

Always securely networked everywhere



Reference report on modern ICT architecture for Verkehrsverbund Vorarlberg
Public Transport



Thanks to onway's central communication system, all our on-board bus systems are networked and our entire fleet can offer passengers reliable WLAN access.

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Initial position

Verkehrsverbund Vorarlberg Public Transport (VVV) began equipping its vehicles with public WLAN in 2017. This public WLAN system was supplied by onway and has since been continuously expanded into a comprehensive «bus-to-ground communication» system:

- Networking parallel «on-board» IT systems
- Extending real-time passenger information
- Securely separating internal and external traffic flows via the same data connection
- Reducing hardware (number of antennas and routers)

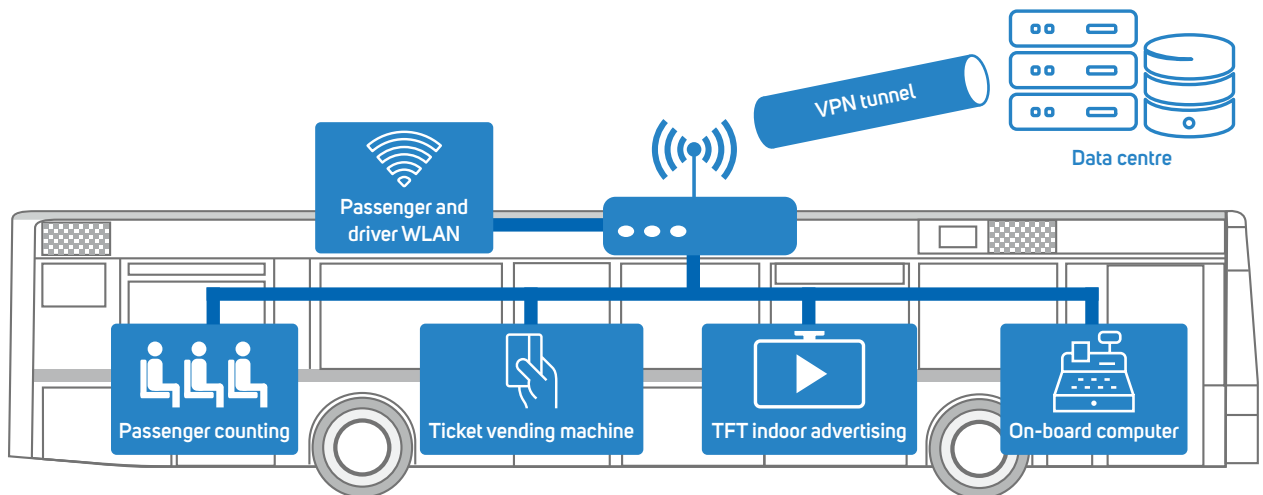
Process

onway's integrated communication platform connects different VVV systems and applications, such as passenger WLAN, passenger counting, ticket vending machines, TFT indoor advertising and VVV on-board computers as part of a stable vehicle-to-ground connection. The only hardware required is an intelligent router/firewall gateway (ON2800), which has many advantages:

- Optimal solution for cost-efficient and maintenance-friendly «on-board» networks
- Lower costs for hardware and operational communication
- Automating the configuration, management and maintenance of the network infrastructure for the entire bus fleet (automatic provisioning, managing SIM cards, allocating devices, selecting landing pages, statistics and documentation related to device life cycle)
- Engineering and support services from a single source

Solution

onway was chosen as a partner to implement this challenging project after a successful pilot project and rolled out the certified communication platform for VVV's city and rural bus fleet. By providing mobile, free and stable internet access for passengers and implementing a bus-to-ground connection solution, VVV has set its sights on a modern ICT architecture. The multifunctional communication system connects systems and applications, while guaranteeing customers and employees a secure, high-performance and fully comprehensive network solution.



Network overview diagram using a VVV long-distance bus as an example

The network diagram shows the ON2800 onway router as the central bus-to-ground connection. The router is connected to the Ethernet switch, which is automatically configured by the router. The configurations required for the connected systems – such as the ticket vending machine, the passenger counting system and the passenger information system – are therefore managed automatically. By automatically configuring VLANs and assigning IP addresses, the interaction between switch and router stands out as an optimal solution for cost-efficient and maintenance-friendly «on-board» networks. Around 400 systems have been integrated in the VVV bus fleet.

Verkehrsverbund Vorarlberg Public Transport (VVV)

Verkehrsverbund Vorarlberg Public Transport (VVV) is a tariff and transport association in the Austrian province of Vorarlberg and unites almost all companies working within local public transport in Vorarlberg. The bus and rail network and its associated elements is probably one of the areas where there is most direct contact between the public sector, residents and visitors. Every day, tens of thousands of people in Vorarlberg alone make use of the services provided by municipalities, the state, the federal government and their partners. Over one thousand employees create the best possible connections every day, ensuring passengers get to their destination safely.

onway

Since 2004, the team at onway ag has been supporting customers to evaluate, plan, implement and operate their WLAN/Network Access Control solutions, as well as offering ongoing support. To date, the team has successfully completed over 100 projects. We would be delighted to support you with your WLAN project.