Backgrounder

E-ticketing is gaining momentum in public transport

The Kolibri Card opens up new opportunities in transport planning and leads to a growing customer base

In Schwäbisch Hall e-ticketing is popular: 91 per cent of passengers think that the Kolibri Card makes public transport a lot easier.

Schwäbisch Hall, Germany, January 15, 2011. A current trend in the transport sector is e-ticketing: More and more transport associations are now implementing this advanced e-business system as its convenient mode of payment attracts new customers. At the same time, transport associations can use detailed information on the choice of public transport lines and routes for customer-focused transportation planning - as is shown by the example of Schwäbisch Hall.

Whenever Brunhild Walch takes the bus into town, she no longer needs to look for the right change for her ticket. She has been travelling with the so-called Kolibri Card offered by the transport operator KreisVerkehr Schwäbisch Hall. "I simply hold my card in front of the card reader," she says. "The fees are automatically charged to my customer account." This type of e-ticketing is called Check-in/Check-out (CiCo). Brunhilde Walch is one of 12,000 customers who take advantage of this barrier-free service. 91

per cent of passengers think that e-ticketing makes travelling by bus and train a lot easier. Numerous citizens of Schwäbisch Hall who have never used public transit, are now occasional or even frequent users.

Check-in with Kolibri Card

Ingrid Kühnel, managing director of KreisVerkehr Schwäbisch Hall

Getting the lowest fare

KreisVerkehr Schwäbisch Hall has been offering e-ticketing since 2006. To this end, the transport operator has equipped eleven train stations and 200 busses with new card readers which transmit the check-in/check-out data to the service centre via wireless LAN. TicketOffice 3.0, an electronic fare management system then processes all sales data. It meets the standards of the Association of German Transport Companies. "The system calculates the fare for each journey and charges the amount to the customer account," explains Ingrid Kühnel, managing director of KreisVerkehr Schwäbisch Hall. Customer-related invoicing data and fare data are separately stored on two different computers that process more than three million journeys." Three million journeys that provide transportation planners with valuable information on travelling behaviour. So far, it has been necessary to carry out time-consuming and costly passenger surveys in order to have access to such a wealth of information. "Passengers change at transfer points that we have never considered to be interchanges. E-ticketing now shows us how we can improve our network and frequency of trains or busses in order to meet the specific needs and expectations of our passengers," says Kühnel.

Software supports planning

The transportation planning software PTV Vision and its module VISUM assists users in optimising their processes. Based on anonymised CiCo and timetable data, as used by KreisVerkehrs Schwäbisch Hall, we have tried and tested the applications of current tools in VISUM," explains Dr.-Ing.

Peter Mott who is in charge of the Business Development Public Transport division at PTV. VISUM can directly import CiCo data via the feature Passenger Module/E-Ticketing and check its plausibility by means of the timetable. Line and route planners can therefore display and analyse passenger volumes and the routes they selected within the entire network. "Our line blocking method generates not only the best lines and frequencies, but also the required vehicle types," explains Mott. Users only have to enter a few details, such as the starting point, information on the line serving this stop, on the departure time or the stop where the passengers get off.

Testing a new approach

"Moreover, we are currently testing the use of the matrix correction method TFlow Fuzzy that is integrated into VISUM," says Mott. This add-on module corrects trip matrices in public transport based on current count data and reference values. If a previous demand matrix obtained from a travel survey has to be updated, TFlowFuzzy allows the user to calculate new values merely based on count data. "This principle can also be applied to e-ticketing, which means that the matrix generated by the transportation model can be calibrated with CiCo data," says Mott. The more precise the calibration result, the more focused and customer-orientated is the line and route network of the transport associations.

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Background Information

KreisVerkehr Schwäbisch Hall GmbH is a rather small transport association in Baden-Württemberg. However, it belongs to one of the largest counties in south-west Germany in terms of space, covering a territory of 1,500 square kilometres. In 2006, the transport operator introduced e-ticketing. Together with the IT provider highQ Computer Solutions it developed the electronic fare management system **"TicketOffice 3.0"**, which meets the requirements of VDV's core application (CA). To ensure protection of all personal data, the data protection supervisory authority for the non-public sector of Baden Württemberg's Ministry of the Interior was involved in the development process at an early stage. TicketOffice supports all three CA levels: Level 1 covers non-cash payments for tickets. Level 2 corresponds to tickets that are stored electronically in the form of a chip card or on a mobile phone, for instance. Level 3 refers to an electronic ticket, including automatic fare calculation. Customers, who want to use e-ticketing, can pay for their ticket by providing KreisVerkehr Schwäbisch Hall with a direct debit for a specific amount that will then be credited to the customers' personal ticketing account. The CiCo ticket fees will be automatically debited to this account.

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