



TapConnect Barcode Ticketing Solution

A Ximedes Case Study

Barcode Travel Across the Netherlands

Translink is a Dutch association, established to manage the OV Chipcard, a prepaid card that lets people travel all over the Netherlands, regardless of the transport operators used. Translink takes responsibility for clearing & settlement of interoperable e-tickets that are sold using TapConnect.

In the OV Chipcard tradition Translink is now running a program to modernize fare collection in the Netherlands. Fares can be paid in three ways:

- 1) Using their debit or credit card
- 2) With a new (EMV-based) closed loop card
- 3) With a mobile barcodes

Translink is the owner of TapConnect for barcode travel in The Netherlands. TapConnect is a barcode ticketing solution that Ximedes originally developed for GVB, the Amsterdam public transport operator.

API-Based Solution

Flexible Ticket Sales

TapConnect's API-first architecture makes it easy for operators to partner with organisations to sell tickets. This helps to increase ticket sales and reach a wider audience. At this moment, TapConnect tickets are sold in the Traveler Apps of public transport operators such as Arriva, GVB and RET, but also by independent sales organisations such as Tranzer, Glimble and Maze.

TapConnect also introduces combi-ticketing by seamlessly combining museum or exhibition tickets with public transport passes. In 2023, the internationally acclaimed Keukenhof tulip display implemented combi-tickets, granting visitors the convenience of traveling to the Keukenhof via public transport while gaining access to the breathtaking grounds with a single, hassle-free ticket. The phenomenal sales figures reported by TapConnect unequivocally demonstrate the success of this approach.

Fits Like a Glove

Product Definition

One of the key features of TapConnect is its flexibility in defining transport products. Transport operators can effortlessly customise and tailor diverse transport offerings to suit their unique requirements.

With TapConnect, operators gain the ability to define time-based products that are either date-specific or dynamically adjust their validity based on the moment of initial check-in, ensuring a seamless travel experience that lasts for a specified duration.

Product - details

Name (Dutch) *
Product naam

Name (English) *
Product name

Description (Dutch)
Product beschrijving

Description (English)
Product description

Product code *
1234

Time-based tickets
Time-based tickets

Validity *
☐ Fixed Validity
☒ Sliding Validity
Valid for
60 Minutes after activation

Ticket Lifespan *
☐ Fixed Lifespan
☒ Sliding Lifespan
Expires *
30 days after the date of sale
Product end
Last day the product can be used after this date, the product will no longer be valid.

Sales Period *
Start date *
11/01/2021
End date *
11/01/2021
Please note, allow sufficient time for synchronization of this product to all validation equipment

Nominal price *
Start date
11/01/2021
Price
€ 7.00
Add Price

Modality
Bus
Tram

Customer Service

Name *
Address *
Email *
Phone *
Product *
Add Customer

Name	Address	Email	Phone
John Doe	1234 Main St	john.doe@example.com	06 1234 5678
Jane Doe	5678 Main St	jane.doe@example.com	06 9876 5432
John Doe	1234 Main St	john.doe@example.com	06 1234 5678
Jane Doe	5678 Main St	jane.doe@example.com	06 9876 5432
John Doe	1234 Main St	john.doe@example.com	06 1234 5678
Jane Doe	5678 Main St	jane.doe@example.com	06 9876 5432

TapConnect



Check-In And Checkout

Robust Ticket Validation

In the Netherlands passengers are required to check in and check out of the public transport system, regardless whether you use your bank card, a closed loop token or a barcode. This is similar to the situation in London.

That is why barcodes have to be validated in real-time, and TapConnect is up to this challenge making an online check of every barcode presented well within 250 milliseconds ensuring a smooth and seamless passenger experience. TapConnect even deals elegantly with a situation in which a tram or bus temporarily has no internet connection.

Fraud detection

The barcodes TapConnect uses are defined by Translink, together with the Dutch PTOs. They require the barcodes to be signed with a key that belongs to the PTO that issues the ticket. This setup makes it very hard to forge TapConnect barcodes for fraudsters.

However, barcodes have an inherent weakness, they are easy to copy and can be shared in seconds.

Therefore, Fraud detection is very important and it is integral to TapConnect's. Transport operators can set up custom parameters to automatically detect and prevent fraudulent activities, automatically adding suspect barcodes to a deny-list.



TapConnect

Insights from Travel Data

5,767

Count

Taps vs. time ⓘ



Fraud detections ⓘ

TapConnect goes beyond operational features by providing transport operators with real-time insights into travel history. Operators can access up-to-date information on passenger journeys, allowing for informed decision-making and data-driven improvements.

In conclusion, TapConnect offers an innovative suite of features that empower transport operators to redefine their operations. With flexible product definition, automated fraud detection, streamlined distribution, barcode issuance and validation, inspection capabilities, and real-time insights, TapConnect sets a new standard for transport system management. By embracing TapConnect, transport operators can unlock efficiency, security, and customer satisfaction in their operations, ultimately shaping the future of the industry.



Ready to achieve similar results? Let's talk.

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