



# HAVAG Case Study

Test new and flexible pricing models,  
reinvent your fare structures  
and increase revenue

**FAIRTIQ**



## Boosting Public Transport Revenue: A Case Study on Immediate Passenger Rewards

The introduction of the Deutschlandticket has brought about significant changes in the dynamic landscape of German public transport, but accessibility remains a problem for many commuters. To remedy this and incentivise regular travel, Hallesche Verkehrs-AG (HAVAG) began testing customer loyalty programmes.

In co-operation with FAIRTIQ, various bonus models were introduced to determine their impact on revenue. Through careful analysis, HAVAG found that **offering instant rewards to passengers resulted in a remarkable 20% increase in revenue.**

This case study demonstrates the effectiveness of instant passenger rewards in improving public transport usage and financial profitability.



## How rewarding passengers immediately increased revenue by 20%

The last few months have been pretty eventful for regular public transport users in Germany. The introduction of the ‚Deutschlandticket‘ means that they can now travel as often as they want on any of the country’s local and regional transport services for just 49 euros a month. Although some 10 million people have already taken up this offer, the ‚Deutschlandticket‘ is not a viable option for many others. So, how can the industry create a pricing system that is accessible for people who do not hold any type of season ticket or travelcard and encourages them to use public transport more regularly? Answering this question is key to the long-term development of public transport and a sustainable rise in passenger numbers.

Bonus models and loyalty/reward programmes are two of the most popular tools that public transport companies use to increase ridership. In these models, users enjoy discounted fares once they have made a pre-defined number of journeys. The structure of these models can differ vastly: immediate reductions vs cashback; monthly vs weekly rewards or discounts; flat vs variable discount rates.

Despite the ubiquity of these models, there is little reliable data on their effective impact and whether the increase in public transport they generate actually offsets their costs. Our partner Hallesche Verkehrs-AG (HAVAG) wanted to change this situation and decided to trial a loyalty programme before investing in a costly roll-out. FAIRTIQ’s flexible infrastructure made it possible to test different bonus models simultaneously against a control group. From the data, we were able to identify whether the introduction of these types of reward programmes make financial sense for public transport providers, i.e. the resulting increase in sales offsets the cost of the scheme.





## Travel more, pay less

The advantages of a bonus programme for customers are clear: they can travel more for less. HAVAG wanted to know whether these programmes are also financially worthwhile for transport providers.

## Two-group parallel experiment

A selection of bonus models was tested simultaneously with the help of the 'FTQ Lab' app. The first group enjoyed discounted fares in the same month. The second group enjoyed discounted fares the following month.

## An investment that pays off

The results confirm that bonus programmes incentivise greater public transport use. They are also financially beneficial as the additional turnover they generate outweighs the costs.

"The "Deutschlandticket" is primarily aimed at regular users for whom spending €49 per month on public transport makes financial sense. There will always be a large share of people who only use public transport occasionally or rarely. It is precisely this group of people that we are interested in finding out whether the discounts influence their usage behaviour."

Kathrin Jähnert-Elster, Fare and Sales Coordinator with Hallesche Verkehrs-AG

## Digital tickets, an innovative distance-based fare and a reward programme trial

HAVAG, which is part of the Mitteldeutscher Verkehrsverbund (MDV), the transport association for the Leipzig-Halle area, operates bus and train services in Halle (Saale) and parts of the wider Saale area. Since November 2019, public transport users in the city of Halle (fare zone 210) have been able to purchase their regular tickets digitally using the FAIRTIQ app. Later, in September 2022, HAVAG began trialling an innovative distance-based fare across the greater Halle area. The company went one step further in early 2023 when they began testing two reward models. These trials coincided with the introduction of the Deutschlandticket.



# Field tests deliver unambiguous results

HAVAG and FAIRTIQ jointly defined the test setup. First, two test groups were created; these differed both in terms of the type of discounts offered, their rates and when the users received them. The aim here was to ascertain which model had the strongest influence on public transport use.

The fare experiment was carried out using the 'FTQ Lab' app, which HAVAG is also using to test its distance-based fare. The use of the regular FAIRTIQ app was still possible regardless of the test. Both test groups received discounts after they reached a predetermined number of journeys per month (e.g. after 5, 10 or 15 trips/month). A sliding scale of three thresholds with increasing discount rates was applied to both groups.



## Test group 1

Test group 1 received their reward in the same month: e.g. from the fifth trip per month, users enjoyed a 10% discount on their next journeys. Public transport use was therefore 'rewarded' immediately. As soon as the tester reached the threshold, they paid reduced fares thereafter. However, at the beginning of every month, they were back to square one and had to pay the full fare until they reached the discount threshold again.



## Test group 2

Test group 2 received their reward the following month: depending on the number of journeys they made in the first month, the applicable discount rate was applied on all fares for journeys they took during the subsequent month. Although they were not immediately rewarded, frequent users benefited from consistently discounted fares. In other words, in return for a longer wait, regular users are able to travel on public transport at constantly discounted rates.



## Control Group

A control group did not receive any rewards.

Importantly, the different groups were randomly selected, but the average expenditure of the two groups prior to the experiment was the same.

It does not matter how good a reward programme is if the customer is not aware of it and cannot be 'nudged' at the right time. The test groups were informed about the time-limited reward by email. During the test period, communication was via the app: automatically generated and individualised messages were precisely timed to motivate the tester to use public transport: one message when the user was within one journey of reaching the reward threshold and one directly at the end of that journey.

## And with 20% more turnover, the winner is... the immediate reward!

The results were largely positive for the downstream reward model (test group 2), and were more ambiguous in the statistical test. Here, a second trial with a larger test group could help to clarify the situation.

However, the results for the immediate reward model (test group 1) are unambiguous: it led to a significant increase in public transport use and passenger spending.



The average discount cost of the test was about 10% of the total expenditure of the test group.



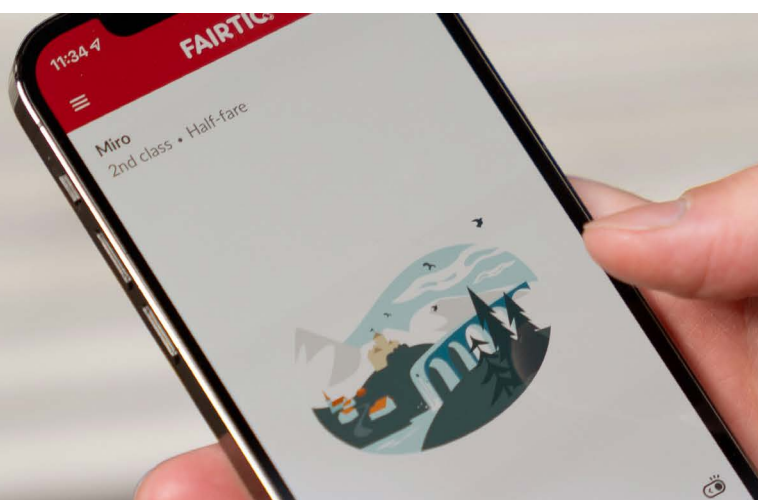
Compared to the control group, however, test group 1 spent roughly 20% more on public transport from the start of the reward test. The difference is statistically significant (with  $p < .05$ , for the number crunchers among us).



The return on investment is unequivocally positive: the additional expenditure is about twice as high as the costs of operating the reward programme!

“FAIRTIQ is an ideal partner to work with us on developing the market and designing innovative fare products. We are impressed at how customer-oriented, fast and agile FAIRTIQ is when it comes to developing the app and bringing new ideas to the table.”

Andreas Völker, Head of Marketing, Sales and Customer Service at Hallesche Verkehrs-AG





The results of test group 2 show that not every reward model is guaranteed to generate the desired results and more field experiments are needed to develop effective measures. We are delighted that HAVAG is a strong advocate for innovation in the public transport sector, as its decision to carry out field tests of potential new products shows. These types of experiments make it possible to measure effects in a robust way and provide an objective knowledge base that will help the sector as a whole to develop attractive and efficient fare systems. Such an approach could become standard practice, where public transport providers systematically test planned fare products before they roll them out.

## The advantages of FAIRTIQ



The facility of conducting pricing experiments in small groups and analysing their results with a high degree of precision.



The facility of tapping into FAIRTIQ's expertise and data to develop innovative fare models, including models targeted specifically at public transport users who do not hold a season ticket/ travelcard.



Increased likelihood of success thanks to direct communication (nudging) with users via the app.



Successful demonstration of the profitability of reward models justifies investment in the fare experiment.



The opportunity of increasing company revenue.



Fast implementation, creativity, and flexible and adaptable research design.



Find out what FAIRTIQ  
can do for you?

Contact our experts today to find out how FAIRTIQ can help you make your public transport services even more innovative, customer-friendly and profitable:

Contact: [sales@fairtiq.com](mailto:sales@fairtiq.com)