

6th meeting of the User Requirements/Implementation and Deployment Working Group

13 September 2018 – Brussels

Agenda

1. INTRODUCTION

- Adoption of the Agenda and the MoM from previous meeting

2. SHIFT2RAIL JU – STATE OF PLAY

3. MEMBERS' INPUT IN THE CONTEXT OF THE PREPARATION THE FUTURE RAIL RESEARCH AND INNOVATION ACTIVITIES (next Multiannual Financial Framework)

- Current status and feedback from 19 June 2018 event
- Presentation of the draft STRIA

4. UR-ID WG members participation in S2R projects' advisory groups

5. AOB, NEXT STEPS, CLOSING

- Date of next meeting
- Other

- Adoption of the Agenda



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State of play

- S2R Call 2018: Results to be issued in the coming weeks
- Preparation of Annual Work Plan 2019
- Projects reviews: continuous
- Revision of MAAP Part B
- KPIs, standardisation
- Demo plan
- InnoTrans 2018 (see next slide)

InnoTrans 2018

- Latest agenda available on S2R website
- Highlights:
 - Over 20 cutting-edge solution to be showcased on the stand (Hall 4.2 stand 203) throughout the week;
 - Commissioner Bulc's visit to S2R stand;
 - R&I awards;
 - Women in Rail award;
 - S2R cocktail hosted by Voestalpine.

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STRIA Connected and Automated Rail Transport

SHIFT₂RAIL UR-ID

Brussels, 13 September 2018

Vincent BLERVAQUE

Head of Program – Autonomous Train

RAILENIUM

Context

- ❑ STRIA (Strategic Transport Research and Innovation Agenda) for Connected and Automated Transport
- ❑ EC DG Research & Innovation
- ❑ Surface transport
 - ❑ Rail
 - ❑ Road
 - ❑ Maritime
- ❑ Update of first roadmap published on 9 November 2016
- ❑ Commission Staff Working Document – Towards clean, competitive and connected mobility: The contribution of Transport Research and Innovation to the Mobility Package (31/05/2017)
- ❑ Deliver strategic guidance to EC for future research and innovation programs

Draft Roadmap – Thematic areas

1. Rolling stock enablers for remote control of train operation and autonomous train operation
2. Environment and operational monitoring
3. Large scale demonstrations to enable deployment
4. Railway network information, management, maintenance and control
5. Socio-economic impacts –User/public acceptance
6. Human factors
7. Physical and digital infrastructure & secure connectivity
8. Big data, AI and their applications
9. Safety and security

Draft Roadmap – Proposals for initiatives

1. Rolling stock enablers for remote control of train operation and autonomous train operation

- Reliable environment perception to detect trackside signals and to identify all external hazards enabling on-board decision-making intelligence
- Reliable train positioning
- Enhanced Train Control and Management System

Draft Roadmap – Thematic areas

2. Environment and operational monitoring

- Reliable external and internal environment perception (outside ATO)
- Enhanced Decision and Advisory Support
- Interactions with all road users

3. Large scale demonstrations to enable deployment

- Deployment of autonomous passenger trains in real conditions and mixed railway traffic environment
- Deployment of autonomous freight trains in real conditions and mixed railway traffic environment
- EU-wide common experiment/testing agenda and common framework on testing and deployment

4. Railway network information, management, maintenance and control

- Smart maintenance and asset management
- Logistics on demand and increased last mile handling
- Smart traffic management
- Mobility as a service and Intelligent stations
- Management of interactions with passengers for safe and secure operation

Draft Roadmap – Thematic areas

5. Socio-economic impacts –User/public acceptance

- Impact assessment of connected and automated train (passenger & freight)

6. Human factors

- Driver tasks for remote train operation and highly automated train operation
- Communication and interaction between automated passenger train / tramway and users / workers

7. Physical and digital infrastructure & secure connectivity

- Development of digital model of railway infrastructure
- Fast, safe, reliable and high-capacity connectivity between all parts of the rail system and its environment
- Cyber security for connected and automated railway system

Draft Roadmap – Thematic areas

8. Big data, AI and their applications

- Create more value from data in connected and automated railway system
- Further development and use of AI in connected and automated railway system

Draft Roadmap – Thematic areas

9. Safety and security

- EU-wide testing procedures for connected and automated train
- EU-wide safety assessment program for connected and automated train



Thank you for your attention

Vincent BLERVAQUE
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S2R projects – advisory groups (update)

- Information disseminated to UR-ID WG on 12 and 20 June 2018
 - **IP3 common advisory board:**
 - answers received
 - Preparation on-going
 - **Innowag:**
 - Invitation to Advisory Group
 - Specific organisations targeted
- Information disseminated to UR-ID WG on 08 August 2018
 - **SMARTe**
 - Specific organisations targeted
 - Answers received – preparation on-going (possible telco in October)
- S2R tender: “**Human Capital**”: 3rd Workshop on *technology and skills in the rail sector*
27 September, Brussels (TNO, UNEW)

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UR-ID WG Meeting

User Requirements/ Implementation Deployment Working Group

Brussels

13 September 2018

Paolo Umiliacchi

CENELEC Consultant for Rail Interoperability

JU Shift2Rail reporting expert for TC9X

Cliff Cork

CEN/TC 256 Chairman

JU Shift2Rail reporting expert for TC256

Summary

- ✧ CEN-CENELEC – Shift2Rail collaboration and the Sector Forum Rail
- ✧ How to start a standardisation project
- ✧ Improving collaboration

CLC-S2R discussed at Sector Forum Rail

- ✧ Meeting held on 2018-08-30
- ✧ Preliminary view of standardization possibilities analysed in the S2R Standardisation Roadmap
- ✧ Innovation and Standardisation are not antagonist. As stated by Jan Anders, vice president of the Sector Forum Rail, timing is important:
 - ◆ If standardisation comes too early, it can stop innovation
 - ◆ If standardization comes too late, market opportunities are lost

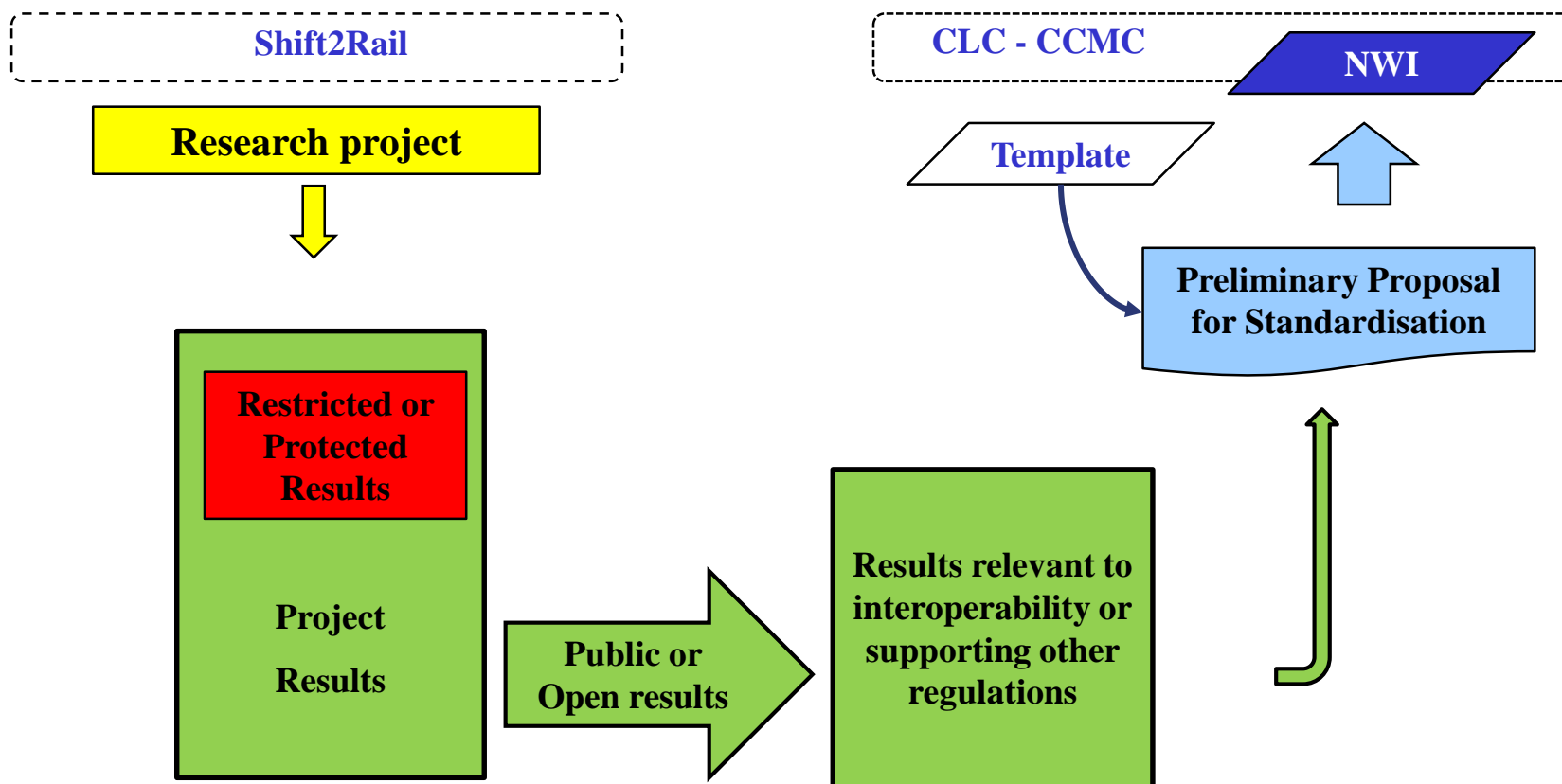
CLC-S2R discussed at Sector Forum Rail

- ✧ Summary of Meeting held on 2018-08-30
- ✧ S2R will send to CCMC and the CEN and CENELEC Railway TCs Officers, JPC-R Chair and Vice Chair, and to ETSI a table listing all the S2R TDs (including the project leaders, the list of the experts already involved and a short description of the foreseen outputs).
- ✧ CEN and CENELEC Railway TCs Officers and ETSI will provide to S2R contact points and feedback (i.e. status of the standards, preference to develop EN instead of ISO/IEC, work currently in development related to S2R projects...).

CLC-S2R discussed at Sector Forum Rail

- ✧ Summary of Meeting held on 2018-08-30 (cont.)
- ✧ If any working group from CEN CENELEC or ETSI identifies a standardisation open point which could potentially be solved by S2R projects, then the Convenor will ask to include (if not yet done) an expert into the S2R project to be sure that this open point will be taken into account by the researchers of S2R projects.

Standardisation from research



Improving collaboration

✧ Suggestion:

- ◆ Following first ideas coming from the Standardisation Roadmap, specific Topics of next Calls for Proposals can include activities, aimed at producing standardization proposals, linked to specific results or parts of them
- ◆ Such activities can bring to a well identified Deliverable, associated with adequate resources and budget
- ◆ It can be investigated if CEN-CENELEC can be a partner or have a similar role in some projects

THANK YOU for YOUR KIND ATTENTION

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CENELEC Workshop Edition 5

ICT for RAILWAYS

September 2019

Focus on:
Internet of Transportation Things,
Big Data, Artificial Intelligence

- **More information will be available in the next months**