

RAIL BALTICA INFRASTRUCTURE MANAGEMENT MODEL IMPLEMENTATION

Annual Progress Report No. 3

January 2023 – December 2023



CONTENTS

INTRODUCTION..... 3

PROGRESS OVERVIEW 4

CONCLUSION AND OUTLOOK 16

CONTACTS..... 16



INTRODUCTION

In 2023 the Baltic States have advanced further in their effort to develop the Rail Baltica infrastructure management model, upholding the overarching goal to provide equal, non-discriminatory and easy access to Rail Baltica railway infrastructure and facilities, as well as to elevate future Rail Baltica operations to the highest industry standard.

As in previous years, a dedicated cooperation format – Expert Working Group (hereinafter – **EWG**), comprised of Baltic railway sector experts, continued to work on the implementation of a comprehensive action plan which covers core areas and functions in managing the future Rail Baltica railway – access, railway operations, safety, performance and other critical aspects.

The work of the EWG has been augmented by the support of Shadow Operator (hereinafter – **SO**) services. These services, provided by globally renowned railway sector companies, bring long-term operation and maintenance experience and expertise in managing the high-speed European gauge railway infrastructure and assist the EWG in the development of tailored railway operation and maintenance models for Rail Baltica.

Going beyond the functions and responsibilities in railway infrastructure management, the EWG has extended its area of focus and actively delved in other activities related to the future use of the Rail Baltica railway, such as shaping of a high-quality service offer, evaluating potential public service obligations models for rail passenger services and other pertinent issues.

This broader engagement aims to complement the initial aim of assuring readiness and establishing an efficient model for infrastructure management. It incorporates the crucial aspect of defining how this infrastructure will be utilized to provide rail services. The amalgamation of these two dimensions would unlock the full socio-economic benefits of the Rail Baltica project, whilst maximum efficiency in infrastructure use would bolster the financial sustainability of the infrastructure managers and alleviate the financial burden on the Baltic States in maintaining the infrastructure.

This 3rd iteration of the Annual Progress Report provides a comprehensive review of the progress achieved in Rail Baltica infrastructure management model throughout 2023. Similar overviews of progress in 2021 and 2022 are available in the 1st iteration of the Annual Progress Report and the 2nd iteration of the Annual Progress Report, respectively.

PROGRESS OVERVIEW

Unified performance framework

The initial set of Key Performance Indicators (hereinafter - **KPIs**) devised to assess the Rail Baltica railway line's performance was established in 2021. These indicators largely retain their relevance, given that no new dimensions specifically linked to Rail Baltica have been identified since then.



In 2023, SO compiled a comprehensive report on maintenance activities of Rail Baltica infrastructure. Asset management was highlighted as a significant topic, emphasizing the systematic monitoring of KPIs associated with it.

KPI monitoring enables interactive queries and report generation across infrastructure manager applications. KPIs visually represent management ratios vital for maintenance, operational and financial control. These KPIs track asset status against objectives and include metrics like availability, repair times, delays, and maintenance costs. KPIs are essential for managing railway operations and are often integrated with finance and maintenance activities.

In addition to the KPI's identified in previous periods, SO proposed more areas to monitor with following KPI's:

- Availability time per month per Asset type;
- Availability of defined track paths/section;
- Meantime to repair (MTTR);
- Meantime between failures (MTBF);
- Mean time to failure (MTTF);
- Delays of planned handover from construction to maintenance (reporting for defined strategic constructions);
- Percentage "one time fix";
- Delays (minutes) caused by Infrastructure;
- Average time of disruption for rail operation;
- Number of disruptions according to priority;
- Average Age of Asset (per type);
- Average Maintenance costs/OPEX by Asset type;
- Average Maintenance costs by type and region;

EWG will continue updating KPIs in subsequent periods to be prepared for measuring and considering the values relevant for operation.

1

Uniform interface with railway undertakings

EWG continued to develop the vision of the future uniform interface approach. It was concluded that regardless of the legal or organizational structure governing the infrastructure management model and its framework, the aim is to establish a consistent interface for interactions between the railway undertaking/applicant and infrastructure managers of Rail Baltica. Internally, all procedures, formats, and decisions would remain within the infrastructure managers; however, the external interface of engagement with the railway undertaking/applicant would be consolidated into a singular point of contact.

To proceed with this vision, key areas were identified to be investigated in subsequent period:

- options and models for implementing the standardized interface (which may range from a virtual or physical office to IT applications or legal solutions, or a combination thereof).
- functional scope of the standardized interface, encompassing tasks such as submission of requests for train path allocation, outputs in capacity allocation, invoicing, collection of charges, real-time train data provision, network database detailing available routes, terminals, infrastructure specifications, and capacity limitations.

EWG notes that RailNetEurope has developed similar functionalities in already existing applications. Therefore, future evaluation is warranted to determine whether these applications could be adapted for Rail Baltica. Additionally, analysis is needed to identify bespoke solutions tailored specifically for Rail Baltica and to identify any features or solutions currently absent in the market.



In 2023, Rail Baltica project garnered additional attention from the users of the North Sea-Baltic freight corridor. It was agreed to commence discussions on crucial operational and maintenance topics, facilitating direct communication between infrastructure managers of Rail Baltica and future clients. The main areas of interest revolve around following aspects:

- Operational management: determining the structure and coordination responsibilities;
- Legal framework for access:
 - Defining access requirements for railway undertakings and unification of access conditions across sections;

- establishing the legal framework and insurance necessities for access contracts;
- Border-crossing processes: addressing voltage standards for electrification, safety system requirements;
- Language standards: exploring language requirements and the possibility of implementing international language standards or translation tools;
- National permits: assessing the necessity of obtaining national permits for locomotives operating on the line;
- Operating concept: defining the operational model in terms of line capacity, train compatibility, travel times, and availability of necessary facilities;
- TCR concept: outlining the maintenance intervals, management protocols, and contingency plans in case of major disruptions.

Discussions with the market players will continue in 2024.



Current legislation requires infrastructure managers to ensure dispute resolution within the coordination process of the capacity allocation procedure. EWG considered the possibility of extending the role of infrastructure manager in dispute resolution within Rail Baltica infrastructure management model, by creating a mechanism which would allow to address broader scope of issues, eliminating the need for regulatory body and court intervention.

To explore these possibilities and analyse possible alternatives for dispute resolution strategy in Rail Baltica infrastructure management model, the EWG held consultations with the regulatory bodies of the three Baltic States.

Considering the European legal framework which upholds the right of the market player to appeal to an independent State institution and following an assessment of the practical dispute resolution process, the EWG concluded the work with a recommendation to apply existing dispute resolution mechanism in Rail Baltica infrastructure management model. However, it was also suggested to implement additional measures for cross-border coordination at the level of infrastructure manager's and regulatory bodies.

This recommendation was made based on the following key consideration: the primary objective of the dispute resolution strategy is to minimize the occurrence of complaints and disputes related to Rail Baltica network. Rather than relying

solely on the dispute resolution process, a more practical mean to achieve this goal is to ensure efficient coordination with the market players in the decision-making processes of the infrastructure manager. Coordination principles with the market players and the areas of infrastructure manager’s activities in which such coordination could take place will be analyzed further in the uniform interface topic.

Common charging principles

As Rail Baltica is a new infrastructure which will pass through three countries, with the operational concept based mostly on international traffic, the intent is that Rail Baltica infrastructure management model shall feature a common charging framework. During the reference period, EWG continued to work on the development of the track access charging framework, starting with the basic elements:

3

- typology of train traffic planned on railway line and identification of the relevant market segments that could be used to apply the mark-up component of the track access charges;
- efficient, transparent and non-discriminatory methodology for estimating the mark-ups and assessing the market ability to bear them, encompassing the estimation against alternative modes of transport;
- incentive schemes and measures that may be used to attract and develop the train traffic;
- cost model with relevant and comparable cost structure for determining the direct cost component of the track access charges.

EWG has decided to turn for Technical Support under Regulation (EU) 2021/240 for specialized expertise in the abovementioned matters. While different approaches towards the charging framework are used in EU, it is expected that external expertise will help to identify feasible solutions that would be tailored specifically for Rail Baltica.

EWG also actively participates and collaborates on the preparation of a new business plan and cost-benefit analysis of the Rail Baltica Global Project (hereinafter – **RBGP**), ensuring that the assumptions concerning track access charging system are aligned with the latest developments in the Rail Baltica infrastructure management model.

A cooperation framework has been established between SIA “Eiropas Dzelzceļa līnijas” and LatRailNet, the independent charging body of Latvia responsible for setting and collecting track access charges. Both organizations have agreed to collaborate closely on the development of Rail Baltica infrastructure management model, making sure that there are no information gaps, overlaps in activities, the decisions are aligned. The priority actions pinpointed for further engagement are market segmentation and track access charging system for Rail Baltica, as well as the overall cooperation between the existing railway network and the Rail Baltica system.

Common capacity allocation

The procedure of requesting, offering and scheduling rail capacity, that leads to the formulation of annual timetable by means of which train running is scheduled, is known as the ‘train path allocation process’. In 2022, the EWG concluded the analysis of the common elements which should be harmonized between the Baltic States within train path allocation process to be used for Rail Baltica.

4

Building on these identified commonalities, in 2023 the EWG started to work on a common Rail Baltica capacity allocation framework, encompassing key stages of train path allocation process’, associated deadlines, principles of publication. The work of the EWG derived insight from the handbooks of RailNetEurope, which aim to harmonize train path allocation process’ in the entire European rail industry.

Amidst these developments, the European Commission has introduced the Greening Freight Package initiative, comprising three legislative proposals, and including a proposal for a new European regulation on the use of railway infrastructure capacity in the Single European railway area.

This legislative proposal aims to introduce new rules and procedures regarding the use of railway infrastructure capacity by envisaging the creation of a harmonized European level framework for capacity management in the European railway network.

Consequently, the EWG has determined to temporarily halt further development of the common capacity allocation framework for Rail Baltica, noting the possibility of overlap and (or) redundancy in view of the legislative proposal.

Further advancement of this topic is contingent upon the finalization of the new European legal background and a comprehensive impact assessment with respect to Rail Baltica infrastructure management model.

Cooperation that is extended beyond the railway infrastructure managers

EWG has continued its' active role in defining and implementing the Operational Readiness Plan of the RBGP which encompass the full spectrum of activities required to start operations on the Rail Baltica railway.

Particular attention this year was on the assessment of different models for effective cross-border public service obligation (PSO) contract awarding to enable cross-border transportation service for passengers in Rail Baltica. This task materialized in the submission of joint application of the Baltic States for the Technical Support under Regulation (EU) 2021/240, aiming to acquire specialized subject-matter expertise for a comprehensive assessment. The key outstanding questions are open access market potential and definition of services and market segments where PSO would be necessary; recommendations for overall cross-border PSO system structure in Rail Baltica as a common cross-border infrastructure; principles of cross-border PSO contracting.

5

The EWG expects that a functional model will be set in place assuring the availability of the PSO model in time, thereby maximizing the utilization of the infrastructure and enhancing the socio-economic benefits of the RBGP.



EWG has actively participated in a range of other supplementary activities pertaining to the operational phase of Rail Baltica. These include preparation of next generation cost-benefit analysis for the RBGP, consideration of private line connections to Rail Baltica infrastructure, development of the financial model for the project, investigation of rolling stock acquisition schemes, and more.

This involvement is crucial to ensure that the perspective of infrastructure manager, as the asset owner and operator, is thoroughly considered across diverse domains, making sure that reliability, availability, maintainability and safety aspects are properly attained.

6 Common safety management

Previously developed checklist for the identification of Safety Management System requirements pursuant to Regulation 2018/762 and means of their fulfilment have been presented to the SO. Deliverables for the fulfilment of essential part of the requirements are expected in upcoming years.

Moreover, number of required actions for the overall safety management system of Rail Baltica were identified within the Operational Readiness Plan, including substance of the activity, related legal background, split of responsibilities and implementation timeline. These activities go beyond the mandatory safety authorization requirements for the infrastructure managers, and cover aspects related to emergency management, railway security management, accidents and incidents, staff training, etc.

Common external strategy

Development of the infrastructure management model for Rail Baltica will touch on many aspects related to the Baltic transport ecosystem and thus will require significant engagement with a variety of stakeholders which operate and perform in the railway sector. Therefore, stakeholder management is an integral component of Rail Baltica infrastructure management model development process.

The EWG has crafted a stakeholder management strategy which will serve as a roadmap for identifying, analyzing and engaging stakeholders effectively. Recognizing the pivotal role stakeholders play in the tasks of EWG, the strategy aims to optimize stakeholder engagement efforts and foster productive interactions.

To create a foundation for further stakeholder management actions, the EWG is developing a Stakeholder Database which will be a centralized repository of stakeholder data to be used for tracking, analysis, management of interactions.



EWG emphasizes continuous relationship-building activities to cultivate positive connections with stakeholders. EWG has actively engaged in various platforms, such as EuroLink, Terminal Advisory Group (TAG) & Railway Undertaking Advisory Group (RAG) meetings and others, collecting valuable feedback on the considerations for Rail Baltica infrastructure management model. This engagement involves not only conveying the current status and vision for Rail Baltica, but also actively seeks input and opinions from diverse stakeholders

within these influential platforms. By using these interactions, the EWG continues to foster dynamic exchange of ideas, contributing to the refinement and optimization of the various concepts that are under consideration.

Overall, the EWG’s commitment to an inclusive and collaborative approach is reflected in its proactive stance, making sure that Rail Baltica infrastructure management model aligns with the collective experience and expectations of the broader rail industry.

Extended cooperation beyond the Baltic States

EWG continued to follow and participate in EuroLink platform, which aims to create a harmonized European timetable for railway transport.

EWG has submitted data for the EuroLink members questionnaire, providing information about Rail Baltica line: market studies, modelling and assumptions, infrastructure development, concepts of train services and infrastructure capacity usage.

While a dedicated timetabling design session for Rail Baltica has not taken place yet, EuroLink provided an opportunity to learn more about the new European legislative proposal for railway infrastructure capacity management and allocation from practitioners points of view, as well as how the concepts that are promoted by EuroLink could fit in this new environment.

8



EWG continued to follow RailNetEurope’s Language Tool program, in order to have up-to-date information and available solutions for future operational rules concerning operating language aspect.

So far, for the operating language a bilingual approach (common language as the main option and national language for the domestic traffic) was recommended by the EWG, and English was recommended as the common language.



EWG recognizes the importance of the Greening Freight Package initiative which would introduce significant changes to the legislative framework for rail

infrastructure capacity and traffic management, for monitoring the performance of rail transport, for stakeholder coordination and for the allocation of capacity.

One of the aims of the legislative proposal is to establish harmonised framework for the management of rail infrastructure capacity and rail traffic across the single European railway area, eliminating the differences in national rules and practices.

These goals align with objectives of the Rail Baltica infrastructure management model, but signify a wider-reaching impact on the entire European railway network, extending beyond the Baltic States and Rail Baltica. Accordingly, EWG will persist in monitoring and participating in the development of this legislative proposal to assess its definite impact on further refinement of the Rail Baltica infrastructure management model.

Traffic management

EWG continued to engage with RBGP coordinator RB Rail AS in the preparation for Rail Baltica control-command and signalling (hereinafter - **CCS**) subsystem procurement and deployment, to assure that approach which has been defined for the development of Rail Baltica traffic management functionality is compatible with the technical scope and operational solutions of Rail Baltica CCS subsystem.

To assure the same understanding between different layers and formats of RBGP delivery organization, the topic of traffic management functionality for Rail Baltica was raised and presented in the Railway Operational Reference Group of RBGP (hereinafter - **RORG**).

9

RORG has concluded that procurement and deployment of Rail Baltica CCS subsystem shall be aligned with the following approach for Rail Baltica traffic management functionality:

- Operational Control Centres shall be implemented in every country, ensuring the function of:
 - Traffic management for mainline (including international and regional stations)
 - Energy management (traction and non-traction)
 - Coordination of maintenance
 - Efficient coordination with national emergency / security authorities
 - Efficient coordination with Railway Undertakings
 - Passengers' information management
- Traffic management for freight terminals, infrastructure maintenance facilities and rolling stock maintenance facilities shall be managed by

- dedicated operator (traffic management personnel), which may be located at the facility or in the Operational Control Centre
- Every Operational Control Centre shall have the capability to become the back-up of other Operational Control Centres
 - Every Operational Control Centre shall have the effective capability to control traffic on the entire Rail Baltica railway line
 - CCS subsystem shall be designed with high flexibility level, to allow easy modification, expansion and reconfiguration according to the traffic management organization and consistence of traffic (as it is expected that frequent adaptation of the operational control centres and organizational structures may be required during the CCS subsystem lifetime).

Deployment of Rail Baltica CCS subsystem is planned to start in 2024.

Service facilities

In preceding years, it was established that management model for each service facility would be determined by the State in whose territory a particular facility is situated. This conclusion was reached considering that management of service facilities has no material impact to the overall Rail Baltica infrastructure management model since requirements for service facility management are outlined in EU legislation and must be adhered to by any service facility operator, assuring open and non-discriminatory access.

- 10 To facilitate the implementation of decisions made by each Baltic State, the SO is delivering a report on Facility Organizational Models which will analyse the strategical and institutional framework of all stakeholders that are operating in service facilities, provide facility operational and maintenance organigrams, recommend specific organizational models for individual facilities, outline any special requirements that may apply.

The report will provide subject-matter expert insights to guide further decision-making processes, plan and commence necessary preparatory actions, as well as tailor implementation strategies accordingly.

Infrastructure maintenance strategy

- 11 SO has progressed further with the preparation of infrastructure maintenance concept for RBGP, which will provide a structured and concise description of the maintenance strategy and principles for Rail Baltica infrastructure. The purpose

of maintenance concept is to establish general framework for future maintenance activities that must assure durable, safe and secure infrastructure, achieve excellent safety, availability and reliability targets, optimize life cycle costs and maximize the value of assets.

EWG is aware that the complete maintenance strategy will be influenced by various factors, including local workforce, supplier market availability, business model of the infrastructure manager and others. These aspects will remain on the agenda of the EWG in 2024.



As RBGP is transitioning into full-scale construction phase, project delivery organizations must start preparations for interim maintenance of the assets which will be handed over by the construction contractors. In this regard, the primary task for 2023 was the collection of relevant asset data, while the required preparations will continue in 2024.

Horizontal measures

EWG has continued to act as a dedicated platform of cooperation in the development of Rail Baltica infrastructure management model, engaging key railway sector experts from the Baltic States.

Furthermore, in 2023, a memorandum of understanding was concluded between AB "LTG Infra", SIA "Eiropas Dzelzceļa līnijas", OÜ "Rail Baltic Estonia", expanding this collaboration and introducing a General Meeting format. This format will function as a governing body with the purpose of providing of high-level guidance, required decision-making and monitoring.

12

This institutionalization of cooperation, coupled with the previously developed action plan, completes the operational framework for development and implementation of Rail Baltica infrastructure management model at the level of infrastructure managers.



In addition to pan-Baltic cooperation, AB "LTG Infra", SIA "Eiropas Dzelzceļa līnijas", OÜ "Rail Baltic Estonia" have initiated preparatory actions to expand their existing scope of business and functional landscape for the integration with the role of infrastructure managers of Rail Baltica. This includes review of

organizational structure and staffing plans, planning for necessary authorizations, acknowledgement of the added dimension in decision-making, and other actions to ensure organisational, administrative, and technical readiness for swift transition from RBGP implementation phase to operational phase.

CONCLUSION AND OUTLOOK

Rail Baltica infrastructure management model remains in active development phase, with progress varying across different topics based on their complexity, input availability, and external factors.

It is envisaged that all 12 topics areas will be in the agenda for 2024, with particular focus on the development of the uniform interface solution and the framework for essential functions. In that regard, upcoming developments in EU legislative framework will be one of the key factors in determining the further course of action.

The operational concepts and models developed by SO will drive the more practical advancement in the technical pillar of the model, commencing with the development of operating modes, standard operating procedures and manuals, as well as required authorization processes.

Finally, EWG will continue active stakeholder engagement and involvement in other activities related to operational readiness of RBGP, which are crucial components in making sure that Rail Baltica delivers more than just a physical connection and assets – it creates a highly functional railway system capable of opening up of a new economic corridor.

CONTACTS



info@rbe.ee

Veskiposti 2/1, Polarise maja
10138,
Tallinn, Estonia



edzl@edzl.lv

Ģenerāļa Radziņa krastmala 9,
LV-1050
Rīga, Latvia



info@ltginfra.lt

Geležinkelio g. 2,
LT-02100
Vilnius, Lithuania