

BD4



**AIRLINE
CASE STUDY**

**Increasing
revenue while
reducing the cost
of discounts!**

BD4 helped an international airline drive improved revenue for a much lower cost of vouchers by using AI-driven intelligent individual profiling.



Situation

A leading airline wanted to improve the performance of its digital sales to maximize revenue from existing visitors. An obvious way to do this is using incentives. However, these risk diluting revenue where some passengers would buy tickets anyway. In most cases this means that an unquantifiable number of vouchers are used when customers would complete transactions regardless. So BD4 was enlisted to drive higher revenue for the lowest possible cost of vouchers.

Digital sales challenges

Airlines have traditionally segmented digital audiences with business rules. If clients fulfill certain criteria or act in a given way, they would be targeted as part of a segment, offered vouchers or an incentive to book. When this occurs at a segment level there is inevitable wastage. The benefits of any uplift are therefore diminished if the number of vouchers results in unnecessary dilution. But measuring this is hard!

Segments are made up of a wide variety of individuals with different motivations. There is an understandable fear among Revenue Management Executives that if discounts are made available to adhere to a set of rules, these can be learned and “gamed” by customers to trigger unnecessary incentives.

So the challenge was set: is there a way to use individual profiling and machine learning to target incentives more efficiently, achieving the goals of e-commerce (higher conversion) while avoiding revenue dilution.

Human touch e-commerce

The airline worked with BD4 to implement its personalization platform for a customer-centric approach, utilizing real-time customer-level signals in the user journey to respond automatically to shopping behaviors. In this use case, the airline sought ways of proving that individual-level modeling and real-time intervention could contribute to the following:

- **Increase revenue per user**
- **Minimize churn**
- **Reduce retail friction**
- **Avoid unnecessary discounting**
- **Ensure effective allocation of incentive funds and optimize budgets**

It is self-evident that rule-based segmentation is a blunt tool. Yet certain criteria need to be followed in order to support the overall commercial strategy of the business. Traditional exit layer methodologies rely on triggers and segmentation to deliver an action such as a voucher.

However, it takes a long time to learn whether this is successful and multiple airlines have reflected that there is little evidence that the conversion benefits of vouchers provided in this way override the dilution impact. This can cause tension between digital teams and those responsible for measures such as RPK (Revenue Passenger Kilometers) or yield metrics.

This is where a fresh approach combining detailed profiling and the creation of models such as Price Sensitivity, Churn Risk and Voucher Impact can create more precise interventions.

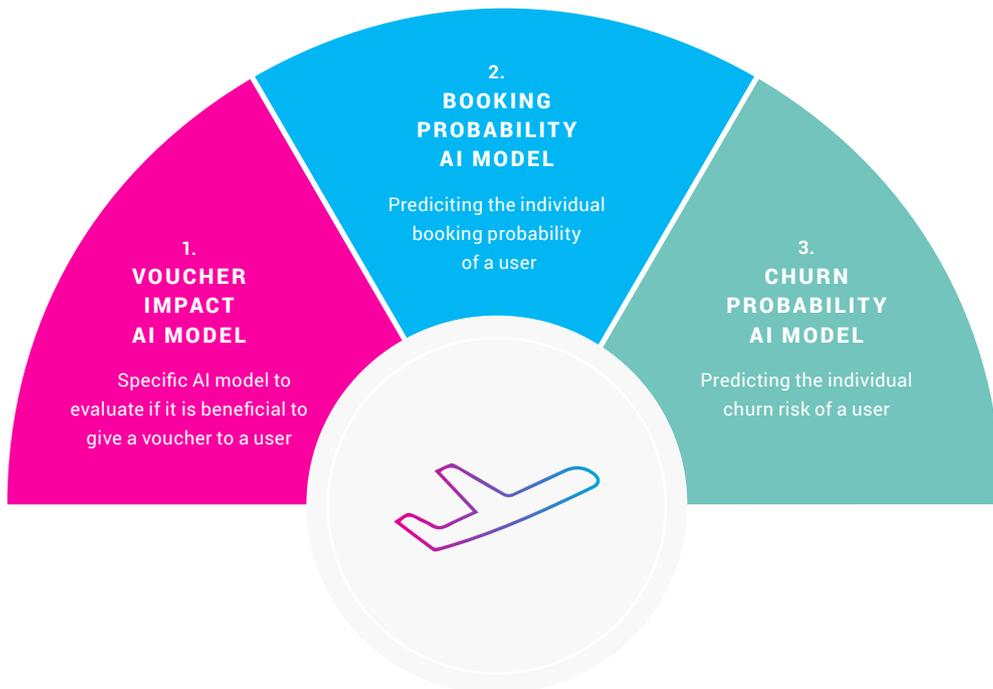


BD4's AI-driven personalization platform

provides a deep real-time understanding and connection with customers, allowing an airline's channels to present individually tailored messages to relevant customer profiles at the most appropriate stage of the booking process.

Deploying automated AI

Typically airlines experiment with a set of segment-driven approaches modeled against a control group. BD4 worked with the airline to develop a set of real-time models that made behavior much more transparent including:



Segments of individuals

The audience was divided to include a control group to be monitored while building a precise audience that was suitable for vouchers and creating models which allowed BD4's platform to understand the behaviour of those clients who use vouchers.

To evaluate the effect of those models, multiple tests were carried out which enabled transparency and control:

1

LEARNING PERIOD

The audience was profiled and modeled to enable a wide range of use cases. Individual level understanding and visualization was enabled. The airline could »see« their customers behaviours and experiences for the first time. During this time a range of classifiers were trained.

2

TRAINING PERIOD:

Once the audience was profiled a specific Voucher Classifier was trained, revealing the probability of which individuals would buy and which would not in order to target vouchers at only those who would not buy a ticket without them.

3

TEST AND CONTROL PERIOD:

The various classifiers were orchestrated to deliver statistically significant results that showed a sustainable revenue uplift and also enabled the team to understand how much money was saved compared to creating an uplift in a more traditional way – with rules driven segments.

4

BUSINESS AS USUAL:

Once the benefits of the approach were established, it became possible to utilize multiple voucher types as one of many additional use cases tailored to each individual by the AI-driven profiling approach.

The results

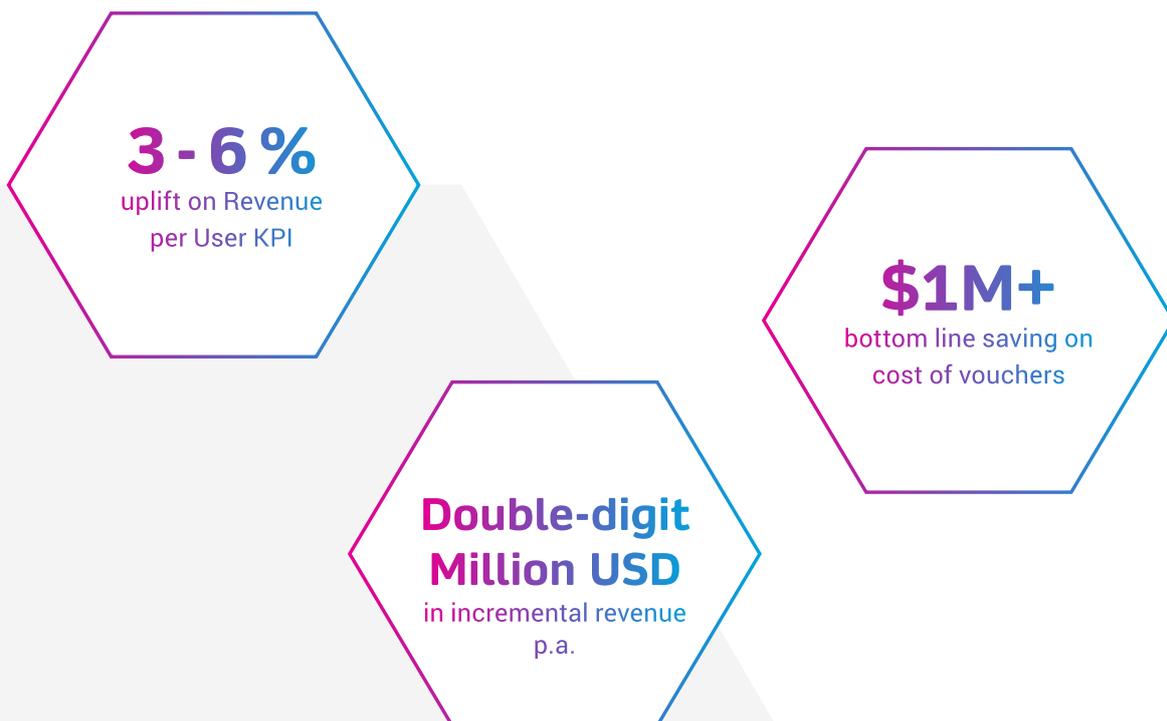
During the period of the test it was established that a **significant uplift in revenue per user was achieved** (between 3 and 6% depending on seasonality and time).

In order to get that level of result using a traditional distribution of vouchers would have cost **more than \$1M USD over 10 months** – a figure that translates directly to the bottom line. Thus the airline had both a higher revenue per customer and a lower cost to achieve it. Further, the airline had a leading edge approach for ongoing experimentation and delivery at the level of the individual.

In the course of the experiment, the growing amount of user-data collected and processed enabled the evolution of the AI/ML capabilities – which continually delivered incremental monthly revenue growth to the airline involved.

Extrapolated to 100% traffic over the course of a year this single use-case would have generated **double-digit Million USD incremental revenue** for the airline. And all for a fraction of the normal cost of such an incentive campaign.

Comparing this with the full cost of the BD4 platform, this individual use-case not only pays for itself but delivers a very significant return on spend (> 8 times).





Expanding digital empathy

Multiple airlines, including this one, are moving forward with a whole new set of experiments and interventions made possible by this unique approach. The different stages of the digital buying journey enable a multitude of use-cases to connect with customers on a personal level.

Working at an individual level also allows airlines to solve challenges in the shopping process by presenting products and offers that resonate best with customers on a one-to-one human-level.

With BD4's platform, airlines have the capability to deploy multiple personalized interventions simultaneously to their entire audience, with the customer experiencing seamless online experiences which are inferred from their detailed, modeled preferences.

**Human touch
e-commerce
that maximizes
the value from
each customer.**



**Find out more on [BD4.ai](https://bd4.ai) –
or get in contact with us
for a personal demo.**

BD4

BD4 Group GmbH
Rödelheimer Bahnweg 23
60489 Frankfurt am Main
Germany

T +49 (0)69 2474718-201
info@bd4.ai