

Metro New York City, NY

PANYNJ Next Generation Agency-wide TMS System

PANYNJ builds, operates, and maintains critical transportation and trade assets. Its network of aviation, rail, surface transportation and seaport facilities moves millions of people annually and transports vital cargo throughout the New York/New Jersey region. PANYNJ also owns and manages the 16-acre World Trade Center site, home to the iconic One World Trade Center.

In December 2016, The Port Authority of New York & New Jersey (PANYNJ) awarded Kapsch TrafficCom a four-year contract to install an Agency-wide Transportation Management Software (ATMS).

Innovative solutions contribute to a healthy world without congestion!

Powered by Kapsch's DYNAC® software, the new ATMS enables PANYNJ to manage ITS assets at its bridge, tunnel, aviation, and port facilities, and at the PATH rail transit system from any of its individual facility Operations Control Centers and the PA-AOC. The new system helps the Authority improve operational efficiency, agency-wide visibility of travel conditions and information accuracy, facilitate consistent workflows and enhance regional transportation coordination, environmental monitoring and reporting capabilities.

Moreover, The ATMS facilitates enhanced motorist safety and mobility by improving regional travel throughout the PANYNJ's transportation system infrastructure.



Project Scope:

Kapsch was chosen to design, build and support the Port Authority of New York and New Jersey's Next Generation Agency-Wide Transportation Management Software. The contract consists of a two-year installation phase and a two-year maintenance phase base term followed by one additional two-year optional maintenance period.

Kapsch successfully merged 21 independent traffic and facility management data systems into a single enterprise DYNAC-based ATMS managing the Authority's vital "Gateways to the Nation" transportation assets including the George Washington, Bayonne, and Goethals Bridges & Outerbridge Crossing, Lincoln & Holland Tunnels, LaGuardia, JFK International & Newark Liberty International Airports and the Port Newark-Elizabeth Marine Terminal.

The Challenges:

- Combining the expectations of multiple facility stakeholders all using the same interfaces on the centralized platform
- Meeting the demand for deployment of the system across multiple facilities with an aggressive schedule

The Solution:

A single enterprise DYNAC-based ATMS:

- Replace independent legacy systems with an agency-wide, next generation architecture. All Authority assets are able to be managed from any individual facility as well as the PA-AOC, providing agency-wide situational awareness
- Enable rapid, consistent, and appropriate responses to traffic incidents and tunnel life safety events by generating and executing real-time response plans to help facility and AOC operators expertly manage time sensitive, critical situations
- Inform all Authority facilities on the status of the regional transportation network: New software at the Ferry Transportation Unit, Port Authority Bus Terminal, GWB Bus Station, Teterboro & Stewart International Airports and PATH
- Facilitate enhanced motorist safety and mobility by improving regional travel throughout the PANYNJ's transportation system infrastructure
- Communicate with 511 database and the traffic and incident data systems used by the Authority to convey real-time traveler information to regional transportation agencies and the traveling public

System Features: Supervisory Control and Data Acquisition (SCADA), Dynamic Message Signs (DMS), NTCIP, Closed Circuit Television (CCTV), Video Management System (VMS), Center-to-Center (C2C), Roadway Weather Information System, TRANSCOM TDI and OpenReach interfaces, Lane Use Signals (LUS), Incident Management, Vehicle Detection System, Roadway Device Management System, Traffic Signal Interface, GPS Tracking Interface, External System Interfaces (511, Twitter, Travel Times, OpenReach, E-Alerts, WebEOC, IBM Maximo, ...).

The Added Value

- The centralized system provided situational awareness at an agency level allowing facilities to react to events occurring at neighboring facilities to allow the max throughput of vehicles around the region.
- Agency employees were able to transfer positions from one location to the other without going through the process of learning an entirely new traffic management system.
- Situational awareness at a larger regional level was achieved with the 511 interface used by multiple agencies in the NY and NJ regions.
- Historical database created to help provide data that can be used to help manage future incidents and events

