

Towards an affordable, resilient, innovative and high-capacity European Railway System for 2030/2050

Set up a dissemination platform for CAPACITY4RAIL

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• UIC

Project coordinator

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Executive Summary

This document provides a plan for disseminating and using the knowledge gained during the European Commission Framework Program 7 CAPACITY4RAIL project.

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Abbreviations and acronyms

Abbreviation / Acronym	Description
C4R	Capacity4Rail
CEN	European Committee for Standardisation
CER	Community of European Railway and Infrastructure
	Companies
CTR	Concluding Technical Report
EFRTC	European Federation of Railway Track work
	Contractors
EIM	European Infrastructure Managers
ERA	European Railway Agency.
ERFA	European Rail Freight Association
RAMS	Reliability, Availability, Maintainability, Sustainability
S&C	Switches and Crossings
TEG	Track Experts Group
TRL	Technical readiness level
UIC	International Union of Railways
UNIFE	Union des Industriels Ferroviaires Européennes

1. Introduction

The CAPACITY4RAIL dissemination and communication activities are coordinated by UIC as WP6.1 leader, under the control of the project coordinator UIC.

UIC, UNIFE, EFRTC, ARTTIC and NewOpera are the main actors of dissemination within CAPACITY4RAIL.

Nevertheless, all consortium partners contribute to some extent to the dissemination and communication activities.

Dissemination and exploitation of results are crucial to the acceptance and implementation by railway undertakings, suppliers and end-users of the technologies developed in the project.

During the first stage of the project, communication will be mainly aiming at raising awareness about CAPACITY4RAIL by presenting the objectives, processes and expected results of the project, as well as building the necessary networks to increase the efficiency of the project and its connexions to its environment.

At a final stage, dissemination activities will be focusing on promoting the results achieved and making the appropriate target audience aware and sensitive to their potential benefits, in order to facilitate implementation of the project results.

All along the project duration, ongoing communication activities will be necessary to keep dissemination active to continuously present, discuss and get feedback on the progress of the project.

With a global system view, CAPACITY4RAIL covers a wide range of technical areas, and a large variety of dissemination targets.

The following objectives have been identified for the CAPACITY4RAIL dissemination strategy:

- Raising awareness for the project approach and results;
- Generate active involvement of railway stakeholders in the evaluation and usage of CAPACITY4RAIL results;
- Stimulate active involvement of researchers into CAPACITY4RAIL related research activities;
- Dissemination of scientific and technical new knowledge;
- Facilitating and encouraging implementation of outcomes by end-users.

2. Background

CAPACITY4RAIL'S GENERAL OBJECTIVES

To face the future challenge of increasing traffic and make the railway system more attractive and competitive, a step change is needed to guarantee an adaptable system, offering a high operational capacity with high reliability and resilience to hazards.

This step change will only be achieved through a global and combined optimisation of infrastructure, operation and vehicle performances.

METHODOLOGY

IMPROVING THE SYSTEM'S PERFORMANCE

- Performance of very high speed systems: bridges and transition zones
- Speed of freight trains
- Carrying capacity of freight trains (longer) and wagons (larger)
- Improved transhipment procedures and facilities (marshalling yards, terminals)
- Improved traffic planning and operation: automated data exchange and reasoning

MAKING THE SYSTEM MORE RELIABLE AND RESILIENT: AVOIDING ACCIDENT AND MITIGATE TRAFFIC DISRUPTIONS

- Improved behaviour of bridges and transition zones at very high speed
- S&C design based on failure modes
- S&C resilient to natural hazards (extreme weather conditions)
- Development of failure detection for infrastructure and freight vehicles
- Intelligent vehicles
- Resilient operations: decision support systems and incident management plans

MAKING THE SYSTEM MORE AVAILABLE: ALLOCATING MORE TIME TO OPERATION

- Reduced construction time and maintenance for infrastructure
- Development of monitoring for condition-based maintenance
- Non-intrusive infrastructure monitoring techniques with low impact on traffic
- Self-monitoring and intelligent components

EXPECTED RESULTS - KEY INNOVATIONS

The project will deliver more than 60 technical deliverables comprised of the following:

SPECIFICATIONS

- Future slab track systems and new concepts for switches and crossings;
- Set of desirable standards for wagons, locomotives, gauge, infrastructure design, train management and infrastructure management as well as connectivity;
- Use of sensors in railway environments and backlash-free wireless transmission.

GUIDANCE DOCUMENTS

- Combined RAMS- and cost-oriented design of infrastructure;
- Design of track systems and subgrade resilient to flooding; design of bridges for very high speeds;
- New Concepts and technologies for optimised slab track and self-monitoring switches;
- Freight terminal design;
- Efficient freight vehicle systems;
- Fully integrated rail freight systems;
- Incident and emergency management including extreme weather situations;
- Roadmap for automation of traffic management systems;
- Advanced monitoring and future design-to-monitor construction philosophy.

DEMONSTRATION

- New concepts of self-monitoring switches;
- Innovative slab track system;
- Retro-fit monitoring systems and system integration.

The market penetration of the CAPACITY4RAIL results is guaranteed by the participation of:

- Railway operators (undertakings and infrastructure managers), guaranteeing that project solutions will satisfy user needs and fulfil railway requirements;
- Research groups;

- Railway suppliers;
- Railway organizations at EU and international level.

3. Representativeness of the consortium

Because of its fairly broad representativeness, both in terms of railway stakeholders and in terms of geographical scope, thanks to the worldwide membership of UIC, the international outreach of universities and the wide presence of major industrial partners and European associations, the consortium in itself is the primary base for dissemination. It covers countries of West to East and North to South of Europe and brings together a balanced combination of Infrastructure Managers, freight operators, international professional associations, large industrial groups as well as SMEs, with a strong support of universities.



FIGURE 1: NUMBER OF PARTNERS PER COUNTRY



FIGURE 2: NUMBERS OF PARTNERS PER TYPE

Therefore, the uptake and implementation of the research findings by the players themselves and their active participation in the dissemination process will ensure a fairly large and effective spreading of the information among the different railway stakeholders.

4. Dissemination Targets

TARGETED AUDIENCES

C4R will deliver outcomes with different technical readiness levels (TRL) according to which the different dissemination audiences and targets will be addressed through appropriate channels.



FIGURE 3 : TARGETED AUDIENCES OF CAPACITY4RAIL PROJECT RESULTS

EUROPEAN COMMISSION

As it is co-funding the Project, the European Commission is the first recipient of the deliverables. Moreover it has to ensure that CAPACITY4RAIL is performing according to the contractual agreements. It is therefore necessary to have an open and informative dialogue with the Project Officer representing the Commission which is naturally the first and main addressee of the deliverables.

In accordance with the Grant Agreement, the project Officer will be kept informed through the periodic reports, on the progress of work, the project objectives, and on the achievements all along the duration of the project.

At the end of the project, the final summary report will give an overview of the project context, achievements and potential impact.

The Project Officer will be invited to attend all seminars and workshops for the dissemination of the CAPACITY4RAIL project.

The European Commission will be informed of any scientific publication related to the project.

For an improved and open dialogue, more informal direct meetings between the Project Officer and the Coordinator and involving a panel of experts of appropriate expertise and level will be organized on demand of the Commission Officer or proposed by the Coordinator, where particular points will be presented and questions answered.

OTHER RESEARCH INITIATIVES

Linking with other freight-related or similar projects allows cross-fertilization and mutual enrichment of projects.

Several opportunities for networking with other EU project leaders are ongoing and other will be looked for all along the project lifetime, in order to establish links, identify interactions, create synergies and avoid duplication of work.

Synergies will be created with Shift²Rail since several members of the CAPACITY4RAIL project should be involved within Shift²Rail and CAPACITY4RAIL has been identified as a project which will feed the various Innovation Programmes of Shift²Rail.

FREIGHT OPERATIONS

For Freight operations the targets are mainly the decision makers which can be the shippers themselves or the wagon owners, leasers or operators, the railway undertakings, the combined operators and the wagon manufacturers. Of course the infrastructure managers have to be well aware of the progress made as they must be compatible with infrastructure evolutions and constraints. This variety of targets enhances the need of a large dissemination on the website of the project at various stage of the project progress. Participation in seminars, conferences and exhibitions to explain the possible progress and get a feed back for the research and development are essential for success.

During the course of the project dissemination specifically targeted to IP5 of S2R should be regularly organized on the basis of a yearly meeting to inform the Joint undertaking and the IP5 members of the progress made for an efficient global development.

At M24 a special dissemination event will be held organized in workshops with results consolidated in a global meeting.

At M36 and M48 a catalogue listing the various progress will be issued

INFRASTRUCTURE MANAGERS AND RAILWAY UNDERTAKINGS

EXECUTIVE MANAGEMENT

This audience is of primary importance, as it is the one who decides on the use of the project results and turn the proposed innovations and optimization into practice.

- During the course of the project, presentations will be given several times a year within UIC Freight Forum and Rail System Forum, held ad UIC, where the executive management is represented.
- Regular newsletters as well as a final "Executive management Report" highlighting the main interest points of the Concluding technical report and showing the interest of applying the results of CAPACITY4RAIL

project will be sent to the concerned representative of the executive management and made available from the UIC website homepage.

DESIGN & MAINTENANCE ENGINEERS

Infrastructure design and maintenance engineers and experts are a key audience, easier to identify in the railways according to their respective technical skills. They are generally well informed of the technical context of the ongoing research, as they are or have been involved themselves in current or previous projects, reviewing action, working groups or standardization committees.

Consequently, this audience can be reached in many different ways:

- Directly with the deliverables or by guidelines derived from these documents;
- With the Concluding Technical Report;
- Through the UIC working groups they are active in: Track Experts Group (TEG), Operation Focus Group, Works planning and capacity allocation Working Group and the Sector Expert Teams (SETs);
- Through their participation in workshops and dissemination seminars;
- Through general conferences, and exhibitions;
- Through their direct involvement into the reviewing process of the project.

It appears necessary that communication means are linked to each other with mutual cross-references, so that each specialist easily finds its way to the relevant information, whatever the initial contact point may be.

CAPACITY PLANNING AND OPERATION MANAGERS

Capacity Planning and Operations Mangers in various countries will be contacted when gathering data for the road maps for the development of modelling and simulation tools. This will ensure that as future concepts are developed, the industry has the ability to evaluate them. This will support strategic trade-off decisions as well as tactical real-time operational decisions.

The various concepts developed will be demonstrated using simulations and results shared with all members.

Workshops will be held to derive joint requirements and testing for incident management plans, e.g. in extreme weather and other hazardous conditions. This will not only be multi-national but also across all modes of transport and central agencies. This will help to define what simulations will be undertaken to showcase the final results.

Results will be shared through academic research papers as well as by presentations to various expert groups and industry forums.

SOURCING

Decision making railway staff involved in corporate sourcing in the whole supply chain should be reached in the following main directions:

- Market strategies;
- Long-term funding and planning;
- Contracting strategies;
- Rules and regulations;
- Project and worksite management.

An efficient communication toward this audience will require the work stream leaders to analyze which relevant results the project can deliver on these aspects.

RAILWAY STAFF AT OPERATIONAL LEVEL

Railway staff at operational level will be mainly addressed through the training platforms, through national experts and through the publication of Guidelines and Code of Practice. They may be indirectly interested in the CAPACITY4RAIL results and the influence that they may have on the different national codes, regulations and practice.

Translation of the key CAPACITY4RAIL reports and results that will be disseminated as Guidelines will be of importance to reach this population with an often limited understanding of the English language.

Training platforms (infrastructure, operations, migration) will be set up using the training competences of the Academia involved in the dissemination tasks (Newcastle University, University of Birmingham, Technische Universität Dresden, Instituto Superior Técnico) with the support of the railway undertakings .The training platforms and programmes will be established when enough results are available.

RAILWAY SUPPLY INDUSTRY

EXECUTIVE MANAGEMENT

This group will be addressed via the Executive management Summary Report, which will summarize the Concluding Technical Report. Publications and information will be delivered to the executive management by the UNIFE high level committees (UNIRAILINFRA – UNIFE Infrastructure Committee, Strategy committee, Presiding Board, UNIFE Standards and Regulation Committee, UNIFE Technical Plenary), at UNIFE's office and at the events of the association throughout the year.

The infrastructure contractors will be addressed through the EFRTC structures and other UNIFE and EFRTC contacts.

INFRASTRUCTURE, ROLLING STOCK, AND SIGNALLING SUPPLIERS

Supply industry will be reached mainly via the Executive management Summary Report, depending on the level (management or operational). Rail and component suppliers will be addressed both within UNIFE committees and forums and via training workshops (e.g. through CAPACITY4RAIL training platforms or CAPACITY4RAIL events) organized within the project.

Moreover UNIFE will present CAPACITY4RAIL project during the INNOTRANS event. INNOTRANS is the biggest Rail Infrastructure event in Europe which takes place every two years. INNOTRANS 2014 and 2016 will be an ideal forum to present the latest developments in the project. The event will be attended by the supply industries and European (and International) railway Infrastructure Managers and Operators and will therefore be an ideal forum to link end users with the technologies and results.

INFRASTRUCTURE CONTRACTORS

The contractors will be addressed through the Executive management Summary Report which will be delivered to the Executive Managers of EFRTC members. Rail contractors will be reached through EFRTC Committees and General Meetings, where relevant outcomes of the project will be disseminated to contractors.

Relevant information will be also disseminated through the EFRTC website.

In addition, contractors will be invited to attend training workshops when relevant.

OTHER RESEARCH INITIATIVES

Dissemination to other initiatives can be considered according four timescales

 Towards ongoing FP7 projects: this consists mainly in cross-fertilisation between projects through the simultaneous involvement of the C4R partners. These projects are for instance: D-RAIL, MAINLINE, SUSTRAIL, INNOTRACK, MARATHON, SPECTRUM, ON-TIME, etc.

This will be ensured by

- \circ the natural circulation of information through shared experts;
- o the presentation of the C4R results in other project's workshops;
- \circ the identification of key actors of other projects to be invited in C4R events.
- Towards H2020 project proposals: the involvement of many C4R experts in H2020 railway proposals will help to keep a good level of complementarity to achieve a comprehensive and consistent research programme.
- Towards Shift²Rail: C4R is designed as a natural feeder of this initiative. C4R will deliver outputs with intermediate TRL which will be brought to higher TRL through further development in S²R,
- Future research strategies: beyond Shift²Rail, C4R will deliver guidelines describing further actions to be undertaken in terms of scientific knowledge, innovation, development and implementation, in order to improve the railway system and adapt it to the 2030/2050 vision.

ORGANIZATIONS AND REGULATORY BODIES

UIC

Setting apart its role of project coordinator and work stream leader in the Dissemination of the project, UIC is a target of major importance owing to the very wide membership of international railways. The different working groups and specialized forums and platforms (infrastructure, rolling stock, and freight) will be regularly informed on the project results and will help in their future implementation.

UNIFE

UNIFE is a European association that represents the interests of the railway supply industry in Europe at the level of both European and international institutions. Its membership comprises manufacturers and integrators of railway rolling stock, subsystems, components, signalling equipment and infrastructure. UNIFE will participate actively in dissemination, exploitation and training activities. Its particular focus will be dissemination and exploitation where, through its committees, technical forums, and events it will provide input from and result access to the rail industries, including maintenance contractors and suppliers. Further, it will distribute material at its annual and joint research events throughout the year. UNIFE is in close association with the national industry associations also a point of dissemination to the industries outside of the project.

CEN

CEN produces European standards, and as such is directly involved in railway standardization with its Technical Committee 256 for Railway Applications. A meeting of the project with the representative of this body will be help in order to define, within the framework agreed with the European Commission, the way CAPACITY4RAIL results may contribute to future European Standards.

CER AND EIM

Discussions between the Project Manager, CER and EIM representative will be initiated in view of proposing the project results as a basis for future standards.

ERA

In order to present useful information to the European Railway Agency (ERA) in charge of future regulation in the railway field, a joint action will be initiated by UIC, UNIFE, CEN, CER and EIM representatives, under the direct coordination of the Project Manager.

The dissemination efforts are twofold:

- Make sure to delineate, as clearly as possible, the content of
 - \circ TSI revisions or other regulations for which ERA is the competent technical body $\,$;
 - European Harmonized Standards (to be used as sufficient means of compliance with EU regulations);
 - Other industry standards (best practice)
- Provide sufficient understanding of the findings, hypotheses and limits of impact assessments, and the corresponding tools.

EFRTC

Beside the dissemination of project results by EFRTC, some of its members will be involved in checking the feasibility of innovations proposed for the execution of track construction, renewal and maintenance.

SCIENTIFIC AND ACADEMIC COMMUNITIES

Although the CAPACITY4RAIL project is mainly aiming at practical implementation into the railway activities, the high level of implication (40%) and skills of the academic partners will highly contribute to the production of scientific publications, thus sowing further research projects.

5. Dissemination media

PROJECT DELIVERABLES:

CAPACITY4RAIL will generate 60 technical deliverables, dealing with the following issues:

SPECIFICATIONS

- Future slab track systems and new concepts for switches and crossings;
- Set of desirable standards for wagons, locomotives, gauge, infrastructure design, train management and infrastructure management as well as connectivity;
- Use of sensors in railway environments and backlash-free wireless transmission.

GUIDANCE DOCUMENTS

- Combined RAMS- and cost-oriented design of infrastructure;
- Design of track systems and subgrade resilient to flooding; design of bridges for very high speeds;
- New Concepts and technologies for optimised slab track and self-monitoring switches;
- Freight terminal design;
- Efficient freight vehicle systems;
- Fully integrated rail freight systems;
- Incident and emergency management including extreme weather situations;
- Roadmap for automation of traffic management systems;
- Advanced monitoring and future design-to-monitor construction philosophy.

DEMONSTRATION

- New concepts of self-monitoring switches;
- Innovative slab track system;
- Retro-fit monitoring systems and system integration.

The outcome above will be disseminated by means of the following:

CONCLUDING TECHNICAL REPORT

Through the grant agreement with the European Commission, CAPACITY4RAIL is committed to disseminating the project results. The Concluding Technical Report (CTR) is the most complete document on the results of the project and on the methods used, the way the results are to be implemented, the identified technical problems and the proposed solutions.

It will be the "key" for reaching and using the CAPACITY4RAIL results and it will summarize the content of all the project technical deliverables. Integral part of the Final Report (together with the Financial and Management Report), the CTR will also give insights about the cost of the technical research work and operations undertaken within the project in order to achieve the expected results, giving an overview of the work undertaken and references to where further information is available.

The CTR will be distributed to the European Commission and to the members of the Consortium participating in the project as well as to any relevant target group.

GUIDANCE DOCUMENTS

Guidance documents are deliverables that give clear recommendations to each type of concerned audience. They are needed in order to provide each target audience with the project results presented according to its interest and level of understanding of the needed information.

They will concern most of the fields covered by the project as listed on page 9:

- Combined RAMS- and cost-oriented design of infrastructure;
- Design of track systems and sub-grade resilient to flooding; design of bridges for very high speeds;
- New Concepts and technologies for optimised slab track and self-monitoring switches;
- Freight terminal design;
- Efficient freight vehicle systems;
- Fully integrated rail freight systems;
- Incident and emergency management including extreme weather situations;
- Roadmap for automation of traffic management systems;
- Advanced monitoring and future design-to-monitor construction philosophy.

Drafted in English as all project deliverables, the most important guidance documents will be translated into German and French. They will be proposed to members of Standard Committees as input for future standards or update of standards in the area of CAPACITY4RAIL;

These translated guidance documents will the preferred means to reach the operational staff

PROJECT WEBSITE

The project website, of which a complete description can be found in deliverable D61.1 "Set up of a public and private website", is divided into a public website and a private platform.

The public area is the tool of choice for hosting communication materials and disseminating project activities to a vast audience. It provides information on the project's objectives and duration, EU funding, participants list, etc.

The project website is available at: http://www.capacity4rail.eu



FIGURE 4: SCREENSHOT OF THE PUBLIC WEBSITE HOMEPAGE.

At this stage, the public website contains the following **public pages**:

- News
- About
- Participants
- Publications
- Public deliverables
- Contact

The Members Area is accessible from the projects' homepage.

This tool is the platform where documents and information of any type can be uploaded and made available by and for the project partners.

Access to the private area is restricted to the Consortium members only, with access rights depending on their role and level of involvement.

After six months of activity, 100 persons have received various access rights to the CAPACITY4RAIL private workspace.

FLYERS



FIGURE 5: C4R FLYER

A project flyer has been produced at M6 of the project, where the list of partners, the project objectives, the structure, the targeted innovation and expected benefits are presented.

The flyer will be updated during the course of the project, based on the content of the Concluding Technical Report. It will give a visual and quick overview of the results and their benefits.

NEWSLETTERS, PRESS RELEASE

The CAPACITY4RAIL Newsletter will be published at least annually, with some extra issues depending on progress and events.

The purpose of newsletters is to draw attention to the project results and refer interested parties to the more comprehensive documents: Concluding Technical Report, Guidelines and Deliverables. They will be distributed not only at the main project meetings, but also on each occasion the project will be presented to the interested audience: seminars, workshops, conferences, exhibitions.

Newsletters will be sent to all project members and made available on the CAPACITY4RAIL Public website.

They will be complemented by the electronic newsletter of UIC.

A special issue based on the content the Concluding Technical Report will be prepared for Executive Managers to explain what C4R has achieved and which benefits can be derived from the implementation of its results.

Press release will be published at the occasion of all major events related to C4R.

PUBLICATIONS

Scientific and academic publications and communications generally come under each WP or task leader.

To ensure the follow-up and to facilitate the notification to the European Commission, all publications will be recorded using the dissemination activity report.

Several journals the consortium members routinely submit and appropriate for reaching most of the CAPACITY4RAIL audiences are identified for the preferred publication of general or specialized articles:

- Railway Gazette International
- International Railway Journal;
- The International Journal of Railway Technology;
- Continental Railway Journal;
- Journal of Rail and Rapid Transit;
- Structural Control and Health Monitoring;
- Smart Materials and Structures;
- Journal of Vibration and Control;
- Journal of Dynamic Systems, Measurement and Control;
- Acta Meccanica;
- Journal of Transport Economic and Policy.

PUBLICATIONS APPROVAL PROCESS

Rules for the publication of foreground are detailed in the Consortium Agreement (CA).

Before disseminating foreground, the partners should respect the following rules:

- A copy of any proposed publication in connection with or relating to the Project shall be sent to the Coordinator and the Project Office and by the Coordinator to the partners at the earliest time possible. Any of the partners may object to the publication within 30 days after receipt of a copy of the proposed publication on the grounds mentioned in the CA. The proposed publication shall not take place until the expiry of the above period of 30 days.
- In the event that an objection is raised within the above period of 30 days, the Party proposing the publication and the partner objecting shall seek in good faith to agree a solution on a timely basis whereby such objection is resolved.
- In the case of the conflict not being resolved within 30 days, the final decision shall be jointly voted by the Executive Board and the restricted Assembly of the concerned SP(s) partners at a majority, within the following 15 days.

The following process should be applied:

1- The partner wishing to publish shall inform the Project Coordinator, the Dissemination leader and the Project Office (capacity-publication@eurtd.com) as early as possible and at least 45 days before the planned publication.

2- The Project Office assists the partner to prepare and send an e-mail to the consortium (capacity-partners@ eurtd.com), which will include a summary of the intended dissemination

3- Any partner having an objection should send within 30 days, an e-mail to the publishing partner and copy to capacity-publication@eurtd.com, explaining how the intended publication is contrary to his/her interests and indicating some suggested modifications or a request for the cancellation of the publication.

4- The publishing partner and the objecting one(s) shall seek in good faith to agree a solution on a timely basis whereby such objection is resolved.

5- In case of the conflict not being resolved in 30 days, the final decision will be jointly voted by the Executive Board and the restricted Assembly of the concerned partners within the following 15 days.

6- When the publication is approved, the final version of the publication is sent by the publishing partner to capacity-publication@eurtd.com.

7- The publishing partner fills in the "dissemination report" (see figure 6 below) and sends it to the Dissemination WP leader (dekeyzer@uic.org)

8- The Dissemination WP leader makes the publication available in the dedicated folder of the CAPACITY4RAIL internal website. The partner submitting the publication should then send a link to the posted publication to the consortium.

In all external communication, the EC funding shall be acknowledged with the following compulsory statement:

"The research leading to these results has received funding from the European Community's Seventh Framework Programme [FP7/2007-2013] under Grant Agreement n°605650."

Furthermore, the contribution made by each of the partners must be indicated.

Events

Initiating or participating to major events is a prime opportunity to reach a large audience, and invite stakeholders related to the project and network to meet with experts and discuss research initiative in related areas.

The success of such a communication is only guaranteed if the information delivered is recent and up-to-date. Hence, the choice of external events to take part in, or the planning of special events has to stick not only to the targeted audience, but also to the time schedule of activities and of the production of results of the project.

Training platforms will also be organised by each subproject in close cooperation with academia to address specific aspects of the project such as Freight, Infrastructure, Operation, Migration (see above).

Moreover, the consortium will organise its own dissemination events in the form of two one-day workshops at M 18 and M36 and one two-day final event at M48.

Event	Description	Periodicity	Venue
Seminars of	Seminars of International Association of Railway	Every 2 years	EU
International	Operations Research (IAROR), where the most		
Association of Railway	recent developments on rail operations research		
Operations Research	and systems management are presented.		
(IAROR)			
World Conference of	Sessions of World Conference of Rail training	Every 2 years	EU and
Rail training (WCRT)	(WCRT), where innovative teaching and learning		overseas
	methods, policy and practice for rail education and		
	training are discussed.		
ICREM 2015 :	International Conference on Railway Engineering	June 13-14,	Copenhagen
International	and Management brings together industry,	2015	, Denmark
Conference on Railway	researchers and scholars to exchange results about		

Engineering and Management	Railway Engineering and Management, and discuss the practical challenges encountered and the solutions adopted.		
Transport Research Arena	Transport Research Arena - The top transport research event in Europe, gathering every 2 years the key stakeholders: experts, operators, industry and policy-makers.	Every 2 years (2014, 2016)	France
World Congress on Railway Research (WCRR 2015)	The World Congress on Railway Research is the world's foremost international forum for the promotion, development and exchange of the latest innovations in the global rail industry.	Every 2 years	tbc
IHHA2015 International Heavy Haul Association	Together with WCRR the most important railway congress. Next congress will have the item "Operational Excellence"	Every 2 years	Perth (Australia)
2ndInternationalConferenceonRailwayTechnology:Research,DevelopmentandMaintenance	The purpose of this Conference is to provide opportunities for scientists and engineers to meet and to discuss current research, new concepts and ideas and to establish opportunities for future collaborations in all aspects of Railway Technology.	Every 2 years	Corsica (France)
Transport Logistic	Transport logistic, is a Leading International Exhibition for Logistics, Mobility, IT and Supply Chain Management, presenting the entire value chain and the major international market leaders out of the transport and logistics sector.	Every 2 years	Munich (Germany)
INNOTRANS	International Trade Fair for Transport Technology - Innovative Components, Vehicles, and Systems: INNOTRANS is an international platform for buyers and sellers of passenger and freight transport technology. It brings together all the railway industry (including railway undertakings)	Every 2 years	Berlin (Germany)
ITS World Congress	ITS World Congress is a world-wide annual event to promote and showcase Intelligent Transportation Systems (ITS) technologies.	Annually	Varies

TABLE 1: MAIN EVENTS FORESEEN FOR CAPACITY4RAIL DISSEMINATION





RECORD OF DISSEMINATION ACTIVITIES

A fill-in form based on the model below will be made available on the C4R Workspace to report any dissemination activity to the SP6.1 leader, who will collect, compile the data and synthesize them into a final dissemination report.

		Location, event, journal, TV program, website :	Date
Oral presentation	Stand, flyers		
Conference	Vorkshop		
Paper in conf. proceeding	Newsletter, Press release		
Poster	Web publication, blog	Title	Responsible partne
Published paper	TV broadcast		
🗌 Video	Interview		
			🗘 30 to 100
			Im More than 100
	or document available :	Hyperlink to dissemination document :	
semination support	or document available .		

FIGURE 6: SCREENSHOT OF THE DISSEMINATION ACTIVITY REPORT

6. Conclusion

The main target audience has been identified, appropriate communication media and methods have been selected, and a dissemination schedule has been initiated, based especially on the participation in or the organization of events.

Although the Project Coordinator remains the preferred spokesperson of the project, dissemination is the task of all partners.

A public web-based platform has been implemented, to be used as the main tool for permanent hosting and displaying of dissemination and communication material.

UIC, UNIFE, EFRTC, and NEWOPERA will play a major role, as their respective platforms allow them to reach a wide range of audiences in the area of freight operation, infrastructure, and supply industry.

Through conferences and publications, the academic partners will ensure a focused dissemination to the scientific community.

A process has been put in place for reporting and assessing dissemination activities.