



INTELLIGENT TRANSPORTATION SYSTEMS

Warsaw tramline passenger information system

The project

- Passenger information system for one of Europe's biggest tramlines with 520 trams and 550 stops
- Equipping 520 trams with the onboard tracking and communication unit R-AVL-A30
- Multi-vendor integration of onboard units
- Supply of 68 tram-stop information panels
- Integrating the whole tram-stop display network into the system
- Generation of estimated arrival times for information panels, website and apps

marketing.transport@gmv.com
gmv.com



«GMV's hallmark traits are its professional approach and precise analysis of our particular needs»

Michał Aniotek, Project Manager



Initial situation and goals

When GMV took on modernization of Warsaw trams passenger information system the existing system of onboard units and tram-stop information offered passengers only partial information.

The aim of the new system was to extend estimated tram arrival times to the whole network and to improve the accuracy of the information. These objectives have then been fleshed out in successive phases, adapting the system to open standards and phasing in new functions.



Solution

GMV's solution is a turnkey project providing all necessary equipment and software for precise calculation and display of estimated arrival times.

The project has been carried out over several phases. In the first phase Warsaw Trams set its sights on enlarging and enhancing the existing information-panel and equipped-tram system. In this phase GMV set up a high-availability control center and brought in wholly GMV-developed software with tram-stop arrival time forecasting algorithms, building up the system to a total of 68 panels and 480 trams fitted with onboard tracking

Real time passenger information system for Warsaw's trams

Warsaw's 550-tram, 130-kilometer tramline serves the whole city; this makes it one of Europe's biggest.

Tramwaje Warszawskie (Warsaw Trams) first turned to GMV back in 2011 as part of its passenger-information modernization drive. Phased in up to 2018, the GMV-supplied system now provides Warsaw residents with real-time, top-quality, highly accurate and reliable information.

units. These new panels include synthesized voice information for disabled users. The new time-calculation system also enabled GMV to bring in other real-time passenger information systems based on handhelds and the website.

Warsaw's tram fleet will be tracked by means of GMV's highly robust and dependable R-AVL-A30 onboard unit, a mobile GPS-based tracking appliance with mobile cellular communication that additionally allows actual running performance to be checked continually against real-time planning.

Subsequent enlargements have brought the total number of equipped trams up to over 520.

In 2018 Warsaw Trams turned anew to GMV for enhancement of the system by migrating it to the cloud, so that it could be used at all 550 tram stops. Warsaw Trams furnishes this information by means of an open API integrated with GMV's own timing system.

GMV and Warsaw Trams have signed a service level agreement to guarantee passengers maximum accuracy in the times shown.

Results

Tramwaje Warszawskie (Warsaw Trams) launched what was at the time a groundbreaking tramline initiative in Eastern Europe with the idea of giving its passengers precise, understandable and top-quality information.

This goal, sketched out in the first project phases, has been more than met with an open cloud solution taking in the whole fleet and all tram stops; the information is shown not only on the tram-stop panels but also on handhelds and the website.

«In 2018 GMV carried out a successful implementation on the cloud of the arrival-time prediction system of Warsaw Trams» Michał Aniotek, Project Manager

