

Report

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CER Ticketing Roadmap – 1st Implementation Monitoring Report Autumn 2022

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1. Executive Summary

In autumn 2021 the CER member railways adopted the CER Ticketing Roadmap ("Roadmap"). The Roadmap embodies the members' vision of railway ticketing and distribution by 2025 and 2030, respectively. It establishes concrete actions to further improve the experience of rail passengers in the Single European Railway Area and is a key token of the sector's commitment to the European Union's climate and growth goals. It is crucial that the CER community delivers on its pledges.

To add weight to its voluntary commitment and to ensure timely delivery of the Roadmap, the sector has decided to monitor and report progress continuously. The document at hand is the first progress report, based largely on an online survey carried out amongst the CER passenger railways from November to December 2022. The survey findings and recommendations were endorsed by the CER General Assembly on 1 February 2023. The exercise will henceforth be repeated twice a year. Key target groups of these reports are the passenger CEOs of the CER member railways and other topical CER bodies. As a token of transparency and commitment, it was decided to make the key elements of the report available in a concise manner.

Overall Roadmap implementation progress amongst the survey respondents is good, with most actions on track and several railway undertakings (RUs) already compliant with specific areas of the Roadmap. However, there are differences from one action to another. Most respondents report an implementation status ranging between 25% (project initiating phase) and 75% (execution phase), with some respondents reporting specific Actions as 0% completed (not yet started).

Sector solutions are already available and accepted for several of the issues which the Roadmap seeks to resolve. In these cases, sector work needs to focus on the implementation of these solutions. Less mature actions, notably the harmonization of ticket conditions and on-journey real time information, deserve additional attention. As a prerequisite, the definition of these solutions requires a broad and common sector effort. CEOs committed to ensuring broad participation of their companies' experts in the relevant international working groups.

However, participation in this first survey showed some upward potential. About half (15 railways) of the CER passenger community, participated up until 13 December 2022. These represent over 87% of the CER members' passenger traffic, but not all EU Member States were covered. The CER Assembly on 1 February stressed that it is crucial to prevent widening implementation gaps between those RUs who are very active in advancing the international development of the Roadmap topics and who made their implementation status transparent, and those who have not yet responded in full. As taking stock of all CER member RUs and completing the picture is indeed essential, it was agreed to extend this first survey campaign into February to March 2023 for the non-respondents.

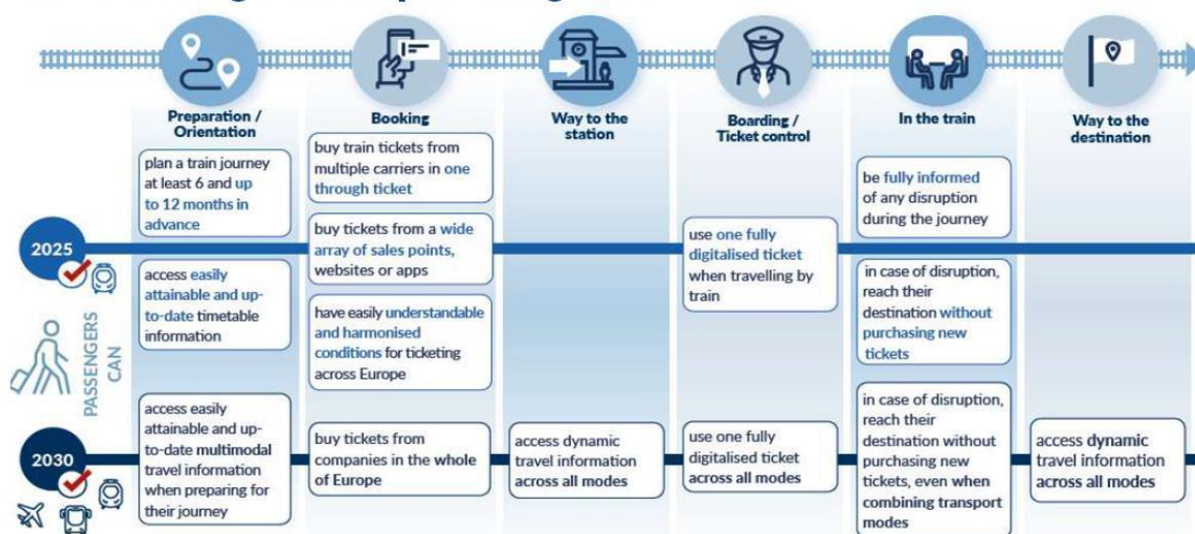
Nonetheless, the survey already yielded valuable insights, which this report summarises.

2. Background and Purpose of this Report

CER Ticketing Roadmap

In September 2021 the CER General Assembly adopted the CER Ticketing Roadmap (“Roadmap”). The Roadmap encapsulates a vision of railway ticketing and distribution by 2025 and 2030, respectively, summarizing concrete actions to further improve the customer experience from planning and booking to travelling internationally by rail. The roadmap naturally respects the regulatory requirements, more importantly, in several cases it exceeds them. It is thus a key token of the sector’s commitment to a truly Single European Railway Area and to meeting its own and the European Union’s climate and growth goals. It is crucial that the CER community delivers on its pledges. The voluntary effort of the CER member railways has so far been received well by stakeholders. However, they expect continuous and tangible progress and customer improvements. Delivery on the roadmap is not only a pledge but also in the RUs’ very own interest, and crucial to help shape meaningful legislation in this area.

The Ticketing Roadmap at one glance



Important Roadmap milestones are to be achieved by 2025. To make the Roadmap a reality, the CER Ticketing Task Force¹ has published an Implementation Handbook and identified suitable governance structures for each of the eight core action areas of the Roadmap. No new governance structures have been established. Rather, the actions draw on already established sector working bodies, for instance at UIC and CIT.

Implementation Monitoring

To add weight to its Roadmap commitment and to ensure timely delivery, the sector has decided to monitor and report progress continuously. For this, and to drive and steer

¹ The CER Ticketing Task Force consists of representatives from ČD, DB, MÁV-START, NS, ÖBB, SBB, SNCF and Trenitalia and is supported by CER, UIC and CIT. Participation is open and encouraged to all CER member railways

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implementation, CER has contracted a consultant. In collaboration with the Ticketing Task Force and CER members, comprehensive progress reports will henceforth be presented bi-annually to the CER General Assembly. The document at hand is a synthesis of the first such report. The key findings and recommendations were presented in detail to the General Assembly on 1 February 2023. The report at hand was produced for a broader audience such as the European institutions.

The purpose of this first report is to:

- take stock of Roadmap implementation maturity
- identify awareness and resource and skills gaps
- recommend concrete steps to gain broader traction for implementation across the CER constituency and in the dialogue with the European institutions about smart legislation in the ticketing domain
- highlight areas of progress that substantiate the CER community's commitment.

3. Conclusions and recommendations

Based on the solid number of responses received and the CER Ticketing Task Force’s combined knowledge about sector solution maturity and RU participation, implementation of the CER Ticketing Roadmap is on track. Several respondents have already implemented selected Actions or are well advanced with their internal projects. There are only a few areas where a few railways have not yet started implementation or where groundwork (specification and potentially development of sector solutions) is needed for individual RUs to move on. Some respondents indicate some level of uncertainty regarding their companies’ concrete implementation status. The Ticketing Task Force has already stepped up its efforts to support the railways with the closure of blank spots.

Non-responding RUs have been urged to also nominate their overall and action specific contact persons so they can participate in the upcoming multilateral Implementation Meetings, thus avoiding a widening of the awareness and implementation gap.

CER Ticketing Task Force assessment of Roadmap implementation status as planned, based on the survey responses and additional insights into the maturity of sector solutions:

| Action | Assessment |
|--|---|
| 1. Timetables | Good number of RUs already compliant (e.g. thanks to significantly shortened timetable upload cycles) or with concrete plans to become so shortly. Nonetheless, improving timetable quality requires continuous efforts, notably by further increasing upload frequencies |
| 2. Booking horizon | Relatively good number of RUs already compliant or with concrete plans to extend booking horizons to between six and twelve months; to be resolved: different booking horizons for domestic and cross-border services, which some RUs apply. |
| 3. Tariff exchange | Already solid use of sector solution and compliant RUs or those with concrete plans. |
| 4. Standardized API | Solution in place (OSDM), various railways have started implementation or have a concrete plan to do so in due time. Recognition of OSDM as “the” sector solution is doubtless there at CER level (clarity about the WHAT). Missing final commitment of European Commission/ ERA to implement OSDM in TAP TSI and pending MDMS-regulation had/have a delaying impact on the Implementation of OSDM (uncertainty about the “WHEN”). Nevertheless 2025-deadline must be met as commitment given within the Roadmap. |
| 5. Harmonization of ticketing conditions | Very broad scope with heterogeneous maturity levels of sector solutions; stronger internal alignment is |

| | |
|--|--|
| | recommended. Nevertheless, high interdependency on OSDM to deal at least with the “unharmonized” ticketing conditions of today is a valuable Plan B. |
| 6. Digitalization of tickets | Good number of RUs already compliant or with concrete plans to become so shortly. |
| 7. Real time information | Limited sector solution in place, but assessment of adaptability and future proofness work in progress. Alternatives under investigation. |
| 8. Support during disruptions and delays | Agreement on Journey Continuation (AJC) already implemented or planned by several respondents. Others are urged to join. Launch of further work beyond AJC imminent. |

A key observation from the reporting campaign at hand is that those RUs who take an active role in the international development of Roadmap topics, or even participate in the Ticketing Task Force, are the ones who are most advanced in their implementations. It is highly recommended that more RUs participate actively in the established working bodies and that they engage in the upcoming Implementation Meetings organized by the Task Force. It is fair to say that investing time and effort into actively taking part saves time, effort and ultimately cost at the tail end of implementation.

Based on the survey responses the most obvious Actions and solutions with a best practice character are:

- increasing the upload frequency to the MERITS timetable database (Action 1)
- joining the AJC (Action 8)
- using the OSDM offline platform for uploading tariff data (Action 3)
- implementing the standardized OSDM API for sales transactions (Action 4, and indirectly 5).

The above solutions are comparatively easy to scale up, certainly in comparison to Actions such as real time information/ Action 7. The survey does not allow for more detailed insights into how exactly the relatively speaking most advanced RUs have implemented specific Actions of the Roadmap. This is subject to additional Ticketing Task Force enquiry and exchange with the CER member RUs, for example in the context of upcoming Implementation Meetings.

Last but not least, it is recommended to include and offer support to RUs from Accession countries and neighbouring networks as soon as possible so as to prepare smooth integration into the Single European Railway Area and to add weight to the solutions that are being rolled out under the umbrella of the Roadmap.

4. First Monitoring Campaign: RU Survey Q4 2022

In order to take stock of and assess implementation maturity one year after the adoption of the Roadmap and three years before a set of key milestones is due, a first online survey was performed in Q4 2022 among the CER passenger railways. In preparation of the survey, the consultant and the Ticketing Task Force assessed the maturity and clarity of the key reference documents pertaining to the eight action areas of the Roadmap, notably the Implementation Handbook. These specify the common services and components that each RU will need to make use of, and they are critical for consistent and timely implementation by individual RUs. The documents were considered adequate guidelines for RUs to launch, continue and finalize their internal implementation work, respectively. In the survey, RUs were nonetheless asked what additional information they need and where support from multilateral expert groups is needed.

The survey was designed by the consultant together with the Ticketing Task Force and ran from 11 November to 13 December 2022. The CEOs of the CER member railways were addressed directly by the CER Executive Director to ensure high level support of this exercise. Subsequently, a range of topical CER working bodies were involved, too, in order to facilitate internal communications and response preparation on an individual RU level. Halfway through the survey runtime, reminder messages were sent by CER.

The 15 responding RUs represent over 87% of the CER members' passenger traffic, thus covering a sizeable number of European passengers. Some EU Member States were not covered in time for the CER General Assembly. Still, as the following will highlight, the survey yielded valuable insights and offers solid starting points for fine tuning and facilitating the implementation of the Roadmap. Moreover, several additional RUs have meanwhile submitted their responses, pushing the coverage of CER members' passenger traffic further up. These responses will be incorporated in the next edition of the report.

Future editions of the survey – it is planned to have two rounds a year, in Q2 and Q4, respectively – will focus on specific items and actions or contain additional areas of enquiry if considered useful as Roadmap implementation progresses.

5. Overall Survey Findings

In the following, the overall survey findings as well as Action specific results are presented. The order of the Actions follows the customer experience logic of the Roadmap from pre-booking through to post-journey requirements. The survey was structured in the same way.

| # | Action (Focus: implementation by 2025) |
|---|---|
| 1 | More up to date timetables |
| 2 | Being able to buy train tickets at least 6 and up to 12 months in advance (booking horizon) |
| 3 | More up to date tariff exchange, enabling through tickets |
| 4 | European wide standardized API ² for selling train tickets |
| 5 | Increased harmonization of ticketing conditions (general conditions of use) |
| 6 | Full digitalization of tickets |
| 7 | Real time information during the journey |
| 8 | Better support during disruptions and delays |

From questions received during the survey it can be concluded that the less active a railway's involvement in the international development of the Roadmap topics the more need for clarification and support. Whereas RUs that are actively involved in multilateral working bodies, and especially in the Ticketing Task Force, articulated a significantly lower need for support and guidance or not at all.

Another overall finding is that the internal prioritization of the resulting to dos – as evidenced by prioritization of implementation projects, the allocation of budgets and the availability of expert resources – constitutes an ongoing challenge.

The sector solutions that need to be implemented by the RUs to be Roadmap compliant, such as the MERITS database for timetable data exchange or the OSDM protocol as a technical enabler for the sale of integrated and through-tickets, seem to be generally considered mature and fit for purpose. There were no comments or indications which may lead to the conclusion that this is not the case. Hence, it seems to be generally recognized that there is a suitable portfolio of solutions at an implementing RU's disposal. This also implies that the key tasks to ensure broad compliance with the Roadmap are indeed to be performed at an individual company level. Exceptions are, nonetheless, the Actions related to harmonization of ticketing conditions (Nr. 5), extension of booking horizon (Nr. 2) and real time information (Nr. 7). Here, the Implementation Handbook already points out that an extra effort by multilateral working bodies is needed to define, refine, and specify widely implementable solutions.

² Application Programming Interface that allows two IT programs to communicate with each other.

Overall, some responses from RUs that are not engaged in relevant international sector working bodies indicate that there is a need for additional explanation about the workings and practicalities of the solutions as outlined in the Implementation Handbook. The Ticketing Task Force together with the Action Owners are currently undertaking due effort to further respond to this information need in the form of implementation meetings that will take place soon.

Awareness:

Respondents are broadly aware of what is expected from them in each Action. However, the confidence rate varies significantly and indicates areas where additional communication and facilitation efforts are needed.

Q: Are you aware of what is expected from your company?

| Action | Yes | Somewhat |
|--|------------|-----------------|
| 1. Timetables | 87% | 13% |
| 2. Booking horizon | 93% | 7% |
| 3. Tariff exchange | 80% | 13% |
| 4. Standardized API | 80% | 13% |
| 5. Harmonization of ticketing conditions | 53% | 33% |
| 6. Digitalization of tickets | 80% | 13% |
| 7. Real time information | 53% | 40% |
| 8. Support during disruptions and delays | 73% | 20% |

Involvement:

Likewise, a majority of respondents are actively involved in the international development of solutions that are geared to meeting the Roadmap goals, thus dedicating resources, time and money to furthering the Roadmap.

Nomination of contact persons:

The implementation of a multi-stakeholder, multidimensional undertaking such as the CER Ticketing Roadmap benefits from a community of practice, where internal and multilateral process owners collaborate and take their respective areas of responsibility forward. An important element of the first survey was therefore to compile RUs' contact persons so that upcoming implementation tasks can be facilitated as efficiently and effectively as possible and so that outstanding solution development work can benefit from as many RUs' perspectives as possible. In the coming months there will be Action specific Implementation Meetings, to which the nominees will be invited shortly.

Implementation status:

Implementation maturity differs widely from one Action to another. Most respondents report an implementation status of between 25% (project initiating phase) and 75% (execution phase), with some respondents reporting Actions as 100% completed (in production) or 0% (not yet started). This deserves a closer look and critical assessment per Action (cf. subsequent chapters).

The fact that for each Action there are one to three respondents who are not sure about their company’s implementation status indicates a need for stronger internal alignment, for instance by way of a Project Manager or single point of contact with a mandate to coordinate all Roadmap related activities.

Q: What is the current status of your company's implementation of the Action?

| Action | 100% | 75% | 50% | 25% | 0% | Not sure/ no answer |
|---|------|-----|-----|-----|-----|---------------------|
| 1. Timetables | 47% | 7% | 13% | 13% | 13% | 7% |
| 2. Booking horizon | 33% | 13% | 20% | 13% | 0% | 20% |
| 3. Tariff exchange | 40% | 27% | 13% | 0% | 7% | 13% ³ |
| 4. Standardized API | 0% | 7% | 20% | 40% | 20% | 13% ⁴ |
| 5. Harmonization of ticketing conditions | 0% | 20% | 7% | 33% | 20% | 20% |
| 6. Digitalization of tickets | 13% | 33% | 20% | 7% | 13% | 13% |
| 7. Real time information | 0% | 13% | 20% | 33% | 7% | 27% |
| 8. Support during disruptions and delays: | | | | | | |
| We have joined and implemented CIT AJC ⁵ | 73% | | | | | |
| We have not yet joined but are planning to do so | 13% | | | | | |

Note: Some minor rounding differences when the sum per Action is 99% or 101%.

Identified obstacles and issues:

³ Plus 1 RU (= 7% of total respondents) referring to its parent company’s technical enablers.

⁴ Plus 1 RU (= 7%) referring to its own solution and the parent company’s technical enablers.

⁵ Agreement on Journey Continuation

Most respondents chose to share their implementation obstacles and issues incurred so far. These largely fall into the following categories:

- Resource limitations
- Project prioritization
- Budget constraints
- New way of working (multi-stakeholder, international)
- Reliance on third parties (e.g. infrastructure manager for timetable and real time information)
- Lack of standardized off-the-shelf solutions.

Support needs:

The respondents made good use of the open-field survey question related to areas where different stakeholders could help facilitate Roadmap implementation and overcome barriers to implementation.

Suggestions were made specifically regarding.

a) European Commission and ERA

- Respect that Roadmap implementation requires collaboration among competing RUs (= refrain from competition procedures)
- Refrain from legislative proposals that impose new or conflicting requirements that may jeopardize RU efforts and investments already made
- Take over the sector solutions like OSDM into the TAP TSI regulation so the sector only needs to invest once

b) Sector bodies (Action Owners, Ticketing Task Force)

- Foster dialogue, alignment and synchronization between multilateral working bodies and RUs as well as between RUs
- Launch implementation meetings and workgroups per Action or specific subsets thereof
- Exert strong project management, leadership and visibility
- Remind of implementation deadlines and intermediate steps on an ongoing basis
- Take the diversity and specificities of CER passenger RUs, for instance of open-access international high-speed operators, into account

c) Others

- National governments to support the Roadmap consistently and refrain from contradictory or additional legislation in that field
- National bodies and stakeholders to align national standards and requirements with the Roadmap; overcome the patchwork of conflicting national or even regional approaches and solutions.

Action-specific findings are currently being analyzed with the governance bodies in charge of their development and maintenance.

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About CER

The Community of European Railway and Infrastructure Companies (CER) brings together railway undertakings, their national associations as well as infrastructure managers and vehicle leasing companies. The membership is made up of long-established bodies, new entrants and both private and public enterprises, representing 78% of the rail network length, 81% of the rail freight business and about 94% of rail passenger operations in EU, EFTA and EU accession countries. CER represents the interests of its members towards EU policy makers and transport stakeholders, advocating rail as the backbone of a competitive and sustainable transport system in Europe. For more information, visit www.cer.be or follow us on Twitter [@CER_railways](https://twitter.com/CER_railways) or [LinkedIn](https://www.linkedin.com/company/cer).

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