The text presents the general situation and challenges in the transport industry in the context of the project framework. It refers to the research phase of the project and to the developed tools and outcome of the project.

Information about the project and its activities

The EU-funded Green.Smart.Transport.Deal (GSTD) project focuses on strengthening transnational cooperation between social partners in order to increase the involvement of workers in the activities carried out in companies when implementing the European Green Deal (EGD) in the transport sector. It also aims to develop these activities in a socially responsible way, taking into account the rights of workers, employers and the environment.

In addition, the GSTD project assumes as its added value a more detailed focus on the implementation of the EGD in a socially responsible way, taking into account environmental issues, the economic interests of companies and the social needs of workers in the transport sector. This will be done through effective cooperation in the application of the European regulations for the implementation of the European Green Deal.

It should be emphasized that the Green. Smart. Transport. Deal involves eight organizations (trade unions and employers) from six countries: Italy, Poland, Spain, Slovakia, Croatia, and North Macedonia.

The research phase carried out during the development part of the project consisted of the preparation of a desk study accompanied by the results of an online survey carried out in all partner countries. It examined several technical aspects: low emission vehicles, urban greening, digitalization and the presence of the Green Deal in society, as well as other issues, particularly those related to workers: employment conditions and the application of information and consultation rights, collective bargaining and social dialogue.

In our practical guide, we intend to refer to the conclusions drawn from the aspects of workers' participation and their working conditions, taking into account the main objective of the project, which can be summarized as follows:

- ➢ taking into account the participating countries, there is a great diversity of industrial relations, although an identity is maintained in terms of workers' participation through trade unions or works councils (workers' councils in some countries);

- ➢ bipartite or tripartite sectoral councils are set up to conduct social dialogue in the transport sector, and sub-councils may be set up according to sub-sectors such as rail, maritime, urban, etc.;

- ➢ all countries call for the strengthening of tripartite social dialogue, the strengthening of the capacity of trade unions and employers' organisations in the sector and the need to develop collective agreements and training programmes for workers;

- ➢ collective agreements should be strengthened to ensure that they cover all workers in the transport sector, particularly in the areas related to pay. To this end, it is necessary to promote the existence of collective agreements in each transport sub-sector;

- ➢ workers are concerned about the transformation of current jobs into green jobs and do not recognize that social dialogue is currently providing solutions to the problems that have arisen;

- ➢ workers report a lack of information about green or digital transformation processes in their companies. Employers, on the other hand, complain about the lack of information from institutions about the policies that governments will implement and how these may affect their companies. In this sense, employers perceive these impacts as immediate,

while employees see them in the medium term, showing a general lack of interest in the issue;

➢ the lack of consultation at national and regional level on the implementation of the Sustainable and Intelligent Mobility Strategy is cited by respondents as a reason for exclusion from the transition process and they foresee a negative impact on their employment conditions and business costs. In particular, employers point to a lack of awareness of the Green Deal in society and a lack of discussion by governments and social partners;

➢ Finally, problems were also identified in relation to the provision of information to employees by trade unions or works councils.

Employees believe that they should receive more information from trade unions about green and digital transformation processes. They give two reasons why this information is insufficient: the lack of trade union knowledge on the subject (lack of specialised training) and the fact that in some countries the information and consultation system does not have sufficient legal protection to be implemented.

From the analyses carried out in each of the project partner countries, it can be concluded that it is now necessary to develop the exchange of information about the planned transformation processes between governments and social partners (tripartite social dialogue) at both national and regional level.

At company level, there is a need to establish clear and demanding information and consultation protocols between employers and trade unions (or works councils) in order to anticipate these technological changes and to strengthen the training of existing workers in the implementation of new technologies in their workplaces.

The Practical Guide on Employee Participation is part of this toolkit developed by the project and aims to create **a handbook that supports and helps to improve employee participation**, focusing on the green transition aspects of employment where, in addition to the creation of new green jobs, this may mean the loss of some existing jobs, for which it is necessary **to strengthen the training of workers**, either to train them for new jobs in their own occupational sector or to train them for jobs in other occupational sectors. In addition to the qualification of workers, it is necessary to strengthen the systems of worker participation, especially information and consultation; and to analyse and **strengthen the protection of workers in their workplace** in the face of the generation of new risks caused by the environmental **transition.**

What are we facing in transport in the face of the twin transition? What action is the European Union taking?

The Sustainable and Smart Mobility Strategy sets out a roadmap to put transport in the Union on the right track towards a sustainable and smart future[1]. One of the milestones on the road to sustainable, smart and resilient mobility is the large-scale deployment of automated mobility by 2030. The strategy recognizes that changes in the transport sector, in particular those related to automation and digitalization, create many new challenges and opportunities for the transport workforce.

Twin transition refers to the interplay between digital and green transformations: properly used and managed, digital technologies can help make economies (more) resource efficient, circular and climate-neutral.

The twin transition approach recognizes that there is a huge and largely untapped opportunity for technology and data to help achieve sustainability goals. Rather than treating digitalization

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and sustainability in isolation, a dual transformation strategy combines these critical functions to unlock efficiency and productivity benefits. Dual transformation can have a positive impact by greening technology, data assets and infrastructure, while accelerating sustainability across the organization. While digital technologies can create efficient and sustainable sources of energy to help address this trade-off, they can also have negative impacts. For example, training and deploying artificial intelligence models consumes energy and water and generates carbon emissions, whether in data centres, the cloud or at the edge. These negative impacts are already happening and are also the goal of such a sustainable energy transition.

The European Pillar of Social Rights sets out 20 key principles and rights essential for fair and well-functioning labor markets and social protection systems. The Pillar is the European rulebook to make sure that the green and digital transitions are socially fair and just, both for transport users and the transport workforce[2].

The Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality sets out comprehensive guidance to Member States on the necessary policy packages to leave no one behind in the green transition[3]. The **Union's digital strategy** aims to make the digital transformation work for people and businesses, while helping to achieve its target of a climate-neutral Europe by 2050. The Digital Decade policy program 2030 has established digital targets, including for a digitally skilled population and highly skilled digital professionals, as well as for the digital transformation of businesses[4].

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[2] The study on 'The social dimension of the future EU transport system regarding users and passengers' mapped the challenges and opportunities posed by the modernization of the transport system to different groups of transport users – including citizens with poor IT literacy or with limited access to the internet – and reviewed possible solutions that would ensure users are at the center of the future transport system: European Commission, Directorate-General for Mobility and Transport, Kouris, S., *Study on the social dimension of the future EU transport system regarding users and passengers – Final report*, Publications Office of the European Union, 2022

[3] Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality 2022/C 243/04 (OJ C 243, 27.6.2022, p. 35).

[4] Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade Policy Program 2030 (OJ L 323, 19.12.2022, p. 4).

https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age_en

In the EU-27, around 10 million people are employed in the transport and storage sector (including postal and courier activities), representing 5.2 % of total employment[5]. About 53% of them work in land transport (road, rail and pipelines), 3% in water transport (sea and inland waterways), 4% in air transport, 26% in supporting and warehousing activities (such as cargo handling, storage and warehousing) and the remaining 14% in postal and courier activities. Women are under-represented in the EU transport workforce (22%). An analysis by age of the EU transport workforce in 2015 shows that the share of persons aged 30-49 was similar to that of the economy as a whole, but the share of older workers was higher in transport (36.9% are aged 50-64), while the share of younger workers was lower (12.1% are aged 15-29)[6].

The transport sector has been identified as one of the sectors where the implementation of the European Green Deal (as well as related national strategies) will require new skills and labor, and where skilled labor is already scarce. In addition to the shortages associated with the shift towards renewable energy sources and sustainable and energy efficient materials, products and modes of transport, there are already significant labor shortages in certain transport occupations. Since 2017, all reports on labor market imbalances in Europe[25] have ranked heavy truck and lorry drivers in the top 10 in terms of labor shortages. In 2022, bus and tram drivers were among the top 10 occupations with identified shortages for the first time. Labor shortages may accelerate automation, which could at the same time be an opportunity to compensate for missing workers[7].

The study "The social dimension of the transition to automation and digitalization in transport, focusing on the workforce" assessed the awareness, preparedness and guidance needs of transport stakeholders. It found that, in general, there is little awareness in the sector of the

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[5] 4.6 % of total employment if postal and courier activities are not included.

[6] European Commission, Eurostat, Jere, N., Corselli-Nordblad, L., Ford-Alexandraki, E., et al., *Key figures on European transport: 2022 edition*, Jere, N. (editor), Corselli-Nordblad, L. (editor), Ford-Alexandraki, E. (editor), Xenellis, G. (editor), Publications Office of the European Union, 2023, https://op.europa.eu/en/publication-detail/-/publication/548fbb23-9d7a-11ed-b508-01aa75ed71a1/language-en

[7] European Labor Authority, *Report on labor shortages and surpluses – 2022*, Publications Office of the European Union, 2023

impact of automation and digitalization on the transport workforce. On average, transport stakeholders are moderately prepared for this transition. Trade unions and national public authorities seem to be anticipating or managing change more than employers. Stakeholders surveyed indicate that if guidance and additional measures are needed, they should focus mainly on knowledge sharing and training and education of the workforce[8]. As employers in the transport sector - especially small and medium-sized enterprises (SMEs) - are often unaware of measures or strategies aimed at facilitating the transition of the workforce, the social dimension of automation and digitalization does not seem to be a priority issue for them.

Labor market developments will be influenced not only by technology, including its cost and acceptance, but also by other factors such as globalization, demographic change, the green transition, economic and other social trends, and the regulatory environment. In addition, the pace of automation will vary across countries and regions, modes of transport, types of occupations, and skills and competences.

According to a recent report on the future of work in transport, the risk of automation of jobs varies widely across the more industrialized countries. Between 5.7 and 50 per cent of low-skilled jobs (such as port workers or baggage handlers) are at high risk of automation. The risk for medium-skilled jobs (such as skilled seafarers or heavy-duty truck drivers) is between 7 and 23 per cent. High-skilled jobs (such as ship's officers, aircraft pilots and professionals) have the lowest estimated potential for job loss due to the introduction of automation technologies, at up to 2 per cent[9].

The European research project SKILLFUL has identified the jobs and positions most likely to be affected by current and future changes and developments in the European transport system. Among the transport jobs that are likely to change are drivers, manual operators, ticket issuers and controllers, logistics center staff, security controllers, and booking clerks and travel agents.

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[8] European Commission, Directorate-General for Mobility and Transport, *Study on the social dimension of the transition to automation and digitalization in transport, focusing on the labor force: final report*, Publications Office, 2021
[9] World Maritime University, *Transport 2040: Automation, Technology, Employment – The Future of Work* (2019). Reports. 58

Among the jobs that are expected to become more relevant are logistics managers, logistics operators at terminals and delivery dispatchers, artificial intelligence, digital transformation, big data and security and cyber security experts, legal services personnel and privacy protection specialists, and automated vehicle and drone operators[10].

Upskilling and reskilling are crucial for managing the green and digital transitions. Having a workforce with the right skills contributes to sustainable growth, leads to more innovation and improves companies' competitiveness. Principle 1 of the European Pillar of Social Rights states that 'everyone has the right to quality and inclusive education, training and lifelong learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labor market'.

The European research project WE-TRANSFORM identified the level of importance of different skills and competences necessary to meet the challenges of the future automated and digitalized work environment, including by mode of transport[11]. Short training periods can be a solution to motivate workers to participate in training and for employers to support this. The Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability invites Member States to put in place legal frameworks that facilitate the recording of learning outcomes (e.g. certificate or award) from small learning experiences (e.g. short online courses)[12]. Schemes such as individual learning accounts and a supportive framework, including guidance and validation facilities, can promote the effective uptake of training in the transport sector[13].

The Union's rules on the qualification and training of drivers of buses and lorries require the subjects to be covered in periodic training to take account of technological developments. The forthcoming revision of the Train Drivers Directive should better adapt the training and

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[10] Skills and competences development of future transportation professionals at all levels (https://www.skillfulproject.eu/) – Deliverable D1.1 (2017) *Future scenarios on skills and competences required by the transport sector in the short mid and long-term*.

[11] Workforce Europe – Transformation agenda for transport automation (https://wetransform-project.eu/) – Deliverable D3.2 *Analysis of workforce barriers, needs, skills, and challenges*.

[12] Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability 2022/C 243/02 (OJ C 243, 27.6.2022, p. 10).

[13] Council Recommendation of 16 June 2022 on individual learning accounts 2022/C 243/03 (OJ C 243, 27.6.2022, p. 26).

certification of train drivers to the possibilities and requirements of the digitalization of the railways and make it easier for train drivers to operate across borders[14].

On the one hand, automation and digitalization are expected to improve working conditions in the transport sector, offering higher levels of safety and flexibility (e.g. part-time work) and eliminating many monotonous and physically demanding tasks. This could make the sector more attractive overall, especially for female workers and under-represented groups of workers, such as those at higher risk of exclusion, young workers and workers with disabilities. On the other hand, there is a risk of higher stress levels for some workers due to the perception of constant monitoring and surveillance, including by algorithmic management tools or AI in general[15].

The Commission's study on social aspects in the maritime sector includes recommendations and possible initiatives that can contribute to ensuring adequate working and living conditions for seafarers, including the modernization of maritime education and training to take account of technological developments. The study on Air Traffic Controllers (ATCOs) and Air Traffic Service Engineers (ATSEPs) provides an overview of current and future human and social issues and working conditions as reported by ATCOs and ATSEPs in the EU Member States[16].

All modes of transport will be affected by automation and digitalization, whether by automated ships or vehicles or by digitalized processes. A combination of a lack of awareness, a lack of understanding of new requirements and a fear of not being able to cope with change contribute to skepticism and sometimes resistance to change in the transport sector. Against this backdrop,

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[14] Directive (EU) 2022/2561 of the European Parliament and of the Council of 14 December 2022 on the initial qualification and periodic training of drivers of certain road vehicles for the carriage of goods or passengers (codification) (OJ L 330, 23.12.2022, p. 46).

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 (OJ L 315, 3.12.2007, p. 51).

[15] Eurofound (2020), *Employee monitoring and surveillance: The challenges of digitalization*, Publications Office of the European Union, Luxembourg.
https://www.eurofound.europa.eu/observatories/eurwork/industrial-relations-dictionary/algorithmic-management

[16] European Commission, Directorate-General for Mobility and Transport, *Study on social aspects within the maritime transport sector: final report*, Publications Office, 2020

European Commission, Directorate-General for Mobility and Transport, Dhondt, S., Oprins, E., Zon, R., et al., *Study on Air Traffic Controller (ATCO) and Engineering Staff (ATSEP) social issues and working conditions: final report*, Publications Office, 2021

the transport sector would benefit from introducing and implementing ways to better manage this change. Change management involves the methods and ways in which an organization describes and implements change in its internal and external processes to ensure a constructive and beneficial transition to automation and digitalization.

The skills intelligence tools of the European Centre for the Development of Vocational Training (Cedefop) are providing evidence on current and future skills and labor market trends. These include Skills-OVATE that offers detailed information on the jobs and skills employers demand using big data technology on online job advertisements[17].

The Digital Skills Assessment Tool is a self-assessment tool allowing individuals to test their digital skills and access training opportunities appropriate for their needs[18].

Information and consultation, negotiation of collective agreements - necessary action on the part of the social partners

In line with Principle 8 of the European Pillar of Social Rights, which includes that 'workers or their representatives have the right to be informed and consulted in good time on matters relevant to them, in particular on the transfer, restructuring and merger of undertakings and on collective redundancies', change management plans should be designed in a participatory manner and in close collaboration with workers' representatives.

The negotiations between organizations representing employers and workers (social partners) through social dialogue and collective bargaining help improve working conditions. Against the backdrop of the variation in the degree and quality of the involvement of social partners across

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[17] The 'transport & storage' section (https://www.cedefop.europa.eu/en/tools/skills- intelligence/sectors?sector=04.08) includes activities relating to passenger or freight transport by rail, pipeline, road, water or air, and associated activities such as terminal and parking facilities, cargo handling, storage etc. Also included is the renting of transport equipment with driver or operator, and postal and courier activities.

[18] Based on the Digital Competence Framework, this free test (https://digital-skills-jobs.europa.eu/en/digital-skills-assessment) covers information and data literacy, communication and collaboration, digital content creation, safety, and problem solving. Cedefop, *Understanding technological change and skill needs: skills surveys and skills forecasting*, Publications Office, 2021, https://data.europa.eu/doi/10.2801/212891. The second practical guide (https://data.europa.eu/doi/10.2801/144881) focuses on automated skills intelligence methods: big data and AI-driven analyses, while the third practical guide focuses on technology and skills foresight methods (https://data.europa.eu/doi/10.2801/307925).

countries and the unequal coverage of workers by collective agreements, the Commission has presented an initiative to further strengthen and promote social dialogue with concrete actions at national and Union level. On 12 June 2023, the Council adopted a recommendation on strengthening social dialogue in the European Union, where it sets out several ways through which Member States might reinforce social dialogue and collective bargaining at national level, including by involving social partners in policy design, promoting the benefits of social dialogue, and strengthening the capacity of trade unions and employers' organizations[19].

Social dialogue also plays a key role in adapting to the changing world of work. The 2020 Framework Agreement on Digitalization, concluded by the cross-industry European social partners, is an example of the willingness of social partners to shape the future together. Likewise, the European sectoral social partners in the transport sector have carried out various joint projects on automation and digitalization, which included joint recommendations to their affiliates.

The Europe Transport Workers' Federation produced an automation and digitalization toolkit for their affiliated unions. This provides helpful guidance on negotiating change with management including a model collective bargaining agreement that covers issues around automation and digitalization[20].

In conclusion, we would like to formulate the following message:

> ➢ As the first element of awareness is transparency, individual companies could consider adopting a clear strategy detailing the impact of automation and digitalization on their workforce.

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[19] Council Recommendation of 12 June 2023 on strengthening social dialogue in the European Union
Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Strengthening social dialogue in the European Union: harnessing its full potential for managing fair transitions, COM/2023/40 final

[20] https://www.etf-europe.org/activity/eadt/

> Dialogue between the social partners, for example in the context of a collective bargaining process at company, national or sectoral level, can promote a common understanding of the issues at stake - including definitions of relevant terms - and thus contribute to raising awareness of the expected impact of automation and digitalization on the workforce.

> The social partners in the transport sector should contribute to improving working conditions in the context of the transition to automation and digitalization. Where not already done, they should incorporate, in their collective agreements at company, national or sectoral level, dedicated provisions regarding automation and digitalization. Taking inspiration from existing collective agreements in transport, the social partners at national and European level are invited to jointly identify good practice examples of such dedicated provisions for each mode of transport and share them with their respective affiliates[21].

> Through social dialogue and collective bargaining, decent work and quality of employment must be guaranteed, in the face of twin transition processes in the transport sector, by **establishing permanent learning programs for workers that renew their current professional qualification and allow them to adapt to technological changes.**

> Given the effects on the labor market that occur with the twin transition in the transport sector, with the emergence of new green jobs that may pose a threat to current employment, it is necessary **to include social protection for the most**

vulnerable workers, vulnerable to these transition processes, including direct, indirect and induced jobs.

➤ The twin transition in the transport sector means that its workers will have to adapt their work patterns to new risks such as the electrical risks generated by plug-in cars. Therefore, **within the framework of worker participation we must also attend to the analysis and evaluation of the risks of new technologies associated with the development of greener transportation**: electric, hybrid, biofuel vehicles, battery technology, hydrogen and batteries made of fuel; to establish prevention measures against these risks and to train workers in the prevention of electrocution risks to which they are exposed in electric vehicle maintenance services, among others.

➤ For small and medium-sized companies to address green and digital transformation processes, they incur unaffordable economic costs in many cases. Therefore, **it is necessary to have specific support measures for the sectors and industries affected by this twin transition**, with specific funds derived from the European Union and from the national governments themselves.