

Extract from the Report on development of indicative extension of TEN-T Core and Comprehensive Network to the Western Balkan

Note: The Report is not for the official use (still in process of adoption by the Regional Steering Committee)

Railway transport

The legal framework for the development of the Indicative extension of TEN-T Core and Comprehensive Rail Network to the Western Balkan is Regulation 1315/2013 (last revision was in 2019).

This Regulation represents long-term strategy for the development of a complete trans-European transport network (TEN-T) consisting of infrastructure all modes of transport including rail and it covers the technical standards as well as the requirements for interoperability of infrastructures and defines priorities for the development of the TEN-T.

The regulation introduces a network with a dual-layer structure: Comprehensive network and of Core network.

Regarding transport infrastructure requirements, the regulation defines the freight terminals, ERTMS deployment, compatibility with the requirements of the TSI's, electrification of the network and access to freight terminals.

Therefore, the priorities for the railway infrastructure development are:

- deploying ERTMS;
- migrating to 1 435 mm nominal track gauge;
- mitigating the impact of noise and vibration caused by rail transport, in particular through measures for rolling stock and for infrastructure, including noise protection barriers;
- meeting the infrastructure requirements and enhancing interoperability;
- improving the safety of level crossings;
- where appropriate, connecting railway transport infrastructure with inland waterway port infrastructure.

Railway Compliance indicators

Based on the previously mentioned priorities, this report covers assessment of the specific requirements as follows:

- Electrification - rail network to be electrified by 2030 (including sidings where necessary);

- Axle load: Freight lines 22.5 t axle load by 2030.
- Line speed: Freight lines must allow 100 km/h by 2030 (no speed requirement for passenger lines);
- Train length: Freight lines to allow for 740 m trains by 2030;
- Track gauge: Nominal track gauge for new railway lines 1435 mm;
- ERTMS / signalling system: Core network to be equipped with ERTMS by 2030.

Primary infrastructure characteristics and physical state

The TEN-T rail network is consisted of two layers: Core and Comprehensive Network. The total length of the Comprehensive is 3895 km but 3684 km in operation. Length of Core is 2546 km with 2474 km in operation. 211 km on Comprehensive Network is temporary closed line due to safety reasons (lack of maintenance) or missing links and 72 km on Core Network.

In same time, the Rail Core & Comprehensive Network consists of three Corridors (Vc, VIII and X) and 7 Routes.

Table 1. Description of TEN-T Comprehensive and Core Rail Network to the Western Balkans

Corridor/Routes	Comprehensive Rail Network		Core Rail Network	
	Nodes	Length (km)	Nodes	Length (km)
Corridor V C	Bosanski Samac (Bosnia and Herzegovina) – Sarajevo– Capljina (Bosnia and Herzegovina)	428	Bosanski Samac (Bosnia and Herzegovina) – Sarajevo– Mostar - Capljina (Bosnia and Herzegovina)	428
Corridor VIII	Tirana/ Durres/ Vlore – Lin/Pogradec (Albania)-Kicevo– Skopje – Kumanovo – Beljakovci (North Macedonia)	426	Tirana/ Durres/ Vore (Albania) - Skopje (North Macedonia) – Deva Bair/ BG border	73
Corridor X	Sid (Serbia) – Belgrade – Skopje (North Macedonia) – Gevgelija/GR border	730	Sid (Serbia) – Belgrade – Skopje (North Macedonia) – Gevgelija/GR border	730
Corridor Xb	HU border/Kelebija – Stara Pazova (Serbia)	151	HU border/Kelebija – Novi Sad (Serbia) - Stara Pazova (Serbia)	151
Corridor Xc	Nis (Serbia)-Dimitovgrad/BG border	104	Nis (Serbia) - Dimitovgrad/BG border	104
Corridor Xd	Veles (North Macedonia) – Kremenica/GR border	145	-	-
Route 2	Podgorica (Montenegro) — Vore (Albania)	144	Podgorica (Montenegro) — Vore (Albania)	144

Route 4	RO border / Vrsac — Belgrade (Serbia) — Bar (Montenegro)	580	RO border / Vrsac — Belgrade (Serbia) — Podgorica (Montenegro) - Bar (Montenegro)	580
Route 7	Nis (Serbia) – Doljevac (Serbia) - Pristina (Kosovo)	152	-	-
Route 9A	Novi Grad (Bosnia and Herzegovina) -Banja Luka– Doboj – Tuzla (Bosnia and Herzegovina) – Brcko /Zvornik (Bosnia and Herzegovina) – Loznica -Ruma (Serbia)	491	-	-
Route 10	Lapovo-Kraljevo (Serbia) — Pristina (Kosovo) — Gorce Petrov (North Macedonia)	340	Kraljevo (Serbia) — Pristina (Kosovo) — Gorce Petrov (North Macedonia)	254
Route 11	Pozega (Serbia) — Stalac (Serbia)	138	Pozega (Serbia) — Stalac (Serbia)	138
Route 13	HU border/ Horgos – Subotica (Serbia)	28	-	-



Figure 1. Indicative extension of the TEN-T Core and Comprehensive Network to the Western Balkans

TEN-T Core and Comprehensive Network Compliance

Indicative extension of the TEN-T Core and Comprehensive Network to the Western Balkans was done in 2016, during the latest revision of the Core Network.

In previous 15 years, region invested more than 2 billion EUR in the rail projects. However, the conditions and quality of service was not increased. With average operational speed around 50 km/h in passenger, rail transport cannot compete with road transport. Same situation is in freight where the significant part of the time is preparation of trains, loading/unloading operation and waiting time on the border. Because of that, in past 10 years, rail lost significant number of passengers as well business customer.

There are two main reasons: lack of the proper maintenance and absence of the reforms.

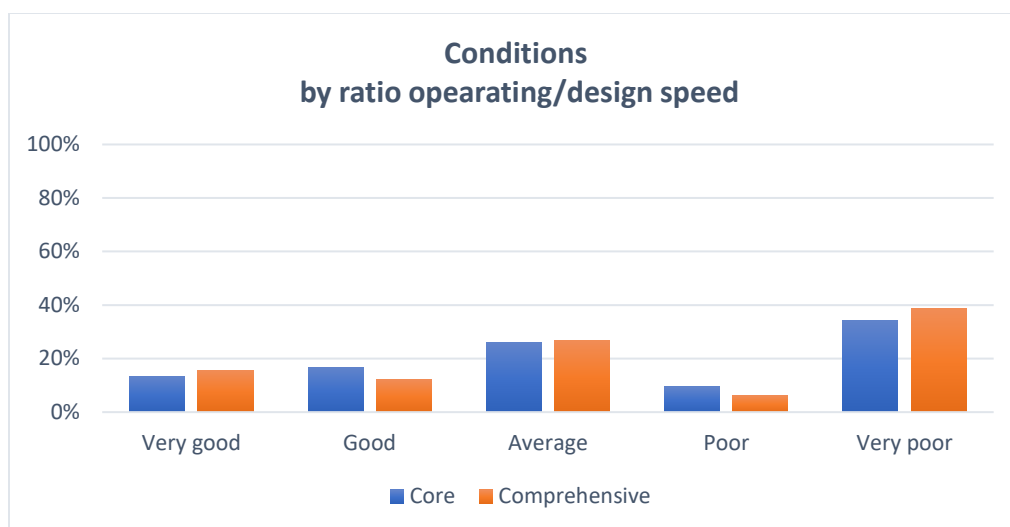


Figure 2. Conditions of the railway infrastructure

The TEN-T Comprehensive and Core Railway Network is still facing insufficient investments (only 15% of overall investments), with existing investments directed into isolated sections and not to the overall network improvement. However, if necessary, repairs and appropriate upgrades are not made, poorly maintained railways and deferred repairs will increase costs and downgrade the business productivity, as well as influence further decrease of railway transport.

Furthermore, to achieve full benefits of rail transport in the SEE region, railway reforms need to be accelerated. A common and integrated approach (infrastructure development in parallel with reforms) would help in overcoming the sectors fragmentation and the establishment of an open market, consequently contributing to the performance improvement along multimodal transport corridors. Currently, development of rail infrastructure and the rail reform process is progressing but requires higher efforts in order to fully utilise the potential of rail transport.

Taking in account that deadline for the completion of the Core Network is 2030 and 2050 for the Comprehensive, all Regional Partners will face with lot of challenges in aim to reach this target.

Electrification

Rail electrification compliance of the operational network is already 73% on the Core and 54% on the Comprehensive Network. There are certain parts of the networks mainly in Albania and North Macedonia (Corridor VIII) which are in construction phase and those are not part of the analysis.

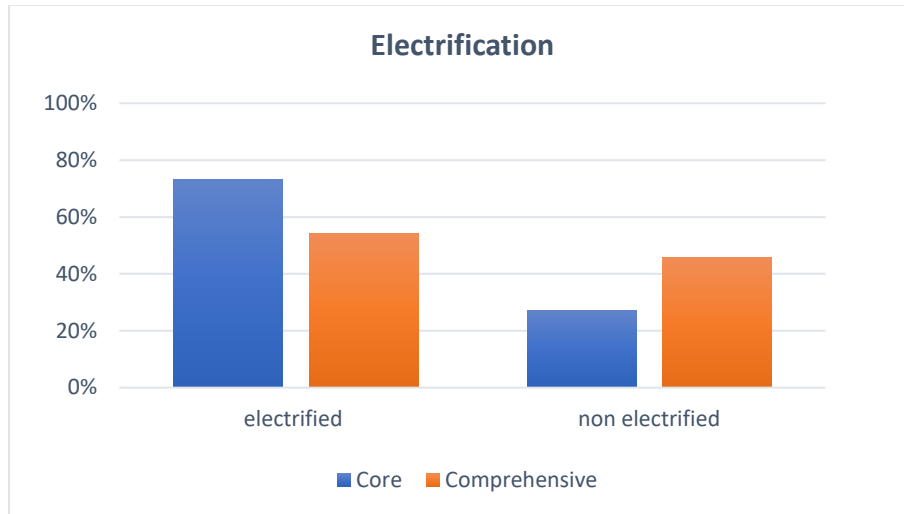


Figure 3. Percentages of electrified and non-electrified lines



Figure 4. Map of electrified lines

Axle Load

For freight axle load, the compliance versus the parameter of 22.5 t per axle is already at a 87% on Core and 72% on Comprehensive per 2021 data. Outages are mainly in Albania, Kosovo and Bosnia and Herzegovina.

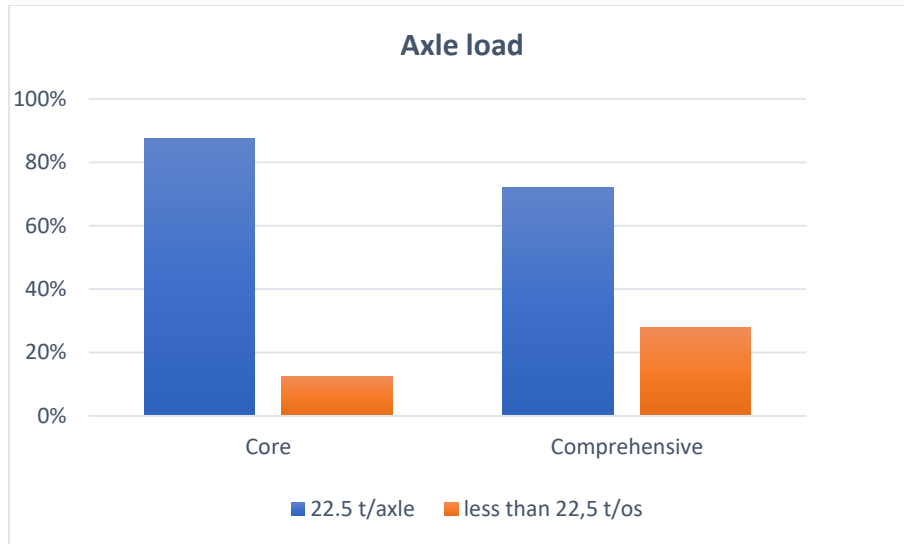


Figure 5. Axle load in tons/axle on Core and Comprehensive Network

Freight line speed

For freight line design speed, on the Core network the compliance versus the parameter of 100 or more km/h is already at a middle 72% per 2021 data and 61% on the Comprehensive network. While for the operational speed only 15% of the operational Core network has operational speed more than 100 km/h and 13% of the Comprehensive network. Outages are mainly in Albania, Montenegro, Serbia, Kosovo and Bosnia and Herzegovina.

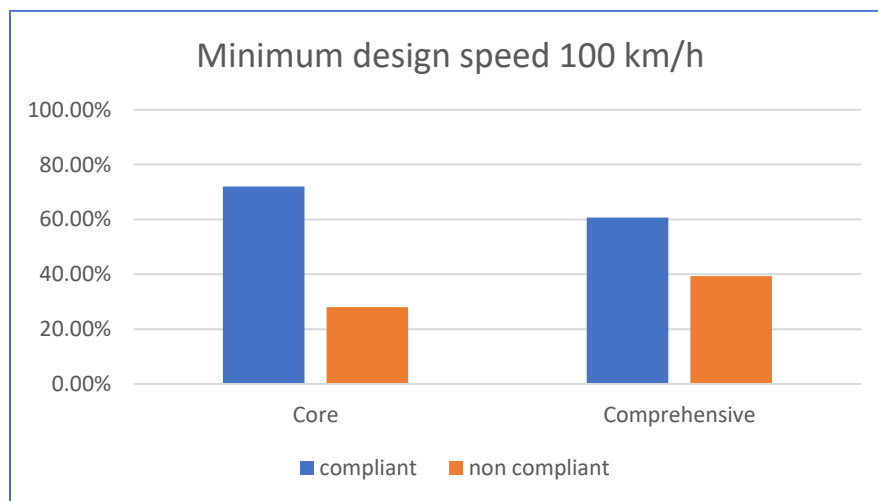


Figure 6. Design Speed 100 km/h and more

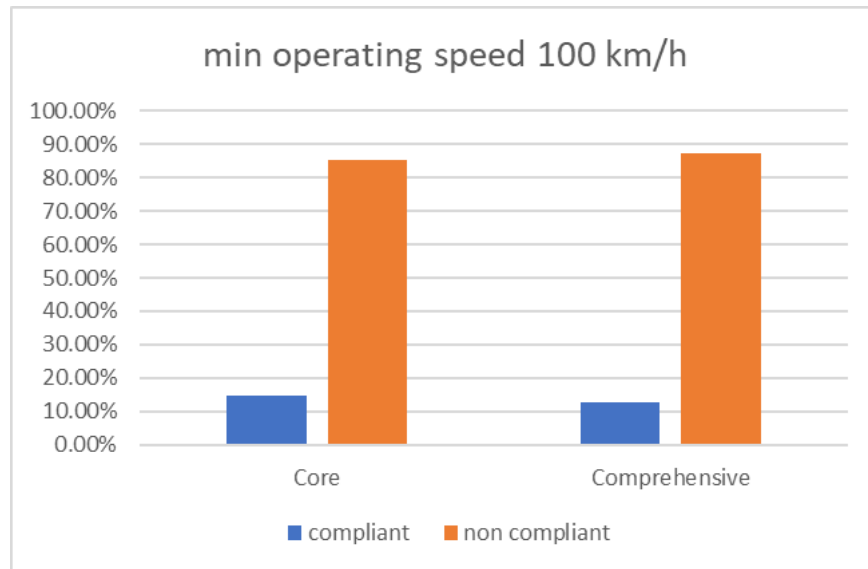


Figure 7. Operating Speed 100 km/h and more

Train length

For freight train length, the compliance versus the parameter of **740 m** or longer sidings for trains none of the networks fulfils this parameter. However, 79.5% of the Core network and 73.4% of the Comprehensive network can accommodate trains longer of 500 m. The 500 m parameter is mainly met in the region except in Albania. This however needs to be seen with the already mentioned caveats that the situation continued to improve and that there are differences here and there between nominal compliance and the actual operational possibilities. For example, a line may be fit for 740 m trains while it does not have enough sidings to turn that possibility into reality.

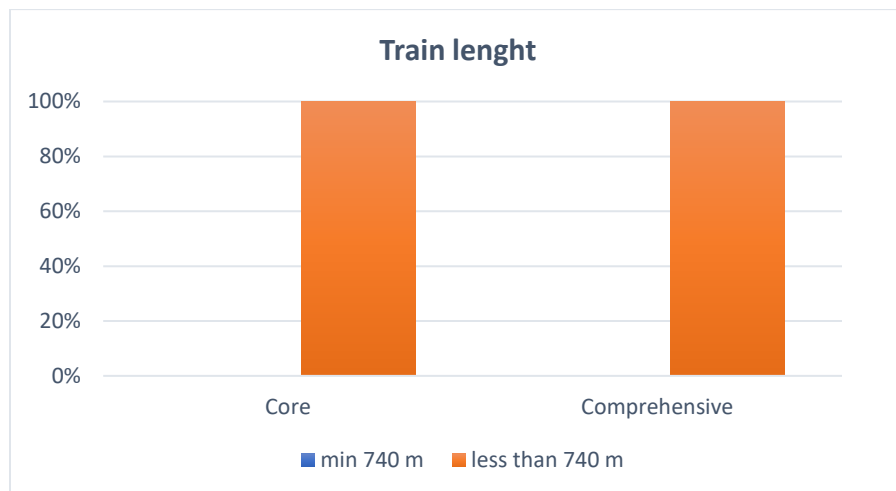


Figure 8. Train length

Track gauge

Rail track gauge is already compliant at a high 100% per 2021 data. There is one notable exception in Serbia (the Mokra Gora rail line with narrow gauge), but this railway line is not part of the Core and Comprehensive network and it is only used for touristic purposes. The situation is the same for many years and does not affect the interoperability.

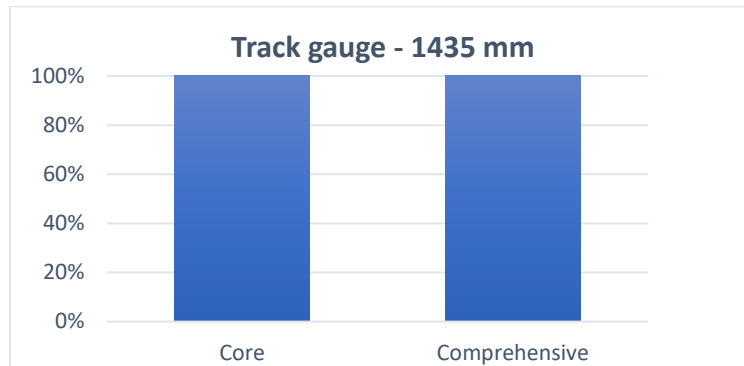


Figure 9. Track gauge

ERTMS

Currently, there are no ERTMS in operation in the entire network. Almost all Regional Partners partly transposed interoperability directive (third or fourth rail package). Some of them published certain number of TSIs but no one implemented in practise. Looking to the planning and ongoing projects, in Albania, Serbia, North Macedonia there are intention to implement ETCS level 1 or even 2.

ERTMS deployment (track-side) is not existing as per 2021 data. ERTMS deployment is the biggest challenge in terms of the TEN-T parameters with slower progress than anticipated and wished. Plans are in place to address this situation.

However, all Regional Partners should make additional efforts in further transposition and implementation of interoperability directive.

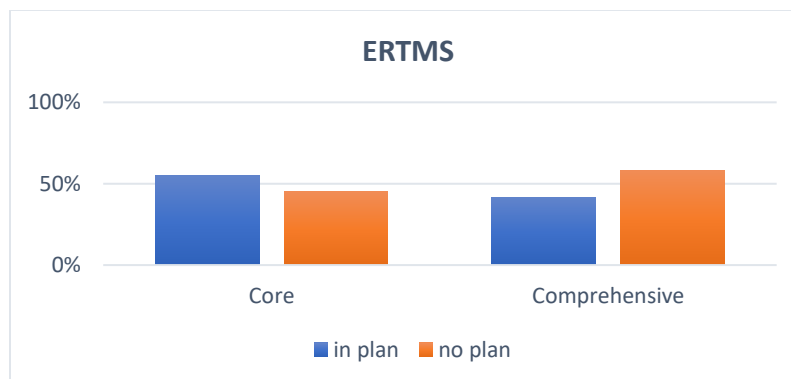


Figure 10. ERTMS deployment plans

Overall compliance assessment

The current condition of the network was assessed based on data received from Regional Partners on the current condition of their tracks. To this purpose, conditions are divided in five parts based on ratio between current maximum operational speed and maximum designed speed on the network. It was done in aim to better describe the current condition of railways.

Table 2. Assessment Methodology Criteria

Condition of railways	Operational/Design speed
Very good	0,86 - 1
Good	0,71 - 0,85
Medium	0,61 - 0,70
Poor	0,51 - 0,60
Very Poor	0 - 0,50

In accordance with applied criteria overview of the network is presented in the table below.

Table 3. Current condition of the Rail Network

	Core	Comprehensive
Very good	13.38%	15.74%
Good	16.73%	12.30%
Average	26.11%	26.94%
Poor	9.46%	6.35%
Very poor	34.32%	38.66%

As for the condition, 30% of the Core rail network and 28% of Comprehensive has been reported to be in very good and good condition, where approximately 70%-100% of designed speed can be achieved. The approximately, 26% of the sections have been reported to be in average condition, with larger variations in the maximum allowed speed.

The largest part of the Core network (44%) and Comprehensive (45%) is in poor or very poor condition, where on average 50% of the designed speed can be achieved. One important issue to mention is reliability of the system for assessing the condition. On several sections, there was a large discrepancy between the reported condition, designed and maximum allowed speed. Furthermore, there seem to exist several different systems for assessing the condition in different Regional Partners.

The reason why the largest part of the network is in poor or very poor conditions is the lack of regular maintenance of the network and lack of condition-based maintenance (CBM). This lack

of maintenance exists because of inappropriate maintenance plans and the insufficient funds to cover the basic needs in the past. Therefore, the rail network instead of regular maintenance needs more funds for substantial reconstruction which also creates worse traffic disruptions later.

Strong tool for overcoming the problem is implementation of regular condition-based maintenance based on multiannual contracts, between the Infrastructure Manager and the relevant authority, followed by appropriate on time funding. This solution is a part of the Transport Community Rail Action Plan, and on long term is cheaper and more effective since all negative implications from the irregular maintenance are avoided. These negative aspects such as: more funds for reconstruction, indirect losses because of insufficient performance, traffic disruptions and safety issues, sometimes multiplies the amount needed for regular condition-based maintenance. On top of the regular maintenance, it is highly important the EU Technical Specifications for Interoperability and TEN-T standards to be applied.

Since the railway transport is one of the greenest transport modes, the future of the transport shall be on tracks. Within the EU Sustainable and Smart Mobility Strategy and the Green Deal Plan, the development of the rail transport system is in the main focus. Therefore, the South – East European Parties shall follow or even set the path for state of the art, interoperable, sustainable, and green transport system by substantial rail system development.

Overall conclusions of the TEN-T compliance assessment exercise

The main purpose of this report is to make a baseline for the future monitoring of the development of Core and Comprehensive Network in the Western Balkans region.

In accordance with data related to the network compliance and projects provided by the Regional Partners and the analysis performed by TCPS in this regard, the following general conclusions could be drawn:

- a) TEN-T compliance rate is generally good in terms of infrastructure profile and design parameters, with large variations between transport modes;
- b) However, gaps are still significant, requiring well-targeted and calibrated investments over the next years in order to achieve full compliance by the time-limits set-up by Regulation 1315/2013 in this regard;
- c) There's plenty of work ahead in regard to all compliance standards requiring systematic implementation of soft measures under the general framework provided by the relevant Directives (alternative fuels, safety, tunnels, ERTMS);

Railway projects

The rail sector has been in shadow of road regarding the overall investments in the last 15 years. While road sector took around 80%, railway only got approx. 12% of the total investments.

The situation has been changed and the priority of the railway transport is granted. Nowadays, rail system improvement is integral part in all recently published strategic documents of the European Commission. Within those documents the priority is given to greener and efficient transport modes such as the railway. It is also expected that the same principle to be mirrored by the Transport Community new strategies and concepts.

The European Union has been funding the construction and upgrade of transport corridors across its member states and neighbouring countries in order to remove bottlenecks and promote sustainable and seamless transport. Promoted under the Trans-European Transport Network (TEN-T) policy, the projects contribute to the completion of Core Network that will connect EU and the region.

Overall, Transport Community Treaty Permanent Secretariat has identified a 10 financed secured or ongoing rail projects. The length of rail sections currently under various forms of upgrading is **877.8** km (all on the Core Network). Apparently, priority is given to the Core Network. The projects' overall value is **3,687** billion EUR.

All 11 identified rail transport projects in the region should be complete by 2027 based on data provided by Regional Partners.

Detail overview of the railway projects in all Regional Partner will be independently presented in the Annex I of this document.

TEN-T KEY PERFORMANCE INDICATORS FORECASTED PROGRESS

Railway indicators

Having in mind that the majority mature and ongoing projects are estimated to be completed until 2027, the following forecast per TEN-T performance indicator will cover the same period. Also, the following forecast takes into consideration that the other parts of the rail network which are not subject of improvement with the mentioned projects will remain at least on the same level as they are now. Additionally, there is extension of the network as a result of the foreseen projects which limits the improvement of some TEN-T criteria.

One of the most critical railway TEN-T performance indicators is the railway network electrification. Namely, the higher efficiency, lower green gasses emissions and low operation and maintenance cost are railway marks because of the electrification of the rail network.

If we take into consideration the progress forecasted in terms of electrification it is noticeable that the electrified Core network will grow for little bit more than 10% and shall reach 83.31%. Therefore, it is necessary to boost up the plans for total Core network electrification in the Region.

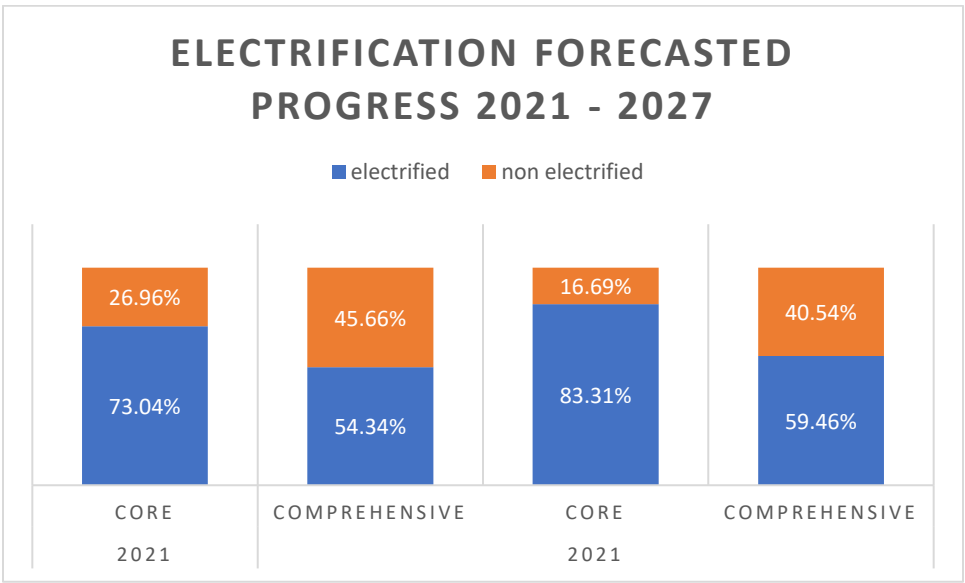


Figure 11. Western Balkans Rail network electrification forecasted progress for 2027

In terms of axle load performance of the how the rail network in 2027 will look like it is noticeable that 89.24% of the Core and 71.03% of the Comprehensive will be compliant with the TEN-T criteria. This will represent significant progress in terms of track performance capabilities, but it will be perfect if the whole Core and Comprehensive network fulfils this criterion 100%.

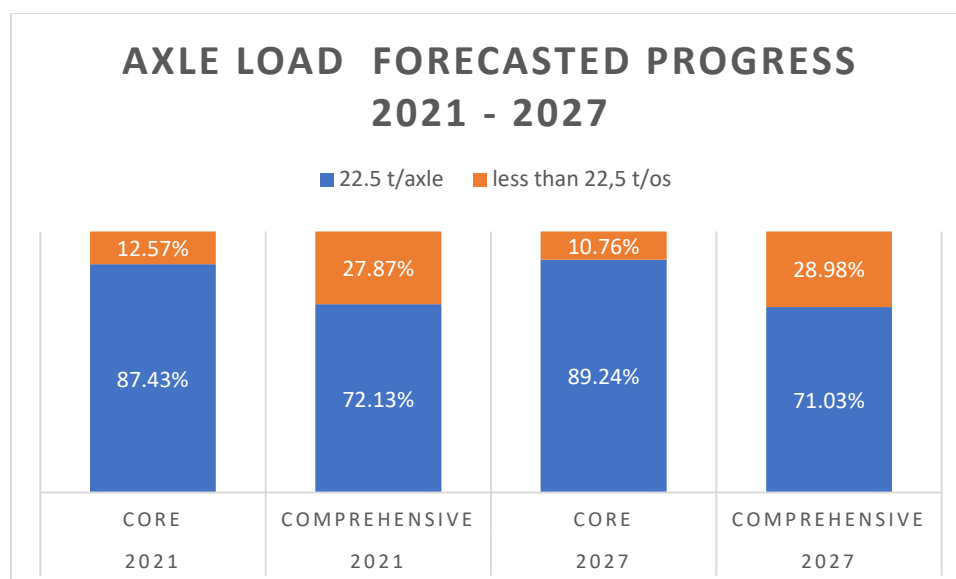


Figure 12. Western Balkans Rail network axle load forecasted progress for 2027

The train length as TEN-T key performance indicator is one of the newest performance characteristics which the rail networks of Europe and the Western Balkans region need to adjust. Today's Western Balkans rail network is not compliant with this indicator but encourages the fact that majority of the regional planned projects take into consideration this characteristic and it is foreseen where it is possible. Therefore, for five years shall be able to operate with higher traction efficiency on 30% of the Core network and almost on 20% of the Comprehensive network.

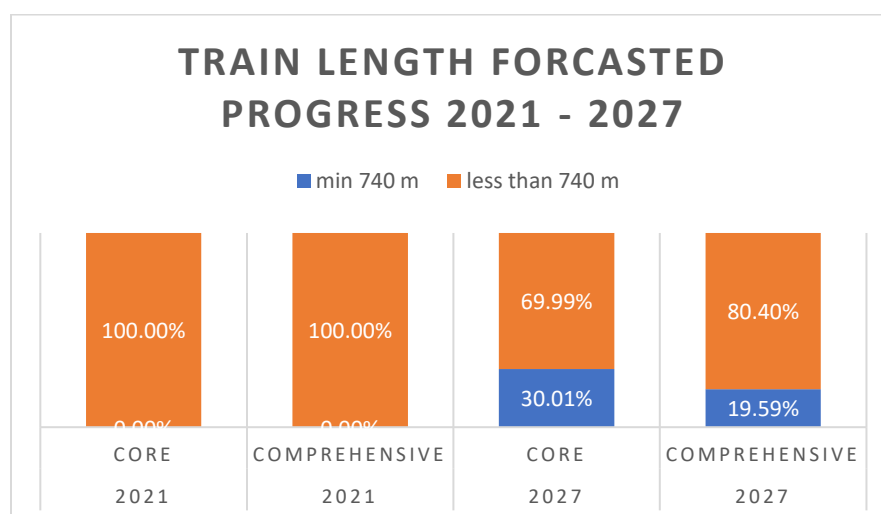


Figure 13. Western Balkans Rail network train length forecasted progress for 2027

While analysing the figures related to the design and operational speed improvement (Figure 14 and 15)) it is immediately noticeable that with the full execution of the projects until 2027 the design speed will not improve significantly.

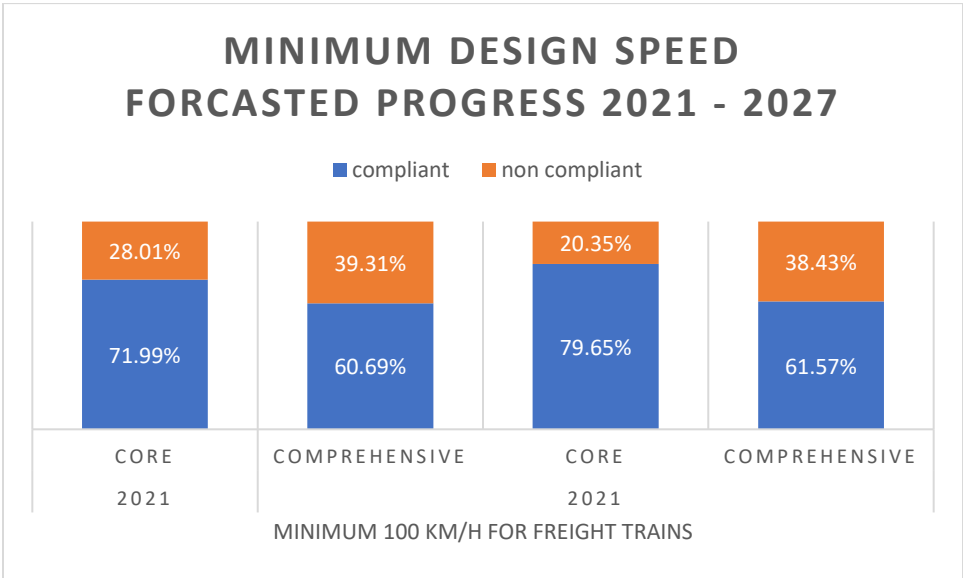


Figure 14. Western Balkans Rail network minimum design speed compliance forecasted progress for 2027

On the other side there is significant progress expected on the operational speed TEN-T compliance indicator. Namely, from 14.55% on the Core and 12.79% on the Comprehensive network, in 2027 the compliance shall grow to 43.60% and 31.27% respectively. This situation indicates the poor situation it is now the Western Balkans rail network and how significant impact on rail competitiveness the maintenance gap has.

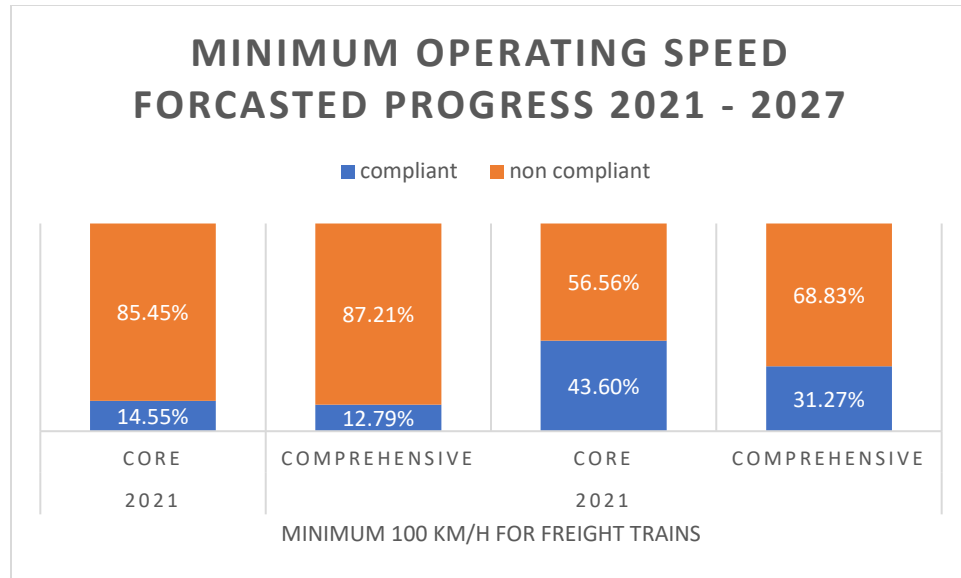


Figure 15. Western Balkans Rail network minimum operating speed compliance forecasted progress for 2027

The ERTMS deployment (track-side) is included into part of the projects and this is not sufficient improvement to address the current situation of zero implementation of this TEN-T compliance indicator. Therefore, significant efforts are needed in future.

Rail Projects Descriptions – Annex 1

Albania

Rehabilitation of the railway Durres - Tirana Public transport terminal PTT and construction of the new railway Tirana - Rinas branch

The project is finance secured. Tender procedure is over and contract has been signed between Albanian Railways and winner on the tender. There are activities for execution are undergoing for this design and build project. The detail design is in progress and when finished the works shall start. This project is supported by the European Union with an investment grant of 35.5 million EUR under 'Connectivity Agenda for the Western Balkans and by the European Bank for Reconstruction and Development (EBRD) with a 36.9 million EUR loan.

Under the contract more than 34 km of the existing railway track between Tirana and the port of Durres will be rehabilitated. Additionally, a new 7.4 km-long rail track connecting Tirana city to the Tirana International Airport will be constructed. This project is also identified as one of the flagship projects of Economic and Investment Plan for the Western Balkans, published by the European Commission in October last year.

This project for rehabilitation and construction of 41 km railway line on the Core network should be finished until 2023 and it is in compliance with all TEN-T compliance indicators with exemption of electrification. The cost of this new line is estimated at 90.45 million EUR.

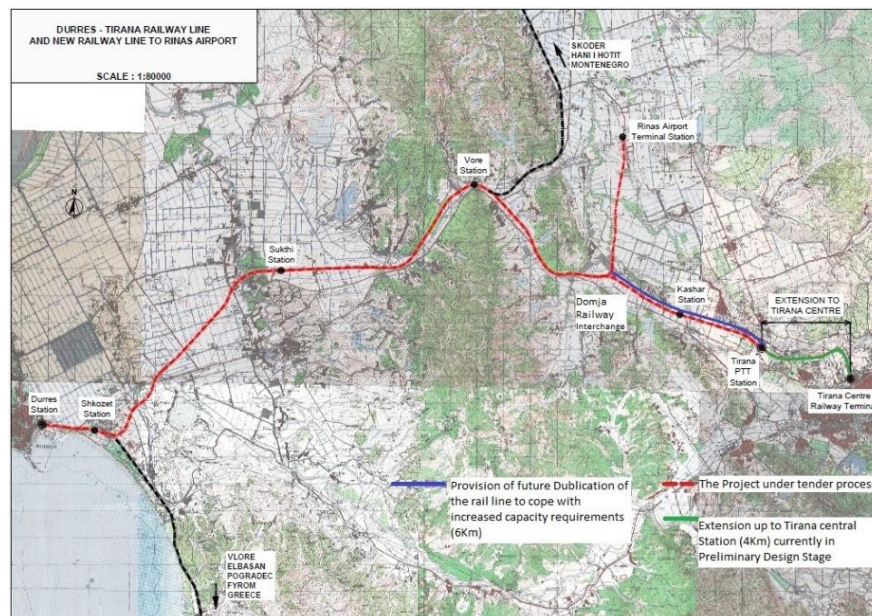


Figure 16. Durres – Tirana Railway Line and Airport Connection

Bosnia and Herzegovina

Corridor Vc-Overhaul and modernisation of the railway section Šamac – Doboj – Rječica

This Project is part of the initiative to complete the Corridor Vc that connects the port of Ploče on the Adriatic coast in Croatia with Budapest. More than 325 km of Corridor Vc run through Bosnia and Herzegovina.

Once completed, the railway line on the Corridor will be brought to sufficient standards corresponding to the importance of this Corridor, both for improved connectivity within Bosnia and Herzegovina, improved connectivity with neighbours, but also improved connectivity between the region of South-East Europe with the EU.



Figure 17. Ongoing/finance secured project on Corridor Vc in Bosnia and Herzegovina

Kosovo

Rehabilitation and modernisation of Route 10

Railway Route 10 in Kosovo is 148 km long extending from the CCP with Serbia in the north of Kosovo (near Leshak station) to the border with North Macedonia (Hani i Elezit station). Rail Route 10 branches from Corridor X in Lapovo (Serbia) and forms an alternative route to Skopje: Belgrade – Lapovo – Kraljevo - Fushe Kosove – Skopje.

The Project has a strong regional dimension, supporting as it does the General Rehabilitation and Modernisation in order to fulfil EU standards, respectively Technical Specifications on Interoperability. The implementation of this project will increase regional connectivity and facilitate both import/export and passenger traffic across this region. This project also contributes to regional cohesion and will assist in the development of seamless connections for passengers and freight in the Western Balkans. This is the main direct railway connection between Serbia, Kosovo and North Macedonia.

The activities so far implemented for the project on General Rehabilitation of the Railway Route 10 are presented below:

- a) The General Rehabilitation and modernisation of the Phase one has started in August 2019 and it should be completed in 2021.
- b) Evaluation procedure for appointment of the Contractor for Phase two is ongoing and the works are expected to start in Q3 2021.
- c) Therefore, it is ongoing procedure for drafting of ToR for Project Design for Phase three which shall be implemented through IPF 9.

The total estimated cost of the project is 245 million EUR and estimated implementation deadline year is 2025. This project will level up the whole Route 10 in terms of all TEN-T compliance indicators without exemption.



Figure 18. Ongoing/finance secured projects on Route 10

Montenegro

Orient/East-Med Corridor: Rail Interconnection, Bar – Vrbnica, Section Route 4

The project concerns reconstruction works along the Vrbnica (state border with the Republic of Serbia) – Podgorica - Bar railway line forming a part of the Orient/East Mediterranean TEN-T Core Network Corridor, an indicative extension TEN-T network to the Western Balkans.

The proposed bridges for reconstruction and modernisation were refurbished almost 40 years ago. **Reconstruction of the ten bridges** is urgent and with special attention to parts of steel

structures where the risk of corrosion was particularly increased and where corrosion protection would increase the safety and security of railway transport of passengers and freight transport.

Estimated cost is 38 million EUR. There are Feasibility study, EIA as well as detail design. Construction works are ongoing with plan to complete by 2022.

Also, Montenegro for the following period has in plan to execute construction works on rehabilitation on all remaining sections of railway line Vrbnica – Bar (Rail Route 4) which is total length of 159 km. Estimated amount for the whole distance is 244 million EUR.

With the completion of the mentioned projects, the railway lines will be capable to be operated with designed speed of 80km/h instead of the existing 50 km/h and train length of 500m. The Route 4 railway line will remain electrified but no ETCS, GSM-R or rail – road terminals are planned to be build.

This is means that there will be still need for improvement of this main railway routes in Montenegro in terms of TEN-T compliance.



Figure 19. Ongoing/finance secured projects on Rail Route 4 in Montenegro

North Macedonia

The Macedonian rail network will be improved by implementation of project on the eastern part of the Corridor VIII on the adequate sections and one rehabilitation project on the Corridor X.

The project on the Eastern Part of Rail Corridor VIII involves three phases:

- a) PHASE I (Rehabilitation of section: Kumanovo – Beljakovce) covers 30.8 km, shall cost 48.9 million EUR and shall be finished until 2022. The construction works are ongoing.
- b) PHASE II (New Construction of section Beljakovce – Kriva Palanka) covers 34km shall cost 145 million EUR and shall be finished until 2024. Tender procedure is launched, expected date for the start of works is the second half of 2021.
- c) PHASE III (New Construction of section Kriva Palanka – Bulgarian Border) covers 34km shall cost 420 million EUR and shall be finished until 2026. This phase is partly finance secured. Only 60.7 million EUR are secured by the EU from the IPA, while the remaining funds will be secured through loans from the EBRD and the EIB.

The execution of the Eastern Part of Rail Corridor VIII will make the corridor compliant with Directive 2008/57/EC on the interoperability of the rail system. Also, electrification, line speed 100 km/h (freight), axle load 22,5 t, track gauge 1435 mm and implementation of ETCS are foreseen. The only TEN-T uncompliant segment of the project planning is train length 740 m, while for the GSM-R implementation for which Macedonian government has plans to be performed as separate project for the rail network.



Figure 20. Ongoing/finance secured projects on Corridor VIII, Eastern section towards border with the Republic of Bulgaria

Within the 9.6 million EUR worth Project for track renewal works on the section Nogaevci – Negotino only the basic track renewal activities are planned in 2021 and there is no other improvement in terms of TEN-T compliance. The only improvement of this 31 km long already electrified rail section with permitted axle load of 22.5 t is maintaining the operating speed on the same level as the design speed of 100 km/h.

Serbia

Serbia has quite an extensive planned rail project pipeline. It includes few sections of the Core and Comprehensive network. All these sections will be analysed below.

Reconstruction and modernisation of double-track railway line Belgrade - Stara Pazova - Sid - state border with Croatia

Section Beograd - Novi Beograd - Stara Pazova is currently under construction (length of 34,5 km, total amount 307,5 million EUR). Works are financed through the Chinese loan.

Preparation of the technical documentation for section Stara Pazova - Sid (Preliminary Design with FS and ESIA) from WBIF funds is ongoing (length of 92,2 km, estimated value 250 million EUR). Total amount of this Technical Assistance is 3 million EUR. Preparation of technical documentation should be done until the beginning of 2022.

When finished, this project will provide reconstruction of total 126.7 km of railway line for 557.5 million EUR until the end of 2026. In same time all TEN-T compliance indicators will be met.

Reconstruction and modernisation of the railway line Belgrade - Novi Sad - Subotica - state border with Hungary

Section Beograd - Novi Beograd - Stara Pazova is currently under construction (34,5 km, value 307,5 million EUR).

Works on section Stara Pazova - Novi Sad are currently ongoing (40,4 km, value 615,7 million EUR). The works are financed through Russian loan.

For section Novi Sad - Subotica - Kelebija technical documentation is prepared, and the works are expected to begin in first half of 2021 (108 km, value 1.021,1 million EUR). These works are financed through Chinese loan.

With execution of all sections of the railway line with total length of 183km and value of 1.994 billion EUR, this railway line on the Core network will become High Speed Railway line and it will fulfil all TEN-T compliance indicators latest by 2024.

Reconstruction and modernisation of the railway line Niš - Brestovac - Preševo - state border with North Macedonia

The technical documentation for the part Niš - Brestovac section (23,4 km) is prepared, and works are expected to **begin in second half of 2021**. The value of this part of project is 59,9 million EUR.

Some critical sections (Vinarce-Djordjevo, Vranjska Banja-Ristovac, Bujanovac - Bukarevac) on this part of corridor in length of 46,6 km have been renewed in the previous period in value of 32,6 million EUR.

The preparation of the technical documentation for the section Brestovac - Preševo - state border with North Macedonia (Preliminary Design with FS and ESIA) from WBIF funds is ongoing. Total amount of this Technical Assistance is 3,5 million EUR.

When finished this project will provide reconstruction of total 159 km of railway line for 219.9 million EUR until the middle of 2023. In same time all TEN-T compliance indicators will be met.

Reconstruction and modernisation of Niš - Dimitrovgrad railway line

The technical documentation for reconstruction and modernisation of Sićevo - Dimitrovgrad railway line (Preliminary Design with FS and ESIA) is prepared. Preparation of tender documentation for selection of contractor is currently ongoing. Works are expected to begin in third quarter 2021.

Works are expected to begin in third quarter 2022.

The preparation of the Design for Building Permit for work on electrotechnical infrastructure for the railway bypass and Sićevo - Dimitrovgrad is currently underway. Works are expected to begin in fourth quarter 2021. Tender procedure for selection of supervision is currently ongoing.

The sources of financing are WBIF grant, EIB loan and Serbian budget.

This project shall improve this 108 km railway line on the Core network until 2024 in terms of all TEN-T compliance indicators except ETCS and GSM-R. The cost of this improvement is estimated at 268 million EUR.



Figure 21. Ongoing/finance secured projects in Serbia