

**Minutes of Meeting – 14<sup>th</sup> meeting of the Scientific Committee of Shift2Rail**
**Shift2Rail Scientific Committee**

<b>Project:</b>	SC	<b>Date/Time:</b>	23 September 2020 02:00-04:00 PM
<b>Meeting Type:</b>	Scientific Committee	<b>Location:</b>	Via webex
<b>Meeting Coordinator:</b>	Valerie Lorgé	<b>Issue Date:</b>	

<b>Summary of the Meeting</b>	
<b>Topic</b>	
Item 1	<p><b>Introduction and welcome of the SC members</b></p> <p>The SC Chairperson and the S2R JU Executive Director welcomed the participants to the 14th meeting of the Scientific Committee (SC). A brief tour de table was organized. The ERA observer also attended the meeting.</p>
Item 2	<p><b>Approval of the meeting Agenda and previous MoM</b></p> <p>The agenda of the meeting was approved. The minutes of the previous meeting were approved.</p>
Item 3	<p><b>Conflict of Interest: declarations</b></p> <p>The declarations for Conflict of Interest (CoI) of the S2R JU Governing Board Decision n°07/2018 were sent out electronically to the SC members. The members of the SC sent the signed declarations to the Secretariat.</p>
Item 4	<p><b>State of play – information from the SHIFT2RAIL JU</b></p> <p><b>Latest developments and ongoing activities</b></p> <p><i>Please refer to the PowerPoint presentation</i></p> <p>The Executive Director provided an update on programme activities since the last SC meeting in April 2020. He indicated that the S2R JU has been up and running despite the Covid-19 restrictions and that there have not been any major delays.</p> <p>The Governing Board of 22 June 2020 - GB saw the adoption of the Final Annual Accounts 2019 and the AAR 2019. On 25 June, the S2R Call 2020 Evaluation Consensus Meetings took place. On 17 July, the Extraordinary Governing Board Meeting dedicated to the award of the Call 2020 was held. In September, the Call 2020 Grant Agreement Preparation phase was kick-started. On 19 November 2020, the 26<sup>th</sup> Governing Board meeting will focus on the adoption of the AWP 2021 as well as on discussions on the S2R successor programme.</p> <p>Concerning the adopted AAR 2019, the ED highlighted that the S2R JU is performing according to plan, although some areas require a strict monitoring and mitigating actions. The document provides a detailed overview on the progress on all activities, all detailed TDs, as well as an Executive Summary summarizing the overall situation of the programme. He underlined that some TDs are running behind due to a combination of factors. However, there is no criticality questioning the</p>

delivery path. All projects are targeting finalization by end 2022, to allow the phasing-out of the current programme and the phasing in of the new programme. The Executive Director stated that by the end of 2019, the Programme reached a pivotal milestone in terms of Programme implementation: more than 50% of the Programme has been delivered in view of the TRL6/7 operational demonstrations planned for conclusion in 2022.

Concerning the on-going cooperation with regions and international organizations, he indicated that the signing of the MoU with CUTRIC is foreseen on 23/10 at the S2R Innovation Days. The MoU with UIC is in its final drafting stage, under review by the European Commission. The MoU with CEN/CENELEC has been approved by the Commission and will be sent to the GB. Concerning the MoU with ACRI, the Governing Board consultation process has been launched until 17 July. The signature of the Cooperation Agreement with the Permanent Secretariat of the Western Balkan Transport Community is foreseen on 26/10 at the Western Balkan Ministerial Meeting.

Furthermore, the ED suggested collaboration with the newly founded German Centre for Rail Traffic Research (Deutsches Zentrum für Schienenverkehrsforschung beim Eisenbahn-Bundesamt). Professor Salander, the Research Centre's Director, indicated progress will be made shortly on this. The ED suggested signature could take place during Innotrans 2021.

The ED then provided participants with an update on S2R participation in events. He highlighted the two key dates where S2R will be showcasing activities: the online S2R Innovation Days in October 2020 and Innotrans on 27-30 April 2021.

The S2R Innovation Days will be a digital event with limited onsite participation held on **22-23 October**. It will provide the opportunity for the European railway community to see how far innovations have come and what can be expected at InnoTrans 2021.

In answer the Professor Lacôte's question about hyperloop, the ED answered that on-going work on the possible standardisation of regulatory frameworks is taking place, but indicated there is currently no funding directly invested in R&D in this field by the S2R JU. The S2R successor programme's exact scope is still to be determined once all the facets are clearly defined (funding, policy objectives, various interests), with the core remaining rail. The draft proposal on the [European Partnership for transforming Europe's rail system](#), as published on S2R website and approved by the Commission, also includes a reference to hyperloop.

The Executive Director indicated that following the deadline for submission of proposals to the call H2020-S2RJU-2020 on 27 May 2020, 17:00 (Brussels time), a remote evaluation was carried out according to the rules on proposal submission and evaluation laid down in the S2R JU Annual Work Plan 2020. The Executive Director indicated that 43 proposals were received in response to the call for proposals, for a total of €187.3m (€113.4m co-funding). 35 proposals were submitted for the open call, requesting almost three times the available budget. All open call topics were covered. 42 proposals were declared eligible.

The Executive Director provided details on the outcome of the Call 2020, with 8 CFM proposals and 11 OC proposals invited to start the grant preparation as presented in the ranked list in Annex 1 to the GB Decision 07/2020:

- CFM, 8 Projects, €127.2m (co-funded €55.4m)
- OC, 11 Projects, €22.0m (co-funded €19.9m)

The Executive Director indicated that the Grant Agreement Preparation phase was launched officially beginning of September with the objective of signing the Grant Agreements on 1<sup>st</sup> November 2020.

The Executive Director provided details on the number of participations by country in proposals evaluated and considered for funding by type of action, as well as information of country share in the total S2R JU requested contributions in proposals evaluated and considered for funding. The Executive Director highlighted a much wider participation of countries from the EU-13, in particular in the open call. This reflects a positive trend going in the right direction. He underlined that the actions put in place helped to widen the participation, and should be followed up in the next period. Moreover, he indicated that the companies involved are operating in different MS and that this is not reflected in the slides. He stressed that one redress procedure is currently on-going and examined by the appointed redress committee.

The Executive Director underlined that the AWP2020 targets were to reach TRL 7, and that this was mostly reached. He summarized the proposals received, underlining that the average score this year is higher than previous years. Furthermore, he emphasized the extremely positive feedback from the independent observer.

Concerning ranked n°1 proposal Hypernex under S2R-OC-IPX-01-2020: Innovation in guided transport - (EU funding: 0.25M€), the ED indicated that a presentation can be organized for the SC as soon as the Grant Agreement is signed.

Item 5

**Preparation of S2R successor**

The ED indicated a specific page was created on the S2R website for the preparations of the S2R successor programme: <https://shift2rail.org/shift2rail-successor/>

The Proposal for a [European Partnership transforming Europe's rail system](#) was approved by the European Commission and published on the S2R website

He emphasized the current intensive exchanges on the progress on the legislative proposal for the future partnership, which is to be a single basic act for all institutionalized partnerships, with specific sections for each partnership. The European Commission will put forward the proposal for adoption by the Council - after consultation of the European Parliament and the Economic and Social Committee. This will take the form of a common Regulation establishing all the Joint Undertakings foreseen under Horizon Europe. It is expected the Member States will receive the Commission Regulation proposal in view of the Competitiveness Council end of November. After negotiations, the Regulation should be adopted just after the summer 2021, with a start of activities foreseen in September 2021.

He stressed however the absence of agreement of the European Council and European Parliament on the Multi-Annual Financial Framework, and the fact that the Horizon Europe budget had been cut, with discussed figures varying from 600 M euros to 1 B euros.

The final scope, objectives and budget for the partnership will depend on the political agreement on the legal act establishing the Joint Undertaking, as well as the agreement on the Master Plan between the Commission and partners. This Master Plan will be developed on the basis, inter alia, of the Strategic Research and Innovation Agenda (SRIA) currently being developed by ERRAC.

The [Invitation to manifest the interest to become candidate founding member of the Transforming Europe's Rail System European Partnership](#) has also been published, with the deadline set on 1<sup>st</sup> October. The proposed Rail European Partnership aims to bring together a wide range of actors in the rail system, from across the rail supply industry and operational sectors in order to develop a "system of systems" approach. The future Partnership aims at transforming rail's system architecture, increasing emphasis on freight and digitalisation and enhancing focus on deployment of innovative solutions. For that purpose, it needs to involve key partners and their co-investment

	<p>to deliver such a programme, including testing results at different levels before bringing them at European large scale, subject to the relevant socio-economic business case.</p> <p>The ED highlighted a more transparent process compared to the establishment S2R.</p> <p>He underlined that the first action of the next JU will be to establish the new Master Plan. This will require the involvement of the SC, SRG, GB, Commission, ERA and ERRAC. The organisation will be built around 2 main pillars; on the one hand, the innovation pillar (similar to the current S2R), and on the other hand a system pillar (extrapolated from LINX4Rail, supervised by the Commission), to converge the sector towards a unique set of operational rules.</p> <p>The DG MOVE representative highlighted that the Commission is currently finalising the single basic act covering all JUs under Horizon Europe with a common part and specific parts for each JU. Content wise, for the Master Plan, inputs will be the high-level proposal made by the sector, the ERRAC work and the study commissioned by DG Move and expected in October 2021.</p> <p>Professor Salander sought additional details on the structure of the single basic act. The Commission representative indicated that part 1 will encompass the common provision, Part 2 will target the specific provisions for the individual JUs, and finally part 3 will detail the final provisions, such as e.g. monitoring and evaluation, the transitional provisions, etc.</p> <p>The Chairperson indicated she presented the SC position on the set-up of the future KPIs for the S2R successor at the previous Governing Board in July 2020. The ED asked whether progress has been achieved on the Commission side or whether KPIs will be included as part of the Master Plan or as part of the Regulation itself, and how the work should be organized by the SC. The DG Move representative underlined that part 3 of the single basic act on monitoring and evaluation does not include specific references to KPIs. They are therefore still to be defined in the Master Plan. The ED suggested that the SC can work on the set-up of a task force to provide input to the Commission to define the key specific KPIs for the S2R successor, as well as specific research areas. The ERA representative indicated interest and his will to support the SC on this matter.</p> <p>The Chairperson enquired about the current input on the role of the S2R SC in the future single basic act. The DG Move representative indicated the possibility to seek scientific advice in a more flexible way, with the possibility for the JU to seek scientific advice from shared advisory bodies.</p> <p><b>The ED put forward the following proposal: STRIA ERRAC will be delivered to the Commission in October 2020. Once the strategic research agenda is received and the plug-in study commissioned by DG Move finalized, the SC could be contracted to work on the definition of the KPIs for the S2R successor programme as input for the Master Plan, when the single basic act is submitted to the Member States. The DG Move representative agreed this represented a sensible way of moving forward. It was highlighted that the ERA input is welcome. The work would be performed between November 2020 and mars 2021.</b></p> <p>By July 2020, the European Council is expected to reach a political agreement on the Multiannual Financial Framework and Own Resources Decision. Implementation of the Multiannual Financial Framework 2021-2027 should start in January 2021.</p>
Item 6	<p><b>SC draft advice on AWP2021</b></p> <p>The ED emphasized that the draft AWP 2021 does not contain any new Call, but mostly activities related to the implementation of the Programme. <b>The SC advice on the AWP2021 is welcome by 12 October 2020.</b></p>

	<p>The ED indicated that should the new Rail research and innovation partnership be agreed upon by the Member States and launched during 2021, a new AWP will need to be adopted.</p> <p>Professor Lacôte enquired whether there are already demonstrators, and he indicated that in his opinion, ERTMS is the correct tool. The ED answered that the ATO demonstrator on freight is scheduled for Innotrans 2021, and he mentioned the demonstrators on full autonomous obstacle detection and 5G connection, the DAC demonstrator, the demonstrator on intelligent video gate and two IP4 demonstrators on the use of applications and on my-track. He stated that some will be run now and showcased at Innotrans and others will take place at Innotrans. Between 2020 and 2022, a series of demonstrators will become available.</p> <p>Professor Vervest underlined that more focus could be targeted, namely in relation to ERTMS and demonstrators in order to achieve a European rail system. This is currently missing in the document in his opinion. The ED answered that S2R is currently working on one part of ERTMS (the technology of ERTMS), but that S2R will seek to highlight this concept in the document.</p>
<p>Item 7</p>	<p><b>European Year of Rail (EYoR): Planning and SC involvement</b></p> <p>After the SC meeting in April, a document was sent to the SC indicating the suggested events for the EYoR. The SC input on its involvement during the EYoR are to be formulated. The ED indicated that there is a new document on events under preparation, whilst the final agreement of the European Parliament and the Council are pending on EYoR for 2021, with a possibility to postpone the launch to 1<sup>st</sup> June 2021. The ED emphasized that the main events are the following: i.) Innotrans 2021; ii.) an event under discussion with Europalia and Alstom, to have a hydrogen train running on the Bruxelles-Malines train tracks to showcase a combination of the oldest infrastructure/newest technologies, and iii.) a third event on the launch of the S2R successor. He also underlined the possibility to organize hackathons on the future of the digital interlocking or future of rail operations, bringing together universities and companies to raise public awareness on rail innovations.</p> <p>Professor Vervest suggested the organization of a joint event between the rail sector and the telecommunications sector on a pan-European basis in order to materialize ERTMS, with a public call for ideas and proposals on a European basis.</p> <p>The ED took note of the proposal. Infrastructure managers playing the game would be interesting. Interlocking is a component of ERTMS, and a hackathon could be organized on this. The Operators Prorail and NS are interested, indicated Professor Vervest.</p> <p>Professor Söylemez put forward a suggestion to organize a series of virtual panels/seminars that can be delivered by scientists as well as industry representatives. The scientific committee can help chair some of the sessions and deliver some speeches.</p> <p>Professor de Dios Sanz Bobi emphasized the following: 1) the need to use S2R as a vehicle to reach the end-user and increase awareness about rail of the past, present and future; 2) the need to have a visible site; 3) the emphasis to be placed on energy, climate change and digitalisation advantages and EU investment in these fields. He indicated that academic cooperation, with Shift2Rail's commitment to the quality of European research in an open dialogue and also with the University, must be a strengthened link in this European year of the railway. Shift2Rail can channel a traveling service in cooperation with the European structures, operators and infrastructure managers and railway users that show how we see our immediate future, fostering a dialogue with social actors in different stations: stop to get to know the train, then continue to catch the train. Inclusive communication is necessary to understand why we need a dedicated innovation program funded by Europe targeting, even as health priorities now emerge.</p>

	<p>Professor Pyrgidis underlined that in his opinion the main message to pass on to the citizen is that railway is the only technology that reached its peak, dropped and then peaked again. The development of railway technology reached an early peak, then dropped, then managed to rise again and is on the cutting-edge of technology in many countries. He therefore emphasized three axes: the history, the present (advantages of railway) and the future (S2R should contribute to future innovations).</p> <p><b>The ED thanked the SC members for their contributions and indicated additional contributions are welcome by the end of October.</b> He summarized the ideas put forward by the SC members for the EYoR. The first idea is a hackathon or challenge activity, with SC intervening as a jury. The second idea gravitates around the idea of an annual S2R innovation day, hosted by different universities, and bringing together the full rail community (a European event, moving around Europe). The third idea is to bring back rail as a first choice of transport, linking the past, present and future, with a visible train in Europe, travelling through all the capitals of Europe and illustrating the logic of linking the past with an art exhibition, the present with a hackathon, and the future with visible high-speed train. In order to materialize these activities, the SC involvement is expected, e.g. as member of the jury.</p>
	<p><b>AOB and conclusions</b></p> <p><b>Next meetings:</b></p> <ul style="list-style-type: none"><li>• <b>15<sup>th</sup> SC meeting:</b> <b>Friday 11 December 2-4 PM via webex</b> The proposal for a single basic act will be sent to the Member States, so that the SC can have a discussion on the role SC and the work on KPIs and update their proposal for SC involvement involvement in the EYoR</li><li>• <b>The 16<sup>th</sup> SC meeting will be held during Innotrans on 29 April 2021 at 13:45-15:45 PM in Berlin</b></li></ul>

Annex

Agenda 14th meeting SC (adopted)

<b>Action nr.</b>	<b>Action</b>	<b>Related Topic</b>	<b>Due date</b>	<b>Action Owner</b>
<b>1</b>	Provide S2R JU presentation	Item 4	Done	JU
<b>2</b>	Once the strategic research agenda is received, the plug-in study commissioned by DG Move finalized, and the single basic act is submitted to the Member States, the SC members can be contracted to work on the definition of the KPIs for the S2R successor programme as input for the Master Plan.	Item 5	November-March	S2R and SC members
<b>3</b>	SC comments on AWP 2021	Item 6	12 October	SC members
<b>4</b>	SC proposals on activities for 2021 as the European Year of Railways	Item 7	End of October	SC members