Cross-Border Public Transport Services

May, 2023
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We would like to express our gratitude to the consortium members for their review and guidance in shaping this document.

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This document may be cited as:

Cover image: Krivec Ales

Supported by:

European Climate Initiative (EUKI)

on the basis of a decision by the German Bundestag

Consortium partners:

Supporting science based policy to prevent dangerous climate change enabling sustainable development
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Introduction

This paper analyses the obstacles and solutions related to the provision of cross-border public transport (CBPT) between neighbouring EU countries, with the focus on the borders between Poland and Lithuania, and between Romania and Hungary.

CBPT is most simply defined as a scheduled transport service in a border region with at least one stop in two contiguous border regions in two different countries that is accessible by the public. The services may be operated by public or private service providers but need to be open for the public as end users.

A service that crosses a border but does not stop on both sides within the border region or a service that starts in the border area but does not cross the national border is not considered CBPT. Long-distance services that cross multiple borders need to fulfil this criterion at one border crossing minimum. Services that start or stop in a town which is outside but close to the border region could also be considered CBPT if the distance from the town to the border region is under 25 km and no other city or town lies between the town and the national border.

Buses and coaches are the most frequent forms of CBPT, followed by trains. Trams and ferries do not exist as CBPT in the areas covered in this paper. Most cross-border rail services between the focus countries of Poland and Lithuania and Romania and Hungary are along the North Sea – Baltic and Rhine – Danube (TEN-T) corridors. Bus services operate along and beyond the TEN-T corridors, due to differences in infrastructure networks between road and rail and the importance of regional bus lines. Bus lines operate along the Augustow (PL) – Alytus (LT) line between Lithuania and Poland, while the Romanian-Hungarian border has more connections through bus and mini-bus services.
Transboundary passenger transport in the context of emissions reductions is important for an array of reasons. CBPT increases mobility between countries and maintains accessibility for rural and remote regions for cross-border rail travel across the European Union. An increasingly integrated coordination of elements, functions, and border crossings can help boost the modal shift in coordination with urban nodes on the TEN-T network.

Moreover, CBPT empowers better integration and cultural interchange between local communities in different countries. It also allows employees leaving in one country but working in another one, to choose low-carbon transport options instead of personal cars across borders. As a result, CBPT brings a boost to European cohesion and supports a more profound implementation of the EU Green Deal.

Factors impacting CBPT

National borders are often characterised by geographical factors (such as mountain ranges, rivers and lakes) and can have varied spatial characteristics (e.g., sparsely or very densely populated areas) or urban structures (such as twin cities or urban agglomerations). These specificities may impact the availability, number, frequency and
design of CBPT – either as obstacles (mountains, rivers, lakes) or as positive (push) factors that increase the demand for such services.

Other factors that impact CBPT projects are demand and border permeability. While not all non-permeable border segments have high demand for a CBPT project, but no services in place, in most cases there is unbalanced demand, where supply of services fails to meet demand – which is quite tricky to handle from a planning perspective. In areas with unbalanced demand stakeholders struggle to have a common understanding of the problems; if demand for CBPT was met, the only constraint on permeability would be geography and non-permeability could be significantly reduced, in some cases to zero and in many cases to less than 30%.

Analysis shows CBPT projects are possible everywhere in the EU, given that a favourable legal and policy framework is in place. Inhabitants of border regions make up around 30% of the total EU population and for these populations CBPT widens the range of options for cross-border mobility. CBPT offerings can emerge both from new cross-border services where passenger transport is poorly developed or completely absent, as well as better interconnection of existing domestic public transport services in neighbouring border regions.

However, adequate cross-border transport infrastructure networks are a basic prerequisite for developing and operating any domestic or CBPT by road or rail. Significant discontinuities in infrastructure availability and quality at the border can be inhibiting factors for the development and operation of CBPT.

Combining geographical and demand aspects enables an analysis of permeability of border segments for public transport, which is the relation between supply and demand in a border segment. While natural or geographical factors play a small to insignificant role at the borders that we discuss here (Romania-Hungary and Poland-Lithuania), border permeability is a decisive factor in designing new policies. Demand for CBPT services in European border regions is very unevenly distributed and sometimes even sporadic.

High demand for CBPT on both sides of the border can be found along the Dutch borders with Germany and Belgium, along the French-German and German-Swiss borders, the Belgium-French and French-Luxembourg borders. Conversely, the Romanian-Hungarian (RO-HU) and Polish-Lithuanian (PL-LT) borders are on the lower spectrum of permeability with high demand occurring only occasionally for small border segments.

While the RO-HU border is recording higher demand and a higher concentration of inhabitants in its northern part, the demand at the PL-LT border is unbalanced with very low permeability. It is noteworthy that the two border crossings at the RO-HU southern

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border have medium to high permeability mainly due to both road and rail enjoying increased public transport traffic at the Rhine-Danube Corridor.

The number of CBPT stops in border regions varies greatly. In Western Europe, bus and tram services tend to have a higher number of stops than trains or ferries. CBPT services in Eastern Europe today are scarce but tend to cover longer distances than in Western Europe. Such is the case for the PL-LT border, where the shortest connection on rail is between Bialystok and Kaunas with a train that operates only during weekends for tourism purposes. The target groups are more varied on the RO-HU border and includes tourists, students, border commuters, and workers. The only rail connecting Vilnius and Warsaw operates along a TEN-T corridor, as with most rail CBPT. The RO-HU border has more rail connections, with a TEN-T line in the north in addition to rail line which crosses at Curtici- Lőkösháza and a further connection operated by ÖBB in the north between Satu-Mare and Vienna.

Further development of TEN-T corridors in the rail network could contribute to improved or new rail CBPT. However, this requires development of not just long-distance high-speed traffic, but also local and regional connections in the border areas. While at the RO-HU border there is growing business and small traffic, at the PL-LT border there are some other security and geopolitical concerns related to the area known as the Suwałki Gap. Despite, or perhaps because of, these geopolitical concerns, projects such as Rail Baltica should be sped-up to bring about more passenger traffic in order to foster exchanges between communities on the two sides of the border.

CBPT services on both the RO-HU and PL-LT borders are poorly embedded in domestic services. The lack of integration is seen in stops served, lack of coordinated timetables and frequencies, lack of integration into domestic ticketing systems, increased fares as well as different operating times (during the day, as well as throughout the year). Almost all bus services are not integrated but are individual services, thus making integration of different modes of transport more challenging.

Current crossings

The RO-HU border has virtually no challenges related to natural or geographical barriers. The whole length of the border is in the eastern part of the Pannonian Plain and divides vibrant regions determined mainly by urban agglomerations such as Oradea and Arad on the Romanian side and Debrecen and Szeged on the Hungarian side.

Rail crossings include:

- Ágerdőmajor (Tiborszállás) – Carei
- Biharkeresztes – Episcopia Bihorului

On 1 May 2004, when Poland and Lithuania joined the European Union, the Poland-Lithuania border became an internal border of the European Union. On 21 December 2007, Poland and Lithuania acceded to the Schengen Agreement. After this, crossing the border became easier, as EU internal borders are open to all traffic with little need for control. There are still, however, occasional customs and police controls against smuggling of restricted goods affecting about 1% of passengers. There is a single rail crossing between Trakiszki and Šeštokai.

Road crossings include:

- Budzisko – Kalvarija
- Ogrodniki – Lazdijai
- Beržniki – Kapčiamiestis
Figure 2. CBPT, rail and bus between Romania and Hungary.

Source TEN-T Mapping

Figure 3. CBPT, rail and bus between Poland and Lithuania.

Source TEN-T Mapping
Legal challenges

EU legal obstacles for CBPT can emerge from the different political status of national borders within the EU, which originates from the multiple stages of the European integration process. This is most clearly seen through Romania's inability to join the Schengen Agreement, creating embarrassing effects related to consumers’ rights and quality of services.

Losing around one hour at the border crossing can impact traveller decisions to use transborder public transport to and from Hungary. Adverse effects for cross-border passenger transport also emerge from prescriptions on currency use and from exchange rate losses: all four countries examined here have different currencies, Lithuania is the only member of Eurozone.

Specific aspects relevant for CBPT are not yet regulated or harmonised by existing EU secondary legislation. If CBPT-relevant regulation is included, it often includes inadequate provisions hampering the development or operation of CBPT. Incoherent implementation of EU legislation by the four Member States can lead to legal obstacles for CBPT, for example, differences between domestic rules or procedures used to apply EU-regulations or transpose EU-directives. This exact issue is seen in the implementation of the ERTMS railway signalling system in all four countries – all of which are laggards in this area as well as investments in infrastructure, in both railways and motorways, as well as in electric mobility infrastructure.

Provisions on CBPT-related issues in domestic laws or regulations do not allow a common frame of action for the development of CBPT. This may be due to the absence of provisions on one side of the border or because legislation on both sides include incompatible provisions.

EU-wide rules on domestic and cross-border public transport usually do not significantly influence country-specific organisational and procedural features of local or regional public passenger transport. These system differences between neighbouring countries often result in major administrative obstacles. These obstacles can lead to low cross-border cooperation between public transport actors or may even provoke deliberate ‘blocking behaviour’ by national public transport authorities (more rarely by local or regional authorities, especially on RO-HU border). Cooperation over the PL-LT border is often mismatched, with activity by the central government of Lithuania on one side, and the region/voivodat of Podlaskie on the other.

Low cooperation between local authorities on CBPT results in asymmetries between public transport actors on both sides of a border including:

- when public authorities with responsibilities for local public transport on each side of a border are at different levels of government – local/regional vs. national - or with different operational capacities, such as human and financial resources, available rolling stock for passenger transport.
• Low cooperation between transport operators, especially if companies are in private or public ownership and transport providers on each side are operating at very different territorial scales.

Dysfunctionalities and difficulties due to low cooperation in the four countries has included:

• Lack of cross-border coordination for existing national, regional or local public transport services – no harmonisation of timetables for connecting services at borders or lengthy administrative procedures for line concessions (for both bus and rail) or permits to operate trains across borders (homologation of rolling stock).

• Lacking cross-border integration of domestic tariff systems and a nearly total absence of truly cross-border tariff systems for CBPT – absence of cross-border tickets or easy-to-use ticketing systems.

In some neighbouring non-EU countries (i.e. Switzerland, Liechtenstein, Norway, United Kingdom), the right of domestic regional or local public transport operators to develop CBPT in their region is generally well-recognised. At the same time, conflicts of interest mean that other national actors will in some occasions try to stop development of CBPT. For our case studies, only the train connection between Vilnius and Bialystok via Hrodno (Belarus) exhibits these traits. Nonetheless, there is no cooperation with Belarus, therefore any transborder development slightly related to CBPT there is, at this point, utterly impossible.

**Rail-specific challenges**

In 2023, the Romanian national operator, CFR Călători, in collaboration with MAV (HU), operates 36 trains between Romania and Hungary. Statistical data for the first three quarters of 2022 shows that 228,000 passengers use international trains, equating to roughly under 300,000 passengers for the entire year. More than 70% of passengers use the trains over the RO-HU border. However, number of passengers using private automobiles to cross was nine times higher. For international bus travels data is scarce.

Poland and Lithuania have been reconnected in 2023, with a new line connecting Vilnius and Warsaw. The new route is operated by Lithuanian operator LTG Link in cooperation with the Polish carrier PKP Intercity. The LTG Link train runs from Vilnius via Kaunas to Mockawa, where due to different rail gauge, passengers have to transfer to a train operated by PKP Intercity and continue their journey to the Polish capital. In addition to the gauge issue, each Member State of the four has its own signalling system, safety system, electricity system etc. Harmonisation is under way at the EU level, but it is taking decades. In the meantime, international trains need to be equipped with each country’s specific system.

Incompatible rolling stock is also an issue and may be outdated and inefficient. Even where second-hand stock is available, incumbent operators are generally reluctant to
purchase it. New entrants usually do not have sufficient funds to order an entire new fleet themselves, and the rail industry is reluctant to take orders for only a few units.

The major national rail operators do not show much interest in the night train business. New entrants or start-ups often have a hard time penetrating the market as it is difficult to find sleeping cars or couchettes; the second-hand market is empty and there is not enough starting capital to order a new fleet. Operators choose to use “the old system” – an old train pulled by an engine (instead of an integrated electric high-speed system), most especially in the case of night trains.

Therein lies another problem: the rolling stock of sleeping cars is exhausted because of years of underinvestment and degradation, while incumbent rail operators have not ordered new fleets. Currently there is only one night train operating between Bucharest and Budapest towards Vienna.

Additionally, the inability to book a rail ticket across Europe at a one-stop-shop online impedes European consumers’ rights. This is a significant issue for rail passengers in Romania, Hungary, Poland and Lithuania, and can be sorted out via a dedicated EU Regulation to support transparency of data of all EU operators and guarantees for the passengers’ consumer rights.

Because of the role of infrastructure in development of railways interconnections, the revised TEN-T Regulation is of great importance for facilitating development of transboundary public transport. For the railways in the areas observed, nodes in the whole TEN-T network are critical. Those nodes support local development and engage local and regional level governments and organisations in sourcing solutions for intermodality and transport problems.

**EU policy processes and funding**

For the mobility transition or for the modal shift towards less carbon intensive modes of transport, local and regional authorities can make use of funds from the Cohesion Fund, the Just Transition Fund (JTF), the European Regional Development Fund (ERDF) and the EU Recovery and Resilience Facility (RRF). However, these funds are not nearly enough to enable authorities to fulfil their role in making mobility more sustainable.

The European Commission is looking into how the European Investments Bank (EIB) could help solve the problem in the four states. Additionally, cross-border trains can be funded via National Plans within the Recovery and Resilience Facility and the European Commission has passed an action plan on night trains and international passenger rail in 2022. The four governments should relaunch night trains – if the

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3 See the Horizontal Paper “Utilisation of EU funds for the transformation of the transportation sector” for further information on EU funding mechanisms.
geopolitical difficulty at the PL-LT border is surmounted and the same gauge is implemented.

For rail, the **Connecting Europe Facility (CEF)** is the key financing instrument for bridging missing links, removing bottlenecks and improving harmonisation and interoperability on the TEN-T Core Network, thus increasing the competitiveness and market share of the European rail system. CEF funds are needed to complete the TEN-T network (or extend it when justified by market needs), including the finalisation of major on-going TEN-T projects, and to support the digital transformation of rail operations, especially ERTMS on board and on track.

Finally, the **INTERREG** programme supports cross-border mobility with significant amounts dedicated to local/regional actors.

The European Commission has also published a non-legislative document that addresses rail transport and how to improve modal shift. The proposed Action Plan seeks to make rail travel more attractive for cross-border trips. Currently, all international travel accounts for less than 10% of EU rail journeys.

Much of the proposal focuses on improving and unifying rail ticket purchasing, an area in which rail is often compared unfavourably to aviation. Easier ticketing, it is hoped, will help the bloc achieve its target of doubling high-speed rail traffic by 2030 and tripling it by 2050; as for our cases – operationalisation of Rail Baltica and improvement of rail infrastructure between Romania and Hungary.

**Synthesis and solutions**

On the country-level the four governments of Hungary, Lithuania, Poland and Romania must:

- help operators to order new sleeping cars,
- reduce track access charges to direct costs levels,
- oblige major national rail operators to sell tickets on their websites,
- ensure non-discriminatory access to tracks, and
- implement strategic European coordination with sufficient mandates and resources.

There are several key reforms which can occur at the EU level. The EU can offer **green loans** at preferential interest rates via the European Investment Bank (EIB) for national operators as well as new entrants. Additionally, the EU or the four governments can together set up their own **rolling stock pool**. For regional and some national operations, rolling stock is sometimes owned and leased out by the regional/national

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government (awarding authority) or a government-owned company, and this model can be scaled up to the regional or EU-wide level.

A key solution on the demand-side lies in a rail ticketing regulation that enables passengers to search and book rail tickets across Europe with one click, up to 9-12 months in advance, under the protection of passenger rights for the entire trip. The Commission stated that it will investigate an EU-wide VAT exemption for train tickets and put forward proposals next year that will make cross-border rail services more frequent.

**Connecting Europe Facility (CEF)** for the trans-European transport networks (TEN-T) can be leveraged to support first and last-mile solutions, including multi-modal hubs, park and ride facilities and safe active infrastructure for walkers and cyclists. CEF stresses that TEN-T funding should also support public and collective transport infrastructure projects such as renovation of bus stations, or solutions to promote intermodal transport. The railways are at the core of these developments. Expanding the TEN-T network requires urban nodes to play a bigger role. These nodes currently receive only 1% of CEF funding and need to be better defined so that they can be eligible for co-financing. Urban nodes are part of a broader network of connections, and supporting role nodes play a key role in active mobility and public transport and must be documented and supported.

Local authorities representing urban nodes around the two transborder areas should be routinely involved in meetings of the “corridor forums” of the TEN-T core network where they are located, most especially in Central and Eastern Europe. The European Commission should also better define investment that will be eligible in the urban nodes under the “railway lines” and “multimodal passenger hubs” priorities of CEF calls for proposals.⁵

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