



Pilot Report

from the FTE CNA Pilot – 1st RU-only phase

version 1.0

Version	Responsible	Date	Description
0.1	Sebastian Carek	13 July 2022	Initial version based on the evaluation meeting and individual feedback.
0.2	Sebastian Carek	17 August 2022	Incorporation of remarks received by the RU pilot participants.
1.0	Sebastian Carek	26 September 2022	Document revised by the FTE Passenger / Freight and CNA WGs.

1. Description of the Pilot

TTR process envisages the introduction of the new Capacity Needs Announcement process (CNA) for applicants. Although the process is to a certain extent explained in the TTR documentation,¹ the FTE Plenary Assembly decided to run a pilot test to detect the feasibility and strong/weak points of the new element. The first phase of this pilot took place from April to June 2022, and it was the RU-only phase. The task was to create a few CNAs for TT2025, using the excel data structure agreed upon by the TTR DCM WG. Few RUs went step forward and tested also RU-RU harmonisation of the CNA, in case the traffic would be run in cooperation. No specific issues have been reported in that part. The alignment of the CNA with the customer was not tested. Together 13 RUs joined the pilot.



Countries, where the CNAs were tested in the 1st phase

This document gives an overview of the pilot findings, and it is based on the consolidated feedback sent by the pilot participants. It should be noted that the perception and potential utilisation of the CNA element differed between various networks and partially reflected the market organisation in the particular network.

2. Process and Implementation Findings

- Handling of CNAs on a larger scale without IT is not handable by RUs. IT is ultimately needed at IMs, at RUs and central side.** The pilot was executed with the excel file, and this gave the opportunity to test if an excel solution is manageable. The results clearly showed that excel could be used for a few CNAs, but the manual work makes it impossible to deliver all the capacity needs (e.g. status-quo/all trains). Filling in excel is very resource-demanding, this can be partially solved by the development of the CNA form in the ECMT. Nevertheless, even if ECMT would make easier the creation of CNAs, the RUs do not have resources to manually insert all trains. This would require an interface or other IT solution, like delivery of all starting train data for CNA from the IMs' system.

¹ Accessible via: <https://ttr.rne.eu/downloads/>

Recommendation: until suitable IT solutions are available, IMs should agree with RUs for which lines and what kind of trains should be prioritised for the submission of CNAs (for ideas see the expectations for the IM-RU phase). This would improve the Capacity Model relevance and at the same time rationalise the resources.

- **RU benefits for doing CNAs should be defined in the future.** Doing a CNA requires effort on the RU side, to do so, the benefits of doing must be defined/explained, especially compared to those RUs who decide to only consult the draft Capacity Model and or even skip the advance planning phase and directly request something not in line. Some of the suggested potential benefits raised individually by RUs were:
 - Earlier/more detailed information in case the CNA crosses a congested/TCR section.
 - Extra IM-RU consultation on an alternative solution in case the need cannot be fully satisfied (something similar to a feasibility study)
 - Higher chance to get the capacity of suitable quality
 - Better quality of the final allocated train path (also in relation to TCRs)
 - Less work during the submission of the path request (CNA results converted to the request system)

Recommendation: clarify the CNA benefits for the applicants after the IM-RU pilot phase, TTR Process Group should define how to make attractive the early CNA submission for applicants.

- **IMs should expect more CNAs from the leading applicants, even if they have no licence in the IM's country.** The pilot showed that the selection of the partner RU, especially in freight, usually comes later than X-24. IMs should expect that a lot of CNAs might be submitted only by the leading applicant, this can be even an entity that does not have a railway licence B for the particular network on which the CNA is placed and, for legal reasons, does not have the status of an authorised non-RU applicant. The IMs will have to work much more with these entities in the advance planning phases than they do now and recognise them as full partners/customers.

Recommendation: IMs should treat all CNAs submitters equally, irrespectively if they have a valid railway licence and/or formal status of the non-RU applicant on the specific network in question.

- **Deadline X-24 is not fully sustainable, also later submission/modification of the CNA shall be possible.** Even for more predictable market segments, the market cannot get frozen after X-24. There are many factors that can influence the demand, such as a pandemic, war, change of non-railway logistic streams, delays in rolling stock delivery, strikes moving manufactory volumes between factories and so forth. Construction of a binding Capacity Model and Capacity Supply not reflecting the market development will only lead to not optimised timetables and or not requested capacity products. And this has to be prevented. It is essential that the internationally aligned market dialogue with applicants continue after X-24.
- Another interesting finding in the pilot was that **the route sometimes depends** on the partner RU and in case you do not know the partner, you cannot indicate the definitive route. The same goes for the usage of Primary Location Codes

(PLC), a freight RU might know an approximate place where the goods are expected to be loaded/unloaded, but not the exact PLC.

- **Only some market segments are predictable at X-24.** The railway market is dynamic and for most of the freight and part of the passenger service, it is not possible to predict the market needs 2-3 years ahead of the operation. The situation differs depending on the RU, networks and the market segment.
 - Freight: Some supply-driven intermodal trains can be predicted, same as some transport under long-term contracts. The single wagon-load used to be predictable for decades, but since the pandemic, some RUs noted that this stability is now challenged. Most of the freight demand-driven business cannot be defined reliably at X-24, and specific market segments could never be defined in pre-planning but still needs capacity (e.g. the timetable and route for pulpwood depend on the weather conditions). Some freight RUs stated that they might be able to provide some general expected data based on their own assumptions without assigning the capacity to exact customers.
 - Passenger: the backbone services are predictable and can have the form of a CNA. The PSO services might be more predictable, but some RUs noted that the PSO authorities define their wishes in different timeframe and sometimes do short-term changes, which undermines the ability of the RU to provide stable CNAs. This can be improved by the introduction of the new processes and long-term PSO funding, but there still might be cases where short-term-needs-change from the PSO authority would have objective reasons (change in the travel demand). The open-access services are more in the control of the RU, but still, X-24 is not suitable for all cases, there are special trains for special events, and changes in the demand on particular days and this is not predictable by X-24. Also the timetable is very dependent on the rolling stock, and if the manufacturer is delayed, it also changes the concept.

Recommendation: The TTR process shall allow updates and new market inputs from the market also after X-24, preferably at least closer to the deadline X-11, when the Capacity Supply is published.

Expectations from the IMs-RUs CNA pilot phase:

- Due to the high amount of manual work, IMs should not expect that there will be an extensive number of CNAs submitted for TT2025 and TT2026. This will make manageable for IMs also a larger geographical acceptance of CNA, for which FTE members would like to encourage them. Especially, DB Netz and SNCF Réseau participation would be beneficial. Several RUs will increase their activity or join the pilot in case these 2 IMs join the pilot.
- Continuing in the pilot using only excel files would further decrease the number of CNAs and increase the manual work for all involved parties. Some technical questions will have to be answered (see chapter 3). The availability of ECMT, allowing for data upload, editing, export and submission at least at the MVP level, would be a good step forward.

- RUs confirm the TTR concept that CNAs cannot be set as mandatory² since they would not be manageable by the resources, and there will not be stable realistic information for certain market segments.
- With limited initial experience and technical support for the pilot it seems more feasible to use CNAs as one of the inputs to the Capacity Model/Supply during the pilot phase. The CM/CS should then be investigated more thoroughly by the IM in dialogue with the involved RUs (a kind of early feasibility study). The question is then which traffic should be selected by the RUs for the CNA pilot (where to put the priority focus). Some of the discussed options (decision will remain individual) were:
 - New or significantly changed traffic concepts
 - Traffic running through a bottleneck/congestion
 - Wished alternative in case of a Major/high impact TCR – in case the IM will create the Capacity Model variant for the TCR
- **RUs have mixed feelings about the geographical scope for CNAs defined by IMs for TT2025.** The IM representatives provided to FTE/RUs the expected geographical scope where the CNAs can be placed for TT2025. The comments:
 - The proposed scope of IMs is not a connected network of lines. Some IMs offer good and large scope (such as ProRail, Infrabel, VPE, ŽSR, HŽ Infra), but some of the IMs only have a single/two lines or do not take part in the process. The most critical is the absence of DB Netz (except RFC ScanMed pilot) and absence of SNCF R, since those are two central IMs with a lot of international traffic. There is also a wish to submit CNAs in the PKP PLK network, but PLK does currently not plan to implement TTR at all for TT2025-TT2029.
 - RUs tried in the pilot to create CNAs from origins to destinations. This meant that part of the traffic route had even several times entered and exited the CNA scope intended by the IMs for TT2025. It is unclear how IMs will handle the hybrid CNAs, when for instance, DB Netz as the IM in the middle, decided not to be part of the TTR pilot. A similar issue can also be caused by ÖBB infra, which has a very central position, but, e.g. out of scope is the key transit line of Brenner and the connection to SŽ Infra and VPE, although both these IMs/ABs allow CNAs to the ÖBB infra border.
 - In general, some of the IMs are strongly encouraged to reconsider the scope and enlarge it, the number of CNAs in the first timetable would be rather very low, but it would be beneficial if these few CNAs are processed for the maximum possible part of their route.

***Recommendation:** The TTR implementation and steering bodies should motivate the IMs to enlarge the geographical scope for CNAs for TT2026. The handing of the hybrid should be clarified.*

² Note that 2 pilot participants noted that the value of CNAs is low if they are not mandatory. A “black-rider” can be one of the reasons.

3. IT and Technical Findings

- **CNAs need good documentation to give clear explanations.** There is a clear need for good and clear materials on how to fill in a CNA. The excel file published by the DCM WG was found very confusing, key explanations are missing, and some explanations are technical and full of abbreviations that an English-speaking planner/business developer cannot understand. The FTE excel version of the explanation is much better, but still, some comments were received (see below). In ECMT, it would be helpful if the data fields have “clue” or “description text” (translation to the local languages as in PCS should be envisaged).
 - What is mandatory and what is not? It has to be well communicated that the CNA can also contain only general information, the data structure guides the planner via many fields, which (s)he tries to fill in, and this might cause frustration due to the unavailability of such level of detail.
 - What locations should be included, only border crossings or all operation/commercial stops?
 - It was the first experience for several RUs with the ID core-part, not clear what to insert, and if it is needed to insert anything.
- **How to split the Excel files in the submission to IMs?** It is possible to put as many CNAs into a single Excel file as an RU wishes. Nevertheless, it is unclear how to make the submission if this is not done centrally via ECMT. CNAs contain a lot of sensitive commercial information, and should not get to an undesired party. Especially in the freight business, two different RUs might cooperate for one traffic, while for the other, they might be competitors. This has to be also reflected in the excel submission, so no RU gets CNA information, where it is not involved in the train run. So how to do the split? Per partner, per corridor, send it as a single file? Doing a high amount of splits can make the process very time consuming and increases error risks. No conclusion was reached by the pilot participants. It is only clear that if ECMT is used for submission, ECMT should solve this issue and deliver access to all involved entities in each particular CNA.
- **Data quality issues in the reference database of IMs.** In the excel file, the RUs had to fill in PLC codes, the source of them was ERA’s RINF. Nevertheless, the data quality for some IMs was not perfect (e.g. DE, CZ), for instance, some PLCs had ended validity.
- **Length/weight should focus on carriages only.** Currently, the CNA structure asks the expected length/weight of the train, including locos. The RUs suggest changing it to the length/weight of carriages only. Firstly, it would make the data structure closer to TSI requirements. Secondly, the carriage information is better predictable, while which and how many locos are to be used depends more on the route and the future infra parameters.
- **No need for the Acceleration field.** The acceleration field in the data structure was not filled in by the RUs. It was questioned if this field must be part of the data or can be removed.
- **Maximum journey time field should be kept.** Although this field was used very sporadically, the RUs concluded that the field should be kept. Firstly, it

might be used as an alternative to the exact timetable (ELA/ELD and LLA/LLD). Secondly, added value can be if ECMT is able to track the CNA in later TTR phases, and for instance cross-check if the capacity products in the Capacity Supply can be combined in order to reach the wished maximum journey time.

- **Frequency should be at the location not the object level.** Frequency of operation might differ depending on the location. For instance, a daily train running A-B-C-D will end on Wednesdays at C. Currently, you can define the frequency only for the whole CNA object, but it should be possible to do it for each location.
- **Frequency for midnight crossing trains should be specified.** It was not clear in the pilot what frequency to put, if the traffic would run more days. The rule must be clearly specified, e.g. it can be the day of the departure from Origin.
- **Different order of container profile preferred.** The current excel has order: P1, C1, P2, C2. The order P1, P2, C1, C2 would be more preferred.
- **Good IT solution for clock-phase pattern is needed.** Some of the passenger services are operated in the clock-phase pattern, filling in the information for each train run would create a very time-consuming task with the additional risk of losing the information “clock face required”. Thus, there is a need for a good IT solution, where the RU can easily define the pattern timetable and start-end hours of the clock-phase run.
- **Data from CNA (or created capacity product) should be transferable to the path request.** Filling in data demands resources, thus any opportunity to reduce double work must be utilised. The RUs would expect in the future an integrated IT landscape, where you can transfer the data inserted via CNA (or potentially data of the capacity product created based on CNA by IMs) to the capacity broker – with this the workload can be reduced.
- **Unclear in the bitmapday.** It was unclear if the bitmapday filed is to be filled in for the days of the running days validity or for the whole timetable period. In general, this field in excel is very human-unfriendly, even with the IT converter created by FTE.
- **Different running days can have different information.** It was found out that on different running days the timetable can differ. A frequent example in the passenger business was different O/D per day. On the freight side we observed examples where the route differs on some days (due to different partner) and therefore also the parameters. Although no solution has been found yet, the issue cannot be solved simply by creating multiple CNAs, because it is still one traffic and one contract. It can also happen that later the IM-RU consultation will lead to finding an alternative solution and reduction of subsidiary timetables.