

FOSTER RAIL

Future of Surface Transport Research Rail

Coordination and Support Action

Grant Agreement No 605734

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Deliverable D5.2

Report from “pre-requirements and implementation groups”

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|-------------|-----|---|
| WP | 5 | Fostering innovation and partnerships: ERRAC and SHIFT ² RAIL |
| Task | 5.2 | Innovation Packages (IPs) requirement specifications and R&D coordination |

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| Deliverable lead beneficiary | UIC | Deliverable responsible person | UIC |
| Email | fletcher@uic.org | | |

| | |
|--|------------|
| Other contributors to the deliverable | UIC, UNIFE |
|--|------------|

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¹ Dissemination level: **PU** = Public, **PP** = Restricted to other programme participants (including the JU), **RE** = Restricted to a group specified by the consortium (including the JU), **CO** = Confidential, only for members of the consortium (including the JU)

² Nature of the deliverable: **R** = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

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1. Executive Summary

FOSTER-RAIL is a EU coordination and support action project under the 7th Framework Programme designated to support ERRAC (European Rail Research Advisory Council) in defining research needs for their strategies and programmes in order to realise the objectives of the Europe 2020 strategy.

The Foster Rail Work Package 5 (WP5) “Fostering innovation and partnerships: ERRAC and SHIFT²RAIL” relies on the implementation of the proposed joint undertaking for research, development and innovation for rail (under the acronym: SHIFT²RAIL). One objective of the WP5 was to create/manage under the ERRAC umbrella the so-called “pre-system requirements and implementation groups” of the future SHIFT²RAIL to embrace the business needs for the entire sector.

The purpose of this deliverable is to describe the activities carried out within WP5 associated to the task 5.2 “Innovation Packages (IPs) requirement specifications and R&D coordination”. The main objective of this task was to provide a framework under which the creation of “system pre-requirements groups” for each SHIFT²RAIL Innovation Package could be established.

The primary objective of this activity was seeking to ascertain the business-led needs of the wider rail sector in order to identify the core (technical) requirements that each of the five (5) Innovation Programmes will be required to address in SHIFT²RAIL.

This deliverable provides a report on the initial developments of this activity. It describes the process agreed between WP5 members at the beginning of the project to provide inputs (technical requirements) to SHIFT²RAIL.

The deliverable D5.3 “Report from pre-requirements and implementation groups” details the activities of the task 5.2.

2. Description of Deliverable

During this period, two meetings took place (May and July 2013) in order to lay ground for this activity.

These meetings have allowed the following:

1. Setting the scene with the different FOSTER RAIL partners (and the ERRAC wider community) regarding the objectives of this task.
2. The task also aims at supporting the SHIFT²RAIL IPs to better focus the planned research and innovation activities as well as the related Technical Demonstrators (TDs), Integrated Technology Demonstrators (ITDs) and System Platform Demonstrators (SPDs).

In this initial stage of the work of the group, four matrixes were created:

1. Each of these matrixes corresponds to each of the 4 SPDs (regional, freight, high speed/mainline, urban and suburban). Each of these matrixes includes the 5 SHIFT²RAIL IPs (if relevant) and the list of TDs.
2. Preliminary KPIs have been assigned to the (quantified) targets of SHIFT²RAIL (*system capacity, system reliability and LCC*).
3. It is then expected that the technical requirements should be inputted for each of targets and KPIs developed, therefore providing the requirements for all the TDs and IPs across all 4 SPDs.

A case study developed by SNCF on the TCMS Technology Demonstrator from Innovation Programme 1. In this case study, SNCF has filled-in the expected requirements for this TD, corresponding to the different targets. The result of this first exercise is expected to be shared with the leader of IP1. This first case study will allow the group to further refine the tool to be used in the coming months.

Extract from the template of this excel can be found below.

| | | | | | | |
|--|--|---------------------------|--|---|--|--|
| <p style="text-align: center;">TD 1.2 Wireless Train Control and Management System (TCMS)</p> | | System Capacity | Passengers per Metre of Train Length | x | | |
| | | | Increased Line Occupancy | x | | |
| | | System Reliability | Reduction in the number of In-service failures per million kms in a specific subsystem affecting operation | x | | |
| | | | Increased reliability through the better design, implementation and monitoring of infrastructure | x | | |
| | | LCC | Reduction in capital costs (infrastructure) | x | | |
| | | | Reduction in capital costs (Rolling Stock) | x | | |
| | | | Reduction in maintenance costs (infrastructure) | x | | |
| | | | Reduction in maintenance costs (Rolling Stock) | x | | |
| | | | Reduction in Energy consumption | x | | |
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