Trapeze™

Intelligent Transportation Systems

(FOR BUS FLEETS)

Make public transit the backbone of Mobility-as-a-Service with real-time data and dynamic disruption management

As tomorrow's mobility manager, you're focused on capturing real-time data and moving toward making mass transportation the backbone of Mobility-as-a-Service (MaaS). Your intelligent transportation system is critical to achieving a MaaS framework that works for all – making transit the safest, most reliable, convenient, and cost-effective component of a journey.

The only ITS solution equipped with Intelligent Decision Support (IDS), TransitMaster provides your operation with up-to-the-second situation awareness of every vehicle on the street, and tailored service restoration tools, such as dynamic re-routing and route creation on the fly.

The system is fully integrated with your existing mission-critical software for optimal responsiveness to situations and provides the real-time traveler information and infotainment capabilities your riders expect, to be fully informed along their journey. The redesigned Mobile Data Terminal interface (Mobile-Enriched) is intuitive and allows operators to stay focused on driving while being fully aware of changes to service.

TransitMaster is a cost-effective ITS solution designed specifically with maximum configuration possibilities. This agility lets you quickly adopt the latest advancements that drive public engagement and rider satisfaction, so you're at the forefront of change.

80%
decrease in late pullouts (Spokane)

100%
driver compliance for cycling wheelchair during pullout

AGENCY BENEFITS

Deliver seamless service by getting the right information at the right time.

Improve Operational Decision-Making

Get a central, organized view of real-time operations. Proactively be alerted of issues and resolve them to reduce passenger wait times. Prioritize critical action items based on your business rules.

Resolve Asset Issues Before They Happen

Improve preventative maintenance capabilities and enhance fleet maintenance programs by capturing real-time and predictive diagnostic data. Improve fuel efficiency with operator behavior monitoring and vehicle telematics.

Improve Planning

Optimize travel times and deliver reliable service riders expect. Utilize ridership information by location and time to help you plan your next change of service.

Increase Cost Savings

Avoid hardware obsolescence with a cost-effective modular solution. Automate dispatch actions, eliminate dual data entry (with enterprise integration) and cost-effectively integrate voice and data communication.

Gain Actionable Insights

Understand historic CAD/AVL data to help you keep on improving performance, enhancing rider experience to deliver the journey your ridership expects.

PASSENGER BENEFITS

Make travel easier, safer, and rewarding with real-time information and infotainment.

Make Operations Safer

Improve response time and accuracy during emergencies with GPS location, real-time disruption management, and automatic notification to key stakeholders. Reduce accidents with improved visibility via camera integration. Collect data on driver behavior to improve road safety.

Get Real-time Information All the Time

Leverage AVL data generated from ITS to provide riders with real-time vehicle arrival predictions on street signs, IVR, web, and mobile applications. Reduce uncertainty for passengers by immediately relaying service disruptions and detour information.

Increase Rider Comfort

Manage overcrowding by monitoring passenger loads in real-time, adding service, and informing riders of current capacity automatically. Provide seamless service by monitoring wheelchair and bike deployments and expanding options for fare collection.

Turn Your Best Practices into Powerful Decision-Support

TransitMaster Intelligent Decision Support is the first and only next-generation CAD/AVL system to meet FTA Transit Operations Decision-Support System (TODSS) requirements. IDS can be easily configured to fit your needs, enabling you to automate your agency business rules and integrate operating procedures. With a highly customizable flow of information to operators, dispatchers, road supervisors, administrators, ridership, and even third parties, you stay on top of daily service while delivering reliable transit information. By leveraging your existing incidents, instead of canned incidents, you best implement your action plans and handle service disruptions with consistency.

PRODUCT FEATURES

Incident Management

Prioritize critical incidents and execute associated Action Plans. Monitor pending incidents and escalate as needed. Integrate external data (e.g. weather/traffic) that may impact operations.

V8 Integrated Vehicle Logic Unit

Facilitate GPS tracking of all connected mobile assets. Integrate with onboard devices for single-point log-on, aggregation of data, and sharing of pertinent AVL data.

Mobile Enriched User Interface

Help drivers communicate more efficiently with dispatch and get timely performance feedback with a large, color touchscreen Mobile Data Terminal (MDT) that is intuitive to use and requires no formal training to operate.

Service Adjustments and Real-time Disruption Management

Add or cancel service and create detours in minutes, using a simplified, step-by-step process. Communicate service notifications instantly to passengers across communications channels.

Headway Management

Provide automatic feedback to drivers to reduce gapping and bunching on frequency-based routes. Monitor and analyze spacing with algorithms using real-time data, including traffic, construction, and service interruptions.

"This headway management solution from Trapeze is really groundbreaking."

Douglas Ibarra, Technology and Planning Analyst, Oahu Transit Services

Case Study

Learn how Metro Transit's ITS upgrade transformed their customer experience.
https://www.trapezegroup.com/mt

Real-Time AVL Map

Show real-time location of all mobile assets and access most features dispatch needs right off the map. Filter map views based on multiple criteria to get specific information (e.g. late vehicles on BRT Route 7). Send directions for ad hoc locations to drivers via MDT Turn-by-Turn navigation, instead of over the radio.

Voice Over Internet Protocol (VOIP)

Establish voice connections between different participants, including dispatch workstations, radio terminals, loudspeaker amplifiers, intercom units, interoperable legacy radio systems, and telephone users with a software-based communications system.

AVL Playback

Access and review all known data during a specific time period for a bus, route, driver, block, etc. Review recorded operation data such as schedule adherence, communication data, and passenger count data.

Vehicle Intelligence

Monitor the health of your fleet in real time and look at predictive alerts and trends. Enable your maintenance department to proactively address issues - even while vehicles are on the road - before they worsen.

On-Board Integration

Manage use of destination signs, automated vehicle announcements, Automatic Passenger Counters (APCs), vehicle cameras, the farebox, and the MDT with a single onboard computer to streamline operations. Eliminate cumbersome vehicle inspections via MDT instead of paper.

Traffic Signal Priority

Optimize routes at busy intersections and improve spacing of buses by requesting signal priority in real time. Enable/disable TSP function remotely.

Trapeze Enterprise Integration

Eliminate duplicate entry between systems. Send maintenance data to Enterprise Asset Management to address asset issues. Integrate with Traveler Experience for dynamic route guidance.

Third-Party Integration

Enable a fast, easy, and affordable way to provide riders with real-time information using the GTFS standard. Standard integrations with myriad of existing vendors, as well as open API's, to do more with your ITS solution.

Backward Compatibility Engineering

Upgrade your software and access new features and functionality of the back-end systems without having to replace your entire vehicle network. New fixed-end software releases continue to be compatible with old hardware. Upgrade pieces of hardware with simple adapter cabling.

Read the Blog

How Oahu Transit Services optimized spacing with a smart headway management system.
https://www.trapezegroup.com/blog/dreams

EXTEND YOUR ITS CAPABILITIES

IDS Value Program – Get operational assessment, customized training, and IDS configuration support.

Yard Management for Bus – Locate exact position of buses in the garage/yard for timely pullout, efficient scheduling, and maintenance.

ViewPoint with Power BI – Monitor real-time performance dashboards, create reports, and share information across departments.

Infotainment – Provide real-time onboard content to enhance the passenger journey, using the latest dynamic passenger information (DPI) systems from Trapeze powered by VIANOVA Technologies.

Turn-by-Turn Navigation – Provide vehicle operators with visual and audio instructions, including turn-by-turn during detours and ad hoc routes like shuttles or bus bridges.

Vehicle Intelligence – Proactively identify issues to reduce roadcalls and vehicle breakdowns, and integrate with Trapeze Enterprise Asset Management (EAM), eliminating manual data re-entry.

Mobile Router Call Data and Passenger Wi-Fi – Enable Passenger Wi-Fi and real-time bus location via CCTV.

Annunciation – Create and manage announcements for the entire transit system.

Automatic Passenger Counter – Review ridership count data to analyze significance of bus stops and routes.

GTFS-RT – Provide real-time trip updates, service alerts, and vehicle positions to customer-facing applications.

Information Technology for Public Transport (ITxPT) – Enable cost-effective, plug-and-play deployment of ITS systems and gain flexibility to experiment with new technologies to further enhance the customer experience.

Pedestrian Walking System – Provide information to the driver as well as nearby pedestrians that the bus is about to turn, helping prevent pedestrian accidents.

Mobile Supervisor – Enable road supervisors to monitor their assigned routes in real-time via tablet.

Illustrated Parts Catalog – Make parts requests easier by electronically retrieving critical parts schematics.

Reach out to our ITS experts for a demo.

Trapeze™