



System Pillar Steering Group Meeting 10

Meeting 2 October 2024

09h30 – 12h30

Minutes of the Meeting

1. Welcome from the Chair, Adoption of the Agenda and Update of the new Commission.

Keir FITCH (DG MOVE) welcomed the participants and opened the 10th meeting of the System Pillar Steering Group. According to Mr. FITCH, the very clear part of the new mandate is the development of the so-called green industrial strategy, arguing that this strategy is important to what the JU is seeking to achieve. Keir FITCH emphasised that we are currently at the beginning of the process of working out of what the research programme will look like after 2028. Mr. FITCH added that JU is organising a workshop on the 11th of October 2024.

Ian CONLON (EU-RAIL) thanked the participants who participated on the system pillar corner at InnoTrans which left a very good impression. Mr. CONLON elaborated that the STIP version has been formerly published on the ERJU website, alongside the Commission request to the agency for the TSI.

Nicolas FURIO (UNIFE) thanked the Commission, the JU and the Agency for the work done at InnoTrans, highlighting the numerous positive feedback received for the InnoTrans train initiative, adding that it should be reconducted for the next InnoTrans. Mr. FURIO added that the many sessions organised regarding JU, ERA topics and the DAC demonstrations were also well appreciated. He ultimately noted that the main issue was the sound of the panel discussion on EC/JU/ERA stand, due to technical restrictions.

Mr. FITCH (DG MOVE) supplemented Mr. FURIO's feedback by sharing that the DG for International Partnerships is now developing a much bigger rail programme. He elaborated that this opportunity to sell the European technological system could be an opportunity for us.

Miroslav HALTUF expressed the positive feedback of the SRG group and acknowledged the progress made by the JU.

Ms. TOURNIER said that it was very important that the STIP is aligned in terms of timing & content with the EC request for the Multiannual TSI revision framework received by ERA, and to which ERA will respond according to the available resources.

Mr. CONLON (EU-RAIL) eventually presented the agenda of the meeting.

The decisions 2024-02, 2024-03 and 2024-04

Decision 2024-02: Annual Work Programme (AWP) 2025:

Ian CONLON (EU-RAIL): First, he reminded that the System Pillar Steering Group gives a view on the System Pillar elements of the AWP. This document will be approved by the governing board in November. The current best draft of the System Pillar elements circulated with the description of the

different tasks. Mr. CONLON added said that the Annex will be updated as soon as the contract will be formalised.

Ian CONLON (EU-RAIL) highlighted several main changes: the enhanced focus on operation and harmonisation, the Control Command and Signalling (CCS) trackside and onboard, the alignment with STIP and EC Technical Specifications for Interoperability (TSI) and the Harmonised diagnostics (task 5). Ian CONLON eventually asked if the participants would be able to approve it now.

Aude CHAILLEY (CER) declared that the RfS for SC2.4 was not sent to the STG before. She elaborated that changes in remits should be discussed with the representative bodies. She elaborated the CER sent position for SC2.4. She claimed that some deliverables were not delivered, and the migration is not sufficiently considered. The CER expects consultations before the next SC in the steering group.

➔ In conclusion, the CER does not give approval until the contract is signed.

Hans MENSCHAERT (EIM) shared his concerns about the publication of TSI. He said that the interaction IP-SP should become more intensive as it is critical for progress. Mr. MENSCHAERT rose two questions: considering the impact on the workload of stakeholders and mirror groups, how to organise the interaction SP-IP? Mr. MENSCHAERT questioned the field force: When will its application be tackled?

Miroslav HALTUF shared that the SRG was asked to prepare an opinion to the AWP and the MAWP to the governing board (GB). He said that the SRG was still waiting for the final updated version of the documents. These documents will be discussed on the 9th of October to provide an opinion to the GB.

Keir FITCH (DG MOVE) reminded that SP resources are limited, highlighting the need for a correct prioritisation. Mr. FITCH asked for the STG's opinion concerning the focus. He ensured that the focus on operational harmonisation is understood by the European Commission (EC), as the lack of harmonisation generates additional costs. Finally, Mr. FITCH shared concerns about the cost of the railway system, which are still very high. The AWP should therefore address these points.

Nicolas FURIO (UNIFE) said that the UNIFE appreciated the focus on operational rules in the AWP. Nevertheless, he deplored that the SP-STG should have been consulted before drafting the RfS in order to coordinate, as it would have been easier to provide the right proposal to the JU. Regarding the AWP approval, some deliverables listed and what the consortium is proposing are not aligned.

➔ Therefore, the UNIFE cannot approve the AWP as presented today. Written approval can be given when the SC2.4 will be finalised and the content of the AWP aligned with SC2.4.

Carole COUNE (AERRL) supported the CER position, especially regarding the migration aspect.

Udo GOLEBNIAK intervention focused on the interaction SP-IP. He answered from Traffic CS: SP, including Traffic CS, follows SEMP process, top down. Mr. GOLEBNIAK reminded us that this work is a long-term work based on operational concepts. The IP demonstrates the feasibility of solutions while SP analysis how these solutions can be incorporated in the system architecture.

Michel RUESEN (EUG) highlighted the confusion about the FRMCS programme, as it was not anticipated in the budget. According to Mr. RUSEN, the radio is crucial to have a good target system.

Keir FITCH (DG MOVE) replied that the budget for FRMCS is unfortunately limited.

Concerning the approval of SC2.4, Ian CONLON (EU-RAIL) declared that the approval will be delayed until the contract is finalised. Mr CONLON warned that the review period will be shorter than usual (less than 3 weeks). He considers that no all contractual issues can be discussed broadly before the signature of the contract. Nevertheless, the consultation about priorities of SC could be made. He proposed the June 2025 STG meeting to draft the priorities and the overall strategy of the next contract. Mr CONLON then pointed out the intensive interaction for FP-task 2 that the monthly workshops and daily contacts demonstrate. Concerning the risk of deliverables, he reminded the expectations on delivery

from the current contract and contractual payment. Mr. CONLON spotlighted the need to make sure that there is no double funding of the same deliverable in both contracts (SC2.3, SC2.4). He then emphasised that the SC2.4 is not reducing the focus on migration but has the goal to upgrade migration activities. Mr. CONLON elaborated that individual migration plans for national networks are out of scope and reminded the participants that the aim is a general plan to ease migration. In addition, he declared that migration activities need to be done primarily in tasks and in the system domains (Traffic CS and Train CS) to be effective. He recalled that migration is embedded in Traffic CS and Train CS and added that resources of the SP are limited as there is no capacity for additional topics, such as Field Forces or FRMCS. Mr. CONLON finally reminded the participants that the contract will be revised and that they will be asked for written approval once it is signed and reminded the deadline (10th of October). The programme consolidation for the next SC 2026 will take place in June 2025. The SP-STG will be involved.

Addendum following the meeting: the AWP was approved by written confirmation.

2. System Pillar Transverse CCS Overview - CCS/TMS Data Model, Configuration, Diagnosis

Ian CONLON (EU-RAIL) pointed out that the current CCS/TMS data model is intended to be published externally. An update concerning the extension of ERA ontology will also be published when complete.

Ralph MÜLLER (EUG / DB Netz) presented the CCS/TMS data model.

For further detail, please refer to the presentation.

He emphasised the importance of interoperable, exchangeable over interfaces rail-data. After defining the ERA ontology as the foundation, he declared that it should be extended to CCS, in agreement with ERA. Mr. MÜLLER recalled that the data process for digital railways needs a supply for configuration and is divided in 3 steps: Data engineering & validation, configuration, and operation & diagnosis. He then focused on the data model, defined as the single source of truth, which is based on ERA ontology. Ralph MÜLLER explained the data process as coming from raw data to ERA ontology, to validation and eventually to its utilisation.

Ian CONLON (EU-RAIL) agreed that the link to ERA is important and described the two steps for its approval: the first one would be to publish it internally. The second step is the extension of ERA ontology.

Michel RUESEN (EEIG ERTMS) requested to EU-RAIL whether the ERA is aligned with SP's proposition or not. Ms. TOURNIER replied that ERA has no comment at this stage.

Even though Hans MENSCHAERT (EIM) welcomed positively this initiative, he expressed concerns about the unclarity of the document, described as a “not yet developed finalised draft”, especially concerning the scope and the governance. He questioned the link to RINF and its aim, perceived as not clear.

Keir FITCH (DG MOVE) answered Mr. MENSCHAERT (EIM) remarks, describing the aim of this work as sharing the same data model for all railway systems.

Vladimir KAMPIK (AZD; TCCS Domain Team Leader) gave more details. He advocated that EU-RAIL had long discussions regarding TCCS domain and explained that the model presented is one of the seven data models that we have in ERJU, CCS/TMS and are not yet finalized. Mr. KAMPIK detailed that a publication is needed to have external feedback for improvement.

Mr. MÜLLER (EUG / DB Netz) added that as RINF includes all legacy diversity and has a different scope, the SP CCS/TMS model scope is limited to radio based ETCS L2. He also regretted that all previous data integration initiatives never came into practical use. Mr. MÜLLER claimed for a useful

data model with a clear scope and to bring it to operation. CCS/TMS model need to be tested and implemented to improve it.

Hans MENSCHAERT (EIM) agrees both to continue to work and for the publication. Mr. MENSCHAERT (EIM) would like a testing-by-the-society-sector-formulation to be added to the decision.

Ms. Aude CHAILLEY (CER) endorsed the need for testing and improvement.

➔ **It was agreed that the decision would be put forward for written approval following the SP-STG.**

Addendum following the meeting: the decision was approved by written confirmation

EIM added the following remarks

EIM agrees with the proposed decision

1. We support the idea to enlarge the ERA ontology with other related models, as the reality is “related”, so should the model.
2. Before doing so it is needed to ensure a good governance:
 - Clear responsibilities, having a CCM procedure and CCB in place (EIM suggests that this is a task of ERA)
 - The scope and goal for the model and extension should be clear.
 - Ontology expansion should only be on a stable model.
 - Every expansion should be justified by a decent use-case. There is nothing worse than models not being used.
 - Merging of the existing data initiatives such as RCA Object Catalogue, EULYNX Data Prep, Linx4Rail CDM, en X2R4 data into the proposed model, should all be done very carefully. Merging models always takes time and attention.
3. It should be clear that implementation is separated from the model. Meaning: having something in the ontology should NOT mean -per se- having it in RINF (until now the development of ontology has been done under the RINF flag, in the future this should be independent for developments).

Diagnostic, Monitoring, Configuration Management

Diagnostic

Mr. MÜLLER (EUG / DB Netz) argued that the many opportunities to improve operation and maintenance demonstrate the need for diagnostics.. He added that 4 TCCS documents have already been produced and elaborated that the 4th document was requested by STG in May, which is describing the relation with HERD.

Configuration management

Mr. MÜLLER (EUG / DB Netz) reminded that three documents have already been produced. He defined its framework, as a “use case driven approach”. He then depicted the centralised process of the configuration management dependency tree. After a question from Mr. GOLEBNIAK (Siemens; Traffic CS Domain Team leader), Mr. MÜLLER clarified that the harmonized process framework will be the same for all systems. He then specified that the configuration management needs testing and feedback from users to improve.

Mr. CONLON (EU-RAIL) declared that the publication will be only internal.

➔ **The decision was approved by the STG.**

3. SP framework: contract update

For further details, please refer to the presentation.

Ian CONLON (EU-RAIL) presented the 3 lots and their status, (Lot 1: Core Group; Lot 2 Tasks and Domains, Lot 3 CCS TSI maintenance). He explained the main budget was allocated to the Lot 2. He elaborated that the response SC2.4 has been received on the 20th of September and highlighted its good quality. The current contract runs to 10 October. Mr. CONLON specified that the new contract of Lot 1 was signed. The Lot 3 is delayed due to disagreement concerning the funding for FRMCS. Mr. CONLON said that EU-RAIL requested a specific input for the next 12-month period for the need for standardisation work. EU-RAIL is still awaiting a response. Mr. CONLON expressed a need for a general sector view.

Keir FITCH (DG MOVE) highlighted the work done by the UIC and the need for a greater support. He enjoined SP-STG members for their opinions.

Michel RUESEN (EEIG ERTMS) declared that the consortium will deliver responses for SC2.4 this week.

Ian CONLON (EU-RAIL) declared that EU-RAIL received several feedback that questioned the need to reallocate resources from the lot 2 to the lot 3 and asking for an opinion about a possible reduction in the Lot 2 budget to fund the FRMCS.

Jean-Michel EVANGHELOU (UIC) shared his concerns about the decrease in FRMCS budget, as it is the amount of budget requested is modest (less than €250,000) and advocated that this amount of money would generate incentive to the sector. He then declared that it is a question of recognition. He eventually announced that details of budget will be provided today.

General strategy of SP

Keir FITCH (DG MOVE) reminded SP direction agreed by the representative bodies of the railway sector. He expressed the need to finalise the decision about the Lot 3. He stated some AWP points need to be clarified.

4. Response to CER/EIM paper on Railway System Architecture

Ian CONLON (EU-RAIL) presented the planned meeting with the associations in the coming weeks: (AERRL 14/10, EIM 24/10, UNIFE 25/10). The meeting with the CER still needs to be organised. He said that this topic is important and is causing difficult but essential strategic discussions. He recalled that a general alignment in STG is needed.

Items for information (for further details please refer to the presentation)

Cybersecurity

Mr. Oliver KNAPP (DEUTSCHE BAHN) declared they are not facing any current issues on this topic.

As Mr. KNAPP did not receive the details of the security integration, he declared that this task is still unclear regarding the amount of work needed.

Mr. Ian CONLON (EU-RAIL) responded that cybersecurity is key in the railway sector. He declared that the size of tasks and the workplan need to be defined, in tandem with ERA. He specified that the planning step will be key to commit the ad hoc resources to SC2.4. The cybersecurity team could be extended if there is an opportunity to do it.

Ms. Tiana TOURNIER confirmed that discussions with ERA and EU-RAIL are ongoing and advocated for a collective engagement and alignment on this topic considering the limited resources.

Mr. Nicolas FURIO (UNIFE) informed the SP-STG that the UNIFE, CER and EIM have created a rail sector cybersecurity platform to define the key priorities on this field and assess the impacts of the

Cyber Resilience Act on the rail sector. Considering the resource available, he supported the idea that the cybersecurity work within the SP Lot2 (Security Domain Team) is too ambitious regarding the gap analysis with all the TSIs. . He then asked the ERA to clarify how cybersecurity will be managed by the Agency considering that it is a priority included in the new EC TSIs request. He also called for avoiding duplication/overlap between the European cybersecurity legislation (e.g. CRA) and the future TSIs.

Keir FITCH (DG MOVE) informed that the Commission has included cybersecurity in the TSI request. He added that specific railway aspects must be included in the TSI considering the existing EU horizontal regulation. The Commission aims for a single set of authorisations. The railway should therefore use, when appropriate, as much as possible the existing work from other sectors.

Francis PARMENTIER (NB-RAIL.EU) declared that the ERA is looking to have the best synergy between all the stakeholders to avoid duplication of work.

Mr. RUESEN (EUG) brought the existence of the EUG security group to the attention of the SP-STG, which is the mirror group for SP.

Energy report – Task 1- Presentation by Mr. Christian CHAVANEL (UIC) (for further information, see the slides)

Mr. CHAVANEL (UIC) first presented the methodology and the structure of the report. This method allowed to identify 51 different solutions, classified in 4 categories (rolling stock, infrastructure, operations, and buildings). Mr. CHAVANEL then discussed the challenges for the implementation of some of these measures (e.g. comfort of passengers).

Mr. CONLON (EU-RAIL) highlighted that the report was initiated during in the energy crisis. He challenged Mr. CHAVANEL, asking if the solutions were still relevant.

Mr. CHAVANEL replied that the energy remains important in the railway sector. He explained that reducing the energy consumption means to decrease the costs. He added that it is possible that the European Union would experience price instability in its energy supply.

Mr. CHAVANEL (UIC) eventually continued his presentation by explaining the 9 capabilities of the task 1 / The 2 main ones are: “operate train” (*see slide page 48*) and “manage energy” (*see slide page 47*). Mr. CHAVANEL highlighted different solutions, (e.g. braking/accelerating optimisation, recovering the braking energy, etc) or solutions that would need to be incorporated in the architecture (e.g. driving assistance, DAS, ATO). Christian CHAVANEL describes the needs to modify the architecture to save energy and to identify the impacts on the “to be” architecture as the next steps.

Ms. Carole COUNE (AERLL) asked if the priority should be given to existing regulation concerning the energy data collecting system, that are not implemented in some Member States.

Mr. Keir FITCH (DG MOVE) offered to discuss about this topic how the Commission can better make it happen.

Traffic control and supervision. Presentation by Udo GOLEBNIAK (SIEMENS; ; Traffic CS Domain Team leader)

For further detail, please refer to the presentation.

After briefly presented the SP organization with Traffic CS, Mr. GOLEBNIAK (Siemens; Traffic CS Domain Team leader) informed the SP-STG that his team is still following the roadmap. On the upcoming 3 years, his team will focus on the subsystems and interface certifications for the traffic CS Systems. Mr. GOLEBNIAK then described the strong focus put on the specification of approximatively 80% of the System Capabilities. He then presented the status of the CONEMP, System Analysis and System Concept. He detailed that his team is implementing the review comment for the CONEMP document. Mr. GOLEBNIAK made the remark that the CS CONEMP document does not represent the

status of the Traffic CS work as it will be adapted continuously. He defined migration as the main challenge they are facing. His team received more than 90 review comments concerning the Traffic CS system Analysis and FRS. The major findings are seeable in the slides.

System concept review

Mr. COLEBNIAC (Siemens; ; Traffic CS Domain Team leader) presented the status of the system concept review. He highlighted that the comments have been received, analysed, and grouped into topics. Several questions were raised after this work and will shape the work design of Mr. GOLEBNIAC's team. These questions address different areas such as shunting, TPS specs, operator interface or the ATO architecture. Udo GOLEBNIAC gave an outlook of the organisational changes for SC2.4. He said that they are planning to work in a factory belt mode in tandem with the operational domain and will be, for instance, used specifically for the operational scenarios. He also highlighted the need to set up migration scenarios. He detailed that the interface specification, the sub systems specification as well as engineering guidelines are the 3 major outcomes of the Traffic CS work.

Mr. FITCH (DG MOVE) recognised the great work of Mr. GOLEBNIAC's team and asked for further details concerning the migration scenarios.

Mr GOLEBNIAC (Siemens; ; Traffic CS Domain Team leader) replied that migration is one of the main topics they are working on and increased the scope of their work.

Mr PERSCHKE Wawrzyniec (EC) asked for clarifications concerning the timeline about both migration and Traffic CS.

Mr GOLEBNIAC (Siemens; Traffic CS Domain Team leader) replied that they are following the planning and the milestones given.

Mr CONLON (EU-RAIL) asked Mr. GOLEBNIAC when the steering group will look at the design decision (next steering group or next year).

Mr GOLEBNIAC (Siemens; Traffic CS Domain Team leader) reminded that the milestone concerning this topic is November 2024 (draft review).

Mr. CONLON (EU-RAIL) declared that the aim is to simply and reduce costs in the system. There is no consensus on this topic yet and the document needs to be discussed with the sector.

Train CS: Status & CCS Onboard architecture – (presentation by Mr. SCHNEIDER (EUG / EBB) Hans Jakob, SIMONI (ALSTOM) Bastien & Prins Martien (NS))

For further detail, please refer to the presentation.

Mr. SCHNEIDER Hans Jakob (EUG / EBB) first gave a quick overview of the target functionality of Train CS and the status of deliverables and reminded that these documents have been discussed before. The domain challenges are one of the key points as in the past time some alignments have been made (e.g. migration). Mr. SCHNEIDER regretted that the budget is limited. He informed that the closing out of the contract 2.3 is on time and that the preparation of the contract 2.4 has started.

Mr. SIMONI Bastien (Alstom) continued by presenting the Train CS way of working and the system architecture. Mr. SIMONI declared that previous initiatives (e.g. Ocora) materials were reused and could be also combined with inputs from flagships projects and from the ARC domain. He then presented the rationale of the way of working, reminded that it is a complex system that needs to fulfil different needs. The participants were informed that the next step is to consolidate some functionalities (e.g. ASTP). Mr. SIMONI defined their approach as logical and modular to fulfil the requirements and emphasised on the readiness aspect of the rationale.

Mr. PRINS Martien (NS) presented the 4 migration steps on the CCS onboard. He depicted the current situation according to the TSI 2023, the second step (TSI 2028) and informed the SP-STG that the main

changes will be the introduction of FRMCS within the CCS Consist Network as well as the first step in the Basic Advanced Safe Train Positioning (ODO). Mr PERSCHKE Wawrzyniec (EC) asked if evolutions of the odometry or train display are compatible with the system version 3 or will trigger a new system version.

Mr. PRINS (NS) replied that they do not have the answer to this question yet, but this element is on the agenda for the next meeting.

Mr. CONLON (EU-RAIL) thanked the presenters and recognised the work achieved over the past few years.

Mr. FITCH (DG MOVE) added that this group is the place where issues are raised and discussed. He encouraged the members.

Mr. FITCH emphasised the need for urgent replies for points 4 and 5 in the agenda (decisions on AWP and data model). ERJU will propose another meeting quite rapidly to finalise these points.

Mr. MALTUF thanked the presenters and ensured that he will provide feedback soon.

Mr. FITCH (DG MOVE) thanked the participants.