WRIST - Grant Agreement 636164

Innovative Welding Processes for New Rail Infrastructures

Deliverable D8.9

Mid-term dissemination activities foreseen in the dissemination plan

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Abstract	This document details the Mid-term dissemination activities foreseen in the dissemination plan.
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1 Introduction or background

In order to facilitate implementation of the improved joining methods for both pearlitic and bainitic rails and of joint design strategies for a better life-cycle performance, the project has a strong process of interaction with industry and a strong dissemination component.

The dissemination plan and activities are the responsibility of WP8 - Dissemination, sustainable impact and exploitation.

WP8 is dedicated to the dissemination and exploitation of results as well as IPR issues. The WP will be executed with the help of all partners, and led by ARTTIC, with support of the dissemination and exploitation managers (TUD and GTG).

The Mid-term dissemination activities foreseen in the dissemination plan describes the project's foreseen audiences, key messages and communication channels for the dissemination. It included dissemination events up to the mid-term of the project (October 2016).

All exploitation and IPR issues are dealt with in T8.2 which will begin at M19 and will deliver an initial exploitation plan at the beginning of the task, and will be finalised at M34.

During the early months of the project, dissemination has been limited to project goals and identifying planned activities. As the project progressed and as project results became available, they have been disseminated by various channels described in the next sections of this document.

2 Objectives

The dissemination activities aim at developing and facilitating efficient communication between potential beneficiaries at all levels, from standardisation to implementation and manufacturing, thus optimising indirect benefits of the project by anchoring obtained improvements firmly in the railway sector/market. Therefore, dissemination of initially ambitions and later on results is needed outside of the project at target platforms, by means of demonstrations, conference publications and written publications.

3 Dissemination targets

Target groups for dissemination of the project results are:

- engineering specialists within the partner companies,
- external industry and standardisation/notifying bodies in the railway sector,
- engineering specialists in other parts of the rail industry and in other sectors such as urban railway,
- transport sector,
- academic rail community,
- rail manufacturers,
- national rail infra providers,
- potential purchasers of products resulting from exploitation of the work.

In accordance with the description of action a 'User Interest Group' has been set up at the beginning of the project. This has been built from the initial contacts of the partners and will be grown organically with the addition of new members as results are made available and interest is shown in the final exploitable developments. It was initially foreseen to convene a meeting of these members, but instead each partner has made presentations and held discussions with their contacts in order to explain the project concept and obtain feedback on the work to be done. This was discussed at the second project meeting in Huddersfield in November 2015.

Initial contacts have been made with the following people:

Full name	Organisation
Christoph Gerritsen	Arcelor Mittal
Stijn Droessaert	Arcelor Mittal
Pascal Peeters	Arcadis/Arcelor Mittal
R. Stremme	Asset Rail
D. Pelt	BAM Rail
Arjan Baas	BAM Rail
Corne Schoonen	BAM Rail
Anders Ekberg	Chalmers
Ben Buyvoets	Dekra
John Jansen	Dekra
Martin Hiensch	Dekra
Rolf Bouthoorn	Dekra
Wim Plantagie	Dekra
Andreas Zoll	Deutsche Bahn
Manfred Zacher	Deutsche Bahn
Christian Tapp	DB Netz
Rene Heyder	DB Systemtechnik
Katrin Maedler	DB Systemtechnik
Cor Scholtus	Dura Vermeer and Asset Rail
Gert Loogman	GVB (Amsterdam)
J.W.M Lammers	HTM (City den Haag)
Dimitri De Spiegeleer	Infrabel
Paul Godart	Infrabel
Gari Harris	Longssteel
Willard Kamerling	Merling
Sander Buitendijk	ProRail
Bart Schotsman	ProRail
Marco Klaibeda	ProRail
Harry Kampinga	Rail OK
Greg Lambert	Rail OK
Robert Némethyh	Rn-Soudage
Mueller Roger	SBB CFF FFS
Bergbest	Sersa Nederland
Bosch	Sersa Nederland

Full name	Organisation
Philippe Pouligny	SNCF
Vincent Ratgers	Spitske spoorbouw Nederland
A. Overeem	Strukton Rail
Willem Kuppen	Strukton Rail
Henk VandenHoek	Strukton Rail
Harm Medendorp	Strukton Rail
Eric Moesker	Swietelsky Nederland
Hubert Dabas	Tata Steel
Pascal Secordel	Tata Steel
Elisabeth Bremski	Tata Steel
Mike Poulter	Tata Steel
Robert Lambert	Tata Steel
Frederic Fau	Tata Steel
Bjorn Paulsson	Trafikverket
Tommy van Rossum	Volker Rail
Peter van Dam	Volker Rail
Werner Smakman	Volker Rail

WRIST has already been presented at member meetings of the Working group AG60 Rail welding (Arbetsgrupp AG60 Rälssvetsning) within the Swedish Welding Commission (which in turn is the Swedish member of IIW International Institute of Welding). AG 60 has some 30 members chaired by CHALMERS representing authorities (Trafikverket, Swedish Transport Administration), educators, rail manufacturers (British Steel, Voest Alpine, Vossloh), rail welding companies (InfraNORD, Strukton, Force Technology,…) rail welding equipment (Elektro-Thermit, within the Goldschmidt group

4 Methodology

The following activities have been carried out:

- Inclusion of project results on the partners' websites.
- Creation of the project's logo and graphical identity.
- Creation and publication of a brochure announcing the project and its ambitions.
- Production of dissemination material in the form of a poster/exhibition material and flyers.
- Design and creation of the project's website, with public and private sections, the latter only accessible by the partners. The secure access area will be a hub for project information and document exchange as well as contact points to other partners/partner groups.
- Creation of a User Interest Group, with experts from various parties (infrastructure managers, rail installation companies, academics …).
- Two newsletters have been launched divulging project's major events.
- Lectures and presentations on smaller seminars of the project's non-confidential results.

- Development of a WRIST dissemination diary to identify all open external meetings where the project should be show-cased.

The key activities undertaken, together with the targeted audience, are shown in Table 1 below.

Activity	Implementation	Target audience
Project website	By M3 of the project. Document store for partners and public area for dissemination. Web address promoted through other activities.	Anyone can join a mailing list to receive regular updates. All papers, presentations and seminar material stored on website.
User Interest Group meetings	Initial contact has been made with identified end users	Experts from infrastructure managers and rail welding contractors.

Table1 : WRIST exploitation and dissemination activities period 1

Dissemination is a permanent on-going activity (M1 to M36) which benefits from the support of the Dissemination Manager who offers assistance for issues concerning the dissemination of the research results. The Dissemination Manager is in charge of the management of the broadcasting of the project results widely across the EU to the diverse sectors that had a direct and wider interests in the project results.

An Exploitation Board, which is necessary to ensure the involvement of stakeholders covering the whole value chain and also to facilitate the involvement of relevant industrial sectors who may be able to exploit the tools developed in the project, has been set up in T8.2 and be reported in the exploitation plan.

The WRIST Exploitation Board is composed of representatives from all partner companies that are direct stakeholders in the exploitation process, along with invited members who will be potential future end users of the technologies and will be able to advise on the best strategies for the widest possible dissemination and exploitation of the WRIST tools.

The first exploitation board meeting took place at InnoTrans in Berlin on 20 September 2016 at the GTG booth. A slide introducing WRIST was used as part of GTG rolling video wall on their internal booth and external stand. The slide was shown approximately every 12 minutes. The total number of GTG booth visitors has been estimated at 10 000, of which 233 have stayed for 15 minutes or more.

6 Results

6.1 Logo and graphic identity

The following logo has been designed and approved by the WRIST consortium. With tag line:

Without tag line:

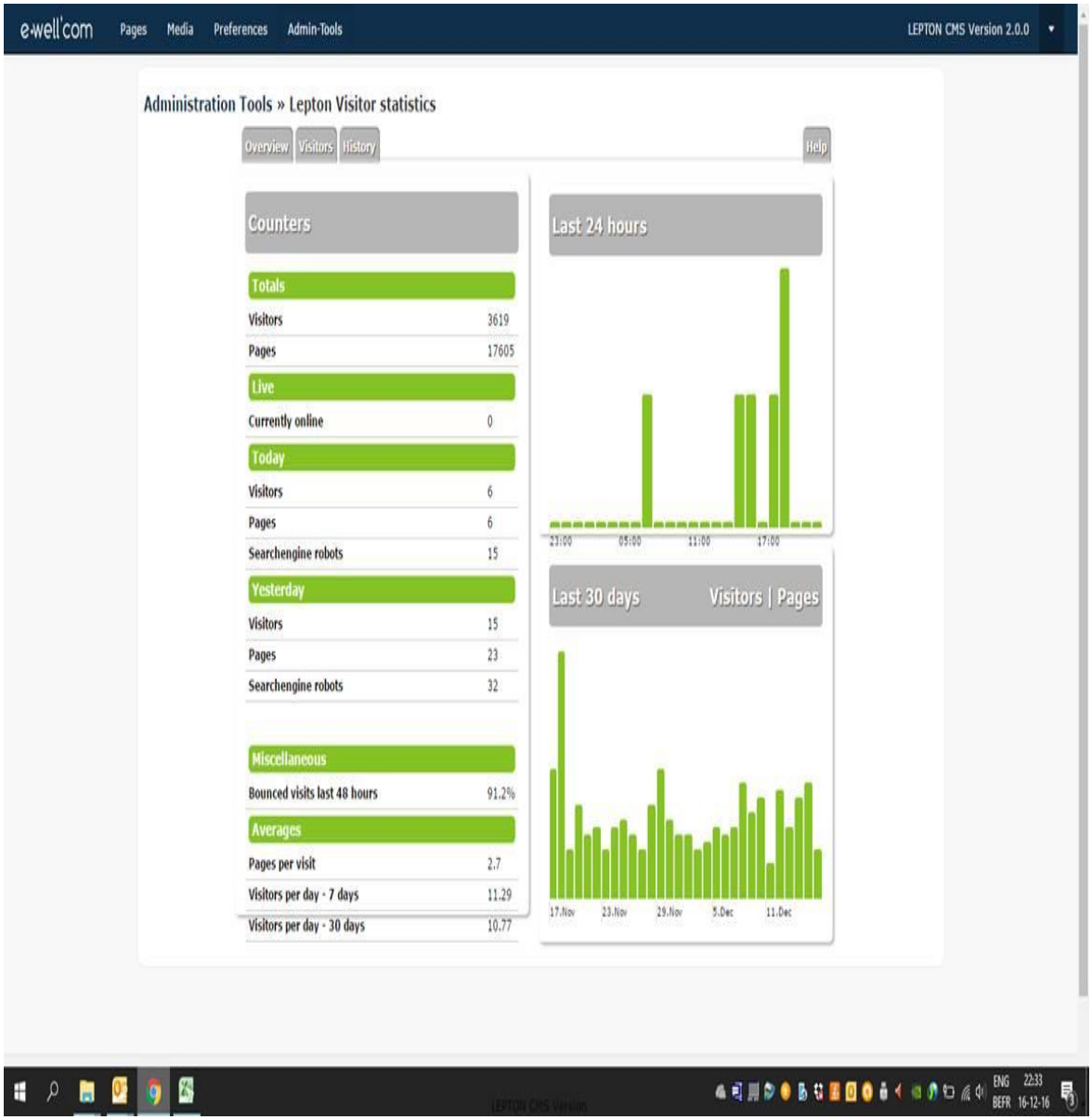
6.2 Project website

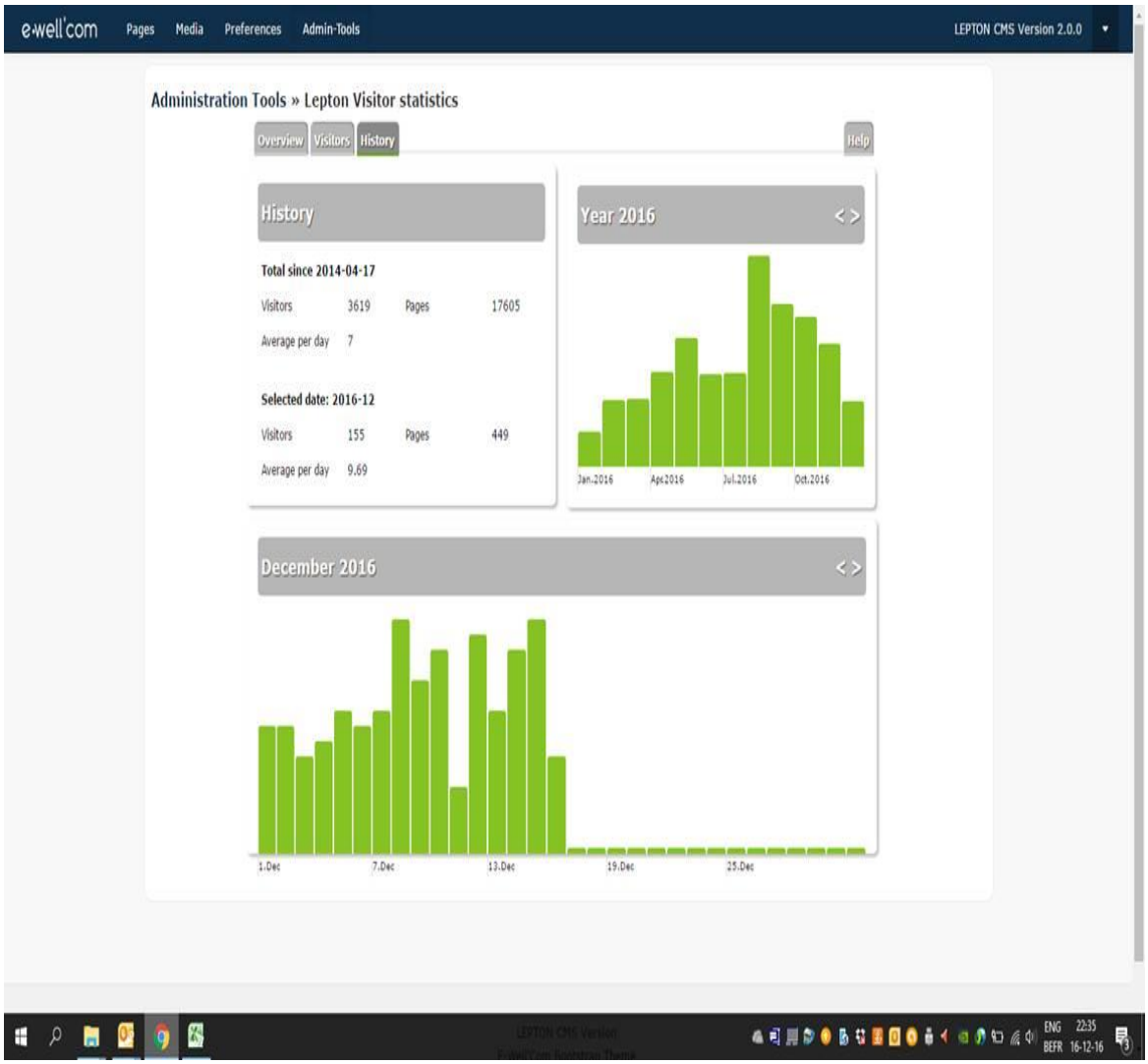
Link: www.wrist-project.eu

The dissemination activities represent a very important part of the WRIST project. The WRIST project aims to generate information and technology from the results of the project and disseminate this by means of conferences and publications and to develop and implement exploitation plans for each project partner and potentially for the wider EC community.

The initial exploitation and dissemination of the project was made on the project public website. The website gives an overview of the project outlining the main objectives and will keep to be promoted as a useful tool for the project partners to support their involvement in the project.

Below are screenshots of the visitors' statistics of the project's public website:





6.3 Project flyers

Two thousand (2 000) flyers have been printed and distributed to Partners for handing out. Flyers were distributed at the following events:

- Welding Week : Welding Fair (20-22 October 2015, Antwerp, Belgium),
- Wheel Rail Interaction 2015 UK (21-23 October 2015)
- BIL/NIL Welding Symposium (24-25 November 2015, Antwerp, Belgium).
- InnoTrans (20-21 September 2016, Berlin, Germany)
- Pumps&Valves (20-21 April 2016, Antwerp, Belgium)

The flyers contain a synthetic description of the project background, objectives and expected outcomes as well as a list of the project's partners and coordinator contact – see below.


Advanced Joining Technologies
increased reliability, longer lifetime and less maintenance
Use of Advanced Rail Steel Grades
will become easier and more cost effective for rail operators
Reliability
technologies will provide less disruptions and a higher safety level
Ecology
environmentally friendly and energy efficient joining techniques
www.wrist-project.eu
Coordinator
Koen Faes
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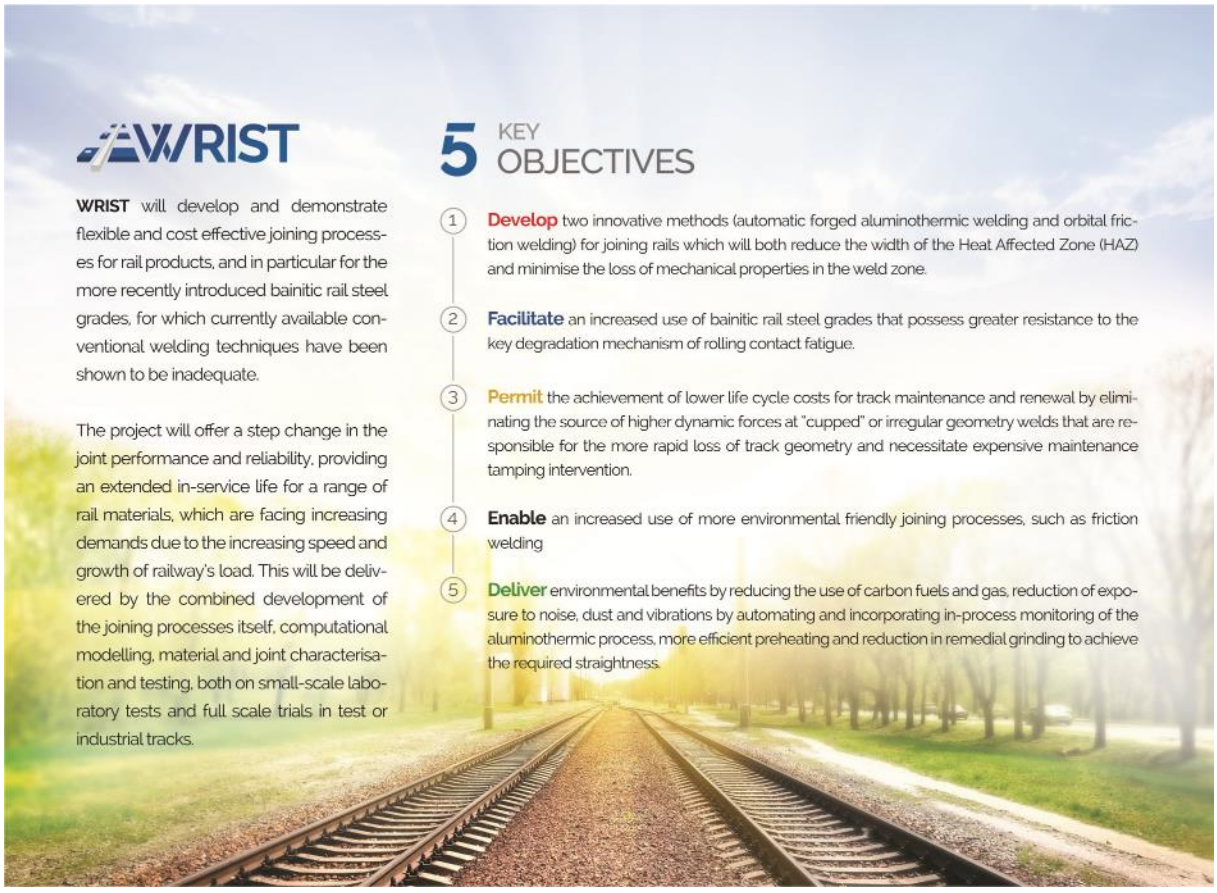
Partners
University of HUDDERSFIELD
TU Delft
ProRail
GOLDSCHMIDT
DENYS
jackweld
CHALMERS
ID²
ARTTIC
This project has received funding from the European Union's Horizon 2020 research and innovation Transport programme
Innovative Welding Processes for New Rail Infrastructure
WRIST


WRIST
WRIST will develop and demonstrate flexible and cost effective joining processes for rail products, and in particular for the more recently introduced bainitic rail steel grades, for which currently available conventional welding techniques have been shown to be inadequate.
The project will offer a step change in the joint performance and reliability, providing an extended in-service life for a range of rail materials, which are facing increasing demands due to the increasing speed and growth of railway's load. This will be delivered by the combined development of the joining processes itself, computational modelling, material and joint characterisation and testing, both on small-scale laboratory tests and full scale trials in test or industrial tracks.
5 KEY OBJECTIVES
1 Develop two innovative methods (automatic forged aluminothermic welding and orbital friction welding) for joining rails which will both reduce the width of the Heat Affected Zone (HAZ) and minimise the loss of mechanical properties in the weld zone.
2 Facilitate an increased use of bainitic rail steel grades that possess greater resistance to the key degradation mechanism of rolling contact fatigue.
3 Permit the achievement of lower life cycle costs for track maintenance and renewal by eliminating the source of higher dynamic forces at "cupped" or irregular geometry welds that are responsible for the more rapid loss of track geometry and necessitate expensive maintenance tamping intervention.
4 Enable an increased use of more environmental friendly joining processes, such as friction welding
5 Deliver environmental benefits by reducing the use of carbon fuels and gas, reduction of exposure to noise, dust and vibrations by automating and incorporating in-process monitoring of the aluminothermic process, more efficient preheating and reduction in remedial grinding to achieve the required straightness.

6.4 Events and conferences

Different events have given the opportunity to present the WRIST results and progression of work. The following events have already taken place:

- 20 - 22 October 2015: Welding Week; Antwerp welding fair (Antwerp, Belgium).

  Project information and flyers available at the information booth of BWI.

- 21 - 23 October 2015: Wheel Rail Interaction Seminar.

  Flyers have been made available.

- 27-28 October 2015 AG60 working group in Ängelholm where SJ (Swedish State railways) have a school for education of rail welders, demonstration of a French manufacturer of thermite welding equipment.

  Presentation of WRIST project, progress on results.

- 24-25 November 2015: BIL/NIL Welding Symposium, Antwerp, Belgium

  Project information and flyers available at the information booth of BWI.

- 7 December 2015: Allan Binstead (GTG) made an oral presentation at Balfour Beatty Rail in Derby

- 8 April 2016: Andreas Peeters (GTG) in collaboration with DB presented WRIST to DB and GTG customer

- 15 April 2016: Ian Banton (GTG) gave a WRIST overview briefing at Network Rail

- 27-28 April 2016: AG60 working group in Borlänge at the Swedish Transport Administration.

  Presentation of WRIST project, progress on results.

- 24 June 2016: a dissemination presentation set up by Allan Binstead (GTG) was issued

- 20 - 23 September 2016: INNOTRANS Exhibition and Conference “International Trade Fair for Transport Technology”, Berlin, Germany. www.innotrans.de/en/

  Project information and flyers available at the information booth of GTG.

- 1-2 November 2016: AG60 working group in Örebro at Vossloh (manufacturing switches), also demonstration of the Goldschmidt pre-heater for thermite welding.

  Presentation of WRIST project, progress on results

- 2-3 November 2016: NIL/BIL Welding symposium

  Project information and flyers available

- 23 November 2016: Network Rail Track Engineers conference.

  Project information as part of “Weld of the future” briefing

6.5 Newsletters

Three newsletters have been issued: November 2015, June 2016 and December 2016. The first newsletter highlights the objectives of the project, the second newsletter provides an overview of the progress of the running work packages with a special focus on WP3 and the third newsletter highlights the WP2 achievements.

The newsletters have been printed and made available at events, posted on Partners’ websites, circulated to the CAPACITY4RAIL consortium (Increasing Capacity 4 Rail networks through enhanced infrastructure and optimised operations - Grant agreement no: 605650) and to the UIC welding group, emailed to the user interest group via the dedicated mailing list and tweeted.

7 Conclusions

As the project aims to develop two novel welding techniques that are likely to be the subject of Intellectual Property protection, dissemination of results need to be controlled carefully. Specific tools and strategies for dissemination and exploitation were foreseen and have been implemented when interesting results became available for all fields of society: industrial, scientific, and educational.