System Pillar Steering Group Meeting 9

Meeting 29 May 2024

09h30 – 12h30

Minutes of the Meeting

1. Welcome from the Chair and Adoption of the Agenda

Keir FITCH welcomed the participants and opened the 9th meeting of the System Pillar Steering Group.

As focal points for the upcoming discussions, he referred to the growing investment needs of the railway sector over the next few years, but also to the competing funding requirements for the European Commission (EC), which are spread over a wide range of areas, resulting in risks for the future continuation of a Joint Undertaking (JU) in railway research. He appealed to EU-RAIL, but above all to the members of the sector, to adequately present their achieved and expected results now and to specify the design of a future partnership to increase visibility within the ongoing evaluation of the JUs.

Josef DOPPELBAUER emphasised the important role of the System Pillar (SP). He highlighted the challenges at political level for a continued support of rail. He conveyed the demands of the EU Agency for Railways (ERA) to EU-RAIL for clearly defined, realistic and timely targets, detailed implementation plans and an observation group. He also emphasised that the SP should be based on principles (e.g., safety) that convey a clear message to policy makers. These are set down in the Annex to this document.

Ian CONLON responded by referring to the SP's focus on Control, Command and Signalling (CCS), the European Train Controlling System (ETCS) and Traffic Management Systems (TMS), the solution of which was a prerequisite for further innovation in the field of harmonisation and technology and thus had great potential. He added that the SP was dependent on extensive and complete engineering activities to realise its goals, which could only be simplified to a limited extent. Regarding the materiality of the discussion, he cited as an example the progress of the currently discussed outputs of the Traffic CS, which represent a main component for system evolution in the context of the maturity platform.

Keir FITCH presented the meeting agenda to the participants. Due to time coordination aspects, agenda items 5 and 6 were swapped during the meeting.

2. Approval of Meeting 8 Minute

The minutes of the 8th meeting of the SP Steering Group (STG) were adopted without further comments.

3. Update

Giorgio TRAVAINI echoed the arguments made earlier and added that although the sector is interested in the work of the SP, clear messages in the form of continual progress and subsequent simplification are now needed to pass on the efforts made to decision-makers. For the long-term continuation of research and innovation (R&I) activities in the railway sector, he appealed to the participants to raise their voices now and coordinate their efforts, also with a view to InnoTrans 2024. He also informed about the Governing Board (GB) meeting to be held on 21 June 2024, which will result in important decisions regarding the launch of the call of interest for new associated members, as well as for the update of the Multi Annual Work Programme (MAWP).

➔ **Members should note that applications for new associated members are expected to be possible until November 2024 following the GB decision, so that a selection can be made by early 2025.**

Ian CONLON informed the participants about the recording of the meeting.

Carole COUNE expressed concerns about the decision points brought forward in this STG meeting. She mentioned important deliverables expected to be completed in September 2024, which would make it necessary to adapt the Standardisation and TSI Input Plan (STIP) later and making a request for approval today questionable. Furthermore, regarding the decisions on TACS/EULYNX B4R3 and the General Diagnosis Concept, she criticised the fact that no further documents supporting the preparation for the decision were distributed together with the agenda.

Keir FITCH confirmed that the STIP is an evolving document for which agreement on a first version should be considered as a start. Ian CONLON assured that the participants had been informed about the planned decision-making process in preparation for this meeting. Accordingly, the two other agenda points raised were to be explained within the meeting before the related documents are circulated with sufficient time to decide on a written approval. In response to his question, Carole COUNE specified that she was referring to the Migration Roadmap deliverable scheduled for September, which should be included in the STIP. Ian CONLON argued that the agreed documents (STIP v1) were initial versions which would be updated on an annual basis. He recalled that no critical comments on the documents had been made by STG members in response to previous requests from the SP. He recalled that the anticipated finalisation of the TSI request by the EC in June 2024 would be followed by the distribution of the STIP aligned with it, for which the STG would then be asked again for approval. Today's decision therefore serves as an anticipation of approval.

➔ **In future, the previously circulated meeting agenda should provide more precise information on whether and in what sense approval decisions need to be submitted within the meeting.**

Bardo SCHETTINI GHERARDINI suggested regarding items for decision within the SP STG meetings that the relevant documents – contrary to the current procedure – could be sent to the participants in advance so that questions can be addressed directly within the meeting, which in his view would make it more efficient. Nicolas FURIO expressed his support for the proposal. Keir FITCH pointed out that it would be useful to give explanations before initiating a written procedure. Ian CONLON argued in favour of the current procedure, where items for decision should be provided at least three weeks in advance.

ITEMS FOR DECISION OF THE SYSTEM PILLAR STEERING GROUP

4. EU-RAIL Standardisation and TSI Input Plan

Ian CONLON presented the status of the Standardisation and TSI Input Plan. He described the current progress in the overall process and recalled the basic idea behind the STIP, which was to provide a complete

picture of the work of EU-RAIL and its linked outputs into the relevant harmonisation processes. He reiterated that the STIP would continue to develop during annual adaptations in alignment with the TSI request, so that review and quality checks are carried out, R&I programmes at European level are coordinated with European harmonisation channels and finally closer coordination can be established between R&I activities and the specifications, as well as ERA and the EC's TSI requests. He emphasised the good progress achieved in these areas.

Ian CONLON presented the comments received from CER, EIM and UNIFE (deadline on 14 May 2024) in response to the new draft of the STIP sent out on 17 April 2024. These were to be incorporated into the final draft. Regarding the re-inclusion of the OSDM input, a counterproposal was made by the SP and a conditional reintroduction will be implemented. Jean-Philippe Gachot (CER) indicated that the proposal was acceptable to them. Ian CONLON presented the next steps, which is that the final draft of the STIP will be sent after the TSI request has been finalised in the RISC in June 2024 (25-26 June). He informed that, following today's approval, a written approval by the STG would be requested, probably by mid-July 2024, whereby a non-response would be considered as approval.

Bardo SCHETTINI GHERARDINI expressed EIM's satisfaction with the planned procedure. Nicolas FURIO confirmed UNIFE's support in principle for the procedure but said that changes in the form made in the STIP (e.g. changes regarding the harmonisation channel) should be discussed in the STG in future. Indeed in the STIP V1.0 some topics are not linked to a specific harmonisation channel but labelled as "SP documents → TSI" or "SP documents → EN standard". Ian CONLON confirmed that more holistic updates are expected in those areas where not all information is currently available.

Paolo UMILIACCHI announced that comments from CENELEC could follow TC 9X plenary meeting in June 2024.

➔ **The possibility of linking important documents within the STIP for a better readability to be examined by the SP.**

Jean-François CAUBET suggested that the final version of the STIP should include the deliverables planned for September. Ian CONLON suggested a later bilateral discussion on the migration deployment domain.

Aude CHAILLEY introduced herself to those present as the representative for CER/SNCF and expressed support for the proposed approach. She also mentioned a document of comments, which has been sent earlier and is expected to be incorporated. Ian CONLON confirmed this.

➔ **Keir Fitch confirmed the conditional approval of the STIP, subject to the process outlined above.**

5. TACS/EULYNX B4R3

Mirko BLAZIC presented the Trackside Asset Control and Supervision (TACS) domain in the context of EULYNX. He explained the background to this, and the successes and progress achieved in the transition from release two to three. He then elaborated on the subsystem and interface specifications, which do not explain security-specific contexts, but which will be addressed in a separate publication. He then explained the review process, emphasising that collaboration was taking place in the form of a joint mirror group bringing together railways and industry. *For further detail, please refer to the presentation*. Ian CONLON reiterated that relevant documents on this topic would also be sent out following the STG meeting as a basis for the request for approval.

Nicolas FURIO underlined the efforts made by the TACS domain team to deliver the System Pillar Documents of EULYNX Baseline 4 Release 3. This new release includes many error corrections and

clarifications showing again the benefits of the sector cooperation within the System Pillar. UNIFE recognised that the operations related functional behaviour of object controllers for trackside assets have reached already a high level of maturity in the specifications. However, the diagnostic and maintenance related functionalities are not mature enough. Nicolas Furio also commented that for maintenance related functionality, the System Pillar TCCS domain is working on a stable and mature overall maintenance concept usable for trackside asset object controllers as well as for other subsystems. The outputs of this work could be contradictory with the Documents of EULYNX Baseline 4 Release 3. Nicolas Furio highlighted the cooperation between the TACS and TCCS domain team but was calling the SP to pay attention to the work on these two domain teams to make sure that contradictory documents are not released by the SP. It is important to get a good cooperation between the domain teams. Josef DOPPELBAUER confirmed these concerns and emphasised the importance of a GAP analysis between the AsIs system status and the objectives for the ToBe system. He expressed doubts that the current specifications are complete and provide what is needed to ensure modularity. Ralph MÜLLER interjected that from the track assets domains and the transvers domain, the same experts were working on this topic, ensuring coherence.

Malik BENAMEUR confirmed that there is a common synchronisation of the work done from the supplier side. There is also a regular and highly frequented exchange with the transversal domain. He assured that there would be a ToBe concept for the future standard maintenance interface, which, however, would not contradict the earlier publications, as these do not yet represent a finalised concept and are closely aligned to a Chance Management Process within the SP. Josef DOPPELBAUER emphasised the need for clear communication – especially to decision-makers. He considered a GAP analysis at a higher level to be an appropriate direction.

Mirko BLAZIC added that, from the transversal group's point of view, the results should represent extensions to the current interfaces without causing contradictions. He recalled the SMI and SDI specifications published in release two, which were not fundamentally changed, and added that everything should remain fully aligned in the future.

➔ **The Document and Decision will be sent out following the meeting for written approval by mid June.**

6. General Diagnosis Concept

Ralph MÜLLER presented the General Diagnosis Concept to the participants. He explained the underlying challenges and the resulting objectives for collaboration with stakeholders from the SP and the Innovation Pillar. He emphasised that diagnostics is about analysing and reporting on the status of components, but not about intervening in them. He presented the business logic, emphasising the users' need for confidentiality of certain data collected and communicated by the system. He specified that in addition to the distinction between open and confidential data, another category is provided for data whose willingness to share differs between railways and suppliers. Accordingly, a clear definition was needed for open data, while the distinction between category 2 and 3 data would have to be discussed on a project-specific basis (*for further details, please refer to the presentation*). He expressed the need for agreement from the STG.

Keir FITCH asked whether this would mean differences in the system architecture. Ralph MÜLLER specified that it was at this point a question of the strategic acceptance of a distinction between three data categories by the STG, the processing of which would subsequently have to be implemented.

Ralph MÜLLER presented three documents that build on this and still need to be further developed. Finally, he classified the connection of the General Diagnosis Concept to the STIP, as well as to the Harmonised European Railway Diagnostics (HERD), with which deviations should be avoided. Ian CONLON added that the General Diagnosis Concept focusses on CCS, whereas HERD covers a broader scope. He pointed

out that the presented documents were being circulated, so that a decision for written approvals on the data categorisation in the General Diagnosis Concept by the members could be expected by the end of July 2024.

Josef DOPPELBAUER expressed concerns about categories 2 and 3, as allowing the exchange of confidential information would contradict the basic principle of modularity of the SP and leaving decisions like these to the suppliers could raise security concerns. He considered it necessary to analyse the impact of the decision on the system architecture and the common business objectives of the SP. Keir FITCH questioned why a common interface system for the three data types was not possible. Bardo SCHETTINI GHERARDINI confirmed the comments made by Josef Doppelbauer on the confidentiality aspects and cyber security issues. He feared that the distinction in data categorisation in the commercial agreements could cause business and legal problems, which would make further in-depth study of the topic necessary.

Ralph MÜLLER specified that the source code associated with category three data could not be used by other parties but was necessary for the supplier. He emphasised that data communication and cyber security would be implemented by other teams and according to the needs of the users. Josef DOPPELBAUER confirmed that within Task 1 (Architecture) it must be assessed whether the principle of modularity can be maintained and that the issue must be discussed in the context of the common business objectives. Keir FITCH confirmed this necessity.

Miroslav HALTUF criticised the definitions of basic terms underlying the categories, since these can differ greatly between EU regulations and should be defined jointly. Ralph MÜLLER referred to an agreement with ERA regarding their ontology relieving these concerns.

Klaus MINDEL disagreed with the inevitable negative correlation between confidentiality data and security concerns and emphasised that the discussion was about the possibility of including confidential data in general. Keir FITCH pointed out that the categorisation of data could change over time and that modularity had to be ensured in any case.

Ian CONLON concluded that the question of modularity needs further analysis. He suggested that members should decide based on the documents provided, after which feedback can be given and focused discussions and workshops can be organised before written approval is sought. If no approval can be obtained by then, the issue will be discussed further at the next SP STG meeting. Keir FITCH elaborated that the discussion should not be about maintaining the three categories, but about which data should be included in which of them.

➔ **A summary document on the progress and discussion issues on the General Diagnosis Concept to be circulated to the members as a basis for further discussion on the data categorisation.**

TEMS FOR DISCUSSION OF THE SYSTEM PILLAR STEERING GROUP

7. Response to CER/EIM Paper on Railway System Architecture

Ian CONLON introduced the discussion on the response to the CER/EIM paper on Railway System Architecture. He reminded participants that this document introduced the concept of migration plateaus, highlighted the importance of migration harmonisation, and was published in the end of 2023. He also mentioned the proposal for approach circulated after the 8th meeting of the SP STG, which emphasised the need for operational and technical harmonisation. He referred to the need for harmonisation before CCS systems can be improved in a technically cost-effective way, which would make it a subject to be discussed not only for political decisions but also for commercial approaches. He emphasised that the high-level

statements made in the document should now be specified in more detail, which is why a proposal asking for feedback has been circulated to the sector so that a common approach can be found.

He also mentioned the upcoming publication of the results of the traffic CS domain, which requires a sectoral agreement on the further development of interlocking and RBC and for which further specifying documents will be distributed. He suggested linking the analysis of the outputs of the traffic CS with the discussion on migration plateaus. Finally, he asked for general feedback from those present, in particular CER, EIM and UNIFE (note: Nicolas FURIO sent the UNIFE's review to Ian Conlon before the SP STG meeting).

a. Feedback from UNIFE, CER, EIM

Bardo SCHETTINI GHERARDINI expressed support for the proposed approach by EIM, which is currently still working on the final response. He confirmed that a single migration path for all EU Member States and infrastructure managers would be difficult to implement. He emphasised that short-term decisions could lead to a delay in the deployment of the target architecture. He considered a more modular view of the migration targets and a division into smaller intermediate targets to be useful to gradually approach the target architecture. Accordingly, EIM proposed an alternative granularity of the target and the inclusion of an intermediate migration target 0.5, as well as an adaptation of targets 1 and 2.

Nicolas FURIO presented the opinion of UNIFE. He summarised that UNIFE questions the feasibility of achieving on time all necessary specifications to comply with the full set of Migration Target 1 features. It is important to agree on priorities for the migration aligned with the Common Business Objectives. This should dbe also discussed with the Migration Domain Team. In addition, guidance is now needed regarding the next steps to make progress. He then asked about the planned upcoming progress.

Keir FITCH mentioned that this discussion could also be held within the Deployment Group, which was concerned with identifying the relevant technical developments for Europe. Perschke WAWRZYNIEC interjected that moving the discussion from a technical to a higher managerial level would make sense and explained this using an example from the FRMCS/ETCS. He deduced that synergies should be created by bringing the Migration Group and the SP together with the Deployment Group, so that simplifications take place directly and more coherent decisions are made. Keir FITCH added that, in addition to the technical implementation issues, the distribution of costs and benefits of the technologies should also be addressed, which requires an integrative decision-making process. Bardo SCHETTINI GHERARDINI emphasised that this was a technical and at the same time an economic and strategic discussion. He proposed the establishment of an advisory sub-group within the Deployment Group.

Carole COUNE emphasised the relevance of bringing in the technical perspective of ERA and the ERTMS stakeholder platforms. Keir FITCH pointed out that responsibility for the overall systemic perspective lay with the Deployment Group but assured that alignment with the ERTMS Group was being sought. The Deployment Group lies within the remit of EU-RAIL, which is, however, closely linked to ERA. Josef DOPPELBAUER added that in the case of new technological debates in the context of the TSI, ERA carries out impact assessments linking the technical work with deployment objectives. Similarly, the Deployment Group needs to understand the technical implications. He thus justified the close cooperation between the Deployment Group and ERA. He added that decision-makers should be better informed technologically by the SP and ERA.

Aude CHAILLEY then advanced the CER perspective. The elements to be included in the migration plateaus or migration targets should be evaluated in the relevant entities of Europe's Rail (migration domain) and deliver the elements and process to produce a sector's consensus on the content and timeline of migration targets/plateaus. Each element should ensure compatibility with existing solutions, the

modularity principle, maturity and operational and economic performance. She added that the decision-making process should be implemented at sectoral level.

Keir FITCH summarised that further discussion and review of the governance process is needed. Ian CONLON emphasised that a high level of detail in responses and statements would be helpful, including the provision of counterproposals. He added that the decision bases provided to decision-makers at higher levels need further revision so that a limited number of choices is clearly mapped. Finally, he proposed a two-stage process in which, after having received the paper responses, further technical work takes place followed by high-level discussions.

➔ **Formal written responses to the CER/EIM paper from the representative associations to be expected within three weeks.**

b. Traffic CS Output and Consultation Process

Udo GOLEBNIAK presented an update on Traffic CS. He demonstrated the planned roadmap and brought it in line with the status quo, which primarily involved preparing the system requirements and interface specification. He recalled the basic idea and objectives of Traffic CS and specified the associated system interfaces. He then explained the chosen design approach, which combines both top-down and bottom-up measures in relation to the needs of the sector and the technical implementation. He also discussed the deliverables currently being worked on. Roman TREYDEL continued by presenting the status of the deliverables. He specified the Single European Railway Area (SERA) roadmap to target functionality, which should lead to harmonised operations and a harmonised safety logic. He then described a draft of a subsystem architecture that focusses entirely on the compilation of the safety requirements.

Roman TREYDEL emphasised the importance of a common agreement on the simple harmonised safety system. He suggested for the further process the development of the SERA requirements for the subsystems (esp. trackside protection) and interfaces based on the train centric principle, so that safety principles can be implemented. He was confident about a realisation of migration possibilities of the safety system for existing infrastructure. Finally, he presented the schedule for the upcoming reviews of the Mirror Group. *For further details, please refer to the presentation*.

Ian CONLON emphasised that the review process carried out by the Mirror Group should be complemented by a sector-wide discussion, given the importance of the decision to be taken. He added that the sector should first answer the strategic question regarding the priorities at European level, which is whether the realisation of a long-term SERA or short-term implementations should be prioritised. He emphasised that a sector-wide agreement on this was a prerequisite for the work of the SP and would significantly accelerate the development process.

➔ **Members of the Steering Group will be informed and involved in the strategic discussion about the sectorial expectations on Traffic CS to come up within the following months.**

Keir FITCH added that the discussion underway was dependent on further assessment of the implications (e.g., costs, benefits) of the fully and partially integrated approach, as well as analysing the trade-offs in relation to the operational functionalities delivered in each case. Ian CONLON argued that the definition of common objectives and potential alternatives is a prerequisite for subsequent impact analyses.

Miroslav HALTUF asked about the anticipated timetable for the individual process steps and the results aimed for in the respective phases. He emphasised that the States Representatives Group requests clear objectives and schedules. He also asked whether, in addition to the safety layer, the other layers of the TMS would be included. Roman TREYDEL differentiated the Traffic CS from the TMS and assured that non-

safety aspects would also be included. He also emphasised that the migration target 0.5 is already at a good state of progress at the current stage. He considered partial harmonisation as not being a feasible approach.

Bardo SCHETTINI GHERARDINI agreed that migration target 0.5 is about developing a realistic approach to achieving objectives, which requires the definition of priorities. He added that the objectives and their realisation must be discussed not only on a technical but also on a financial level. He emphasised that strategic compromises had to be found among the members and therefore had to be discussed at a higher level. He also added that the choice of governance was critical so that the strategic position of the railway sector should be communicated in an organised way. For this reason, he considered the involvement of the Deployment Group to be important. Keir FITCH confirmed that formal decisions are made at a higher level, but that the work of the JU leads there, which requires inclusive and transparent processes within it.

Roman TREYDEL reassured that the work's impact on the TSIs should be minimised. He was confident that an SP standard could be developed for the purpose of implementation in a reasonable timeframe. The application of this should be attractive to suppliers and railways, but not compulsory. Ian CONLON agreed that the solution developed should be applied because of its attractiveness and that it needed clear business cases. He added that the solution would need sufficient, but not complete, consensus from the sector, with governance still to be specified.

Ian CONLON summarised that decisions should be based not only on technical input but also on economic, timely and other higher-level considerations and should therefore involve the management level. He anticipated a possible strategic alignment by the end of 2024 and that with input from members, a technical implementation plan could be developed before addressing strategic levels. Keir FITCH argued that the SP STG is suitable for informal but high-level decisions due to the involvement of the main bodies in the sector. He added that informal decisions are not always sufficient for long-term target implementation.

Mirsoslav HALTUF asked whether the use of space technologies was missing from the work presented. Ian CONLON confirmed that these were part of the migration targets.

8. Debrief on ERA ERTMS Conference

Keir FITCH closed the meeting without further discussion of the remaining topics. He held out the prospect of agreeing on an alternative discussion context for these.

➔ **An email summarising the content discussed to be sent out to the participants.**

ANY OTHER BUSINESS

9. AOB

- *Video on TMS/CMS model*
- *Energy Report*

ANNEX I

ERA statement on EU-Rail SP – SPSG of 29-05-2024

- The Agency strongly supports the SP objectives of developing a standardised and harmonised EU railway architecture (based on stable interfaces) and a harmonised operational concept
- We expect concrete results (not hype) - after two years of EU-Rail SP activity, deliverables are starting to be delivered for review
- Unfortunately, those deliverables are complex concepts needing important efforts to understand and review. These deliverables often read as black boxes with excessive use of acronyms
- The initial plan to:
    - start from the Common business objectives;
    - define the As-is system, and
    - describe the target system including the needed migration,

  seems buried under complex concepts
- The Agency would welcome:
    1. A clear definition/description of the target railway system with its implementation plan identifying what are the priority actions (also in regard to various sector statement
    2. This description should follow the SMART principles (Simple, Measurable, Achievable, Realistic, Time-bound)
    3. A reporting to and monitoring by the SPSG of the main milestones as described in points 1 & 2
- In order to enable and support migration, the system architecture needs to be rooted in clear basic (and non-negotiable principles, e.g. Safety). Approach should be mor bottom up, starting from basic control loops (i.e. protecting the (safe) movement of trains)
- Conveying clear simple messages that speak to decision makers & across experts will enable effective adhesion and development of workable solutions