

KEY FINDINGS D2.2

**Identification of skill needs and occupational profiles
from the point of view of rail operators
and infrastructure managers**

Public version

wmp consult and Deutsche Bahn (co-leaders WP2)

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STAFFER
EUROPEAN RAIL SKILLS ALLIANCE



AIMS

- Taking into account results achieved in WP1 and the methodology adopted in task 2.1 for the identification of skill gaps and their important, task 2.2 identifies skill needs from the point of view of railway operation and infrastructure management.
- Based on the analysis of specific trends and drivers of change in railway operation and infrastructure, the aims of task 2.2 are:
 - Analysis of stakeholder requirements
 - Identify needs in terms of training and/or reskilling provisions at different EQF level
 - Identify the occupational profiles in railway operation and infrastructure management with reference to the Classification of the European Skills, Competences, Qualifications and Occupations (ESCO)
 - Analysis of the “as is” in terms of occupational profiles and skills within the companies
 - Identify the operators’ and infrastructure managers needs in terms of new skills and competences
- As in task 2.1, the skills needs analysis of task 2.2 looked not only at general requirements but also on emerging and new skill needs that are related to cross-border rail traffic, with particular reference to rail freight corridors, for example language and communication skills.





WP2 WORKFLOW

- Constitution of a core team consisting of personnel of the two co-leaders with at least weekly exchange and information meetings.
- WP2 company partners (CER, DB, FS, IŽS, ÖBB, SNCF, CFL) agreed to organise regular information meetings organised by CER that are open also for non-STAFFER partners in order to inform about WP and task progress and results and discuss key results and outcomes of activities in the railway operation and infrastructure management related “strand” of STAFFER.
- Regular reporting and discussion of interim results in two meeting formats:
 - 7 General Meetings of all WP2 partners until November 2021.
 - 7 information meetings for CER affiliates in preparation of the general work package meetings.
- Elaboration of methodological tools as a collaborate process, led by WP2 co-leaders but with pro-active involvement of all partners involved in the work package.
- Besides this, WP2 co-leaders actively participated in exchange with WP1, WP3 and further work packages (WP4 and WP5) as well as general STAFFER coordination meetings.





APPLIED METHODOLOGIES WP2

- **Desk research**

- Gathering and evaluation of relevant literature on trends, challenges and skill needs in railway operation and infrastructure management
- Compiling a database of 192 EU co-funded transnational projects dealing transnational cooperation in fields such as initial and higher VET, education and competence development, technological and other innovation, etc. [ongoing analysis will feed into WP4, 5 and]

- **Online survey**

- Development and implementation of a comprehensive online survey (feeding into task 2.1 and 2.2) addressing railway undertakings, employer organisations as well as secondary and tertiary education and research institutions. High response rate amongst companies with > 80 valid responses from 19 countries.
- Assessments and analysis of 30 railway specific profiles that are defined in the ESCO database in relation to current skill sets and future skills needs
- More in-depth analysis of three occupational profiles [train driver; staff in traffic control centres; technical and engineering staff in infrastructure and maintenance]
- Specific focus on cross-border railways and related language, communication and other requirements

- **Focus groups and exchange with experts**

- Establishing of focus group on cross-border railways, language and communication and skill needs as well as other requirements in order to increase efficiency and effectiveness of cross-border railway operation
- Focus group work and exchange with company experts will continue in the context of forthcoming WPs 4, 5 and 6.



MAIN RESULTS I

- Building on the analysis of major trends, challenges and innovations as well as related needs and requirements from the perspective of railway operation and infrastructure management in task 2.1, task 2.2 looked at current and future skill sets and related training and qualification requirements
- The analysis of occupational profiles that are specific to railway operation and infrastructure management show that in terms of EQF levels, railways is dominated by medium level qualification profiles with dominance of EQF levels 3 and 4 to 5 and 6.
- A further feature of occupational profiles in railways is the distinctive feature fact that company-related further training and the provision of special knowledge and skills across different occupational groups but particularly in operation.
- According to respondents to the STAFER WP2 survey, there is a general trend from medium to more advanced skill levels across all occupational profiles. While tasks that require only low qualification is decreasing, medium and higher qualified profiles face an upward skill shift in terms of fundamental, technical as well as transversal skills. The main drivers the upskilling need are new technologies, digitalisation and automation.
- The in-depth analysis of three occupational profiles at different EQF entrance level (train driver, staff in control centres; technical and engineering staff in infrastructure and maintenance) illustrates these trends quite well and also show that occupational profiles are also becoming more diversified in terms of specialisation of skill sets. This is illustrated for example by new occupational profiles that have been developed by companies during the last five years.
- The described features have also been highlighted by survey participants and experts in relation to cross-border railways and in relation to fundamental and technical skills such as ERTMS, national rules and regulation in other countries and of course foreign language skills.
- A key result of WP2 in this context is also that in order to increase efficiency and effectiveness as well as employability in cross-border and transnational railways there is a need to shift from staff mindsets that currently are national-centred to European mindsets that require more European railway knowledge and related intercultural competences and soft skills such as communication, problem-solving, autonomy and resilience, learning motivation and or openness.

MAIN RESULTS II: Outlook

- From the perspective of railway operation and infrastructure management and the results achieved in WP2, there are plenty of ideas as regards topics, measures and formats developed further in WP4, validated in the context of WP5 and implemented in WP6.
- Issues and questions that need to be addressed include the following in particular:
 - Short, medium and long-term strategies and accompanying measures as regards cross-border railways (regarding different needs of language training, intercultural communication and other skills, interoperability, other aspects) targetting staff involved in operation (train drivers) and cross-order traffic management, control, and planning;
 - Qualitative vs. quantitative changes in job profiles and topics/contents and formats of education and training that might be developed at transnational or European level;
 - Develop a better understanding of “European mindsets” in railways (discussion and exchange with experts, further research) and how to foster them, for example by railway-specific Erasmus schemes.



EXPECTED BENEFITS FOR RAIL SECTOR

- The research in the context of WP2 complements findings from previous and ongoing research but also provides additional insights and knowledge as regards future skills and competence requirements as well as requirements in the context of transnational railway operation from the perspective of operational staff, experts inside railway undertakings and railway-related research.
- On this basis future skills needs as regards transnational activities promoting fundamental, technical as well as soft skills have been identified for different railway-specific occupational profiles that provide a basis of stakeholder activities in further STAFFER work packages and tasks
- Above that, WP2 has delivered a deeper look at skills, competences and other requirements related to operational and managerial staff involved in cross-border railways and rail freight corridors.
- All in all, different types of benefits are expected from STAFFER and WP2 for the rail sector:
 - Direct exchange in thematic focus groups and concrete suggestions as regards measures in relation to mobility, exchange and training will contribute to the development of adequate and relevant measures in the context of further STAFFER work packages (WP4, WP6) that provide concrete added-value for railway undertakings and the sector.
 - By the focus on different occupational profiles relevant for railway operation and infrastructure management and the specific interest in cross-border railway operation, benefits are expected in fields such as the development of European level offers of skills and competence development as well as transnational initiatives for stronger alignment and cooperation in relation to specific occupational profiles and measures for different groups of staff.
 - It is also expected that the research and further activities in WP2 will contribute directly to the elaboration of a longer-term strategy and action plan for the rail sector as foreseen in WP7. Here, WP2 survey results may contribute to a longer-term strategy that takes into account also national differences as regards requirements and needs in railway operation and infrastructure management.





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