



DB Rail Academy
by DB Engineering & Consulting

Feasibility Study

Establishing a Regional Centre of Railways Excellence for the Western Balkans

Inception Report (Update based on comments by TC
Secretariat), 19 December 2024

Content

1.	Introduction and Project Context.....	3
2.	Overview Project Organisation and Management.....	4
2.1	Project Team	4
2.2	Project Communication.....	6
2.3	Quality Management	7
2.4	Stakeholder Management.....	7
2.4.1	Stakeholder Management Process.....	8
2.4.2	Identification and Registration of the Stakeholders	9
2.4.3	Stakeholder Analysis.....	9
2.4.4	Stakeholder Engagement.....	10
2.5	Project Management Plan.....	12
2.5.1	Project Schedule	12
2.5.2	Risk Matrix	13
3.	Approach and Methodology.....	15
3.1	Input Data	15
3.2	Assumptions/ Prerequisites.....	15
3.3	Status Quo of the railway sector in the Western Balkan.....	16
3.4	Railway Related Educational Institutions.....	28
3.5	Overview of Methodology.....	31
3.6	How to approach Task 1: Developing three Scenarios for the Regional Centre	34
3.7	How to approach Task 2: Developing a Roadmap.....	36
4.	Annexes	38

1. Introduction and Project Context

The Transport Community is planning a new regional training center to serve the members of the Transport Community and to support a common regional approach to transport that will improve the quality and quantity of transport services in the region. The new center will focus on providing qualification programs based on EU standards. The Centre will mainly offer relevant technical trainings as well as capacity building activities for certain needs.

At the Rail Excellence Summit in 2023 the idea for a regional center was born. Participants recommended the establishment of a regional education and training center for rail excellence. The purpose of this center will be the provision of education and training based on EU standards and norms in the railway sector. The focus of the training program will be on topics relevant for railway operations and for relevant specialized functions such as train drivers, station managers, dispatchers, remote controllers, etc. The new center will also have a multidisciplinary approach, including governance, legal, economic, technical and operational issues.

The objective of this project is to provide different scenarios and a roadmap for the planning and establishment of the Regional Railway Centre, including options for different models, milestones and objectives to be achieved.

DB Rail Academy was commissioned to advise on the project due to its extensive expertise, particularly in the establishment and optimization of training facilities. It is the international, training provider of DB Engineering & Consulting and has the objective of meeting individual needs for high-quality training and education worldwide. With access to the know-how of DB Training, Learning & Consulting and the entire DB Group, it offers a wide range of seminars, qualification programs and courses covering all aspects of public transport, rail transport, railway construction and logistics. The training services are complemented by HR consulting, which helps companies to identify the potential of their employees and to develop and implement sustainable plans for future success. The portfolio ranges from needs analysis and assessment to the development and operation of entire academies.

This inception report constitutes the first deliverable of the agreement with the Transport Community Secretariat. It outlines in more detail the approach and methodology that DB Rail Academy is planning to take to this task. It also includes an overview of the status quo in the Western Balkan in relation to the respective regional railways systems as well as structures for technical and railway related education.

2. Overview Project Organisation and Management

2.1 Project Team

The project team combines German DB know-how with regional expertise. The overview of the project team, their key tasks and responsibilities as well as their professional background are presented below.

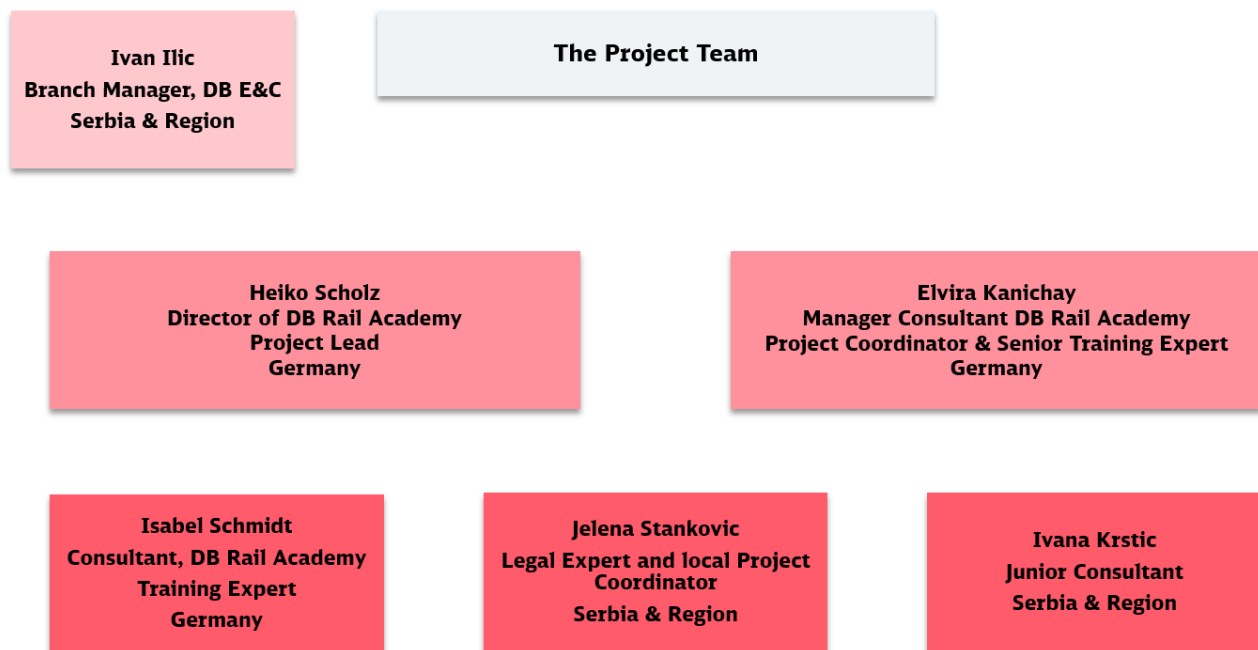


Figure 1: Overview of the Project Team

PROJECT STAFF:		
Project Team	Position	Task / Responsibilities
Heiko Scholz	Director DB Rail Academy and Lead Training Expert	Strategic guidance and advice on all work packages Ensuring quality of all deliverables
Elvira Kanichay	Project Coordinator and Senior Training Expert	Focal point for Transport Community and Stakeholders Overall Project Management Expert on models for training academies and training development and delivery
Jelena Stankovic	Local Focal Point and Legal Expert	Regional Focal Point for Transport Community and Stakeholders Providing legal framework conditions
Isabel Schmidt	Junior Training Expert	Expert on railway training development, delivery and training infrastructure
Ivana Krstic	Junior Regional Expert	Regional research and outreach, stakeholder management Supporting documentation and elaboration of report
Ivan Ilic	Head of DB E&C Branch	<i>Participating in selected meetings (not part of the technical delivery team)</i>

Table 1: Project Staff: Positions and Responsibilities

Professional Background of Experts

Heiko Scholz is the Global Director of DB Rail Academy and Head of Competence Consulting at DB Engineering & Consulting, a role he has held since 2017. With extensive expertise in international business development, he specializes in creating and implementing business models and strategic frameworks for railway academies worldwide. His work includes planning and delivering training programs for global clients, along with the acquisition and leadership of HR projects. Additionally, he has managed diverse projects to enhance performance, quality, timeliness, and cost efficiency.

Elvira Kanichay is an experienced Manager Consultant at the DB Rail Academy. Her background is in supporting international TVET systems including setting up or upgrading private or public Training Academies globally across different sectors such as construction, transport, and railways. During 2024 she has worked on developing a conceptual framework and building plan for a new Training Academy for the Azerbaijani Railways Company. Elvira has more than 15 years work experience developing and managing international projects.

Jelena Stankovic is an EU regulatory expert with a strong knowledge on criminal matters and economic crime offence (corruption related offence). During the last years she has been focusing on railway regulation in the EU and has worked for different projects for EU member states (such as Rail Baltica project). She holds a magister legum degree and has more than 14 years of experience in EU policy, international technical assistance and project management.

Isabel Jilina Schmidt supports the project as a Junior Competence Consultant at DB Rail Academy. As a psychologist (M. Sc.) and HR expert who graduated with honours, she has already gained experience in the areas of training, personnel and management development and employment diagnostics. As part of a DB-wide project, she was involved in the planning, design and marketing of interdisciplinary training and further education programs.

Ivana Krstic is as a Junior Consultant in Project and Program Management, contributing her expertise to the project. She holds a Bachelor of Laws, graduating with honors, and has engaged in various areas of law, including contract law and labor law. Throughout her tenure at DB E&C, Ivana has developed substantial experience in contract management, tendering procedures, administration. Additionally, she has cultivated strong project and program management skills, enhancing her ability to deliver effective solutions within her role.

2.2 Project Communication

DB Rail Academy emphasizes clear and customized communication with the Transport Community. Various communication formats and intervals are used to ensure transparency. To ensure effective information flow, a stakeholder and communication matrix (see Annex 1) was developed, which outlines specific moments for discussions and feedback. These planned interactions provide a structured foundation for decision-making and adjustments to the project modules as necessary.

The communication strategy includes regular status meetings between the Transport Community project team and the DB Rail Academy project team, along with expert interviews and consultations with national focal points. These interviews are conducted as needed to understand the unique status and expectations of each region involved.

The meetings are primarily held virtually via MS Teams; however, where possible, interviews with various stakeholders are conducted on-site. Apart from these meetings, most communication takes place via email.

Meetings and interviews will be documented through written minutes to maintain a comprehensive record and shared with the TC Secretariat. Furthermore, DB Rail Academy continuously monitors the quality of its services, integrating client feedback to maintain high standards throughout the project's lifecycle.

2.3 Quality Management

The Teamleader jointly with the Senior Training Expert are responsible for the overall quality control of the project. In line with DB standards, all documents will be checked based on the 4-Eyes principles to ensure the quality of delivered documentation, analysis, and potential recommendations. Data collected and analysis presented to the TC Secretariat will be verified and validated by the technical expert's team. In case of specialised technical topics, the technical team can also rely on expertise within Deutsche Bahn and for specialised internal experts to be consulted.

The analysis and ideas for the main deliverables Task 1 and 2 of scenarios as well as the roadmap will be reflected on with the TC Secretariat to include their expertise and comments before any final products.

2.4 Stakeholder Management

During the execution of the services, the stakeholder's identification and engagement activities shall be planned and be performed by the DB project team.

The project team will be responsible for engaging stakeholders throughout each work package provided. Based on the scope of each service, the project team will identify and assess if new stakeholders are involved in providing the service.

The project team must increase support and minimize resistance from stakeholders.

The project team shall engage the stakeholders through the process of communicating and working together with them to meet their needs and expectations, and to address issues as they occur. We will be actively listening and asking for input and feedback from the stakeholders to make sure communications are being received and understood, and to capture important information to make adjustments and to respond to problem areas.

DB will also provide a template for a stakeholder map and a proposal to classify stakeholders to enable a structured approach (see Annex 1).

2.4.1 Stakeholder Management Process

Stakeholder management contains these processes:

- Identify and Register Stakeholders / IDENTIFY AND REGISTER;
- Categorize and Assess Stakeholders interests and influence / ANALYSIS MATRIX;
- Stakeholder Engagement:
 - Plan Stakeholder Engagement / ENGAGEMENT STRATEGY AND ACTION PLAN;
 - Manage Stakeholder Engagement / ACTIVITIES AND COMMUNICATION;
 - Monitor Stakeholder Engagement / PERFORMANCE REVIEW.



Figure 2: Stakeholder Management Process

2.4.2 Identification and Registration of the Stakeholders

The purpose of the Stakeholder identification process is to identify all project stakeholders as soon as is practicable. The identification of all the stakeholders, their roles, responsibilities, requirements to constrain the service must be ascertained. Stakeholder's identification, registration, engagement shall be kept updated throughout the project.

The initial list of the stakeholders was created for the activities relevant for the service to be implemented and related. Additional stakeholders shall be identified based on the ongoing execution of service. Current overview of stakeholders can be found in Annex 1.

2.4.3 Stakeholder Analysis

Based on the Stakeholders Register the project team has carried out the stakeholder analysis with the purpose of developing the stakeholder matrix, as in the graph presented below. (see Annex 1).

The stakeholder matrix is based on the “Relevance of interested party” and the “Priority of the interested party” for the identified stakeholders. It gives a graphic representation how the stakeholders should be managed throughout the whole service. An example is given in **Error! Reference source not found.**, where the circled red numbers represent one stakeholder from the stakeholder register. Please note that the numbers in the figure are just examples for illustration, but do not refer to actual stakeholders from the Stakeholder Register.

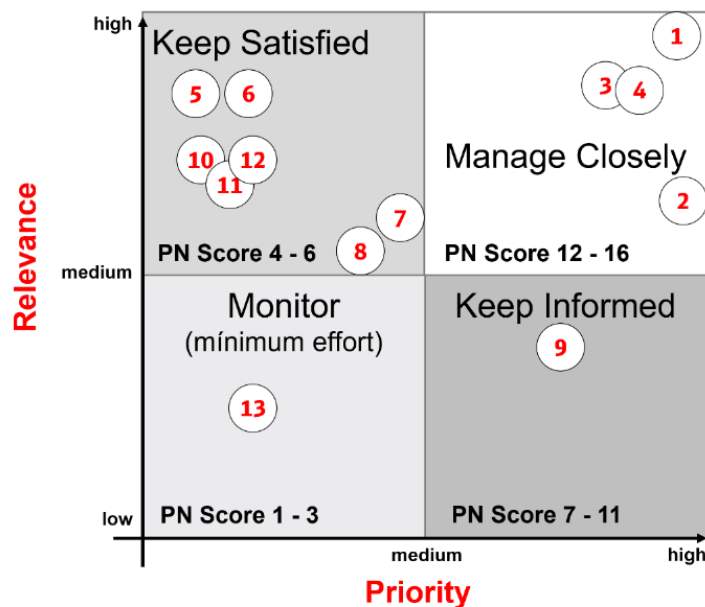


Figure 3: Stakeholder Analysis and Stakeholder Matrix

To determine the needs and expectations of identified stakeholders, the scoring of each stakeholder is ranked according to their degree of priority and their relevance (1 low - 4 high):

- Relevance of interested party: effects upon organizational activities. Not relevant; Minor relevance; Influential; Significantly relevant;
- Priority of the interested party: effects on decisions the organization makes. No importance; Minor Importance; Some Importance; Major Importance;
- Power: combined effects of the Relevance and the Priority of the interested party gives the Priority Number (PN).

Power (Effects of influence) = Priority x Relevance		Priority of Interested Party (Effects on decisions)			
		No importance	Minor importance	Some importance	Major importance
Relevance of Interested Party (Effects on activities)	Not relevant	1	2	3	4
	Minor relevance	2	4	6	8
	Influential	3	6	9	12
	Significantly relevant	4	8	12	16

Table 2: Stakeholder ranking

Score	Power of Interested Party (Effects on decisions)		
	Description	Strategy	Objectives
1 to 3	Low relevance with low importance	Monitor interest	Detect opportunities from growing interest
4 to 6	Low relevance with high importance	Keep satisfied	Build interest, monitor for changes
7 to 11	High relevance with low importance	Keep informed	Maintain interest, monitor for changes
12 to 16	High relevance with high importance	Manage closely	Maintain support, monitor for changes

Table 3: Stakeholder engagement strategy

2.4.4 Stakeholder Engagement

Communication with Stakeholder

The engagement and communication activities with stakeholders are identified with their purpose, the proposed actions, and the agreed frequency. This information shall be added to the Communication with Stakeholder Register.

The engagement and communication activities, alignment process, communication mode and escalation process shall be dedicated to each stakeholder or stakeholder group.

The engagement approach analysis shall be followed in order to reach engagement goals:

- Inform: to provide balanced, objective, accurate and consistent information to assist stakeholders to understand the problem, alternatives, opportunities and/or solutions;
- Consult: to obtain feedback from stakeholders on analysis, alternatives and/or outcomes;
- Involve: to ensure that their concerns and needs are consistently understood and considered;
- Collaborate: to partner with stakeholders including the development of alternatives, decision making, and the identification of preferred solutions;
- Empower: to place final decision-making in the hands of the stakeholder.

Due to specific project conditions the communication with stakeholders and project beneficiaries is of highest relevance, therefore the project team has developed a template for Minutes of Meetings with Stakeholder (see Annex 2).

Stakeholder escalation of problematic issues

In case of any significant and problematic issues arising in handling Stakeholder needs and requirements and the issue is not be resolved within one month or depending on critical status of issue. The Project leader will send notification with description of situation and possible solutions towards TC Secretariat.

Responsible persons from both parties TC Secretariat and DB EC arranging joint meeting in order to evaluate situation and risks and draw up potential scenarios to resolve Stakeholder issue in most amicable way for all involved parties.

2.5 Project Management Plan

2.5.1 Project Schedule

The table below describe the project schedule including deliverables. This can be reviewed on a regular basis and adjusted during the project cycle in agreement with the TC Secretariat.

		Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
1.	Kick-off Meeting DB Project Team and Transport Community, 30.09.2024										
2.	Inception Phase (1 month) Deliverable: Submission of report in Word/ PDF format incl. detailed timeline, workplan and methodology by 31 Oct										
3.	Phase 1: Data collection and interviews with relevant stakeholders (2 months)										
4.	Phase 2: Data Analysis and Modelling of Scenarios (4 months) Deliverable Task 1: Submission of report in Word/ PDF format on three different Scenarios to Transport Community Secretariate by 31 March. TC has 20 days for any additions or adjustments.										
5.	Phase 3: Development of Roadmap (1 month) Deliverable Task 2: Submission of report in Word/ PDF format on Roadmap by 15 May to Transport Community Secretariate. TC has 20 days for any additions or adjustments.										

Figure 4: Project phases and timelines including submission of deliverables

2.5.2 Risk Matrix

The following table presents the risk management matrix for implementing this Feasibility Study. As highlighted below, the core risks are related to too little engagement by stakeholders. Yet, this can be mitigated by a close collaboration between DB and the Transport Secretariat and reliance on contacts and stakeholders that TC already has close relations with or even signed MoUs.

Impact Probability	Significant	Medium	Minor
Highly likely			
Likely	Engaging other stakeholders such as national railways companies, training providers, industry representatives in the needs assessment ⇒ Support by TC and national focal points to guide consultants on most relevant stakeholders and potential support in establishing contacts ⇒ Trying to engage with major stakeholders face-to-face not only per email or online meetings	Finding the right level of data , e.g. legal and economic data for each of the six regions and in accessible languages to ensure a neutral comparison ⇒ Support by TC and national focal points to access and verify the data required	

Unlikely	<p>National Focal Points are unable to invest sufficient time in providing information, contacts etc</p> <p>⇒ TC formally introduces consultants and ensures joint interest in and understanding of the study</p> <p>⇒ Consultants jointly with TC communicate timelines as early and clearly as possible for their input</p>	<p>High expectations by TC political leadership on scope and outcomes of this study</p> <p>⇒ TC and consultants presenting study to leadership clearly outlining scope and limits of this study, being clear that this is the first step towards a Regional Centre</p>	
----------	--	---	--

Table 4: Risk Matrix

3. Approach and Methodology

3.1 Input Data

The Project team received input data from the TC Secretariat, which has been classified according to the following categories:

Category	Content
Reference documents	Includes the studies/documents considered as "1.1 Documents, studies and Information to be taken into account" shared during kick off meeting
Previous deliverables from other projects	It includes previous deliverables from Skill Training for Future European Rail System (STAFFER)
Memorandum of Cooperation	Includes information about request for support in setting up Regional Railway Excellence Centre

Table 5: Classification of Input Data Received

3.2 Assumptions/ Prerequisites

For a successful and on-time project delivery, the following assumptions are highlighted:

- Close collaboration between the consultants and the Secretariat of the Transport Community is necessary to ensure that the analysis fits the requirements.
- Project language will be English. All for the project required general documents should be provided in English or Serbian language as much as possible to avoid translation costs. National focal points shall provide information in written or verbal form in English. DB will produce all WP outputs and deliverables in English; Workshops and presentations shall be in English.
- Contacts to local focal points: Introduction by Transport Community Secretariat and agreeing on their roles and responsibilities in relation to this assignment, e.g. being available for interviews, providing relevant information and documents to the consultants. The Transport Community Secretariat to provide relevant local contacts as feasible.

- Once data input has been identified and analyzed, it is expected that no changes in the input will occur afterwards.
- Identified risks will be discussed and mitigated with the TC Secretariat.

3.3 Status Quo of the railway sector in the Western Balkan

This chapter provides an overview of the Western Balkan relevant for this study. Here, the current framework and conditions for the local railway sectors are described as well as the educational systems as related to technical and railway education.

Albania

General information

Albania has an area of 28.748 km² and population of Albania in 2022 is estimated at 2.8 million. Total length of the train system is 425 km of single line none of which is electrified yet (30 % is under construction, 70 % non-electrified) with the standard gauge of 1435 mm.

The most relevant state railway companies are Albanian Railways (Hekurudha Shqiptare), Cargo Railway „AlbRail“.

Albania has a limited infrastructure with 4 passenger lines with no high-speed trains as of now. There is no international passenger traffic with the neighboring regions. National passenger transport has 5 lines out of which 4 are currently not in operation. These lines are mainly to and from the capital Tirana. The oactive line is between Elbasana and Pogradec where trains are operating 3 days in a week

International cargo traffic exists between Montenegro and Albania.

Ongoing Trends

The main ongoing trends in Albania currently can be seen as tendencies to improve and modernize infrastructure, improving connectivity with neighboring regions. Emphasis is on a better connection and inclusion of private railway companies as well as digital improvements for operations.

Market Characteristics

There are ongoing efforts to liberalize the market and encourage private investments; direct awards are possible. The railway is 100% state-owned. Albania has recognized the need for investment in the railway sector and has sought funding from international organizations and other partners for modernization project.

Education System

	Albania
Relevant authorities	Ministry of Finance and Economy (Ministria Financave dhe Ekonomisë), since 2017. Previously, Ministry of Education, Sport, and Youth (Ministria Arsimit, Sportit dhe Rinisë). National Agency for Education, Vocational Training, and Qualifications (Agjencia Kombëtare e Arsimit, Formimit Profesional dhe Kualifikimeve, AKAFPK) oversees accreditation and curriculum development.
Legal Framework for Vocational Education	Established in 2002 with the Law on Education and Training (Për Arsimin dhe Formimin Profesional në Republikën e Shqipërisë), creating a standardized framework for vocational education.
Education Structure	Compulsory schooling: 9 years (5-year primary cycle and 4-year upper cycle). Vocational education is full-time, offered through 2- to 4-year programs in public/private vocational secondary schools and vocational training centers
Vocational Education Levels and Certifications	Level I: 2 years, Level 1 vocational certificate, includes 40% general subjects, 30% vocational subjects, 30% practical training. Entry to Level II or job market. Level II: 1 year after Level I, Level 2 vocational certificate (30% general, 20% vocational, 50% practical training). Level III: 1-2 years after Level II, Level 3 vocational certificate + vocational state Matura diploma, enabling higher education or workforce entry
Post-secondary Vocational Options	1-2-year vocational programs at tertiary level institutions, including universities, academies, and vocational colleges, leading to vocational qualification certificates and diplomas
Specific Features	Albania's vocational training system has undergone significant reform following a steep decline in the early 1990s from 466 vocational schools to 57 by 2000/01. The curriculum has been modernized to align with market demands, with around 50 training curricula developed by 2013

Table 6: Education System in Albania

Bosnia and Herzegovina

General Information

Bosnia and Herzegovina has an area of 51.209,2 km² and a population of a 3.2 million estimated in 2022. The length of single-track railways is 540 km, the length of the double-track railways is 68 km. The total length is 609 km of which 392 km is electrified, and is built on standard gauge track of 1435 mm.

The most relevant state railway companies are „Željeznice Federacije Bosne i Hercegovine“ which operates in the Federation and „Željeznice Republike Srpske“ which operates in the RS. The entity companies manage the infrastructure and provide transport operations for both freight and passenger service within their borders. As of now, there are no high-speed trains in BiH.

Ongoing Trends

There are efforts to upgrade outdated infrastructure. There's a focus on increasing freight capacities to better serve the logistics needs of the economy. The sector is gradually adopting digital technologies for ticketing, scheduling, and operational management.

Market Characteristics

The railway is 100% state-owned. Railways system in BiH is outdated in infrastructure and faces limited funding and operational inefficiencies. The railway network, primarily inherited from the former Yugoslavia, has seen a decline in passenger numbers and freight transport.

Education System

	Bosnia and Herzegovina
Relevant authorities	Bosnia and Herzegovina has a decentralized vocational education system. Responsibilities are divided between federal and cantonal levels, with additional autonomy for the Republika Srpska entity and the Brčko District, each with separate constitutional provisions governing education
Legal Framework for Vocational Education	No single nationwide legal framework; education laws and regulations are determined at the entity and canton levels, reflecting Bosnia and Herzegovina's decentralized governance structure
Education Structure	Compulsory education culminates with a primary school certificate, the "Svjedočanstvo o završenoj osnovnoj školi." Secondary education is offered through three- or four-year programs in a variety of schools, including vocational schools (srednje stručne/strukovne škole) and technical schools (Tehničke i srodne škole)
Vocational Education Levels and Certifications	Three-year vocational programs: Culminate in the "Diploma o završenoj srednjoj stručnoj školi," qualifying graduates to enter the workforce. Four-year technical programs: Culminate in the "Diploma o završenoj srednjoj školi," allowing workforce entry or access to higher education. Master craftsman courses: Offered by vocational schools, with master exams leading to the "Diploma o završenom petom stepenu stručne spreme."
Post-secondary Vocational Options	Further vocational education is available at higher vocational schools. Graduates receive a "Diploma o završenim osnovnim strukovnim studijama" for basic vocational studies, which is necessary for progressing to specialized studies, resulting in a "Diploma o završenim specijalističkim strukovnim studijama."
Specific Features	The authorities allow for up to six different curricula for a single vocational occupation due to historical factors and a lack of standardization in curriculum choice across schools. Adult education is widely available in recognized secondary schools and lifelong learning centers, but regulation is inconsistent across regions.

Table 7: Education System in Bosnia and Herzegovina

Kosovo*

General Information

Kosovo has an area of 10,887 km² and a population of 1.5 million. The total length of the train system is 334 km, with 103.4 km designated for freight. The railway operates on a standard gauge of 1435 mm, aligning with EU standards.

The most relevant state railway companies are Trainkos Sh.A and INFRAKOS Sh.A.

Kosovo's railway fleet primarily consists of rolling stock with currently no high-speed trains. In 2024, a new route between Prishtina and Kline has recently been established. There are currently no international passenger services.

Ongoing Trends

Kosovo, supported by the European Union, is prioritizing the rehabilitation of its infrastructure. Efforts are focused on enhancing connectivity with neighboring regions, particularly Serbia and Albania. They actively seek foreign investments to support these improvements, with a goal of creating a more competitive and efficient railway industry.

Market Characteristics

Kosovo faces significant economic challenges, including high unemployment (25-30%), particularly among youth. Kosovo's competition law framework in the railway sector is evolving, with ongoing efforts to promote a more competitive environment. Direct awards are possible. The railway is 100% state-owned. The railway infrastructure is largely outdated and in need of modernization. Kosovo is actively seeking foreign investment and partnerships to revitalize the railway sector and attract funding for necessary upgrade.

** This designation is without prejudice to positions on status and is in line with UNSCR 1244 (1999) and the ICJ Opinion on the Kosovo declaration of independence.*

Education System

	Kosovo
Relevant authorities	Ministry of Education, Science and Technology oversees primary, secondary, and vocational secondary schools, as well as universities. The Ministry of Labour and Social Welfare manages regional vocational training centers.
Legal Framework for Vocational Education	A standardized national system under the Ministry of Education, Science, and Technology, with legal provisions allowing for modular, flexible training in vocational centers. Schools can be accredited by the Ministry and the National Qualification Authority based on national standards.
Education Structure	Students complete nine years of compulsory schooling. Secondary education includes general and vocational secondary schools, with vocational training options available after completing compulsory schooling.
Vocational Education Levels and Certifications	Two-year basic vocational training: Leads to the NQF 3 national certificate (Certifikatë Kombëtare e Kombinuar Niveli KKK 3). Three-year vocational program: Culminates in the NQF 4 national diploma (Diploma Kombëtare e Kombinuar Niveli KKK 4), enabling access to higher education. One- to two-year additional qualification: Results in NQF 5 (Diploma Kombëtare e Kombinuar Niveli KKK 5), available at private vocational colleges. Non-formal education programs at NQF 3, 4, and 5 are also available.
Post-secondary Vocational Options	Post-secondary education includes additional qualifications at private vocational colleges, offering NQF 5 diplomas. Graduates from secondary vocational programs may also transition directly to university-level studies.
Specific Features	While a legal framework exists for dual training, practical training partnerships between schools and companies remain voluntary and informal. Many schools lack necessary facilities for hands-on learning. Slow economic growth, a high SME presence, and limited industry investment have affected vocational training expansion and the availability of skilled labor.

Table 8: Education System in Kosovo

Montenegro

General information

Montenegro spans an area of 13,812 km² with an in 2023 estimated population of 633,158 thousand. The railway system covers a total length of 250 km with 225 km electrified, operating on a standard gauge of 1435 mm. There are no high-speed trains.

The main state railway companies are “Željeznički prevoz Crne Gore” (Passenger Transport), “Željeznička Infrastruktura Crne Gore” (Infrastructure), and “Montecargo” (Cargo).

Ongoing trends

Montenegro is prioritizing railway modernization, focusing on rehabilitating existing lines, particularly the Bar-Belgrade railway. They work to improve international connectivity through cross-border links with neighboring regions and electrifying sections of the railway network to boost energy efficiency and reduce emissions. There is a growing emphasis on public-private partnerships to attract investment, while passenger services are being enhanced with modernized rolling stock and optimized schedules. Digitalization is being gradually adopted to improve operations and customer experience, along with a focus on sustainability to align with EU environmental goals.

Market characteristics

Competition is regulated under the Law on Protection of Competition to prevent anti-competitive practices. The railway sector is fully owned by the state, with ongoing efforts to modernize aging infrastructure and rolling stock. The sector is seeking loans and international support for upgrades, with a strategic focus on enhancing cross-border rail links, especially with Serbia and Albania.

Education System

	Montenegro
Relevant authorities	Ministry of Education (Ministarstvo prosvjete), responsible for all educational policies including vocational education.
Legal Framework for Vocational Education	Governed by Ministry of Education policies, currently undergoing reforms to implement modular curricula across vocational education levels, enhancing flexibility and adaptability to market needs.
Education Structure	Compulsory primary education starts at age 6 and lasts until age 14 or 15. Completion of primary education, with the certificate “Svjedočanstvo o završenoj osnovnoj školi,” is required for entry into vocational programs.
Vocational Education Levels and Certifications	<p>Basic Vocational Training: Two-year program resulting in the Diploma o položenom praktičnom ispitu.</p> <p>Secondary Vocational Education: Three- or four-year program, leading to either the Diploma o položenom završnom ispitu (three years) or the Diploma o položenom stručnom ispitu (four years). Graduates from four-year programs qualify for both the workforce and university admission, while those from three-year programs enter the workforce directly.</p> <p>Post-Secondary Vocational Education: Includes master exams for the Diploma o položenom majstorskom ispitu and higher vocational studies for the Diploma o stečenom višem stručnom obrazovanju.</p>
Post-secondary Vocational Options	Post-secondary options include master craftsman training (Obuka za majstora) and higher vocational studies (Više stručno obrazovanje), each designed to meet specialized vocational skills and certification requirements. Graduates from the four-year secondary vocational programs are eligible for university admission.
Specific Features	Ongoing reforms aim to modularize curricula in vocational education, including basic, secondary, and post-secondary levels. Modularization is intended to enhance course flexibility and relevance to industry demands, with vocational schools encouraged to collaborate with businesses through public-private partnerships.

Table 9: Education System in Montenegro

North Macedonia

General information

North Macedonia spans an area of 25,713 km² with an in 2022 estimated population of 2.0 million. The railway system covers a total length of 700 km, with only around one-third electrified, operating on a standard gauge of 1435 mm.

The main state railway companies are "Železnici na Republika Severna Makedonija Transport" (Transport) and "Makedonski Železnici Infrastruktura" (Infrastructure).

Ongoing trends

North Macedonia is prioritizing railway modernization, focusing on rehabilitating existing lines, and constructing new ones to enhance safety and efficiency. Efforts are underway to boost international connectivity through cross-border links with neighboring regions, and sections of the network are being electrified to improve energy efficiency and reduce emissions. North Macedonia is seeking public-private partnerships to attract investment, while passenger services are being enhanced with modernized rolling stock and optimized schedules. Digitalization is gradually being adopted to improve operations and customer experience, with an increasing emphasis of making rail transport more sustainable, to align with EU environmental goals.

Market characteristics

Competition is regulated under the Law on Protection of Competition to prevent monopolistic practices. The sector is primarily dominated by state-owned Macedonian Railways (MŽ), although efforts to liberalize the market and encourage private participation are underway. Much of the infrastructure is outdated, prompting the authorities to seek loans and international support for modernization, with a strategic priority on enhancing cross-border rail links with Greece, Serbia, and Bulgaria.

Education System

	North Macedonia
Relevant authorities	Center for Vocational Education and Training oversees the vocational education system
Legal Framework for Vocational Education	Vocational education is structured under the National Qualification Framework and governed by the Vocational Education Law, which also includes provisions for master craftsman exams established in 2006, though these exams are currently inactive.
Education Structure	Divided into nine years of primary education followed by optional secondary education at vocational secondary schools. Primary education completion is required for entry into vocational programs.
Vocational Education Levels and Certifications	Two-Year Vocational Training: Concludes with the Certification of Professional Competence Three-Year Vocational Training: Grants the Diploma for Final Exam, enabling workforce entry. Four-Year Vocational Training: Concludes with the State Matura Exam, qualifying students for higher education
Post-secondary Vocational Options	Adult vocational education is available through secondary schools, community universities, lifelong learning centers, and private institutions.
Specific Features	Master craftsman training, legally established but currently inactive, aimed to advance practical vocational skills. Adult vocational education is well-supported and widely accessible across a variety of institutions.

Table 10: Education System in North Macedonia

Serbia

General information

Serbia spans an area of 88.499 km² with an estimated population of 6.6 million. The total structural length of the standard-gauge lines on the territory of Serbia amounts 3333,4 km, out of which 3044,7 km of single-track and 288,7 km of double-track lines. Totalling of km of 1273,7 km of open track have been electrified, together with the main through tracks (985,0 km of single-track and 288,7 km of double-track lines). The total length of tracks on electrified open tracks and the main running tracks is 1.563 km out of which the length of electrified open tracks and running tracks 1.563 km. All above data relate to standard gauge 1435 mm tracks.

The most relevant state railways companies are “Serbian Railway Infrastructure” a.d. PUC “Belgrade Metro and Train“, “Serbia Cargo” and Joint Stock Company for Railway Passenger Transport “Srbija voz.

Ongoing trends

Significant investments are being made to upgrade existing railway infrastructure, including track renewal, station renovations, and the implementation of modern signaling systems. Serbia is working to enhance its railway connections with neighboring regions to boost regional trade and passenger transport. There is a growing emphasis on making the sector more environmentally friendly, incl. investments in electrification and reducing carbon emissions.

Market characteristics

The competition law framework in Serbia’s railway sector is evolving to promote a more competitive environment, ensure fair access to infrastructure, and align with EU standards; direct awards possible under defined conditions. The railway is 100% state-owned.

Education System

	Serbia
Relevant authorities	Ministry of Education, Science and Technological Development
Legal Framework for Vocational Education	Vocational education in Serbia is regulated nationally under a centralized framework managed by the Ministry of Education.
Education Structure	Students complete primary education with a Certificate of Completion of Basic Education (Uverenje o završnom ispitu u osnovnom obrazovanju i vaspitanju), required for entry into secondary vocational schools.
Vocational Education Levels and Certifications	<p>One-Year Program: Concludes with a Certificate of Proficiency Exam (Uverenje o ispitu za stručnu osposobljenost).</p> <p>Two-Year Program: Yields a Work Qualification Diploma (Diploma o stečenom obrazovanju za rad).</p> <p>Three-Year and Four-Year Programs: Both award a Diploma of Secondary Education (Diploma o stečenom srednjem obrazovanju), with the four-year program allowing university entry.</p> <p>Master Craftsman Level: Available since 2014, requiring three years of prior vocational training and two years of work experience.</p>
Post-secondary Vocational Options	Higher vocational studies, culminating in a Diploma of Basic Vocational Studies, provide a path to specialist studies. Specialized studies can lead to the Diploma of Specialist Vocational Studies.
Specific Features	The vocational system includes partnerships with enterprises for practical training. Master craftsman training introduced in 2014 allows for advanced vocational specialization.

Table 11: Education System Serbia

3.4 Railway Related Educational Institutions

The following table describes relevant educational institutions that offer railway related education or work with the respective railway companies.

	Name of Institution	Scope / Content
Bosnia and Herzegovina	Željeznički Školski Centar	<p>It offers vocational training and education related to railway engineering and operations such as: Traffic Railway traffic technician (four years), train drivers education (four years)</p> <p>Vocational Education: Offering programs specifically tailored for careers in the railway sector.</p> <p>Technical Training: Providing hands-on training in areas such as railway engineering, maintenance, and operations.</p>
Kosovo	Academia Tempuli Prishtina (private educational institution)	<p>The College of Applied Technical Sciences "Tempulli" has the longest tradition in private education in Kosovo and has been providing training and education for participants in the field of traffic.</p> <p>Bachelor's Degree in Transportation Engineering: Covering the principles of railway systems, infrastructure design, and operations.</p> <p>Master's Degree in Railway Engineering: Focused on advanced topics such as signaling, maintenance, and safety in railway systems.</p> <p>Professional Certifications: Short courses or certifications related to railway management, operations, or safety standards.</p>

Kosovo	The British Chamber of Commerce in Kosovo, BCKK (non-profit organization)	Providing resources and assistance to British businesses operating in Kosovo. Offering insights and information about the Kosovo market and business environment.
Kosovo	Competence Center “Shtjefën Gjeçovi” (non-profit institution, collaborating with other organizations)	Providing training and educational courses in various fields, often focusing on vocational training and skills development.
North Macedonia	Harry Fultz Institute (private institution)	Technical Programs: Courses in areas like engineering, information technology, and business. Professional Development: Workshops and training sessions for skill enhancement. Certifications: Offering recognized certifications that validate skills in specific trades or industries.
Serbia	Academy of Technical and Art Applied Studies Belgrade - Department School of Railroad Transport in Belgrade (Visoka železnicka škola)	<ol style="list-style-type: none"> 1. Railway Mechanical Engineering (Bachelor, 3 years) 2. Railway Civil Engineering (Bachelor, 3 years) 3. Railway Traffic (Bachelor, 3 years) 4. Traffic and Transport (Bachelor, 3 years) 5. Traffic Electrical Engineering (Bachelor, 3 years) 6. Traffic Electrical Engineer (Bachelor, 3 years) 7. Commercial Traffic Operations (Masters, 2 years) 8. Electrical Engineering in Traffic (Masters, 2 years)
Serbia	University of Belgrade, Faculty of Traffic and	The main focus is educating and researching efficient, safe, and

	Transport	sustainable transport systems across road, rail, air, and maritime sectors. This faculty covers the design, operation, and optimization of transportation infrastructures and traffic management, with an emphasis on integrating new technologies and addressing global transport challenges.
--	------------------	--

Table 12: Railway related Academies and Institutes

3.5 Overview of Methodology

The main purpose of the Feasibility Study for Establishment of a Regional Centre of Railway Excellence is to deliver a general overview of legal, technical and economic state of play for all six Western Balkan regions and a clear roadmap for planning and establishing of the Regional Railway Center.

This project is aimed to give answers to the questions of decision-makers within the public sector during the first stages of analyzing and forecasting of the process that is expected to generate benefits for the Railway Undertakings and Infrastructure Manager of all Western Balkan regions in fostering high class railway knowledge and general interest in railway sector.

The project team will evaluate different scenarios for development of the Regional Railway Center. To gauge their strength, and their pros and cons, an initial analysis will be carried out, which will characterize the legal, economic, operational and infrastructure repercussions that each alternative would have for the decision makers.

This scenario analysis takes on special relevance in a macro economic, financial, and situational context of the current political framework in the Western Balkan regions. Which will imply the output variation due to different risks and preconditions.

Scenario development will be based on 7 Work packages.

- **WP 1. Legal requirements**

This work package should give an overview of current legal and strategic situation for each of the six Western Balkan regions, including identified gaps and actions needed to overcome possible obstacles in the certification recognition process.

In order to identify all relevant legal and strategic acts focusing on TVET and training regulations to set-up a regional centre, firstly desk research for all six Western Balkan (WB) regions has to be organized. This desk research will list all relevant laws, by-laws, strategies etc. from the region. During the research we will focus on identifying Acts which have the same level of power in the legal system of the respective region.

- **WP 2. Economic factors**

This work package will analyze the economic factors in relation to the establishment of a Regional Centre.

Firstly, during the data collection phase local cost drivers for training centres (e.g. staff and trainer costs) will be assessed across the Western Balkan. This cost assessment will be based on general and specific economic data per region to generate an estimation on potential

general cost levels. This data will also be validated through interviews with the national focal points.

Based on that national data and based on DB standards, relevant cost categories for the Regional Centre will be defined as clustered below. Costs for state of the art equipment such as simulators or virtual reality tools will equally be considered depending on the technical and operational requirements assessed in work packages 3 & 4.

Secondly, potential cost efficiency and revenue streams will be mapped out for the future Centre based on the three scenarios to be developed under Task 1

- **WP 3. Technical factors and Infrastructure**

This work package will define infrastructure requirements and potential equipment relevant for the new Regional Centre.

In a first step during the data collection phase, existing infrastructure across the 6 regions will be assessed including the standards of existing facilities as well as level of equipment existing training institutes across the region already have. Based on that, gaps in available infrastructure will be assessed.

During the Data Analysis and Scenario modeling phase, different options for infrastructure will be defined and mapped out.

- **WP 4. Operational factors**

The operational factors focus on reviewing the existing training portfolios across the region. During the data collection phase, an overview of relevant training standards will be compiled. This data will then be benchmarked against EU standards and gaps in the curriculum will be identified.

These gaps will serve as indication on what the Regional Centre shall offer to achieve EU standards and what training program should have the highest priority for the Centre to implement. This analysis will be closely aligned with the technical factors and the infrastructure development as described in the previous chapter. It will also be assessed if online modules might also be feasible or if the focus will be on physical trainings.

- **WP 5. Needs Assessment**

A needs assessment will be conducted to understand the needs for professionals and to identify the gaps in the current local training programmes. This needs assessment will be based on interviews with the local focal points for each of the 6 regions. This work package shall provide an overview of potential demand for relevant training courses and training facilities in the railways sectors in the region aimed at jointly achieving EU standards in the region.

It is proposed to do interviews with local representatives of railways companies (e.g. HR representatives). The selection of relevant companies shall be informed by recommendations of the national focal points and agreed with the Transport Community.

Furthermore, selected providers and stakeholders in vocational and technical education as well as in upskilling and qualification programmes for professionals shall be consulted as relevant. This exercise also includes an assessment of potential partners for a Centre such as universities and training institutes across the region.

- **WP 6. Risk Assessment**

Identifying potential risks and challenges associated with establishing and operating of the Regional Centre will be done through all WPs and will be presented in each WP.

All identified risk will later be used for the modelling of scenarios.

- **WP 6. Stakeholder Engagement**

Collaboration with Stakeholders will be organized through all WPs and project implementation. During legal, economic and infrastructure factor assessment the consultants will also search for possible collaboration opportunities with relevant international and/or national bodies, industry associations etc. Involvement of any stakeholder which is not an official partner of TC and involved in the project implementation, will be discussed with TC in advance. DB will also propose a stakeholder mapping tool for TC (also see chapter 2.4 and Annex 1.

The last stage of the project implementation will be dedicated to the finalization of the relevant *Roadmap* for establishing of the Regional Center of Railway Excellence in the Western Balkan.

During this process the DB project team will follow the SIGMA-OECD standard relevant for public policy design and development of Roadmaps (example Law on Planning System of Serbia). This includes defining actions which are separated on short-term (up to 1 year for implementation), mid-term (2-5 years for implementation) and long-term (more than 5 years for implementation).

The project team will develop one roadmap for the optimum scenario.

3.6 How to approach Task 1: Developing three Scenarios for the Regional Centre

The following table presents a proposal on how to develop the scenarios based on the different criteria and work packages outlined in the tender documents. DB will suggest 3 options for the Regional Centre. For this inception report, the DB project team developed some initial ideas for 3 different models for a Regional Centre outline on top of the table which will be verified and adjusted during the study.

Each model has its own implications in regard to potential location and training delivery.

This methodology will be discussed further with the Transport Community Secretariat and will be further defined over the coming project phases.

Methodology for Scenario modeling:

	Minimum Scenario (Do-Minimum)	Optimum Scenario (Optimal Solution)	Maximum Scenario (Do-maximum)
	Hybrid Model:	Cooperation model:	Stand alone Centre:
	<ul style="list-style-type: none"> ❖ Small coordinating unit ❖ Training provision by external service providers ❖ Location of unit is flexible ❖ Location of training can vary since trainings can be provided in different regions by different service providers 	<ul style="list-style-type: none"> ❖ Part of an existing university or institute ❖ Training delivery and staffing in partnership with host ❖ Options for Equipment ❖ Options for regional certification ❖ Options for online and in person trainings at the hosting Centre ❖ Proposal of 2 different locations/ regions 	<ul style="list-style-type: none"> ❖ Centre has its own building and hired staff ❖ Trainings offered fully in the Centre ❖ Options for Equipment ❖ Options for regional certification ❖ Strong brand for TC ❖ Proposal of 2 different locations/ regions
Legal	Legal barriers and opportunities for this model, incl. regional certification	Legal barriers and opportunities for this model, incl. regional certification	Legal barriers and opportunities for this model, incl. regional certification

Economic	Economic framework conditions relevant for this model Cost Categories	Economic framework conditions relevant for this model Cost Categories	Economic framework conditions relevant for this model Cost Categories
Operational/ Training portfolio	Identifying priority training needs Confirming options for relevant training providers on EU standards in the region for selected trainings and certificates	Identifying priority training needs Identifying suitable hosting partner based on options of existing training programmes/ modules and space/ venues for training delivery Curriculum development as needed	Identifying priority training needs Curriculum development for new training Centre
Technical/ Infrastructure	Choosing service providers that have sufficient equipment or locations, or trainings can take place at the TC partner company requesting specific trainings	Identifying suitable hosting partner based on technical preconditions/ existing infrastructure	Procuring full infrastructure for new Centre
Risk assessment	Sustainability (financial resources, regional political developments, sufficient requests for services)	Sustainability (financial resources, regional political developments, sufficient requests for services)	Sustainability (financial resources, regional political developments, sufficient requests for services)
Stakeholder management	Securing continuous commitment by regional railway companies Securing commitment on political level and to regional certification options	Securing continuous commitment by regional railway companies Securing commitment on political level and to regional certification options	Securing continuous commitment by regional railway companies Securing commitment on political level and to regional certification options

Table 13: Methodology for Scenario Modeling

3.7 How to approach Task 2: Developing a Roadmap

The second task of the project is the development of a roadmap which will include detailed steps and processes for the set up of a Regional Training Centre. The DB Project Team proposes the following methodology to develop a roadmap based on one of the Scenarios outlined above and based on short-term, mid-term and long-term tasks. The Roadmap will also include a risk matrix as well as a stakeholder map and a stakeholder engagement plan. The criteria for the roadmap might still be added to based on the analysis beforehand.

	Short-Term (up to 1 year) Mobilization and Preparation Phase	Mid-Term (1-5 years) Opening of Centre and Operations	Long-Term (more than 5 years) Operations of Centre
Institutional level (political commitment and decisions)	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc
Legal	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc
Economic	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc
Operational	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc

Technical	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc
Needs Analysis	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc
Risk Assessment	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc
Stakeholder management	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc	Activity 1: Activity 2: etc

Table 14: Developing a Roadmap

4. Annexes

- Annex 1: Stakeholder Matrix
- Annex 2: Template for Minutes for Meetings with Stakeholders