

Letter of Intent

Between

Aachener Straßenbahn und Energieversorgungs-AG (ASEAG),

Aachener Verkehrsverbund GmbH (AVV),

ACCEPT Institute (ACCEPT),

Arriva Personenvervoer Nederland bv (Arriva),

Nahverkehr Rheinland GmbH (NVR),

Trans Link Systems (Translink), and

VDV eTicket Service GmbH & Co. KG (VDV-ETS).

This Letter of Intent is entered into on 7 December 2018 between:

1. *Aachener Straßenbahn und Energieversorgungs-AG*, Neuköllner Straße 1, 52068 Aachen, Germany (ASEAG),
2. *Aachener Verkehrsverbund GmbH*, Neuköllner Straße 1, 52068 Aachen, Germany (AVV),
3. *Stichting ACCEPT Institute*, Stationsplein 61, 3818 LE, Amersfoort, The Netherlands (ACCEPT),
4. *Arriva Personenvervoer Nederland BV*, Trambaan 3A, 8441 BH, Heerenveen, The Netherlands (Arriva),
5. *Nahverkehr Rheinland GmbH*, Glockengasse 37 – 39, 50667 Köln, Germany (NVR),
6. *Trans Link Systems BV (Translink)*, Stationsplein 151-157, 3818 LE, Amersfoort, The Netherlands (Translink), and
7. *VDV eTicket Service GmbH & Co. KG*, Im Mediapark 8a, 50670 Köln, Germany (VDV-ETS).

In consideration of:

- the shared vision for integrated personal mobility in Europe, giving people the best possible service to plan their journey and travel across operators, travel modes, scheme boundaries and geographical borders;
- the shared goal of implementing an infrastructure for interoperable account-based travelling (ABT) in Europe, connecting individual e-ticketing schemes in public transport;
- the current work and pilots regarding the European Travellers Club (ETC) project which is funded by the European Commission under the Horizon 2020 program (project ID is ETC-636126);
- Translink is responsible for the e-ticketing scheme in The Netherlands and acts as the scheme provider, card issuer and clearing operator for the Dutch scheme;
- Arriva is responsible for the public transport services in the province of Limburg (The Netherlands), for the cross-border bus lines 44 (in cooperation with ASEAG) and 350 and the cross-border train services between Aachen and Maastricht as of December 2018;
- VDV-ETS operates and coordinates the technical systems and standard for ((eTicket Deutschland in Germany, the electronic fare management system in public transport;
- VDV-ETS is the scheme provider of ((eTicket Deutschland;
- NVR is the responsible transport authority for regional rail passenger transport in the areas of Aachener Verkehrsverbund (AVV) and Verkehrsverbund Rhein-Sieg (VRS);
- AVV is the responsible transport authority in the Aachen area in Germany;
- ASEAG is a public transport operator and responsible for the public transport services in the Aachen area (Germany) and for the cross-border bus line 44 (in cooperation with Arriva);
- ACCEPT is a not-for-profit Institute with its own Supervisory and Advisory Board. Members of the Advisory Board are: ITSO Ltd. from the United Kingdom, National Transport Authority from Ireland, Rejsekort A/S from Denmark, Translink Systems from the Netherlands, Transport Scotland and Verkéiersverbond from Luxembourg.

- ACCEPT is the coordinator of the work and pilots regarding the ETC project and is governed by the above-mentioned members of the Advisory Board to support and implement the vision of interoperable account-based travelling.

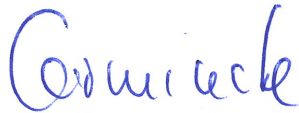
The above-named parties wish to:

- I. continue the current ETC pilots as-is (as described in Appendix A) in their respective countries for a limited period of time, that will depend on the progress made on the following points, but at least until 31st of December 2018, under the current conditions for the cooperating parties;
- II. to support each other and provide services to each other while building on the results of the ETC project;
- III. use the time until 1st October 2018 to formalize the continuation of the ETC pilots in the agreements between all parties, for instance with regard to the potential impact of the new European General Data Protection Regulation (GDPR) legislation;
- IV. work together in coordinating the further roll-outs of ETC pilots in other regions possibly including more functionality, other modalities, additional parties and/or more travellers (see Appendix B for a possible roadmap). Parties are aware of other relevant initiatives, like the Eurekarail project, which is managed by the Dutch Province of Limburg. This should lead to a more detailed roadmap by March 2019, including the following:
 - a) investigation of the impact of extending the ETC pilots on for instance the underlying technical, operational and legal infrastructure;
 - b) work together on finding and allocating resources to support and finance the activities necessary to accommodate possible further roll-out of the ETC pilots.

This Agreement shall be governed by Dutch law. Courts with competence to hear disputes arising out of this Agreement shall be the courts of Utrecht (The Netherlands).

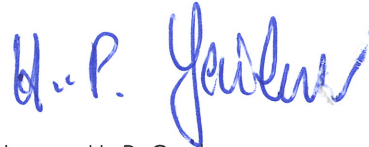
The Parties signify their agreement to the foregoing by signing below.

For ASEAG



Name: M. Carmincke
Title: CEO
Date:

For AVV



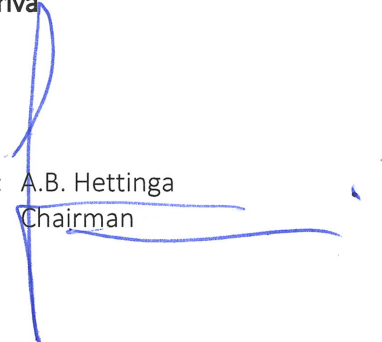
Name: H.-P. Geulen
Title: Managing Director
Date:

For ACCEPT



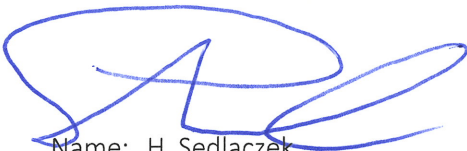
Name: R. Testroote
Title: Director
Date:

For Arriva



Name: A.B. Hettinga
Title: Chairman
Date:


For NVR



Name: H. Sedlaczek
Title: Managing Director
Date:

For Translink

Name: A. Groothedde
Title: CEO
Date:



For VDV-ETS



Name: N. Zeino-Mahmalat
Title: Managing Director
Date:

Appendix A: ETC Pilot description

ETC Pilot:

- bus line 44, from Aachen (Germany) to Heerlen (the Netherlands). Operated by ASEAG and Arriva;
- bus line 350, from Aachen (Germany) to Maastricht (the Netherlands). Operated by Arriva;
- approximately 500 passengers, equally distributed between the Netherlands and Germany;
- the Generic Secure Token¹ (GST), issued by ACCEPT, is used as the unique identifier;
- in the Aachen area (in the ASEAG busses) people travel using an automatically purchased day ticket, which is stored in the online ticket stock, operated by AVV;
- in the Limburg area (in Arriva busses) people travel based upon pay-as-you-go, where the price is being calculated in the back-office, operated by Translink;
- on line 44 (ASEAG and Arriva busses) people travel using an automatically purchased single-journey ticket, which is stored in the German online ticket stock (operated by AVV) or calculated in the Dutch back-office (operated by Translink) depending on the used bus (Arriva or ASEAG);
- cross border transactions (German travellers who travel in the Netherlands and Dutch travellers who travel in Germany) are being routed through the Interoperable Authentication and Routing Hub, operated by ACCEPT; and
- costs for travelling in the neighbour country are invoiced by the home PTO.

¹ Version 2.1.

Appendix B: Roadmap

The parties named above foresee the following possible roadmap (with indicative timelines). For each next phase parties will draft entry criteria, which need to be met before entering this next phase.

Phase 1: Continue the ETC pilot as is **1st April 2018 – 31st December 2018**
See appendix A for a detailed description

- The design and implementation of a generic reader² for the Dutch system (exact date to be set).

Total number of travellers using the system: 500

Phase 2: Expand with: **1st January 2019 – 30th June 2019**

- Train connection between Aachen – Maastricht (– Liege) (RE 18; Eurekarail)³;
- Implement the readability of the Generic Secure Token (GST) (considering also any further agreed developments at the time) on all terminals on train stations served by the RE18;
- Add the whole Limburg concession of Arriva;

Total number of travellers using the system: at least 5,000

Phase 3: Expand with: **1st July 2019 – 31st December 2019**

- Achieve integration of token, acceptance sensor and German hub into the KA-Standard;
- Solve data protection issues and multi-client OTS platform;
- Realization of at least a prototypical German Hub and multi-client OTS platform. Apply these and the standard components in the following further extensions of service:
 - o Add the possibility to travel with a VDV-barcode mobile⁺ on a smartphone in the AVV region;
 - o Add the possibility to travel based upon check-in / check-out and price calculation in the back-office in the AVV region;
 - o Add the whole concession of ASEAG;
 - o Add the train connection between Aachen – Köln – Bonn;
 - o Add the city of Bonn.

Phase 4: Expand with: **1st January 2020 – 30th June 2020**

- Add further mobility providers such as car sharing and bike sharing
- Concept for upscaling (transform the pilot into a running system)

² This generic reader includes the OV-chipkaart module, the GST module and EMV-c module.

³ Note that this train service will start at 9th December 2018, so it is our intention to include this train connection by that date.

The scope of each phase in the roadmap is defined by content on different subjects:

	Phase 1	
Countries	2	Netherlands, Germany
Authorities	2	AVV - Province of Limburg
Public Transport Operators (PTOs)	2	Arriva – ASEAG
Modalities	1	Bus
Area/Regions	2	2 bus lines between Aachen and Maastricht Aachen Region, ASEAG concession
Functionality/concepts		ABT - ETC card - web/app
Propositions	2	full fare, pay-as-you-go (Netherlands) and day trip ticket (Germany)
Travellers		500