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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**Greening Freight Transport**

## 1. Introduction

Freight transport is the backbone of our single market and an enabler of our trade with the rest of the world. From the transport of raw materials to the delivery of parcels to our door, logistics chains drive economic growth and job creation, generating new opportunities for EU businesses, while offering consumers a wide choice of products and transport services.

As our economy grows, freight volumes are projected to rise. And as transport of freight accounts for over 30% of transport CO<sub>2</sub> emissions<sup>1</sup> and is an important source of air pollutant emissions<sup>2</sup>, the decarbonisation of freight is vital to us delivering on our climate and environmental objectives as set out in the European Green Deal. This is why the Sustainable and Smart Mobility Strategy<sup>3</sup> made “Greening Freight” one of its flagship initiatives.

The Sustainable and Smart Mobility Strategy is our roadmap to making all transport modes more sustainable, making sustainable alternatives widely available in a multimodal transport system, and putting the right incentives in place to drive the transition. The Zero Pollution Action Plan<sup>4</sup> further underscored the need to invest in more sustainable transport and mobility to deliver on the zero pollution ambition. The Commission has already put forward several initiatives to support the greening of freight transport, with a focus on making each transport mode more sustainable in terms of vehicle efficiency and emissions, using sustainable fuels and making available the recharging and refuelling infrastructure needed to decarbonise transport across modes (Fit for 55 package). A further focus is on ensuring that our TEN-T infrastructure is fit for our environmental objectives (Efficient and Green Mobility package).

However, more can and must be done, and that is the focus of the initiatives in the Commission’s Greening Freight Package. Unnecessary regulatory obstacles continue to undermine the efficiency of European freight, limiting the scope for emissions reductions. Improving operational efficiency, both within the modes and at the system level, is therefore one of the cost-effective methods to greening freight transport. The ambition of shifting to more sustainable and energy-efficient forms of transport such as rail and inland waterways by boosting their attractiveness is key to ensuring a more future-proof freight transport. Under the right conditions, digitalisation can create a win-win solution: improving performance and working conditions while reducing negative environmental impacts<sup>5</sup>.

Russia’s war of aggression against Ukraine has further heightened the urgency of decarbonising European freight transport, which still largely relies on fossil fuels. Improving its operational efficiency will help make the transport sector more resilient in terms of resources and will consequently do the same for our single market. The Commission will continue to focus on cutting freight transport’s reliance on fossil fuels, by, for instance, shifting to zero- and low-emission vehicles, vessels and planes, while also promoting the

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<sup>1</sup> Estimate based on PRIMES model, developed and maintained by E3Modelling.

<sup>2</sup> Estimate based on PRIMES model, developed and maintained by E3Modelling.

<sup>3</sup> 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](#)).

<sup>4</sup> COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Pathway to a Healthy Planet for All EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil' ([COM/2021/400 final](#)).

<sup>5</sup> For example, the European Green Digital Coalition has developed a methodology to assess the net environmental impact of digital solutions in transport (<https://www.greendigitalcoalition.eu/>).

removal of bottlenecks in various transport modes and encouraging the increased use of more energy-efficient solutions. The recent crises have shown that logistics operators can adapt relatively quickly to unexpected circumstances. However, it has also become clear that flexibility depends on many factors, including interconnectivity between transport modes, existing infrastructure capacity and coordination through logistics chains to optimise transport flows, as well as an appropriately skilled labour force. Flexible inter- and multimodality is key to achieving a resilient transport system capable of better responding to future crises.

The Greening Freight Package and other upcoming initiatives planned to be put forward by the Commission aim at improving the performance of freight transport by introducing measures to increase its efficiency and overall sustainability. They will strengthen the attractiveness and competitiveness of greener freight transport options, while promoting more sustainable transport choices.

More precisely, in addition to this Communication, the Greening Freight Package consists of three legislative proposals adopted by the Commission on 11 July 2023:

- The revision of the Weights and Dimensions Directive (96/53/EC);
- A draft Regulation on the use of railway infrastructure capacity in the Single European railway area;
- A draft Regulation for a harmonised framework for greenhouse gas emissions accounting of freight and passenger transport services (CountEmissionsEU);

and

- the revision of the Combined Transport Directive (92/106/EEC), planned for adoption later this month.

This Communication explains how these measures fit within the existing policy framework and with other upcoming proposals mentioned below, such as the revision of the River Information Services Directive or the revision of the Train Drivers Directive. All are geared towards putting in place the necessary infrastructure and vehicles as well as rules, financial support and incentives, while highlighting the critical role of transport workers in this historic transition.

## **2. Overall trends in European freight transport**

Freight transport activity in the EU in 2021 accounted for more than 3 400 billion tonne-kilometres (tkm)<sup>6</sup>. Between 2010 and 2021, road and maritime transport grew by 19.5% and 11.8 % respectively, while the overall freight transport activity growth was 13 %. Over the same period, rail and inland waterways saw a 9.2 % increase and a 12.4 % drop respectively in tkm<sup>7</sup>.

The freight modal split has only moderately changed over the last decade<sup>8</sup>. One of the reasons behind today's modal composition is structural economic change in our single market, such

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<sup>6</sup> This figure includes intra-EU air and sea transport but not transport activities between the EU and the rest of the world.

<sup>7</sup> Air freight transport accounted for 2.4 billion tkm in 2021, growing about 29 % from 2010.

<sup>8</sup> Maritime transport largely dominates extra-EU freight. Road represents half of the modal split for intra-EU freight, while the modal share of rail freight has decreased marginally from 12.4% in 2010 to 11.9 % in 2021. The (low) share of inland navigation also decreased from 5.1% to 4%.

as the declining importance of heavy industry in the EU, the rise of e-commerce, and the increased reliance of industrial actors on just-in-time deliveries which require fast, direct and reliable solutions. Ensuring seamless connections between different modes is therefore more important now than ever before, so that projected growth in freight transport goes as much as possible via sustainable options – in this way also reducing congestion on our roads and generating savings to society of the costs associated with it<sup>9</sup>.

Moreover, the completion of the Single European Rail Area is taking time, and while remarkable progress has been made, in particular to open up rail freight markets to competition, interoperability issues still hold back significant growth. On the operations side, more flexibility in rail capacity planning and allocation is necessary to be able to respond to the specific needs of freight transport. In addition, the availability and quality of infrastructure is not yet what is needed for the single market to function as it should; the diverging implementation of infrastructure standards is preventing the operation of higher-capacity freight trains and some notable gaps remain, such as cross-border missing links and lack of transshipment terminals. Addressing these gaps would also make the rail sector more resilient in the event of crises<sup>10</sup>.

Europe's freight transport sector has already had to step up its resilience in recent years. Put in place only a few days after the start of the COVID-19 pandemic in Europe, the Green Lanes ensured uninterrupted transport services, and limited disruptions to EU-wide supply chains<sup>11</sup>. In doing so, they reduced the impact of COVID-19 restrictions and supported economic recovery while protecting transport workers' health and safety. EU airports also served as hubs for the distribution of COVID-19 vaccines across the Union and beyond<sup>12</sup>. Climate change and extreme weather events such as droughts, heatwaves and floods have also put severe pressure on the operation of various forms of freight transport.

Russia's war of aggression against Ukraine has further tested the resilience of European freight. At the same time, the sector responded robustly and successfully to the call for help from Ukraine after Russia blockaded its Black Sea ports. Thanks to the joint efforts by EU Member States, Ukraine, Moldova, international partners and the Commission, the Solidarity Lanes<sup>13</sup> have become a lifeline for Ukraine's economy and global food security, and the backbone of new connectivity with the EU. This connectivity is here to stay.

Looking forward<sup>14</sup>, freight transport activity is projected to grow by around 25% by 2030 and 50% by 2050, compared with 2015<sup>15</sup>. This projected growth represents a significant challenge from an environmental point of view due to emissions of GHG, air pollutants and noise unless freight transport is made more sustainable.

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<sup>9</sup> For instance, congestion costs for road transport are estimated at EUR 230 billion per year, or 1.8% of EU GDP. Source: [SWD\(2020\) 331 final](#).

<sup>10</sup> For example, this would ensure that alternative rail services can be more easily set up in the event of disruptions similar to the Rastatt incident of summer 2017. On 12 August 2017, the collapse of the Rastatt tunnel in Germany disrupted international rail freight traffic, closing the line until October 2017. A study carried out by stakeholder associations has estimated the losses at some EUR 2 billion.

<sup>11</sup> COMMUNICATION FROM THE COMMISSION on the implementation of the Green Lanes under the Guidelines for border management measures to protect health and ensure the availability of goods and essential services ([C\(2020\) 1897 final](#)).

<sup>12</sup> Brussels Airport served as a hub for distribution of Pfizer vaccinations to Europe and worldwide.

<sup>13</sup> COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS An action plan for EU-Ukraine Solidarity Lanes to facilitate Ukraine's agricultural export and bilateral trade with the EU ([COM/2022/217 final](#)).

<sup>14</sup> According to developments under current trends and policies (i.e. the baseline scenario).

<sup>15</sup> Estimates based on PRIMES model, developed and maintained by E3Modelling.

### 3. Recent steps to make freight transport more sustainable

The 2020 Sustainable and Smart Mobility Strategy is an ambitious roadmap for putting European transport firmly on the right track for the future. It sets a number of milestones on the path towards sustainable mobility, including for freight transport, such as increasing rail freight traffic by 50% by 2030, doubling rail freight traffic by 2050, and increasing transport by inland waterways and short sea shipping by 25% by 2030 and by 50% by 2050<sup>16</sup>.

Since the launch of the Sustainable and Smart Mobility Strategy in December 2020, the Commission has already delivered. The **‘Fit for 55’** package of 2021 put in place policies that will make individual modes more sustainable. Agreement between the co-legislators has been reached to promote the uptake of sustainable fuels in aviation (REFuelEU Aviation)<sup>17</sup> and in maritime transport (FuelEU Maritime)<sup>18</sup>. The agreement on the Alternative Fuels Infrastructure Regulation<sup>19</sup> sets a minimum floor of recharging and hydrogen refuelling stations along the trans-European transport network (TEN-T) and in its urban nodes. Safe and secure parking areas, which are also suitable for recharging times, are key in this regard and the Commission reiterates the need for ambition to develop such safe and secure parking areas alongside the TEN-T network. In addition, the agreement on the **Renewable Energy Directive**<sup>20</sup> introduces more ambitious targets for the transport sector<sup>21</sup>.

Furthermore, the proposed CO<sub>2</sub> standards for heavy-duty vehicles<sup>22</sup> as well as the proposed **new Euro 7 emission standards**<sup>23</sup> will ensure that CO<sub>2</sub> and other pollutant emissions from newly sold vehicles used for freight transport will be significantly lowered. In addition, the new Euro 7 emission standards will tackle pollutant emissions from brakes and tires, contributing further to achieving the new stricter air quality standards proposed by the Commission, notably in cities.

The need to put in place modern transport infrastructure and relevant traffic management systems was addressed in the proposal to review **the TEN-T Regulation**<sup>24</sup>. For instance, the Commission has proposed to improve network quality standards, e.g. through the inclusion of a new infrastructure standard for the rail loading gauge (P400) and through operational targets for rail freight transport. European Rail Traffic Management System (ERTMS) deployment will be accelerated and should be completed by 2040, so that freight trains can

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<sup>16</sup> Compared to 2015.

<sup>17</sup> Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on ensuring a level playing field for sustainable air transport ([COM/2021/561 final](#)).

<sup>18</sup> Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the use of renewable and low-carbon fuels in maritime transport and amending Directive 2009/16/EC ([COM/2021/562 final](#)).

<sup>19</sup> Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council ([COM/2021/559 final](#)).

<sup>20</sup> Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652 ([COM/2021/557 final](#)).

<sup>21</sup> The agreement gives the possibility for Member States to choose between a binding target of 14.5% reduction of GHG intensity in transport from the use of renewables by 2030 or a binding share of at least 29% of renewables within the final consumption of energy in the transport sector by 2030.

<sup>22</sup> Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) 2019/1242 as regards strengthening the CO<sub>2</sub> emission performance standards for new heavy-duty vehicles and integrating reporting obligations, and repealing Regulation (EU) 2018/956 ([COM/2023/88 final](#)).

<sup>23</sup> Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on type-approval of motor vehicles and engines and of systems, components and separate technical units intended for such vehicles, with respect to their emissions and battery durability (Euro 7) and repealing Regulations (EC) No 715/2007 and (EC) No 595/2009. ([COM/2022/586 final](#)).

<sup>24</sup> Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Union guidelines for the development of the trans-European transport network, amending Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013 ([COM/2021/812 final](#)).

easily cross borders. The TEN-T core network corridors and the Rail Freight Corridors would be merged into nine ‘European Transport Corridors’ so that infrastructure planning meets the day-to-day operational needs of rail freight. For inland waterways transport, the TEN-T revision introduces the concept of ‘good navigation status’, so that Member States ensure minimum standards for European waterways based on reference water levels for a defined number of days per year, while avoiding or mitigating environmental impacts and taking into account the objectives of achieving good water status under EU law.<sup>25</sup> The TEN-T revision also calls for more transshipment terminals and includes targets for ensuring sufficient terminal capacity, so that all modes can work together more effectively.

The development of the TEN-T has been supported by the Connecting Europe Facility (CEF), the Cohesion policy and since 2021 also the Recovery and Resilience Facility (RRF). In the 2014-2020 period, CEF Transport contributed EUR 23 billion in EU grant support to transport infrastructure projects. In the 2021-2027 period, CEF Transport has already allocated EUR 13.1 billion of the total EUR 25.6 billion budget available. The great majority of the supported projects concerns sustainable modes of transport, such as railways, maritime transport and inland waterways, as well as alternative fuels infrastructure and intelligent traffic management systems. Overall, approximately 80% of CEF Transport funding contributes to the EU’s climate objectives in line with the Green Deal. In the 2021-2027 period, cohesion policy has allocated EUR 25.1 billion to supporting TEN-T – more than two-thirds of which to sustainable modes of transport.

Progress has also been made to make sure that the ‘polluter pays’ and ‘user pays’ principles are implemented without delay in all transport modes. This should ensure a level playing field between modes and build the business case for freight operators to choose the most sustainable transport option. In this regard, the revised **Eurovignette Directive**<sup>26</sup> now in force is enabling more efficient and greener road charging rules. Under the proposed revision of the **Energy Taxation Directive**<sup>27</sup>, the Commission has also proposed updated taxation rules for motor fuels that take into account their environmental performance. Furthermore, the extension of the **EU Emissions Trading System (ETS)** to the maritime and road transport sectors will ensure that the cost of the CO<sub>2</sub> emissions is reflected in the final cost of these services, while the updated ETS rules for aviation will accelerate the implementation of the polluter pays principle by phasing out free allowances for the sector by 2026.

#### 4. Further measures to green freight transport

Despite the actions taken to date, freight transport still faces unnecessary regulatory obstacles and is let down by market failures. This also slows down decarbonisation and reduction of pollution in the freight transport sector. The measures put forward by the Commission to green freight transport address these inefficiencies at both modal and system level. Thanks to a number of important supporting measures summarised below, the quality and availability of sustainable transport services will improve – to the benefit of all.

##### *4.1 Improving the operational efficiency of individual modes*

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<sup>25</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

<sup>26</sup> Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures and Directive (EU) 2022/362 amending Directives 1999/62/EC, 1999/37/EC and (EU) 2019/520, as regards the charging of vehicles for the use of certain infrastructures.

<sup>27</sup> Proposal for a COUNCIL DIRECTIVE restructuring the Union framework for the taxation of energy products and electricity (recast) (COM/2021/563 final).



Around 50% of volumes transported by **rail freight** are moved across borders (compared to 7% of passenger traffic)<sup>28</sup>, giving the sector a clear European dimension. However, current rules governing network capacity management and allocation do not work well and are particularly unfavourable to cross-border and freight traffic. In broad terms, the current process is annual, national and manual. The reliance on an annual timetabling exercise does not respond to the needs of different rail customers: stable timetables, early booking of tickets for passengers and flexible train runs adapted to just-in-time supply chains for freight shippers. The national focus and lack of cross-border coordination often results in cross-border trains, many of which are for freight, wasting time at the border, while uncoordinated maintenance works on the national networks disrupt traffic more than necessary. Finally, the use of interoperable digital tools to manage capacity and exchange between infrastructure managers and rail undertakings is still limited.

The Regulation on Rail Freight Corridors<sup>29</sup> was intended to address some of these shortcomings, but its evaluation<sup>30</sup> showed that network capacity cannot be managed efficiently by distinguishing corridors from the rest of the network and by considering freight and passengers separately. Thus, the Commission is now proposing **measures to better manage and coordinate international rail traffic**<sup>31</sup>, revising the entire framework for capacity management and consolidating it into one single legal text. Building on the industry-led Timetable Redesign project, the proposal will provide infrastructure managers with greater flexibility for both longer-term strategic planning and shorter-term allocation of capacity. The result will be more efficient utilisation of rail capacity for all types of traffic. Cross-border coordination will also be improved, as infrastructure managers will be required to establish common principles and procedures and consult all relevant stakeholders via structured processes. Greater use and interoperability of digital tools will be promoted. Different types of train services can co-exist on the rail network, but this needs proper management and cooperation. The Commission's proposal will improve cross-border coordination in particular, thereby facilitating the setting up of new cross-border services including passenger night trains connecting Europe's capitals and regions, and long-distance freight services.

The proposal is expected to improve train punctuality and the reliability of rail services, and to reduce the negative impact of infrastructure works on rail traffic. By attracting higher volumes of freight to rail, it will also bring positive environmental impacts, by improving energy efficiency and reducing greenhouse gas and pollutant emissions, road accidents and congestion.

Revising the rules on the **certification of train drivers** will also support better use of capacity by rail freight. By further harmonising training and certification requirements across the EU, the revision will improve the mobility of train drivers across borders and encourage the uptake of digital technologies. The current rules often require trains to switch drivers at national borders; these additional border stops impact on efficiency, preventing optimum use of rail capacity, increasing journey time and the cost of cross-border rail, while also undermining resilience to disruption within the system.

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<sup>28</sup> In 2019.

<sup>29</sup> Regulation (EU) 913/2010 of 22 September 2010 concerning a European rail network for competitive freight.

<sup>30</sup> Evaluation of 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 - Publications Office of the EU (europa.eu).

<sup>31</sup> COM(2023) 443.

The **deployment of digital automatic couplings (DAC)** will be a game-changer for European rail freight. DAC has the potential to support faster and heavier trains. It can reduce terminal turnaround times and thereby free up infrastructure capacity, while also ensuring more accurate freight localisation through its digital dimension, which is essential to enable better planning of logistics operations. DAC is thus expected to bring substantial benefits for the sector as a whole, in terms of both better capacity and lower costs. It is now time for the rail freight sector and Member States, with the support of the relevant EU financial institutions, to find new funding resources to make DAC a European reality. The EU has already mobilised research and innovation funds to support the development of DAC – most notably via the European DAC delivery programme run by Europe’s Rail Joint Undertaking. National promotional banks, commercial banks and possibly institutional investors (e.g. pension funds, insurers) could be mobilised to support investment needs, while the European Investment Bank has made investing in rail one of its priorities, including the deployment of new technologies. The Commission, with the help of Europe’s Rail Joint Undertaking, is developing a comprehensive migration strategy to coordinate deployment.

Like rail freight, and as underscored by the NAIADES III Action Plan<sup>32</sup>, **inland navigation** also needs a serious boost. Digitalisation is key to improving the efficiency, reliability and competitiveness of navigation and traffic management, and also to better integrating the sector into broader multimodal chains, and lowering emissions. At the same time, the further development of inland navigation needs to take into account relevant EU environmental rules with an impact on inland waterways. While **the River Information Services Directive (RIS Directive)** has increased the operational efficiency of inland waterway services by harmonising them at the EU level, there is still room for improvement. The degree of harmonisation achieved differs between RIS technologies, the update and adoption of technical standards is still too slow, and digital tools could be used more effectively. The upcoming revision of the RIS Directive is intended to address these shortcomings

At the same time, more efficient **road transport** will remain essential for freight flows and in particular last-mile deliveries. It is therefore key to bring down emissions from road freight services, as HDVs are still responsible for around 28% of road transport CO<sub>2</sub> emissions<sup>33</sup> and a significant source of air pollution<sup>34</sup>. The shift to the deployment of alternatively fuelled HDVs, in particular zero-emission HDVs, is happening but will take time, even under the proposed CO<sub>2</sub> performance standards for trucks. More needs to be done to generate energy savings and efficiency gains. The patchwork of diverging national rules and standards, together with the legal uncertainty regarding the rules applicable to cross-border operations by certain types of vehicles, are also slowing the transition to zero-emission vehicles. They are deterring the sector from using solutions that could lower the environmental impact per tonne-kilometre transported, such as the European Modular System, if the solutions are agreed by neighbouring Member States.

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<sup>32</sup> COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS NAIADES III: Boosting future-proof European inland waterway transport ([COM/2021/324 final](#)).

<sup>33</sup> Source : EU transport in figures, Statistical pocketbook 2022.

<sup>34</sup> HDVs also account for 34% of road transport nitrogen oxide emissions in 2020 and are a source of other air pollutants such as particulate matter, which is a concern in particular for transport operations in and close to urban centres.



**The revision of the Weights and Dimensions Directive (WDD)**<sup>35</sup> will help make road transport more efficient and sustainable in a number of ways. First, it will support a transition to zero-emission HDV fleets through incentives, such as enabling additional loading capacity for HDVs with zero-emission powertrains. It will ensure that investment in zero-emission powertrains not only prevents the loss of loading capacity but may also lead to an increase in payload, should zero-emission technologies become lighter or smaller. Second, the revised Directive will also address the inefficiencies generated by the current rules. By harmonising rules on the use of longer and/or heavier commercial vehicles in cross-border operations where such vehicles are allowed to travel in the territories of neighbouring Member States, it will remove administrative barriers to cross-border transport operations, improving their operational and environmental efficiency. Third, it will strengthen enforcement and monitoring, by mandating the use of weighing mechanisms built into road infrastructure to detect automatically overloaded vehicles and by promoting further work on Intelligent Access Policy schemes. It is important to ensure that the right truck with the right cargo operates on the right road at the right time as this would help reduce the impact on environment, infrastructure, human health and safety, and society.

The upcoming **Roadworthiness Package** will reinforce the efforts to reduce air pollutant and noise emissions in the road sector, with measures allowing for better emission testing during periodic technical inspections and at roadside checks, while the **upcoming revision of the EU rules on end-of-life vehicles** and on the type-approval of motor vehicles with regard to their reusability, recyclability and recoverability<sup>36</sup> will for the first time include lorries and trailers.

#### 4.2 *Improving the operational efficiency of freight transport at the system level*

Sustainable freight transport must be multimodal: it should combine the strengths of individual modes, such as the environmental performance and energy savings per tkm of rail and inland waterway transport, with the flexibility and reliability of road transport. This is complicated by the scarcity of infrastructure, in particular appropriate multimodal terminals. But achieving multimodality holds the promise of better services for consumers and businesses, greater environmental performance and lower costs.

Internalising external costs will lead to polluters and users taking responsibility for the costs they generate and making choices that are also better for society. Until this internalisation of costs is achieved<sup>37</sup>, non-road and intermodal transport – involving rail, inland waterways and short sea shipping, in combination with limited road legs – need support to ensure they are price-competitive with road operations. **The revision of the Combined Transport Directive (CTD)** would aim to make intermodal transport more competitive. The Commission will consider the possible inclusion of a range of regulatory, operational and economic measures, such as ensuring that the road legs of international intermodal operations get the same treatment as international road operations when using non-resident hauliers. Boosting intermodal transport can increase the operational and energy efficiency of the freight system while providing ‘door-to-door’ services of similar quality to road-only transport. A complete

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<sup>35</sup> COM(2023) 445.

<sup>36</sup> Directive 2000/53/EC and Directive 2005/64/EC.

<sup>37</sup> The Sustainable and Smart Mobility Strategy announced that “The Commission will therefore pursue a comprehensive set of measures to deliver fair and efficient pricing across all transport modes. Emission trading, infrastructure charges, energy and vehicle taxes must come together in a mutually compatible, complementary and coherent policy.”

overhaul of the principles is proposed, where intermodal operations that will be covered by the revised CTD would be defined in terms of external costs savings, thus facilitating the operations that contribute the most to sustainable freight transport. Member States' support to intermodal transport covered by the CTD will also have to comply **with State aid rules**.

The **revision of the Weights and Dimensions Directive** provides additional incentives to intermodal transport by enabling additional loading capacity for HDVs involved in intermodal operations and to non-containerised intermodal transport. The revision planned for adoption this summer of the **rail Technical Specifications for Interoperability** will also support intermodal operations by improving interoperability between rail and road. The work of the **European Union Agency for Railways (ERA)** to remove obsolete national rules will remain paramount for the completion of a Single European Rail Area.

Providing reliable and comparable information about the carbon footprint of freight services to businesses and consumers can go a long way towards encouraging them to opt for greener transport solutions – without implications for the public purse. At the same time, greater transparency on the environmental performance of transport services can be a very powerful tool not only to stimulate behavioural change in the market but also to support investment decisions of transport service organisers and operators to reduce emissions and costs.

**CountEmissionsEU**<sup>38</sup> establishes a common framework to calculate the door-to-door well-to-wheel greenhouse gas (GHG) emissions of transport services, based on an internationally accepted standard<sup>39</sup>. Reliable GHG emissions data will enable transport operators to effectively benchmark their services, and consumers – be they businesses or individuals – to make informed choices about the least carbon intensive transport or delivery options. Companies calculating these emissions will be required to use and to rely on the common framework when they choose to publish them or share with business partners or individual transport users.

As highlighted in the Sustainable and Smart Mobility Strategy, future mobility should offer paperless options in all modes, for professionals and individual drivers alike. Digitalisation can also help reduce administrative burdens and lead to the creation of new business models. Sharing relevant data and information can significantly enhance the operational efficiency of multimodal logistics chains by making it possible for users to track, trace and plan their shipments. Availability of electronic certificates and freight transport information would also facilitate digital enforcement. Implementing the **Regulation on Electronic Freight Transport Information** will create an EU-wide network of certified digital platforms for exchanging cargo-related B2A information. In the future it could also be used for other B2A exchange (e.g. driver, operator and vehicle-related information), as well as for supporting B2B communication. The **European Maritime Single Window environment** Regulation will have a major role in improving the efficiency of short sea shipping, which suffers from burdensome, inconsistent reporting obligations between port calls. Both regulations are currently being implemented and are expected to become applicable in 2025.

Good progress has already been made under the **Digital Transport and Logistics Forum**, which is working on a concept and tools for a wider multimodal data-exchange framework.

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<sup>38</sup> COM(2023) 441.

<sup>39</sup> ISO 14083:2023; Quantification and reporting of greenhouse gas emissions arising from transport chain operations; <https://www.iso.org/standard/78864.html>.

The upcoming **Communication on European Mobility Data Space** will set out the Commission's plans in this regard.

## 5. Investing in the green transformation of freight

The transition is already under way in the sector and the Commission fully recognises that this transition is major – and so are the investment needs. The additional private and public investment needs required to prepare transport for a sustainable future are estimated at EUR 205 billion per year between 2021 and 2030 compared with the previous decade<sup>40</sup>. The challenge is therefore to combine in a sound manner public and private investments, notably using financial instruments (including conditions for loans and for blending grants and loans) to ensure the quick deployment of recharging and other alternative fuels infrastructure, as well as the renewal of vehicle fleets, especially by bridging the gap faster between the purchase prices of fossil-fuelled and zero-emission vehicles, planes and vessels, reducing the total cost of ownership of the latter. More cooperation and follow-up at EU level is needed. The Commission will – within the Sustainable Transport Forum – bring together the relevant market actors from transport and energy to approach the total investment challenge for sustainable freight transport in a comprehensive manner.

The electrification of freight, for example, requires a coordinated sector integration<sup>41</sup>. The **TEN-E Regulation**<sup>42</sup> stresses the importance of cross-border smart electricity grids, giving particular attention to the role they can play in enabling the integration of both sectors for example via cross-border high-capacity recharging networks along highways. Promoting such synergies between the transport and electricity sectors, as well as promoting a more sustainable and electrified system, requires a substantial upgrade of the EU electricity networks. Already by 2030, EUR 584 billion investments are required to cover the needs in EU electricity grids.

On the public investment side, the Commission will continue to mobilise **EU programmes** (Connecting Europe Facility, InvestEU, Horizon Europe, as well as regional and cohesion funds) to support the greening of freight. They will address infrastructure bottlenecks and support digitalisation and innovation. For instance, the setting up of **Europe's Rail Joint Undertaking** under Horizon Europe shows the EU's commitment to research and innovation in rail. Building on the work accomplished by Shift2Rail Joint Undertaking, the new partnership has made 'transforming Europe's rail freight' one of its flagship projects, with a focus on the deployment of innovative solutions in the rail freight market – DAC but also automation and signalling systems. The work by the other European partnerships established under Horizon Europe will further contribute to the decarbonisation of transport via research and innovation activities<sup>43</sup>. The **Recovery and Resilience Facility** also presents an

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<sup>40</sup> They include investments in vehicles/vessels/aircraft and recharging and refuelling infrastructure. They do not include investments in infrastructure such as road or railways. They are reported in 2022 prices, using a deflator of 1.1588. Source: SWD(2023) 68 final.

<sup>41</sup> Such importance is reflected in the EU energy legislation, where the Electricity Directive (EU) 2019/944 requests electricity distribution system operators to develop network development plans and set out planned investments with particular emphasis on the main distribution infrastructure required to connect new generation capacity and new loads. While those network plans can include recharging points for electric vehicles, long response times by network operators to requests for network connections for recharging points risk to delay the necessary deployment of high power recharging points, in particular for heavy duty vehicles. The Commission will also be vigilant on the need for quicker permitting, such as for charging infrastructure and energy grid connections, while guaranteeing the necessary protection of the environment and public participation as set out in relevant EU law.

<sup>42</sup> Regulation (EU) 2022/869 for trans-European energy infrastructure.

<sup>43</sup> 2Zero, building on previous EGVIA partnership is fostering technological development in road transport for accelerating the transition towards zero tailpipe emission mobility; Clean Hydrogen Joint Undertaking has a specific focus on Heavy Duty Fuel Cell Vehicles, while CCAM supports innovation in automated freight.

opportunity to push for much-needed additional terminal capacity, as well as the modernisation of rail freight and inland waterway transport. Building on this, **REPowerEU** has also put the support to zero emission transport and its infrastructure as one of its core objectives, enabling Member States to integrate this dimension in their plans to reduce their reliance on fossil fuels.

Member States will continue to spend **EU ETS revenues** on climate and energy-related projects, including rail freight transport. The Innovation Fund, also financed by the ETS revenue, will be expanded and continue to support the decarbonisation of the transport sector. The scope of priority investments of the Modernisation Fund has been extended to infrastructure for zero-emission mobility.

However, considering the current pressure on national and EU budgets and the massive investments required by the green and digital transition, public support alone will not be sufficient. The Commission will continue to cooperate with the European Investment Bank and national promotional banks to help target their lending accordingly. Furthermore, the Commission will continue to work on setting the right framework to give the right private investment signals. The Commission considers that promising business models are emerging, whereby financial investors combine public support like grants or lower-interest public loans with private investments to support transport operators both in rolling-out charging infrastructure at their depots and in using dedicated instruments to lower the total-cost of ownership of operating zero-emission trucks, hence addressing two key obstacles to the transition. The Commission will promote such financial instruments, including with institutions such as the European Investment Bank and national promotional banks in the Member States.

In parallel, the Commission will continue working on the right framework with the right private investment signals. For example, the **EU Taxonomy** aims to help channel capital to support sustainable economic activities by establishing clarity on which activities qualify as green<sup>44</sup>. If the latest updates to the **Taxonomy framework**<sup>45</sup> are adopted as foreseen, technical screening criteria will be set out for a wide range of sustainable transport modes, notably in terms of freight transport and infrastructure. In such a scenario the **European Green Bond Standard**<sup>46</sup>, based on the EU Taxonomy, will further help mobilise additional private investment for the greening of freight transport.

## 6. Essential workers for greener freight

The shortage of transport workers is threatening European freight services – and their future<sup>47</sup>. All modes are already experiencing staff shortages, and this will be further exacerbated as the ageing transport workforce retires and the demand for freight services increases. These shortages are often the result of various factors, including difficult working conditions, such as long working hours, periods spent away from home and lack of professional growth, as well as demographic challenges. Overcoming these requires both

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<sup>44</sup> Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32020R0852>.

<sup>45</sup> [https://finance.ec.europa.eu/publications/sustainable-finance-package-2023\\_en](https://finance.ec.europa.eu/publications/sustainable-finance-package-2023_en)

<sup>46</sup> [https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/european-green-bond-standard\\_en](https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/european-green-bond-standard_en)

<sup>47</sup> According to the latest 2022 report on labour shortages by the European Labour Authority, truck drivers figure among the widespread shortage occupations for 2022, in line with similar trends from previous years. Similarly, the upcoming 2023 ESDE report includes land transport and transport via pipelines among the subsectors where Member States experience persistent labour shortages.

attracting more workers to the sector, as well as empowering the current labour force to be able to harness existing opportunities, such as those related to the green and digital transitions.

The Commission has made efforts to improve working conditions and increase the attractiveness of the transport sector for its workers through its strong commitment to **social dialogue**<sup>48</sup> and other initiatives, such as **Women in Transport – Platform for Change**<sup>49</sup> and **the network of Diversity Ambassadors in Transport**<sup>50</sup>. More recently, the **2021 European Year of Rail** was a golden opportunity to promote rail as an attractive employer – and the sector made good use of this opportunity, for instance with the Women in Rail agreement between the sectoral social partners<sup>51</sup>. The 2023 European Year of Skills<sup>52</sup> has further built on this momentum, focusing on the skills needed for the transport sector of the future.

The ongoing digital transformation presents opportunities, such as increased efficiency, improved working environment and quality jobs that should attract more workers to this sector. The Commission will also continue to work on the just transition towards automation and digitalisation for the transport workforce<sup>53</sup>.

The Commission has also put forward legislative initiatives<sup>54</sup> to improve working conditions and social protection in the road freight sector, while ensuring a balance between the freedom of goods and the freedom of operators to provide cross-border services. The priority is now the implementation of these provisions, to make sure that truck drivers can fully make use of their new rights while maintaining a level-playing field in the market. Moreover, in its proposal to revise the **TEN-T Regulation**, the Commission emphasised the need to ensure safe and secure parking areas that are crucial for the protection of the health and safety of these workers, including the women among them.

In addition to stepping up the mobility of train drivers across borders as outlined above, the new initiatives to green freight transport will help further improve working conditions in the sector. For instance, the revision of the **Weights and Dimensions Directive** will likely incentivise the use of more aerodynamic cabins, which will improve comfort and safety of drivers. Furthermore, increasing the use of zero-emission HDV will significantly reduce drivers' exposure to noise and air pollution in the cabin, thus improving working conditions. The upcoming initiative on **crewing requirements for inland navigation** is another concrete example of an initiative that will positively impact the mobility of workers and create a level playing field, while also helping to ensure that automated vessels are deployed efficiently.

Attracting workers to the freight transport sector will remain key to its future, and the Commission has already taken several steps to do this – most recently, through **the revision**

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<sup>48</sup> The recent Council Recommendation on Social Dialogue, which brings social dialogue to the EU acquis, reinforces sectoral social dialogue that is crucial for the sector, including for the issues such as conditions in the sector, better enforcement of EU driving & rest time rules, driver shortages, image and recruitment.

<sup>49</sup> [https://transport.ec.europa.eu/transport-themes/social-issues-equality-and-attractiveness-transport-sector/equality/women-transport-eu-platform-change\\_en](https://transport.ec.europa.eu/transport-themes/social-issues-equality-and-attractiveness-transport-sector/equality/women-transport-eu-platform-change_en)

<sup>50</sup> [https://transport.ec.europa.eu/transport-themes/social-issues-equality-and-attractiveness-transport-sector/equality/diversity-ambassadors-transport\\_en](https://transport.ec.europa.eu/transport-themes/social-issues-equality-and-attractiveness-transport-sector/equality/diversity-ambassadors-transport_en)

<sup>51</sup> Signed by European Transport Workers Federation (ETF) and Community of European Railways and Infrastructure Managers (CER).

<sup>52</sup> [https://year-of-skills.europa.eu/index\\_en](https://year-of-skills.europa.eu/index_en)

<sup>53</sup> Under Action 69 of the Sustainable and Smart Mobility Strategy, the Commission announced its plan to issue recommendations for the transition to automation and digitalisation and their impact on the transport workforce.

<sup>54</sup> These include Directive (EU) 2020/1057 which harmonised rules on posting of drivers and Regulation (EU) 2020/1054 which strengthened, clarified and guaranteed effective enforcement of social rules in road transport.



**of the driving licences Directive**, where the Commission has proposed allowing accompanied driving for lorry drivers from the age of 17, so that young people graduating from school no longer need to wait until they are 18 before they can drive these vehicles. The proposal also aims at streamlining the recognition of driving licences issued in selected third countries, and setting up a knowledge network to support the integration of professional drivers from third countries within the single market.

In a similar vein, the Commission will also launch a dedicated study to compare the requirements to obtain a Certificate of Professional Competence (CPC) needed by truck drivers issued in selected third countries with the CPC requirements in the EU. This will help identify the gaps that holders of CPCs issued in third countries may have and adapt the training requirements under the CPC Directive<sup>55</sup> to focus on those gaps.

Last but not least, several initiatives are also already in place at the European level to upskill and re-skill transport workers to perform their jobs in a greener and more digital sector, such as the **STAFFER** project in rail<sup>56</sup>, the Skills Sea project in maritime transport<sup>57</sup>, and the large scale partnership for shipbuilding and maritime technologies developed under the umbrella of the Pact for Skills<sup>58</sup>.

## 7. Conclusions

As we celebrate 30 years of the single market, we also celebrate our transport companies and workers who have ensured the free movement of goods in the EU and beyond, and made a true success story of our single market.

The European freight sector is at a turning point. It must seize the opportunities offered by the green and digital transition to become less polluting, more resilient and continue to thrive in the globalised economy of tomorrow. All modes need to do their share and work more efficiently – individually and all together.

With our efforts to green freight transport, we move forward along the path set out by the Sustainable and Smart Mobility Strategy, towards achieving our European Green Deal objectives for transport. The initiatives described in this Communication build on and complement the various initiatives already put forward during this Commission's mandate – all geared towards decarbonising and reducing the environmental impact of freight transport while allowing our single market to grow.

Curbing the free movement of goods – a fundamental freedom within the EU – is not an option. Greening freight and economic growth must go hand in hand. The competitiveness of our single market and the EU's drive towards open strategic autonomy depend on it.

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<sup>55</sup> Directive (EU) 2022/2561

<sup>56</sup> <https://www.railstaffer.eu/>

<sup>57</sup> <https://www.skillssea.eu/>

<sup>58</sup> [https://pact-for-skills.ec.europa.eu/about/industrial-ecosystems-and-partnerships/mobility-transport\\_en](https://pact-for-skills.ec.europa.eu/about/industrial-ecosystems-and-partnerships/mobility-transport_en)