KEY FINDINGS D1.1 and D1.2

"Identification of current and future skills and competence needs"

Public version

Leader Organisations: TUD and SIEMENS

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Overview

- Aims: Objectives of WP1
- Workflow: From WP1 to WP2, WP3, WP4
- Applied methodologies: Planned work steps
- Main Results:
 - WP 1.1 Identification of trends
 - WP 1.2 Skills development
- Expected benefits for rail sector
- Lead authors contact





AIMS

Objectives of WP1

• WP 1.1: Providing analysis of state of the art

umbrella for WP2 and WP3

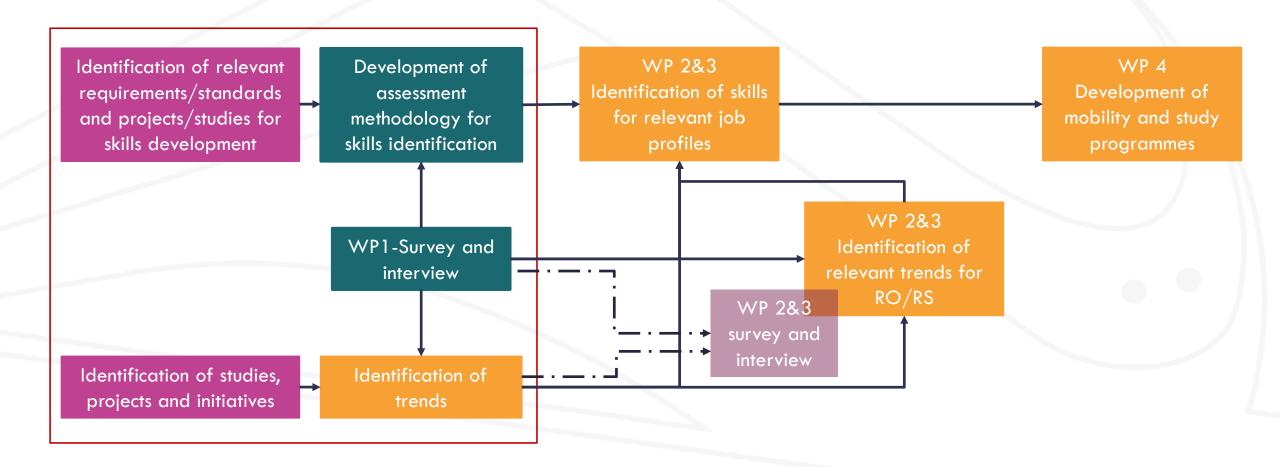
• WP 1.2: Develop a state-of-the-art assessment methodology

	WP 1	WP 2	WP 3
1	Trends definition and analysis	Identification of relevant trends from the operational point of view	Identification of relevant trends for railway supplier
2	Development of assessment methodology for skills identification	Identification of skills for relevant job profiles	Identification of skills for relevant job profiles
	Building the methodological		





WORKFLOW: WP1 - WP2 - WP3 - WP4







APPLIED METHODOLOGIES

Planned work steps:

- 1. Identification of studies, projects and initiatives that need to be included in the analysis of trends
 - → Review and analysis
- 2. Identification of relevant requirements
 - → Review and analysis
- 3. Discuss how to collect the know how from operators, infrastructure managers and supplier companies on current assessment methodologies: surveys and interviews
 - → Evaluation of survey and interviews
 - → Replication and comparison of these results with data from 1. and 2.







Definition "Trend"

- Trend is the basic direction in which something (rail) is developing
- Trend is a particularly profound and sustainable development

Definition "Megatrend"

 Megatrend is a long-term development that affects all areas of society and the economy

Classification of Trends

- Technology Trends
- Interoperability Trends
- Resilience Trends
- Modal Split Trends
- Human Resources Trends
- Environment Trends







Human resources trends

- Demographic problems (young employees, female employment)
- Inclusion (disabled people)
- Competence scope of employees
- XXX

Modal split trends

- Customer service
- Travel time and punctuality
- XXX

Technology trends

- Digitalisation + automatisation
- Big data
- Artificial intelligence (AI)
- Maintenance (predictive maintenance, integrated production platform)
- XXX

Environment trends

- CO2 neutrality (Green Deal, energy sources)
- Noise reduction
- XXX

Interoperability trends

- Operating processes (e. g. communication and language)
- Requirements on systems and components (e. g. ETCS, signal systems)
- Licensing issues
- xxx

Resilience trends

- Natural, economic, political disasters
- Pandemics (COVID-19)
- XXX

Safe and uniform European railway area







Assessment methodology should provide a tool for the continuous assessment of the skill needs during and beyond the project life.

WP1

Trends

Society

- Technical changes
- Environment and politics
- Economics and market

Occupational groups/job families for RS and RO

- Engineers
- Production
- Tradesman
- Digital / IT
- Technicians
- Corporate
- Operations
- Finances

WP2/WP3

Occupational/job profiles (examples)

- Existing occupational profiles
 - rail operation manager
 - infrastructure engineer
 - dispatcher
 - train driver
- New occupational profiles

Identification of skill needs... ...by using an assessment methodology

WP1







- To serve a comprehensive umbrella for WP 1 a survey on trends and skill development is conducted by the working group.
- This survey is distributed to all partners of the STAFFER project as well as to the associated partners of STAFFER. In addition, the target group is extended to the UNIFE rail company community.
- The survey is designed to provide an overview of the impact of trends and skill situation in rail companies (rail operators, infrastructure managers as well as rail suppliers).
- The purpose of the questionnaire is to get transparency on current understanding of skills in the European rail industry and to receive insights in current skill analysis and development practices in Europe.





EXPECTED BENEFITS FOR RAIL SECTOR

Expected benefits:

- Analysis of current trends that impact the rail industry
- Assumptions on how the change of trends affects also the skill situation and the workforces.
- The conducted survey gives an overview on the skill situation and assessment practices in the industry

Recommendations for a state-of-the-art development of skill is provided.





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