



STAFFER
EUROPEAN RAIL SKILLS ALLIANCE



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Policy Recommendations

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1 INTRODUCTION

1.1 Why do we need policy recommendations?

The ERASMUS+ STAFFER project brought together 32 rail sector partners and countless stakeholders to develop strategies and techniques for building a workforce to meet Europe's ambitious social, economic, and environmental goals. These recommendations translate the project's highly detailed results into an integrated package of policies designed for implementation by key decision-makers and stakeholders at both EU and national levels.

These policy recommendations were developed by the STAFFER partners representing sector-wide organisations, UNIFE and CER, with the assistance of other partners. The recommendations clearly call for creating a framework at the European and National levels that is fit to provide the skills and workforce needed for the jobs of tomorrow, thereby supporting a growing sustainable transport sector. The recommended policies and actions, outlined below, are a clear view of the sector's priorities taking into account the fact that STAFFER encompasses all jobs linked to railways, from technicians to academia.

Rail is the greenest mode of transportation available. It emits 0.4% of EU energy related GHG emissions from transport, accounting for 1.8% of EU transport's energy consumption while transporting 17% of freight and 8% of passengers. It is 7 times more energy efficient than road and 15 times more energy efficient than air transport. At a time of climate urgency, it is a sector that has the potential to be very innovative and technologically driven to further the EU interests.

There is currently great momentum in Europe to foster rail investments in various countries. The European Sustainable and Smart Mobility Strategy has the ambition to boost modal shift, increase the uptake of zero-emissions transport services, and double high-speed rail and freight traffic by 2030 and 2050 respectively.

But all of this is impossible without people. Over a million people are directly employed and around 1.3 million work indirectly for the sector (e.g. driving trains, building infrastructure, designing and supplying equipment, training workers, and managing operations – to name only a few key jobs). However, there is a significant shortage of professionals in engineering and mathematics (STEM), which is key for various jobs within the rail sector. As an example, since 2011, the number of first year starters in mechanical engineering has dropped by half and the number of first year starters for electrical engineering has dropped 38% in Germany. Many challenges are present: staff shortages, transforming skills, an ageing workforce (~40-45% of the workers are 50+ years old), a sector pictured as old-fashioned, and male dominated

(~20% of the railway workers are women). The sector must address these challenges by making itself more attractive to employees, especially women, while improving all aspects of employee training and education. We need public policies to address these challenges.

2024 is a year of change, with the European elections and a new European Commission executive. Now with the European Green Deal largely adopted, it is also time to implement policy objectives, especially for the transport sector, and these objectives must focus on skills and labour shortages to ensure that we can deliver the transport system Europe needs.

The skills' need in the railway sector is critical, and the aim of the European Green Deal and subsequent Smart and Sustainable Mobility Strategy have exacerbated this need even further. However, it must be clear that such development cannot take place without appropriate financing of the sector.

1.2 Structure of the policy recommendations

The policy recommendations are divided into 3 pillars, following the strategic priorities identified in WP 7.1:

1. Scale-up the sector's employability, attractiveness and diversity
2. Advance education and training needed for smart and sustainable railways
3. Deepen the Single European Railway Area of skills

Across those priorities, a horizontal focus has been set on recommendations addressed to European (mainly European Commission) and National (national, regional and local) policymakers while, at the same time, adding the critical funding elements. Some recommendations on streams of actions are also proposed for companies to undertake.

UNIFE and CER have approached this exercise in a way that is short, concise, and, most importantly, concrete on elements that can be achieved. Small streams of action lead to big achievements, and it is in this spirit that the policy recommendations have been drafted.

1.3 Consultations

Due to the importance of this document, UNIFE and CER have paid particular attention to mobilise different institutional and non-institutional stakeholders to ensure the broadest possible consultation. This concretely means that the following groups have been consulted:

1. UNIFE Membership



2. CER Membership
3. STAFFER Partners, specifically WP 7 co-leaders
4. Key stakeholders (European Commission, ERA and ETF)



2 POLICY ACTIONS FOR A QUALIFIED WORKFORCE OF A SMART AND SUSTAINABLE EUROPEAN RAIL SECTOR

2.1 Scale-up the sector's employability, attractiveness and diversity

One of STAFFER's key findings is the criticality of improving the railway sector's attractiveness and diversity. As it stands, the railway sector is not seen as a go-to sector for building a career, which may be due to its image as 'old-school', as well as a lack of understanding about the different professions that are on offer. In the Mobility sector, rail is also competing against the automotive industry, which invests substantially in its reputation and image.

However, railways need not be jealous of other modes of transport. The sector can boast breakthrough developments such as high-speed rail which, from the technology development to its roll out across the EU and the world, has been a game changer of how we see sustainable transport, rendering possible high-scale projects such as connecting all European capitals by high-speed rail. As a key element of technological advancement, it should be part of a highly attractive sector for people to work in.

As presented in STAFFER D 7.2, the attractiveness of a sector depends on many factors. These factors include the work's actual purpose, the possibility for training, the international opportunities for exchanges, and the diversity of career paths possible within a company, work-life balance and flexibility where feasible. The policy recommendations are designed to help the railway sector address these factors and build a qualified workforce.

Attractiveness was by far the most important challenge from a HR perspective. 31% of survey respondents placed this challenge first and more than 50% of respondents included it in the top-5 challenges, according to WP 2 results. Among other important elements, improving initial and further vocational education and training and improving the development of talent were among issues raised. Furthermore, diversity is a key topic for the sector and there is valid concern about the low share of women employed (~20%). This lack of diversity could also deter potential workers from choosing a career in the railway sector.

Guidance and activities at an EU and national level are important to improve the sector's attractiveness.

Policy Recommendations 1

1. EU LEVEL

- a. Establish an Ambassador Programme for Rail Ambassadors (persons who work in the companies and/or educational institutions) to coordinate and exchange best practice on attracting workforce to the railway sector, providing a forum for discussion on activities and lessons learned.
- b. Further promote the Talent Booster Mechanism across EU's regions to orient its priorities towards jobs needed for the green transition, focusing on railway; to train, retain and attract the necessary skills and competences to the railway sector with a view to mitigate the impact of the demographic transition.
- c. Identify challenges, lived experiences and best practices for specific populations such as women or lesbian, gay, bisexual, trans, and queer (LGBTQ+) community when it comes to the rail as a career and develop specific EU guidelines and platforms for exchange within the sector to raise awareness.
- d. Develop policies and actions (e.g. based on investigating and sharing best practices) to support the integration of women, immigrants, and other under-represented groups into the railway workforce. CER and ETF should be supported in monitoring and implementing the Social Partner Autonomous Agreement 'Women in Rail', while programmes such as the STAFFER Mentoring Programme for female engineers should be continued to build a network across companies sharing lived experiences and best practices for women's career development.
- e. Foster the role of the European Railway Agency in disseminating information on railway education in Europe.

2. NATIONAL LEVEL

- a. Create programs for railway sector employees to visit primary and secondary schools (less than 16 years old) to inspire pupils, especially young girls, and explain the diversity of career paths in the railway sector, encompassing both the operational and supplier activities.
- b. Coordinate marketing campaigns for students approaching higher education (16-18) to make the sector more visible and improve its image, showing the range of professions and career options available. Such marketing campaigns should also



target workforce that look for a career change, highlighting the possibilities in the railway sector.

- c. Allocate financial resources to the development and implementation of marketing campaigns, including events such as 'Rail Job Days', which could be organised in Member States to attract students and workers.
- d. Increase the visibility of dedicated railway faculties through national and targeted communications campaign in high schools and at study orientation events.

3. RAIL SECTOR

- a. Create in the companies and/or on a sector level and/or at educational institutions the function of a Rail Ambassador. Ambassadors can show first-hand experience about a job, a career or their experience of studying in a certain educational programme and can answer questions coming from potential candidates.
- b. Use platforms like LinkedIn, X, Facebook, TikTok, and Instagram to share industry news, job openings, employee success stories and updates about the company's initiatives. Be active where people, including younger generations, are active.
- c. Advertise on learning platforms (Quizlet, StudySmarter, and Youtube channels for specific topics) that primarily offer content in the engineering sector.
- d. Promote an inclusive and diversified workplace culture through concrete initiatives highlighting a positive work environment, safety culture, and commitment to diversity and inclusion within the organization.
- e. Encourage current employees to refer qualified candidates, including qualified female talents, through incentive-based referral programs, emphasising the importance of their role in building the workforce of tomorrow, where relevant and desirable.
- f. Feature testimonials and success stories from current employees, sharing their experiences and career journeys within the company as to show the variety of opportunities in the railway sector.
- g. Showcase job opportunities that the sector can offer and give candidates more insights as regards growth opportunities.
- h. Provide virtual tours of facilities and create videos that showcase a typical day in the life of employees, giving potential candidates a glimpse into the work environment.



2.2 Advance education and training needed for smart and sustainable railways

Education, at all levels, is an important factor in ensuring that the rail sector has an adequate supply of appropriately trained workers for all positions, from maintenance to train drivers, as well as managers, engineers, and trainers.

STAFFER has highlighted the lack of railway specific curricula in the EU and transparency when it comes to the offers already available. This clear gap makes it difficult to increase the pool of candidates available for the railway sector, and, ultimately, to provide the workforce needed to meet the policy objectives set out in the European Green Deal.

Trends in the railway sector have a great impact on the variety of profiles that will be needed in the future. For instance, digitalisation, cybersecurity, automation and others impact heavily the need for reskilling and upskilling the workforce. The rail supply industry identified that the profiles that will need the strongest skill adaptation are engineers (22% of respondents), digital/ IT (19%) and technicians (15%).

On the side of railway operation and infrastructure management, 30 different profiles were identified, demonstrating the complexity of the sector when facing skills and labour shortages. Focussing on 3 profiles (train drivers, staff in control centres and engineering profiles in infrastructure), it is clear that ICT skills is considered the most important future skillsets that each job profile need to have (32%, 55% and 56% respectively).

Taking into account the critical need related to ICT skills but also in general to meet the rail staff needs of tomorrow, WP 4.1 identified that there were 101 programmes related to railways (e.g. electrical engineering is included), WP 4.3 subsequently analysed programmes across 13 European countries, and across EQF 3-8. A list of VET and higher education entities was identified in the field of mobility and training for the rail sector. The striking conclusion is that there are very little opportunities to find training centres focussing on the railway sector and limited opportunities at higher education levels, where bachelors and masters programmes are scarce.

Currently the Railway Academic education is scattered amongst other Technical Studies, in contrast to aerospace engineering and maritime engineering at technical universities. It is therefore not strange that young people do not choose to become a Railway Engineer when choosing a technical study.

Taking these different trends into account, their impact on the future skills needed for the railway staff and the lack of coordinated approach towards a common framework of studies for the

railway sector, the European Commission along with Member States, education providers and the railway sector should work towards an efficient system for railway education, across all education levels.

Policy Recommendations 2

1. EU LEVEL

- a. Develop and coordinate an EU-scale workforce education planning strategy by identifying priority subject areas, which should be railway-related but also cross-cutting topics like Electrical/Mechanical/STEM/Digitalization. This should be done in close collaboration with universities by providing transparent and easily accessible information on the number of graduates entering the railway sector every year, as well as communicate the range of education offered.
- b. Create and fund a “Railway Erasmus” by giving students with railway-related studies and/or apprenticeships or internships in companies the possibility to continue their studies and/or broaden their experience in other European countries.
- c. Create exchange programmes between rail sector employers and educational providers (e.g. ERASMUS+ Railway Engineering Programme) to improve understanding and build interest towards international rail careers and cross-border service improvements, in line with the Proposal for a Council Recommendation on “Europe on the Move”, adopted in May 2024.
- d. Expand existing activities of Europe's Rail Joint Undertaking on skills, focusing on the impact of technological developments on existing skills, upskilling and reskilling needs.
- e. Build, manage and maintain a unique information portal (e.g. through STAFFER or ERA academy websites) to consolidate the Europe-wide offer of rail-related educational programs at different qualifications framework (EQF) levels and internships. Adequate funding should be made available for this activity.

2. NATIONAL LEVEL

- a. Identify a broad offer of education and training programmes based on continuous collaboration between the railway sector and educational providers. This broad offer should target job seekers that just graduated from high school, higher



education, as well as citizens who would like to change jobs and continue their career in the railway sector.

- b. Integrate the skills and profiles identified in STAFFER into the curricula and programmes of educational providers to match the needs of the railway sector needs. Fully consider the differing needs of railway operators, infrastructure managers and suppliers by providing programs for all EQF levels (e.g., EQF levels 3-4 for train drivers and EQF levels 6-8 for engineers and managers working in the supply sector).
- c. Improve the processes for changing curricula and programmes at universities across the EU (it takes too long – about 3 years in many cases).
- d. Foster collaboration between national, regional, and local authorities with universities and the railway sector to implement local/regional hubs for railway engineering expertise.
- e. Facilitate the setting-up of dedicated railway faculties in order to increase the coherence and the visibility of railway engineering curricula in technical universities.

3. FUNDING

- a. Financially support companies, including SMEs, to implement internal training programmes to re-skill and up-skill their workforces as to provide a lifelong learning path in the company for each worker, increasing the attractiveness of the sector. The European Social Fund, the European Regional Development Fund, and the National Recovery Plans can be good examples of successful programmes.
- b. Guarantee financial resources to support the creation of a network of universities and educational institutions that provide courses and degrees in the railway field.
- c. Support the introduction of railway sector internships and apprenticeship programmes in close collaboration with educational providers.

4. RAIL SECTOR

- a. Allocate the necessary internal human resources to support the re-training and up-skilling of the current workforce by investing in educational programmes and continuous learning staff.
- b. Continually adapt training programmes based on new technology development.
- c. Emphasize flexible and innovative learning approaches enabling employees to quickly acquire new skills and knowledge.





- d. Promote the 70-20-10 continuous learning principle (70% learning on the job, 20% learning from others, 10% training) and challenge/ adapt routine tasks, where possible, by fostering exchange and interdisciplinary learning processes on a continuous basis.
- e. Establish partnerships between educational institutions at all levels and railway sector employers to attract more people to jobs in the sector. Activities should include guest lectures, field trips, and recruitment programmes, all designed to build a close connection with students and young graduates.
- f. Promote internships and apprentice programmes in collaboration with educational providers by highlighting the benefits and learning opportunities associated with those programmes and emphasizing the potential for long-term employment.



2.3 Deepen the Single European Railway Area of skills

The railway sector is deeply rooted in its national context, significantly impacting the way the infrastructure and the rolling stock are built and operated, despite 25 years of policies towards completing a Single European Railway Area (SERA). However, trains also cross borders. The recent resurgence of night trains, the call for more investment in cross-border links (TEN-T), and the deployment of technologies such as ERTMS; all point towards a strong push to increase international railway service.

While the skills of running a train in different countries is not intrinsically different, planning and operating international railway service requires a different set of competences, from technical skills (e.g. understanding how risks and safety are approached in a different country) to soft skills (e.g. speaking the other language) and practical skills (e.g., driving regulations). Development of all these skills can be facilitated by exchange programmes for students, apprentices and staff. In 2018 there were approximately 8 000 cross-border interoperable mobile workers employed by European railway undertakings. This number is expected to grow in the coming years as cross-border traffic is expected to increase.

Education providers have a role to play here, skills development in all countries and railway companies as well as the rail supply industry increasingly should be oriented towards the acceleration of standardisation of technical, operational and infrastructure related rules and standards. This will lead railway staff to investigate furthering projects which aim at increasing cross-border train services as well as consider how technology can better improve a European railway mindset.

At the end of the day, running more international trains means more cross-border infrastructure, which, in turn, means greater investments needed from the European Union and Member States to build the SERA, as well as to develop and implement the new digital technologies, such as ERTMS, to support cross-border service. This shift towards sustainable modes of transport will exacerbate even more the need for a skilled workforce to work across European borders.

Policy Recommendations 3

1. EU LEVEL

- a. Strengthen and adjust existing transnational education, training, and expert exchange programmes to foster opportunities for students, apprentices, interns, and staff to develop talents in a European context. Support the initiatives and

recommendations developed in STAFFER Work Package 6 (“STAFFER Student Mobility Programme”, STAFFER Apprentice Mobility Programme”).

- b. Simplify the procedure grant applications for ERASMUS+ for apprentices and staff exchanges as well as expand the scope of the funding rules to increase the number of applications (e.g. job shadowing should be again in the scope) to encourage the further internationalisation of railway companies and their staff. Learning the local language through training should also be part of the projects as this is a barrier for exchange programmes.
- c. Exchange of best practices on certification and recognition of learning mobilities of apprentices and interns.
- d. Increase ERASMUS+ funds to provide more opportunities for railway staff to take part in cross-border exchange programmes organised by a tandem of companies, and encourage the establishment of a European scale Rail Blended Intensive Programmes (BIP) whereby exchanges, virtual learning and other types of education can be merged.

2. NATIONAL LEVEL

- a. Ensure that national ERASMUS+ contact points launch campaigns targeted for rail exchange programmes, both at the company level as well as for students, promoting the availability and benefits of these programmes for the individual and the company.
 - b. Establish company networks by national Erasmus+ Agencies to promote the exchange of experience and good practices as well as report about barriers and problems.
5. Guarantee the mutual recognition of professional qualifications acquired across Member States, which is a result of a harmonisation of education programmes.

3. RAIL SECTOR

- a. Continue the work undertaken by STAFFER to develop railway specific vocabulary to facilitate language learning for cross-border operations, as the operational language is the one defined by the infrastructure manager at the national level.
- b. Build exchange programmes for staff and apprentices between railway companies, to learn about safety culture, how other companies operate and all elements of interoperability and safety useful for cross-border traffic.



- c. Promote training opportunities and staff exchanges within the company's group related to smart and sustainable technologies focusing on digitalization and automation.



3 CONCLUSION

The main objective of this deliverable is to provide a set of concrete, feasible, and short- to medium-term policy recommendations, in order to feed the debate within the European railway sector, policymakers and other stakeholders involved.

This is a joint and timely exercise which takes into account the new EU institutional cycle, which will feature new political actors who, we believe, should prioritize these important challenges for the future of the European railway sector and the European Union's own objectives and agenda.

Briefly, the policy recommendations focused on 3 pillars of action: scale-up the sector's employability, attractiveness, and diversity; advance and arrange more dedicated railway education and training needed for smart and sustainable railways and deepen the railway's European identity. In each of them, several recommendations were listed, both at European and national levels and within the sector, without forgetting the important aspect of funding, which is fundamental for these actions to be properly implemented and adopted.

We consider that each stakeholder has their own role to play, while European institutions must provide a macro and European approach to issues that are transversal to all Member States. Likewise for Member States, since many of the proposed actions and measures have an intrinsically national character and deserve national and even regional attention. And finally, the railway sector itself has the capacity and responsibility to advance on a set of actions internally, also in collaboration with other stakeholders who are committed to advancing towards an even more smart and sustainable sector.

We therefore call on the EU institutions, Member States, representatives of the sector, and stakeholders to take these policy recommendations into account in future endeavors and policy actions and initiatives.