

# IVU.suite at BKK

## SWIFT SYSTEM IMPLEMENTATION WITH STANDARD SOLUTION



### INITIAL SITUATION

Budapest never stands still. More than 1.7 million residents and 2.3 million annual tourists ensure that the Hungarian capital is constantly in motion. Heavy traffic and ageing technology present a challenge for the city's municipal transport authority, Budapesti Közlekedési Központ. Many vehicles in the highly heterogeneous fleet are old and they often break down. What's more, traffic jams and other disruptions affect the punctuality of public transport. Dispatchers at the control centre only receive information regarding the traffic situation from drivers and then only have limited options to intervene in the current transport operations. Passengers also have no options to gain information about delays and cancellations.

### OVERVIEW

<b>Employees</b>	1745
<b>Vehicles</b>	A total of approx. 2,300 vehicles, including buses, trams, trolleybuses and ferries
<b>Transport services</b>	4.8 million passengers per day, 3447 km of lines
<b>Divisions</b>	Operation of the entire local transport system in Budapest (surface transport, metro, infrastructure)
<b>Objectives</b>	Complete modernisation of fleet management Introduction of a passenger information system
<b>Special features</b>	Highly heterogeneous vehicle fleet (vehicle types, years in service, technical requirements) Very short project duration



### IVU.SUITE IN USE AT BKK

RELIABLY MANAGE VEHICLES OF ALL KINDS WITH **IVU.fleet**

PROCESS VEHICLE DATA AND INFORM DRIVERS WITH **IVU.box** AND **IVU.cockpit**

KEEP PASSENGERS FULLY INFORMED WITH **IVU.realtime**

COLLECT AND EVALUATE STATISTICS WITH **IVU.control**

## OBJECTIVE

BKK wanted to increase the reliability of its transport services and fundamentally improve the service for passengers in order to make public transport in Budapest more attractive and make it easier for new customers to opt for public transport over private car travel. A state-of-the-art IT system was intended to provide dispatchers with a comprehensive overview of the traffic situation and additional management options. Plans were also in place to display dynamic passenger information at stops and in vehicles. At the same time, BKK also wanted to create a basis for future service expansions, such as the introduction of flexible e-ticketing.

## SOLUTION

Rather than gradually replacing the existing technology, BKK opted to introduce a new IT system in one single step. They decided in favour of IVU on account of the company's experience gained from similar large projects as well as the quick-to-implement **IVU.suite** system.

It was necessary to equip around 2,300 vehicles – from the 1970s cog-wheel railway to Danube ferries, trams and trolleybuses right through to the latest generation of hybrid buses – with modern on-board computers. IVU installed **IVU.box** on-board computers and **IVU.cockpit** operating software across the entire fleet. Using recognised standards such as IBIS-IP, GPS, 3G and Wi-Fi, they capture data, manage the entire vehicle periphery, provide drivers with information and ensure optimal data transfer.



State-of-the-art on-board computers provide drivers with information and manage the entire vehicle periphery in all vehicles.

A new control centre with 32 workspaces was set up in Budapest at the same time. The **IVU.fleet** control centre software processes the signals of all on-board computers and clearly presents the current traffic situation. Numerous dispatch functions offer dispatchers extensive operational control.

**IVU.realtime** provides information for passengers. It processes real-time data for over 300 passenger information displays in the city and provides additional systems via standard interfaces.

Finally, BKK uses **IVU.control** to evaluate its operating performance and service quality.

## RESULT

The specialised **IVU.xpress** IT process made it possible to modernise the entire Budapest fleet management in just two years. IVU managed to introduce its **standard solution**, which was modified in part to the special requirements and processes of BKK. Old vehicles were not left out of the modernisation equation, but rather usefully integrated into the entire system. Dispatchers are now always up to date on the **operating situation** and in a position to directly intervene, where necessary. Operating performance has improved significantly, and plans are now far more stable. This is paying off. Customers are more satisfied with their transport services than ever before, also thanks to the extended information options for passengers.

The essential prerequisite for this was a flexible, quick-to-implement solution that integrates seamlessly into every environment. Thanks to modern interfaces and the use of **open standards**, the IVU system has formed the basis for future expansions.

“IVU constructed a brand new IT system at BKK within a very short space of time. Our dispatchers now have a hundred times more tools to manage and regulate transport operations. We can respond to many situations that we didn't even know about before.”

**András Berger**

Project Manager at Budapesti Közlekedési Központ