(intel®)

Polish municipal transport service creates a smoother ride with e-ticket innovation

Intel® Core™ M Processor with Intel® vPro™ Technology

Enterprise Client

A group of 10 municipalities in the Silesia region of Poland has worked with retail display solution provider One System to implement an innovative e-ticket system that streamlines the transaction process by introducing an electronic replacement for paper tickets. Point-of-sale devices powered by Intel® Core™ M processors with Intel® vPro™ technology and an online e-ticket system make paying for travel around the region easier for passengers. Meanwhile travel operators receive payment in a secure and timely manner.

Challenges

- **Delight passengers.** Polish municipalities work together to create a seamless, easy-to-use transport network across Silesia.

- **Streamline transactions.** Transport operators wanted a more efficient payment process that would ensure prompt receipt of payments.

- **Go digital.** The existing paper-based ticketing system was cumbersome and outdated.

Solutions

- **Point-of-sale innovation.** 2 in 1 devices, delivered by One System and powered by Intel Core M processors, offer the performance and flexibility to support real-time transactions.

- **Remote maintenance.** With Intel vPro Technology enabled, IT administrators can minimize downtime on point-of-sale (PoS) devices.

- **Online platform.** New e-ticketing system offers online portal for users to check and update their accounts at their convenience.

Impact

- **Better connected.** Electronic system enables faster payments, a smoother customer experience, and the potential to use analytics to improve services further in the future.

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Automating transactions adds convenience for passengers and efficiencies for operators

> "One of the key challenges was to develop a safe and reliable ticketing system and installing it in sales points of various types and sizes. Therefore terminals had to be as small but as powerful as possible and energy-efficient to reduce the heat generated. "
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> **Paweł Szymczak,
> Market Development Manager,
> One System**

Moving to an electronic ticketing system

Ten of the municipalities that make up the Polish province of Silesia share a vision of delivering a well-organized and effective public transport system to citizens across the region. They work hard to maintain a balance between clear and integrated communication across the region, and a focus on meeting the needs and expectations of the local communities within each individual municipality. By sharing responsibilities in this way, the group aims to optimize use of the financial resources available for public transport in Silesia and deliver the best possible service to passengers.

As part of its ongoing commitment to improving the transport network, the municipalities wanted to develop a safe and reliable ticketing system that would enable citizens to buy tickets and passes for bus travel quickly and easily, and from a convenient location.

With this in mind, they began looking at ways to enhance the existing PoS outlets in multiple stations and stops around the region. These outlets varied in size depending on location and in some places could be small and difficult to find. Passengers were able to buy only paper tickets from these outlets, and the transactions carried out were just between the PoS device and the customer. Public transport operators then needed to wait for the proceeds from these transactions to be transferred to them. From the operator's perspective, this model was cumbersome and lengthy, often meaning they needed to wait weeks before receiving income from ticket sales. This led to a demand for a more efficient electronic ticket sales system across the public transport network.

A key element of this new system would be the sales terminals themselves. It was essential that any technology used to support the new sales model be simple to use, with a touch interface and running on the Microsoft Windows* platform so that it could support the e-ticketing software that the municipalities had chosen. Internet connectivity was also an important requirement, since all operations were carried out online. In addition to the PoS devices at stations and at bus stops, public transport vehicles also had to be installed with readers to scan and validate passengers' e-tickets as they boarded.

Small but powerful PoS devices

The project was funded with support from EU funds. The PoS devices – a total of 140 PoS terminals, including 120 Dell Venue Pro* 2 in 1 devices and 20 Dell All-In-One (AIO) devices, all with Intel Core M processors and Intel vPro technology – and supporting cash and ticket encoders, were supplied by One System. "These processors are characterized by what we believe is a great combination of performance and mobility," says Pawel Szymczak, head of market development at One System. "Mobility is particularly important as it enables employees to put devices away overnight and so avoid the possibility of them being stolen."

The terminals were also equipped with wireless wide area network (WWAN) cards to enable WiFi connectivity. The small footprint of the 2 in 1 devices allows them to be installed in space-poor locations. A docking station is attached to each device, which permanently attaches a printer and ticket encoder, allowing each terminal to be removed from the point of sale and locked away

at the end of each day. This helps prevent possible theft as well as allowing more flexible use of space.

Secure, real-time transactions

The system became operational in mid 2015, covering over 140 points of sale within six months and implemented by local IT company BIT-Technologies. All transactions are monitored in real-time by the public transport operator, ensuring security for both the municipalities and passengers using the e-ticket system.

At the same time, electronic cards have replaced their paper predecessors. Each passenger now has his or her own e-ticket card, which they hold next to the electronic reader at the entry point of each bus to validate a journey. The software that enables ticket sales and control was developed by local solution provider R&G Plus Mielec. As well as handling ticket purchase transactions, the solution offers an online portal for e-ticket card holders to access information about their accounts, such as payment history, make new payments or top-ups and to contact customer service.

Keeping things moving with remote management

By using Intel vPro technology, the team managing the PoS devices is able to streamline maintenance by remotely diagnosing issues and in some cases carrying out fixes remotely as well. This is an important advantage as the devices are spread over a large geographical area and so IT administrators are not always able to physically travel to a faulty device straight away. Eliminating the travel time needed means the administrative team can respond to issues faster and more efficiently, minimizing downtime and ensuring the passenger experience is not affected.

A foundation for future development

With the new Intel Core M processor-powered devices in place, the transport network has achieved much smoother distribution of electronic tickets, and more timely settlement of transactions. All operations are now carried out electronically, online, and the proceeds from ticket sales go directly to the public transport operator. From the passenger's perspective, the service provides a single interface through which they can quickly and easily purchase travel throughout the 10 Silesian municipalities.

The municipalities are already thinking about future developments. For example, the system also offers the potential to study passenger movements using the e-ticket readers. The data collected at validation points will allow the mu-nicipalities to identify which points of sale sell the most tickets, which types of tickets are most popular, and which parts of the network are the busiest. This information will be used to optimize communication services within the Silesian agglomeration.

Lessons Learned

When implementing a program of innovation across a large area and with multiple stakeholders, coordination is key. The 10 municipalities in Silesia that implemented the e-ticketing service chose to rely on One System's expertise in transport solutions to help them deliver a compelling, effective service. It brought together technology leaders like Intel and local specialists like R&G Plus Mielec to create a tailored solution that met the municipalities' needs.

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