

Detailed Technical Design Review and Design Expertise Services for Rail Baltica in Latvia

Meeting with Suppliers

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Co-financed by the European Union
Connecting Europe Facility

Design Speed

249 km/h – passenger trains
120 km/h – freight trains

Standard Gauge

1435 mm

Double-track Electrified

2x25kV AC

Axle Load

25 t

Traffic Management

ERTMS 2

Max. Freight Train Length

1050 m



3 mainline design sections

Tallinn-Rapla – VE stage partly finished, MD started
Consultant-IDOM

Pärnu Rapla-VE stage finished, MD started
Consultant – IDOM

Pärnu-EE/LV border – Inception report received
Consultant – Obermayer/Prointec



4 mainline design sections

EE/LV border-Vangaži – Inception stage
Consultant – Ineco/Ardanuy

Vangaži-Misa – VE stage
Consultant – DB/EGIS/Olimps

Upeslejas-Riga-Misa – VE stage
Consultant – IDOM/Ineco

Misa-LV/LT border – Inception stage
Consultant - IDOM



4 mainline design sections

Ramygala-LT/LV border – VE stage partly finished, MD started
Consultant-IDOM

Kaunas-Ramygala-VE stage finished, MD started
Consultant – IDOM

Schedule and Duration of Works

⦿ Time period

- Period for the provision of the Design Review Services and Design Expertise Services is envisaged to **last twenty-seven (27) months** starting from the Signing Date, however, the Services shall be furnished till the end of the design works for each design section, but no longer than sixty (60) months from the Signing Date.
- These given dates are indicative and may change during the Design contracts implementation.

Design Section	Design priority section	Title	Length (Preliminary design)	Indicative dates of deliverables submission	
				Master Design	Detailed Technical Design
DTD1 (Mainline through Riga)	I	Tornakalns - Imanta	7.874 km	05.09.2020	11.06.2021
	II	Upeslejas - Riga central station	15.583 km	05.10.2020	11.06.2021
	III	Riga airport - Misa	32.090 km	05.11.2020	11.06.2021
DTD2 (Vangaži - Salaspils - Misa)	I	Vangaži maintenance facilities - Nāgelmuiža	21.300 km	25.09.2020	19.05.2021
	II	Nāgelmuiža - Salaspils	8.500 km	25.09.2020	19.05.2021
	III	Daugava river bridge	13.800 km	25.09.2020	19.05.2021
	IV	Bērzene - Misa	22.750 km	22.09.2020	19.05.2021

DTD3 (Estonian/Latvian border – Vangaži)	I	EE/LV border – Vitrupe	25.800 km	14 months from DTD agreement commencement day	24 months from DTD agreement commencement day
	II	Vitrupe - Skulte	39.900 km	16 months from DTD agreement commencement day	26 months from DTD agreement commencement day
	III	Skulte - Vangaži maintenance facilities	28.300 km	19 months from DTD agreement commencement day	28 months from DTD agreement commencement day
DTD4 (Misa - Latvian/Lithuanian Border)	I	Iecava municipality	17.600 km	14 months from DTD agreement commencement day	22 months from DTD agreement commencement day
	II	Iecava river bridge	1.000 km	12 months from DTD agreement commencement day	20 months from DTD agreement commencement day
	III	Bauska municipality	21.700 km	16 months from DTD agreement commencement day	22 months from DTD agreement commencement day
	IV	Mēmele river bridge	1.300 km	13 months from DTD agreement commencement day	20 months from DTD agreement commencement day
	V	Grenctāle	3.615	15 months from DTD agreement commencement day	22 months from DTD agreement commencement day

Schedule and Duration of Works

⦿ Meetings

Title	Responsible party organizing the meeting	Scheduling	Participating parties (from both parties of the Contract)
Kick-off meeting	Client	7 days after signing of the Contract	ESP and Client
Inception meeting	Client	19 days after signing of the Contract	ESP and Client and other experts appointed by contract parties
Co-ordination meetings	Client	5 days after completion of Design Review and Design Expertise services for particular deliverable	ESP Key-Experts, additional Expert (if needed), Client and Consultant

Technical Specification

⦿ Technical Requirements for Design Review and Design Expertise

- Both services shall be carried out according to applicable acts of Republic of Latvia:
 - <https://em.gov.lv/lv>
 - https://em.gov.lv/lv/nozares_politika/buvnieciba/normativie_akti/normativo_aktu_saraksts/
 - <http://www.vzd.gov.lv/lv/normativie-akti/normativie-akti/>
 - http://www.lgia.gov.lv/LGIA/Normativie_akti/Noteikumi.aspx
 - <https://likumi.lv/>
 - <http://www.varam.gov.lv/lat/>
 - <http://www.varam.gov.lv/lat/likumdosana/>
 - <https://www.daba.gov.lv/public/>

⦿ General information and scope of work:

- According to the preliminary design solutions 261 km of Railway in Latvia includes 75 railway bridges/overpasses, 1 railway tunnel, 10 animal crossings, 78 road crossings, 5 pedestrian crossings and other structures. This amount of construction objects is indicative and shall not be treated as limiting and/or restricting the scope of Services. Tenderer shall take into account that actual number of total construction objects and structures may change during the Design process of Rail Baltica.
- Design Review and Design Expertise service shall be carried out for the following design stages:
 - Master Design – Design Review;
 - Detailed Technical Design – Design Review and Design Expertise.

⦿ Design Review:

- ESP shall carry out the Design Review services for each deliverable in Master Design and Detailed Technical Design which are provided to ESP by Client;
- Design Review services minimum scope of work for each deliverable shall be provided according to Checklists and Chapter 5 of Technical Specification;
- Design review reports shall be done in English;
- Client has a right to decide whether Design Review remarks provided by ESP shall be implemented or not;
- ESP shall use Design Review as an input basis for Design Expertise report;
- BIM deliverables are not part of scope of work for Design Review Services.



Design Expertise:

➤ The Expert shall carry out Design Expertise services for every designed construction object that is required by Latvian legislation. 5

Sequence and description of work procedure.

- ⦿ General Description for Design Review scope of Work:
 - With the respect to each deliverable, the Client shall inform the ESP at least **10 days** before the design deliverables will be issued to the ESP for the Design Review and Design Expertise services execution. If available, Client will provide a draft of deliverable to ESP before services execution. Client is not obligated to provide draft of deliverable. Draft of deliverable has not to be assessed. Draft of deliverable is only for informative purpose for upcoming Design Review and Design Expertise services.

- ⦿ General Description for Legal Design Expertise:
 - Design expertise shall be carried out according to national legislation;
 - Design expertise shall check all design parts according to national legislation.

- ⦿ Design Review and Design Expertise first examination for each deliverable unless otherwise agreed with the Client shall be carried out in **30 days**. ESP is obliged to submit Design Review and Design Expertise reports to the client after the work completion but not later than 30 days after receiving the deliverable package.

- ⦿ During the Design Review and Design Expertise services ESP has **5 days** to carry out administrative review. The aim of the administrative review is to check whether provided deliverable is complete. In case of missing documents/data in deliverable package for Design Review and Design Expertise the ESP shall as soon as possible inform the Client and Consultant. In case of incomplete deliverable it is up to the Client to decide if ESP Service provided shall carry out Design Review Services.

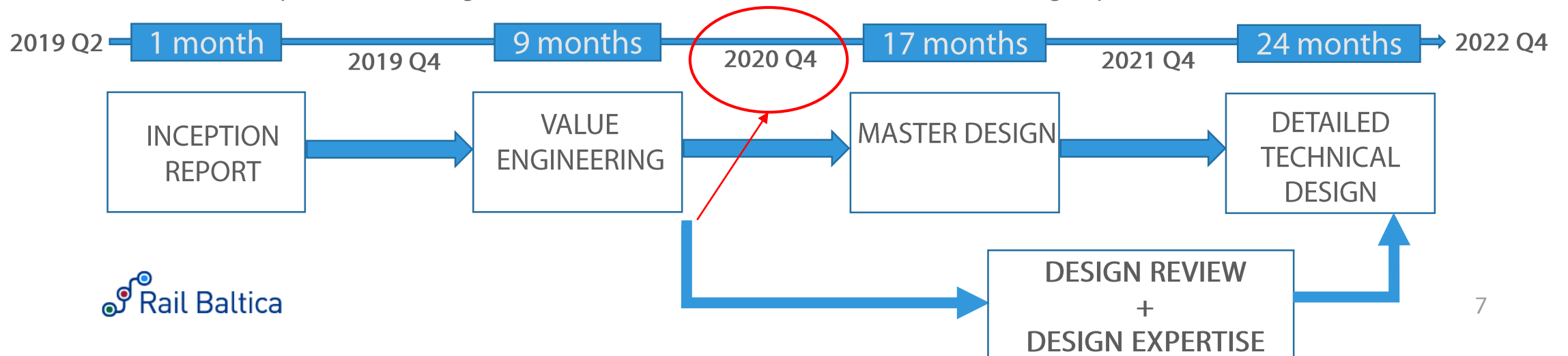
- ⦿ After Client receives a report from ESP, Client and Consultant has **10 days** to evaluate non-conformities.

- ⦿ Design Review iterations shall not exceed 2 times.
 - Every following Design Review and Design Expertise repeated examination for each deliverable shall be carried out in 7 days. The Expert is obliged to submit Design Review and Design Expertise reports to the Client after the work completion but not later than 7 day after receiving the deliverable package
 - On completion of the Design Review and Design Expertise for a particular Service Module, the ESP shall submit to Client following deliverables:
 - Report of Design Review by providing separate word or excel documents with all remarks (if any generated) according to each item in checklists of Annex 2.

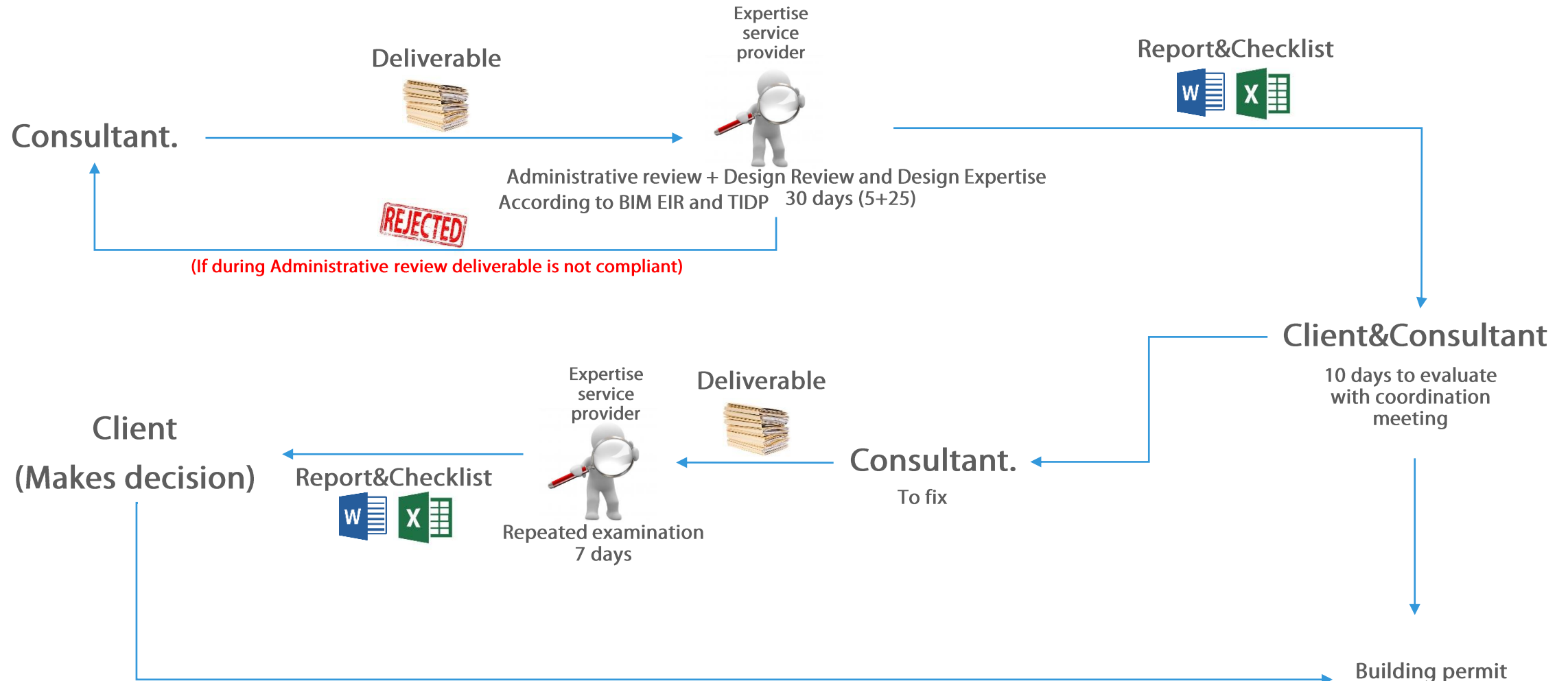
When?

Design Review and Design Expertise timeline

- ◎ Design Review and Design Expertise Services shall be available as follows:
 - Starting from the beginning of Master Design stage;
 - During Detailed Technical Design Stage.
 - Expected peak for Design review is expected in 2021-2022.
- ◎ Duration for Design Deliverable (according to DTD TS) reviewal is as follows:
 - Inception Report – 14 days
 - Value Engineering – 45 days
 - Master Design – 45 days
 - Detailed Technical Design – 45 days
- ◎ Design Expertise final approval with the positive decision will be submitted with Detailed Technical Design to the respective contracting Authorities that will issue Construction Permits.
- ◎ Timeline example for One Design Section – In 2020 there will be 4 sections running in parallel.



Workflow procedure for Design review and Design Expertise



Design Review and Design Expertise and NoBo

⦿ NoBo:

- Following requirements stated in NoBo TSI regulations shall not be a part of this Design Review and Design Expertise scope of work:
 - Commission Regulation (EU) No 1299/2014;
 - Commission Regulation (EU) No 1300/2014;
 - Commission Regulation (EU) No 1303/2014;
 - Commission Regulation (EU) No 1301/2014;
 - Commission Regulation (EU) 2016/919.
- ESP shall coordinate works with respective NoBo services provider. Reports developed by ESP shall be available to NoBo services provider. Client shall be included in the coordination process with NoBo. Client will provide ESP with all the necessary contact details of NoBo services provider.

Experts

Key Experts:

No	Specialist Designation	Professional competence (qualification)
1	Project Manager of Design Expertise	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
2	Structural Design Expert for Transport Structures	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
3	Railway Track Design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
4	Geotechnical Engineer or Engineering Geologist	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework

Additional Experts:

No	Specialist Designation	Professional competence (qualification)
1	Road Design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
2	Structural Design Expert for road viaducts	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
3	Railway Track Design Expert for 1520 mm railway	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
4	Water, Stormwater and Drainage and sewage Design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
5	Land melioration systems design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
6	Hydrotechnical structures design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
7	High voltage (110 and more kV) power supply design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
8	Network and Telecommunications Design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
9	High pressure Gas supply network design Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
10	Cultural Heritage Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
11	Environmental Expert	Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework
12	Construction works preparation and organization expert	Qualified in relevant area with previous experience for construction works preparation and organization for highspeed railway.

Certification in Latvia

Requirements for foreign Experts:

- ⦿ Recognition of professional qualifications of foreign specialists in Latvia is regulated by the Law “On the Regulated Professions and the Recognition of Professional Qualifications”, as well as by Republic of Latvia Cabinet Regulation No. 168 “Procedures for the Provision of Temporary Professional Services in a Profession Regulated in the Republic of Latvia” adopted on March 28, 2017;
- ⦿ Recognition of professional qualifications in Latvia applies, when a foreign professional, who has the right to fully and independently work in a home country in the relevant profession, wishes to pursue that profession in Latvia as well. The procedure for recognizing professional qualifications as well as the list of regulated professions can be found on the website of the Academic Information Center: <http://www.aic.lv/portal/en/arvalstu-diplomu-atzisana/professional-recognition-of-foreign-qualifications-in-latvia>. This procedure is applicable in cases, where a foreign professional wishes to obtain the right of self-employment in a regulated profession and applies to service providers both within and outside the European Union.

Mitigation of risks and different consequences

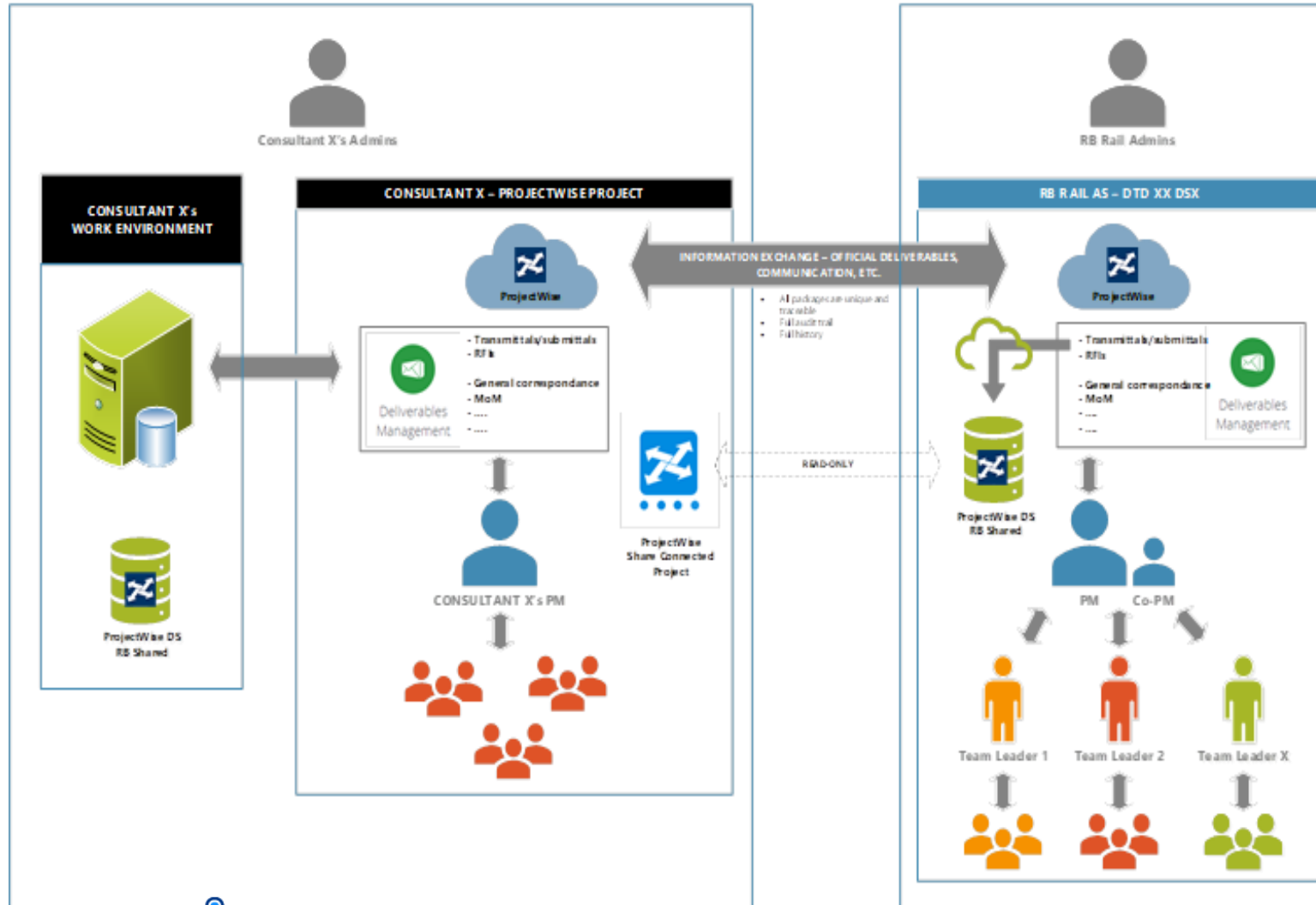
- ⦿ Common approach for all three Baltic state Detailed Technical Design shall be established to ensure that the best possible quality is achieved.

- ⦿ General Design Expertise according to local legislation without additional Design Review and Design Expertise services with detailed task description.
 - Construction procurement and construction implementation phase:
 - Extension of time for Construction procurement due to incomplete design;
 - Increase of CAPEX for Construction;
 - Problems with project financing;
 - Extension of time during Construction phase.

- ⦿ Design Expertise with additional Design Review with specific scope of work defined in Terms of Reference for the Design Expertise procurement.
 - Risks during design phase, construction procurement and construction implementation phase:
 - Design mistakes and errors shall be limited to minimum;
 - Design is completed in full compliance with contract agreements;
 - Contractor is not capable to prolong the procurement deadline relying on design errors and claim for variations during construction works relying on discrepancies in design;
 - Savings on CAPEX and OPEX.

Access to data and file sharing during work execution

File sharing using RB Rail Common Data Environment



OPTION: "CONSULTANT" USES ITS OWN PROJECTWISE LICENSES

This use case is for Consultant companies which are Bentley ProjectWise license holders.

In this case, the Client will set up a Connected Project within the platform and the Consultant has to do the same on its side of the ProjectWise platform. These two Connected Projects will then be linked and used for Deliverables Management between the Connected Projects. In this case the Consultant:

- Access the dedicated, project relevant information on the Client's data source;
- Exchange (send/receive) information with the Client using the Common Data Environment Deliverables Management platform ensuring traceability of all deliverables and communications;
- View the delivered dedicated project information in Client's data source;
- See the audit trail of all Deliverables and information exchange history;
- Fully control and administrate the number of users who has access to this its side of the Connected Project on Consultant's Side of CDE;
- Fully control the access right levels for the users who has the access rights to the Connected Project on Consultant's side of the CDE;
- Can add as many users as it considers necessary to have access to the Connected Project;
- Does cover the license cost for using the platform for all users from Consultant's side.

Questions?



**PALDIES!
THANK YOU!
AITÄH!
AČIŪ!
KIITOS!
DANKE!
MERCII!
DZIĘKUJĘ!**