



System Pillar Steering Group

Meeting 18 March 2024

09h30 – 12h30

Minutes of the Meeting

1. Welcome from the Chair and adoption of the Agenda

Keir FITCH (DG MOVE) welcomed the participants to the 8th meeting of the System Pillar Steering Group (SP-STG). He names the participants present on site and summarizes the meeting agenda.

2. Approval of meeting 7 minute

The minutes of the 7th meeting of the SP-STG were approved without further comments.

3. Update

Giorgio TRAVAINI informed the members about the EU-RAIL planning to organise a train as a means of transport for a trip from Brussels to Berlin on 23 September on the occasion of InnoTrans 2024. The plans to equip the train with special configurations (e.g., to integrate workshops) would allow a journey of slightly less than 400 people. He invited the members and offered the possibility of further personal contact on the subject. He emphasised the symbolic function of the campaign as a political message, as a sign of cohesion and the implementation of the industry's principles. He informs about the participation of the Belgian Deputy Prime Minister and Minister of Mobility, the involvement of the Women in Rail project and the efforts to accentuate own R&I activities.

Ian CONLON mentions the ERTMS 2024 conference taking place in Valenciennes from 23 to 25 April and refers to DAC, the migration discussion, operational harmonisation, and the STIP as examples of topics in the workshops taking place and having links to the work of the SP. He also emphasised 'Session 6: Outlook – Future', which will take place on Day 3 and in which the work of the SP will be discussed.

Giorgio TRAVAINI also mentions the Connecting Europe Days 2024 from 2 to 5 April, in which EU-RAIL is organising an event in cooperation with the Belgian Presidency of the Council of the EU, which has attracted widespread interest, as evidenced by the participation of the Belgian Deputy Prime Minister and Minister of Mobility and the German Federal Minister for Digital and Transport.

In response to the question referred by Soenke KRAFT from digital participants, Giorgio TRAVAINI replied that questions about the InnoTrans train should first be addressed to him, before they are passed on.

ITEMS FOR DISCUSSION OF THE SYSTEM PILLAR STEERING GROUP

4. EU-RAIL Standardisation and TSI Input Plan

Keir FITCH introduces the first item on the agenda by mentioning the 1,200 comments submitted by 09 February in the course of the first Standardisation and TSI Input Plan (STIP) review round.

Ian CONLON points out that the approval of the STIP is to be debated in the next SP-STG, but that an update on the timing and process will now be provided to answer open questions. He summarises the STIP process, including a visual flowchart, and places the status quo in the review process of the creation phase of the first version of the STIP, in which all content is compiled by EU-RAIL. He emphasized the planned regular updating of the document every 18 to 24 months. The comments provided are currently being reviewed in accordance with the period planned for this until the end of March.

➔ **The STIP Approval Consultation is scheduled to be launched on April 12.**

➔ **The approval by the SP-STG will take place at SP-STG Meeting 9.**

Ian CONLON mentions the close alignment between the STIP and the European Commission (EC) process on the TSI mandate, which aims to ensure that the documents present as coherent a picture as possible. He reminds that although the content of the documents varies in some cases, there is a lot of common ground.

Wawrzyniec PERSCHKE continues by describing the connection between the STIP and the EC request for TSI. He points out that the STIP is also included in the standardisation request to European standardisation organisations. He mentions that in addition to the bilateral exchange for the alignment process, the trilateral exchange with the ERA is also essential to reach an agreement and to react appropriately to all comments received.

➔ **Much of the work will be completed by April 2024, when a first draft of the TSI request will be circulated.**

➔ **Based on feedback from the sector by mid-May and an expert group, the clarity of the document will be assessed.**

Wawrzyniec PERSCHKE emphasises the relevance of the complementarity of the sector's comments on the TSI request and the STIP and, consequently, the time difference between the end of the consultations on the former and the approval of the latter.

Ian CONLON proposes that for the STIP review phase scheduled from mid-April to the end of May, the information relevant to the TSI mandate should be looked at first before the other elements are considered. He also emphasises that such a solid alignment and the linking of the TSI-related work of the JU where it is relevant at European level would be novel up to today.

Keir FITCH emphasises that the EC is trying to implement its part of the process as quickly as possible and pave the way for the agency's future work.

Nicolas FURIO emphasises the relevance of the STIP as a key document for UNIFE. He asks whether a reopening of the STIP would be possible after the RISC meeting. Keir FITCH and Ian CONLON point out that, although small changes are possible, a fundamental reopening of the STIP after the RISC meeting is not planned.

Ian CONLON responded to Nicolas FURIO's second question on feedback on a document recently circulated by UNIFE by saying that the discussion on the harmonisation channels will be taking place in the context of the STG.

Keir FITCH reiterates that the goal of a strong business is supported, but not at the expense of freezing the technological progress of the railway, emphasising the common goal of progress in functionality to improve the system in a coordinated way and promote essential investments.

5. Traffic Management System – Cross Border Variants

Keir FITCH opens the question of how a European specification of the TMS could be developed instead of costly and innovation-inhibiting individual solutions.

Ian CONLON emphasizes that the paper has already been made available and that the following discussion should primarily focus on follow-up actions.

Patrick KONIX presents the variants analysis carried out during Task 3 of the SP. He names the variants and points out that they represent theoretical steps from a de-centralised to a centralised European TMS/CMS system and do not reflect the real situation in Europe, which is rather between scenario 0 and 1, i.e., at the beginning of the implementation of a centralised system. He describes how the document was validated by the mirror groups and in the strategy circles. He gives some examples of the comments from the latter and emphasises that the subsequent revision of the document could be labour-intensive.



Comments from the
Strategy Circle

Keir FITCH mentions that progress beyond scenario 1 would be desirable from the EC's point of view. He emphasises that the need for a common traffic markdown and TMS at European level is recognised, but that a realistic view is essential.

Bardo SCHETTINI GHERARDINI sees a limitation of the variants analysis in the fact that it does not sufficiently address the functional vision relevant to the SP logic in addition to the technical vision. He considers this to be necessary to recognise the needs to be fulfilled by the TMS and incorporated into the architecture. He emphasises that it should be clarified how the different decisions in the process are made to avoid discrepancies between local and global views.

→ The variants analysis should include a functional perspective that clarifies by whom, at what level and using what tools, information and coordination decisions are made.

Keir FITCH brings in the EC's perspective by agreeing that the goal is to design a common TMS at all levels. He emphasises the importance of compatible and effective technologies, also for long distance services and a streamlined approach at European level.

Josef DOPPELBAUER agrees that, from his point of view, the decision-making process and the complexity of interaction should be better mapped in the document. He also emphasises that the hierarchy of control loops should be considered to avoid security RISCs. Another security RISC he mentions is the lack of digital connections between neighbouring countries. Finally, he adds that experience is also considered when evaluating the variants.

→ ERA and EIM will submit their detailed feedback on the variance analysis following the meeting.

In response to Keir FITCH's question as to whether the security concerns were about CCS, Josef DOPPELBAUER answered in the negative and specified that it was about the appropriate allocation of

functions. He cites examples of security deficiencies that resulted from the fact that the TMS was trusted more than the real situation.

Enno WIEBE adds that the target system and the migration path should be clearly defined. He emphasises that perspectives also differ within CER: while some see the TMS only as a tool to simplify the exchange of information in rail transport, others see its potential as a fully-fledged management tool for some parts of the network. He concludes that the document itself should leave more room for discussion, that the topic needs more analysis and a greater understanding of user needs.

Keir FITCH responded by asking why CER does not see more innovation potential in the TMS and emphasised that the aim is not to create a pan-European system, but to bring together various individual regional solutions to increase efficiency.

Enno WIEBE replied that the potential of the TMS to replace the current information exchange system was certainly recognised, but decisions should continue to be made by the infrastructure manager and not at European level. He emphasised that regardless of the long-term goals, small steps should be taken first.

Keir FITCH emphasises that the political discussion should be separated from the question of system functionality, with the latter currently taking centre stage.

Nicolas FURIO brings in the industry perspective, which is interested in process simplification, but also in the question of financing as an important implementation step. He emphasises the relevance of adequate cost estimates for the TMS. Keir FITCH replies that cost savings are a main reason for developing a European solution.

Wawrzyniec PERSCHKE adds that the paper, which has so far focussed primarily on technical feasibility, should specify more clearly which functions are necessary to contribute to the current discussion.

According to Bardo SCHETTINI GHERARDINI, the paper should take a functional perspective and identify needs to have a strategic value and promote informed policy decisions later.

Giorgio TRAVAINI stresses that while FP1 is the focus in this context, the R&I plans go beyond that into the second wave of FA1 to understand, based on data and research, what functional harmonisation makes sense at European level.

Keir FITCH also emphasises the importance of making informed decisions. He says that an ambitious approach is not necessarily at odds with the legitimate concerns raised and that these should not hinder technological progress. He recognises the need for prioritisation, but also for a more focused discussion.

Ian CONLON concludes that an update of the document will be necessary, but also raises the question of the timeframe for this. He also emphasises the role of future R&I in answering open questions and reiterates that the presented document should provide a framework for discussion.

Enno WIEBE asks whether the open questions should be answered exclusively during FP1 and expresses concern that this strategically fundamental topic is not given enough room for discussion with too little participation of all stakeholders.

Keir FITCH corrects this assumption and summarises the outcome by saying that more work should be done on the paper based on the concerns raised, with higher level discussion involving the STG.

Ian summarises.

- ➔ The comments raised by ERA and EIM - as the functional extension, the safety issues, and the lack of certain cross-border transport elements - should be incorporated into the update of the document before being discussed in the context of the wider sector.
- ➔ A revision will be targeted for the next SP-STG (to be confirmed).

6. Harmonised Diagnostics

Ian CONLON introduces the topic of Harmonised Diagnostics by recalling that it was introduced as a special topic in this contract year to see if its consideration is valuable for the work of the SP. He points out that the status quo will be analysed in work phase 1 before use cases are considered in more detail in phase 2. He emphasised that part of the four-month review is the formal acknowledgement from the JU to the SP consortium, but that in the meantime a review is carried out by the domains, mirror groups and core groups.

In his presentation, Markus URBAN explained to the audience the reasons for the goal of harmonising diagnostic data in the context of an organisation that makes it possible to coordinate the transfer of data between data producers and consumers. To realise this, technological, digital, normative, and operational hurdles were identified. He calls the economic viability of the targets a key enabler of the project, which makes the specification of use cases essential for a later application of the results. The use cases are evaluated based on KPIs. The five areas described by him in which benefits can arise were specified in templates regarding the data exchange process and the parties involved. He cites the monitoring of wheel conditions as an example of a use case. He reiterates that the document has been submitted, is approved on Polarion and will be presented to the core group for the second phase, in which the use cases and the framework application will be finalised.

Emilia ANDREEVA-MOSCHEN introduces herself as a new project participant.

Ian CONLON reminds those present that the deliverable has already been circulated in the SP and will be made available to a wider group after the SP-STG meeting.

7. Cybersecurity

Keir FITCH introduces the topic of cybersecurity as an increasingly important issue in view of the global political situation. He places it in the context of the EU Cyber Resilience Act and refers to the high expectations also for the railway industry, as well as the relevance of the development of technologies on the part of the JU.

Ian CONLON agrees with the high priority of the topic for the EU regulatory environment and adds that room for manoeuvre should be created in the context of the SP-STG.

Kurt KAYSER presents the cyber security document development process, in which the foundations for the definition of SP Cybersecurity are to be created based on existing documents from other organisations. The first set of draft documents was finalised in January as STIP content, circulated for review internally and in the railway and industry mirror groups, and feedback with varying impact was received; a further review is planned by ERA and ENISA. He states that the goal until the last quarter of this year is to refine the draft documents. He describes the four documents in detail. A traceability matrix is to be created, which will show users in practice in which legislative and standards' areas requirements are met. He mentions that new standards, such as IEC 63452, will be included. In May 2024, a larger review round will begin and a presentation at InnoTrans 2024 is planned, as well as the expansion of cooperation with the migration team.

Enno WIEBE is surprised that he has not yet seen the documents, although cybersecurity is as relevant for CER and EIM that they should be included. He expresses concerns about the mirror group.

Markus WISCHY emphasises that they strive for a transparent and open way of working, but that for the first review round emails had to be sent and access to Polarion was necessary. He promises that the next two rounds, the first of which will take place in April 2024, will include a further audience.

Ian CONLON clarifies that there are no intentions to exclude individual groups. He emphasises that initial internal considerations during a three-cycle iteration are not uncommon before a broader circulation takes place. He recalls that the consultation process with the sector via mirror groups is a sectoral arrangement and is outside the JU's remit. Participation in the cyber security mirror group or otherwise by the organisations is always open to them.

Bardo SCHETTINI GHERARDINI also expresses his surprise that he was not informed about the document and the possible participation in a mirror group. He would like to know at what point the information did not get any further. He considers the topic to be strategically relevant beyond the JU and considers further communication beyond the inner circle and Polarion, as well as the involvement of EIM and CER, to be necessary. He asks to be included in the future.

Kurt KAYSER replies that Polarion is not needed for the review.

Ian CONLON expands on this and points out that there is a contract with the SP consortium to which CER and EIM belong and which provides for a remit in cybersecurity.

➔ As a next step, CER and EIM should get in touch with those responsible for the project to specify possible involvement.

Bardo SCHETTINI GHERARDINI points out that they only have limited resources at their disposal and that the responsibility for involving all stakeholders therefore does not lie with them, but with the JU.

Ian CONLON clarifies that the meeting as part of the process can also be regarded as having an information function and at least two more cycles will follow.

Nicolas FURIO mentions that some concerns have arisen during the review of the documents by Unife. He thinks that some parts need further discussion within their team and asks about the application of the content. He also sees it as a key issue and would like to participate in subsequent reviews. He emphasises that overlaps between regulations should be avoided.

Keir FITCH recognises that it should be clarified where general regulations are relied upon and where rail-specific requirements are necessary.

Josef DOPPELBAUER expresses concern that the document may lack architectural and technical elements of cybersecurity. He emphasises that it is important to avoid duplicates and to understand what is being done at SP and association level. Kurt KAYSER emphasises that architectural elements are included and that two of the documents presented take a primarily technical perspective.

Michel RUESEN sees a communication problem as the cause of the debate, in the course of which EIM and CER were not informed that there would be a working group called "Railway Security Expert Group", which is open to all experts. The causes and preventive measures need to be discussed. He also believes that the political perspective should also be included as a second dimension.

Enno WIEBE emphasises how good the link to the rail supply industry is. It should be noted that the rail operating community and the rail supply industry are organised differently, and he considers it relevant for both that the results of the SP are ultimately widely accepted. He also emphasises the importance of the certification scheme, which should be discussed by both bodies as they have different positions on it. He would also like to avoid a situation where the topic of cybersecurity ends with position papers being passed

back and forth but instead it should be discussed. He added that the CER had not yet finalised its position on the mirror groups, but that it should in any case be brought closer to the work of the associations.

Bardo SCHETTINI GHERARDINI mentions that there have been intensive discussions with EIM and CER on how the shortcomings of the mirror groups could be solved and that this discussion could also support the work of the JU.

Francis PARMENTIER reminded that the GBR should also be considered as an external reviewer.

Daniel LOPOUR also expressed interest on the part of EUSPA to participate in the discussion of the document, as cybersecurity is also discussed in the context of the Space Programmes.

Kurt KAYSER confirms future involvement.

Keir FITCH summarises that there is still a lot of coordination work to be done and open questions about the certificates and TSI processes.

Ian CONLON reiterates that we are at the beginning of the process and there is enough time to revise the consultation process. He emphasises that it is good that the groundwork is being done first by the experts and that the integration of the whole sector is being planned. He assures that all the shortcomings and communication problems mentioned will be addressed.

Kurt KAYSER adds that although the drafts were created with a focus on CCS, they can also be used in other areas in which cybersecurity plays a role.

8. Response to CER/EIM Paper on Railway System Architecture (incl. status on the activities Migration and Roadmap)

Ian CONLON introduces the next agenda item by referring to the CER/EIM paper presented at the last SP-STG meeting and the concept of migration plateaus, as a request was made by the JU.

➔ A discussion paper will be circulated after the meeting.

Ian CONLON emphasised that the aim was to respond to the CER/EIM document, but as a draft and as a basis for discussion. He describes the four areas of the JU's response. He emphasises that in addition to the operational considerations for the harmonisation of CCS systems, there are also structural requirements for the approach. It is about improving the system on a performance, operational, and European level. In addition to the structural need, there also needs to be an overall business case for the implementation and cost reduction of life costs. He also emphasised that the outputs of the JU and the SP should be seen as complementary to transformations that have already taken place. He suggests that system changes should not only be considered at national level, but through European solutions. As a goal, he mentions an agreed sectoral line on the work to be done and a high-level commitment to it.

Christoph KLOSE presents the CER/EIM paper as a high-level view on the ambition of the migration strategy for SERA, which involves the input of all stakeholders and the discussions, and sheds light on the background for the creation of the paper. He provides details on the two steps of the implementation of the SP architecture and describes the planned timeline. By 2027 there will be a specification, followed by a development phase and the deployment of the technologies. He specifies that products of migration target 1 should be available by the early 2030s and those of migration target 2 by the mid-2030s.

Steffen SCHMIDT continues the discussion and describes the products presented as core products that fit into the target system and are ambitious and motivate compliance with the harmonisation approach but are also realistic and based on existing technologies. He emphasises that the harmonisation of operational processes and the necessary minimum for the trackside architecture represent a trade-off. Firstly,

automation for goal 1 and the improvement of the track site is important to advance the business cases. He refers to a list of improvements that need to be discussed. He describes the reactions as having very different impacts. He points out that some activities are not mentioned under target 1, which is because they are seen as optional. Target 2 primarily supplements efficiency-related elements, which should only be realised a few years later. He emphasises that what is presented provides a starting point for discussions, including with the sector.

Ian CONLON emphasised that it was a matter of sector discussions on important points in the CER/EIM paper and that a strategic approach for the connection of different CCS systems should be developed in the next few years.

Josef DOPPELBAUER described harmonisation as a key issue for the seamless movement of trains in the SERA and economies of scale. However, he expresses concern that contractual/commercial and technical objectives are not sufficiently separated. In addition, harmonisation would need an entry point of migration and different stages of maturity will always coexist. This should be clearly described by CER and EIM.

Enno WIEBE adds that the affordability of the changes for the actors to reach the target should be considered more closely. He emphasised that sector buy-in can only be ensured if financing is also discussed.

Keir FITCH confirms that financing should play a role in future planning using a systems approach. He added that funding from the EU serves as a catalyst but is subordinate to strong business cases.

Bardo SCHETTINI GHERARDINI confirms that the deployment of migration and capacity is not just about technical empowerment, but also about financial empowerment. He emphasises the role of the deployment group.

Christoph KLOSE clarifies that such a realisation takes place using prototypes and that support in identification and alignment from the deployment group would be helpful. He could imagine to collaborate in different countries and with different operators, especially in the initial implementation phase.

Keir FITCH points out that the experts in the deployment group are primarily responsible for maintaining and coordinating a strategic overview of what is needed for the railway industry of tomorrow.

Wawrzyniec PERSCHKE adds that the document describes the gradual development according to the needs of the sector, but not its technical impact. However, he believes it is important to include this to depict scenarios.

Klaus MINDEL considers implementation to be a key issue that should not be discussed too technically. It is therefore more a question of achieving broad support for the test architecture in the sector.

Ian CONLON points out that the evaluation of the paper already finalised by the JU provides details to guide and promote an informed discussion. He describes the follow-up steps of an enquiry into the status of the migration and roadmap activities, which are currently continuing their work.

- **The paper will be circulated after the SP-STG, and is open for comment and discussion.**

9. Response on year 1 of the System Pillar

Ian CONLON continues with the agenda and summarises the developments in the three main topics of the last SP-STG. Regarding communication, he recalled that the aim was to improve communication. In the future, the work of the SP is to be better emphasised, for example through events and workshops, and

included more in the JU newsletter. About the mirror groups, he pointed out that there is a proposal awaited from the railways, and that EU-RAIL is ready to support in the set up of a new structure, though the organization is largely the responsibility of the sector. .

ANY OTHER BUSINESS

10. AOB

- *TMS/CMS model – new release*
- *Energy Report*
- *Four Month Review / second phase of contract*

Ian CONLON says that a new version of the TMS/CMS model will be published and made available to all JU projects with the aim of testing and improving it. Regarding the Energy Report, he refers to the current finalisation and the clarification letter that has been sent to the consortium and should be finalised in April 2024. With regard to the four-month review, the formal letter to the consortium should be sent in March 2024.

- *Glossary*

Fabrizio COSSO summarises the developments surrounding the creation of the glossary. He reports that the user guidelines for using the glossary have been made available. The entries for FP1 are currently being added and entries that do not comply with the guidelines are being cleaned up. In addition, user instructions and reviews of the guidelines are taking place, while the developers are currently dealing with questions of administration and version handling.

Fabrizio COSSO points out that documents could also be rejected in future if they do not comply with the guidelines.

Keir FITCH mentions the work on ontologies that is also taking place in this context and asks for an alignment. Fabrizio COSSO confirms that the imports on Polarion are in line with what was agreed at the ontology level.

Johannes GRAEBER asks whether there is an easy way to search the glossary and create links to documents. Fabrizio COSSO confirms that search functions are possible in Polarion and via OntoRail and that work items for reference can be created in the documents, which is explained in more detail in the guideline.

11. Standardisation Presentation



Ian CONLON refers to the time bottleneck and offers to, instead of giving the already postponed standardisation presentation, distribute the presentation documents and to be available for questions of any kind.

Paolo UMILIACCHI mentions that the System Committee is also an opportunity to pass on additional information and to exchange ideas with the SP.

Keir FITCH summarises the topics of the meeting. He mentions traffic management, cybersecurity and the CER/EIM paper as major open points. They will all be part of further discussions below. He thanks those present and announces the next meeting for the end of May 2024.

Enno WIEBE bids farewell in his role as CER representative and thanks for the cooperation.