shipment and securely store it until the installation begins.

Paratransit Cellular Data Plans Procurement & Shipping

We will request the cellular router details from you, so we can procure the cellular data plans and ship the SIM cards to you ready for installation.

Phase Four - System Installation, Configuration, & Testing

Dispatch Cloud & ITS System Install

Our technical team will build your hosted environment, configure it, and test it according to the approved System Configuration and Integration Specification.

Stop, Route, Stop Announcements & Schedule Configuration

We will import the base stop and route data from the existing sources provided to give your team a starting point to work with.

Our Trainer will then facilitate a workshop with your Transit Planners on how to create, update, and configure stops, and routes, and upload a schedule ready for go-live use in the system.

As part of the training, we will review the imported data, and then assist you in creating real route examples, so your Transit Planners have the knowledge and references to create and configure all remaining routes.

By working with the Transit Planners and facilitating the configuration of stops, routes, and schedule, we aim to give your team the tools necessary to be self-sufficient for all future maintenance activities. This approach means you won't have to wait for external resources to action system updates, so the data your riders view is always correct.

Following the training workshop, Transit Planners will be allocated three weeks to create all required configurations, with Connexionz providing guidance and quality assurance for the duration of the process.

Mobile Application & Public Website Configuration & Testing

Our technical team will customize and test the mobile applications and website in line with the approved System Configuration and Integration Specification and then deploy them ready for end-user use.

UTA System Install

UTA will install, configure, and test the APC central system ready for training.

Connexionz and UTA will work to integrate the live UTA vehicle load feed into the Connexionz CORE system.

Phase Five Full Fleet Installation & Testing

Full Fleet Installation Planning & Bookings

Following the delivery of the hardware, and the completion of the System Installation, Configuration, and Testing, our Project Manager will work with you to book resources to complete the vehicle installations.

As part of this process, we discuss and agree the following, which is done to ensure a smooth installation process:

- Working hours and timelines.
- Onsite communication channels and key personnel.
- The workplace layout, rules, and do's and don'ts.
- Potential dangers and risks and mitigation strategies.
- Incident and injury management processes.

Full Fleet Vehicle Installation, Testing & Sign-off

The UTA Lead Field Technician assigned to the project will be our primary onsite point of contact during installation and will:

- Manage the onsite inventory.
- Work with Apple Country Transit's Operations and/or Maintenance teams to coordinate the delivery of the vehicles to ensure the maximum throughput and minimal disruption to operations.
- Complete all installations, APC calibration, and testing.

The Connexionz Technical Support resource will work remotely with your team to install the SIM cards in the cellular routers into the paratransit vehicles, and to configure them to forward the GPS positions to the Connexionz CORE system.

Full Fleet Vehicle Road Test Sign-off

Following the installation of all equipment on a vehicle, Connexionz recommends that Apple Country Transit's Lead Technical representative completes a road test as a final check before approving each vehicle as fit for revenue service.

This approach will ensure that no inadvertent defects have been introduced during our installation process.

Phase Seven - System Training

Training Prep

Our Project Manager will create the Training Plan and submit it to you for approval – please see the "*Training*" section for further details.

As part of the Training Prep, our Project Manager will:

- Send all required Training Documentation.
- Set up all required users with access to the Connexionz Support Desk.
- Coordinate all required training bookings and prerequisite tasks.

Training Workshops

Our Trainer will arrive onsite at your offices on the allocated day to run the training workshops in line with the agreed Training Plan – the training workshops included are as follows:

- Dispatcher and Supervisor User Training - On-site.
- Admin System Training - On-site.
- Report & Analysis Training – Remote.

Following the training workshops, our trainer will stay on-site for one day to assist users when they start using the system, which in our experience is when the valuable "how" type questions are asked.

This approach ensures your users are fully supported and have the tools necessary to perform operations following the departure of our Trainer.

Remote report training is conducted later. This approach is taken so the system has time to collate enough real relevant data to ensure the training is meaningful to attendees. During the training, we will review the system default reports and demonstrate how custom reports can be created during the training.

Connexionz also supplies supplementary scheduled remote courses in one-hour sessions by arrangement at no additional cost.

APC & NTD Training Workshops

UTA will deliver the following remote training:

- APC Hardware System Troubleshooting.
- UTA System &NTD Report Training.

Phase Eight - System Acceptance Testing, Support & Approval, & Project Closure

System Acceptance Testing, Support, & Approval

Following the completion of training, your team will use the fully configured system to complete day-to-day operational and revenue service activities, and our project team will provide support. The purpose of this burn-in period is to ensure your team is confident operating the system before moving to business-as-usual support.

Project Closure

Following the System Acceptance, our Project Manager will compile all relevant project closure documentation and set up a workshop to:

- Confirm the ongoing APC system accuracy maintenance,
- Confirm full compliance with the specification.
- Present the Support and Maintenance Agreement.
- Introduce our Account Manager and Customer Support Technician.
- Present a Project Acceptance Certificate.

You will then be requested to approve the Support and Maintenance agreement and Project Acceptance Certificate. Following this you will transition to business-as-usual support, where our dedicated Account Manager and Customer Support Technician will become your main contacts for all your operational needs.

Google Transit Integration

As soon as the routes are configured and the schedule has been imported, we will work directly with Google Transit representatives to answer all questions required to validate and integrate the GTFS static data feed into Google Transit.

Following the GTFS static data approval and bus tracking integration configuration, we will work with Google Transit representatives to answer all questions required to validate the GTFS real-time data feeds, which is the last step for full Google Transit integration.

If necessary, we will also work with you and guide you through the Google Transit registration process to set up an agency account, which is required before GTFS integration with Google Transit can begin.

Project Schedule

Above we have described the phases involved in implementing your requirements. The following pages contain a detailed project schedule. The schedule defines all the work needed to deliver the assignment two project and details the phases, tasks, estimated start and finish dates, estimated duration, required resources, and task predecessors.

This schedule reflects the project requirements and has been created based on our experience delivering similar projects.

The project schedule will be updated to reflect any changes made during contract negotiations, reviewed, finalized during the Project Initiation meeting, and then base-lined so the project can be appropriately tracked to ensure we meet all required dates.

Once base-lined, a project schedule can only be changed through the approved change control process.

The project schedule is a living, breathing document that will be constantly maintained during the life of the project by our Project Manager, Nune Arslanian, and is a valuable tool used to help ensure project dates are met.

ID	Task Name	Duration	Start	Finish	Resource Names	Predecessors
1	**Apple Country - ITS Implementation**	**66.19 days**	**Fri 21/02/25**	**Mon 26/05/25**		
2	*Project NTP*	***0 days***	***Fri 21/02/25***	***Fri 21/02/25***		
3	Contract Negotiations	48 hrs	Fri 21/02/25	Fri 28/02/25		2
4	**Main Project**	**43.31 days**	**Mon 3/03/25**	**Thu 1/05/25**		
5	**Project Initiation**	**4.5 days**	**Mon 3/03/25**	**Fri 7/03/25**		
6	Project Initiation Onsite Meeting Agenda & Bookings	1 hr	Mon 3/03/25	Mon 3/03/25	CNX - Project Manager	3
7	Project Charter, Requirements , & Schedule Review, & Communication Confirmati	1 hr	Thu 6/03/25	Thu 6/03/25	CNX - Project Manager,AC - Proj Lead	6FS+3 days
8	Project Issues, Risks, and Change Management Plans Review, & Risk Identification & Owner Assignment	1 hr	Thu 6/03/25	Thu 6/03/25	CNX - Project Manager,AC - Proj Lead	7
9	Project Charter/Scope & Schedule Updates	1 hr	Thu 6/03/25	Thu 6/03/25	CNX - Project Manager	8
10	**Project Charter, Requirements & Schedule Approval**	**8 hrs**	**Thu 6/03/25**	**Fri 7/03/25**	**AC - Proj Lead,AC - Proj Sponsor**	**9**
11	***Project Initiation - Complete***	***0 hrs***	***Fri 7/03/25***	***Fri 7/03/25***		***10***
12	**Discovery & Design**	**2.06 days**	**Fri 7/03/25**	**Tue 11/03/25**		
13	**Solution Discovery & Design Prep**	**0.06 days**	**Fri 7/03/25**	**Fri 7/03/25**		
14	Solution Discovery Planning & Bookings	0.5 hrs	Fri 7/03/25	Fri 7/03/25	AC - Proj Lead,CNX - Project Manager	11
15	***Solution Discovery & Design Prep - Complete***	***0 days***	***Fri 7/03/25***	***Fri 7/03/25***		***14***
16	**Solution Discovery**	**0.25 days**	**Fri 7/03/25**	**Fri 7/03/25**		
17	ITS Configuration Requirements Workshop	1 hr	Fri 7/03/25	Fri 7/03/25	AC - Proj Team,CNX - BA	15
18	Vehicle Hardware Requirements	1 hr	Fri 7/03/25	Fri 7/03/25	AC - Proj Team,UTA	17
19	***Solution Discovery - Complete***	***0 hrs***	***Fri 7/03/25***	***Fri 7/03/25***		***18***
20	**Solution Design Creation, Review & Approval**	**1.75 days**	**Fri 7/03/25**	**Tue 11/03/25**		
21	ITS Solution Configuration Specification Creation	4 hrs	Fri 7/03/25	Mon 10/03/25	CNX - BA	19
22	ITS Solution Configuration Specification Review	1 hr	Mon 10/03/25	Mon 10/03/25	CNX - Project Manager,AC - Proj Team,CNX -	21
23	ITS Solution Configuration Specification Updates/Clarifications	1 hr	Mon 10/03/25	Mon 10/03/25	CNX - BA	22
24	**ITS Solution Configuration Specification Approval**	**8 hrs**	**Mon 10/03/2**	**Tue 11/03/25**	**AC - Proj Lead,AC - Proj Sponsor**	**23**
25	***Solution Design Creation, Review & Approval - Complete***	***0 hrs***	***Tue 11/03/25***	***Tue 11/03/25***		***24***
26	***Discovery & Design - Complete***	***0 hrs***	***Tue 11/03/25***	***Tue 11/03/25***		***19,25,15***
27	**Procurement, Configuration, Testing, & Shipping**	**20.38 days**	**Tue 11/03/25**	**Tue 8/04/25**		
28	**Vehicle Hardware Procurement, Configuration, Testing & Shipping**	**20.13 days**	**Tue 11/03/25**	**Tue 8/04/25**		
29	Vehicle Hardware Procurement	1 hr	Tue 11/03/25	Tue 11/03/25	CNX - Tech Lead	26
30	Vehicle Hardware Configuration & Order Fulfilment& Shipping	4 wks	Tue 11/03/25	Tue 8/04/25	UTA	29
31	***Vehicle Hardware Procurement, Configuration, Testing & Shipping - Complete***	***0 days***	***Tue 8/04/25***	***Tue 8/04/25***		***30***
32	**Paratransit Cellular Data Plans Procurement & Shipping**	**5.25 days**	**Tue 1/04/25**	**Tue 8/04/25**		
33	Paratransit Cellular Data Plans Procurement - * 2 Vehicles	2 hrs	Tue 1/04/25	Tue 1/04/25	CNX - Project Manager	26,31FS-5 days
34	Paratransit Cellular Data Plans Order Fulfilment & SIM Card Shipping	5 days	Tue 1/04/25	Tue 8/04/25	Telco	33
35	***Paratransit Cellular Data Plans Procurement & Shipping - Complete***	***0 days***	***Tue 8/04/25***	***Tue 8/04/25***		***34***
36	***Procurement, Configuration, Testing, & Shipping - Complete***	***0 hrs***	***Tue 8/04/25***	***Tue 8/04/25***		***35,31***
37	**System Installation, Configuration, & Testing**	**18.63 days**	**Tue 11/03/25**	**Mon 7/04/25**		
38	**Dispatch Cloud & ITS System Install**	**3 days**	**Tue 11/03/25**	**Fri 14/03/25**		
39	Build Hosting Environment, ITS Core Installation, Configuration & Testing	20 hrs	Tue 11/03/25	Fri 14/03/25	CNX - Snr Dev	26
40	Vehicle & GPS Cell Server Setup	4 hrs	Fri 14/03/25	Fri 14/03/25	CNX - Snr Dev	39
41	***Dispatch Cloud & ITS System Install - Complete***	***0 hrs***	***Fri 14/03/25***	***Fri 14/03/25***		***40***
42	**Stops, Routes, Stop Announcements & Schedule Configuration**	**15.63 days**	**Fri 14/03/25**	**Mon 7/04/25**		
43	Stop GPS Data Import	1 hr	Fri 14/03/25	Fri 14/03/25	CNX - Snr Dev	41
44	Stop, Route, Stop Announcements & Schedule Configuration Training Workshc	4 hrs	Fri 14/03/25	Mon 17/03/25	AC - Proj Lead,CNX - Trainer,AC - Planners	41,43
45	Stop, Route, Stop Announcements & Schedule Configuration	3 wks	Mon 17/03/25	Mon 7/04/25	AC - Planners	44
46	Stop, Route, Stop Announcements & Schedule Configuration Support & QA	8 hrs	Fri 4/04/25	Mon 7/04/25	CNX - Trainer	45FF
47	***Stop, Route, Stop Announcements & Schedule Configuration Complete***	***0 hrs***	***Mon 7/04/25***	***Mon 7/04/25***		***46***
48	**Mobile Application & Public Website Configuration & Testing**	**5 days**	**Fri 14/03/25**	**Fri 21/03/25**		
49	Branded Mobile App Configuration, Deployment & Testing	40 hrs	Fri 14/03/25	Fri 21/03/25	CNX - Dev 1	41
50	***Mobile Application & Public Website Configuration & Testing - Complete***	***0 days***	***Fri 21/03/25***	***Fri 21/03/25***		***49***
51	**UTA System Install**	**5.13 days**	**Tue 11/03/25**	**Tue 18/03/25**		
52	UTA Central System Installation, Configuration, & Testing	1 wk	Tue 11/03/25	Tue 18/03/25	UTA - Tech	26
53	UTA Live Load Configuration	1 hr	Tue 18/03/25	Tue 18/03/25	UTA - Tech	52,41
54	UTA Live Load Configuration &Testing	1 hr	Fri 14/03/25	Fri 14/03/25	CNX - Snr Dev	43
55	***UTA Live Load Feed Configuration & Testing - Complete***	***0 days***	***Fri 14/03/25***	***Fri 14/03/25***		***54***
56	***System Installation, Configuration, & Testing - Complete***	***0 days***	***Mon 7/04/25***	***Mon 7/04/25***		***41,47,50,55***

ID	Task Name	Duration	Start	Finish	Resource Names	Predecessors
57	**Full Fleet Installation & Testing**	**13 days**	**Tue 25/03/25**	**Fri 11/04/25**		
58	**Full Fleet Installation Planning & Bookings**	**8.25 days**	**Tue 25/03/25**	**Mon 7/04/25**		
59	Full Fleet Installation Planning& Bookings	1 hr	Tue 25/03/25	Wed 26/03/25	CNX - Project Manager,AC - Proj Lead	36FS-2 wks
60	***Full Fleet Installation Planning& Bookings - Complete***	***0 days***	***Mon 7/04/25***	***Mon 7/04/25***		***59,56***
61	**Full Fleet Vehicle Installation, Testing & Sign-off**	**3 days**	**Tue 8/04/25**	**Fri 11/04/25**		
62	**Full Fleet Vehicle Installation& Testing**	**3 days**	**Tue 8/04/25**	**Fri 11/04/25**		
63	Fixed Route Fleet Vehicle Installation, APC Calibration, & Testing - 4 Hours Per Vehicle * 1 Resources * 6 Vehicles	24 hrs	Tue 8/04/25	Fri 11/04/25	UTA - Tech	60,36
64	Paratransit Fleet Cellular Router GPS Forwarding Configuration & Testing - 1 Hour Per Vehicle * 1 Remote Support Resource * 2 Vehicles	2 hrs	Tue 8/04/25	Wed 9/04/25	CNX - Tech Support,AC - Proj Lead	60,36
65	***Full Fleet Vehicle Installation& Testing - Complete***	***0 hrs***	***Fri 11/04/25***	***Fri 11/04/25***		***63,64***
66	**Full Fleet Vehicle Road Test Sign-off**	**0.19 days**	**Fri 11/04/25**	**Fri 11/04/25**		
67	Full Fleet Vehicle Installation Inspection& Road Test Sign-off	1.5 hrs	Fri 11/04/25	Fri 11/04/25	AC - Lead Mech	65FF
68	***Full Fleet Vehicle& Road Test Sign-offs - Complete***	***0 hrs***	***Fri 11/04/25***	***Fri 11/04/25***		***67***
69	***Full Fleet Vehicle Installation, Testing& Sign-off - Complete***	***0 days***	***Fri 11/04/25***	***Fri 11/04/25***		***65,68***
70	***Full Fleet Installation & Testing - Complete***	***0 days***	***Fri 11/04/25***	***Fri 11/04/25***		***69,65***
71	**System Training**	**7.25 days**	**Mon 7/04/25**	**Wed 16/04/25**		
72	**Training Prep**	**1.78 days**	**Mon 7/04/25**	**Tue 8/04/25**		
73	Training Plan & Schedule Creation	4 hrs	Mon 7/04/25	Mon 7/04/25	CNX - Trainer	60
74	***Training Plan & Schedule Approval***	***8 hrs***	***Mon 7/04/25***	***Tue 8/04/25***	***AC - Proj Lead***	***73***
75	Setup User Logins & Send Training Documentation.	1.5 hrs	Tue 8/04/25	Tue 8/04/25	CNX - Trainer	74
76	Support Desk Setup	0.25 hrs	Tue 8/04/25	Tue 8/04/25	CNX - Tech Support	75
77	Training Bookings	0.5 hrs	Tue 8/04/25	Tue 8/04/25	AC - Proj Lead,CNX - Project Manager	76,56FS-5 days
78	***Training Prep - Complete***	***0 days***	***Tue 8/04/25***	***Tue 8/04/25***		***77,75,76,73,74***
79	**CAD/AVL Training Workshops**	**2.25 days**	**Fri 11/04/25**	**Wed 16/04/25**		
80	Dispatcher and Supervisor User Training - On-site	7 hrs	Fri 11/04/25	Mon 14/04/25	CNX - Trainer,AC - Trainees	78,56,63SS+3 days
81	Admin System Training - On-site	1 hr	Mon 14/04/2!	Mon 14/04/25	CNX - Trainer,AC - Trainees	80
82	Onsite Training Go-live Support	8 hrs	Mon 14/04/2!	Tue 15/04/25	CNX - Trainer	81
83	Report & Analysis Training - Remote	2 hrs	Tue 15/04/25	Wed 16/04/25	CNX - Trainer,AC - Trainees	82
84	***CAD/AVL Training Workshops - Complete***	***0 days***	***Wed 16/04/2***	***Wed 16/04/25***		***80,83,81,82,86***
85	**APC & NTD Training Workshops**	**2.5 days**	**Fri 11/04/25**	**Wed 16/04/25**		
86	APC Hardware System Troubleshooting - Remote	1 hr	Fri 11/04/25	Mon 14/04/25	UTA,AC - Maintenance Team	63
87	UTA System &NTD Report Training	2 hrs	Wed 16/04/2!	Wed 16/04/25	UTA,AC - Trainees	84,86
88	***APC & NTD Training Workshop - Complete***	***0 days***	***Wed 16/04/2***	***Wed 16/04/25***		***87***
89	***System Training - Complete***	***0 hrs***	***Wed 16/04/2***	***Wed 16/04/25***		***78,84,88***
90	**System Acceptance Testing, Support, & Approval, & Project Closure**	**12.5 days**	**Mon 14/04/2**	**Thu 1/05/25**		
91	**System Acceptance Testing, Support, & Approval**	**11 days**	**Mon 14/04/2**	**Tue 29/04/25**		
92	System Burn-in & Acceptance Testing	2 wks	Mon 14/04/2!	Mon 28/04/25	AC - Operations Team	26,56,80
93	System Burn-In & Acceptance Testing Support	8 hrs	Fri 25/04/25	Mon 28/04/25	CNX - Proj Team	92FF
94	***System Acceptance Testing Approval***	***8 hrs***	***Mon 28/04/2***	***Tue 29/04/25***	***AC - Proj Lead***	***89,92,70***
95	**System Acceptance Testing, Support & Approval - Complete**	***0 days***	**Tue 29/04/25**	**Tue 29/04/25**		**94**
96	**Project Closure**	**10.88 days**	**Wed 16/04/2**	**Thu 1/05/25**		
97	Project Closure Meeting Prep	2 hrs	Tue 29/04/25	Wed 30/04/25	CNX - Project Manager	95SS
98	Ongoing Testing and Calibration Years 1 - 3 Plan	1 day	Wed 16/04/2!	Thu 17/04/25	UTA	89
99	Confirm Requirements Compliance, SMA & BAU Support Process	1 hr	Wed 30/04/2!	Wed 30/04/25	CNX - Project Manager,AC - Proj Lead	95,97,98
100	Create & Submit Project Acceptance Certificate	1 hr	Wed 30/04/2!	Wed 30/04/25	CNX - Project Manager,AC - Proj Lead	99
101	***Project Acceptance Certificate Approval***	***8 hrs***	***Wed 30/04/2***	***Thu 1/05/25***	***AC - Proj Lead,AC - Proj Sponsor***	***100***
102	***Project Closure - Complete***	***0 hrs***	***Thu 1/05/25***	***Thu 1/05/25***		***101***
103	***System Acceptance Testing, Support, & Approval, & Project Closure - Complete***	***0 days***	***Thu 1/05/25***	***Thu 1/05/25***		***102***
104	**Google Transit Integration**	**35 days**	**Mon 7/04/25**	**Mon 26/05/25**		
105	GTFS Static Integration & Google Transit Validation	1 wk	Mon 7/04/25	Mon 14/04/25	Google Transit	47
106	GTFS- Realtime Integration & Google Transit Validation	6 wks	Mon 14/04/2!	Mon 26/05/25	Google Transit	105
107	Google Transit Integration Support	4 hrs	Fri 23/05/25	Mon 26/05/25	CNX - Project Manager	105,106FF
108	***Google Transit Integration - Complete***	***0 days***	***Mon 26/05/2***	***Mon 26/05/25***		***107***
109						
110	**Internal Development**	**5 days**	**Fri 21/02/25**	**Thu 27/02/25**		

Technical Support

Our support team is available 24/7/365 via a toll-free number, email, or our web-based Support Portal. The Connexionz Support Portal is the 'source of truth'. All incidents are recorded in the portal, regardless of whether they were initiated via phone, email, or online.

The web-based Support Portal allows you to log incidents, which automatically generate a 'ticket' (the system used is Jira—Atlassian).

When an incident is submitted through the Support Portal, our Customer Support Technician will triage the ticket to determine the incident priority and type and attempt to resolve it if possible. If the support resource is unable to resolve the ticket during the initial triage, they will contact you for additional information or escalate the issue to a Level 2 or Level 3 resource for further review and resolution.

The Customer Support Technician will provide Apple Country Transit with frequent updates to ensure you are informed and understand the next steps and estimated resolution timeframe. Your team will have access to the Support Portal and can view the status of each ticket. All communication between you and Connexionz will be captured in the comments field, so the full ticket history is available.

The reliability of the solution hardware is proven, so we have not included spare hardware in the project – we can discuss this further during BAFO if required.

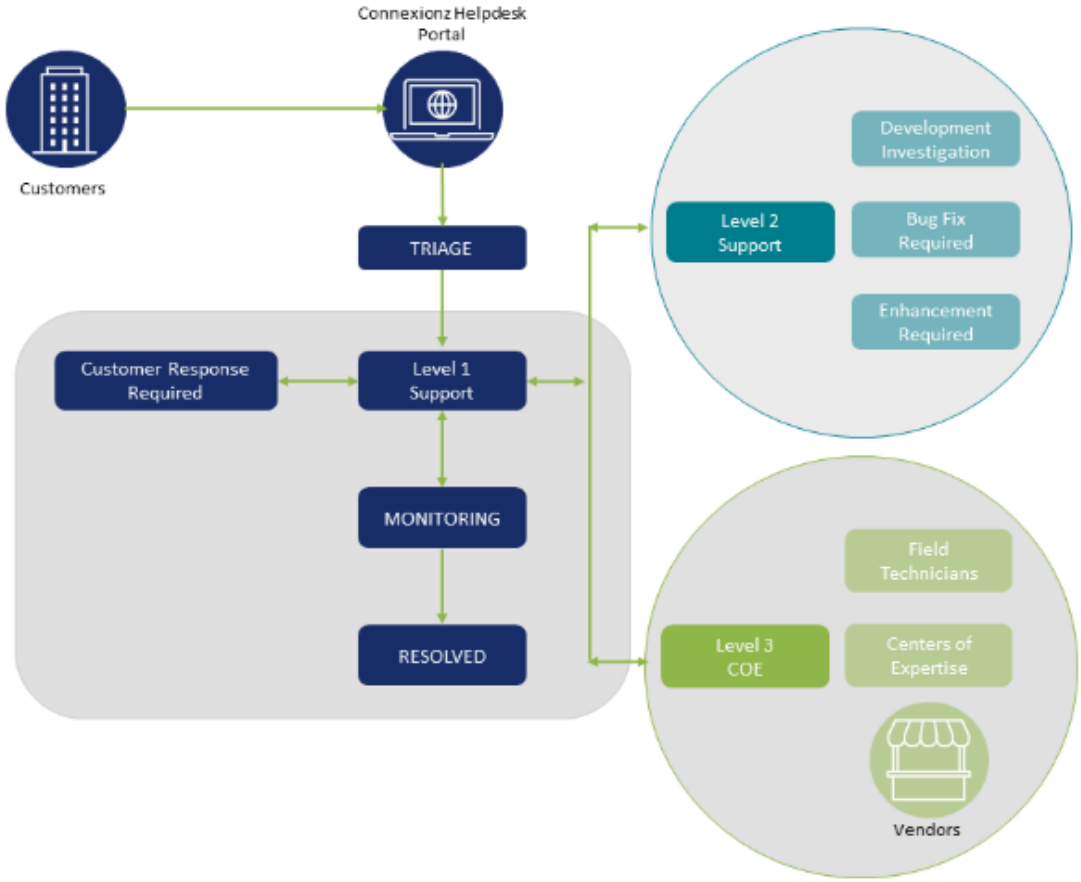


Figure 9 Connexionz Helpdesk Portal workflow.

Service & Maintenance Agreement

As part of the Project Closure, a Service & Maintenance Agreement is provided to Apple Country Transit, which defines the incident types, priority levels, timeframes for a response, and target resolution time. This document explains how the escalation process is handled. The Service & Maintenance Agreement is reviewed yearly to capture additional assets purchased.

All hardware supplied includes a default 1-year warranty. Extended warranties have also been provided, as requested.

Sample of Service Level Agreement

Below is a sample of the Incident Types, Priorities, and Service Level Response Times within our standard support and maintenance agreement. You will review and approve them during the Project Closure phase, and once the project is approved, they will become part of our business-as-usual support and maintenance processes.

All SLAs and terms will be considered when negotiating the final contract.

Incident Types & Priority Levels (SAMPLE)

Priority	Incident Type	Sample Description of Incident
High 1	Connexionz CORE	Connection to a hosted solution is completely unavailable. Complete system is unreachable by the Customer's users.
	API's	Web Portal and/or Mobile App is unreachable by users.
	Onboard Hardware / Software	Failure of Onboard Hardware / Software impacting 10% or more of the fleet e.g. __ vehicles (__ or more vehicles experiencing issues or not working).
Urgent 2	Connexionz CORE	A hosted solution is unavailable. Major or partial system failure causing malfunction and impacting Customer's users.
	API's	Web Portal and/or Mobile App is unreachable or does not render the map and/or routes.
	Onboard Hardware / Software	Failure of Onboard Hardware / Software impacting between 5% and 10% of the vehicle not functioning. e.g.: __ vehicles (between __ and __ experiencing issues or not working).
Normal 3	Connexionz CORE	A limited number of customer users or non-critical functions affect the system.
	API's	Limited functions within the Web Portal and/or Mobile App are not available.
	Onboard Hardware / Software	Limited failure of Hardware / Software impacting - Less than 5% of the vehicle fleet unavailable or experiencing issues.
Low 4	Connexionz CORE	Minor bugs impacting Customer's users.
	API's	Minor bugs impacting CNZ Web Portal and/or Mobile App.
	Onboard Hardware / Software	Any functionality that does not does not impact critical business functions.

Target response Times (sample)

Incident management targets: All timings are calculated from the moment the support request is received by Connexionz or a third-party contractor's support function.

PRIORITY CATEGORY	DESCRIPTION OF INCIDENT	RESPONSE TIME (from the time that Incident is logged)	TARGET RESOLUTION TIME "SUBJECT TO SITE AND HARDWARE ACCESS"
1	Such an Incident will have one or more of the following characteristics: ○ Outage on all Systems ○ Operations are interrupted or halted. ○ Critical deadlines are threatened.	< 60 Minutes	Continuing until reinstatement or until a workaround is provided.
2	Such an Incident will have one or more of the following characteristics: ○ Normal operations are interrupted and may be restricted but User is able to continue working. ○ The problem affects only 1 (one) User.	< 4 Hours	Within X business hours
3	Such an Incident will have one or more of the following characteristics: ○ Temporary workaround can be found. ○ Fault does not adversely impact on normal operations. (Non-critical stock spares can take from 6-12 weeks lead time)	Next business day	Within X business days
4	Such an Incident will have one or more of the following characteristics: ○ Minor cosmetic issues ○ General questions or information requests	Next business day	Within mutually agreed timeframes

Training

Connexionz has two decades of experience in training agencies; Apple Country Transit can be assured that the Customer Success Team will work with you to ensure personnel's confidence in using Connexionz CORE.

All training is run by Connexionz employees who are experienced trainers. All modules will encompass practical delivery methods, including instructor-led overviews, hands-on activities using the system, and operational scenarios where required.

Connexionz is happy to follow your lead and schedule training around your service operations. The optimum number per session is 6 to 8 people. Smaller classes have proven to result in better retention and more confident course participants.

Connexionz Onsite Training Needs

For successful onsite training for the Agencies, Connexionz will require:

- A room that is large enough to support the staff who are being trained.
- Comfortable seats for all staff and trainers.
- A room with HDMI-based projection is preferred.
- A Wi-Fi connection should be made available.
- For Dispatch and software training – It's helpful to have supervisors bring their laptops so they can "watch and try".

For APC Hardware System Troubleshooting Training, an operating vehicle (not in service) is required with all hardware installed, tested, and in working order.

Training Plan

Our Trainer will create a Training Plan and submit it to Anaheim Resort Transportation for approval before training is conducted. The Training Plan will include:

- Approach.
- Schedule.
- Contact details and roles and responsibilities.
- Training workshop to training guide reference.
- Agenda for each training workshop, including the intended audience, required equipment, prerequisites, workshop topics and durations, and trainer details.

Training Schedule

Our Trainer will work with you to develop a specific training schedule that suits the resources availability and any other operational constraints we need to work with - below is an example of a training schedule that will be produced:

Training Workshop	Workshop Total Time (Hours)	Trainees Required	Trainee Attendance Time (Hours)	Start Time	End Time
Day 1: Dec-13-2022					
Dispatch	5.5	Dispatchers Operations and Agency Management	5.5	8:00 a.m.	1:30 p.m.
Connexionz Support Portal	0.5	Operations and Agency Management	0.5	2:30 p.m.	3:00 p.m.
Route & Schedule Maintenance	1	Planners / Schedulers	1	3:00 p.m.	4:00 p.m.
		Operations and Agency Management		3:00 p.m.	4:00 p.m.
Day 2: Dec-14-2022					
Mobile App	0.5	Drivers Customer Attention / Services personnel Operations and Agency Management	0.5	2:00 p.m.	2:30 p.m.
Analysis & Reporting	1.5	Operations and Agency Management	1.5	2:30 p.m.	4:00 p.m.
Bus Hardware Installation & Maintenance Overview	1	Maintenance personnel	1	8:30 a.m.	10:00 a.m.

Training Agenda

Training Agendas provide a more detailed view of each training workshop, so trainees know what to expect and can prepare appropriately. Our typical training agenda includes the following sections:

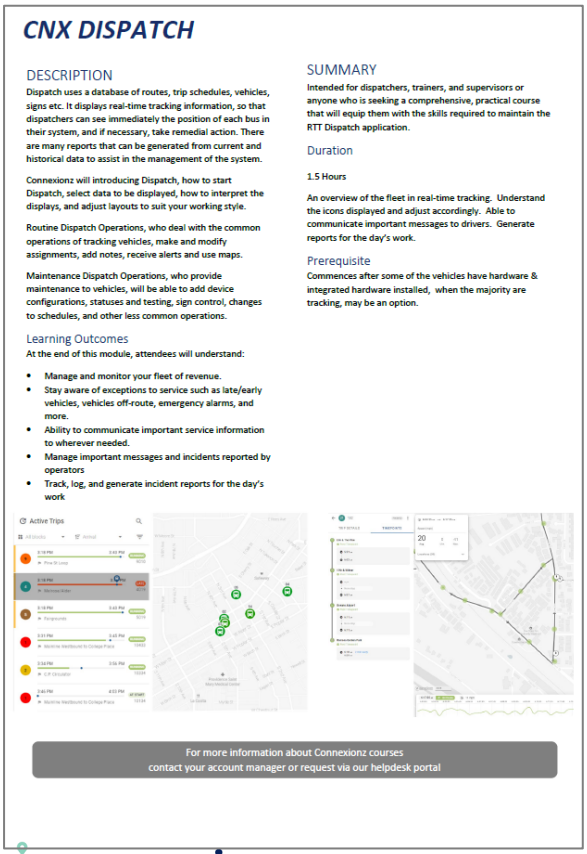
- Workshop Overview.
- Participants/Intended Audience.
- Duration.
- Trainer Details.
- Training Approach.
- Prerequisites.
- Materials Required.
- Training Topics.

Our Trainer will work with you to develop a specific training agenda that suits resource availability and any other operational constraints we must work with – the image on the right shows an example of the training agendas that will be produced.

Training Manuals

Electronic manuals will be provided. Learning at your own pace is also a great way to cement system knowledge, and we have training videos available within the dispatch application, and additional topics available via our Helpdesk Portal, which is available 365/24/7. Each video provides a visual and audible clip with a duration of approximately 3-5 minutes. If self-paced doesn't work for you, contact us and schedule a free one-on-one session.

Samples of our Training Manuals - Course content, learning outcomes, duration, prerequisite, and who should attend.



CNX DISPATCH

DESCRIPTION

Dispatch uses a database of routes, trip schedules, vehicles, signs etc. It displays real-time tracking information, so that dispatchers can see immediately the position of each bus in their system, and if necessary, take remedial action. There are many reports that can be generated from current and historical data to assist in the management of the system.

Connexionz will introducing Dispatch, how to start Dispatch, select data to be displayed, how to interpret the displays, and adjust layouts to suit your working style.

Routine Dispatch Operations, who deal with the common operations of tracking vehicles, make and modify assignments, add notes, receive alerts and use maps.

Maintenance Dispatch Operations, who provide maintenance to vehicles, will be able to add device configurations, statuses and testing, sign control, changes to schedules, and other less common operations.

Learning Outcomes

At the end of this module, attendees will understand:

- Manage and monitor your fleet of revenue.
- Stay aware of exceptions to service such as late/early vehicles, vehicles off-route, emergency alarms, and more.
- Ability to communicate important service information to wherever needed.
- Manage important messages and incidents reported by operators
- Track, log, and generate incident reports for the day's work

SUMMARY

Intended for dispatchers, trainers, and supervisors or anyone who is seeking a comprehensive, practical course that will equip them with the skills required to maintain the RTT Dispatch application.

Duration

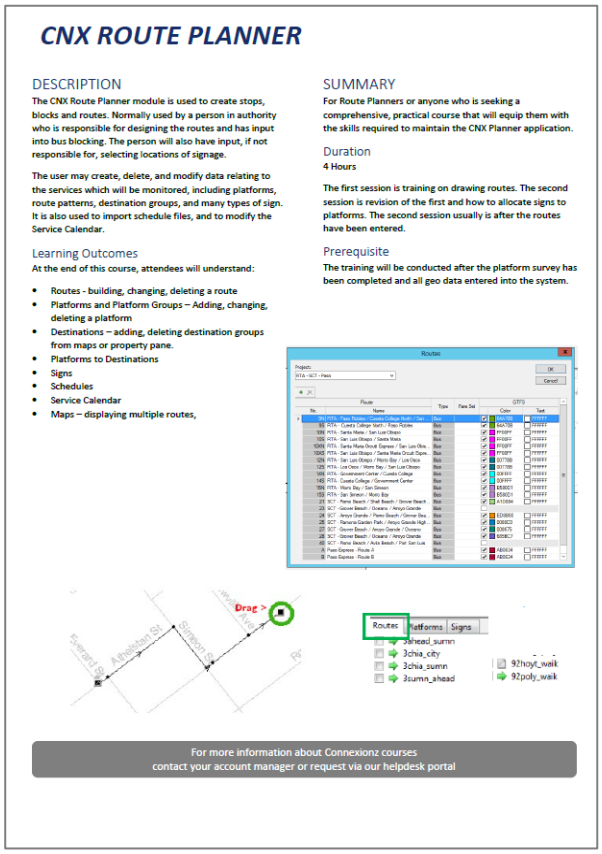
1.5 Hours

An overview of the fleet in real-time tracking. Understand the icons displayed and adjust accordingly. Able to communicate important messages to drivers. Generate reports for the day's work.

Prerequisite

Commences after some of the vehicles have hardware & integrated hardware installed, when the majority are tracking, may be an option.

For more information about Connexionz courses
contact your account manager or request via our helpdesk portal



CNX ROUTE PLANNER

DESCRIPTION

The CNX Route Planner module is used to create stops, blocks and routes. Normally used by a person in authority who is responsible for designing the routes and has input into bus blocking. The person will also have input, if not responsible for, selecting locations of signage.

The user may create, delete, and modify data relating to the services which will be monitored, including platforms, route patterns, destination groups, and many types of sign. It is also used to import schedule files, and to modify the Service Calendar.

Learning Outcomes

At the end of this course, attendees will understand:

- Routes - building, changing, deleting a route
- Platforms and Platform Groups – Adding, changing, deleting a platform
- Destinations – adding, deleting destination groups from maps or property pane.
- Platforms to Destinations
- Signs
- Schedules
- Service Calendar
- Maps – displaying multiple routes,

SUMMARY

For Route Planners or anyone who is seeking a comprehensive, practical course that will equip them with the skills required to maintain the CNX Planner application.

Duration

4 Hours

The first session is training on drawing routes. The second session is revision of the first and how to allocate signs to platforms. The second session usually is after the routes have been entered.

Prerequisite

The training will be conducted after the platform survey has been completed and all geo data entered into the system.

For more information about Connexionz courses
contact your account manager or request via our helpdesk portal

Cost Proposal

Scenario 1: Software Only (Baseline, must be included in all proposals)			
Service Type	**Recurring (Y/N) If yes, provide frequency**	**Unit Price**	**Total Price**
Cloud-Based Software & Licensing			
CAD/AVL System Licensing	*Yes, Annually*	*$7,328.61*	*$7,328.61*
APC System Licensing	*Yes, Annually*	*$10,937.50*	*$10,937.50*
Fixed Route Cellular Data Plan	*Yes, Annually*	*$720.00*	*$720.00*
Paratransit Cellular Data Plan	*Yes, Annually*	*$634.50*	*$634.50*
Training			
Training Resources	*Yes, Annually*	*$528.00*	*$528.00*
ITS Project Training (Ongoing ITS and NTD training is included in the Support & Maintenance)	*No*	*$6,215.17*	*$6,215.17*
UTA Training & Documentation	*No*	*$6,875.00*	*$6,875.00*
Personnel & Labor (including Project Management, Travel, & Support. Include Any Subcontractors)			
Project Initiation	*No*	*$369.01*	*$369.01*
Discovery & Design	*No*	*$784.14*	*$784.14*
Procurement, Configuration, Testing, & Shipping	*No*	*$276.76*	*$276.76*
System Installation, Configuration, & Testing	*No*	*$7,564.66*	*$7,564.66*
Full Fleet Installation & Testing	*No*	*$276.76*	*$276.76*
System Acceptance Testing, Support, & Approval, & Project Closure	*No*	*$1,107.02*	*$1,107.02*
Support & Maintenance Resources	*Yes, Annually*	*$4,919.42*	*$4,919.42*
Warranty - Year 1	*No*	*$484.74*	*$484.74*
APC Integration Kit	*No*	*$2,726.75*	*$16,360.50*
Vehicle Installation	*No*	*$875.00*	*$5,250.00*
APC On-Bus Maintenance	*Yes, Annually*	*$812.50*	*$4,875.00*
NTD Certification/Validation of Existing Equipment			
Software Implementation Package Fee - Including NTD Certification	*No*	*$3,354.17*	*$20,125.00*

Scenario 2: Mobile App			
Service Type	**Recurring (Y/N) If yes, provide frequency**	**Unit Price**	**Total Price**
Mobile App for Transit Riders			

Connexionz Software Licensing	*Yes, Annually*	*$138.83*	*$832.99*

Annual Maintenance & Support	**Year 1**	**Year 2**	**Year 3**
Maintenance and support for all hardware, software, license fees, and other costs	*Included in Scenario (1 & 2) Tables Above. The total is equal to: $31,260.76*	*$30,776.02*	*$30,776.02*
	Option	**Year 4**	**Year 5**
		$30,776.02	*$30,776.02*

Total Cost with Three Year Contract	*$158,016.81*
Total Cost with Five Year Contract	*$219,568.85*

Extended Warranty Options	**Cost**
Three (3) Year Extended Warranty (beyond initial 1-year warranty period)	*$1,454.22*
Five (5) Year Extended Warranty (beyond initial 1-year warranty period) - Note: Including Year 1, this gives a total of six (6) years of warranty.	*$2,423.70*

Footnote Pricing Assumptions
We assume your 25' light transit vehicles have two doors and will require a sensor for each door. If this assumption is incorrect then it may be possible to reduce the hardware cost.
Any changes in pricing for Annual Maintenance and Support from years 2 onwards will be calculated based on actual CPI that is determined via a methodology agreed during project contract negotiations.
Henderson County will take responsibility for all NTD APC audit ride-along activities.
Henderson County will provide a resource to assist with the configuration of the paratransit vehicle routes.
The routers on the Paratransit vehicles already have GPS antennas connected, and the routers can be configured to forward the GPS positions to the CNX server. The cellular data plans will only be used for vehicle tracking purposes.
Henderson County will take responsibility for maintaining the existing Pepwave Routers installed on the Paratransit buses and assist CNX remote resources to troubleshoot issues if they arise.

This pricing sheet represents the proposer's cost proposal to Henderson County for this project and includes all materials, supplies, hardware and software, training, support and maintenance, labor and benefits, profit and fees, subcontractor costs, overhead and administration, travel and per diem, and any other items necessary for the successful implementation of this project.

XYZ

Signature of Authorized Official

Head of Sales – North America

Title

01.22.25

Date

References

Client	Solano Country Transit (SolTrans)
Contact	Bisi Ibrahim, Senior Analyst - Technology, Planning & Operations bisi@soltransride.com | 707 – 736 - 6985
Date	2023 – Present
Overview	Connexionz services SolTrans's 56 fixed-route public buses and eight tracking-only Para Transit vehicles.

Client	City of Racine - Racine Transit (RYDE)
Contact	Trevor Jung, Transit Manager trevor.jung@cityofracine.org | 262-636-9123
Date	2022 To Present
Overview	Racine Transit (RYDE) services 35 fixed-route buses, 10 local routes, and 400 stops.

Client	San Luis Obispo Regional Transit Authority
Contact	Omar McPherson, Grants and Financial Manager omcpherson@slorta.org | 805-781-1171
Date	2015 to Present
Overview	SLO Transit is a mass transportation provider in San Luis Obispo, California. It operates 43 vehicles along 16 fixed routes within 23 square miles of the city limits of San Luis Obispo and California Polytechnic State University (Cal Poly).

Attachments

ATTACHMENT A

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY and VOLUNTARY EXCLUSION LOWER TIER COVERED TRANSACTION

(To be submitted with all bids exceeding $25,000.)

(1) The prospective lower tier participant (Bidder/Contractor) certifies, by submission of this bid or proposal, thatneither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) The prospective Bidder/Contractor also certifies by submission of this bid or proposal thatall subcontractors and suppliers (this requirement extends to all subcontracts at all levels) are not presently debarred,suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(3) Where the prospective lower tier participant (Bidder/Contractor) is unable to certify to any of the statements in thiscertification, such prospective participant shall attach an explanation to this bid or proposal.

The lower tier participant (Bidder/Contractor), certifies or affirms the truthfulness and accuracy of this statement ofits certification and disclosure, if any.

SIGNATURE _____

TITLE Head of Sales – North America

COMPANY Connexionz

DATE January 21, 2025

State of Nebraska County of Douglas

Subscribed and sworn to before me this ~~22~~ 21 day of January, 20 25.

GENERAL NOTARY - State of Nebraska
SARAH BUSCH
My Comm. Exp. January 19, 2026

Notary Public _____

My Appointment Expires Jan. 19th, 2026

ATTACHMENT B

Federal Transit Administration Contract Clauses

The vendor agrees to comply with all federal, state, and local laws, rules, regulations, and ordinances, as applicable. It is further acknowledged that the vendor certifies compliance with all provisions, laws, acts, regulations, etc., as specifically noted above in the Terms and Conditions.

Vendor's Name/Company Name: Connexionz

Address, City, State, and Zip Code: 27720 Avenue Scott, Unit 190, Santa Clarita CA, 91355

Phone Number: +1 661 998 9229

Printed Name and Title of Authorized Representative:

Patrick O'Donnell - Head of Sales – North America

Email Address: patrick.odonnell@connexionz.com

Signature of Authorized Representative: 

Date: January 21, 2025

ATTACHMENT C

APPENDIX A, 31 C.F.R. PART 21 – CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

4. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

   The Consultant, __Connexionz_____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Consultant understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Consultant's Authorized Official

Patrick O'Donnell Head of Sales – North America
Name and Title of Consultant's Authorized Official

__January 21, 2025_____
Date

ATTACHMENT D

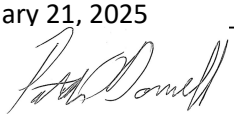
CERTIFICATION REGARDING BUY AMERICA

In accordance with 49 C.F.R. § 661.6, for the procurement of steel, iron or manufactured products, use the certifications below. Select and complete only ONE Buy America certification:

Certificate of Compliance with Buy America Requirements

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(1), and the applicable regulations in 49 C.F.R. part 661.

Date: __January 21, 2025 _____

Signature:  _____

Company: ____Connexionz_____

Name: _____Patrick O'Donnell_____

Title: _____Head of Sales - North America_____

Certificate of Non-Compliance with Buy America Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception to the requirement pursuant to 49 U.S.C. 5323(j)(2), as amended, and the applicable regulations in 49 C.F.R. § 661.7.

Date: _____

Signature: _____

Company: _____

Name: _____

Title: _____

connexionz

SMARTER TRANSIT SOLUTIONS

27720 Avenue Scott
Unit 190
Santa Clarita CA, 91355
United States
www.connexionz.com

Proposal Scoring Matrix: APCs & CAD/AVL Technology

Scores for All Responses

Criteria	Total Points Available	Firm 1	Firm 2	Firm 3	Firm 4	Firm 5
		Connexionz	*Strategic Mapping*	*Smart Sensor Solutions*	*CityData*	*Passio*
Qualifications and experience of firm (including references)	25	25	19	15	23	9
Technical specifications, system requirements, and product capabilities	25	24	23	16	24	20
Cost of proposal including one-time and any recurring costs	25	10.42	9.86	25	5.8	18.87
Proposed training plan	15	15	15	10	10	14
Project implementation schedule	10	10	10	9	10	9
Total Score:	**100**	**84.42**	**76.86**	**75**	**72.8**	**70.87**

Passio scored better on cost than Connexionz, but we had to terminate our previous contract with them for Automatic Passenger Counters for failure to perform their contracted duties. As such, they were disqualified from this selection. Smart Sensor Solutions also scored better on cost, but their proposal did not meet the technical requirements put forth in the County's Request for Proposals, including no mention of National Transit Database (NTD) certification, which is one of the County's primary objectives for this procurement.