

Draft of a
Specialist concept
for a
Europe-wide ticket
for all public vehicles

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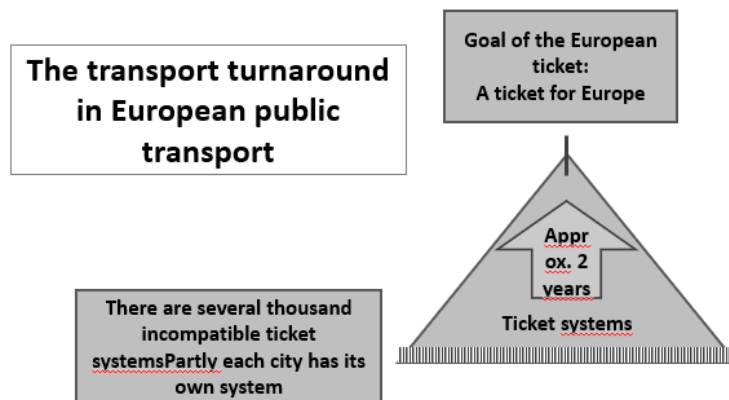
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1. Preamble:

The climate catastrophe is well known. It is also known that the use of cars in this quantity is no longer sensible. Especially when it is mostly only short distances. Currently, there are about 260 million registered vehicles in Europe. It is time for a traffic turnaround in public transport.

If we look at public transport in Europe, it consists of thousands of small, very different islands. Everywhere there are different rules and solutions. Hardly anyone knows rules from the neighbourhood. In the area of national borders, there are rarely cross-border solutions. It is an advantage that you can save individual tickets on your mobile phone. But not everyone has a mobile phone and how many APPs are needed across Europe, thousands? What about taking children, dogs, bicycles, wheelchairs, etc.? A lot of things have to be searched for with each provider.



The comparison with the car shows the direction. Here there are simple rules that usually apply to a whole country, state.

For a car, you need a key, fuel, insurance, tax, MOT, and a driving licence. But most of this only happens once a year. So for 90% of journeys, all you need is the key and a fill-up or top-up every now and then, and you can drive comfortably all over Europe.

Conclusion:

Environmentally harmful car driving is very easy,

Environmentally friendly public transport is cumbersome and has to be learned well.

2. Goals for the European Ticket

2.1 Goals for the customer

The aim is to provide a simple, convenient and uniform ticketing system for all customers in the EU ticketing area. There will be different ticket variants, Comfortable (L), Medium (M)

and Simple (S). The currently existing ticket systems will be replaced and discontinued. The vending machines can also be dismantled.

Everyone can order the ticket card or ticket APP free of charge from the ticket centre, or connect their bank card to the ticket centre (technical requirements for reading must be met). You can choose between a time of use (a time limit) or a permanent ticket that is always renewed.

With the corresponding ticket card or ticket APP, the customer can simply get on and off in the EU ticketing area. With the Ticket-APP from start to destination is supported across all public vehicles. He can select routes, e.g. according to price, journey time or similar, book them and then drive. The ticket navi guides the customer barrier-free to the respective vehicle, to the right stop or to the right platform to the destination.

A simple, clear billing procedure and debiting at the end of the journey, similar to the APP Fairtiq, should create an overview.

Models for these goals are

1. the nationwide 9-EUR ticket. With one ticket, you can travel anywhere in Germany on local public transport. With a QR code on paper or on the mobile phone.
2. The Trafi App from Berlin and Vilnius solves the planning and booking of journeys across all vehicles,
3. the DB app with the display of journeys, booking and tracking during the journey.
4. Fairtiq with its simple check-in and check-out.

All these good approaches are to be adapted and brought together.

All residents will receive a written offer (postage paid prepared form) at the start of the EU ticket system, and can register for an EU ticket free of charge online at the head office.

2.2 Goals for the service provider (company)

1. settlements to the customer

Billing to the customer will be simplified and automated. Payment transactions with the customer are settled via the ticket centre. Subsidies from organisations, the state or employers, etc. (ticket subsidisers) are deposited with the ticket centre. (ticket subsidisers) are deposited with the central office and are settled there. Unpaid invoices or reminders and the like are handled by the ticket office. Cash payments should be replaced. The provider should be reimbursed immediately. Risks and delays in payment transactions are taken over by the central office. In this area, an adjustment of the operational procedures is necessary, which is supported by the ticket centre.

2. technical equipment and support

The technical equipment of the vehicles with readers is taken over by the ticket centre including warranty and maintenance. The ticket centre provides support for all questions and problems of the operation and assists with customer service on site. Furthermore, support can be provided for office equipment and programmes. Close cooperation leads to a quick introduction to the EU ticketing area.

3. special offers

Special offers of a provider can be introduced quickly for all its customers via the head office. Billing is done automatically at the head office. However, advertising can only be made to those customers who have allowed advertising.

2.3 Goals for the centre

The central office is the service provider for the customers, the providers and the subsidy providers. The central office offers a service to all to improve the services of public transport for the customers and to make them more cost-effective. It takes on tasks that lead to simplification and that result in uniform and convenient solutions for all parties involved. The customer's perspective and satisfaction as well as the service should be the benchmark for a good system. Individual peculiarities, wishes or requirements should not restrict or hinder the overall system.

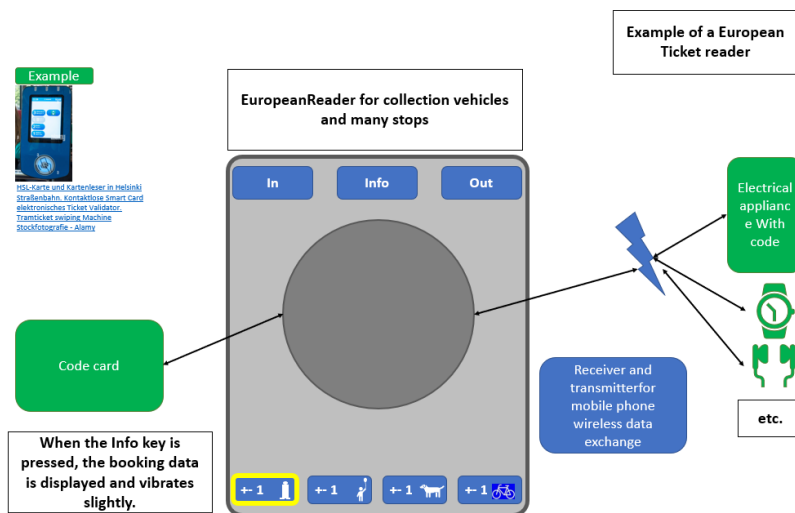
The EU ticket area should have a barrier-free, uniform public transport system so that everyone everywhere can use public transport easily.

The central office takes care of the compliance with passenger rights and supports a speedy regulation.

3. The technology

3.1 Accessible readers

Here is an example of a reader. It should be able to read all systems (L, M, S). Digital customer devices or cards that are recognisable with Bluetooth, for example, can remain in the pocket and do not have to be held up to the reader.



3.2 Barrier-free reader outside the vehicles

In areas with poor or no network coverage, special readers will be used around the stops to record changes or a forgotten check-out, for example, store them and transfer them to the next vehicle via Bluetooth or similar and pass them on to the provider.

Stops will also be equipped with readers to catch up on a forgotten check-out.

3.3 Barrier-free EU Ticket

Three accessible ticket systems should be offered for the customer to choose from.

1. system L, comfortable:
 - a. Complete recording of all data and all services. Journeys can be searched for completely across all public transport vehicles, selected according to price or journey time, booked and used, including billing data. During the journey, everything is displayed in real time, including time adjustments in the event of delays with a navigation system. If desired, the country fonts can be selected in addition to the translations, with other characters or languages so that signs can be read on site. According to current knowledge, it would be a mobile phone or equivalent with a similar APP such as TRAFI.
 - b. Booking and unbooking of e.g. children, dogs, bicycles, guests etc. is possible online at any time.
 - c. Help functions are all visible online and can be edited.
2. System M, medium:
 - a. Allows partial data entry. Here it would be a kind of EC card, e.g. that can be digitally recorded. Start and end of a journey are automatically recognised, via Bluetooth or similar. A journey search and bookings can only be made on a PC or similar. During the journey there is no tracking and no real-time information.
 - b. The booking and unbooking of e.g. children, dogs, bicycles, guests or similar is possible at any time via the reader.
 - c. Help functions such as booking checks are carried out via the reader and can be changed accordingly on the reader.
3. System S, simple:
 - a. Simple card. The card can only be read, there is no further information here. Corrections can be made at the readers.
 - b. Booking of e.g. children, dogs, bicycles, guests or similar is possible at any time via the reader, as is ending the ride.
 - c. Help functions such as booking checks are carried out via the reader and can be changed accordingly on the reader.

4. EU Ticket Centre

4.1 Tasks of the EU Ticket Office

A ticket centre is proposed, which manages the system with all providers and states and enables and supports the introduction and operation. This ticket centre should work as a service provider and support the operation continuously in the interest of the customer and the providers.

The service is that this EU ticketing system can be used and functions in the EU ticketing area. In rural and cross-border areas, special support is needed, especially for digitalisation.

Network coverage needs to be supported by the relevant bodies as a priority.

Software and hardware adaptation e.g. readers of the ticket system, also at the providers, are controlled and maintained by the ticket centre.

The central office shall use good offers of individual providers or states and provide them to all on its own responsibility in the sense of the customer.

A central database will be set up with the customer data, the data of the providers and the subsidy providers. In a simplified and uncomplicated manner, only the necessary data should be stored in accordance with the Data Protection Act. With this data, a ticket code will be created for each person, similar to an identity card. This code, e.g. a QR code, makes it possible to assign the vehicle usage data to the customer and to initiate the billing of the customer, the provider and the subsidy provider. Duplicate data storage is to be avoided in order to reduce operating costs.

The introduction in the EU ticketing area for states should be possible after two years for changeover. It only makes sense if a state is completely adopted into the EU ticket area. Individual solutions complicate the system, are not customer-friendly and should be an exception. Savings measures in individual companies can be made possible and should be used. The EU Ticket Centre can support here. The positive attitude of the companies and that of the states is an important prerequisite for such a uniform system.

4.2 The EU Ticket Office data

Personal details entered once in the database are valid for all journeys in the EU ticket area. An adjustment can easily be initiated by the customer.

Examples of customer data:

1. first and last name, address, birthday, account data, collection order.
2. e-mail, mobile and landline phone numbers
3. Navi, type of accessibility, etc.-
4. 10% or 20% or 50% discount similar to BahnCard
5. personal socially relevant data for discounts, e.g. pensioners pupils, students, types of restrictions, etc. also a free ticket when handing in the driving licence, for a limited period or for nn years, etc.
6. concessions of company employees and the like
7. statement on promotional material
8. other

An equivalent simple solution for visitors to the EU ticket area should be offered. if applicable, automatically when applying for a visa, even if it is not used. The time limits apply as for the visa, after which the data will be deleted in accordance with the Data Protection Act.

Example of provider data:

1. name and address of the provider
2. bank data
3. e-mail, telephone number
4. contract with the centre
5. monthly overview of operating data and operating costs
6. etc. e.g. special offers

Example of grant provider data:

1. name and address
2. bank details
3. e-mail, telephone number
4. contract with the ticket centre
5. detailed description of services and scope of application
6. etc.

5. The individual states in the EU ticket area

The individual states regulate social compensation or subsidies according to their laws. As there are very different legal rules, these can only be regulated at state level. These rules are entered accordingly in the "databases for subsidies" of the ticket office. The aim is to provide relief for the socially disadvantaged. But other subsidies are also possible, e.g. all residents of the state travel free of charge within the state. Corresponding settlements are implemented by the central office.

6. public transport providers in the EU ticketing area

Each provider should disclose the accounts and calculations for its area and make them available to the head office. Openness is an important prerequisite for honest billing and customer satisfaction. An exchange between providers is encouraged and supported by the ticket centre.

Each provider can communicate offers for his area to the central office, which will be recorded and charged accordingly.

However, digital customer advertisements via the central office are only possible with the customer's consent.

7. the billing of public transport in the EU ticketing area

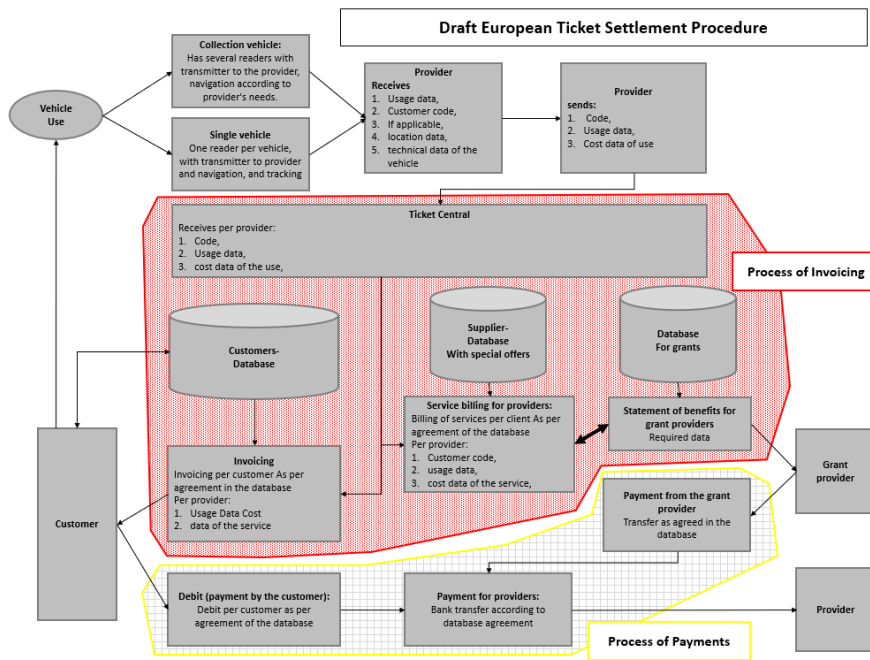
The providers' vehicles read the ticket code with the usage data (start - end) and send it to the provider. The provider adds his costs of use and sends them to the head office.

Honest correct billing is the basis for customer satisfaction.

The central office collects the various costs of a customer over the agreed period of time (daily, weekly or monthly) and invoices them to the customer and debits the account.

Further, the costs are sent to the grant providers and debited there.

The income of both is transferred to the respective providers, incl. a clear statement.



8. coverage of public transport services in the EU ticketing area

8.1 Use of the individual vehicles

E-scooters, Segways, e-bikes, rental cars and similar individual vehicles.

The vehicle is unlocked with the ticket code and the journey can begin. To park the vehicle (technical solution on the vehicle), the journey is ended with the ticket code and the vehicle is locked for the next customer. The used route and / or time can now be sent to the provider.

8.2 Use of the individual vehicles

Vehicles with appropriate readers and stops with readers:

System L:

Mobile phone is digitally recognised automatically in the vehicle when boarding and alighting, incl. tracking, no action required by the customer.

System M:

Customer code must be read with reader and also when leaving. If forgotten, can be corrected at the stop.

System S:

The reader must be used to select boarding or alighting and, if necessary, additional bookings,
If you forget, you can correct it at the stop.

The stops should also be equipped with readers in order to be able to rebook a forgotten check-out.

9. finish

It remains the task of the states to support this EU ticket with all their means. It is a building block for the solution of climate change and the necessary change in transport. Only if public transport is customer-friendly and very simple will it be possible to get people to switch from car to public transport.

Another task is to equip public transport with vehicles and personnel in order to be able to offer more services in rural and cross-border areas. Only if there are offers can the change from car to public transport really succeed.