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Horizon 2020 ETC 636126

## D 12.2 Service Platform (Reservation & Ticketing Platform)

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## 1. Introduction

This document is deliverable 12.2 Service Platform and is part of work package 12 '*German Pilot*'.

The aim of deliverable 12.2 is to provide the German pilot with a service platform that allows buying public transport tickets in advance and storing them in an online ticket stock.

## 2. Executive Summary

The specific objective of Deliverable 12.2 is to accept Dutch passengers in German public transport.

In the past different e-ticketing schemes have evolved on each side of the border. The isolated development of those schemes led to non-interoperable e-ticketing systems that cannot be interlinked with the ones existing in the neighbour countries. In order to enable a seamless travel experience for passengers using public transport services in their neighbour country, a mutual acceptance of the existing accounts needs to be guaranteed. For this purpose the installed reader-equipment in the actual vehicles needs to have the ability to read and recognize the used chip card containing the GST. Apart from the installed hardware in the vehicle, also the back office systems need to be able to cope with transactions generated by Dutch passengers with their chip card containing an ID that allows them to travel abroad.

For this reason a Service Platform was developed and established that provides ticketing opportunities for public transport services using ID chip cards. The Service Platform within the German pilot is one essential system component that contributes to interoperability between country-specific e-ticketing schemes. The reason for this is that the Service Platform can be accessed by domestic, but also international travellers using a chip card containing the generic secure token (GST) and hereby an ID. Each user equipped with an ID is able to access the Service Platform, thus to buy and store tickets for his journeys using public transport on the German side – regardless whether he is a German or Dutch customer.

The Deliverable has been implemented according to the work plan, without any deviations.

The Service Platform is one very central system component that was designed as an online cloud being able to generate and store public transport tickets that are generated by passengers using a chip card containing the GST and hereby a unique ID that is linked to the traveller account. As long as the passenger has such an account on the Dutch or German side, he is known in the system and allowed to buy public transport tickets on the German side – also Dutch passengers holding their account with a Dutch PTO. The structure and functionality of this online ticket stock was designed in a first step and afterwards specified and implemented by the supplier Cubic Transportation Systems. In order to fully integrate the developed component, integration tests with the other system components have been carried out before the start of the pilot.

The Service Platform is a crucial element of the German system architecture. The online ticket stock builds up interoperability, because it can be accessed by all passengers holding an active account with a PTO. In this context it contributes to seamless travelling based on prepaid tickets in Germany as defined in the overarching objectives. The Service Platform directly interacts with other components of the system architecture such as the Equipment installed in the vehicles that is delivered through deliverable 12. 4.

### 3. Service Platform

As stated in chapter 1 of this document, the aim of deliverable 12.2 is to provide a service platform that allows buying and storing public transport tickets in an online environment.

The service platform provides two functionalities that are required to sell and validate tickets for public transport on the German side of the cross-border pilot. Pilot participants are able to buy a day-ticket for the German pilot area with the first check-in using their token card. Based on the check-in a day-ticket is sold in advance and stored in the online ticket stock. The online tickets stock is an online cloud, which offers the opportunity to store and inspect existing tickets via an online connection. This inspection can take place via terminals installed in busses or via handheld inspection devices used by the inspection staff.

The online ticket stock was developed and delivered by the supplier Cubic Transportation Systems GmbH, which has won the national tendering competition for delivering the conventional VDV core application product manager system according to the international role model for electronic ticketing.

The online ticket stock is connected to the German Hub system via the service API.

#### Attachments

- Picture of the system architecture indicating the online ticket stock
- Photo of check-in process answered positively by the Service Platform
- Photo showing the performed check-in being noted in the app:

#### 4. Screenshot, picture of the system architecture

Below one screenshot of the system architecture indicating the online ticket stock:

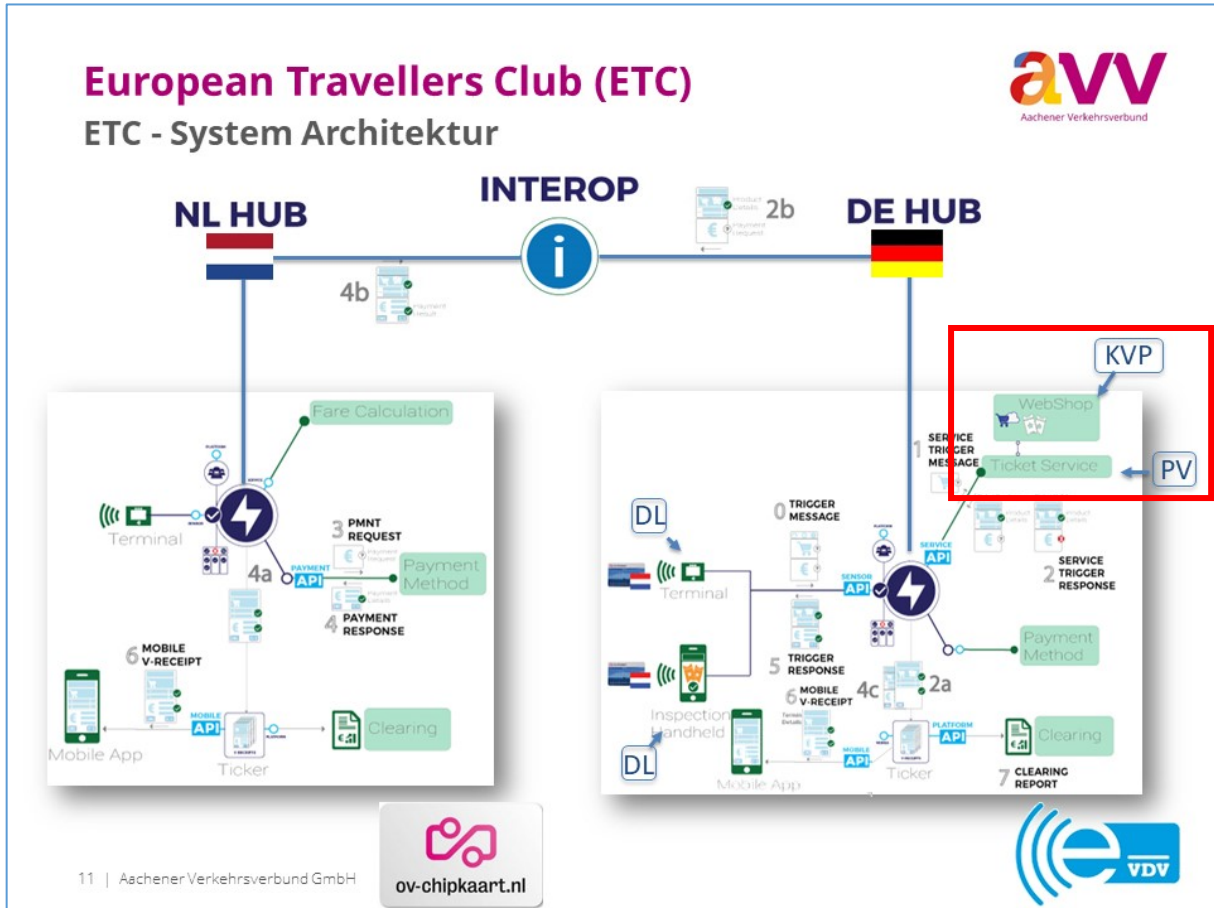


Photo showing the check-in at a terminal in the bus being answered positively by the Service Platform:



Photo showing the performed check-in being noted in the app:

