

## A train beyond borders

**100 locomotives pulling 16 wagons through 18 countries; an overlong train, longer than most platforms travelling 12000 km through Europe while crossing 26 borders. Being technically, operationally and organisationally unique, the ESNtrain will carry participants from everywhere in Europe through 18 different European countries.**

What connects Gdansk with Amsterdam and Rome with Trondheim? The ESNtrain – an overlong train that will travel through Europe and that everyone can join. Being technically, operationally and organisationally unique this train will be on its journey from 28 March to 21 April while crossing 18 different countries. It is a very challenging project since several problems had to be solved in order to guarantee a smooth and problem-free ride.

The 12 000 km are mostly travelled at night, during the day intercultural experience can be gathered while activities with the local population of the 40 visited cities take place. Some examples of these special highlights are the spring festival in Budapest, a breakfast in Genoa and the Sechseläuten in Zurich.

But the train trip itself will be unique as well: Steam engines will accompany the train on several sections, in Vienna a city tour will take place on the urban railway network and the whole train will cross over from Germany to Sweden by ferry.

## Technically and operationally unique

Not only from a cultural viewpoint is the train unique. An overlong train travelling through 18 countries and crossing 26 borders has never been realised before. Several technical and operational solutions had to be found in order to comply with the various national and local technical standards and operational regulations. The different electricity and train stop/warning systems for instance require the use of 100 locomotives. The enormous train length of 500 m also poses several problems. Only few platforms allow accessing the train on its whole length. In addition, the ferry crossing between Germany and Sweden is a specialty that requires proper and thorough planning. Some of these uncountable challenges as well as the technical details of the train are listed in the appendix of this note.

## A diversified cultural programme

Everyone from anywhere in Europe is invited to join the first Europe-wide train travel. The diversified cultural programme of the ESNtrain shows Europe's diversity and by serving as a communication platform it promotes the intercultural dialog.

## Erasmus Student Network (ESN)

The Erasmus Student Network (ESN) is a network of several local Erasmus sections. In Europe ESN exists at nearly 300 higher education institutions in 33 different countries; thus it belongs to the world-biggest student organisations.

The non-profit Platform GmbH leads the project in the context of the 20th ESN-anniversary; ESN provides hands and heads as well as the whole network. From the first idea until the farewell festival, hundreds of volunteers will have participated on the project

### ESNtrain stops

Amsterdam • Bremen  
• Brussels • Budapest • Copenhagen • Dresden • Hamburg  
• Heidelberg • Innsbruck • Krakow • Lausanne • Ljubljana • Munich • Oslo • Pisa  
• Prague • Rome • Stockholm • Trondheim • Vienna • Warsaw • Winterthur • Zagreb • Zurich  
• and many more



ESNtrain • platform GmbH • Neuhofstrasse 30 • CH-8708 Männedorf



## Contact and further information

Of course we are available for any further information.

We also invite you to join the train so we can give you an insight view behind of the scenes.

Contact person: Benjamin Zielke  
Email: [train-logistics@esntrain.org](mailto:train-logistics@esntrain.org)  
Telephone: +41 76 264 07 22  
Internet: [www.esntrain.org](http://www.esntrain.org)

## Sponsoring

You are welcome to participate at the trip as a sponsor for the whole journey or for a small section of it. Even though the basic expenses are already covered, you can support special projects, e.g. the realisation of a steam engine trip.

## Appendix

### Technical, operational and organisational details about the train

#### Technical information on the train

- Overall train length: 500 m
- Train load: 771 t (and additionally 80 – 160 t for the locomotives)
- Number of couchette wagons: 9
- Number of sleeper wagons: 1
- number of social wagon: 2
- Number of dining wagons: 1
- Number of luggage wagons: 1
- Number of salon wagons: 2
- Travel distance: 12 000 km
- Maximum speed of railway wagons: 140 km/h
- Number of sleeping places: 700
- Organising Railway company: ÖBB Erlebnisbahn

#### Some challenges

This train surely is unique from a cultural as well as from a technical-operational viewpoint. There has never been an overlong train travelling through 18 different countries while crossing 26 borders. Uncountable technical and operational solutions had to be found in order to comply with the various different national and local technical standards and operational regulations. The different national power and automatic train stop/warning systems e.g. require the use of 100 different locomotives.

The enormous train length of 500 m also poses several problems. Only few platforms allow entering and exiting the train on its whole length. Very often, this can only be done on a limited number of wagons while the rest of the train risks blocking switches and other tracks. In the Netherlands, the enormous train length has resulted in a totally different problem. Even though it was possible to stop at the stations of Amsterdam and Utrecht, the garage track length for passenger trains is not sufficient long and the train cannot be parked. This results in the fact that the train has to travel empty on the Dutch network while the participants are visiting the city.

Another operational challenge is the ferry crossing between Germany and Sweden since it was necessary to find sufficient space on the boat for the 16 wagons. In addition, the wagons need to be equipped and approved for transport by boat. Furthermore, they need to be boarded on the ship in a specific order for the crossing. This requires considerable shunting in Germany before boarding the ship and in Sweden after arrival.

Unfortunately, some projects could not be realised. A city tour with a steam engine pulling the train on the urban railway network of Vienna could not be realised as originally planned. It was possible, to find a slot (the suburban trains in Vienna usually have a headway of 3 minutes). However, there was the risk that the steam engine would provoke the fire alarm in the tunnels. Therefore the city tour is now realised with an electric engine.

Not at last the enormous train mass (sometimes above 900 t) is more characteristic for a heavy freight train than for a modern passenger train. On mountainous routes it is therefore necessary to pull the train with two engines in order to obtain sufficient power. This procedure is very uncommon for passenger trains.

Several problems are in the details. The toilets of the train for example are generally equipped with a regular collecting tank. However, a single wagon poses problems due to its vacuum-toilet. Since there exist only three cleaning stations for such toilets in Switzerland; this requires carrying the whole empty train from Winterthur to Switzerland and back if the usage of the toilet shall remain possible.

All these problems posed huge efforts and challenges for everybody involved in the organisation of this trip. However, due to the huge Enthusiasm of the national railway companies and with the ÖBB Erlebnisbahn as the organising railway company, solutions were always found.