# IVU.suite **at VVV**



Photo: VVV

# MULTI-TENANT CAPABLE OPERATIONAL CONTROL AND TICKETING SYSTEM FOR THE ENTIRE NETWORK

## INITIAL SITUATION

In the popular Austrian holiday region of Vorarlberg, the transport association of the same name (VVV) unites a total of 26 bus and train operators as well as the regional train connections of ÖBB and the Montafonerbahn under one roof. Since its foundation in 1991, the VVV has distinguished itself above all through its favourable fare system, well-timed timetables, and a local transport system that is both efficient and comfortable.

Until a few years ago, the individual transport operators in the network each used their own software and hardware, which made it difficult to achieve uniform fleet management as well as network-wide passenger information and connection assurance.

## OVERVIEW

| | |
|---|---|
| **Employees** | 40 |
| **Vehicles** | 351 buses |
| **Transport services** | 22 million revenue kilometres (bus and rail) |
| **Operations** | Regional bus transport |
| **Objectives** | Standardise processes Standardised real-time data and passenger information throughout the network |
| **Special features** | 18 separate tenants Central planning at the supplier tenant VVV System for 351 vehicles and 18 ticket sales points |
| **IVU products** | IVU.fleet, IVU.cockpit, IVU.ticket.box, IVU.handheld, IVU.fare, IVU.ticket, IVU.realtime |

## OBJECTIVE

In order to monitor the locations of all vehicles and to be able to intervene as quickly as possible in the event of disruptions, the VVV was striving for the same technology for all transport operators throughout the network – a client-capable standard system with standardised real-time data and passenger information.

## SOLUTION

In order to standardise the operational processes throughout the network, the VVV invited tenders for a multi-tenant fleet management and ticketing system throughout Europe and finally chose the best bidder – IVU with the integrated products of the IVU.suite.

A major advantage of the IVU solution is the multi-level tenant structure of the background system IVU.fleet, which provides the 18 different clients in Vorarlberg with all the data they require at the appropriate levels in each case. In this way, each transport operator or subcontractor has access to the data required for operation, while the VVV itself acts as the central supplier tenant and can view all data in bundled form.

IVU.fleet communicates continuously with the driver-operated on-board computer software IVU.cockpit in the buses. In this way, travel path modifications, strengthening vehicle workings, or trip cancellations can be created with just a few clicks and the modifications automatically passed on to the bus drivers of the various tenants.

To ensure that the VVV always has access to standardised real-time data for fleet management and passenger information throughout the network, IVU also installed the IVU.ticket.box on-board computer and ticket printer in the 351 buses in Vorarlberg. The device continuously records the position data of the bus and transmits it to IVU.fleet, which passes it on both to the real-time information and to around 180 departure displays at bus stops.

The central IVU.fare accounting system supplies the on-board computers with the latest relevant fare data, thus simplifying fare management throughout the entire network. Connected to IVU.fare, IVU.ticket calculates suitable price levels and enables ticket sales on the bus.

On some night bus routes, the VVV also relies on the mobile sales solution IVU.handheld in order to be able to offer flexible ticket sales on the smaller buses as well.

## OUTCOME

Since the end of 2020, VVV has now been using the integrated products of the IVU.suite for its total of 351 vehicles and 18 ticket sales points. The consistent data basis ensures uniform and standardised processes throughout the network – whether in fleet management, passenger information, or in the central accounting system. Since 2023, the latest generation of the on-board computer, the IVU.ticket.box G5, and the IVU.box.gateway has also been in use.

"Since the implementation of IVU's overall system, our passengers have benefited from consistent real-time information as well as a standardised, uncomplicated ticketing system. In this way, we were able to further increase not only the efficiency of our individual transport operators, but also the attractiveness of Vorarlberg's public transport as a whole."

**Adrian Dolensky**
Project Manager (Technology, Infrastructure, Digitalisation Team) | Verkehrsverbund Vorarlberg



The IVU.ticket.box is the digital control centre in the bus. It records all processes, communicates with the control centre, prints tickets, and validates e-tickets.