



Shaping the Future of European Rail: Regulation, Digitalisation, and Fair Competition

vol. 26 | n°4 | 2026

« au service de l'analyse » — since 1998

networkindustries
quarterly

Network Industries Quarterly, January, Vol. 26 issue 4 'Shaping the Future of European Rail: Regulation, Digitalisation, and Fair Competition'

The European rail sector is experiencing a rapid transformation thanks to digitalisation. At the same time, policymakers and industry stakeholders navigate the challenges of regulation, digitalisation, and fair competition. From redefining ticket distribution and embracing multimodal mobility to ensuring balanced oversight and fostering innovation. These are central themes for shaping the future of rail travel across Europe.

This issue of Network Industries Quarterly focuses on the role of digital platforms in shaping transport in Europe. In his contribution, entitled "Regulating Railway Ticket Distribution: What is at Stake?", Prof. Juan Montero provides a clear picture of the context of the progressive change that rail transport has undergone. Elodie Petrozziello's contribution, entitled '*The Multimodal Digital Mobility Services Initiative – From the Train to the Platform*', provides an overview of the potential legal and policy frameworks. Federico Catania, in his piece entitled '*Beyond the tracks: digital ticketing, fair competition and the future of European rail*', flags the benefits of competition and of using intermediary platforms, both for passengers and transport operators. Last, Sophie Lombard, in her piece entitled '*Improving client experience through ticketing: current state of play and way forward*', navigates among the existing obligations for rail service providers and calls for a balanced regulatory approach, avoiding demanding obligations on operators.

Editors of this issue:

Juan Montero & Elodie Petrozziello

dossier

- 3 Regulating Ticket Distribution in Aviation.
What is at Stake?
Juan Montero
- 6 The 'Multimodal Digital Mobility Services Initiative' – From the Train to the Platform
Elodie Petrozziello
- 11 Beyond The Tracks: Digital Ticketing, Fair Competition And The Future Of European Rail
Federico Catania
- 14 Improving Client Experience Through Ticketing: Current State of Play and Way Forward
Sophie Lombard
- 18 Announcements

Network Industries Quarterly | Published four times a year, contains information about postal, telecommunications, energy, water, transportation and network industries in general. It provides original analysis, information and opinions on current issues. Opinions are the sole responsibility of the author(s).

Subscription | The subscription is free. Please do register at fsr.transport@eui.eu or info@ic4r.net to be alerted upon publication.

Letters | We do publish letters from readers. Please include a full postal address and a reference to the article under discussion. The letter will be published along with the name of the author and country of residence. Send your letter (maximum 450 words) to the editor-in-chief. Letters may be edited.

Publication director | Matthias Finger

Managing editor | Elodie Petrozziello and Juan Montero

Publishing editor | Ozan Barış Süt

Founding editor | Matthias Finger

Publisher | Florence School of Regulation, Transport Area, Via Giovanni Boccaccio 121, 50133, Florence, Italy, phone: +39 055 4685 795, email: FSR.Transport@eui.eu and Istanbul Center for Regulation, Istanbul Technical University, Taşkışla, 34367 Istanbul, Turkey, email: info@ic4r.net

Websites | : <https://fsr.eui.eu/transport/>, <https://ic4r.net/>, <https://www.network-industries.org/>

Regulating Railway Ticket Distribution: What is at Stake?

By Juan Montero, Director of the Florence School of Regulation, Transport Area, EUI

Digital platforms have transformed many industries, such as music, media etc., and are also transforming transport, and in particular railways.

From a single direct physical channel to competition between direct and indirect digital channels

Traditionally, rail ticketing was part of an integrated system managed by state-owned national monopolies. Tickets were sold by the monopolist, mainly at passenger stations. This direct channel was dominant, and intermediaries providing indirect distribution channels played a limited role. As most services were purely national and sold on site, global distribution systems (GDSs) managed by digital intermediaries connecting providers and travel agents did not emerge, unlike in aviation (Montero & Finger, 2021).

However, two trends have transformed railway ticketing in recent decades. On the one hand, liberalisation has increased the number of service providers, creating opportunities for aggregators. On the other hand, digitalisation has created new means of distribution at a lower cost. These two trends reinforce each other.

Liberalisation has created new challenges. Newcomers have entered the rail market and they need distribution channels to sell their tickets. Developing a direct channel can be a barrier to entry, particularly for small newcomers. This was certainly the case in the 1990s in the United Kingdom, particularly as the incumbent was dismantled and more than 20 franchises provided passenger services. A highly complex system was developed so that all providers could share the previously existing ticketing system, which enabled passengers to acquire national tickets at a single window.

Digitalisation, however, has reduced the barriers to newcomers developing direct distribution systems. Websites first, and later apps, lowered the cost for incumbents and newcomers to sell their tickets, which improved the passenger experience. As digital sales surpass physical sales in stations, newcomers do not need to create expensive physical networks to sell their tickets. They can rely on digital distribution on their own website/app, following the example of low-cost carriers in aviation. For example,

newcomers in Italy (Italo) and Spain (Ouigo and Iryo) developed their own direct digital distribution channels and they only have a physical presence in a few major stations, or no such presence at all in the case of Ouigo in Spain. As a reference, in 2024 only 9% of tickets were sold at physical points and only 9% by travel agents. 58% of tickets were sold on the websites of railway undertakings (CNMC, 2025).

As liberalisation has fragmented the market, new opportunities have emerged for digital aggregating intermediaries such as Trainline, Omio and Uber. Passengers do not need to check the site of each railway undertaking to identify services and conditions (mostly prices). They can have access to all the inventory in a country (and beyond) and acquire all the tickets in the single window provided by these new digital platforms. The higher the number of competitors, the more value these intermediaries provide. In 2024 22% of high-speed rail tickets in Spain were sold by digital intermediaries (CNMC, 2025). It is not surprising that countries with more competition are the ones in which such digital platforms have a higher market share: the more fragmented the market, the more value is added by aggregators.

In recent decades, railway ticketing has evolved from a single direct physical channel in each country to a more complex ecosystem of competing direct channels run by the incumbent and newcomers, and in addition a growing number of digital aggregators. This ecosystem poses new challenges and calls for regulation.

Regulating content sharing

The first call for regulation came from new digital intermediaries asking for an obligation to be imposed on railway undertakings, and particularly incumbents, to make all their inventory available through these new digital aggregators.

It is important to clarify the terminology. It was common to propose this obligation using the term 'data sharing.' Incumbents would be required to share their data (timetable, prices) with digital platforms. This terminology, however, is confusing. Conflicts between rail operators and digital intermediaries were never about the mere exchange of

such data, but rather about an obligation on incumbents to contract with digital platforms for their intermediation services, an obligation to enable their indirect digital distribution channels. Passengers would have the possibility of acquiring tickets from these digital intermediaries.

It is important to differentiate what we have called ‘naked data sharing’ (mere provision of data) from ‘ancillary data sharing’ in the framework of a compulsory distribution agreement (Montero & Petrozziello, 2025). In a distribution agreement data sharing is instrumental to the main service, which is the intermediation service provided by the digital platform: facilitating transactions between railway undertakings and consumers.

This conflict has evolved as a result of some competition law cases. In 2024 the Commission terminated a case on abuse of a dominant position against Spanish incumbent Renfe (*Online rail ticket distribution in Spain*, 2024) with a commitment to make available to third-party ticketing platforms all the current and future content and real-time data displayed on any of its own online channels, irrespective of the channel they use to access Renfe content and real time data. Note the difference between data sharing and content sharing (the term used in the commitment). In Germany, the National Competition Authority decided against DB (*Deutsche Bahn AG v Omio Travel GmbH & Trainline.com Limited*, 2023) and went further by imposing on DB not only an obligation to share content but also price-ruling principles.

At the moment there is debate on whether the content sharing obligation should be imposed on railway undertakings as a legal obligation in sector-specific legislation, whether this obligation should also be extended to newcomers with no market power and particularly whether legislation should determine the principles to set the prices that digital intermediaries pay to railway companies.

Legislation could impose FRAND conditions (fair, reasonable and non-discriminatory) on pricing, while leaving negotiations to the parties. Disputes on what public authorities, such as national railway regulatory bodies, should decide is FRAND are under consideration. This is the case currently in France.

Regulating digital intermediaries

There is also discussion on the regulation of digital intermediaries. Experience in the regulation of digital platforms, in particular ‘gatekeepers’ in the Digital Markets

Act (Regulation [EU] 2022/1925, 2022), and also experience in the regulation of global distribution systems (GDSs) provide some directions.

There are proposals to impose obligations on digital platforms with market power: neutrality in the display of search results (as in the Code of Conduct for GDSs) (Regulation [EC] 80/2009, 2009), transparency in the algorithms governing the display of results (as in the Platform to Business Regulation – Regulation [EU] 2019/1150, 2019) and maybe displaying results according to certain criteria, such as the volume of emissions. Sharing data back with railway undertakings, as is required in the Digital Markets Act for digital advertising and other services, could be a source of inspiration.

However, more specific obligations have been proposed for railway undertakings that are vertically integrated and not only have market power in rail markets but also in the downstream distribution market. This is the case of some rail incumbents with a strong presence in the transport distribution market (DB, SNCF). Some considerations might be of interest.

First, it is important to differentiate activities. All railway companies have their own direct digital channel. That is, their own instruments (website, app) to sell their own tickets. It does not seem that this is a market in itself but just one of the activities necessary to provide rail services. Some railway companies have expanded their activities. They not only sell their own tickets but they also sell transport (and other) services provided by third parties. This is the case of urban transport services, bus services, etc. Only when they are intermediating third party services can it be considered that they have vertically integrated and they are active downstream in a neighbouring market. Not all railway undertakings, and not even all incumbents, are active downstream as aggregators, and only a few of them have grown market power downstream.

Second, various regulatory obligations are under consideration. On the one hand, it is proposed to impose on vertically integrated operators an obligation to include the inventories of competitors in their digital instruments. This would reduce the barrier to newcomers entering the rail market. It has only been requested by small-scale newcomers, as larger newcomers in Italy and Spain (Italo, Ouigo, Iryo) have shown that ticketing is not a barrier when market entry is done on a large scale. These operators therefore show no appetite for this remedy. However, the liberalisation process in countries such as Germany, Czechia and

Austria has had different results. Entry is done on a smaller scale on specific routes, not on all the network. These smaller newcomers perceive ticketing as a barrier to entry. The downside of this obligation is that it would reinforce the rail incumbent's platform against existing digital platforms (Trainline, Omio). The price to pay for more competition in railways would be less competition downstream in the digital intermediation market.

Furthermore, a structural remedy has been considered: vertical unbundling of the rail and distribution services of incumbent railway companies. Following vertical unbundling of infrastructure management and rail service provision, a further regulatory requirement could be to separate management of rail services and distribution of tickets. Direct distribution seems a too fundamental operation and it is intrinsically united to operating services, particularly as pricing becomes more sophisticated (yield management), which advises against vertical unbundling. In contrast, unbundling seems an option if the railway undertaking goes beyond selling its own tickets and it builds a platform intermediating third party services.

Experience in other digital markets (Amazon, Google Search, etc.) shows that when dominant digital platforms are vertically integrated there is a high risk of self-preferencing, and therefore a strong case for regulation. However, no unbundling has been imposed so far, not even on the platforms with the strongest positions in the market, such as Google in searching, operating systems and apps.

References

CNMC. (2025). *Balance de la liberalización del transporte de viajeros por ferrocarril* (INF/DTSP/091/25).

Finger, M., Montero, A. & Serafimova, E. (2019). *Towards EU-wide multimodal ticketing and payment systems* (Policy Briefs, 2019/19). Florence School of Regulation, Transport.

Montero, A. & Finger, M. (2021). *The rise of the new network industries: Regulating digital platforms* (1st ed.). Routledge. <https://doi.org/10.4324/9781003141327>

Montero, A. & Finger, M. (2024). Regulating ticket distribution in aviation: What is at stake? *Network Industries Quarterly*, 26(3), 3-7.

Montero, J. & Petrozziello, E. (2025). '9: Data-sharing regulation in transport: follow the money.' In *Challeng-*

es in Transport Regulation in Europe and Beyond. Cheltenham, UK: Edward Elgar Publishing. <https://doi.org/10.4337/9781035369164.00013>

Regulation (EC) No 80/2009 of the European Parliament and of the Council of 14 January 2009 on a Code of Conduct for computerised reservation systems and repealing Council Regulation (EEC) No 2299/89. (2009). *Official Journal of the European Union*, L 35, 47-55.

Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services. (2019). *Official Journal of the European Union*, L 186, 57-67.

Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act). (2022). *Official Journal of the European Union*, L 265, 1-66.

The ‘Multimodal Digital Mobility Services Initiative’ – From the Train to the Platform

By *Elodie Petrozziello, Research Associate of the Florence School of Regulation, Transport Area, EUI*

Introduction

In the past decade, the European Commission has been working on specific obligations related to data sharing. The Sustainable and Smart Mobility Strategy (European Commission, 2020), which serves as the guiding document, references these data-sharing obligations in various industries. Other pieces of legislation, such as the EU Regulation on Air Passenger Rights (Regulation [EC] 261/2004 of 11 February 2004), have specific provisions that address data sharing. The ITS legislation (Directive 2010/40/EU of 7 July 2010) is a framework for land transport that establishes national access points (NAPs).¹ These are managed by public authorities at the Member State level to aggregate data that can circulate and create new services and products. From these and other policies and legal actions, the idea of accelerating and facilitating data sharing emerges.

Although similar references to data sharing can be found in legislation focusing on different modes of transport, each industry has its own challenges and a systematic approach has not been taken. The Commission has been developing a position that goes beyond merely imposing an obligation to share data, which was the approach taken by the French and Finnish authorities. Once an obligation to share data is imposed the conditions must be defined, a price set, a common European mobility data space established to facilitate data sharing and a model developed to resolve disputes. The latter requires identifying a framework and the relevant authority.

The general data sharing framework

Before legislating on sector-specific matters it is important to understand the general framework and how it can be applied to transport. The general framework for data sharing is defined in the Data Act. Articles 8 to 13 of this act set obligations for data holders to make their data available in B2B data-sharing agreements. Article 8 clearly specifies that the obligation to share data applies in B2B relations. If applied to transport, it would apply to transport service providers and platforms. The main principle behind it is to use fair, reasonable and non-discriminatory (FRAND)

¹ ‘National access point’ or ‘NAP’ means a digital interface set up by a Member State that constitutes a single point of access to data.

terms and transparent conditions in these bilateral agreements. FRAND is a broad principle that was first developed in the context of competition law and patent law. IP and data share many similarities: both are upstream; a company needs them to develop a product, innovate or provide a service; they have no inherent value; their worth depends on mutual agreement and is not tied to tangible assets.

The negotiation steps outlined in the Data Act (Regulation (EU) 2023/2854 of 13 December 2023) are quite similar to those in patent law jurisprudence. According to Article 5 of the Data Act, the implementing company must request access to data or a dataset by making an offer to the data holder. The latter can either accept or make a counteroffer, and the data requester can accept it or decline it. If the parties do not reach an agreement, following Article 10 of the Data Act, they can appoint a dispute resolution body. Although the IP law approach can be transposed to a sector-specific framework, it necessitates defining precise conditions and establishing a dispute resolution body, and the consequences for parties that do not apply FRAND terms in the transaction. Furthermore, guidance on pricing the dataset is pivotal in this context, as the Data Act provides limited guidance, only that any compensation must be non-discriminatory, reasonable and may include a margin. This means that the financial effort to make the data available (a purely variable cost) and to build the dataset is legally recognised, which in the transport context is ideal as some datasets require structuring. However, an exemption in the Data Act allows the cost of creating the database not to be passed on to SMEs.

Transport-specific data-sharing cases

In the rail transport sector, two important competition law cases have been brought to court. They involved Renfe and Deutsche Bahn and were initially framed as disputes over data sharing. In these cases, the platforms launched complaints against the national rail incumbents. One was launched before the Commission. Trainline interpreted Renfe’s behaviour as abusing its dominant position in the passenger transport market by not sharing content. Renfe did not receive a fine as it voluntarily committed to sharing current and future content with the platforms. However, in this case the discussion centred on an obligation to share content rather than data sharing, and on distribution channels. In other words, Renfe committed to contract with

platforms to make their indirect distribution channel available with non-discriminatory terms. This was a way for the Commission to balance between the interests of transport operators and platforms. It can therefore be argued that this case was about governing a distribution agreement rather than a 'naked' data sharing agreement, but no reference was made to pricing.

In the German case, although similar to the Renfe case, DB had a more developed ticketing platform. The court ruled that third-party platforms should be offered access to its content with comparable conditions to those with which DB has access to its own ticketing. This means that DB cannot discriminate against third-party platforms by prohibiting them from accessing content on its own platform. The principle applied here differs from the Data Act principle as DB must pay Trainline the fare established by the competition law authority, i.e. the long-run average incremental cost. This incorporates the long-term costs of creating and maintaining the platform. These, therefore, are not mere data-sharing agreements but distribution agreements in which the platform is providing a service to the transport company (the platform becomes the distributor of the tickets).

Hence, these dominant companies must enter into distribution agreements. Otherwise, competition would be distorted (Montero & Petrozziello, 2025). The dominant player must pay the distributor's company, as it is providing a distribution service, and content sharing is ancillary to the main transaction, which is the distribution transaction. One can also draw parallels between the non-discriminatory obligation on transport operators, which is very similar to the price parity clauses on the platform (Montero & Petrozziello, 2025). For instance, Booking.com cannot require service providers to prevent discrimination and offer uniform pricing. Therefore, on the one hand, Booking.com cannot impose a price on third parties. On the other hand, railway companies are asked to set a price. This difference is based on the player retaining the power in the market, be it the platform or the (railway) company, and this power is limited by a non-discrimination obligation. It will be more complicated when both have, or do not have, market power. This is a paradoxical situation.

The Multimodal Digital Mobility Service Initiative

The Commission has a 'Multimodal Digital Mobility Service Initiative' in the pipeline. This comprises three pieces of legislation: a 'Single Digital Booking and Ticketing Regulation' (SDBTR), a 'Multimodal Digital Mobility Service Regulation' (MDMSR) and a Proposal for a Regulation on

passenger rights in the context of multimodal journeys (European Commission, 2023). The SDBTR is addressed to rail operators to facilitate intermediaries receiving information from them. The Passenger Rights Regulation complements the initiative by ensuring that consumers have guarantees on multimodal journeys. The MDMSR governs access by transport operators to distribution channels by ensuring that their services, if desired, can be neutrally displayed on the MDMS platform. The overall objective of the initiative is to foster deployment and use of B2B and B2C MDMS, and to favour sustainable door-to-door transport.

For both the SDBTR and MDMSR, four possible policy options (POs) are being considered. PO1 mandates respect for rules that cover commercial agreements between B2C and B2B MDMS. PO2 covers all B2B and B2C MDMS, and all rail operators. PO3 builds on PO1 and adds an obligation to enter into commercial agreements to enable the sale of tickets for indispensable rail operators and vertically integrated MDMS providers with significant market power (SMP). PO4 adds to PO1 an obligation to enter into commercial agreements to enable the sale of tickets for indispensable rail operators, and an obligation to unbundle for MDMS providers that are vertically integrated with a transport operator with SMP. These POs apply differently in the context of the MDMS and SDBT regulations.

Although a regulation should be issued after a market failure is identified, regulatory intervention can be justified on the grounds of accelerating the policy objective of ensuring a fair market and promoting innovation. The latest Eurobarometer on the topic (European Commission, 2025) shows that 36% of the European citizens responding to the survey reported difficulties booking various collective transport modes. 35% experienced difficulties combining different transport operators and 25% struggled with integrating different rail operations. Another reason is to support sustainable transport aims, which have been a priority for the Commission in recent years, and seem to also be a priority for citizens (78%), although only a limited number of them act on this intention (21%). Another key element is to ensure passenger protection, which had already been identified by the Commission as one of its priorities in the passenger rights proposal.

The Single Digital Booking and Ticketing Regulation

The SDBTR is about regulating transport service providers and setting content-sharing obligations. The focus of this regulation appears to be on railway undertakings, but the first challenge is to define the subjective scope of the

regulation. First, railway undertakings with market power are included, mostly the incumbent undertakings. These obligations are built on experience gained in competition law cases. Furthermore, it is under consideration whether content-sharing obligations should be extended to railway undertakings providing services under public service obligations (PSOs). These are mostly regional and suburban services, as these services tend to be provided with exclusive rights. Many of these services are provided by incumbents, but an increasing number of public service contracts are awarded to newcomers after a tender. Finally, obligations can be extended to all railway undertakings, independently of their market power and exclusive rights granted in public service contracts.

Another important point that should be defined in the regulation is the objective scope of these obligations. One obligation is to enter into commercial agreements with platforms that are interested in intermediating the railway service. However, guidance on the content of these agreements is needed. In this case, FRAND terms can be used. However, an incentive to reach an agreement and guidance for this entity on solving disputes are still missing.

Another obligation that might be imposed is vertical unbundling, which follows the logic of separating the railway operator from the infrastructure manager. In practice this means introducing caveats, such as establishing a legal entity to manage the online distribution platform, having differentiated leadership, limiting the information flow, utilising separate IT systems and ensuring transparency in commercial agreements. However, this is the most extreme among the possible obligations mentioned. Important questions remain. Who pays? Does the platform pay the railway company? Does the railway company pay for the platform's service? Is it data sharing or distribution of content?

The airline sector might not be included in the scope of the initiative. Most airlines do not share their content and add surcharges, which consequently increases the ticket price for consumers. Such practices can be interpreted as a form of disintermediation. However, platforms distributing airline tickets must comply with strict obligations. For instance, the principle of a neutral display is particularly problematic for these platforms, as it does not allow them to modify the prices set by the transport providers, and it is a problem that the prices do not include any commission for the intermediation service, which is not sustainable for the business model of MDMS platforms. Therefore, rather than imposing a neutral display, a solution might be to impose transparency. In other words, the intermediation service should clearly

indicate whether it is adding a fee to the price set by the transport service operator.

The example of France in this matter can serve as a foundation at the EU level. There, the regulators are tasked with solving disputes. Indeed, the 2019 LOM granted them regulatory powers to resolve digital mobility disputes. French regulators have various units that oversee monopolistic and essential infrastructure. Thus, they act on upstream markets to ensure fair and valid gain in the downstream market. The French regulatory framework ensures that access to essential infrastructure is correctly implemented. The French transport regulatory authority can investigate infringements on its own initiative, upon receiving a complaint, and upon sanction breaches of LOM obligations. It also has dispute settlement mechanisms, which allow MDMS providers and transport service providers to refer disputes to it for settlement, provided that the dispute is concrete.

There are two positive lessons to be learned from the French example. First, the enactment of legislation has demonstrated that with an obligation in place transport service providers tend to comply with the obligation to grant MDMS providers access to their content. This indicates that if European authorities aim to enhance competition in the MDMS market, they can impose content-sharing obligations. Another lesson is that each party interprets the legislative framework in the light of its own interests. Transport service operators interpret the French framework in very different ways. It is therefore useful to have a regulator to settle disputes.

Nonetheless, the French framework has shown some limitations, including unclear provisions that lengthen the dispute resolution process. Legislative guidance on solving disputes is necessary. If these problems were addressed, passengers would have improved access to all transport tickets, especially for rail, in a well-functioning MDMS market. This is possible by establishing a system of rights and obligations which permits MDMS providers to access the digital sales systems of transport operator providers under FRAND conditions. In return, legislators should establish concurrency obligations for MDMS regarding the presentation of travel options.

The Multimodal Digital Mobility Service Regulation

Multimodal digital mobility services (MDMS) are digital platforms that enable users to plan, book and pay for a multimodal journey. The aim is to incorporate various actors in the MDMS, including journey planners, ticket aggregators, GDSs, meta search engines and MaaS apps. Based on the

latest information, within the scope of the MDMSR there could be B2C MDMS with significant market power, as is indicated by a turnover proxy, which would be a national or European threshold of user numbers visiting the platform a year. Some stakeholders have raised concerns about setting this threshold at the national level, as it may impact cross-border travel. Indispensable MDMS could be included in the scope, meaning ones with significant market power in B2C, and vertically integrated MDMS. However, some stakeholders have raised the question of how to identify indispensable MDMSs.

For each policy option, there can be specific measures that impose obligations on stakeholders. A first measure mandates that there are no restrictive clauses imposed on transport operators when a MDMS is finalising a commercial agreement. A second measure applies to all MDMS irrespective of their market power. They must respect the principles of distribution fees and not impose restrictive clauses. A third measure mandates that all vertically integrated MDMS with significant market power must allow re-linking and/or the sale of tickets in their channels. A fourth measure is addressed to all vertically integrated MDMS with significant market power and adds an obligation to unbundle. Caution is important, as if these regulations are not fairly balanced, they risk disrupting markets.

Furthermore, the GDS regulation (Regulation [EC] 80/2009 of 14 January 2009) dates back to the 1980s. There is a historical reason for this regulation: GDSs were controlled by airlines, which in turn relied on travel agents and computerised reservation systems to book their flights. Over the years the business model of GDSs has evolved for them to become aggregators of different services. If the neutral display obligation in the MDMSR is maintained and applied to GDSs it would be problematic as control by the operator is no longer present. In addition, the CRS only applies to a few players in the market and not to their de facto competitors which utilise a different business model, for instance other content aggregators. Therefore, neutral display should apply to equivalent business models with no different obligations between distributors, resellers and commercial agents.

Conclusion

The MDMS initiative can be an effective measure to support the development of multimodal ticketing services while promoting modal shift and ultimately contributing to achieving sustainable goals. There are tensions among stakeholders as platforms require more content to be shared,

which can lead to the quick acquisition of market power. While sharing more information with platforms benefits users, it is also important to consider imposing obligations on them. At the same time, vertically integrated MDMS, which dominate both upstream rail and downstream transport platforms, may reach high levels of market power. So far, the market has regulated itself, and sector-specific European regulations might not account for national market differences. Indeed, the same company can be both an incumbent and a newcomer in different countries. Therefore, a clear differentiated scope is desirable, perhaps through asymmetric regulation. Overall, the regulation can be successful if it allows fair access to real-time content for ticketing and for the timetable. Consumers should be at the centre, and the protection of passengers should be guaranteed at all times during their journey

References

European Commission. (2020). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Sustainable and Smart Mobility Strategy – putting European transport on track for the future* (COM/2020/789 final).

Regulation (EC) No 261/2004 of the European Parliament and of the Council of 11 February 2004 establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights, and repealing Regulation (EEC) No 295/91 (Text with EEA relevance). (2004). *Official Journal of the European Union*, L 46, 1-7.

Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport (Text with EEA relevance). (2010). *Official Journal of the European Union*, L 207, 1-13.

Regulation (EC) No 80/2009 of the European Parliament and of the Council of 14 January 2009 on a Code of Conduct for computerised reservation systems and repealing Council Regulation (EEC) No 2299/89. (2009). *Official Journal of the European Union*, L 35, 47-55.

European Commission, Directorate-General for Mobility and Transport. (2025). *Flash Eurobarometer 551: Multimodal Digital Mobility Service*. European Commission.

European Commission. (2023). *Proposal for a Regulation of the European Parliament and of the Council on passenger rights in the context of multimodal journeys* (COM/2023/752 final). European Commission. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52023PC0752>

Montero, J., & Petrozziello, E. (2025). “9: Data-sharing regulation in transport: follow the money”. In *Challenges in Transport Regulation in Europe and Beyond*. Cheltenham, UK: Edward Elgar Publishing. from <https://doi.org/10.4337/9781035369164.00013>

Beyond the Tracks: Digital Ticketing, Fair Competition, and the Future of European Rail

By Federico Catania, Head of Government Relations, Trainline Italy

In recent years, rail has returned as a subject of public and political debate in Europe. The green transition, emission reduction goals, the energy crisis and the urgency of more sustainable travel have brought to the forefront the natural role of the train: to be the backbone of collective mobility. In much of the European Union, this change is already visible: unprecedented public investment and ambitious infrastructure plans are modernising lines and stations; new operators are launching new services; and passenger demand for rail is growing – especially among the younger generation. However, the decisive leap forward towards truly European rail remains hindered by a less visible but equally crucial obstacle: digital distribution of rail tickets.

This is not a technical detail or a marginal topic. The way a passenger discovers, compares and purchases a train ticket is now an integral part of the journey itself. If the ticket is not easy to find and buy the train is not a real option – even if the network is modern and the service excellent. Competition between modes of transport increasingly takes place on screens where low-cost airlines and shared mobility services are already fully digital, available, comparable and accessible with just a few clicks. However, there's still nothing easier than getting into a car, the ultimate competitor of all green and collective travel.

If Europe truly wants to make rail the preferred mode of transport, it must also overcome the obvious digital challenge – and it must do so by ensuring fair conditions for all distribution players, including independent platforms that make train travel accessible to millions.

Ticketing as the building block of the European single market for rail

The ticket is the first point of contact between the citizen and the rail system. In a world where every travel choice is made from one's phone – perhaps while sitting on a bus or at a café – building an itinerary, checking a connection and finding an affordable fare are not just commercial operations but actual acts of mobility. It is in this moment that the traveller decides whether to take a train or a plane, to plan an intermodal journey or drive, to move or to stay put.

However, despite independent platforms such as Trainline having already demonstrated for years that it is possible to integrate data from dozens of European operators, offer multimodal journeys and provide real-time digital assistance, the European ticketing ecosystem remains highly fragmented. This is not due to technology, but to commercial and regulatory dynamics that have not been adapted to the digital age.

Booking a train journey from Milan to Lyon, Berlin to Prague or Vienna to Krakow is often more complex than booking a low-cost flight. Not because the trains do not exist, but because the relevant data – fares, seat availability, travel conditions – are not always easily accessible by those who wish to distribute them. Most operators want to keep their direct channels as the only source of tickets for passengers. In many cases, they impose unsustainable economic or technical conditions on third parties. They are also known to segment information in a way that prevents European platforms from building a true end-to-end offer. This is especially problematic when these operators are dominant players in the rail market.

This is the core issue: rail distribution in Europe is not an open market but rather a mosaic of closed models. The ability to show, sell and manage tickets depends not on a systemic vision but on the policies of individual operators and member states. The result is a collective loss: less visible travel options mean emptier trains, less efficient use of public funds and – above all – citizens who, unable to easily find rail options, end up booking flights or driving instead.

The technology already exists: the issue is fairness

For this reason, we must clear up a common misunderstanding: the 'complexity of ticketing' is no longer just technological. APIs exist. Multi-layer booking systems exist. Integrated platforms – like Trainline – have already proven both the technical feasibility and practical usefulness of independent digital rail distribution. This is not easy, but it's possible – with investment and ambition to create a great customer tool.

The real question is not whether it can be done, but under what conditions it can be done. The real obstacle to seam-

less rail ticketing is that rail operators don't allow platforms to access their fares and availability on economically sustainable terms. Those who invest resources in marketing, train promotion and post-sale support are not recognised with transparent and fair compensation. And, in cases of delay and cancellation, platforms cannot assist their users with the right tools.

Today, in many European countries access conditions are often restrictive, commissions are absent or negligible and assistance tools are limited to operators' direct channels. The paradox is clear: on the one hand, the market is asked to 'support' trains as the primary mode of travel; on the other, the market reality penalises those who do so openly and proactively.

The Italian case: competition on the tracks, openness in channels

As we all know, Italy offers a valuable example of an open rail dynamic – not only on the tracks but also in distribution. When in 2012 the high-speed market opened to competition, the market was reinvigorated with the arrival of a new operator, Italo. Part of the growth was driven by the fact that both Trenitalia and Italo immediately chose to open their ticketing systems to third-party distributors. This made it possible for passengers to compare the two competitors in a single digital space with up-to-date prices in real time, and seamlessly book. Independent distributors fuelled healthy competition between the two high-speed operators.

It is no surprise then that on routes such as Rome-Milan fares have fallen by up to 40% at certain times of day. The train is now the undisputed mode of transport between the two cities – surpassing even air travel in perceived quality and operational reliability. Liberalisation has triumphed not only on the tracks but also by integrating channels – making competition that otherwise would have only remained visible to insiders digital.

The Italian example shows that sharing content does not mean operators losing control, but rather expanding value. Distributors generate visibility, demand, incremental revenue and an improved user experience that raises the quality of the entire ecosystem.

Europe: toward structural reform

To address these issues, Europe is now discussing a reform of rail ticketing centred around various instruments,

including the Single Digital Booking and Ticketing Regulation (SDBTR). This law aims to introduce fair, reasonable and non-discriminatory (FRAND) principles in commercial agreements between rail operators and distribution platforms. This initiative moves in the right direction, but it must be ambitious. It is not only about granting access to rail content but also about ensuring that those who access the service can economically sustain it.

Allowing access to content without ensuring fair remuneration means building an unbalanced model. Digital platforms – like Trainline – already bear high costs to integrate complex systems, assist customers during their journey and promote rail transport with new customer groups. This model only works if there is balance between the value these platforms create for rail operators and their ability to derive sustainable returns.

Without fair conditions, the risk is twofold. On the one hand, platforms may be forced to pass costs on to end users – by introducing higher fees that would make trains less competitive. On the other hand, independent distributors might gradually exit the market, thus reducing rail accessibility – precisely when European regulators and citizens are demanding the opposite.

Without adequate remuneration, innovation stalls: fare competition weakens, train promotion declines and the whole ecosystem loses one of its main growth engines. This is why talking about fairness in ticketing is not an abstract or marginal issue – it is a strategic choice for the future of sustainable mobility.

Distribution: a commercial service or a public good?

Digital platforms now play a structural role in the European rail transport system. With their transnational and multi-context nature they broaden access to trains for new user groups in different languages. This includes markets in which traditional operators have no direct presence, by going beyond single-mode and national borders. They do not merely distribute what operators wish to sell; they show alternative combinations, including cheaper ones. In this sense, they rebalance anti-competitive dynamics and restore genuine freedom of choice for travellers.

Platforms create added value for the entire ecosystem. They invest in communication campaigns reaching millions across borders, facilitate the discovery of lesser-known rail offers, stimulate demand for sustainable travel and act as 'digital bridges' in a rail system that remains infrastruc-

turally fragmented along national lines. If the European single market is still incomplete on the tracks, it already largely exists at the ticketing level – thanks to digital distribution and platforms like Trainline.

Post-sale assistance is another key aspect of this function. Independent platforms are generally user-friendly and use technology to provide the best customer solutions. This can include assisting passengers during disruptions, for example with automatic refunds and real-time alerts. In Europe, these services do not always have access to the same tools and information as operators' official channels. This limits their ability to fully assist passengers, especially in cases of delays and journey changes. Paradoxically, allowing a platform full access to post-sale data and tools would not only improve the customer experience but also lighten the assistance burden currently borne entirely by rail operators.

The economic contribution of digital platforms is not a side effect but tangible added value. A study conducted in Spain found that 18% of trips booked on Trainline represent incremental demand – journeys that would not have occurred without the third-party vendor. This means platforms do not divert sales from rail operators; they create new ones, helping fill publicly funded trains and making every euro invested in the rail system more efficient. Without platforms, many trains remain invisible. Without visibility, many journeys do not happen. And without travellers, even the best infrastructure remains underused.

Fair conditions for fair mobility

Rail is already winning in terms of quality, sustainability and competitiveness. But it cannot truly succeed without a digital strategy that amplifies its reach. Without an open market – in which every actor, operator, platform and passenger is part of a shared ecosystem – there will never be a true single market for European public transport.

The future of European rail mobility no longer depends solely on physical infrastructure, but on its ability to be visible, purchasable and intuitive. Every barrier against accessing rail content removed is a step toward a more competitive market; every ticket sold on an independent channel is a victory for the climate, for public transport and for citizens. The ticket is not an accessory to the train – it is the key that makes it real. And like every key, to truly work it must be placed in the right hands, with fair, transparent and sustainable rules.

Improving Client Experience Through Ticketing: Current State of Play and Way Forward

By *Sophie Lombard*, EU Affairs manager, SNCF

Introduction

The President of the European Commission, Ursula von der Leyen, has made the ‘Single Digital Booking and Ticketing Initiative’ a top priority in European transport policy. The key provisions in this future legislative package are expected to focus primarily on railway operators. While the rail sector fully recognises the importance of improving international distribution channels and is already mobilised to do so, it is crucial that the upcoming framework does not impose overly rigid or burdensome obligations on operators regarding their distribution strategies. A balanced approach should be favoured – one that creates a supportive environment for innovation, relies on existing and effective solutions and avoids unnecessary administrative constraints that could stifle innovation.

The existing framework

In an ongoing debate in Brussels, the concept of ‘data sharing’ is frequently misinterpreted or oversimplified. Many stakeholders call for rail operators to be forced to share their data in order to enhance ticketing services, seemingly unaware that a comprehensive legal framework already governs such data sharing at the European level. A clear understanding of what currently exists is essential before considering additional obligations.

Data sharing obligations for operators

Rail operators are already bound by two main pieces of European legislation that define in detail which data they must share and under what conditions. The first is the MMTIS Delegated Regulation adopted under the Intelligent Transport Systems (ITS) Directive. This regulation sets out precise requirements for the publication of specific datasets in a standardised format on national access points (NAPs) – platforms that centralise transport-related data at the national level. Operators are obliged to publish both ‘static data,’ such as timetables, historical delay information and accessibility features, and ‘dynamic data,’ such as real-time updates and disruptions. These data are provided in harmonised formats such as NeTEx and SIRI, which greatly facilitate their use by third parties. Thanks to this harmonised framework, developers and mobility service

providers can easily reuse these datasets to create applications like multimodal route planners and real-time travel assistants, as we will discuss at a later point.

The second relevant legal framework is the Passenger Rights Regulation (PRR). Article 10 of this regulation stipulates that railway undertakings shall provide other railway undertakings, ticket vendors and tour operators selling their services with access to minimum travel information. This information includes timetables and real-time updates, which enable intermediaries to inform passengers promptly in the event of a disruption. However, the regulation does not establish a reciprocal obligation for intermediaries to share relevant passenger data back with operators. Such data – for example, contact and booking information – could be vital to enforce passenger rights efficiently. While today most distributors automatically transmit the necessary data directly to operators, the growing diversity and number of intermediaries makes it increasingly important to consider reciprocal data exchange obligations to avoid a complete disintermediation of operators with passengers. Intermediaries should therefore facilitate operator access to relevant information.

Overall, this existing framework has contributed significantly to the growth of the rail distribution market by enabling third parties to access key data and develop innovative digital mobility solutions. For instance, SNCF Voyageurs has increased the number of technical intermediaries from 5 in 2019 to 50 today, demonstrating the dynamism of the distribution sector. However, a legal obligation to share data should not be confused with an obligation to enter into commercial agreements. The two are fundamentally different in both nature and purpose.

An obligation to enter into commercial agreements

Among the potential measures being discussed by the European Commission as part of the forthcoming ticketing initiative is to introduce an obligation for rail operators – particularly the incumbent – to conclude commercial agreements with intermediaries or with other railway undertakings. At present, there is no European legislation imposing such an obligation, yet the distribution market continues to grow dynamically on its own.

Competition authorities in several Member States have already intervened in specific cases related to access to ticketing systems, or ‘content sharing.’ In France, for instance, the Competition Authority has required SNCF Voyageurs to guarantee transparent and non-discriminatory access by travel agencies to its ticket inventories. This obligation was accompanied by remuneration negotiated in a professional representative framework. In Germany, the Federal Cartel Office decided in June 2023 that Deutsche Bahn (DB) must grant all intermediaries non-discriminatory access to its ticketing systems and real-time information. The European Commission’s Directorate-General for Competition took similar action in Spain regarding RENFE, while in Italy, the competition authority allowed Italo to distribute Trenitalia’s regional offers. These decisions demonstrate that existing competition rules are effective in ensuring fairness and access where necessary.

However, it is important to stress that no authority – whether national or European – has ever required an operator to sell its competitors’ products. Also in air transport, such a provision does not exist. Such a measure would be without precedent, both legally and commercially unjustifiable. It would interfere directly with business freedom, undermine investment incentives and create unnecessary distortions in a market that is already competitive and innovative.

The future framework must remain flexible

As these examples illustrate, competition law already provides effective instruments to address any suspected abuse of a dominant position. Therefore, establishing a new ex-ante regulatory regime that imposes heavy-handed obligations on operators, such as forcing them to sell competitors’ tickets or to be listed on every intermediary platform, would not be justified. Instead, the future framework should preserve flexibility and allow market forces and innovation to continue driving progress in distribution.

Operators’ distribution strategies are crucial for their business

An operator’s distribution and ticketing strategy is one of the key elements determining its commercial success. For operators providing open-access services, an effective distribution strategy is essential to maximise seat occupancy, optimise revenue and strengthen customer loyalty. It allows them to tailor offers and design user interfaces that best reflect their brand identity and customer expectations.

Imposing restrictive obligations on how incumbents distribute and display their offers would deprive them of an essential commercial tool and reduce their ability to compete fairly in terms of quality, service and innovation. For these reasons, operators must maintain full freedom to design and manage their distribution strategies, including their choice of commercial partners.

Mandatory commercial agreements would harm the entire rail sector

Imposing an obligation to conclude commercial agreements could have unintended negative consequences for the entire railway ecosystem. Rather than stimulating modal shifts, such measures would risk weakening operators’ economic models and reducing their capacity to invest in service quality and innovation.

An obligation to connect all inventories – whether between operators or with multiple third-party distributors – would entail substantial technical and organisational costs. These costs would either translate into higher ticket prices for passengers or result in reduced reinvestment in the rail system or reduced transport offers. Establishing and maintaining interfaces between numerous systems requires major investments in IT infrastructure and data management. Unless there is a clear business case ensuring sufficient revenue to offset these costs, the profitability of the activities of operators could be seriously undermined. These development costs could also add barriers to new entrants and could have the opposite effect of a targeted one to limit competition.

Moreover, the level of commission fees charged by intermediary platforms must remain proportionate to the added value they provide. Operators should not be expected to subsidise the development or profitability of third-party platforms. Each actor in the value chain should be able to sustain its own business model. The experience of the hospitality sector, in which global online platforms gradually increased distribution fees to the detriment of hotels and service providers, should serve as a warning. The railway sector must avoid reproducing this situation, which would drain financial resources from operators and reduce their ability to invest in their core services.

At a time when European railways require massive investments to maintain and modernise infrastructure, increase railway connections with additional rolling stock, enhance service quality and meet climate objectives, every euro in-

vested should remain in the rail system. Regulatory measures that would divert resources to intermediaries with limited added value would therefore be counterproductive.

In addition, excessive harmonisation of the various distribution models could suppress differentiation and diversity in the market. If all operators are forced to sell all offers, competition and innovation would inevitably decline. Differentiation – in service quality, digital experience and commercial approaches – is what drives progress and benefits passengers. In both France and across Europe, the ticket distribution sector is already highly competitive and diversified. A wide range of distributors and digital platforms, such as Trainline, Omio and various travel agencies, provide consumers with choice, comparison tools and added-value services that complement transport offers. This diversity demonstrates that the market is working effectively without a need for overregulation.

In short, imposing rigid and costly distribution obligations would ultimately harm the rail sector, reduce competitiveness and hinder the very innovation that policymakers seek to promote.

Solutions to improve (international) ticketing

While imposing burdensome obligations must be avoided, improving international ticketing remains a necessary and legitimate aim. The sector is fully committed to achieving better interoperability and seamless travel experiences. European legislation should therefore support these ongoing efforts, not replace them with a rigid framework.

Enhancing single booking

Achieving a true single booking experience for cross-border rail journeys requires facilitating connections between the different ticketing systems used by European railway undertakings. However, the current landscape is fragmented: various operators and distributors use proprietary technologies and formats that are often incompatible. This technological fragmentation is one of the main barriers to seamless international booking. Imposing commercial obligations will not solve these interoperability issues, and neither will it address the underlying technical and cost challenges.

To overcome these difficulties, the sector has developed a common standard known as an OSDM (open sales and distribution model). This standard, which was created col-

laboratively by operators, distributors and IT suppliers in the International Union of Railways (UIC), enables easier and more cost-efficient interconnections between inventories. It also allows the sale of a wide range of offers beyond traditional rail tickets, including multimodal and integrated travel solutions. SNCF Voyageurs has made substantial investments in digital distribution, particularly for cross-border services, by implementing the OSDM standard and introducing a unified electronic ticket format (ETCD). After long discussions, the European Commission is now playing a constructive role by formally recognising the OSDM standard in the future revision of the Telematics Technical Specification for Interoperability (TSI). Such recognition will encourage broader adoption across Europe and significantly reduce system integration costs.

A seamless passenger experience goes beyond single booking

Improving the passenger experience extends well beyond the technical ability to book multiple segments in one transaction. It also encompasses elements such as journey continuation in case of disruption, accurate and real-time passenger information and the development of innovative digital services that enhance comfort and accessibility.

A key initiative in this regard is the Agreement on Journey Continuation (AJC), which was developed by incumbents but is open to all operators. It allows passengers who miss a connection on an international journey to continue their trip on later trains operated by the same carriers, ensuring that they reach their destination even when disruptions occur. This agreement demonstrates the proactive approach in the sector to improving reliability and passenger rights through cooperation rather than regulation. At the same time, operators are investing in improved real-time information systems for travellers.

Developing digital solutions to improve the experience of passengers on their trips is also part of the solution. SNCF Group's open data policy provides an excellent example of how voluntary data sharing can stimulate innovation. With its open data platform and participation in mobility data spaces such as Eona-X, SNCF facilitates the development of new digital services that benefit travellers directly. For instance, in an Eona-X consortium, a project supported by the European Commission aims to create an application that helps people with reduced mobility plan multimodal journeys according to the services and infrastructure avail-

able. This illustrates how collaborative data ecosystems can generate tangible public value.

A developer passionate about cycling created a map showing cycling travel times from over 3,000 passenger stations across France thanks to SNCF open data sets. Applications like Mollow use open datasets to propose sustainable long-distance travel itineraries by train to reach distant destinations. SNCF Connect & Tech has also developed innovative solutions tailored to passengers' needs, such as end-to-end solutions (the possibility of buying city tickets from more than thirty French urban networks) and pay-as-you-go.

All these examples show that rail travel can be improved with many different types of digital and non-digital services. Creating a trustful and collaborative environment among stakeholders to exchange data is paramount for the development of these projects. The European Commission can play an enabling role by facilitating cooperation, supporting common standards and encouraging the development of interoperable tools. However, experience shows that additional mandatory data-sharing obligations rarely deliver the desired innovation outcomes and can even discourage investment.

Conclusion

The European rail ticket distribution market is already vibrant, competitive and fast-evolving. It does not need to become a heavily regulated sector, as excessive regulation could slow down innovation and limit the sector's capacity to respond to new customer expectations. Imposing costly and disproportionate obligations on railway operators would not contribute to the aim of modal shifting. On the contrary, it would make rail transport less competitive compared to other modes.

Future European regulation should therefore focus on what truly facilitates integration and innovation: promoting interoperable standards, reducing IT development costs and encouraging voluntary mutually beneficial data-sharing practices. By maintaining flexibility and supporting the collaborative initiatives already undertaken by the industry, the European Union can help build a smarter, more efficient and passenger-friendly distribution system.

OPEN CALL FOR PAPERS

The liberalisation and more recently the digitalisation of the network industries have brought various challenges to incumbent firms operating in sectors such as air transport, telecommunications, energy, postal services, water and railways, as well as to new entrants, to regulators and to the public authorities. Therefore, Network Industries Quarterly is aimed at covering research findings regarding these challenges, to monitor the emerging trends, as well as to analyse the strategic implications of these changes in terms of regulation, risks management, governance and innovation in all, but also across, the different regulated sectors.

Published four times a year, the Network Industries Quarterly features short (2000-2500 words) analytical articles about these topics in both the industrialised and the emerging countries. It provides original analysis, information and opinions on current issues. Articles address a broad readership made up of university researchers, policy makers, infrastructure operators and infrastructures services providers. Opinions are the sole responsibility of the author(s). Contact info@ic4r.net or fsr.transport@eui.eu to subscribe. Subscription is free.

Network Industries Quarterly is jointly published by the Transport Area of the Florence School of Regulation (European University Institute) and the Istanbul Center for Regulation (Istanbul Technical University). It is an open access journal funded in 1998 and merged with Network Industries Quarterly Turkey in 2022. Prof Matthias Finger is its foundational and current director.

ARTICLE PREPARATION

Network Industries Quarterly is a multidisciplinary international publication. Each issue is coordinated by a guest editor, who chooses four to six articles related to the topic chosen. Articles must be high-quality, written in clear, plain language. They should be original papers that will contribute to furthering the knowledge base of network industries policy matters. Articles can refer to theories and, when appropriate, deduce practical applications. Additionally, they can make policy recommendations and deduce management implications.

Detailed guidelines on how to submit the articles and coordinate the issue will be provided to the selected guest editor.

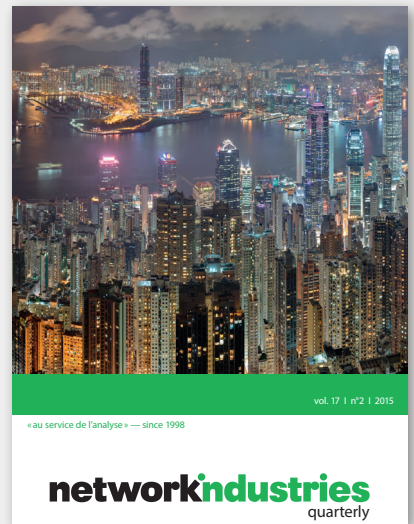
ADDITIONAL INFORMATION

MORE INFORMATION

- network-industries.org
- fsr.eui.eu
- ic4r.net

QUESTIONS / COMMENTS?

Elodie Petrozziello Managing Editor:
elodie.Petrozziello@eui.eu
Ozan Barış Süt, Designer:
ozanbarissut@gmail.com



PAST ISSUE

Vol 26 Iss 3 (January)

[Ticket Distribution in Aviation](#)

Ticket Distribution in Aviation Innovation is closely linked to air transport, from the development of aircraft technologies to the creation of computer reservation systems.