Washington D.C. Department of Transportation Improves Real-Time Bus Tracking with TRANSITiQ

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T E C H N O L O G I E S

Cost-effective, smartphone-based technology provides mission-critical business intelligence for public transit agency

The Challenge

The District of Columbia Government's Department of Transportation (DDOT) manages and maintains the transportation infrastructure across our nation's capital including the District's mass transit services.

Tracking and maintaining visibility into the location and movement of DDOT's extensive network of buses is critical to helping the agency achieve its vision of sustainable travel practices and energy efficiency. By achieving situational awareness into the current situation "on the ground", DDOT can better keep its finger on the pulse of fleet movements, achieve greater rider satisfaction, and, ultimately, improve adoption of public transit services.

DDOT's legacy vehicle tracking system had been in place for some time. However, in order to realize cost savings and boost performance, the agency sought to modernize and complement its existing capabilities. To continue its mission of delivering outstanding public service, specific functionality was needed to improve data collection frequency and reliability across its bus fleet.

The Solution

EastBanc Technologies proposed an alternative approach to DDOT's legacy system—TRANSITiQ.

TRANSITiQ is a powerful, comprehensive, and innovative, business intelligence solution for public transit agencies. Using a combination of smartphone-based GPS, IoT, and cloud technology, TRANSITiQ provides a 360-degree view of individual vehicles and DDOT's overall fleet (location, speed, and direction).

Powered by the cloud (no internal infrastructure is required), TRANSITiQ automatically scales to handle peak traffic times and a surge in position reports—without interruption or delay. TRANSITiQ can uncover vital efficiency gains across the entire system, specific routes, buses, trains, etc.
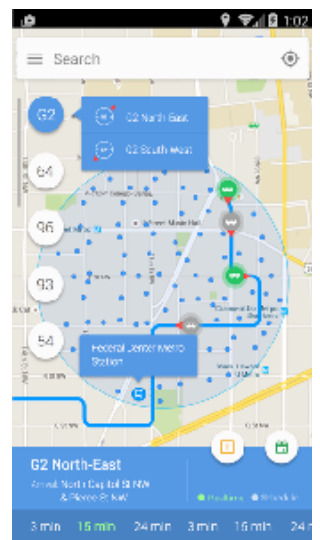
Instead of just relying on gut instinct, the solution provides DDOT with "one source of truth" about its fleet of buses. Vital facts about fleet movements are reported in an intuitive, dashboard-based format. The resulting optimization increases rider satisfaction, prevents delays or bunching, and optimizes transit coverage.

With TRANSITiQ, informed decision-making becomes a standard:

Dashboard Reporting—DDOT can view a dashboard-based operational picture of performance across the fleet and investigate particular areas that don't meet expectations.

Data Metrics—By analyzing raw data in the back-end, DDOT can better measure goals against key metrics.

Historical Trends—DDOT can measure current performance against historical trends to better inform decisions.

Office 360 Integration—Forget about manually pulling reports. The Microsoft Office 360 add-on for TRANSITiQ delivers the convenience of viewing and sharing live performance reports with agency stakeholders right from PowerPoint.

This brings about dramatic cost-savings over legacy, hardware-based systems and allows DDOT to track the location of buses more reliably than its current technology.

The Results

As part of its initial pilot, DDOT tested 15 devices on its Circulator buses (which serve riders in the District and the greater metropolitan area). The results were impressive enough that the agency is currently installing devices across the entire fleet of 64 Circulator buses.

TRANSITiQ is now providing DDOT with a data-driven way to track the location of its fleet of buses more efficiently while simultaneously optimizing performance. Reports include:

Real-time Positioning Information—TRANSITiQ records the vehicle's location data with unparalleled precision and speed, transmitting location information every few seconds.

Current versus scheduled positions—The system can continuously identify deltas between the actual time and location versus the scheduled time and location.

Deviations from schedule—DDOT can now seamlessly set riders expectations, and take preventative actions across its fleet, as necessary.

Anomaly detection—Using automatic algorithms, the system will pick and display user routes requiring attention based on unusual vehicle behavior.
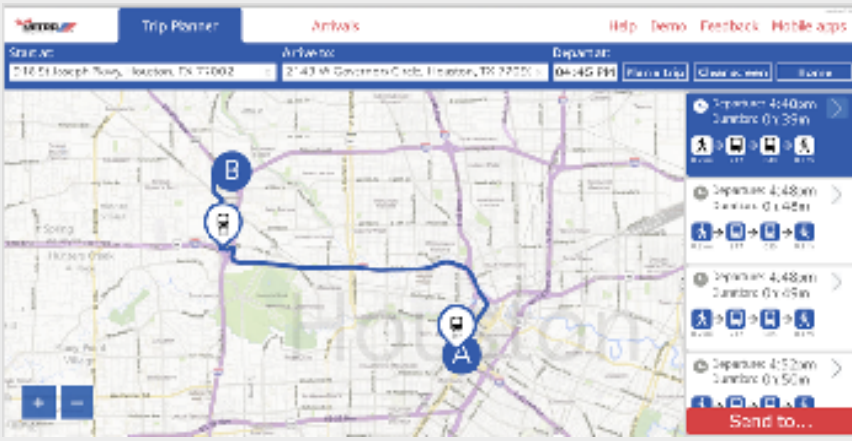
The solution also includes a real-time API capable of providing real-time GPS data to external developers. This allows for other internal, dependent systems to leverage "on the ground" information about fleet movements.

In addition, because the Department already has existing smartphone contracts with cellular operators, no additional investment in hardware was required. TRANSITiQ works seamlessly across multiple platforms, regardless of the device.

And, because TRANSITiQ is a SaaS solution, DDOT benefits from enhancements or upgrades at no additional charge—everything is included in the flat monthly fee.

EastBanc Technologies also provides DDOT with mobile applications, trip planning screens, and bus stop displays. This provides greater transparency to riders in the form of real-time data and situational awareness of DDOT's transportation network, wherever they are.

"The cloud based SaaS solution enhanced our ability to track and measure bus operation performance with the aim of improving operations and the customer's experience"—José Colón, Chief Information Officer, District Department of Transportation, Washington D.C. Government.

If you think your organization could benefit from TRANSITiQ, we should talk. Please reach out to:

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