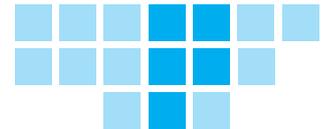


# IVU.suite at the MVV



## CENTRALISED SOLUTION FOR REAL-TIME DATA AND TICKET SALES IN THE ASSOCIATION



### INITIAL SITUATION

Mobility in the area surrounding Munich is white, blue and green. The regional buses in the MVV (Munich transport and tariff association) make the rural districts accessible and connect them with one another and with the Bavarian capital. Within the framework of the association, numerous small and medium-sized transport operators ensure reliable transport services. Before this project began, many of them still operated without any specialized IT support. Thus, a lack of adequate actual data from the vehicles prevented the MVV from providing its passengers with real-time information. In addition, time-consuming manual processes hampered association-wide fare management.

### OVERVIEW

<b>Employees</b>	Approximately 2,000 in the IVU transport service
<b>Vehicles</b>	650
<b>Transport services</b>	69 million passengers per year, 48 million revenue kilometres (2020)
<b>Operations</b>	Regional bus transport
<b>Objectives</b>	Collect real-time data in an integrated way Improve fare management Centralise data storage Standardise processes
<b>Special features</b>	Integration of third-party systems
<b>IVU products</b>	IVU.fleet, IVU.cockpit, IVU.ticket.box, IVU.fare, IVU.ticket

## OBJECTIVES

In order to centralise data storage and standardise processes, the MVV launched the ISE (Integrationsystem Echtzeitdaten – real-time data integration system) project. The objective was to set up an IT system capable of handling multiple clients across the association. This should give transport operators without a control centre of their own a simple option for collecting real-time data on their vehicles and using that to provide passenger information and customer service. At the same time, the association wanted to switch to electronic fare management to enable it to track ticket sales more effectively and to create the technical basis for upgrading its offering in the future – with e-ticketing, for example.

## SOLUTION

As the core component of the ISE, IVU supplied the multi-client integration solution IVU.fleet. The standard system collects real-time information from the individual transport operators and amalgamates it in the ISE. Then IVU.fleet passes the data on to the data hub for Bavaria in bundled form via an interface. The hub subsequently makes the data available to other transport operators and information systems such as apps or passenger information boards.



The IVU.ticket.box is the digital control centre on the bus. The integrated on-board computer records all processes, communicates with the control centre, prints tickets and validates e-tickets.

The on-board computers collect the data from the vehicles and transmit it to the background system via a mobile radio system. As part of the implementation, most of the operators decided to install the IVU.ticket.box in their vehicles.

The individual operators access the IVU.fleet user interface conveniently via a web browser or remote app. This eliminates the need for the local installation and maintenance of a stand-alone client. The user interface is accessed securely via VPN. It makes it possible to create evaluations or define how long vehicles should wait for connections, for example. Drivers then receive an automatic notice on the on-board computer when a connection is delayed.

IVU implemented electronic fare management using IVU.fare. The system allows tariffs to be maintained centrally by the MVV and new ticket prices to be distributed at the touch of a button. The IVU.ticket.box transfers accounting data back to IVU.fare over the air in a way that ensures cash-desk security, so that all project partners retain an overview of sales figures and income at all times.

## OUTCOME

The quality of the MVV offering has improved noticeably since the introduction of the IVU.suite. Passengers now receive the latest information about their connections at all times, while the transport operators and the MVV profit from simpler processes. Thanks to the new evaluation options, they are also able to better assess their performance and respond accordingly. Moreover, with electronic fare management, the association now has a tool to ensure that sales processes in MVV regional bus services are traceable and transparent at all times. At the same time, digital processing of sales data creates a future-oriented basis for upgrading to e-ticketing.

“Thanks to the integrative approach of the IVU system, we provide nearly 100% real-time information at all times, with an absolutely convincing quality level, too. Thus, with a variety of data sources from multiple operators, we are improving service and convenience appreciably for our passengers.”

**Dr Bernd Rosenbusch**  
Managing Director | MVV