

Östgötatrafiken: Data-driven decisions in a modular public transportation environment

Project overview:

Partners:	Östgötatrafiken and Consat Telematics
Location:	Östergötland County, Sweden
Objective:	Create a reliable, data-driven foundation for service planning, monitoring, and passenger insights in a modular system environment
Completion date:	Implemented and operational since service launch in 2019



“The important thing is that each supplier not only focuses on their own part, but also helps troubleshoot and solve issues in other systems they depend on.”

-Albert Gunnarsson, System Integrator, Östgötatrafiken

Östgötatrafiken is the regional public transport authority in Östergötland and is responsible for planning, procuring, and developing public transport in the county. The operations include scheduled bus services, tram, train, demand-responsive transport, and other on-demand services, as well as paratransit and medical transport.

In an environment where many systems and suppliers interact, Östgötatrafiken has chosen a modular system strategy. As part of this work, the organisation implemented Automatic Passenger Counting (APC) from Consat Telematics to strengthen decision-making, monitoring, and the understanding of travel patterns across the county.

The challenge

Östgötatrafiken has deliberately chosen not to adopt a model where a single supplier is responsible for large parts of the system support. Instead, the overall solution is built from several specialised components. This provides increased flexibility and strengthens the organisation's role as a client, but it also creates new challenges.

When the organization itself carries the responsibility for system integration, it becomes crucial that each supplier:

- delivers reliable and high-resolution data,
- understands its role within a broader system landscape, and
- is willing to take responsibility even beyond its own delivery.

At the same time, Östgötatrafiken previously had no passenger counting at all. This limited the ability to work in a data-driven way with service planning, to monitor travel development at a detailed level, and to combine different data sources for deeper analysis.



“When we come to you and say we need your help, you’re there and ready to step in. You take on the role of a puzzle piece and an enabler within our system landscape.”

-Albert Gunnarsson, System Integrator, Östgötatrafiken

The solution

Östgötatrafiken implemented Automatic Passenger Counting (APC) from Consat Telematics in its vehicles, together with a central matching service used to process and quality-assure sensor data into usable passenger data.

The solution is now in operation across several modes of transport city buses, regional buses, trams, and trains, and functions as an integrated part of Östgötatrafiken’s system environment. APC data is integrated into the organisation’s own data platform, where it is combined with other sources, such as ticket validations.

To ensure high data quality, Östgötatrafiken works in parallel with:

- matched and quality-assured APC data from Consat, and
- raw sensor data that is analysed and compared within their own processes.



A collaboration tailored for a modular system environment

Together with Consat Telematics, Östgötatrafiken has established a way of working that functions well in a modular system environment, where multiple suppliers collaborate and the responsibility for integration rests with the client. The collaboration has been characterised by a shared responsibility for the overall solution, where both technical and practical challenges are addressed through ongoing dialogue.

The work has involved continuously adapting the solution to different vehicle types, modes of transport, and technical conditions. In some cases, this has required jointly solving challenges outside standardised frameworks for example during the implementation in trains, where certified hardware was initially unavailable. This collaborative approach has been crucial in ensuring that passenger counting works consistently across the entire transport system.



Summary

With Automatic Passenger Counting (APC) from Consat Telematics, Östgötatrafiken has established a stable data foundation for service planning, monitoring, and analysis. Equally important is a collaboration that works in everyday practice, where Consat acts as a responsible and solution-oriented partner in a modular system landscape, with a shared focus on passengers and societal value.

The results

More precise service planning

By moving from having no passenger counting at all to 100% of vehicles equipped, Östgötatrafiken has gained an entirely new decision support tool. The high-resolution data makes it possible to analyse occupancy and travel development at a detailed level especially in the situations where decisions are most complex: when services need to be strengthened, adjusted, or optimized.

Deeper passenger insights through combined data

By combining passenger data with ticket validations, Östgötatrafiken can both validate the quality of the APC data and gain a deeper understanding of passenger behaviour.

A concrete example is how a low validation rate on trams in Norrköping was identified. With the support of APC data, Östgötatrafiken was able to carry out a targeted communication initiative to increase the share of passengers validating their tickets an example of how technical data can be used to support operational and behaviour-influencing measures.

Improved monitoring and sustainability reporting

Passenger counting is used as a basis for ongoing monitoring of travel development at the management level, as well as for calculating passenger kilometers in environmental and sustainability reporting. The high level of detail makes it possible to analyse changes by city, route, and time period and to understand what actually drives development.

A partnership that works in everyday operations

In a complex and integration-intensive environment, the collaboration with Consat Telematics has worked well in daily operations. Regular check-ins and clear contact channels make it possible to manage both ongoing questions and incidents, and when needs arise there is a willingness to contribute even in matters that extend beyond the scope of the supplier's own delivery.



Traffic Control and Monitoring

Manage daily operations with real-time information and data insights.

Vehicle and Fleet Management

Vehicle telematics integrated into public transportation for complete control.

Passenger Information

Enhance the travel experience for all public transportation users.

Driver Assistance

Enhance hiring appeal while supporting the driver in their daily work.

Electromobility

Seamless integration with existing public transportation operations, providing a unified view of the entire fleet.

Data Insights

Offering valuable insights for continuous improvement in public transportation operations.

Bringing intelligent public transportation to life

Consat Telematics is dedicated to reducing the environmental impact of public transportation through cutting-edge innovation and widespread implementation. Aspiring to global leadership in executing electrification and digitalization within public transportation, we serve diverse markets and organizations.

Our promise is a user centric, modular, and adaptable intelligent public transportation solution that never compromises on quality, reliability, and security. By placing our customers at the core, we ensure that more organisations can receive better data to monitor, manage, and improve their operations.

Contact for more information or a demo:

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