

# IVU.suite at BUS Ostschweiz

## EFFICIENT ROUTE PATTERNS AND OPTIMAL DUTY SCHEDULES

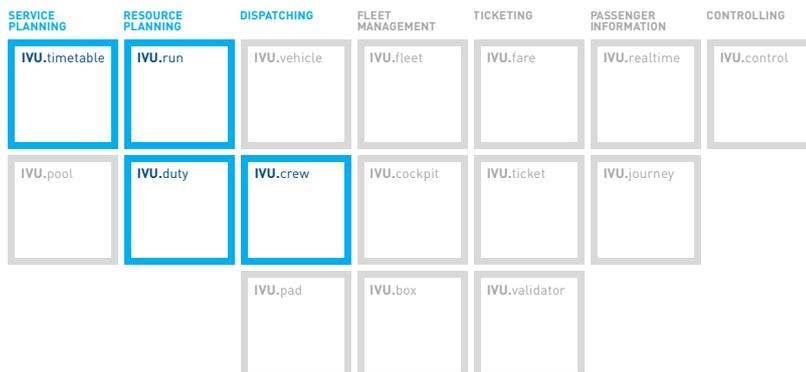


### INITIAL SITUATION

With its blue and white buses from RTB Rheintal Bus, WilMobil and BUS Sarganserland Werdenberg, BUS Ostschweiz AG (BOS) is the face of public transport between Lake Constance and Lake Walen, and in the Wil region. Every year more than eight million passengers travel with the company, on a route network spanning over 440 kilometres. The company has been using IVU.suite products since 1999 to efficiently deploy 900 vehicles and 200 drivers. In order to take complete advantage of the system's potential, In 2017 BOS chose to introduce IVU.duty's schedule optimisation as well.

### OVERVIEW

<b>Employees</b>	200 drivers
<b>Vehicles</b>	90
<b>Transport Services</b>	Approximately 8.5 million passengers annually, more than 6.2 million vehicle kilometres
<b>Operations</b>	Local public transport
<b>Objectives</b>	Simplify planning processes Take employee requests into account more easily Better planning of route variations and offers
<b>Specific Details</b>	First introduction as pilot project with subsequent productive operation



### IVU.SUITE IN USE AT BUS OSTSCHWEIZ

PLAN VEHICLES EFFICIENTLY WITH **IVU.run**

OPTIMISE DUTY SCHEDULES WITH **IVU.duty**

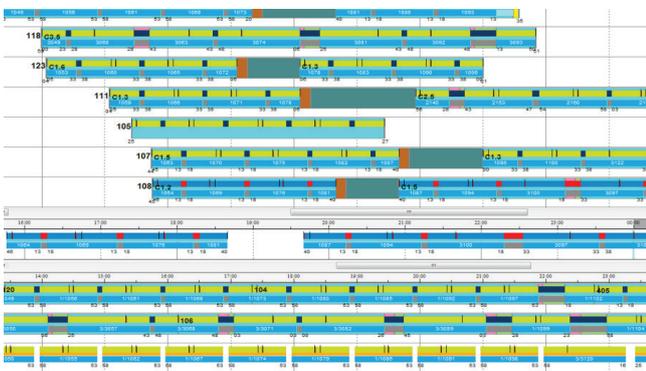
DEPLOY PERSONNEL OPTIMALLY WITH **IVU.crew**

## OBJECTIVES

For BOS it was important to further simplify the planning process and reduce the number of manual procedural steps. Planners should be able to react more swiftly to modifications and employee requests, in order to make duty schedules not only more efficient than before, but also fairer. BOS also placed great emphasis on offer planning as well as operational planning. The duty schedule optimisation should make it easier for planners to calculate various route variations and scenarios – a task that can be very time consuming without optimisation, and for this reason does not often achieve satisfactory results.

## SOLUTION

In order to enable BOS to test the benefits and the actual gains in efficiency before making a final purchase decision, IVU offered to initially introduce the duty schedule optimisation as a pilot project. This makes it possible for planners to comprehensively test the new functions in real operations, and understand their effect on existing duty schedules. BOS already had a standardised planning and dispatch system for vehicles and personnel with the **planning products IVU.timetable, IVU.run, IVU.duty and IVU.crew**. This meant that the optimisation, as part of the duty scheduling product IVU.crew, could be integrated into the existing installation at BOS with **minimum time and effort**. The planners could then access the new functions via a familiar interface.



IVU.duty's duty schedule optimisation simplifies the planning processes and enables the calculation of scenarios.

Due to **numerous automations**, the duty schedule optimisation significantly simplifies the planning processes. At the press of a button, the automatic scheduling calculates how vehicle runs and activities can be optimally covered with the available personnel. In the process, the system takes travel times into account. Duty elements such as vehicle refuelling are also taken into consideration, without the need for planners to take any action.

The basis for this is a **comprehensive rule system** in which BOS can flexibly input the various occupancy guidelines. With this, it is easily possible to calculate multiple **duty schedule variations and scenarios** for the offer planning – planners then only have to adjust the desired parameters in the graphical rule editor.

## OUTCOME

For BOS, the results of the pilot project were conclusive: the schedules created with the help of the duty schedule optimisation were several per cent more efficient than those created via manual planning. Due to the automatic creation of shifts, the company can plan much more flexibly and make adjustments much faster. It is now possible, for example, to react to roadworks or incorporate timetable modifications with very little time and effort. In the offer planning, BOS can now also use reliable data and plan personnel requirements precisely. Even before the project ended, this made it obvious that the pilot would be seamlessly adopted in the productive operation.

*"In IVU.duty's duty schedule optimisation we have gained a high-performance tool that provides optimal support in both the productive operation and in the offer planning. This means we are not only able to more efficiently deploy our drivers, but we also obtain a reliable basis for strategic decisions."*

**Hans Koller**  
Market Manager | BUS Ostschweiz AG