

Shift2Rail Joint Undertaking

5th meeting of the User
Requirements/Implementation
and Deployment Working Group



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)

- Presentation from UR-ID WG Members' and open discussion

4. MEMBERS' PRIORITIES FOR 2019-2020 (in the context of preparation of the S2R JU Annual Work Plan 2019)

- S2R MAAP Part B review
- UR-ID WG Members' presentations
- Discussion


5. UR-ID WG members participation in S2R projects' advisory groups (update)

6. AOB, NEXT STEPS, CLOSING


- Date of next meeting

Introduction

- Adoption of the Agenda

| | |
|--|---|
|  SHIFT2RAIL JOINT UNDERTAKING | |
| 4th MEETING OF THE USER REQUIREMENTS IMPLEMENTATION AND DEPLOYMENT WORKING GROUP | |
| BRUSSELS, 22 November 2017 09:00 – 11:30 | |
| Provisional Agenda | |
| Venue: White Atrium building Avenue de la Toison d'Or 56-60, B-1060 Brussels | |
| 1. INTRODUCTION – ROUNDTABLE | <ul style="list-style-type: none"> Presentation of the Meeting Attendance and Objectives Adoption of the Agenda and minutes of the previous meeting |
| 2. SHIFT2RAIL JU – STATE OF PLAY | |
| 3. FOLLOW UP OF THE INTERIM EVALUATION OF THE SHIFT2RAIL JOINT UNDERTAKING | <ul style="list-style-type: none"> 18-20 JU members participation in SJR projects' advisory groups |
| 4. MEMBERS' PRIORITIES FOR 2018-2019 (in the context of preparation of the SJR JU Annual Work Plan 2018) | <ul style="list-style-type: none"> Presentation from Members' and open discussion |
| 5. MEMBERS' INPUT IN THE CONTEXT OF THE PREPARATION OF THE FUTURE RAIL RESEARCH AND INNOVATION ACTIVITIES (see the Multinational Research Framework) | <ul style="list-style-type: none"> Presentation from Members' and open discussion |
| 6. ANY OTHER BUSINESS, NEXT MEETING, CLOSING | <ul style="list-style-type: none"> Date of next meeting Other |

- Approval of the minutes of the previous meeting (22/11/2017)



 Association of Shifting

User Requirements/Implementation and Deployment WG

Minutes of Meeting

User Requirements/Implementation and Deployment WG

| | | | |
|----------------------|-------------|-------------|---------------------------|
| Meeting type: | UR/ID WG | Date/Time: | 22/11/2017 09:00-11:30 |
| | | Location: | SJR Joint Undertaking HQ |
| Meeting Coordinator: | Luis PATIES | Issue Date: | 20/12/2017 |

| Attendee Name (present) | Initials | Organisations |
|-------------------------|----------|------------------------------|
| BORGHESE, Carlo Maria | CMB | Shift2Rail Joint Undertaking |
| PATIES, Luis | LP | Shift2Rail Joint Undertaking |
| LUISA, Fernando | FL | ALICE |
| UNILACCHI, Paolo | PU | CEMELC (CNC) |
| KUZMIR, Sylwia | SK | CER (PWP) |
| VAN HINBERGE, Anton | AUH | CER (NFI) |
| SWANSONS, Willy | WS | EPF |
| DE SOUZA, Antonio | BA | ERA |
| CHRISTENS, Marion | MC | ETP |
| TINER, Sabine | ST | ETP |
| CARLO D'AMICO, Armando | ACD | EURLEX |
| PADMENTIER, Francis | FP | NS-Rail |
| PIKOS, Konstantinos | PK | SEMAF (HLE) |
| KEMM, Samuel | SK | Transport & Environment |
| FLETCHER, Simon | SF | URC |
| LEVY, Gella | CL | URC |
| BRICCO, Gaudier | GB | URTP |
| PURIO, Nicolas | NP | UNIFE/ERRAC (Sociologie) |

Meeting Agenda

or our overview on consultation in the working groups and other stakeholders. Following this consultation, a final approval of the Governing Board will conclude the process. It was also explained that the MAAP review is not expected to significantly affect the 2018 AVP because what is

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- Date of next meeting

- **S2R Call 2018: Call open**

- S2R Info-Day on 12 December 2017
- Call opened on **16 Jan 2018**
- Deadline for submission **24 April 2018 (17:00 – Brussels time)**

- **Other ongoing activities**

- Preparation of Annual Work Plan 2019
- Revision of MAAP Part B (see dedicated item)
- Preparation for TRA 2018
- Quick-wins for InnoTrans 2018
- KPIs, standardisation
- Demo plan



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- **New MAAP Part B**, together with the Part A, will provide the overall framework to deliver the Master Plan objectives.
- **Published in December: Part A, the “Executive view”**: vision and the overall railway system R&I will contribute to achieve within the boundaries of the remit of the S2R JU.
- **Revision ongoing: New Part B**: R&I activities that are expected to be performed to deliver Part A, including the background, scope, specific vision, etc... per TD/WA and IP/CCA; It will also include a structural view of the integration within IPs and across IPs/CCA.
- **Work is currently ongoing at the level of the different S2R IP/CCA**
- **Finalisation expected by April 2018**



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S2R projects – advisory groups (*update*)

- **Information disseminated to UR-ID WG on 07 February 2018**
- ✓ **Attractive/Co-Active projects:**
 - Invitation to Advisory board meeting (15/03/2018)
 - Questionnaire
- ✓ **DynaFreight:**
 - Invitation to Advisory Group – 08/09 May 2018.
 - Specific organisations targeted
- **Other projects interested in UR-ID involvement (details to come)**
RUN2RAIL, MAT4RAIL, ETALON, FAIR Stations, X2RAIL-2, IN2DREAMS, IN2SMART, IN2TRACK, etc..



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BACK-UP SLIDES



| TD1.1 Traction Systems demonstrator | | | | | | | |
|-------------------------------------|------|------|---------------------------|--------------------|--------------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| finished activities: Roll2Rail | | | ongoing activities: PINTA | | AWP2018: CFM | | |
| | | | | planned activities | | | |

| TD1.2 Train Control and Monitoring System Demonstrator | | | | | | | |
|--|--------------------------------|------------------------------|------------------|------|--------------------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | finished activities: Roll2Rail | | | | | | |
| | | ongoing: CONNECTA, SAFE4RAIL | | | | | |
| | | | AWP2018: CFM, OC | | | | |
| | | | | | planned activities | | |

| TD1.3 Carbody Shell Demonstrator | | | | | | | |
|----------------------------------|-----------|------------------------|------|------|--------------------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | Roll2Rail | | | | | | |
| | | ongoing:PIVOT,Mat4Rail | | | | | |
| | | | | | planned activities | | |

| TD1.4 Running Gear Demonstrator | | | | | | | |
|---------------------------------|-----------|-------------------------|------|------|--------------------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | Roll2Rail | | | | | | |
| | | ongoing: PIVOT,Run2Rail | | | | | |
| | | | | | planned activities | | |



| TD1.5 Brake Systems Demonstrator | | | | | | | |
|----------------------------------|-----------|-----------------------------------|------|------|--------------------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | Roll2Rail | | | | | | |
| | | CONNECTA, PINTA, SAFE4RAIL, PIVOT | | | | | |
| | | | | | planned activities | | |

| TD1.6: Doors and Access Systems Demonstrator | | | | | | | |
|--|------|-----------------|------|------|--------------------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | | PIVOT, Run2Rail | | | | | |
| | | | | | planned activities | | |

| TD1.7: Train Modularity In Use (TMIU) | | | | | | | |
|---------------------------------------|-----------|--------------------------|------|------|--------------------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | Roll2Rail | | | | | | |
| | | ongoing: PIVOT, Mat4Rail | | | | | |
| | | | | | planned activities | | |



TD2.1: Adaptable communications for all railways (quality of service, interfaces)

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
|------|--------------------------------|------|------|-------------------|------|------|--------------------|
| | Ongoing act.: X2Rail1, Mistral | | | AWP 2018: CFM, OC | | | |
| | | | | | | | planned activities |

TD2.2: Railway network capacity increase (ATO up to GoA4 – UTO)

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
|------|--------------------------------|------|------|------|------|------|--------------------|
| | Ongoing act.: X2Rail1, ASTRail | | | | | | |
| | | | | | | | planned activities |

TD2.3 Moving Block

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
|------|--------------------------------|------|------|------------------|------|------|--------------------|
| | Ongoing act.: X2Rail1, ASTRail | | | AWP2018: CFM, OC | | | |
| | | | | | | | planned activities |

TD2.4: Fail-Safe Train Positioning (including satellite technology)

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
|------|------|--------------------------------|-------------|------|------|------|--------------------|
| | | Ongoing act: X2RAIL-2; ASTRail | | | | | |
| | | | AWP2018: OC | | | | |
| | | | | | | | planned activities |



| TD2.5: On-board Train Integrity | | | | | | | |
|---------------------------------|------|--------------------------------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
| | | Ongoing act.: X2RAIL-2; ETALON | | | | | |
| | | | | | planned activities | | |

| TD2.6: Zero on-site testing (control command in lab demonstrators) | | | | | | | |
|--|------|-----------------------------|-------------------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
| | | Ongoing act.: X2Rail1, Vite | | | | | |
| | | | AWP 2018: CFM, OC | | | | |
| | | | | | planned activities | | |

| TD2.7: Formal methods and standardisation for smart signalling | | | | | | | |
|--|------|---------------------------------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
| | | Ongoing act.: X2RAIL-2; ASTRail | | | | | |
| | | | | | planned activities | | |



| TD2.8: Virtually – Coupled Train Sets (VCTS) | | | | | | | |
|--|------|------|------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
| | | | AWP2018: CFM, OC | | | | |

| TD2.9: Traffic management evolution | | | | | | | |
|-------------------------------------|------|------------------------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
| | | Ongoing act.: X2RAIL-2 | | | | | |
| | | | | | planned activities | | |

| TD2.10: Smart radio-connected all-in-all wayside objects | | | | | | | |
|--|------|-------------------------------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
| | | Ongoing act.: X2Rail1, ETALON | | | | | |
| | | | | | planned activities | | |

| TD2.11: Cyber Security | | | | | | | |
|------------------------|------|-------------------------------|------------------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | ... |
| | | Ongoing act.: X2Rail1, Cyrail | | | | | |
| | | | AWP2018: CFM, OC | | | | |
| | | | | | planned activities | | |



| TD3.1 Enhanced Switch & Crossing System | | | | | | | | |
|---|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, In2Track | | | | AWP 2018: CFM | | | | |
| | | | | planned activities | | | | |

| TD3.2 Next Generation Switch & Crossing System | | | | | | | | |
|--|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, S-CODE | | | | AWP 2018: CFM | | | | |
| | | | | planned activities | | | | |

| TD3.3 Optimised Track System | | | | | | | | |
|---------------------------------------|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, In2Track | | | | AWP 2018: CFM | | | | |
| | | | | planned activities | | | | |

| TD3.4 Next Generation Track System | | | | | | | | |
|------------------------------------|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail | | | | AWP 2018: CFM | | | | |
| | | | | planned activities | | | | |



| TD3.5 Proactive Bridge and Tunnel Assessment, Repair and Upgrade | | | | | | | | |
|--|------|------|------|-------------------------------|------|------|--------------------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, In2Track | | | | AWP 2018: CFM AWP 2018: OC | | | planned activities | |

| TD3.6 Dynamic Railway Information Management System (DRIMS) | | | | | | | | |
|---|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activit.: In2Smart, IN2DREAMS | | | | planned activities | | | | |

| TD3.7 Railway Integrated Measuring and Monitoring System (RIMMS) | | | | | | | | |
|--|------|------|------|--------------|------|------|--------------------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, In2Smart, MOMIT | | | | AWP 2018: OC | | | planned activities | |

| TD3.8 Intelligent Asset Management Strategies (IAMS) | | | | | | | | |
|--|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, In2Smart | | | | planned activities | | | | |



| TD3.9 Smart Power Supply | | | | | | | | |
|--|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, In2Stempo | | | | | | | | |
| | | | | planned activities | | | | |

| TD3.10 Smart Metering for Railway Distributed Energy Resource Management System | | | | | | | | |
|---|------|------|------|------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Rail, In2Stempo, In2Dreams | | | | | | | | |

| TD3.11 Future Stations | | | | | | | | |
|--|------|------|------|------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing activities: In2Stempo, FAIR Stations | | | | | | | | |



| TD 4.1 Interoperability Framework | | | | | | | |
|--|------|------|------|---------------------------|------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Ongoing act. IT2RAIL, GOF4R, ST4RT, CONNECTIVE | | | | | | | |
| | | | | AWP 2018 Open Call 1 | | | |
| | | | | Planned activities | | | |
| | | | | | | | |
| TD4.2 Travel Shopping | | | | | | | |
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Ongoing act. IT2RAIL, Co-Active, COHESIVE | | | | | | | |
| | | | | AWP 2018 Call For Members | | | |
| | | | | Planned activities | | | |
| | | | | | | | |
| TD4.3 Booking and Ticketing | | | | | | | |
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Ongoing act. IT2RAIL, Co-Active, COHESIVE | | | | | | | |
| | | | | AWP 2018 Call For Members | | | |
| | | | | Planned activities | | | |



TD4.4 Trip Tracker

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|------|------|------|------|------|--------------------|------|
| Ongoing act. IT2RAIL, Attracktive, My-TRAC | | | | | | | |
| AWP 2018 Call For Members | | | | | | | |
| | | | | | | Planned activities | |

TD4.5 Travel Companion

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|------|------|------|------|------|--------------------|------|
| Ongoing act. IT2RAIL, Attracktive, My-TRAC | | | | | | | |
| AWP 2018 Call For Members | | | | | | | |
| | | | | | | Planned activities | |

TD4.6 Business Analytics

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|------|------|------|------|------|------|--------------------|
| Ongoing act. IT2RAIL, GOF4R, ST4RT, CONNECTIVE | | | | | | | |
| | | | | | | | Planned activities |



| TD 5.0 – Business analytics and implementation strategies | | | | | | | | |
|---|------|------|------|------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing projects: SMART-RAIL, FR8RAIL, INNOWAG, FR8HUB | | | | | | | | |

| TD5.1 Freight electrification, brakes and telematics | | | | | | | | |
|--|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing projects: FR8RAIL, INNOWAG | | | | | | | | |
| | | | | AWP2018: CFM | | | | |
| | | | | planned activities | | | | |

| TD5.2 Access and Operation | | | | | | | | |
|---|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing projects: ARCC, SMART, OPTIYARD | | | | | | | | |
| | | | | AWP2018: CFM | | | | |
| | | | | planned activities | | | | |

| TD5.3 Wagon design | | | | | | | | |
|--|------|------|------|--------------------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing projects: FR8RAIL, INNOWAG, FR8HUB | | | | | | | | |
| | | | | AWP2018: CFM | | | | |
| | | | | planned activities | | | | |



| TD 5.4 Novel Terminal, Hubs, Marshalling Yards, Sidings | | | | | | | | |
|---|------|------|------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing projects: FR8HUB | | | | | | planned activities | | |

| TD 5.5 New Freight Propulsion Concepts | | | | | | | | |
|--|------|------|------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing projects: FFL4E, DYNAFREIGHT, FR8HUB | | | | | | planned activities | | |
| | | | | | | AWP2018: CFM & OC | | |

| TD 5.6 Autonomous train operation | | | | | | | | |
|-----------------------------------|------|------|------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing projects: ARCC, SMART | | | | | | planned activities | | |
| | | | | | | AWP2018: CFM | | |



| WA1 Long-term needs and socio-economic research & SPD's | | | | | | | | |
|---|------|------|------|------|------|---|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| finish: Roll2Rail (Oct. 17) | | | | | | ongoing act.: IMPACT1, NEAR2050, IMPACT2 | | |
| | | | | | | planned activities | | |

| WA2 KPI method and integrated assessment | | | | | | | | |
|--|------|------|------|------|------|---|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| finish: Roll2Rail (Oct. 17) | | | | | | ongoing act.: IMPACT1, tender KPIs, IMPACT2 | | |
| | | | | | | | | |

| WA3 Safety, Standardisation, Maintenance, Materials, Virtual Certification | | | | | | | | |
|--|------|------|------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing act.: PLASA, GoSAFE RAIL, IMPACT2 , SMarTE | | | | | | AWP 2018: CFM | | |
| | | | | | | planned activities | | |



| WA4 Smart Planning, I2M | | | | | | | | |
|---|------|------|------|------|------|--------------------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing act.: IN2RAIL, PLASA, GoSAFE RAIL, IMPACT2 | | | | | | AWP 2018: CFM | | |
| | | | | | | planned activities | | |

| WA5 Energy and sustainability | | | | | | | | |
|---------------------------------------|------|------|------|------|--------------------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing act.: FINE1, OPEUS, DESTINATE | | | | | planned activities | | | |

| WA6 Human Capital | | | | | | | | |
|--|------|------|------|------|------|------|------|-----|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | ... |
| ongoing act.: IMPACT2 , SMarTE, tender HC | | | | | | | | |

