



# How to optimize TCR processes to strengthen rail transport in Europe

Railway Undertakings rely on high quality rail paths to be competitive in the European transport sector. Temporary Capacity Restrictions are massively influencing rail transport day by day. On the one hand, construction work is urgently needed to make the rail network in Europe more attractive and, on the other hand, current operations must not suffer as a result. In this area of conflict, it is necessary to optimize existing processes for IMs to be able to offer the needed capacity reliably and make rail transport more competitive.

To reach the goal of the European Green Deal transport-related measures which is to achieve a 90% reduction in transport emissions by 2050 to create climate neutrality, rail transport has to significantly increase its market share. High quality and solid reliability are the crucial success factors for RUs, which are massively influenced by TCRs. Currently TCRs are optimized in relation to IM/ Ministry Budgets instead of transport streams or train runs. So, optimized TCR processes compared to the current painful situation are essential to reach European climate goals and a strengthened rail transport in Europe.

Besides these macro-economic effects TCRs are also massively influencing the economic viability of rail transport. Both the planning of diversions and the operation on rerouting lines lead to significant cost increases. Thus, RUs have a great interest in ensuring that TCR processes are as efficient as possible. This is also a key issue for all stakeholders that would benefit from having a credible rail solution.

The key goals of RUs for improved TCR handling:

- TCRs shall be executed in a capacity-oriented manner to improve the infrastructure (planning the “work” element) and allow commercially viable train services.
- The impact on commercial capacity shall be minimized, so that markets can be served by trains (the “run” element)
- The impact on customer commitments shall be minimized by early, stable and aligned information regarding TCRs from the IMs, taking into account traffic needs in common dialogue with RUs.

FTE working groups identified the following topics as main factors to optimize TCR processes:

## 1. Define a deadline for last changes of TCRs

Problem: Annex VII does not specify when a TCR can / should be considered stable (no longer changeable) according to the categories major, high, medium and minor, so that the planning of traffic solutions by the RU and IM can start. Re-planning and overlap of different TCRs leads to increased workloads on both RU and IM side.

For rail customers and the RUs, the overall size of a TCR (major, high, ...) does not matter. It is the impact on the specific train that is relevant. Therefore, uniform deadlines for TCR planning/consultation/information in early planning phases and for after the path allocation

should be developed, depending on the impact of the overall train run. Cumulation of TCRs (national and international) has to be considered by the IM(s) accordingly.

Objective: It must be clearly defined from which point in time the IM has to consider the planned TCR to be definitely fixed, so that the RU and IM can have a stable basis for their re-planning of transport concepts. This can include the budgeting and financing of TCRs accordingly.

For the market to be able to adapt to replanning<sup>1</sup>, latest deadlines for stable TCRs information shall be

- 11 months before the timetable change for annual planning
- 6 months before the train run for any TCR after the annual planning.
- 28 days if the TCR has no commercial impact (i.e., no change of timings in nodes, no change of train characteristics or necessary resources, no major rerouting)

## **2. Define important process steps / terms clearer**

Problem: The specifications described in Annex VII can be interpreted differently by the IMs and thus the IMs can publish business rules for TCR planning in national laws and process manuals, which differ from country to country.

Unaligned TCR planning processes trigger unaligned capacity blockages, hampering international traffic routes. Unaligned processes are also a problem to find suitable path alternatives since process timelines diverges from IM to IM.

Objective: a uniform implementation in Europe must be ensured. IMs should define one common and reliable information source (IT system), informing RUs about all TCRs and their effects in a harmonized format and at harmonized times – also offering a clear overview on all TCRs in each country.

The common TCR Tool should be further developed and implemented compulsory Europe wide. Every IM should offer a platform for RUs and if needed affected neighbouring IMs to talk about the planned TCR with the IM – consultation should include the possibility to comment and to find common solutions. Expected minimum input and output of consultations should be defined in law. In addition, there should be an obligation for IMs to coordinate TCRs internationally, maximizing “train run capacity”, based on European traffic flows.

## **3. Include “RUN” in Annex VII**

Problem: IMs interpret Annex VII differently, so that most IMs don’t take the “RUN” component into sufficient account. These IMs limit their activities to the planning of the TCR itself. But in parallel to the planning of the TCR, RUs need an international coordinated process to reorganize transport solutions. Besides “Work” RUs need a “RUN” component to define in iterative RU-IM-dialogues the common traffic solutions. In the moment every IM is planning the rerouting according to own processes and timelines often without considering the availability of re-routing capacities.

IMs can be tempted to overestimate TCR impacts – adding permanent supplementary minutes, larger capacity footprint – to aim at planning TCR planning with greater stability. It is the reason why it is crucial that TCR planning shall be as lean as possible regarding its capacity

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<sup>1</sup> See also statements in CER Ticketing Roadmap, aiming at ticket sales 6 months before the train run  
[https://www.cer.be/sites/default/files/publication/210920\\_CER\\_Position%20Paper\\_Ticketing%20Roadmap.pdf](https://www.cer.be/sites/default/files/publication/210920_CER_Position%20Paper_Ticketing%20Roadmap.pdf)

consumption: as a first step, it shall look for a TCR reducing capacity by the minimum needed and, as a second step, stabilization must occur on the leanest possible basis.

Objective: Besides information about the TCR itself, a central information source (IT system) should inform RUs on the remaining capacity. RUs need information and real coordination of alternative capacities for the entire train run.

Planning of work and run (!) must be carried out according to (revised) Annex VII timeline, including RU-IM-dialogues to plan TCRs according to commercial viability. That means that regulation shall specify that re-planned paths are needed at specific deadlines:

- 5 months before the day of operations for any TCRs after the annual planning
- 28 days before the day of operation in case of no commercial change is needed to the affected paths (i.e., times in nodes unchanged, no change of train characteristics, no major rerouting necessary)

#### **4. Define an entity for escalation in case of non-compliance with processes**

Problem: there is no means of escalation, if an RU is faced with weak cross border (and national) TCR coordination and/or TCR consequences that are not bearable from a business point of view (e.g., insufficient re-routing capacity, lack of international overview, lack of information, etc.)

Objective: An “International Body for Compliance” should be implemented, which is IM- and RU- independent and has the necessary decision-making power to prevent non-compliance with international agreed processes (is also discussed within TTR). The competences and power of this body should be enshrined in EU legislation, so as to ensure it has the mandate to follow up with non-compliance effectively.

#### **5. Implement a lead IM, which must deal with “RUN” – especially capacity aspects for reroutings**

Problem: The stakeholders, which must be involved to best solve international traffic affected by TCR from a train run perspective are not clearly defined in Annex VII. Example: Closure of the Rhine Valley in August/September 2024. Trains must be rerouted via France (Lauterburg – Kehl/Basel), but Annex VII doesn't request a coordination between DB Netz (interrupted line) and SNCF Réseau (re-routing line).

Objective: Within the new processes it has to be ensured that all IMs that are directly and indirectly affected by the TCR “reserve” the necessary capacities in the annual timetable and coordinate their national networks from a European network perspective. The lead IM who triggers the TCRs should inform the neighbouring IMs that additional capacity / paths for rerouting the trains on their networks are necessary and should be pre-booked (to be used and allocated later by the IMs to RUs/Applicants in annual timetabling process). That means concretely: the lead IM should not only inform the neighbouring IMs about a planned TCR (Work Component) but also involve them in the earlier stages in the capacity planning (Run Component).

In our example DB Netz, SNCF Réseau, ÖBB Infrastructure and SBB Infra need to reserve capacity for rerouting lines for timetable 2024 so that the very good preparatory work realized in 2021/2022 can be valued during the timetable construction between April and July 2023.

The above-mentioned case also shows that TCR capacity needs to be an integral part of Ministries Capacity Strategies, as there are no sufficient capacities available to provide re-

routing for >50% of existing traffic. Furthermore, TCRs could be adjusted to guarantee a minimum traffic to still run on the line under construction.

## **6. Include Service facilities if there is an impact on lines**

Problem: Capacity restrictions in service facilities may influence capacity on the connecting lines.

Objective: The new processes should also be applicable for important service facilities (including marshalling yards), so that information and coordination of capacity between service facilities and the lines is guaranteed as well. This is especially important when TCRs in service facilities have impact on the related paths; in these cases, the international coordination and information processes should also apply in order to avoid planning paths that would not make sense if the facility cannot be used.

## **7. Supervision of implementation**

Annex VII got into force over 4 years ago. Since then, the information sharing of IMs has improved. To solve the quality issues caused by TCRs, a next level of coordination is needed by IMs. But surveys between RUs showed that there are still major interpretation and implementation gaps in various countries. A cross-border supervision of the implementation of existing law could be a first step on the way to optimize TCR processes.

Deepening the root cause analysis, it must be pointed out that an international coordination of capacities from a train run perspective is necessary as well as eventually a way of a European wide standardized financing of infrastructure. Incentives set by funding mechanisms are influencing the quality of TCR planning and handling. RUs stress the need for the IMs, according to their insights, to show the steps needed to Member States.

RUs ask decision makers to set the necessary framework conditions for RUs and IMs so that rail transport is strengthened as the backbone of Europe's transport chains and thereby can act as a major contributor to the European climate goals.