
Geopolitics of transport infrastructures in the cross-border Catalan-French space. Criticalities and challenges of the European project

JOSEP VICENT BOIRA

University of Valencia
josep.boira@uv.es

MATTEO BERZI

Autonomous University of Barcelona
and Joint Research Centre
matteo.berzi@uab.cat

ANTONI DURÀ

Autonomous University of Barcelona
antoni.dura@uab.cat

RESUM

Around 30 % of the European Union's population lives in internal border regions between states. It is common knowledge that a transport system is a powerful instrument with which to structure space, and in cross-border regions this is even more pronounced, given that a good transport system between borderlands can help reduce negative externalities. This argument in favour of such a system runs in parallel to another: good services (rail services, in this case) would enable climate change to be more effectively combated and would help to decarbonise transport in Europe. In this regard, the process of European construction is laying the groundwork for more intense cooperation in some of these spheres, specifically cross-border transport between Catalonia and France. New processes reveal encouraging or at least hopeful prospects for the future.

KEY WORDS

transport; cross-border spaces; TEN-T network; railways; geopolitics.

Around 30 % of the European Union's population lives in internal cross-border regions between states (European Commission, 2021). It is common knowledge that a transport system is a powerful space-structuring instrument, and this relationship is even more pronounced in cross-border spaces (Giménez Capdevila, 2012). A good transport system between cross-border territories can help to reduce the negative externalities of the administrative boundaries that penalise their inhabitants' everyday lives, while also helping to construct positive externalities, like by pooling energies and forces to capitalise on synergies, boost the visibility and appeal of cross-border spaces and create new opportunities for the participants (Spiekermann & Wegener, 2006; Lopez *et al.*, 2009; Medeiros *et al.*, 2019; ESPON, 2020, European Commission, 2021). Furthermore, it is important to develop cross-border public services because they can help effect the greater social, political and cultural integration of regions separated by state borders. They also allow for the appropriate provision of educational, civil protection, transport and health systems, thus boosting the appeal of these areas among both people and the business sector. Finally, they also help offset the scarcity of domestic public services and the provision of private services in these areas, where the spatial distribution of these two necessities is not always ideal. These arguments run in parallel to another that is no less important: good services (rail, in this case) help effectively combat climate change and work towards the decarbonisation of transport in Europe (ECO-Union & RAC-France, 2022). Having said that, in this case we find that the European construction process is laying the groundwork for more intense cooperation in some of these areas, specifically in cross-border transport. New processes link up with earlier reflections to present an encouraging—or at least hopeful—picture of the future in this area. One important sign is the attention that cross-border transport is receiving from extraordinarily interesting websites like <www.crossbordertransport.eu>, which contains a complete sampling of all the cross-border transport services in the European Union.

Our goal in this article is to report on this conjuncture, especially in terms of rail transport, and to outline its characteristics.

1. The revalorisation of cross-border territories. The European vector

On 31 January 2023, the European Commission announced a selection of ten pilot projects chosen as part of the Connecting Europe by Rail programme after a long process that started with calls for applications for candidates in December 2021.¹ Of the ten, three affected the Iberian Peninsula and two the cross-border space between Spain and France, specifically the strip of land that joins Catalonia and what is now called Occitanie. The first is the European Sleeper, a

1. <https://transport.ec.europa.eu/news/connecting-europe-train-10-eu-pilot-services-boost-cross-border-rail-2023-01-31_en>.

new overnight train that would join Barcelona with Amsterdam,² and the second is the project submitted by Ferrocarrils de la Generalitat de Catalunya (the regional rail operator of Catalonia) to establish new connections between Catalonia and southern France (Figure 1).

FIGURE 1

Pilot projects chosen by the European Commission to promote rail connections



SOURCE: European Commission.

Even though we shall explore the particular characteristics of both of these projects, now we want to highlight the geographic variable: they both affect cross-border territories and are located in spaces whose role is being revalorised, either directly or indirectly. Neither project could be conceived without their association with the territories they cross. Furthermore, both of them, but especially the latter, are designed to connect the territories in order to provide them with more suitable mobility. And the first one, which aims to connect distant points like Barcelona and Amsterdam, may actually have beneficial effects for the territories it runs through, depending on how it develops and the synergies it may have with services at other scales and

2. Recent news reports state that the promoters of the project seek to put it into service by the spring of 2025 (*La Vanguardia*, 3 June 2023).

on other routes. In any event, we believe that the fact that two of the ten pilot projects chosen by the Commission in the Connecting Europe by Rail programme focus on the cross-border space between Catalonia and Occitanie, either directly or indirectly, is an interesting starting point for this article, among other reasons because it is a sign that points to the hypothesis underlying our research: there is currently a window of opportunity for establishing better and stronger cross-border relations thanks to global geopolitical vectors associated with the project of constructing a European political and economic space, which is materialising through a steadfast focus on sustainable cross-border transport at all scales and the struggle against climate change. We believe that the effects of both vectors could favour cross-border territories like the ones we are studying, which have been seeking a worthy role on the European scene for decades via a range of cooperation initiatives. Now, programmes like this one may foster cross-border communications as a core objective.

Let us delve a bit deeper into this story. On 14 December 2021, the European Commission published the Action Plan to boost long-distance and cross-border passenger rail services.³ Given that 2021 had been declared the European Year of Rail, the Commission presented an initiative that sought to promote rail transport within the context of combatting climate change and building an interoperable rail space within the EU. We find the two scales that we are examining in this paper in the definition of these two principles: the general scale, represented by long-distance and associated with the construction of a trans-European rail space, and the local scale, with the purely cross-border dimension and the consequent struggle against climate change and easier free movement across state borders. This 2021 Action Plan implicitly acknowledged that the rail market's openness to private cross-border services, which has been in place since 2010 (services within states did not open to competition until 2020), had not achieved the expected results. Consequently, the Commission established a series of actions that could have favourable repercussions on cross-border spaces. Two of them are particularly worth highlighting: the simplification of ticket purchasing with easier access to the rail system, and the possibility of declaring these routes as public service obligations (PSO),⁴ with the consequent capacity to award public service contracts to cross-border connections or networks, and not only in-state ones. What is more, the EU programme allowed 'hybrid' cross-border services to be defined, that is, cross-border rail services that include one or more routes run within the framework of a PSO along with one or more routes run according to a free-access system. This 2021 plan opened up a call for applications for pilot programmes that would enable the Commission to develop, specify and support initiatives that meet the requirements of the programme and match the desired political objectives. We should note that right now there are almost 600 cross-border PSO initiatives underway around the European Union, especially along the borders of Benelux, France, Germany and the Nordic countries (Figure 2).

3. <https://transport.ec.europa.eu/news/action-plan-boost-passenger-rail-2021-12-14_en>.

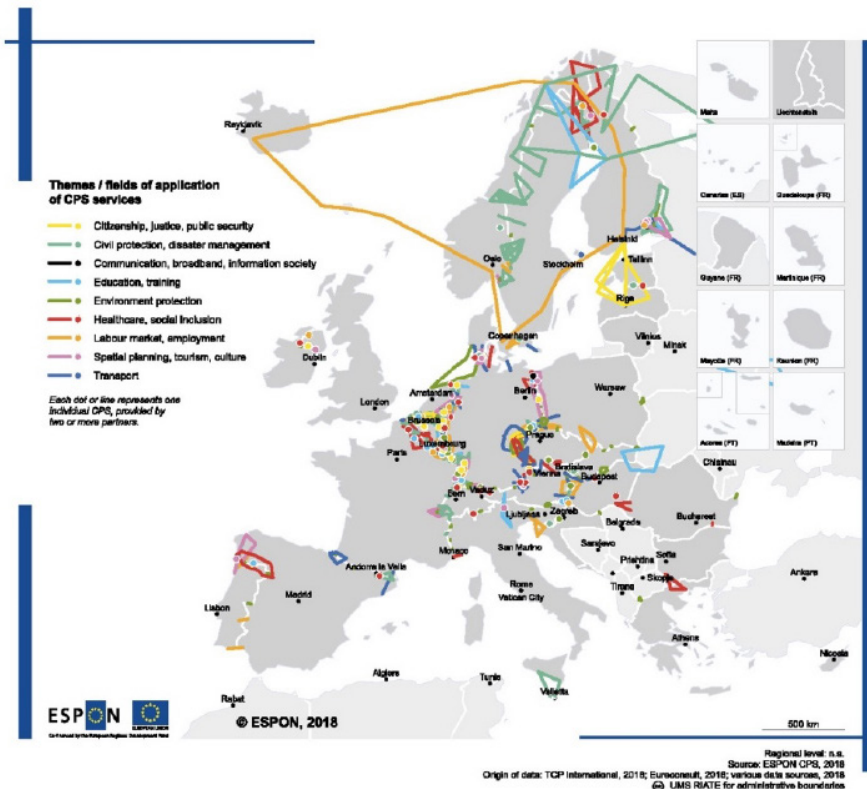
4. For a description of PSOs on a European scale, see ESPON (2020).

FIGURE 2

Cross-border public service obligations in Europe (2018), specifying the sectors affected, including transport

Map 2

CPS by policy areas



SOURCE: ESPON, 2020.

The European context of these cross-border PSOs tells us that the issue of transport ranks third in terms of the number of agreements signed (a total of 105), behind environmental preservation (119) and civil protection and disaster management (118), and ahead of other fields like social inclusion, health and education (ESPON, 2020).

Getting back to the Commission's 2021 call for applications to promote rail transport, we already know the outcome: two of the ten pilot programmes chosen within this Plan show the concern with developing rail services that open up new possibilities for the territories in both long- and short-distances, and at both the general European scale and the cross-border regional scale. Factors associated with European geopolitics, which seek to further the construction of a single European space and steadfastly combat climate change, have come to the aid of cross-border territories' traditional desire to have more permeable connections which bring cohesion to the spaces and better structure them, beyond state borders. Indeed, the European Parliament resolution on the Commission's Action Plan dated 13 December 2022 was clearly favourable to all these points and cited the concept of 'cross-border' 13 times in the nine plans detailed in the

document.⁵ We find the following paragraph (in consideration 20 under ‘*Strengthened infrastructure for passenger rail*’) particularly relevant, given that it shows that good cross-border connections should not be at odds with the development of the Trans-European Transport Network (TEN-T) but instead could be favoured by it:

[The European Parliament] stresses that given that only 44 % of EU border area residents currently have access to rail services and that there are often no appropriate multimodal transport solutions, in order for TEN-T to play its role in fostering socio-economic and territorial cohesion in the EU internal market, smart connectivity to the TEN-T core network is needed and a further integration of different national networks must be developed, also including rural, remote, insular, peripheral and other disadvantaged areas in order to promote their socio-economic development.

Therefore, this article seeks to demonstrate the working hypothesis that in recent years global European geopolitical vectors that connect with a series of forerunners have been developing (see, for example, Giménez Capdevila, 2005 and 2012) and which may help in the revalorisation of local cross-border territories thanks to a range of new initiatives and programmes. Any analysis of their spatial reality must include this background. We seek to study these objectives in the cross-border Catalan-Occitan space on either side of the border between the states of Spain and France. In this case, we aim to demonstrate that rail initiatives and infrastructures that may help to positively determine their future are underway at both a general and local scale. More specifically, we will focus on the development of the Mediterranean Corridor within the EU’s TEN-T network (general scale) and the cross-border rail connection initiatives put forth by Ferrocarrils de la Generalitat de Catalunya, from the Catalan government and other organisations like Renfe, the Spanish state railway operator. Therefore, we want to study the issue of cross-border relations within the European geopolitical framework associated with the decarbonisation of transport and the construction of a European rail space, while also linking it up with prior reflections that paved the way for this perspective in another context.

2. Two vectors driving a new opportunity for the cross-border territory: the European Green Deal and the Trans-European Transport Network

As stated above, there are two general geopolitical vectors that we believe could help to further the objectives of a more cohesive, structured cross-border territory: the fight against climate change and the construction of a single European rail space. Both vectors materialise in two initiatives that we shall briefly explain below: the European Green Deal and the EU’s Trans-European Transport Network.

5. <<https://eur-lex.europa.eu/legal-content/ES/TXT/PDF/?uri=CELEX:52022IP0437>>.

2.1. The goal of the European Green Deal

As stated in all its official documents,⁶ the European Green Deal is a package of political initiatives whose goal is to put the EU on the road to an ecological transition, with the ultimate aim of achieving climate neutrality by 2050. This initiative is presented as the foundation for transforming ‘the EU into a *modern, resource-efficient and competitive economy*’. The package includes initiatives that encompass the climate, the environment, energy, transport, industry, agriculture and sustainable finances, all of which are closely intertwined. The Commission launched the European Green Deal in December 2019, and the European Council took note of it at its meeting in December of that same year. Of all the initiatives associated with the European Green Deal, perhaps the most important one for the purposes of this article is Objective 55 (Fit for 55), a set of proposals to revise the laws related to climate, energy and transport and to undertake new legislative initiatives to adapt EU laws to the EU’s climate objectives. With its adoption, this package aims to lower net greenhouse emissions in the EU by at least 55 % of 1990 levels by 2030. This objective is legally binding and is based on an impact assessment performed by the Commission.

Therefore, both the European Green Deal and the Sustainable and Smart Mobility Strategy⁷ place rail transport at the core of the efforts to achieve a more environmentally friendly mobility system for the EU. This strategy includes a combination of higher carbon fees, with specific measures to support multimodal mobility and investments in sustainable, safe and smart transport. Indeed, we can read statements like these in the official documents:

Rail remains one of the safest and cleanest transport modes and is therefore at the heart of our policy to make EU mobility more sustainable. Today’s TEN-T proposal is accompanied by an Action Plan on long-distance and cross-border rail that lays out a roadmap with further actions to help the EU meet its target of doubling high-speed rail traffic by 2030, and tripling it by 2050.⁸

2.2. The construction and promotion of the Trans-European Transport Network (TEN-T)

Regarding the trans-European network, it was originally defined in 2011⁹ with a European Union political decision, even though it did not get underway until 2013, when the regulations that gave it shape were approved, specifically regulations 1315 and 1316 (regulation 1316 has been updated since then and 1315 is currently under review).

Regulation (EU) 1315/2013 to develop the Trans-European Transport Network (TEN-T), or the ‘Union guidelines for the development of the TEN-T’, seeks to lay the groundwork for the

6. <<https://www.consilium.europa.eu/en/policies/green-deal/>>.

7. <https://transport.ec.europa.eu/transport-themes/mobility-strategy_en>.

8. <https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6776>.

9. <https://ec.europa.eu/commission/presscorner/detail/en/MEMO_11_706>.

development of the Trans-European Transport Network via a two-tiered structure consisting in a comprehensive network and the core network. In turn, Regulation (EU) 1316/2013, which provided funding for the transport network, was replaced by 1153/2021. The latter continues the Connecting Europe Facility (CEF) approved on 7 July 2021, known as the ‘CEF Regulation’, which encompasses transport, energy and telecommunications. It regulates the EU’s financial support for projects to implement the network in the period 2021–2027 and defines the routes of the multimodal corridors in the core network as a priority financing instrument (part III of its Annex). As stated above, this regulation is an update of the earlier Regulation 1316/2013.

The most noteworthy feature of this new vision of infrastructures in the EU was the advent of European corridors. These corridors are a part of the Trans-European Transport Network (TEN-T) within its core network (comprised of the parts of the comprehensive network of the highest strategic importance for achieving the development objectives of the TEN-T) and the comprehensive network (the other existing and planned infrastructures in the TEN-T, as well as measures aimed at fostering the efficient, sustainable use of these infrastructures from the social and environmental standpoint). Furthermore, since the December 2021 revision, a proposal has been put forth that includes the extended core network, stretches that are considered core within the network but are unlikely to be completed by 2030 but instead by 2040.

Thus, it is evident that clear opportunities associated with rail have emerged since 2013 for infrastructures and since 2019 for combatting climate change and decarbonising European society, both globally and locally, which have taken shape in the pilot projects mentioned at the beginning of this article. Thus, it is impossible to understand why the Commission has chosen cross-border and long-distance services that run through or are primarily situated in the Catalan-Occitan space without taking into account that they are the consequence of more global geopolitical processes. In other words, the 2021 Action Plan on long-distance and cross-border rail, which includes these two projects, cannot be grasped without a more in-depth analysis of the geopolitical vectors at play in the European Union. These vectors may help to push forward a process that has been largely unsuccessful in the past.

3. The difficulties structuring rail in the Pyrenees and Cross-Border Cooperation efforts

In fact, the historical development of the rail network across the Pyrenees has previously dealt with tensions similar to the current ones. The different strategies between the state and local scales, along with striking a balance between economic development and environmental protection, have shaped the rail line as we know it today. In the former (the tension between scales), the desire to build networks that structure the internal territories of Spain and France,

specifically from a radial perspective, initially left international connections in the background, and until very recently they did not consider the interest in deploying local cross-border rail. Regarding the environmental tensions, this has become particularly palpable in recent decades and in certain projects, especially the possible articulation of the central rail line that runs parallel to the Atlantic and Mediterranean lines.

Regarding the desire to deal globally with the challenges posed by structuring the cross-Pyrenees rail lines, bearing in mind the purpose of integrating these tensions, we should mention the Council of Europe's creation of the Working Community of the Pyrenees (WCP) in 1983 as an instrument to prepare Spain to join the European Community. This body has the benefit of integrating all the regions and autonomous communities that share the international border, and its survival until today has become an essential referent in cross-border dialogue in the Pyrenees.

FIGURE 3**The Working Community of the Pyrenees**

SOURCE: Developed by the authors with data from © EuroGeographics for the administrative regions. Eurostat, 2023.

In the case at hand, we should note that one of its strategic lines of work continues to be transport infrastructures. The geographer Rafael Giménez Capdevila, a transport expert who was a member of the WCP's Transport Committee, has discussed this in two articles in *Treballs de la Societat Catalana de Geografia*. In the first one (Giménez Capdevila, 2005), he reports on the conflict between the efforts to make the mountains permeable (in terms of the connectivity of both the adjacent and more distant territories) and the impact this has on the environment, as well as cultural impacts, and he suggests a new form of governance that is

capable of coordinating the institutions and groups involved. In the second article (Giménez-Capdevila, 2012), he stresses how ideology and geopolitics largely explain the current state of cross-border rail connections in the Pyrenees as a whole. Thus, the development of high-speed networks in France and Spain has primarily been concerned with structuring their respective territories in connection with their capitals, which puts off any consideration of international connections. This viewpoint has also been noted by other authors, like Germà Bel (2012), who includes it within a broader strategy to centralise the most important infrastructures, especially airports in Spain. In contrast, Giménez Capdevila advocates updating the proposals formulated in the early decades of the WCP, which were designed to ensure a proper fit between local (Pyrenean) needs and a framework that is ceasing to be statal and becoming increasingly European.

FIGURE 4**Rail scheme of the Working Community of the Pyrenees in 2000**

- New high-speed line
- Line to adapt to the norms of the Trans-European Transport Network (TEN-T)
- Line to be refurbished
- Cross-Pyrenean connection



SOURCE: Giménez Capdevila, 2005, p. 13.

In this sense, we should recall how Spain's 1986 integration into what is today the European Union in itself boosted rail development strategies. The free movement of goods and people, which was later enhanced with the Treaties of the European Union, has served as a stimulus to

reinforce and coordinate the axes that cross the border. The aforementioned formulation of the TEN-T is simply a consequence of this reality.

On the other hand, one of the formulas of European integration in recent decades has been the substantial headway in what are called Cross Border Cooperation (CBC) initiatives, currently the most important of the three branches into which European Territorial Cooperation is broken down (along with Trans-national and Interregional Cooperation). CBC is characterised by spotlighting substate territorial entities, from the regional scale (or the autonomous communities in Spain) to the local scale, including a variety of intermediate and sectoral entities. In this sense, the set of cooperation initiatives on the Pyrenean border is considerable and encompasses a wide array of spheres, with prominent examples like the Cerdanya/Cerdagne Cross-border Hospital and even the maintenance of the Bielsa–Aragnouet Tunnel in the sphere of transport. However, there are only a handful of rail cooperation initiatives. On the Atlantic side, we could cite minor improvements in the train that runs along the Basque coastline, which has enabled the timetables of and ticket purchasing for trains between San Sebastián and Bayonne to be coordinated within what is known as the Basque Eurocity, although the complete operability that the territory calls for—which could be achieved by introducing the standard gauge and the other technical and administrative requirements needed to launch it—is still pending, as the Spanish government itself has admitted (Congreso de los Diputados, 2021).¹⁰ However, restoration of the connection between Canfranc and Auloron is not included in the current rail strategies.

Regarding the Catalan border, the local actors have poured their efforts into taking advantage of the connections generated by the high-speed rail line to reach the main cities within what is known as the Catalan Cross-border Eurodistrict: Perpignan, Figueres and Girona. Therefore, this comprises the strategic coordination of local actors on a cross-border scale, which is also a new process compared to historical dynamics. The Eurodistrict is a proposal for cross-border institutionalisation which has brought local relations between the two parts of Catalonia north and south of the border together since 2007. Although this entity has had an irregular history and little transformative capacity, it has at least remained a symbolic example of the local (and county) governments' desire on either side to engage in closer relations in different spheres, including transport. Within this context, local governments have lobbied to leverage high-speed rail as the best way to connect these three cities.

At a larger scale, different cross-border entities have expressed concern with the connections between the territories reported in this article: the current Pyrenees-Mediterranean Euroregion (EPM), launched in 2004, which encompasses the territories of Occitanie, Catalonia, Aragón and the Balearic Islands; its forebear, Catalonia–Languedoc-Roussillon and Midi-Pyrénées; and the C-6 City Network, which connected regional capitals (Valencia, Zaragoza, Barcelona, Palma,

10. <https://www.congreso.es/entradap/l14p/e13/e_0135991_n_000.pdf>.

Toulouse and Montpellier). However, we should note that their impact on rail matters has been scant, as these structures have a very constrained capacity for action. In this sense, we should note that given its history, the current EPM, just like its forerunners, has achieved very little of the purpose for which it was imagined, in the broad sense of being a space for dialogue and approximation between neighbouring territories with important historical and cultural bonds on the Spanish-French border. In contrast, today the EPM's action is limited to serving as a mere platform for requesting resources for Interreg projects, which in some cases become more or less stable networks of actors, albeit ones that have little real impact on the territory. Conversely, executive cross-border policies tend to be sectoral, as in transport. And this reveals another reality: the unbalanced executive capacity between the governments of the autonomous communities in Spain (highly developed in internal rail) and the regions in France.

The issue of the cross-border rail connection on the EPM scale was analysed in a study financed by the Catalan government (IET, 2009). The study assessed the past and currently planned actions, and it concluded by pointing to the potentialities of passenger rail transport in the Euroregion territory. It is interesting to highlight the proposals in this last section regarding both passengers and freight.

- a) **Passengers:** to take advantage of high-speed trains to meet a high 'regional' demand, particularly between Barcelona and the Italian border (this bears in mind SNCF's plans and includes Provence); to create a services committee that includes the institutional members of the EPM and the rail operators; and to encourage intermodality between urban and interurban transport (with the consequent suitable location of high-speed stations).
- b) **Freight:** to heed the prognoses on the Euroregional scale, which point to a considerable increase in demand; to coordinate the actors in the EPM to strengthen EU initiatives around the European rail network; and especially to pressure Spain to adapt to this reality with the goal of forcing France to adopt it as well, thus gradually overcoming the inertia of the past.

The study also reported on different cooperation initiatives in this sphere which are worth revisiting. The first one is more institutional: the European Interreg B ARCOMED project, aimed at coordinating high-speed strategies in the Mediterranean arc. The second one is in the sphere of civil society, namely the EURAM and FERRMED initiatives, both particularly focused on the freight rail connections between Mediterranean Spain and the rest of Europe.

In a similar vein, we should also mention the lobbying actions of a group of cities (Barcelona, Girona, Figueres, Béziers, Montpellier, Narbonne, Perpignan and Toulouse) since 2008, which are asking for an acceleration in the high-speed cross-border connection between Barcelona and Nîmes. This is yet further proof of the recent interest shown by public administrations and civic societies in cross-border territories in taking advantage of and adapting rail transport as a more sustainable tool that contributes substantially to the economic development and approximation of the neighbouring societies.

The increasing importance of cross-border cooperation initiatives in the development of spaces on either side of the Pyrenees is also reflected in the bilateral treaties between France and Spain, which have explicitly recognised it since the 1995 Treaty of Bayonne. The most recent example is the Treaty of Friendship and Cooperation signed by both states in January 2023, in which an entire section, IX, is devoted to this issue (Government of Spain, 2023). Thus, according to the Treaty, the intensification of CBC will materialise in the definition of a joint Cross-border Cooperation Strategy. However, this section makes no reference to transport, and the treaty as a whole deals with the issue of transport connections in a very superficial and ambiguous way. Thus, it remains to be seen whether this strengthening in cooperation between the two states ultimately has practical repercussions on the issue of rail connections.

4. Cross-border rail connections today¹¹

From a local perspective, rail relations between the two sides of the Pyrenees still have many shortcomings, despite the existence of infrastructures that allow for more efficient connections between the urban areas and counties on either side.

The territorial structure of the Catalan Cross-border Space is clearly polycentric (Feliu *et al.*, 2012), such that rail is a means of transport capable of structuring a territory that is diversified in terms of its functionalities: the tourist-heavy coastline between the plain of Roussillon and the Costa Brava; the urban nodes of Girona, Figueres and Perpignan; and the logistics activities in Le Boulou, Saint Charles Perpignan, Vilamalla-El Far de l'Empordà and Portbou-Cerbère. Even though each has different logics and dynamics, all three share the fact that they have a rail connection via either the high-speed Figueres-Perpignan line or the conventional line.

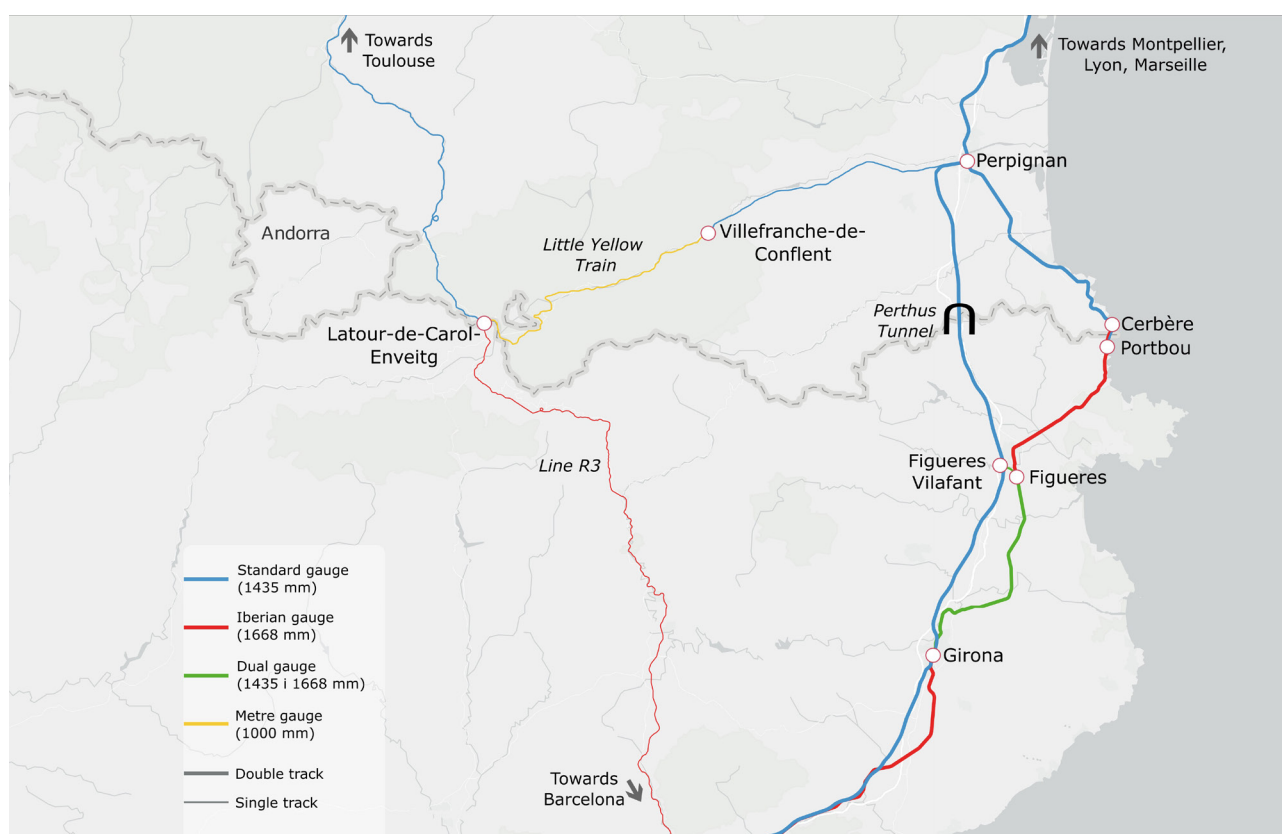
The high-speed Figueres-Perpignan line is totally interoperable according to the requirements set by the European Union's Regulation 1315/2013. However, there are few freight and passenger trains crossing the Pyrenees in comparison to the volume of road traffic. More than half of the north-south flow runs along this line, although only 2 % of these exchanges are done by rail. In contrast, 13,000 heavy vehicles cross the border by the nearby AP7-A9 motorway every day. However, we should recall that rail interoperability does not continue south of Barcelona and that to the north, the high-speed Perpignan-Montpellier line is still in the planning phase. Looking at it from this perspective, there is still hope for cross-border rail transport. According to the latest statistics developed by LPF Perthus (2023), the administrator of the international rail section between Figueres and Perpignan, passenger transport is rallying after the drop off during 2019–2021 caused by mobility restrictions due to the COVID-19 pandemic. For 2023,

11. For an overview of the existing connections in both the Mediterranean Corridor and the Atlantic, see Eco-Union & RAC-France, 2021.

2,252 high-speed rail services are forecast, with an average occupation that currently stands at around 70 %, a record figure since 2019. Freight trains, however, which were less affected by the pandemic, can be considered a more resilient means of transport compared to lorries, with punctuality rates that exceed 99 %. In fact, the figures show a constant upswing in this sector, and more than 2,500 trains are forecast to run through the Perthus Tunnel by late 2023, the most ever.

FIGURE 5

Cross-border rail lines between Catalonia and Occitanie



SOURCE: Developed by the authors with data from the Office of the Government Commission for the Mediterranean Corridor, 2023.

One successful freight transport initiative in this vein is the cross-border cooperation project entitled TRAILS (Transnational Intermodal Links toward Sustainability), part of the Interreg Spain-France-Andorra Programme (POCTEFA 2014–2020). The project has facilitated the creation of new rail routes both between Catalonia and Occitanie and Europe in general while also contributing to boosting the modal share of the Mediterranean Corridor. The most interesting actions include launching multimodal services between Perpignan's Saint Charles terminal and Calais and the pilot project to export wine and sparkling wine from the winegrowing regions of Catalonia to Central Europe. It is clear that the synergy and complementarity between the rail installations and the services offered on either side of the border are key factors in supporting the socioeconomic life of cross-border regions. In terms of emissions, the TRAILS

project contributed to saving 187,000 tonnes of CO₂ in 2021, equivalent to 162,000 lorries. The European Union chose the TRAILS project as one of the best projects financed by the European Regional Development Fund (ERDF) at the 2021 REGIOSTARS awards.

To promote a more competitive and sustainable passenger service which can also be used to structure the Pyrenees-Mediterranean Euroregion (EPM), Ferrocarrils de la Generalitat de Catalunya (FGC) is developing a Euro-regional rail services project. This is an initiative which aims to improve the rail connection between Catalonia and southern France with the goal of encouraging tourism and trade between the two regions. This project calls for the launch of new high-speed rail services between the Catalan and Occitan capitals. The goal is for these new services to lower the travel time between Barcelona and Montpellier, while also improving connections with other destinations in southern France (like Toulouse and Marseille). Furthermore, this new line is expected to have a positive impact on the region's economic development by fostering tourism and cross-border trade. The Euro-regional train project is supported by the European Union, which considers it a key initiative in improving the connectivity of the Mediterranean region. Even though it is still in the planning and construction phase, these new services are expected to start operating in the coming years. The project was publicly announced in May 2023 by the president of the Government of Catalonia, Pere Aragonès, during the institutional visit by the president of Occitanie, Carole Delga (*El Periódico*, 17/05/2023). Currently, the travel time by train between Barcelona and Montpellier is around three hours and 30 minutes. With the Euro-regional trains, travel time is expected to drop to two hours, which would allow quicker and more efficient transport between the two cities.

Regarding the conventional line between Figueres-Portbou and Cerbère-Perpignan, the different technical characteristics of the rail infrastructure, like the track gauges, electrification and safety systems, hinder full interoperability between the French and Spanish networks. Furthermore, the timetable correspondences and the lack of fare integration make conventional rail an unattractive option as a competitive means of transport. In this sense, the local communities have been planning improvements in cross-border rail services for decades, such as having integrated fares between Girona, Figueres and Perpignan and optimising the timetable correspondence between the French and Spanish rail services in order to gain economic competitiveness and speed compared to road transport. Regarding the tourism sector, different local organisations on the Costa Brava and the Côte Vermeille proposed integrated tourist fares to make both the maritime zone and the counties of Empordà and Roussillon in general more appealing. These initiatives did not gain the expected support of the rail companies or the actors, which still see these two tourist-heavy regions as competitors. Nonetheless, these claims continue to be important in local institutional proceedings on both sides of the Catalan Pyrenees.

One interesting debate has arisen on the future of the rail facilities in Portbou and Cerbère. In the past socioeconomic development of these twin cities, the change in track gauge and the presence of a 'hard' border meant that logistics and customs activities and services related to passenger transport created jobs in the nearby counties. With Spain's entry into the EU and the

gradual ‘defunctionalisation’ of intra-EU borders, borderlands like Portbou and Cerbère started to experience a sociodemographic decline. Currently, the delay for both freight and passengers caused by the Iberian and the standard gauge still provides important support for local logistics activities. Nonetheless, the implementation of Regulation 1315/2013 implies that the European transport network should be totally interoperable in the not-too-distant future, ushering in a new phase for its rail installations. The key factor in interoperability is certainly the track gauge between Portbou and Figueres and its migration towards the international gauge, an issue that sparks an interesting discussion in the region. On the one hand, the Government of Catalonia and some Catalan business and civil society associations are asking Spain to commit to planning and financing the work needed to open up a second rail port to Europe, but with standard gauge. In this way, the conventional line would become more attractive for passengers and freight and would contribute to the sustainability of transport. On the other hand, there are doubts as to the benefits of this situation in the short and middle term by local actors both on the border and state-wide. Especially in Portbou and Cerbère, the local actors’ main concern is the negative impact that this would have on the local economy if trains no longer stop at the border. For the central governments, however, the new investment required to open up a second rail line in the Eastern Pyrenees would be difficult to justify in both public opinion and to the European Commission given that the Perthus Tunnel (modern, interoperable and extremely expensive to build) is still underused today. This debate poses a challenge to long-term strategic territorial planning, both cross-border and European. In this vision, the Mediterranean Corridor is a two-fold factor of innovation. First, it is a factor of innovation regarding the rail infrastructure through the implementation of the requirements of the aforementioned regulation (the same track gauge and the same electrification and communications and safety system), which would make it a safer, more efficient and more competitive line compared to other means of transport. Secondly, it is a factor of socioeconomic innovation if we view it as a source that brings travellers and freight. Therefore, stakeholders (both public and private) from different sectors must use multilevel logic to plan a functional reconversion which spreads throughout the entire territory via the rail facilities. In this sense, the tourist sector stands to benefit the most. Portbou and Cerbère are two places of prime importance from a historical (especially during the Spanish Civil War) and natural standpoint, located at the ends of the Costa Brava and the Côte Vermeille, respectively. In the sphere of vocational training, the rail sector has debated the possibility of creating a school for training rail engineers, which would have a spillover effect on other economic sectors like retail, housing, health, etc.

We should mention a third cross-border rail line, namely the conventional Barcelona–Latour-de-Carol/Enveitg-Toulouse line. It is a line whose technical features (line, slopes, single track, etc.) make it scarcely used by passengers and freight, and it is not included in the Trans-European Transport Network (TEN-T). Furthermore, the cross-border connection Latour-de-Carol/Enveitg (Haute Cerdagne) and Puigcerdà (Baixa Cerdanya) is currently not in use and has been out of service for more than ten years. Nonetheless, this line is very important regionally and locally because it structures both Central Catalonia (line R3 of the Barcelona suburban railway

network) and the Pyrenean valleys in Toulouse (liO line of the SNCF) by connecting them with their respective capitals. Just as in the case of Portbou-Cerbère, there have historically been calls to valorise this rail route as both an alternative long-distance transport line (Barcelona-Toulouse-Paris) and as a way to promote local tourism, taking advantage of the Yellow Train that crosses the valleys of the Conflent and connects them with the regional services near Perpignan. In May 2023, the Technical Office of the R3, with the support of different county councils and the Government of Catalonia, drafted the *Proposta ferroviària per al desenvolupament del corredor de la R3* (Rail Proposal for the Development of the R3 Corridor). This document proposes revitalising the connections with the SNCF services on the northern side of the Pyrenees, as well as reopening the standard-gauge track between Puigcerdà and Latour-de-Carol-Enveitg. It also suggests the possibility of working towards better coordination and integration of these cross-Pyrenean services.

5. Conclusions. New opportunities associated with the change in the European rail model: liberalisation?

We have left for the end—as this issue is fully deserving of its own separate section—the still-viable possibilities affecting rail transport associated with the process of liberalising passenger transport in the European Union. In this case, initiatives are already underway which could open up new perspectives in cross-border transport, despite the acknowledgement of the bureaucratic and administrative hurdles to achieving them (European Commission, 2021). First, we should mention the rupture of the agreement between the Spanish and French operators, Renfe and SNCF, respectively, at the initiative of the latter, which in early 2022 announced would take effect at the end of the year. The Paris-Barcelona routes had been operated since 2013 via a partnership agreement to provide the service. However, since December 2022 this route has been operated by the French company, which has the permits and suitable rolling stock. Renfe's response was to start tests on a rail service similar to the one that took its first test journey between Barcelona and Lyon in January 2023, with stops in Girona, Figueres, Perpignan, Narbonne, Montpellier, Nîmes and Valence TGV.¹² Right now, the Spanish company is in the phase of training rail engineers and completing the paperwork to secure the safety and circulation certificates needed for the route to Paris. In this sense, Renfe's plans are to offer a Madrid-Marseille service and another Barcelona-Lyon service, which would later be extended to Paris.¹³ It is clear that the presence of two operators in this cross-border space may enable more and

12. <<https://www.renfe.com/es/es/grupo-renfe/comunicacion/renfe-al-dia/sala-de-prensa/renfe-inicia-las-pruebas-para-operar-sus-servicios-ave-en-francia>>.

13. The latest news on this matter reports a service from Lyon to Marseille in the summer of 2023, when a Renfe branch will open in southern France after the final safety paperwork is completed (*La Vanguardia*, 13 June 2023).

better services which also connect the intermediate cities along the long-distance train line. According to the predictions of LFP Perhus (2023), the number of cross-border services will double between 2025 and 2026, and they may quadruple by 2030. These figures take into account both the constant increase in freight trains due to the Mediterranean Corridor's gradual extension towards Algeciras, connecting the cities, ports and industrial estates along the Mediterranean front, and the new Euro-regional and long-distance trains running towards Europe (especially overnight trains), which are in the planning stages.

On the other hand, we cannot lose sight of the fact that an administrative process got underway in France in 2019 that allows the authorities (state or regional) to issue tenders for short- and long-distance service provision contracts.¹⁴ These tenders may lead the region to sign public contracts which enables it to choose any operator for certain rail services.¹⁵

Within the overall momentum in favour of the use of rail and the European Union's plans as discussed above, will the increase in operators generate new responses to the needs of cross-border territories? Will the European Parliament maintain its interest in cross-border and long-distance transport between EU states? Will the liberalisation of short- and medium-distance services and the more active role of the regions of France and the Government of Catalonia lead to new dynamics that promote greater rail permeability in the region? Will the ban on flights in France, which does not affect connections with neighbouring countries, spread to flights that have recently been reinstated, like the ones proposed to connect Barcelona with Toulouse, cities separated by just 319 kilometres?

There are many questions which deserve further analysis. The fact is that we may be on the verge of foreseeable changes in the rail scene, which has been fairly static to date, as well as institutional and private responses to the needs for more and better connections. We believe that our initial hypothesis has been confirmed: we are in the midst of a dynamic situation which could take advantage of this conjuncture to improve the possibilities of the cross-border territory. It will be worth keeping an eye on the plans and processes.

6. References

- BEL, G. (2012). *España, capital París. Origen y apoteosis del Estado radial: del Madrid sede cortesana a la "capital total"*. Barcelona: Destino.
- CASTAÑER, M.; FELIU, J. (2012). "L'Eurodistricte català transfronterer. Un espai emergent sense marc administratiu", in *Treballs de la Societat Catalana de Geografia*, 74, p. 41–58.

14. <<https://www.sncf.com/en/group/profile-and-key-figures/about-us/opening-up-to-competition>>.

15. Having said that, according to SNCF, the region of Occitanie has no plans to issue any tenders during the length of the transport contract between the two parties, which is in force until 2032.

- CONGRESO DE LOS DIPUTADOS (2021). *Respuesta del Gobierno. Pregunta escrita Congreso 19/05/2021*, Secretaría General, Congreso de Diputados. <https://www.congreso.es/entradap/l14p/e13/e_0135991_n_000.pdf>
- ECO-UNION; RAC-FRANCE (2022). *Reviving French-Spanish passenger rail lines*. Europe on Rail. <<https://europeonrail.eu/french-spanish-passenger-trains-an-opportunity-for-modal-shift/>>
- EL PERIÓDICO DE CATALUNYA (17/5/2023). Aragonès, sobre el tren Barcelona-Toulouse: “Haremos lo que Renfe no ha querido hacer”. *El Periódico*. <<https://www.elperiodico.cat/ca/politica/20230517/aragones-tren-barcelona-tolosa-farem-87492847>>
- ESPON (2020). *Cross-border public services in Europe*. <https://cor.europa.eu/en/events/Documents/COTER/ESPON%20Policy%20Brief%20Cross-border%20public%20services.pdf>
- EUROPEAN COMMISSION (2021). *Study on providing public transport in cross-border regions – mapping of existint services and legal obstacles. Final Report 2019CE160AT093*. <<https://futurium.ec.europa.eu/en/border-focal-point-network/library/study-providing-public-transport-cross-border-regions-mapping-existing-services-and-legal-obstacles>>
- GIMÉNEZ CAPDEVILA, R. (2005). “Els Pirineus: geografia de la circulació i política de transports”, in *Treballs de la Societat Catalana de Geografia*, 58, p. 89–107.
- (2012). “Ideologia i geopolítica en la configuració del sistema de transports transpirinenc (1982–2011)”, in *Treballs de la Societat Catalana de Geografia*, 74, p. 79–99.
- GOVERNMENT OF SPAIN (2023). *Tratado de amistad y cooperación entre el Reino de España y la República Francesa*. <https://www.lamoncloa.gob.es/presidente/actividades/Documents/2023/190123-Tratado%20de%20Amistad%20y%20Cooperaci%C3%B3n_ES.pdf>
- INSTITUT D'ESTUDIS TERRITORIALS (IET) (2009). *El sistema ferroviari al territori de l'Euroregió Pirineus Mediterrània: potencialitats i febleses*. Barcelona: Generalitat de Catalunya.
- LFP PERTHUS (02/02/2023). “Current Statistics”. *Working Group Rail Interconnexions France-Spain*. Madrid.
- LÓPEZ, E.; MONZÓN, A.; ORTEGA, E.; MANCEBO, S. (2009). “Assessment of cross-border spillover effects of national transport infrastructure plans: an accessibility approach”, in *Transport Reviews*, 29(4), p. 515–536.
- MEDEIROS, E.; FERREIRA, R.; BOIJMANS, P.; VERSCHELDE, N.; SPISIAK, R.; SKONIEZKI, P.; BERZI, M. (2021). “Boosting cross-border regions through better cross-border transport services. The European case”, in *Case Studies on Transport Policy*, 9(1), p. 291–301.
- OFICINA TÈCNICA DE L'R3 (2023). *Proposta ferroviària per al desenvolupament del corredor de l'R3*. CREACCIÓ – Agència d'Emprenedoria, Innovació i Coneixement.
- SPIEKERMANN, K.; WEGENER, M. (2006). “The role of transport infrastructure for regional development in south-east Europe”, in *South-East Europe Review*, 1, p. 51–61.