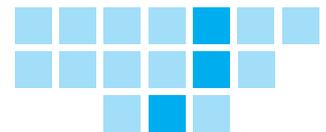


# IVU.suite at WVG



## A NEW FARE MODEL IN JUST FIVE MONTHS



### INITIAL SITUATION

One single fare for Westphalia-Lippe: Thanks to the “WestfalenTarif” fare, passengers only need one ticket for the entire region. The public transport operator Westfälische Verkehrsgesellschaft (WVG) operates most local transport in the region, with its companies Regionalverkehr Münsterland GmbH (RVM), Regionalverkehr Ruhr-Lippe GmbH (RLG) and Verkehrsgesellschaft Kreis Unna mbH (VKU). When the idea of a joint fare system within the zone of the local transport association (Zweckverband Nahverkehr Westfalen-Lippe, NWL) arose in 2011, this was particularly relevant to WVG. The company had already been using IVU solutions for all its transport areas for a considerable amount of time. Now, the priority was to ensure a smooth transfer to the new fare model.

### OVERVIEW

<b>Employees</b>	751 (group)
<b>Vehicles</b>	873 (group)
<b>Transport services</b>	48 million passengers annually, 35 million vehicle kilometres (group)
<b>Operations</b>	Public transport
<b>Objectives</b>	Introduction of a new fare system
<b>Special features</b>	Very short introduction time of five months No intervention in core processes Comprehensive model transformation
<b>IVU products</b>	IVU.fare, IVU.ticket, IVU.box

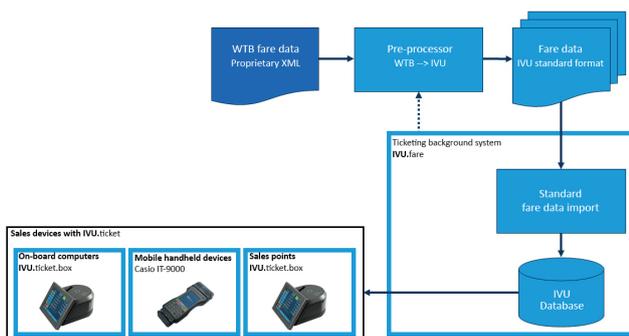
## OBJECTIVES

In order to be able to offer the new tickets to all passengers as a standard, it was particularly important for WVG to provide all their companies with new data in good time for the start of the WestfalenTarif. As well as the central background system, this also affected all sales devices, from the on-board computer to handheld devices and e-ticket validators. In the process, it was important to intervene in the existing installation as little as possible, in order to avoid disruptions to the normal course of operations.

## SOLUTION

As a long-time partner of WVG and other transport operators in the WestfalenTarif region, IVU played a part in the planning and design of the new fare, with practical suggestions for the data modelling. This significantly simplified the subsequent implementation.

The standardised structure of the IVU solution also helped during this process: The central IVU.fare background system manages and prepares all fare data and then transfers it to the hardware equipped with the IVU.ticket ticketing software. Fare data is then fed into the background system in a standard format. In order to implement the requirements of the WestfalenTarif during normal operation, IVU developed a series of solutions that enabled WVG to have a virtually trouble-free transfer.



A model transformation in its own independent pre-process formed the core: Instead of adjusting the background system with much time and effort, the IVU engineers initially exported the WestfalenTarif data to a standard format via a complex procedure and then only subsequently imported it into IVU.fare. This allowed WVG to forgo a special update, and downtime was minimised.

In parallel, IVU developed a method of effectively reducing the quantity of data for the extremely high number of potential connections within the WestfalenTarif's fare zone. The result: A compression of 1:1,000 to 1:2,000. This saves considerable memory and computing capacity on the sales devices and accelerates loading and updating the fare data on mobile devices. The existing hardware could still be used without any problems.

## OUTCOME

Within the five month period between the final fare definition and the launch on 1 August 2017, IVU prepared all WVG companies for the WestfalenTarif. In total, IVU updated the software on around 850 on-board computers and mobile handheld devices at WVG during this period. By the end of this period, the customers could purchase the new tickets at all sales points, both stationary and mobile.

Fare modelling in an external process made it possible to avoid all interventions in the WVG ticketing system, outside of the regular update cycles. The WVG employees could continue work as normal.

Thanks to the years of partnership between IVU and WVG, it was possible to quickly and simply introduce the WestfalenTarif in a practice-orientated process. WVG is now well-equipped for the further development of public transport in the region.

“In the run-up to the introduction of the WestfalenTarif, IVU made an outstanding contribution to the definition and documentation of the import interface of the Westphalian fare database into the transport operators' sales systems. This constructive engagement made it possible for WVG to offer their customers the complete new ticket portfolio at the start of the WestfalenTarif despite the short development time.”

**Stefan Janning**

Department Manager Transport Operations | WVG