EUropa.S. 2022
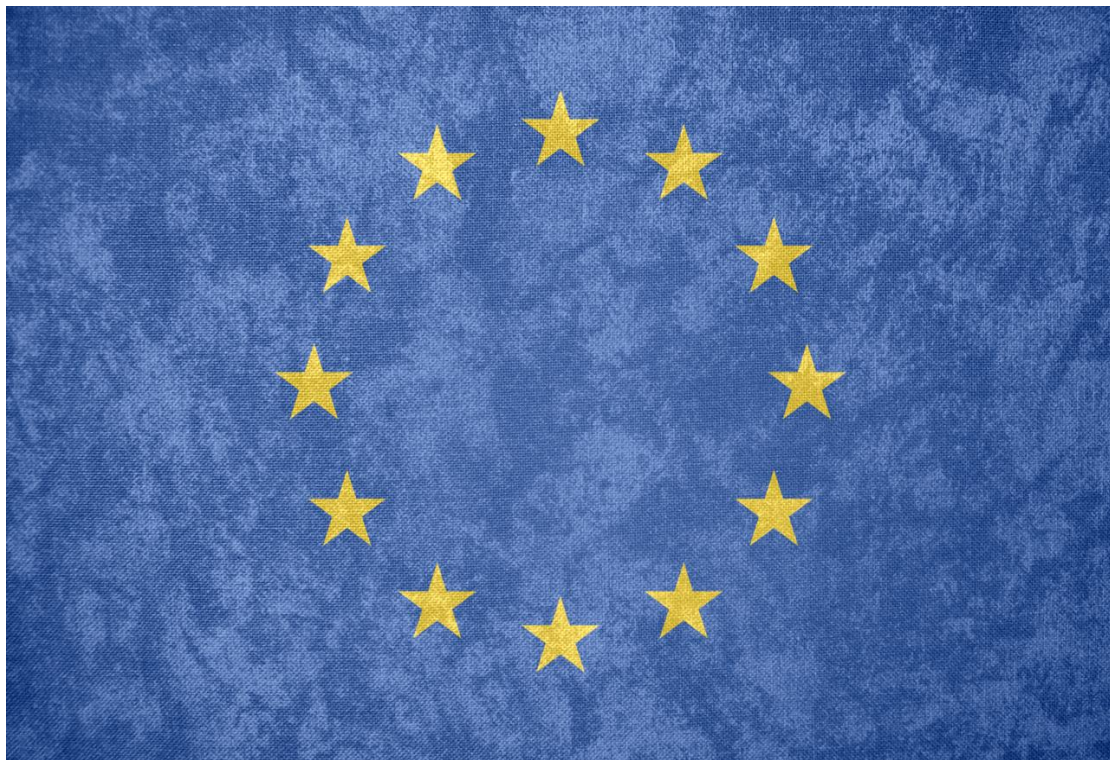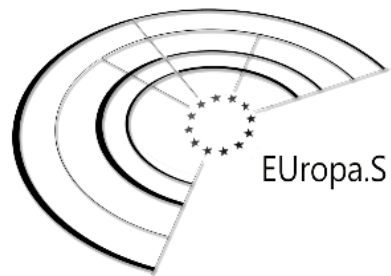
April 15th-18th| University of Piraeus
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INSTITUTE OF RESEARCH
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EUropa.S

EUropa.S 2022
European Parliament,
Transport and Tourism
(TRAN) Committee

Study Guide
Topic: *"The modernization of
the European Railway
Network"*

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Greeting of the Board

Distinguished MEPs of State or Government,

It is our utmost honor and pleasure to welcome you to EUropa.S. 2022, and more precisely, to the European Parliament in the committee of Transport and Tourism (TRAN), an institution of paramount importance, concerning political debates and decision-making at the EU-level.

The topic of our agenda: 'The modernization of the European Railway Network' is an incredibly arousing topic, given the fact that the 'European Year of Rail' was in 2021 and has created numerous concerns about the development and the improvement of the European Rail Network. Due to this, the European Railway Network is more topical than ever. We hope that you find our agenda item as interesting as we do, and we are really looking forward to fruitful debates, although always respecting diplomatic courtesy. Also, it is essential to keep in mind that the information included in the present study guide covers the period up until 12 December 2021, when it was written. As a result, you shall also be aware of potential updates regarding our topic area until the beginning of the Conference.

We are deeply convinced that your interest and passion in European Affairs will certainly emerge from your participation in EUropa.S. Taking part in this will offer you the chance to experience a real simulation of a Conference at a European Level. Moreover, we, the Board of the European Parliament, sincerely hope to give you an unforgettable experience and provide our best selves to ensure a mentally delightful experience. We will make sure that this Conference will be filled with engaging debates and surely enlightening academic advancements.

Please, do not hesitate to contact us with any questions that may occur. We remain at your disposal. It goes without saying that we are really looking forward to meeting you all and we are more than happy that EUropa.S. will be hosted again in Athens! Until then, stay healthy and take care of yourselves!

Kind regards,

The Board of TRAN Committee

Introduction to the European Parliament

The European Parliament is one of the European Union's most important institutions since it serves as a forum for political debate and decision-making at the EU level.1. It is made up of 705 members (MEPs), all of whom are Heads of State or Government, as well as the president, who represent the world's biggest transnational democratic electorate. Members of the European Parliament are directly chosen by voters in all EU member states to represent citizens' interests in the development of EU legislation and to ensure that other EU institutions operate democratically.

Historically speaking, with 142 members, the new parliament gathered for the first time on March 19, 1958, in Strasbourg as the 'European Parliamentary Assembly,' before changing its name to the 'European Parliament' on March 30, 1962. On the 7th and 10th of June 1979, it held its first elections. Since that time, the European Parliament has been steadily growing. In terms of structure, members of the European Parliament sit in political groups, which are grouped not by nationality but by political affiliation. In the European Parliament, there are now seven political factions.

The European Parliament consistently strengthens its role and has a decisive influence on the effective exercise of its responsibilities. Its basic rules of organization and operation are laid down in the Treaties. More specifically, its main responsibilities are three: at first, together with the representatives of EU governments in the Council, Parliament is responsible for adopting EU legislation. Under the ordinary legislative procedure, both institutions act as equal co-legislators. Secondly, MEPs oversee, in a democratic way, the work of EU institutions, notably the European Commission, which is the executive arm of the European Union. Finally, the Parliament exercises joint powers with the European Council on the budget of the EU[1].

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[1] *Welcome to the European Parliament* [online] available at: https://www.europarl.europa.eu/about-parliament/en [accessed at 02 November 2021]

Introduction to the Committee

The Committee on Transport and Tourism (TRAN) is a European Parliament committee. Karima Delli of the Group of the Greens/European Free Alliance, a French MEP, is the current chair. "Transport and tourism, two significant economic sectors, have enormous challenges to fulfill the climatic and environmental concerns of EU citizens," she added in her welcome remarks to the Committee's website. If the EU is to fulfill the Paris Agreement's aims, personal behavior in terms of mobility, as well as industrial and economic structures, will have to radically shift. It is critical to discover solutions for more efficient and greener transportation that is accessible to all citizens and inexpensive. It's also critical that the EU budget's financial resources contribute effectively to both improved transportation and environmental preservation." As a result, she encourages citizens to follow TRAN's activities on a regular basis and to communicate with its members in order to deepen the political conversation.

It is well known that Europe's urban population is expanding and aging. Information and communication technology for mobile devices are rapidly evolving. All of these advances have an impact on transportation in general. As a result, new transportation services and systems emerge. The goal of transportation technology is to make it more ecologically friendly. This shift puts the present transportation sector's structure and governance to the test, necessitating significant regulatory adjustments. On the 10th of May, the Rapporteur presented his draft report in response to the Commission's sustainable and smart mobility plan, which was unveiled in December 2020. While applauding the Commission's approach, the Rapporteur emphasized the need for more ambition in a number of sectors, including the deployment of zero-emission mobility in road, marine, and aviation, as well as the proposal of binding objectives for public charging infrastructure. He emphasized that synthetic fuels and clean hydrogen should be used with the 'energy efficiency first' philosophy in mind. The Rapporteur praised the EU ETS's inclusion of the marine sector and the projected reduction of free permits for the aviation sector but noted Parliament's rejection of the EU ETS's inclusion of emissions from road transport. By 2030, he stated, carbon-neutral options for planned group travel of up to 1000 kilometres should be available. The Rapporteur wants to see the transport sector's digitization advance (notably in rail).
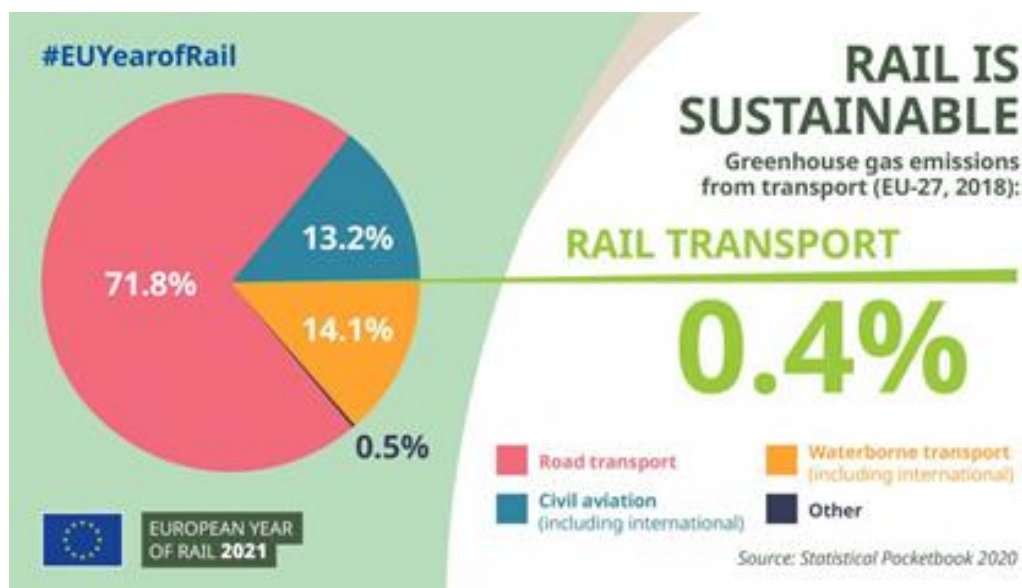
The TRAN Committee's agenda for this year's conference (EUropa.S 2022) is "The Modernization of the European Railway Network." Our objective is to improve the railway system for society and, without a doubt, to contribute to the efficient operation of a Single European Railway Area without borders. The goal of our work is to develop a unified approach to railway safety. In addition, we must provide the technological and legal framework to enable the removal of technical hurdles and serve as the system authority for ERTMS[2] and telematics applications. We also need to improve the accessibility and utilization of information about railway systems.

Introduction to the Topic

The European Year of Rail was declared in 2021, highlighting one of Europe's most sustainable, creative, and safe ways of transportation! Because it is mostly electrified, it emits significantly less CO2 than comparable road or air travel. It accounts for barely 0.4 percent of EU transportation-related greenhouse gas emissions, even though transport accounts for 25% of the EU's total emissions. Furthermore, it is the only mode of transportation that has consistently cut emissions and energy consumption between 1990 and 2017, while progressively relying on renewable energy sources:

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[2] **ERTMS:** *European Rail Traffic Management System*

Source: The European Commission, About the Connecting Europe Express.
Available at: https://www.connectingeuropeexpress.eu/about/

It may also be defined as an innovative and diverse mode of transportation, since it can be utilized not only by vacationers and commuters, but also by company owners and freight carriers who can switch to rail and save money while transporting their goods throughout Europe. It is also the safest means of ground transportation, with the fewest fatal accidents:

Historical Background

The European Parliament Historical Background [online] available at:
https://www.europarl.europa.eu/ftu/pdf/en/FTU_1.3.1.pdf [accessed at 02 November 2021]

It appears critical that we recognize the historical significance of Europe's rail transportation. The construction of railroads across Europe resulted in significant changes to the continent, and railroads continue to play an essential role in Europe to this day. Furthermore, we must keep in mind that rail transportation has a multi-phase history. Rail transportation took off in the United Kingdom, then extended across continental Europe, where each country addressed railroads in its own unique way and at various times.

The necessity for Europe's railway timetables to be coordinated and cross-border rail connections to be established was recognized early on. The history of the European timetable conferences may be traced back to 1872, according to the papers accessible.

"Before the First World War (1915-1918)"

On February 12, 1872, officials from several European governments and members from various railway organizations met in Cologne (Germany) for the inaugural timetable conference*. The railway firms of Austria, Belgium, Germany, France (Compagnie de l'Est), and Switzerland all attended this momentous meeting. The adoption of Roman numerals for the hours 0-12 was one of the collaborative decisions that was made. The Netherlands, Poland, Hungary, Romania, Spain, Portugal, and other countries quickly followed suit. The conference was formerly known as the "International Timetable Conference." It wasn't until 1897 that the "European Timetable Conference" was coined. The "European Timetable Conference" met in Bern (Switzerland) for the final time before the First World War on the 10th and 11th of June 1914. The development was put on hold for a long time due to the First World War.

The first post-war conference was again held on the initiative of the SBB in Montreux (Switzerland). The main task at this conference was to set up international connections as quickly as possible. The European Passenger Train Timetable Conferences in the 50s discussed important matters such as the creation of a unified seat reservation procedure, analysing international traffic flow and standardizing train types.

2021: European Year of Rail

The European Year of Rail will take place in 2021, highlighting one of the most environmentally friendly, innovative, and safe ways of transportation available.

Throughout 2021 around the continent, a range of activities will put rail in the limelight to stimulate the use of rail by both passengers and freight, as well as contribute to the EU Green Deal objective of becoming climate-neutral by 2050.

One of the most prominent initiatives of the European Year of Rail will be the Connecting Europe Express.

Legal Framework

Promoting Sustainable Mobility: The European Year of Rail is proposed by the Commission for 2021.

4 March 2020, Brussels

The Commission suggested today that 2021 be designated as the European Year of Rail, in order to help achieve the European Green Deal's transportation goals. Rail will be promoted as a sustainable, creative, and safe method of transportation through a range of events, campaigns, and projects in 2021. It will emphasize the benefits to people, the economy, and the environment, as well as the remaining hurdles in establishing a truly Single European Rail Area without borders.

"There's no question that railway transit offers significant gains in most areas: sustainability, safety, even speed, provided it's organized and designed according to 21st century principles," stated Commissioner for Transport Adina Vălean, when introducing today's plan. Railways, on the other hand, have a deeper significance: they not only physically connect the EU, but also psychologically. Creating a cohesive and efficient network throughout Europe is a political cohesion exercise. The European Year of Rail is not a coincidental occurrence. It arrives at an ideal time for the EU, when such a coordinated effort is required."

Legal basis and objectives

Article 100(1) of the Treaty on the Functioning of the European Union
The goal of a unified transport policy is to protect both competition and service provider independence. This involves the harmonization of technical, administrative, and safety norms, which is required for national rail system interoperability. To avoid market distortions and make it simpler for new businesses to enter the market, environmental and consumer protection rules may need to be harmonized to some extent.

In its 2011 white paper entitled 'Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system' (COM(2011)0144), the Commission set the goal of ensuring that the majority of medium-haul passenger transport is carried out by rail by 2050. In the medium term (by 2030), the length of the existing high-speed network should be tripled and a dense rail network in all Member States maintained. In the long term, a European high-speed rail network should be completed.

(A. Interoperability)

Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-European high-speed rail system[3] & Directive 2001/16/EC of the European Parliament and of the Council of 19 March 2001 on the interoperability of the trans-European conventional rail system[4] & Regulation (EU) No 913/2010[5] of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight Text with EEA relevance & Regulation (EU) No 1316/2013[6] of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010 Text with EEA relevance & Regulation (EU) 2015/1017[7] of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013 — the European Fund for Strategic Investments[5] & Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulations (EU) No 1316/2013 [8] and (EU) 2015/1017 as regards the extension of the duration of the European. Fund for Strategic Investments as well as the introduction of technical enhancements for that Fund and the European Investment Advisory Hub
COM/2016/0597 final - 2016/0276 (COD).

Through the adoption of <u>Directive 96/48/EC</u> [3]of 23 July 1996 on the interoperability of the trans-European high-speed rail system and <u>Directive 2001/16/EC</u> [4] of March 19 2001 on the interoperability of the trans-European conventional rail system, the EU began a process designed to ensure that trains can transit smoothly and safely from one Member State rail network to another. Several technical solutions (known as 'Technical Specifications for Interoperability' or TSIs) were drawn up as part of these directives.

Since 1 January 2007, national and international freight transport has been entirely open to competition. In an attempt to make better use of the international freight network and improve its interoperability, the EU mapped out nine competitive European freight corridors in <u>Regulation(EU) No 913/2010</u>[5] of 22 September 2010 concerning a European rail network for competitive freight. The objective was to make the railways more competitive in relation to other modes of transport for goods that have to cross several Member States. Regulation (EU) No 913/2010 was amended by <u>Regulation (EU) No 1316/2013</u> [6]on 11 December 2013 establishing the Connecting Europe Facility for the years 2014 to 2020. In 2015, Regulation (EU) No 1316/2013 [7] was amended by <u>Regulation (EU) No 2015/1017</u>[8] of 25 June 2015 on

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[3] Council of European Union *Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-European high-speed rail system* [online] available at: http://data.europa.eu/eli/dir/1996/48/oj [accessed at 06 November 2021]

[4] European Parliament, Directive 2001/16/EC of the European Parliament and of the Council of 19 March 2001 on the interoperability of the trans-European conventional rail system [online] available at: http://data.europa.eu/eli/dir/2001/16/oj [accessed at 08 November 2021]

[5] European Parliament, European Council *Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight* [online] available at: http://data.europa.eu/eli/reg/2010/913/oj [accessed at 09 November 2021]

[6] European Parliament, European Council, *Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010* [online] available at: http://data.europa.eu/eli/reg/2013/1316/oj [accessed at 10 November 2021]

[7] European Parliament and Council, *Regulation (EU) 2015/1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013 — the European Fund for Strategic Investments* [online] available at: http://data.europa.eu/eli/reg/2015/1017/oj [accessed at 10 November 2021]

[8] European Commission, *Regulation of the European Parliament and of the Council amending Regulations (EU) No 1316/2013 and (EU) 2015/1017 as regards the extension of the duration of the European Fund for Strategic Investments as well as the introduction of technical enhancements for that Fund and the European Investment Advisory Hub* [online] available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016PC0597 [accessed at 12 November]

the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal. The Commission proposal COM(2016)0597 sought the extension of the duration of the European Fund for Strategic Investments, as well as the introduction of technical enhancements for that fund and the European Investment Advisory Hub, and entered into force on 16 October 2017.

(B. European Railway Agency and railway safety)

REGULATION (EC) No 881/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 establishing a European Railway Agency (Agency Regulation)[9] & Regulation (EC) No 1335/2008 of the European Parliament and of the Council of 16 December 2008 amending Regulation (EC) No 881/2004 establishing a European Railway Agency (Agency Regulation) (Text with EEA relevance)[10] & Regulation (EU) 2016/796 of the European Parliament and of the Council of 11 May 2016 on the European Union Agency for Railways and repealing Regulation (EC) No 881/2004 (Text with EEA relevance) & Railway safety and signalling: Assessing the state of play of the European Rail Traffic Management System (ERTMS) deployment[11]

The European Railway Agency (ERA) – with headquarters in Lille and Valenciennes, France – was set up by means of Regulation (EC) No 881/2004[9] of 29 April 2004 with the aim of improving the interoperability and safety of the European rail network. The agency itself has no decision-making powers, but it helps the Commission to draw up proposals for decisions in the area of the European rail network and in setting common safety targets. On 16 December 2008, Regulation (EC) No 1335/2008 assigned new tasks to the ERA. On 11 May 2016, as part of the Fourth Railway Package, Regulation (EU) 2016/796 on the European Union

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[9] European Parliament and European Council *Regulation (EC) No 881/2004 of the European Parliament and of the Council of 29 April 2004 establishing a European Railway Agency* [online] available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1510915145294&uri=CELEX:32004R0881

Agency for Railways repealed and replaced Regulation (EC) No 881/2004[10], with a view to contributing to the further development and effective functioning of a Single European Railway Area, guaranteeing a high level of railway safety and interoperability, and improving the competitiveness of railways. The ERA is now the only authority with the power to issue vehicle authorisations (for locomotives and wagons) used for cross-border operations and single safety certificates for railway undertakings operating in several Member States.

Since early 2020, Parliament has been working on an initiative report entitled 'Railway safety and signalling: assessing the state of play of the European Rail Traffic Management System (ERTMS) deployment' (2019/2191(INI)). The draft report will be published shortly and will be voted on in the July 2021 plenary[11].

(C. Social harmonization)

Council Directive 2005/47/EC of 18 July 2005 on the Agreement between the Community of European Railways (CER) and the European Transport Workers' Federation (ETF) on certain aspects of the working conditions of mobile workers engaged in interoperable cross-border services in the railway sector[12] & Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of train drivers operating locomotives and trains on the railway system in the Community.

Council Directive 2005/47/EC[12] of 18 July 2005 lays down working conditions for mobile workers engaged in interoperable cross-border services in the railway sector. It is based on an agreement between the European social partners in the rail industry. Furthermore, Directive

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[10] European Parliament and European Council *Regulation (EC) No 881/2004 of the European Parliament and of the Council of 29 April 2004 establishing a European Railway Agency* [online] available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1510915145294&uri=CELEX:32004R0881

[11] *Railway safety and signalling: Assessing the state of play of the European Rail Traffic Management System (ERTMS) deployment* [online] available at: https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2019/2191(INI)&l=en [accessed at the 15 November 2021]

[12] Council of the European Union *Council Directive 2005/47/EC of 18 July 2005 on the Agreement between the Community of European Railways (CER) and the European Transport Workers' Federation (ETF) on certain aspects of the working conditions of mobile workers engaged in interoperable cross-border services in the railway sector* [online] available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32005L0047 [accessed at 15 November 2021]

2007/59/EC of 23 October 2007 aims to harmonize the minimum qualification requirements and the certification of locomotive and train drivers in the EU. It stipulates that all train drivers must hold a license and a harmonized further training certificate. On that basis, the directive provides for mutual recognition of documents. Since October 2011, certificates or licenses have been issued to drivers performing cross-border services, cabotage services or freight transport services in another Member State or working in at least two Member States.

(E. Railway noise)

Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise - Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise[13] & Communication from the Commission to the European Parliament and the Council - Rail noise abatement measures addressing the existing fleet {SEC(2008) 2203} {SEC(2008) 2204}/* COM/2008/0432 final */ & Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area Text with EEA relevance

Directive 2002/49/EC[13] of 25 June 2002 relating to the assessment and management of environmental noise provides a basis for the adoption of EU measures designed to reduce noise emissions from rail vehicles and infrastructure, leading to specific guidelines which were adopted in 2003 and entered into force in June 2006. In April 2011, a further Commission decision revised the TSIs for railway system rolling stock. On 8 July 2008, the Commission published a communication entitled 'Rail noise abatement measures addressing the existing

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[13] European Parliament and Council Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise - Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise [online] available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32002L0049 [accessed at 16 November 2021]

fleet' (COM(2008)0432), in which it set the goal of retrofitting all freight wagons by 2015. In an attempt to encourage rail companies to retrofit their wagons with low-noise brakes, Directive 2012/34/EU also provides for a new, noise-differentiated charge collection system (European Train Control System (ETCS)).

Response to the Covid-19 outbreak

Regulation (EU) 2020/698 of the European Parliament and of the Council of 25 May 2020 laying down specific and temporary measures in view of the COVID-19 outbreak concerning the renewal or extension of certain certificates, licenses and authorizations and the postponement of certain periodic checks and periodic training in certain areas of transport legislation (Text with EEA relevance)

PE/16/2020/REV/1 & Directive (EU) 2020/700 of the European Parliament and of the Council of 25 May 2020 amending Directives (EU) 2016/797 and (EU) 2016/798, as regards the extension of their transposition periods (Text with EEA relevance)

PE/14/2020/REV/1 & European Parliament legislative resolution of 17 September 2020 on the proposal for a regulation of the European Parliament and of the Council establishing measures for a sustainable rail market in view of the COVID-19 pandemic (COM(2020)0260 – C9-0186/2020 – 2020/0127(COD))

1. Temporary framework for State aid measures

In their 'Overview of the State aid rules applicable to the land transport sector during the COVID-19 outbreak', the Commission services recommend that for rail freight, in case of urgency, Member States conclude public service contracts within the meaning of the Public Procurement Directives. In addition, the general rules on services of general economic interest ('SGEI') apply. They govern the conditions under which compensation for an SGEI can be granted. Provided all requirements are respected, no notification under State aid rules is necessary.

The proposed <u>Regulation COM(2020)0260</u> aims to temporarily repeal the rules laid down in Directive 2012/34/EU (see above) by allowing national authorities and rail stakeholders to deal more easily with a number of negative consequences of the COVID-19 pandemic: waiver, reduction or deferral of track access charges for the use of rail infrastructure, as well as the waiver of reservation charges. This regulation covers a reference period up to 31 December 2020.

2. Extension of transposition deadlines

Following the severe effects of the pandemic crisis, transport undertakings and operators, and other persons concerned, may not be able to complete the necessary formalities or procedures to comply with certain provisions of Union law. <u>Regulation (EU) 2020/698</u> relates to the application of twelve legislative texts (directives and regulations) to all modes of transport, including rail, and extends the time limits laid down for the renewal or extension of certificates, licenses or authorizations, and the postponement of certain periodic checks and training. This text was adopted by Parliament in May 2020. <u>Directive (EU) 2020/700</u> extends by three months (from 16 June to 16 September) the final transposition period of Directive (EU) 2016/797 on the interoperability of the rail system within the European Union and Directive (EU) 2016/798 on railway safety, given that in 2019 only eight Member States had transposed both directives. After the outbreak of the pandemic, it is indeed unlikely that the remaining Member States would be able to complete transposition within the previously scheduled timeframe. Directive (EU) 2020/700 was adopted by Parliament and the Council in May 2020. In September 2020, Parliament adopted the proposal for a regulation 'to assist the railway sector deal with the emergency created by the COVID-19 pandemic' <u>(2020/0127(COD)</u> intended to complete the existing rail-related framework. In this way, national authorities and rail stakeholders can deal more easily with several negative consequences of the COVID-19 pandemic and respond to the urgent needs of the railway sector as long as those consequences persist.

Topic Analysis

The transformation of Europe's rail system is one of the most important issues facing the world in general, but particularly European countries. It is applicable to the following countries: Armenia, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Georgia, Greece, Lithuania, Poland, Romania, Russian Federation, Serbia, Slovakia, Slovenia and Turkey, Belarus, Latvia Moldova, Montenegro, and the former Yugoslav Republic of Macedonia have observer status. It is obvious that, as a result of the Covid-19 pandemic and the multiple lockdowns that resulted in most countries, use of the Rail Network and other modes of transportation was less common than in the pre-covid era. It does, however, continue to play a major role in the transportation of people and products both inside and outside of Europe. Rail, like other forms of transportation, can safely, quickly, and sustainably deliver and transport massive amounts of passengers and freight. The European Rail System's most significant issue is to interconnect and enhance its existing lines and networks across borders in order to achieve a high-speed rail system throughout Europe and beyond.

Benefits of High-Speed Rail

It is evident that modernizing Europe's rail system will have significant benefits and advantages for all countries involved, without exception. The first and most essential benefit is the encouragement of economic development in the areas, which leads to the enlargement and the improving access to their markets. This will increase productivity while also improving the local economy's competitiveness. We must also emphasize that not only will employment improve, but so will social welfare, which is one of the most important factors for all countries. Furthermore, it is a secure and quick mode of transportation.

Throughout Europe, there are numerous railway routes that allow individuals to travel by rail whenever and wherever they want. Countries will gain from this increased use since more people will invest in this way, boosting the country's revenue. Rail would also be considered a more convenient mode of transportation than flying, since there is almost no waiting time on trains. Traveling by rail, in instance, does not necessitate being at the station two hours

before departure, as is common when traveling by airline. Other advantages of taking the train include punctuality and reliability, great service quality and comfort, and, lastly, reasonable ticket rates when compared to flying or the entire cost of driving. Nowadays, when environmental preservation is one of the primary concerns of global civilization, it is critical to remember that rail is generally far more environmentally friendly and energy-efficient than other modes.

European Rail Infrastructure

Transport in Europe is a critical enabler of growth and a driving factor behind the internal market. The transportation industry is increasingly confronted with a number of difficulties that call into question its long-term survival, ranging from environmental protection to energy supply security, as well as economic efficiency and financial viability.
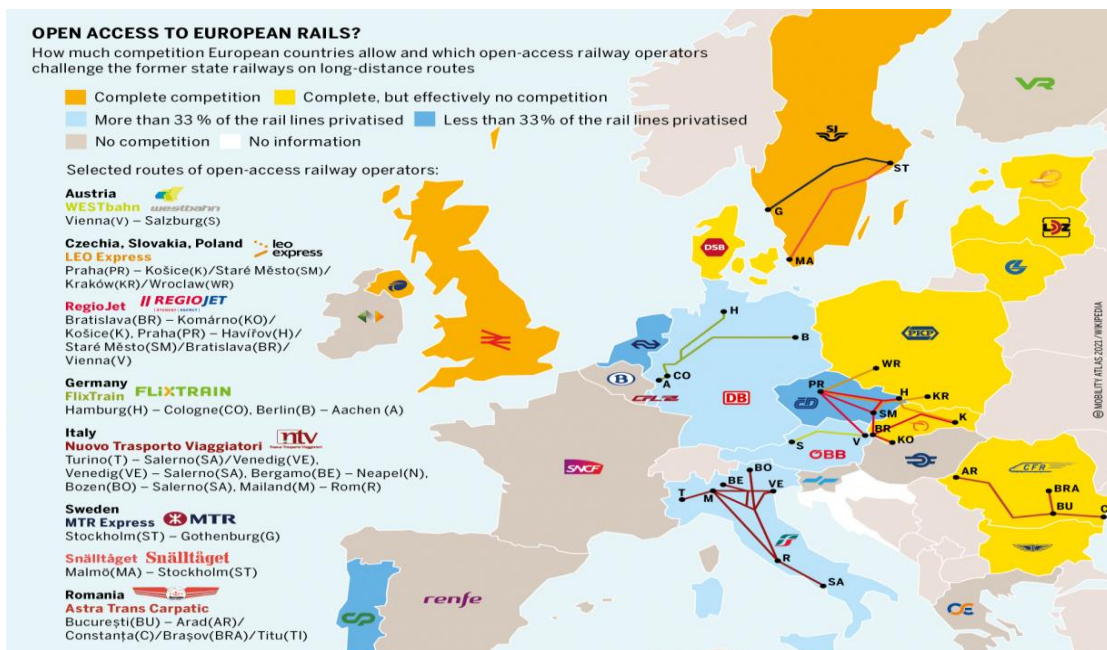
Railways, along with inland waterways and short-sea shipping, can be considered a key to the sustainable development of a more competitive and resource-efficient transport system (European Commission, White Paper (2011), particularly for medium- and long-distance travel, due to their low external and environmental costs.

Railway capacity is a complicated, multifaceted issue (McClellan (2006) [19]) that affects Rail Undertakings (RUs), Infrastructure Managers (IMs), policymakers, and, most importantly, consumers. A recent consultation for the 4th Railway Package (see EC DG MOVE – European Commission, Directorate General for Mobility and Transport (2013) [23]) revealed that rail services (mostly freight) across Europe still have reliability and punctuality issues. Customers and other stakeholders are clearly harmed by this lack of predictability, which results in a variety of hassles (as well as additional expenditures). Of course, the issue presents different characteristics across the various countries; some Member States (e.g., Greece, Romania, and Portugal) are closing several lines due to budgetary constraints, while other parts of the European network are heavily congested. Set against this background and taking also into account the forecasts of increasing rail traffic across the whole Europe from 2010 to 2030 (see for example EC DG ENER - Directorate General for Energy, EC DG CLIMA - Directorate General for Climate Action & DG MOVE (2013) [24] [25] or Sessa &

Enei (2009) [26]), some policy questions draw our attention: European transport infrastructure reflects the complexity of Europe's cross-border management tasks and its historic path dependency. Railway infrastructure is a prominent example of this [14]

European Mobility Atlas 2021

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[14] *European Partnership under Horizon Europe Transforming Europe's Rail System* (2020) [online] available at: https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/ec_rtd_he-partnerships-transforming-europes-rail-system.pdf [accessed at 16 November 2021]

The European Union (EU) as a geographical entity is a recent historical development, and the concept of a Single European Railway Area is even more recent. A European railway system is still a long way off. The settlement structure of any nation is reflected in railway infrastructure. One of the reasons for the creation of a high-speed network in France is the country's concentration on the Île-de-France and a small number of other metropolitan centres, as well as the enormous distances between them. While larger towns like Marseille, Bordeaux, and Nantes have excellent connections to Paris, there is little to no connectivity between them. Furthermore, stations on high-speed lines are frequently positioned outside of the cities for which they are intended to be served.

FUN FACT

"Until the 1980s and early 1990s, 'through coaches' (passenger cars that are re-marshalled during their journey) were a common phenomenon in European trains. Nowadays, aerodynamically optimized high-speed trains and push-pull trains outside of the high-speed lines make this concept almost impossible".
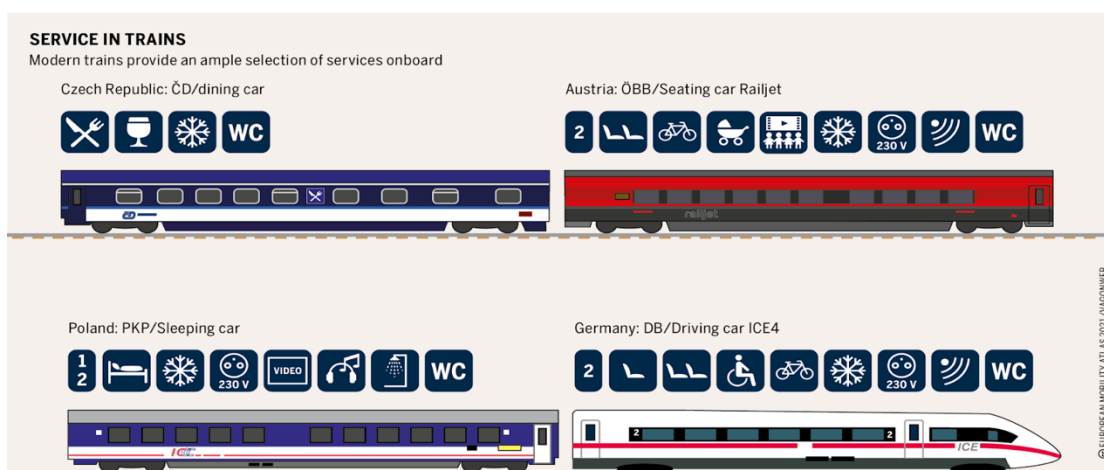
Countries like Belgium and the Netherlands, which have a population that is more evenly distributed across the country and shorter distances between highly populated places, prioritize a timetable with a higher frequency of trains above a high-speed network. Countries like the Czech Republic and other Central Eastern European countries have historically placed a greater emphasis on public transportation, resulting in a denser rail network. Germany is a hybrid of the two. In most Member States, a clock-face schedule, or a timetable system in which public transportation services operate at predictable intervals, is still a pipe dream.

Countries with a population that is more spread over the territory and with shorter distances in between more densely populated areas, such as Belgium or the Netherlands, tend to prioritize a schedule with a higher frequency of trains as opposed to a focus on a high-speed

network. Countries such as the Czech Republic or other Central Eastern European states historically had a stronger focus on public transport and therefore also a denser rail network. Germany is a mix of both systems. A clock-face schedule, a timetable system under which public transport services run at consistent intervals, is still far from reality in most Member States.

The EU's official slogan, In varietate concordia (Unity in Diversity), is also an apt representation of the European railway environment. When designing a European railway strategy, it is critical to consider the various scenarios that exist across the continent. Nonetheless, by specifying both duties and services, a complete legal framework benefits both service providers and clients.

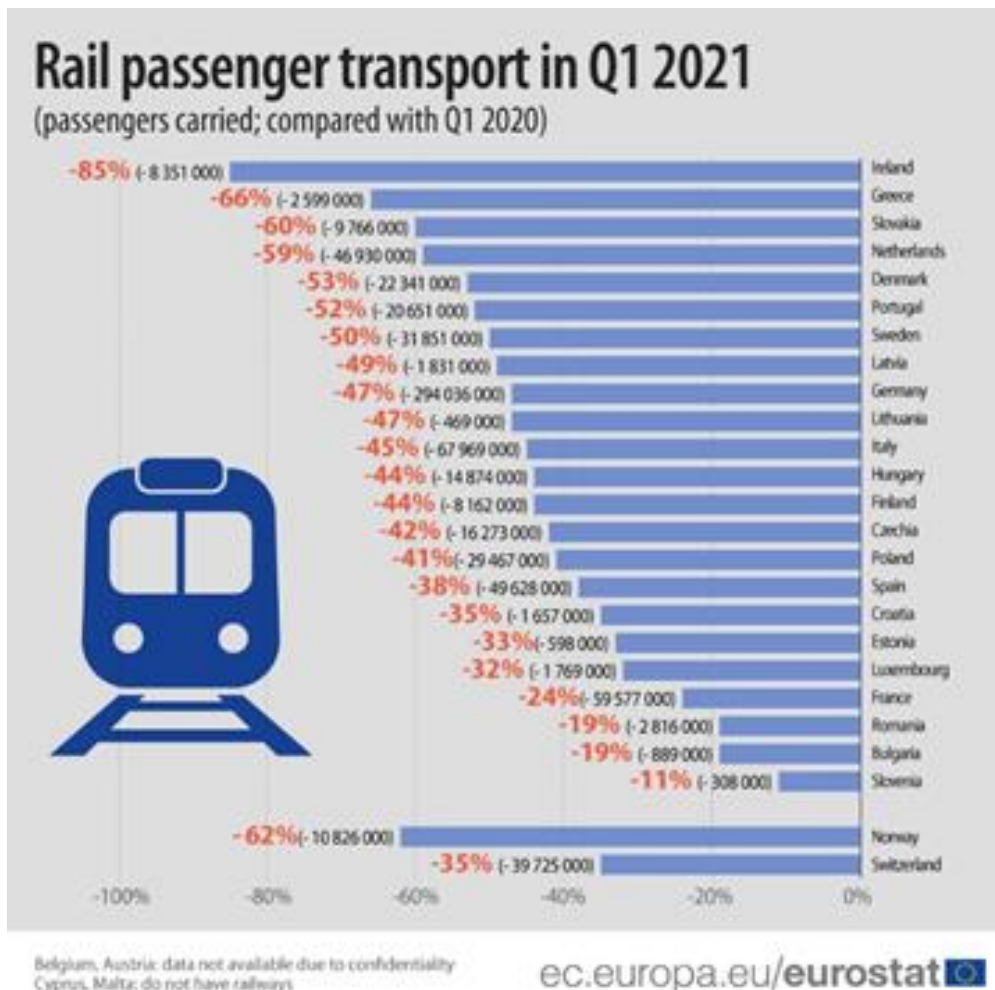## European Rail Network and Covid-19

Lockdowns in Europe have cost the train industry a huge amount of money. The number of passengers has dropped dramatically, putting a strain on rail companies. The COVID-19 situation has wreaked havoc on passenger transport, with numbers plummeting in the four most important European markets. According to Eurostat, passenger numbers in France, Italy, and Spain fell by over 77 percent year on year in the second quarter of 2020, while Germany fell by 59 percent. The decreasing number of passengers is obvious, posing an existential

threat to financially vulnerable railway operators, with potential ramifications for the EU rail sector.1

The transport sector, especially rail travel, was heavily impacted by restrictive efforts to prevent the spread of COVID-19 and changes in travel preferences. The number of train passengers in the first quarter of 2021 remained much lower than in the same quarter a year ago, when COVID-19 had yet to have a tangible impact on EU countries. Ireland experienced the greatest drop (-85%, -8.4 million passengers compared with the first quarter of 2020). Prior to the viral epidemic, it was predicted that between 2010 and 2050, passenger transportation will increase by 42 percent. During the same time, freight transportation was predicted to rise by 60%. The transport sector, on the other hand, has been heavily damaged by COVID-19: both passenger and freight transportation have suffered significant setbacks because of the crisis. Apart from the rail sector, future mobility may need to establish new measures to deal with the virus's impact. The five "R's"—resilience, return, reimagination, reform, and research—should be the focus of the authorities in the post-covid age as the critical actions the rail sector will need to address to better continue to provide services throughout future crises. Given the impact of the COVID outbreak on society, notably on transportation and mobility, the European Railway Network must incorporate innovative health and safety solutions into its overall approach to system design and operation.

Source: Eurostat, Impact of COVID-19 on rail passenger transport in Q1 2021, Available at: https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20210916-1

Challenges of the European Railway Network

Railways constitute an integral part of the EU's Sustainable Mobility Package. The European Union must work towards achieving policy that promotes sustainable and customer-oriented rail and services that motivate people to switch from road to rail. According to figures from the European Commission (EC), transportation accounts for 25% of the European Union's (EU) overall greenhouse gas emissions. Road travel contributes almost three-quarters of this, while aviation and marine transportation split most of the rest. By contrast, rail accounts for just a tiny sliver: only 0.4% of the EU's emissions. Although, some challenges are reflected in the rail sector: for example, transformation of the transport sector is crucial to achieving

Europe's climate policy objectives, particularly if it is to be the world's first climate-neutral continent by 2050: a 90% reduction in transport emissions is required by 2050. Rail can and should play a significant role as 'a game changer' in shifting to sustainable and smart mobility.[15] The rail industry needs to embark on accelerated innovation if it is to realize these opportunities by transforming itself to become the mode of choice for potential users. It will only succeed in this if it can achieve new levels of dependability, building on digitalisation, automation and the optimisation of asset use, exploiting rail's capacity to shift large volumes of passengers and freight speedily and safely as part of a wider European mobility system, assuring competitive good value to its customers.[16] European Rail Network Systems are designed to deliver widely recognized safe, resilient, reliable, and sustainable mobility but generally have systems that may impede flexible adaptation to the evolving needs of its end-users and new market opportunities. Moreover, they are not yet widely recognized for the extent to which they have embraced digital opportunities, consequently making a career in the railway sector less attractive to those with the relevant skills. **Environmental sustainability**: With a significant part of emissions coming from mobility, pursuing sustainable mobility is essential. As the railway is the cleanest mode of transport, promoting modal shift towards rail will support the reduction of emissions. It can be mentioned that **digitalisation** must be the basis and the key for a more effective Railway Network System, given the fact that a fully connected and at the same time integrated digital railway will accelerate the implementation of an efficient asset management. As concerned the digitalisation of engineering, operations and maintenance activities will also reduce the overall cost of the system.

European Green Deal and Modernization of European Railway Network

It is clear: "*there is no "Green Deal " without rail*" as stated by the Chair of UNIFE (after the French name: Union des Industries Ferroviaires Européennes, in English: Union of European

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[15] Philipp Cerny (2021) *Rail: The Challenges of a Single European Railway Area* [online] available at: rail-the-challenges-of-a-single-european-railway-area [accessed at 10 November 2021]

[16] Sergio Matalucci (2021) *EU launches Year of Rail campaign amid drop in passenger numbers [online]* https://www.dw.com/en/eu-launches-year-of-rail-campaign-amid-drop-in-passenger-numbers/a-56234174 [accessed at 12 November 2021]

Railway Industries) recently. The rail sector is committed to this ambition: by accompanying the transition towards a lower carbon footprint, with other modes of transport by offering integrated, complementary, and connected services, and by enhancing the sector's commitment to a circular economy-based rail system. Therefore, rail systems must provide climate resilient services for their users. The rail sector will lead the transition towards integrated, digital, autonomous, sustainable mobility across Europe and towards global competitiveness. Making Europe the first climate neutral continent in the world and making transport sustainable for all should be the main priorities for all the transport authorities and companies. Sustainability is a key transportation factor as Europe seeks to realize its net-zero goals.

The European Commission defined 2021 as the European Year of Rail to help shift passenger and freight transport from road to rail, and to highlight rail as a sustainable, smart, and safe means of transport. It also launched the Sustainable and Smart Mobility Strategy which lays the foundation for how the EU transport system can achieve its green and digital transformation and become more resilient to future crises. The strategy includes ambitious targets for rail, such as doubling high speed rail traffic by 2030 and tripling it by 2050.[17]

In-sights targets

By 2030 the European railways must be encouraged to reduce their specific average CO_2 emissions from train operation by 50% compared to the 1990 base year, measured per passenger-km (passenger service) and tonne-km (freight service). In addition, by 2030 the European railways will not exceed the total CO_2 emission level from train operations in absolute terms even with projected traffic growth compared to the 1990 base year. Furthermore, the European railways will strive towards carbon-free train operation **by 2050** and provide society with a climate neutral transport alternative.

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[17] European Commission *Delivering the European Green Deal* [online] available at: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en [accessed at 16 November 2021]
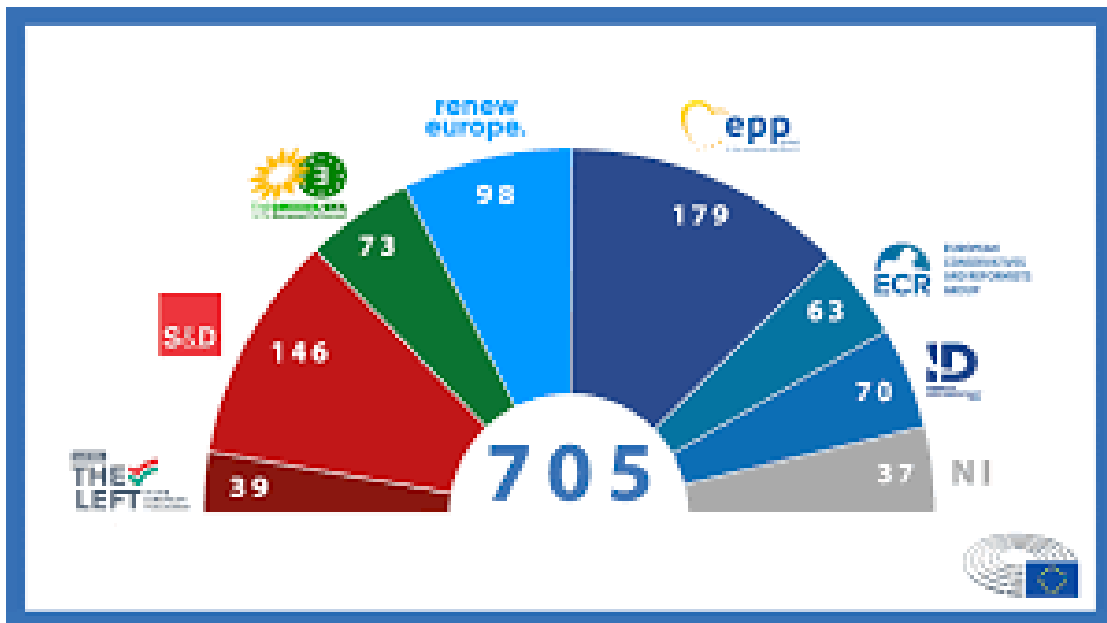
CO₂ emissions

1990 – -30% → 2020 – -50% → 2030 – -100% → 2050

By **2030** the European railways will reduce their specific final energy consumption from train operation by 30% compared to the 1990 base year, measured per passenger-km (passenger service) and tonne-km (freight service). The European railways will strive towards halving their specific final energy consumption from train operation **by 2050** compared to the 1990 base year, measured per passenger-km (passenger service) and tonne-km (freight service).

Parties[18]

Source: European Parliament, Parliament's seven political groups, Available at:
https://www.europarl.europa.eu/news/en/headlines/eu-affairs/20190612STO54311/parliament-s-seven-political-groups

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[18] *The Political groups of the European Parliament* [online] available at: https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/organisation/political-group [accessed at 05 November 2021]

The European People's Party

The EPP Group is the largest and oldest group in the European Parliament. A center-right group, which is committed to creating a stronger and self-assured Europe, built at the service of its people. Their goal is to create a more competitive and democratic Europe, where people can build the life, they want. On that note, MEPs of the EPP are advocating for the adopted legislative framework on emission reduction targets, recognizing the significance of the incentivizing of manufacturers having reached the demanding EU standards. In addition to that, ever since the presentation of Mobility Package 1 the EPP has been one of its cordial supporters, acknowledging the initiative's role as the cornerstone of the canonization of the EU road transportation sector. However, as mentioned by the EPP Group's Spokesman on Transport and Tourism, Wim van de Camp: "The EPP Group will judge the Mobility Package proposals by their potential to reduce administrative burdens for entrepreneurs and protect the millions of jobs that depend on an open and competitive transport sector.

Progressive Alliance of Socialists and Democrats in the European Parliament

The S&D Group stands for an inclusive European society based on principles of freedom, equality, solidarity, diversity, and fairness. Our MEPs are committed to fighting for social justice, jobs and growth, consumer rights, sustainable development, financial market reform and human rights to create a stronger and more democratic Europe and a better future for everyone. In today's times of crisis, the S&D Group's priority is to fight unemployment and ensure that our societies and markets become fairer. We want to give people back trust in the EU and hope for their future. These principles inspire our daily work, in the European Parliament and beyond. The Group of the progressive Alliance of Socialists and Democrats in the European Parliament abstracted: At last, we will have a European Rail transport system with a human face, where all travellers, including people with reduced mobility, will have the right to be assisted and protected in case of delays, cancellations, or discrimination. This was our goal as progressives, and we are proud to have worked to make this happen all across Europe. Last but not least the S&D coordinator in the European Parliament's transport committee, Johan Danielsson MEP, added: "In order to reach our climate goals, we need to

achieve a modal shift, where more goods and passengers are transported by rail. At present, rail passengers hardly have any rights at all, which makes the shift to rail difficult. "Strengthening the rights of rail passengers is essential to make train journeys more attractive and competitive. "Therefore, I am pleased that we finally have an agreement. The provisions guarantee safer and easier travel for rail passengers, including persons with reduced mobility, and will therefore facilitate travel by rail for all Europeans."

Renew Europe

For this political group, Europe is the future and is well worth fighting for. According to their beliefs, the European Union has the chance to renew itself and be able to deliver on the bigger issues, deliver on the expectations of its citizens and deliver tangible added value enabling them to understand how it positively affects their lives.

José Ramón BAUZÁ DÍAZ (Ciudadanos, Spain), spokesperson for Renew Europe in the Parliamentary Transport Committee for this dossier, declared: "Today, in the European 2021 Year of Rail, we move towards a better and stronger European rail transport. The Renew Europe Group has achieved a crucial milestone for the millions of passengers who travel by train every year. EU rail transport passengers and operators and have been heavily hit by the COVID-19 outbreak. Therefore, strengthening the rail passengers' rights and obligations is essential to restore demand and improve the transport sector".

The Greens - European Free Alliance

The Greens/EFA parliamentary group was established in 1999, when two progressive European political families - The Greens and the European Free Alliance (EFA) - agreed to join forces in the European Parliament. Being the fourth largest group in the European Parliament, it consists of 73 Members and their goals are: to work for an integrated and extended railway network as a central part of a fossil-free European transport system. 2021 is the European Year of Rail, which should be the year the whole European Union finally sees political action concerning the green transformation of Europe. According to Greens/EFA, the pandemic gives the European Union an unprecedented opportunity for change. Given the fact

that the world experiences a crisis, the chances of making the transformation towards a circular economy with a sustainable transport system will be greater.

European Conservatives Reformists

The European Conservatives and Reformists Group was created in 2009 as a center-right political group in the European Parliament. It has 64 MEPs, and one of its key beliefs and ambitions is to provide a sustainable, clean energy supply with a focus on energy security. The significance and importance of rail transport in European regions was discussed by ECR Group COTER Deputy Coordinator Jarosaw Stawiarski, President of the Lubelskie Region (Poland), and ECR Group Vice-President Marco Marsilio, President of the Abruzzo Region (Italy) on November 17, 2021. They highlighted the significance of the European Year of Rail 2021 as a platform for promoting rail as a future mode of transportation. They also mentioned the need for more financing to improve railway competitiveness and help develop a strong market position, as well as to improve passenger comfort and reduce trip time. Infrastructure expenditures for railway modernization, according to their speech, are quite costly, but they are also very justified by the long-term economic and environmental benefits[19].

The Left in the European Parliament/Nordic Green Left

GUE-NGL is strongly in support of complete decarbonization and a full transition to renewable energy, as it is fully dedicated to the goals set out in the Paris Agreement. The CO2 emissions targets set out in the Mobility Package, according to GUE-NGL, may be ambitious, but they may be dictated by lobbies and do not serve the requirements of the earth. Instead, GUE-NGL emphasizes the importance of a more ambitious plan to boost renewable energy sector innovation. GUE-NGL also emphasizes the importance of more efficient modes of

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[19] European Conservatives and Reformists Group, Jarosław Stawiarski and Marco Marsilio on the importance of rail transport for EU regions [online] Available at: https://www.ecrcor.eu/news/413-jaroslaw-stawiarski-and-marco-marsilio-on-the-importance-of-rail-transport-for-eu-regions [accessed at 12 January 20

transportation and networks, such as rail and sustainable waterways. Finally, GUE-NGL is a strong supporter of integrating the principle of "polluter pays" within EU policies[20].

Conclusion

Indeed, the European Railway Network constitutes one of the key-elements for European countries and not European ones. It is undeniable that the effective flow of goods and people is a significant part of European integration. The ongoing plans in several member states to maintain, reactivate, upgrade, and construct conventional and high-speed tracks is a good start, but needs to be boosted. There is room for improvement in all sectors. Investments in infrastructure for cross-border links, initiatives for a eco-friendlier and more sustainable railway Network and measures to re-establish the value of the European Railway lines in the post-Covid era should be the main priorities for all governments in order to strengthen their transport sector. European Railway reform should be based on the cooperation of all interested States.

Questions raised

1. How can the EU achieve the complete electrification of the EU-wide?

2. In what ways can the European Railway Network become more sustainable and eco-friendlier?

3. What do you think are the main aspects and benefits of the European Railway Network?

4. What is the key to promote and establish the sustainability objective?

5. How can digitalization play an essential role in order to modernize the transport system?

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[20] *The Political groups of the European Parliament* [online] available at: https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/organisation/political-group [accessed at 05 November 2021]

6. Measures to re-establish the value of the European Railway Network in the post-Covid 19 era.

7. What is the efficiency of the currently established emission reduction targets of the EU transportation sector?

8. In what ways can transportation across Europe evolve?

9. In which ways can the EU eliminate its total GHG emissions in the maritime transportation sector?

10. What is your vision on decarbonizing road transport?

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