

SAFETY4RAILS

SECOND UPDATE OF THE DISSEMINATION AND COMMUNICATION PLAN

Deliverable 10.3

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ABOUT SAFETY4RAILS

SAFETY4RAILS is the acronym for the innovation project: **Data-based analysis for SAFETY and security protection FOR detection, prevention, mitigation and response in trans-modal metro and RAILway networkS**. Railways and Metros are safe, efficient, reliable and environmentally friendly mass carriers, and they are becoming even more important means of transportation given the need to address climate change. However, being such critical infrastructures turns metro and railway operators as well as related intermodal transport operators into attractive targets for cyber and/or physical attacks. **The SAFETY4RAILS project delivers methods and systems to increase the safety and recovery of track-based inter-city railway and intra-city metro transportation.** It addresses both cyber-only attacks (such as impact from WannaCry infections), physical-only attacks (such as the Madrid commuter trains bombing in 2004) and combined cyber-physical attacks, which are important emerging scenarios given increasing IoT infrastructure integration.

SAFETY4RAILS concentrates on rush hour rail transport scenarios where many passengers are using metros and railways to commute to work or attend mass events (e.g. large multi-venue sporting events such as the Olympics). When an incident occurs during heavy usage, metro and railway operators must consider many aspects to ensure passenger safety and security, e.g. carry out a threat analysis, maintain situation awareness, establish crisis communication and response, and they have to ensure that mitigation steps are taken and communicated to travellers and other users. **SAFETY4RAILS will improve the handling of such events through a holistic approach.** It will analyse the cyber-physical resilience of metro and railway systems and deliver mitigation strategies for an efficient response, and, in order to remain secure given everchanging novel emerging risks, it will facilitate continuous adaptation of the SAFETY4RAILS solution; this will be validated by two rail transport operators and the results will support the re-design of the final prototype.

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Executive summary

This report is part of the Work Package 10 (WP10) and is the second update of the SAFETY4RAILS Dissemination and Communication Plan. The first update was submitted in M12 (September 2021). The purpose of the WP10 – titled Communication, Dissemination, Exploitation and Training Activities – communication and dissemination activities is to ensure **efficient communication, create project visibility and to reach various target groups also with results from the project**. The overall objectives of WP10 Communication, Dissemination, Exploitation and Training Activities are:

- To create an ideal environment for SAFETY4RAILS to share research results with potential users and the scientific community, as well as to find the path to exploit these results.
- To identify the tools, processes and key messages and activities to reach various audiences
- To promote the outcomes of the project and diffuse the awareness of the research results

Deliverable 10.3 provides the **third and final version of the SAFETY4RAILS Dissemination and Communication Plan**, comprising both dissemination and communication considerations such as dissemination and communication strategy, channels, publication procedure and action plans. The document outlines the **dissemination and communication activities** by consortium members until the end of the project.

1. Introduction

Deliverable 10.3 is an updated version of deliverable D10.2 First update of the communication and dissemination plan (SAFETY4RAILS Consortium, 2021)¹. It presents the updates of the **Dissemination and Communication Plan (DCP) strategy for the SAFETY4RAILS project, including all the respective activities carried out during the whole life of the project.**

On the one hand, this DCP strategy sets out the plan for targeting the various relevant stakeholders in an effective manner, while also generally describing the intended applied and scientific dissemination and communication activities for the next project cycle. On the other hand, this document describes the communication and dissemination activities performed during the first year and second year of the project.

The dissemination of the project results and the exploitation of the achievements of SAFETY4RAILS are key success factors for the project and the main activities to maximize the expected impacts beyond the scope of the project. Throughout the project lifespan, SAFETY4RAILS focussed on the effective dissemination of the project outcomes and results and on creating a successful and widely used environment for end users to share and develop knowledge related to railway safety and security.

1.1 Structure of the deliverable

The Dissemination and Communication Plan (DCP) was developed considering communications within the consortium (in coherence with WP1), the associated partners, as well as (in coherence with WP2) industry, civil protection actors, policy makers, stakeholders and the end-users. This deliverable also includes the identification of the target audiences and setting the measures (using indicators such as the number and nature of event attendees/end user feedback) for the expected impact of the dissemination and communication activities. Additionally, this strategy also maps other relevant EU-funded projects and policy activities within which SAFETY4RAILS can contribute to. The latter will be updated as the project progresses further.

The document comprises the following sections:

- The second section indicates general initial dissemination and communication objectives as identified in the proposal stage.
- The third section analyses the Identified stakeholders and target groups.
- The fourth section matches each stakeholder and target group to specific key messages.
- The fifth section focuses on the main dissemination and communication channels.
- The sixth section introduces the dissemination and communication materials.
- The seventh section outlines the procedures and protocols.
- The eighth section presents the project's internal communication.
- The ninth section provides for dissemination and communication actions.
- The tenth, and final section, highlights the monitoring and assessment of dissemination and communication activities.

Each section is updated with the real activities performed during the whole duration of the project.

1.2 Dissemination vs. Communication

In order to utilise this deliverable to the fullest and maximize the impact of the project, it is imperative to first establish an understanding regarding the notions of '**dissemination**' and '**communication**', and similarly with

¹ SAFETY4RAILS Deliverable D10.2 - https://safety4rails.eu/wp-content/uploads/2022/03/S4R_RPT_D10.2_V1_2.pdf

an understanding of the impact of both notions to implement them according to guidelines and to improve upon them as the project progresses.

The difference or rather similarities between communication and dissemination can often be confused. For this purpose, the two have been clearly distinguished and clarified in numerous sources related to H2020 funding scheme. According to the European IPR Helpdesk (European Commission, 2018):²

- **“Dissemination”** is the public disclosure of project results by scientific publications or other publications, including e.g. project deliverables with the aim to uptake and use these results by others, thus maximising the impact of the project. The main objective of dissemination is to transfer **knowledge** and **results** to potential audiences that may take an interest in the potential **use** of this knowledge and results. Important to note that the focus of dissemination is on results only and to audiences that may see use of the results i.e. policy makers, scientific community, industrial partners and so on.
- **“Communication”** of the project in the other focuses on the project in general, its added value to society, increasing awareness of the project's existence and so on. It starts at the outset of the project and continues throughout the project lifetime. Thus, the aim of communication is **reaching out to society beyond the project's own community**, including to the **media** and the **broad public** highlighting the very positive impact of EU-funded research and innovation activities by e.g. identifying how different societal challenges are addressed and solutions provided.

The dissemination and communication strategy will ensure the adoption and exploitation of project results through identifying objectives, key messages, methods, channels, tools, timings and responsibilities for effective outreach as indicated in the Horizon 2020 Communication Strategy Checklist (European Commission, 2014) that includes six main themes with detailed guidance.

² European IPR Helpdesk. (2018). Fact Sheet. The Plan for the Exploitation and Dissemination of Results in Horizon 2020. http://www.iprhelpdesk.eu/sites/default/files/EU-IPR-Brochure-Boosting-Impact-C-D-E_0.pdf
PU – Public, D10.3, October 2022

2. Dissemination and communication objectives

The successful implementation of the DCP will ensure that SAFETY4RAILS maximises the impact achieved across targeted audiences (to understand the identified targeted audiences, please check section 3 of this deliverable). This will be attained through the use of typical dissemination methods e.g. conference presentations, attending events (around the topics of cyber security, railway security, resilience, etc.), producing academic papers and presentations, as well as through a website created for the project.

In terms of a specific methodological approach, the SAFETY4RAILS project will employ a methodology which provides a 360-degree or continuous cycle approach consisting of planning, performing, assessing, and reporting (Figure 1). The four categories form a continuous course of action that never stops and whose cyclical form ensures constant feedback.



FIGURE 1 SAFETY4RAILS DISSEMINATION AND COMMUNICATION METHODOLOGY

Efficient dissemination during the SAFETY4RAILS project ensures short and long-term success of the project. This is core to the strategy of spreading knowledge about the project among different target groups by using different instruments, adapted to the target group.

The objectives for **SAFETY4RAILS** external dissemination and communication are to:

- Ensure efficient dissemination of project results.
- Create project visibility.
- Reach various target groups (please refer to the following section 3).
- Guarantee sustainability of the project results (implemented through the dissemination and communication strategy).
- Increase awareness on both the topic of railway security and specific purposes and actions linked to the project.
- Involve the whole community in a participatory communication plan structured in various steps.

The objectives for **SAFETY4RAILS** internal dissemination and communication are to:

- Monitor the status of SAFETY4RAILS developments to keep WPs aware of the project progress.
- Ensure coherent internal communication between WPs.
- Make relevant internal information available also for external communication.
- Ensure an efficient and smooth communication among partners.
- Allow and enable the sharing of interesting and relevant content for the project.

3. Identified stakeholders and target groups

By engaging end-users from the start of the project, SAFETY4RAILS will acquire a more motivated and interested participant base and will allow early opportunities for dissemination and exploitation. In addition, the targeted and timely communication will allow the different target groups to be informed about and to participate in the requirement analysis (WP2), tool development (WPs 3-5) and the implementation of the SAFETY4RAILS Information System, S4RIS, (WP6) and its evaluation and validation by practitioners with different backgrounds. For an effective dissemination and exploitation of the SAFETY4RAILS outcomes, the main target groups and actors have been identified as crucial for the implementation of SAFETY4RAILS as presented in

TABLE 1.

TABLE 1 SAFETY4RAILS TARGET GROUPS AND KEY ACTIONS

Target group	Purpose and target	Means of communication	Key actions
End Users/ Advisory Board members / Rail and metro operators	<p>Involve them in workshops to get feedback and input, review of some deliverables, and participation in the test and evaluation to provide feedback.</p> <p>Raise awareness of the project; disseminate outcomes, guidance, and recommendations.</p>	<p>Advisory board meetings/workshops.</p> <p>A dedicated workspace in UIC extranet to share documents of the project.</p> <p>Dedicated mailing lists to provide them with information.</p> <p>SAFETY4RAILS Website, Social media updates and forum articles, workshops, training, newsletters, domain-specific reports and briefings, and other media and fora.</p>	<p>Promote the uptake of project results and solutions.</p> <p>Promote safety and improvement of existing infrastructure.</p> <p>Promote collaboration and knowledge sharing.</p> <p>Raise interest in training and R&I activities and increase safety and security.</p> <p>Raise awareness.</p>
LEA and practitioners	<p>Raise awareness of the project; disseminate outcomes, guidance, and recommendations</p>	<p>SAFETY4RAILS Website, Social media updates and forum articles, workshops, trainings, newsletters, domain specific reports and briefings, and other media and fora. They will be encouraged to provide feedback on project development and to utilise the SAFETY4RAILS Information System (S4RIS) developed in SAFETY4RAILS.</p>	<p>Promote the uptake of project results and solutions.</p> <p>Promote collaboration and knowledge sharing.</p> <p>Raise awareness of the existence of the project.</p>

Stakeholders involved in crisis response	Raise awareness of the project; disseminate outcomes, guidance, and recommendations	SAFETY4RAILS Website, Social media updates and forum articles, Advisory Board meetings, workshops, trainings, newsletters, domain-specific reports and briefings, and other media and fora. They will be encouraged to provide feedback on project development and to utilize S4RIS developed in SAFETY4RAILS.	<p>Raise awareness of potential threats, shortcomings in current infrastructure.</p> <p>Promote uptake of the project results.</p> <p>Promote training and collaboration, synergies.</p>
Manufacturers for Train and metro systems	Raise awareness of the project, disseminate and promote project achievements aiming at making SAFETY4RAILS technological solutions de-facto solutions for the industry	<p>Promotional material.</p> <p>Major industrial exhibitions and commercial shows dedicated rail industry (such as InnoTrans...)</p> <p>Organisation of Workshops</p>	<p>Promote uptake of the project results.</p> <p>Raise awareness of potential safety threats and considerations for the potential inclusion of project results at the design phase i.e. safety and security by design.</p> <p>Training, collaboration, and participation in events.</p>
Security solutions providers	Raise awareness of the project, disseminate and promote project achievements aiming at making SAFETY4RAILS technological solutions de-facto solutions for industry, and provide IT support during the project and post-project towards commercialisation	<p>Promotional material.</p> <p>Major industrial exhibitions and commercial shows are dedicated to physical and cyber security.</p> <p>Organisation of Workshops.</p> <p>Internal Networking.</p>	<p>Promote uptake of the project results.</p> <p>Raise awareness and promote collaboration and event participations.</p> <p>Raise awareness of potential threats and combine synergies for lessons learned that will influence the design of safer infrastructure.</p>
Scientific community	Exchange knowledge and good practices	<p>Presentation at scientific thematic events, workshops, and conferences.</p> <p>Publication in scientific journals.</p> <p>Dissemination of the project on ResearchGate</p>	Promote collaboration, knowledge sharing, and raise awareness of project existence. promote the initiation of studies and scientific papers.

Standardization bodies	Be informed on the SAFETY4RAIL progress and especially recommendations that could become standards	Promotional material, publication of brochure with the project recommendations. Establish contacts with the relevant groups	Promote consideration and uptake of project results for further standardisation. Lessons learned.
Policy makers	Use the project's outcomes: adapt the legal framework if needed	Promotional material Presentation at thematic events, workshops, and exhibitions;	Promote consideration and uptake of project results for further standardisation. Lessons learned.
Public	Raise overall awareness on the project and its objectives	Promotional material; Press releases. Public workshops. Web presence. Posts on Social Media	Promote safety and security of rail systems. Promote the use of railways of the current generation. Ensure that civil liberties remain unchanged and that personal privacy is guaranteed while increasing safety and security of our citizens. Raise awareness of the societal challenges in current systems and how the R&I of the project will tackle the issues and propose solutions. The public needs to remain involved in the communication chain throughout the project as they are the ultimate end user.

To delve into more detail and to answer the questions who, why and how, as seen in the project proposal, the project target groups are classified according to the above sections.

3.1 Rail and metro operators: End-users, Advisory Board members

Who: End-users and/or Advisory Board members, such as railway operators across Europe and Metro operators. The advisory board will be extended during the whole project with end-users and practitioners.

The Advisory Board is composed of 11 rail or metro security experts from NRIC (Bulgaria), PKP (Poland), Infrabel (Belgium), NS (The Netherlands), SBB (Switzerland), ER-ISAC (European Rail - Information Sharing and Analysis Centre), UITP (International association for public transport), SNCF (France) and ÖBB (Austria).

Why: End-users are in a key role in providing strong, critical, and constructive feedback during the whole project duration to ensure an efficient SAFETY4RAILS Information System (S4RIS) at the end of the project. Participation from this target group will be mutually beneficial. For the project, it means that the relevance and feasibility of the solution will be ensured through the end users' inputs throughout the development process. For the end-users, it provides a means to help ensure that S4RIS is usable for them allowing them to perform vulnerability and resilience analysis in a more effective manner.

How: End-users will be reached through the SAFETY4RAILS website, social media updates and forum articles, Advisory Board meetings, workshops, trainings, newsletters, domain-specific reports and briefings, and other media and fora. They will be encouraged to provide feedback on project development and to utilise S4RIS developed in SAFETY4RAILS.

3.2 Authorities

Who: LEAs, civil protection, fire brigades, ambulance service, public bodies, local authorities.

One representative from the French Ministry of transport is a member of the Advisory Board.

Why: Participation of LEAs and Practitioners will be beneficial for SAFETY4RAILS especially from the point of view of providing better knowledge about vulnerabilities against physical, cyber and combined threats, their detection and the emergency response. Participation from this target group will be mutually beneficial. Moreover, engaging with this target group will allow SAFETY4RAILS to promote the uptake of project results and solutions, promote collaboration and knowledge sharing and raise awareness of the existence of the project.

How: LEAs will be reached through SAFETY4RAILS website, social media updates and forum articles, workshops, trainings, newsletters, domain-specific reports and briefings, and other media and fora. They will be encouraged to provide feedback on project development and to utilize S4RIS developed in SAFETY4RAILS.

3.3 Other stakeholders involved in crisis response

Who: Intermodal operators (bus, plane, road, port, etc.), relevant critical infrastructure operators (energy, telecommunication, etc.), public health.

One representative from the Hungarian Red Cross is a member of the Advisory Board.

Why: Participation of these stakeholders will be beneficial for SAFETY4RAILS especially from the point of view of providing better knowledge about vulnerabilities against physical, cyber and combined threats and emergency response especially to what it is experienced in their scenarios of competence. Participation from this target group will be mutually beneficial. Moreover, engaging with this target group will allow SAFETY4RAILS to promote the uptake of project results and solutions, promote collaboration and knowledge sharing and raise awareness of the existence of the project. Finally, it will help SAFETY4RAILS consortium members to raise awareness of potential threats and shortcomings in the current infrastructure.

How: Stakeholders will be reached through SAFETY4RAILS website, social media updates and forum articles, workshops, trainings, newsletters, domain-specific reports and briefings and other media and fora. They will be encouraged to provide feedback on project development and to utilize S4RIS developed in SAFETY4RAILS.

3.4 Manufacturers for train and metro systems

Who: Manufacturers of train and metro systems as well as Information and Communication Technologies (ICT) vendors.

Why: Participation from this target group will be mutually beneficial. For SAFETY4RAILS it means that providers of essential systems to be considered in the development process can contribute with experiences and input regarding the feasibility of potential project results.

How: The stakeholders will be reached through promotional material and major industrial exhibitions and commercial shows dedicated rail industry (such as InnoTrans, etc.).

3.5 Security solutions providers

Who: Similar to end-users but targeted towards industry providing ICT integrations, infrastructure providers (maintenance, installation) and also organisations and industry-based associations (e.g. ECSO, EOS).

Why: To promote uptake of the project results but also to raise awareness of potential security threats and considerations for potential inclusion of project results at the design phase, i.e. safety and security by design, as well as supporting the training, collaboration, and participation in events.

How: This group will be engaged in a similar way to end-users with added industry-specific workshops, demonstrations, use case presentations and conferences. There are workshops to be conducted as part of WP2 and contacts with being furthered through ongoing communication via social media, blogs, newsletters and events. Events organised by other groups on cybersecurity will be reviewed and potentially attended to contact relevant providers.

3.6 Scientific community

Who: Academia, research and development institutions within the areas and disciplines represented in the project.

Four researchers from the University of Karlsruhe, the European CBRN Centre, the Munich University and the University of Technology, Business and Design Konstanz, are members of the Advisory Board.

Why: Participation from this target group will be mutually beneficial. For SAFETY4RAILS it means that others with scientific experience and knowledge relevant to the development process can contribute with experiences and input regarding the feasibility of potential project results. For the researchers, it will provide a means of tapping into a vast repository of knowledge related to topics such as risk assessment, cyber-physical threats, emergency response and information systems and system resilience.

How: The stakeholders will be reached through publication in top-tier scientific journals and conferences, including those specialised in infrastructure resilience, criminology, cyber threats, system vulnerabilities and risk management measures; participation in and organisation of workshops and conferences; demonstrations and talks at scientific symposiums; incorporation of findings and practice in undergraduate and postgraduate courses; and contribution to dissemination materials.

3.7 Standardisation bodies

Who: CEN, ISO.

Why: Participation from this target group will be mutually beneficial. For SAFETY4RAILS it means it will be informed of the latest standards' developments and agreed on procedures. For the standardisation bodies it will be a chance to consider and uptake of SAFETY4RAILS findings and/or recommendations.

How: The stakeholders will be reached through SAFETY4RAILS promotional material, publication of brochure with the project recommendations and direct contacts.

3.8 Policy makers

Who: Railway system 'governing' institutions, including government departments, international institutions, regulatory and standard-setting bodies as well as ethical committees, technology assessment and foresight institutions, including also MS and EU level policy-related organizations, ministerial bodies (e.g. ENISA, ERA, DG MOVE, DG HOME, REA).

One representative from the European Union Agency for Railways (ERA) is member of the advisory Board.

Why: Policy makers and administrative bodies will play an important part in strengthening the acceptability and feasibility of the S4RIS as well as its findings and approach to resilience more generally. Addressing and engaging policy makers will be also an efficient way of promoting further metro and railway infrastructure resilience and security on the agendas of research institutions and industry.

How: This target group will be reached via conferences, events such as demonstrations and high-level workshops. Together with the Advisory Board, key influencers will be identified who will be informed by regular newsletters and reports generated by the WPs, engaged in blogs and tweets and invited to major SAFETY4RAILS project events. Additional media exposure to the project is planned to further influence a wider group of policy makers.

3.9 Public

Who: The actors with a focus on the public good, citizens, and societal resilience.

Why: Involving civil society organisations (CSOs) is a great means of gaining input from organisations specialised in different aspects of societal resilience and emergency response, which can also act as gateways to reaching and integrating citizens and civil society in risk identification and emergency response. Actors with a focus on the public good, citizens, and societal resilience can provide more grass-root visions as input for developing our accurate, ethical, and sustainable information system which at the same time would responds to societal expectations and needs. To foster resilience, it is important to create fora for dialogue, so citizens are informed about the SAFETY4RAILS system, and to contribute with the input of different kinds. Thus, it is important to get citizens perspectives on how better to enhance the resilience of railway and metro infrastructure.

How: Actors with a focus on the public good, citizens, and societal resilience will be included in workshops as part of WP2 and contacts will be furthered through ongoing communication via social media, blogs, newsletters and events.

4. Key messages

At a high-level and in summary SAFETY4RAILS wants to communicate, subject to updates, as main messages:

- 1) There are ethical and economical methods and tools to improve the resilience of rail and metro infrastructures to address combined physical and cyber threats.
- 2) Increasing digitalisation will raise both the potential number of physical any cyber threats and also their likelihood, depending on whether the mitigation measures are implemented or not.
- 3) SAFETY4RAILS will develop and demonstrate a set of tools to improve the resilience of rail and metro infrastructure against combined physical and cyber threats at the pilot rail and metro sites.
- 4) The project is an innovation project supported by the European Union through the H2020 programme.
- 5) It runs for 2 years from October 2020 to September 2022.
- 6) It has 29 interdisciplinary partners (31 in the future).
- 7) It starts with 17 tools with the potential to improve the resilience of rail and metro infrastructure against combined physical and cyber threats which are not yet products but which have a high technology readiness level.
- 8) The technology readiness levels of the tools will be increased and they will be combined in a modular platform, the SAFETY4RAILS Information System (S4RIS), for testing at pilot sites.
- 9) The individual tools can contribute to the different steps within a resilience cycle e.g. identification, protection, detection, response and recovery.
- 10) The project will carry out its work and develop tools which are legally and ethically compatible with European law and societal values such as the rule of law and civil liberty
- 11) There are many opportunities for those stakeholders identified in our target audiences to learn about the project and to contribute to it with their input which we very much value and welcome.

As the project progresses messages will be adapted and go into further detail on for example, identified user requirements, the functionalities of specific tools implemented in S4RIS, demonstration campaigns etc.

The key messages will be adapted and presented considering which aspects we evaluate as most important and interesting for individual target audiences/groups. A first draft of the focus of key messages is proposed in **TABLE 2**. The table will be updated as the project progresses further.

TABLE 2 KEY MESSAGES PER TARGET GROUPS

Target group	Key messages
End Users/ Advisory Board members / Rail and metro operators	<p>Your participation in the project ensures that our R&I activities and the project in general remain in scope, ensures the feasibility of our solutions and ensures an ethical, efficient and effective SAFETY4RAILS Information System (S4RIS) at the end of the project.</p> <p>Our results will allow you to perform vulnerability and resilience analysis in a more effective manner.</p>
LEA and practitioners	<p>Your participation and your input are valuable to our project and will support our R&I activities.</p> <p>Your participation in the SAFETY4RAILS project will provide us with up-to-date information and data regarding vulnerabilities against physical and cyber threats and emergency response.</p> <p>Our results can support your activities in crisis response situations and support you to mitigate threats and shorten response times and minimize risks.</p>

Stakeholders involved in crisis response	<p>Your participation and your input are valuable to our project and will support our R&I activities</p> <p>Your participation in the SAFETY4RAILS project will provide us with up-to-date information and data regarding vulnerabilities against physical and cyber threats and emergency response.</p> <p>Our results can support your activities in crisis response situations and support you to mitigate threats and shorten response times and minimize risks.</p>
Manufacturers for Train and metro systems	<p>Your participation and your input are valuable to our project and will support our R&I activities.</p> <p>Your expertise can steer our R&I activities and help us solve potential feasibility challenges.</p> <p>From the results of the SAFETY4RAILS, we have identified the following threats. These are recommended to be taken into account in the design phase.</p>
Security solutions providers	<p>Your participation and your input are valuable to our project and will support our R&I activities.</p> <p>From the results of SAFETY4RAILS, we have identified the following threats. These are recommended to be taken into account in the design phase.</p>
Scientific community	<p>SAFETY4RAILS will address your needs, wants and concerns. Join the project and provide your input.</p> <p>Join our network for a closer look at our results. We have a vast repository of knowledge related to cyber-physical threats, emergency response and information systems and system resilience.</p>
Standardization bodies	<p>These are our results, a product of extensive studies and collaboration with first-hand practitioners, stakeholders and end-users.</p> <p>We propose the uptake of these results when revisiting the current and upcoming standardisations.</p>
Policy makers	<p>These are our results, a product of extensive studies and collaboration with first-hand practitioners and end-users. These results can be used to revise or create new standards, laws and regulations.</p> <p>We would like to show which challenges SAFETY4RAILS has tackled and which state-of-the-art results have emerged. This is how our solutions can create a safer rail system in the EU.</p> <p>This is how SAFETY4RAILS tackles the existing and future challenges.</p>
Public	<p>Technology is moving fast and the infrastructure that enables us to carry on our daily lives is advancing. With advancement new challenges are emerging. Your input as citizens will ensure that the R&I remains relevant from a very local perspective.</p> <p>SAFTE4RAIL aims at creating a safer and securer environment by tackling these challenges and addressing them head-on to create safer and securer rail systems.</p> <p>EU R&I has committed funding to increase the safety and security of railway systems against current and future threats. SAFETY4RAILS will create recommendations for new solutions that will increase the security and safety of railway systems.</p>

EU R&I SAFETY4RAILS is committed to ensuring that our results will be useful only with the pre-condition that such results are ethical and follow strict EU regulations. Your input to the project will support us to ensure that civil liberties remain unchanged and that the personal privacy of citizens is unsacrificed while addressing the potential threats in the current railway systems.

5. Dissemination and communication channels

The SAFETY4RAILS project will emphasise the use of various channels in dissemination and communication activities tailored to the different audiences.

5.1 Website

5.1.1 Description

UIC created a dedicated website with the domain <https://safety4rails.eu/> at the beginning of the project (FIGURE 4). It is designed to reach all the potential audiences of the SAFETY4RAILS project with relevant content, although a greater number of visits are expected from those groups that are more technical and related to the subject matter of the project. It includes a description of the project according to public information agreed within the consortium.

The sections of the SAFETY4RAILS website are the following:

About: This section is the home page and contains a general and brief description of the project including the following subsections:

- What is SAFETY4RAILS?
- Why SAFETY4RAILS?
- Which use cases will be implemented?
- What's innovative in SAFETY4RAILS?

Partners: Description of the 31 partners involved in the consortium, including a brief overview of their profile and activities.

Library: This section makes available all SAFETY4RAILS public documents. It comprises at least the following sections:

- SAFETY4RAILS brochures - the electronic versions of the three brochures are available on the website. The first brochure introduces SAFETY4RAILS with a brief presentation on SAFETY4RAILS context, objectives, concept and contact details, in PDF format. The second brochure outlines the project's mid-term achievements, while the third brochure summarises the lessons learnt during SAFETY4RAILS.
- SAFETY4RAILS newsletters
- SAFETY4RAILS videos
- SAFETY4RAILS Public deliverables - all the project public deliverables are published in this section once approved by the EC services.
- SAFETY4RAILS Publications - all the publications issued by the SAFETY4RAILS consortium, in the context of the project, will be published in this section.

News & events: This section allows for the publication of existing news directly related to SAFETY4RAILS' objectives and technologies, as well as other relevant news.

This section includes:

- Press releases: with articles reporting on major events of the project (e.g. kick-off, final conference).
- News: in this section, 1 to 2 blog posts per month are published. Each partner has been asked to provide at least one blog post during the project. A specific topic has been suggested to each partner, but all consortium members have the opportunity to decide upon and change the topic of their blog posts to suit their communication purposes in the project. Articles published in the UIC e-newsletter are also included.
- Events: internal and external events to the project that are most relevant to SAFETY4RAILS, including the project workshops.

- Twitter feed and posts of SAFETY4RAILS' account @Safety4R.

Contact: Project Coordinator and website manager contact details, as well as a contact form.

The website will remain online after the end of the project and will be maintained by UIC. The consortium partners will also refer to the SAFETY4RAILS website within their own companies' websites.



FIGURE 2 SCREENSHOT OF SAFETY4RAILS HOMEPAGE

A disclaimer is available at the bottom of the home page. This section gives information to the users of the website on the general terms and conditions of use, more specifically intellectual property, security, personal data, access, compliance with current legislation and liability.

5.1.2 Main achievements

The website was regularly updated during the period, especially the section on news and events with the publication of 31 articles (at <https://safety4rails.eu/news/>).

Table 3 lists the articles published.

TABLE 3 LISTS OF ARTICLES PUBLISHED

N°	Title of the article	Date	Main author
1	Official launch of SAFETY4RAILS European research project on 5 November 2020	Nov. 2020	EOS
2	End-users workshop held on 14-15 December 2020	Jan. 2021	CEIS
3	What is challenging for the end users in SAFETY4RAILS? How, why and what are the goals of being in SAFETY4RAILS?	Feb. 2021	PRORAIL
4	SAFETY4RAILS presentation at EU Rail Passenger Security Platform – RAILSEC 9, held online on 16/02/2021	Feb. 2021	UIC
5	SAFETY4RAILS project attended the “Project to policy kick-off seminar” (P2PKOS) for security research organised by REA	Mar. 2021	UIC

6	SAFETY4RAILS project held its second workshop with the external experts of the advisory board on 15 March 2021.	Mar. 2021	UIC
7	Future-proofing mass transit infrastructure	Apr. 2021	RMIT
8	SAFETY4RAILS project held its third workshop with the external experts of the Advisory Board on 29 April 2021.	Apr. 2021	UIC
9	SAFETY4RAILS presentation at the CERIS DRS Workshop on Multihazards disaster risk management organised by DG HOME	May 2021	EOS
10	SAFETY4RAILS Impact on Railway Stations in the Context of Physical and Cyber Security	May 2021	RFI
11	Why SAFETY4RAILS is Important for Rail System Operators	Jun. 2021	EGO
12	The need for a Security Operation Control Centre to manage railway security	Sep. 2021	LEONARDO
13	How Railway System Operators will be able to prevent or mitigate IT and OT outages and failures	Sep. 2021	IC
14	Building railway infrastructure resilience through reliable data collection	Oct. 2021	RMIT
15	Towards more resilient Railway Systems enhanced with hardware-based cyber-physical security and digital twin	Dec. 2021	ERARGE
16	SAFETY4RAILS EU project held its first simulation exercise in Madrid on 9-10 February 2022	Feb. 2022	UIC
17	An Incident and Crisis Management Tool to Coordinate the Response to and Recovery from Railway Incidents	Mar. 2022	MTRS
18	SAFETY4RAILS Newsletter is now published	Apr.2022	EOS
19	SAFETY4RAILS EU held its second simulation exercise online on 27-28 April 2022	May. 2022	LAU
20	WINGSPARK: An anomaly detection tool for efficient monitoring, incidents detection and effects mitigation to enhance the security in railway infrastructure	May. 2022	WINGS
21	A crowd simulation tool for improving security and resilience in the railway sector	Jun. 2022	NCSR
22	The choice of the right blockchain platform	Jun. 2022	AC
23	Leveraging Open Source Intelligence for Mass Transit Security	Jul. 2022	INNO
24	SAFETY4RAILS held its fourth simulation exercise in Milan on 6th July 2022	Jul. 2022	CEIS

25	The contribution of SAFETY4RAILS to the wider framework of EU rail transport security	Jul. 2022	EOS
26	SAFETY4RAILS Final Conference will be held on 28 September in Paris, France at UIC HQ	Jul. 2022	UIC
27	SAFETY4RAILS final newsletter is now published	Sept. 2022	EOS
28	SAFETY4RAILS Final Conference was held on 28 September in Paris, France at UIC HQ	Oct 2022	UIC
29	Utilising an open-source threat intelligence and sharing platform as part of the cybersecurity resilience capabilities offered by the S4RIS platform	Oct 2022	Cyber Services
30	The contribution of SAFETY4RAILS to research and academia	Oct 2022	Laurea
31	SAFETY4RAILS Final Conference	Oct 2022	CEIS

5.1.3 Statistics of the website

SAFETY4RAILS website statistics for the whole period (from 1st of December 2020 to 30 September 2022)

- Number of visitors: around 5,200
- Percentage of new visitors: 62.3%
- Number of page views: around 20,000

Figure 3 below presents the statistics of the website during the period:

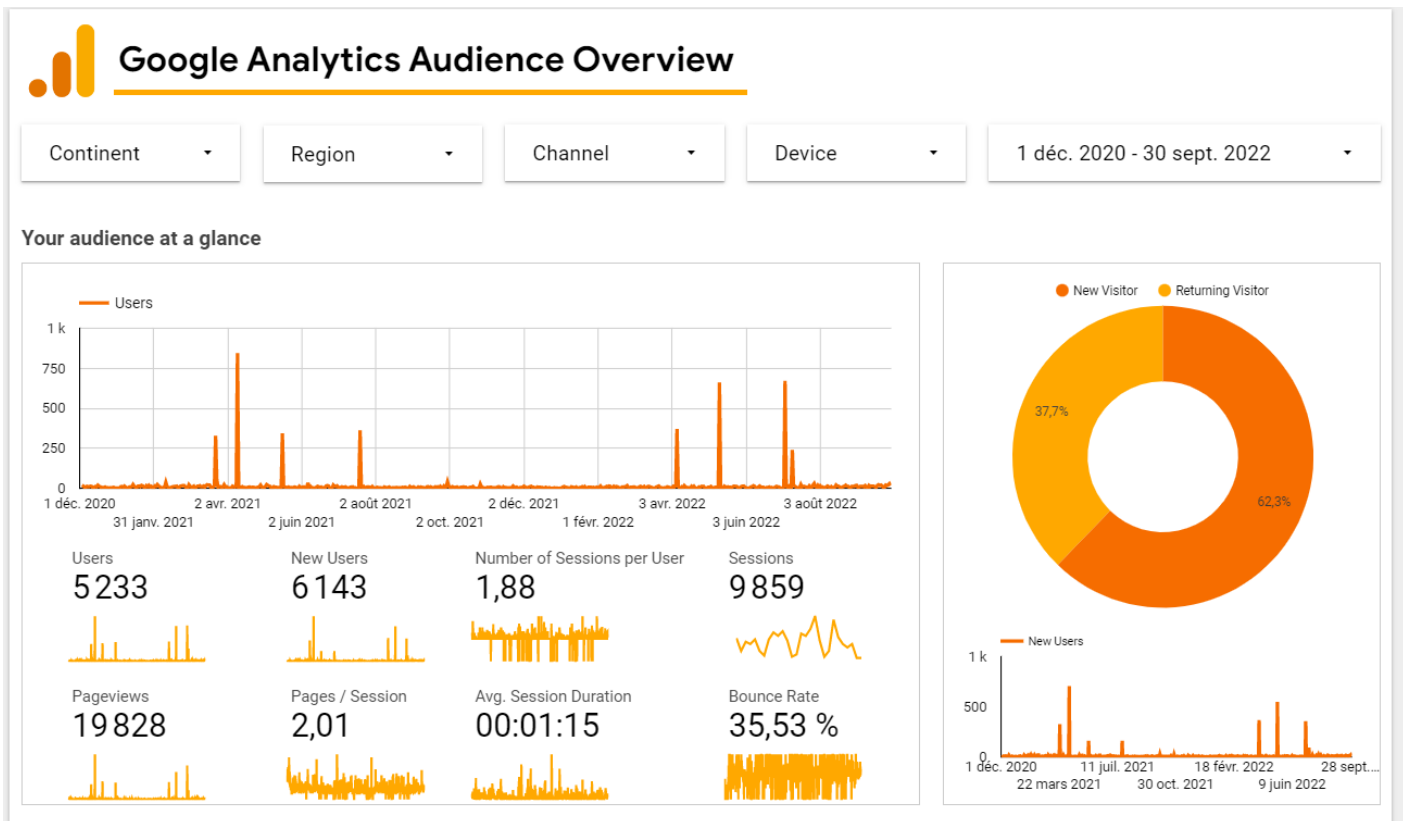


Figure 3 SAFETY4RAILS Website statistics from 1 December 2020 to 30 September 2022

The project’s website will remain active with new updates planned for October 2022, while it will also remain continuously updated after the end of the project. UIC will host and maintain the website at least for 5 years.

5.2 Private area

5.2.1 Description

The main objective of the SAFETY4RAILS private area, the so-called “SAFETY4RAILS workspace” or “extranet”, is to facilitate communication and exchange of knowledge between the members of the advisory board and the end-users. The “SAFETY4RAILS workspace” is created in the UIC collaborative Tool which is an open-source content management and collaborative platform based on a large community of users.

This SAFETY4RAILS workspace enables users to:

- Share and stock documents;
- Organise meetings;
- Manage directories and contacts;
- Discuss special issues online.

The SAFETY4RAILS workspace is accessible at <https://extranet.uic.org> (Figure 4).

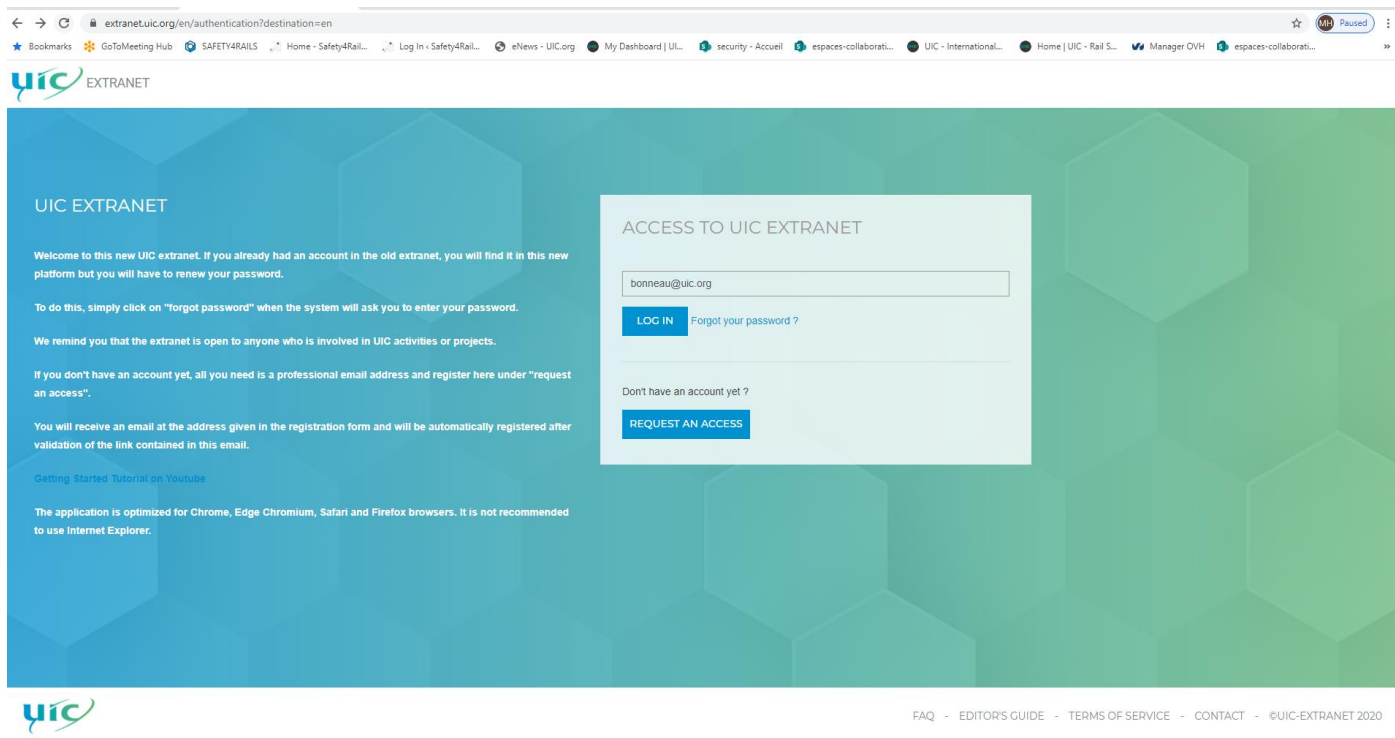


FIGURE 4 SCREENSHOT OF THE SAFETY4RAILS PRIVATE AREA WELCOME PAGE

5.2.2 Main achievements

The SAFETY4RAILS private area was implemented. It's restricted to the end-users and the members of the advisory board.

3 main folders are available:

- SAFETY4RAILS Description
- SAFETY4RAILS Meetings
- SAFETY4RAILS Deliverables

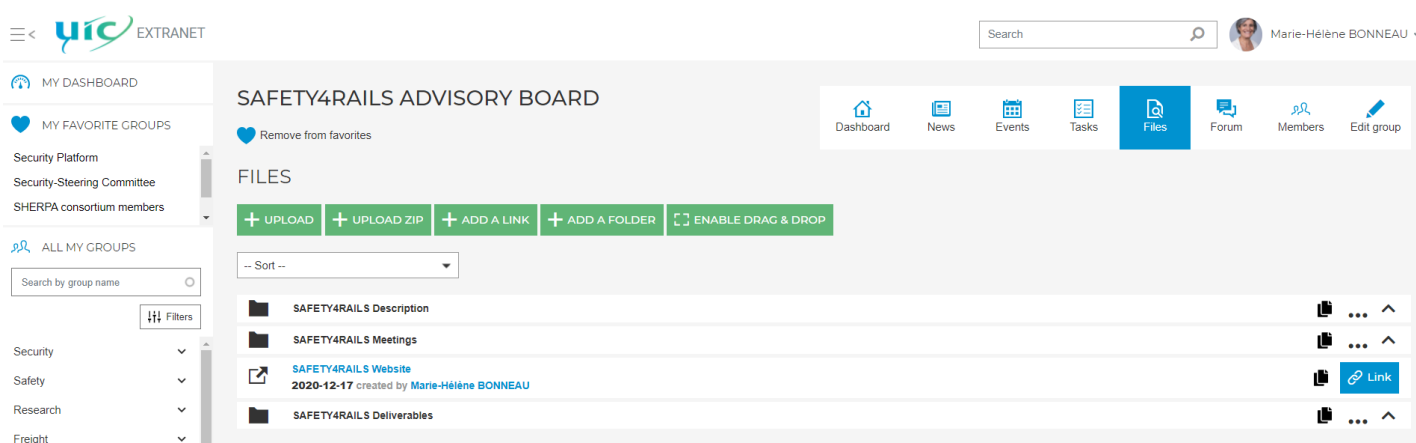


FIGURE 5 SCREENSHOT OF THE SAFETY4RAILS PRIVATE AREA FOLDERS

5.2.3 Main achievements

Documents available for the advisory board were updated in the private area.

5.3 Social networks

SAFETY4RAILS has proceeded to open the following social media accounts: Twitter, LinkedIn, Facebook, Youtube and ResearchGate. The website provides direct access to these social networks by clicking on the icons embedded in the footer part of the website, as well as all news and events. In this way, it is made easy for every website visitor to subscribe and follow SAFETY4RAILS social media platform.

On social media, partners are expected to follow the SAFETY4RAILS' accounts and to tag the project when posting any news related to SAFETY4RAILS. This is a requirement to meet the established Key Performance Indicators (KPIs). EOS continuously sent reminders encouraging partners to actively disseminate and communicate about the activities and achievement of the project throughout its duration.

5.3.1 Twitter

5.3.1.1 Description

Twitter was used under the domain <https://twitter.com/Safety4R> for big scale bidirectional communication with all the audience present on this social media platform but focusing on a technical audience from the railways and metro sector. As expected, the role of Twitter was crucial for events, conferences, or workshops to broadcast SAFETY4RAILS' role and benefits on these scenarios and attract followers through real time information.

Although this social network is not specifically focused on this audience, Twitter is used by a large number of professionals to communicate with each other and keep abreast of developments in their sector. Consequently, it is a tool for achieving the objective of increased awareness of SAFETY4RAILS and its developments.

Messages cover: Information about the project itself (facts, scenarios, tools, partners, etc.), events, shared documents, project news and articles related.

On Twitter, SAFETY4RAILS also has accessible lists to generate more engagement and contribute to the creation of a benchmarking framework:

- Consortium members: with the institutional consortium members' profiles.
- Related projects: including similar EU projects
- Other lists with stakeholders in the critical infrastructure resilience domain, particularly rail and metro.

The Twitter feed (the posts from the @Safety4R account) is also displayed in real time on the project website.



FIGURE 6 SCREENSHOT OF THE SAFETY4RAILS TWITTER ACCOUNT

5.3.1.2 Main achievements

Throughout the period covered, posts have been continuously published on the Twitter account. Information shared through the Twitter account was related to partners' profiles, project news and events (including organisation of project events as well as participation in external events) and project activities and results.

Whenever possible, the Twitter feed contained links towards the other project social media accounts and consortium partners' own social media accounts, as well as towards the SAFETY4RAILS official website, to ensure maximum interaction and involvement from the visitors, and to maximise impact.

While EOS was responsible for posting on the Twitter account, consortium members reposted, shared or "liked" the SAFETY4RAILS posts.

5.3.1.3 Statistics

The SAFETY4RAILS Twitter account was created at the end of October 2020. From November 2020 to 30 September 2022, a total of 204 posts and an average of 9 posts per month were published.

Table 4 below summarizes the statistics during the first year of the project:

TABLE 4 TWITTER STATISTICS FROM NOVEMBER 2020 TO SEPTEMBER 2022

Month	Posts	Impressions per day	Likes	Clicks
November 2020	43	863	366	28
December 2020	7	239	52	28
January 2021	6	152	24	11
February 2021	8	158	18	4
March 2021	10	146	32	21
April 2021	6	108	24	9
May 2021	6	99	24	3
June 2021	5	127	24	24
July 2021	2	45	6	5
August 2021	0	39	1	1
September 2021	4	97	81	4
October 2021	2	28	5	2
November 2021	1	20	1	0
December 2021	2	24	10	5
January 2022	0	12	0	0
February 2022	19	102	43	2
March 2022	3	32	10	2
April 2022	17	69	30	2
May 2022	15	50	23	9
June 2022	8	69	44	2
July 2022	18	65	34	2
August 2022	6	18	16	4
September 2022	16	85	101	16
Total	204	2647	969	184

The project's Twitter account remains active with new posts planned for October 2022, while it will also remain open after the end of the project.

5.3.2 LinkedIn

5.3.2.1 Description

A LinkedIn account, <https://www.linkedin.com/company/safety4rails-eu-project/>, has been created to promote the project among stakeholders and industry professionals.

On LinkedIn partners are expected to:

- Follow SAFETY4RAILS account, tag the project while posting any news related to SAFETY4RAILS.
- Send related information when attending in any event or conference or of any dissemination activity carried out. At least one project-related update that could be shared on social media is expected per month.

5.3.2.2 Main achievements during the period

During the period, posts have been continuously published on the SAFETY4RAILS LinkedIn account. The LinkedIn provided information on partners' profiles (with direct links to the partners' own websites), project

news and events (including organisation of project events as well as participation in external events) and project activities and results.

Whenever possible, the LinkedIn posts include links towards the other project social media accounts and consortium partners' own social media accounts, as well as towards the SAFETY4RAILS official website, to ensure maximum interaction and involvement from the visitors, and to maximise impact.

While EOS was responsible for posting on the LinkedIn account, consortium members were also strongly encouraged to react by reposting, sharing or "liking" the SAFETY4RAILS posts.

5.3.2.3 Statistics of the period

The SAFETY4RAILS LinkedIn account was created end of October 2020. From November 2020 onwards, it has gathered around 224 followers.

In terms of engagement, the account has received a total of 2103 page views (through both desktop and mobile) for the period November 2020 to 30th September 2022.

TABLE 5 PAGE VIEWS (DESKTOP AND MOBILE) FROM NOVEMBER 2020 TO SEPTEMBER 2022

Month	Page views
November 2020	440
December 2020	163
January 2021	91
February 2021	45
March 2021	78
April 2021	44
May 2021	46
June 2021	67
July 2021	24
August 2021	17
September 2021	39
October 2021	16
November 2021	13
December 2021	16
January 2022	4
February 2022	295
March 2022	55
April 2022	94
May 2022	61
June 2022	125
July 2022	137
August 2022	22
September 2022	211
Total	2103

These visitors showed interest through clicks, likes, shares, comments and follows. A total of 46,157 impressions were gathered for the period covered.

In terms of demographics, the visitors coming on the SAFETY4RAILS LinkedIn account have the following background:

- Program and Project Management: 25.8%

- Engineering: 14.6%
- Research: 8.7%
- Education: 4.7%
- Operations: 4.5%
- Marketing: 3%
- Community and Social Services: 2.7%
- Business Development: 2.6%
- Consulting: 2.4%

The project's LinkedIn account remains active with new posts planned for October 2022, while it will also remain open after the end of the project.

5.3.3 Facebook

5.3.3.1 Description

A Facebook account, <https://www.facebook.com/Safety4Rails/>, has been created as a tool to reach a wider audience and engage individual citizens by promoting the benefits and results of the project.

On Facebook partners are expected to:

- Follow SAFETY4RAILS account, tag the project while posting any news related to SAFETY4RAILS
- Use related hashtags while posting
- Send pictures and related information when attending any event e.g. conference or any other relevant dissemination activity carried out. At least one project-related update that could be shared on social media is expected per month.

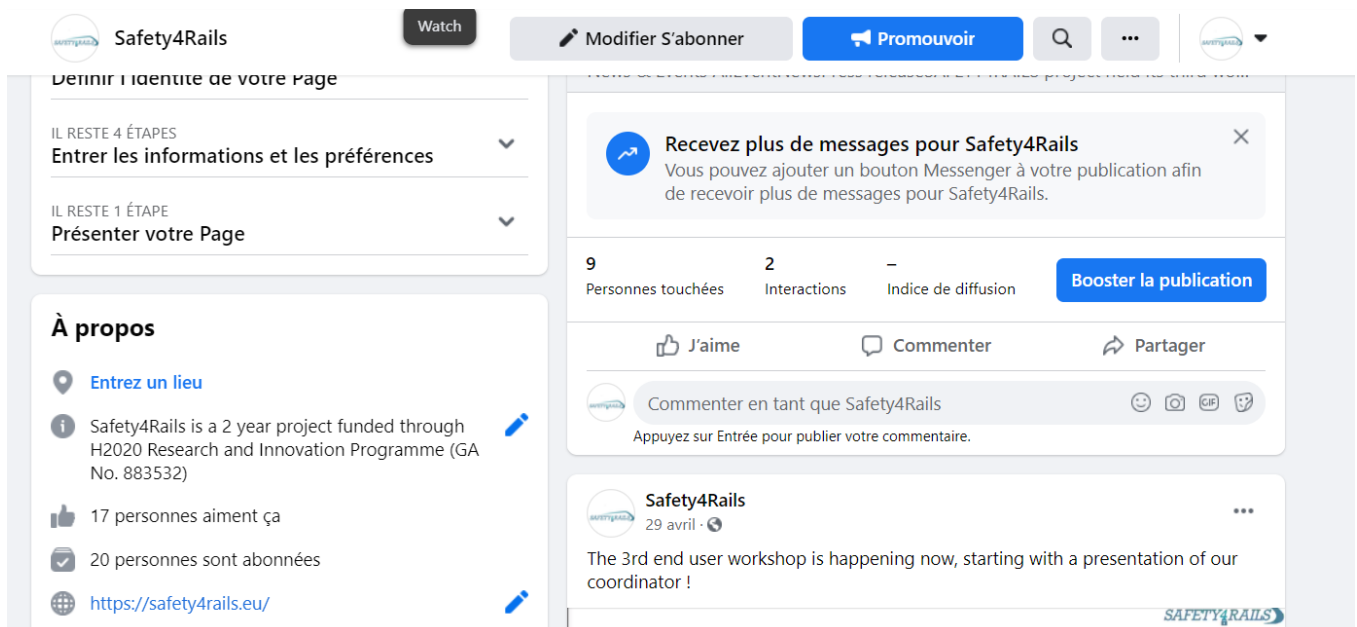


FIGURE 7 SCREENSHOT OF THE SAFETY4RAILS FACEBOOK PAGE

5.3.3.2 Main achievements

Facebook, being not a professional platform, is not considered as the main channel to exchange information concerning the project. The posts shared here are the same than the Twitter's and LinkedIn's ones but clearly reached less people. Dissemination and communication efforts focused on other platforms to ensure maximum reach of relevant audiences.

5.3.3.3 Statistics

16 people "like" the SAFETY4RAILS Facebook page and 19 people subscribed to it.

5.3.4 YouTube

5.3.4.1 Description

SAFETY4RAILS has also a YouTube account for dissemination purposes. The YouTube channel support the publication of videos produced within the course of the project. In addition, the project's YouTube channel will serve as an infrastructure for other social networks and communication channels, as YouTube is a suitable platform for hosting videos that will then be disseminated through other channels.

5.3.4.2 Main achievements

A first video was published at the end of September 2021 on the project's YouTube channel at <https://www.youtube.com/watch?v=Za0LJH87aeM&t=1s>



The video introduces the project to the public and has gathered 368 views.

A second video was published at the end of September 2022 to mark the end of the project. The video underlines the importance of SAFETY4RAILS for end-users. It's available on the project's YouTube channel at <https://www.youtube.com/watch?v=cHu2y3h3VpY&t=14s>. The video has already gathered 141 views within the two weeks following its release. .



5.3.5 ResearchGate

It is the worldwide social networking site for scientists and researchers to connect, collaborate, and share their work. Each SAFETY4RAILS contributor could create an account to share information about the project and publish the SAFETY4RAILS related papers/articles/posters. This will be supervised by the Dissemination Manager.

5.3.4.3 Main achievements during the period

Information on SAFETY4RAILS project is available at: <https://www.researchgate.net/project/SAFETY4RAILS-Data-based-analysis-for-SAFETY-and-security-protection-FOR-detection-prevention-mitigation-and-response-in-trans-modal-metro-and-RAILway-networkS>.

20 collaborators in SAFETY4RAILS projects are already connected and 10 publications are available.

5.4 Press releases

5.4.1 Description

After any relevant event or action by the project a press release will be issued to the main national and international press media. The first target will be the most relevant national press media in each of the countries participating in the project and the countries participating in the demonstration activities. The project has already published the first press release to share information about the start of the project which is available on the project website at: <https://safety4rails.eu/news/>.

The SAFETY4RAILS website will maintain a press clipping section summarising the main references to the project in mass media.

SAFETY4RAILS will also use European Commission media channels such as:

- **Horizon Results Booster** <https://www.horizonresultsbooster.eu/>.
- **Horizon Magazine** <http://horizonmagazine.eu/>.
- **CORDIS website** <https://cordis.europa.eu/es>.
- **DG Home Protection of public spaces newsletter**
https://ec.europa.eu/newsroom/index.cfm?service_id=1410.
- **Conferences and events** organised by the European Commission.

5.4.2 Main achievements during the period

One press release was published at <https://safety4rails.eu/news/> to inform the media that the SAFETY4RAILS kick-off meeting took place on the 5th of November in a virtual conference with all the consortium partners, the Project Officer from the European Commission's Research Executive Agency, representatives from the project's foreseen advisory boards.

Another press release will be published to mark the end of the project.

5.5 Scientific channels and publications

5.5.1 Description

SAFETY4RAILS aims to have articles and op-eds on the demonstration results published in key industry magazines targeting the selected primary target sectors, such as local/national newspapers of relevant technical societies and journals. SAFETY4RAILS partners are expected to publish results in scientific (peer-reviewed) publications. Joint publications among SAFETY4RAILS partners will be encouraged. In addition, complementing means such as organization and/or participation in thematic panels, roundtables and special conference sessions, workshop talks, poster presentations and specialized demonstrations at scientific events will also be used.

SAFETY4RAILS will also use other standard platforms to guarantee effective dissemination.

Research Gate: It is a European commercial social networking site for scientists and researchers to share papers, ask and answer questions, and find collaborators. Each SAFETY4RAILS contributor could create an account to share information about the project and the Dissemination Manager will supervise it.

5.5.2 Main achievements

- **14 Scientific peer-reviewed open access articles published**
 - Thomopoulos S. C. A. et al., "Anomaly detection with noisy and missing data using a deep learning architecture (Article) ", Proc. SPIE 11756, Signal Processing, Sensor/Information Fusion, and Target Recognition XXX, 117560R (16 April 2021).
 - Rajamäki J., "Resilience Management Concept for Railways and Metro Cyber-Physical Systems (Article)", 21st European Conference on Cyber Warfare and Security (ECCWS) (16-17/06/2021).
 - Pasino A. et al., "A Review of Single and Multi-Hazard Risk Assessment Approaches for Critical Infrastructures Protection ", International Journal of Safety and Security Engineering, Aug 2021.
 - Miller N. et al., "A Risk and Resilience Assessment Approach for Railway Networks (Article)", 31st European Safety and Reliability Conference (ESREL) (19-23/09/2021).
 - Sathya S.U. et al., "Resilience Assessment Models for Benchmarking Rail Bridges Against Natural Hazards (Poster)", 12th International Conference on Structural Engineering and Construction Management, ICSECM 2021, Dec 17-19, 2021, Kandi, Sri Lanka.
 - John M.A. et al., "Modelling Cyber-Risk in an Economic Perspective", Proceedings of the 2021 IEEE International Conference on Cyber Security and Resilience, Virtual Conference, 2021.

- Bonneau M., et al., "Protecting railway and metro infrastructure against combined cyber-physical attacks ", World Congress on Railway Research, WCRR 2022, Birmingham, 4-6 June 2022.
- Thomopoulos S. C. A. et al., "3D modeling, simulation and data exchange in cyber-physical threat assessment, multi-biometrics performance evaluation, and risk-based access control (Article)", Proc. SPIE 12122, Signal Processing, Sensor/Information Fusion, and Target Recognition XXXI, 121221E (8 June 2022).
- Thomopoulos S. C.A., "NARRATION: a platform for curation and scenario creation with application to vulnerability and risk assessment (Article)", Proc. SPIE 12122, Signal Processing, Sensor/Information Fusion, and Target Recognition XXXI, 121220Q (8 June 2022).
- Thomopoulos S. C.A. et al., "Impact assessment and mitigation strategies in rail/metro infrastructure with the use of iCrowd simulator (Article)", Proc. SPIE 12122, Signal Processing, Sensor/Information Fusion, and Target Recognition XXXI, 121221C (8 June 2022).
- Siino, G. Et al., "Investment Plan and Resilience Assessment for Railway Bridges Under Extreme Conditions ", 11th International Conference on Bridge Maintenance, Safety and Management (IABMAS), 11-15th July 2022, Barcelona, Spain.
- Crabbe S. et al., "SAFETY4RAILS Information System platform demonstration at Madrid Metro simulation exercise (Article)", 32nd European Safety and Reliability Conference (ESREL) (28 August - 1 September 2022).
- Srivastava K. et al., "Modelling and Simulation of Railway Networks for Resilience Analysis (Article)", CPS4CIP workshop at ESORICS conference <https://st.fbk.eu/events/CPS4CIP2022/>, 26-30 Sept 2022.
- Kopke C. et al., "Methodology for resilience assessment for rail infrastructure considering cyber-physical threats (Article)", CPS4CIP workshop at ESORICS conference <https://st.fbk.eu/events/CPS4CIP2022/>, 26-30 Sept 2022.

- **Other publications**

- **December 2020:** SAFETY4RAILS "Policy Fiche" for European Commission following H2020 Secure Societies Policy brief guidelines-P2PKOS.
- **February 2021:** SAFETY4RAILS "Synopsis of anticipated short-term policy feedback-related actions of projects dealing with Security Research" for European Commission.
- **April 2021:** Update of SAFETY4RAILS "Policy Fiche" for European Commission following H2020 Secure Societies Policy brief guidelines-P2PKOS.
- **June 2021:** SAFETY4RAILS one-page for European Commission promoted: CERIS - Community for European Research and Innovation for Security.
- **July 2021:** Update of "Synopsis of anticipated short-term policy feedback-related actions of projects dealing with Security Research" for European Commission.
- **April 2022:** Update of "Synopsis of anticipated short-term policy feedback-related actions of projects dealing with Security Research" for European Commission.

- **Publications currently in preparation**

- Accepted to appear in IEEE 27th Asia-Pacific Conference on Communications (APCC2022), Kanak et. al. "A Review and Strategic Approach for the Transition towards Third-Wave Trustworthy and Explainable AI in Connected, Cooperative and Automated Mobility (CCAM)"

The scientific publications are available on the SAFETY4RAIL website at <https://safety4rails.eu/library/>.

5.6 Project events/workshops organisation

5.6.1 Description

Several events have been planned during the project life, e.g.:

- Kick-off meeting with EC representatives (held on 5th November 2020).
- Four workshops/meetings with the project end-users and members of the Advisory Board.
- Four simulation exercises with all partners and members of the advisory board (February, April, July and July 202).
- Final conference was held on 28 September 2022.

5.6.2 Main achievements during the period

12 events have been organised as listed below:

- **On 5th November 2020, Kick-off Meeting with EC representatives:**
 - The meeting took place virtually on 5 November between all of the consortium partners, the Project Officer from the European Commission's Research Executive Agency, representatives from the advisory boards foreseen for the project, as well as two envisaged end-user partners from Spain and Turkey.
- **On 12th November 2020, presentation to key European Commission services, Agencies and Joint Undertaking:**
 - Virtual presentation and discussion of the project on 12/11 with (26 participants); representatives announced for: Directorate General (DG) Migration and Home Affairs (DG HOME), DG Communication Networks, Content and Technology (DG CNECT), DG Defence Industry and Space (DG DEFIS), DG Mobility and Transport (DG MOVE), DG Joint Research Centre (DG JRC), European Union Agency for Railways (ERA), Shift2Rail Joint Undertaking (Shift2Rail), Research Executive Agency (REA).
- **On 14-15 December 2020, first end-users and Advisory Board workshop:**
 - Two workshop sessions were held virtually on 14-15 December 2020 focussing on understanding of current threats face by railways and metro stakeholders. The Consortium used the workshop to present initially identified operational requirements and presented a matrix pitching impact against probability to determine which priority to give to each threat, based on the analysis of past incidents and failures. Concrete use-cases ensured discussions remained grounded in reality and allowed the collection of further end-user needs.
- **On 17 December 2020, presentation to the Ethical Board members:**
 - Virtual presentation of the project to the Ethical Board with discussion on aims of the Board and those ethical issues which were identified as most relevant for SAFETY4RAILS.
- **On 15 March 2021, second workshop with the external experts of the Advisory Board:**
 - The second workshop was held virtually on 15 March 2021. After almost 6 months of work, the consortium partners presented the work achieved regarding the identification of needs and requirements from the end-user perspective on the S4R Information system, as well as specific

requirements for standardisation and interoperability. Security experts from railways companies, authorities, EU agency as well as ethical experts attended the meeting and exchanged views with the partners on these first results, as ranked into different priority the requirements presented (use of Slido as an interactive voting system).

- **On 29 April 2021, third workshop with the external experts of the Advisory Board:**
 - The third project end-users and Advisory Board workshop was held virtually on 29 April 2021. The workshop was composed of three sessions: crisis management, crisis communication towards the public, and resilience of transport hubs from the smart city point of view. The SAFETY4RAILS Consortium used the workshop to present initially defined specific requirements for inter-city and intra-city metro systems including crisis communication with citizens and social media and get feedback from the audience on these requirements.
- **On 9-10 February 2022, first Simulation Exercise in Madrid:**
 - This first Simulation Exercise was co-organised by Metro de Madrid (MDM) and ETRA. The event brought together around 60 representatives from the SAFETY4RAILS consortium participating physically in Madrid and online.
- **On 4 April 2022, fourth workshop with the external experts of the Advisory Board:**
 - The fourth project end-users and Advisory Board workshop was held virtually on 4 April 2022 with 31 participants. The workshop focussed on Crisis Communication with the objective to discuss the results obtained so far from the research activities and introduce the SAFETY4RAILS Crisis Communication Framework & the Guidelines for sustainable communication. Interactive sessions were held via an online polling system called Slido to get feedback from the participants.
- **On 27-28 April 2022, second Simulation Exercise online:**
 - The second SAFETY4RAILS simulation exercise was co-organised by ERARGE, EGO and TCDD based on a scenario in Ankara, Turkey. The event was organised online, due to travel uncertainty caused by the conflict in Ukraine, on the 27th and 28th April 2022 with 58 representatives from the SAFETY4RAILS consortium.
- **31 May-1 June 2022, third Simulation Exercise in Rome:**
 - The third SAFETY4RAILS simulation exercise was organised by LDO (Leonardo) and hosted by Rete Ferroviaria Italiana (RFI) in Rome (Italy) on 31st of May and 1st of June 2022 with the participation of around 50 representatives of the SAFETY4RAILS consortium and its Advisory Board.
- **6 July 2022, fourth Simulation Exercise in Milan:**
 - The fourth SAFETY4RAILS simulation exercise was co-organised by LDO (Leonardo) and CDM (Comune di Milano). The event took place at CDM premises in Milan (Italy) and online on 6th July 2022 with some 50 representatives of the SAFETY4RAILS consortium and its Advisory Board.
- **28 September 2022, SAFETY4RAILS Final conference:**
 - On 28 September 2022, the SAFETY4RAILS consortium successfully organised its final conference at the UIC headquarters in Paris (France) and online with the participation of more than 80 partners representatives, Advisory Board members and external guests. Around 55 participants were attending physically at UIC.

5.7 Exhibitions and events

5.7.1 Description

SAFETY4RAILS is foreseen to be presented at the main events of the sector in Europe physically or virtually depending on COVID-19 restrictions. The project will be presented by members of the consortium with through presentations and with printed material (posters, rollups, brochures...) and stands at the exhibitions that offers this possibility. All the material will be published at the same time on the web and social media to enlarge the audience reached and allow keeping a record of the SAFETY4RAILS dissemination activities.

Partners are requested to send each month an updated list of future thematic events (prior to attendance).

5.7.2 Main achievements

- **Events targeting Policy makers:**

SAFETY4RAILS representatives participated and gave a presentation at 7 events organised by the European Commission:

- On **16 February 2021**, Fraunhofer presented SAFETY4RAILS at the 9th Meeting of the EU Rail Passenger security platform. The audience composed of Member States and Stakeholders dealing with security of rail passengers in the European Union took note of the project information.
- On **22-23 March 2021**, UIC took part in the second edition of the “Project to policy kick off seminar” (P2PKOS) organised by the European Commission Research Executive Agency. The seminar brought together policy makers from DG Home, DG Connect, DG Move, ERA, ENISA and 33 EU projects funded under the Horizon 2020 Secure societies call which started in 2020. This seminar was a great opportunity to bridge the gap between security research and policies. Moreover, synergies with other related ongoing projects such as S4Allcities dealing with resilience of smart cities against cyber–physical risks could be also very promising.
- On **5 May 2021**, Fraunhofer presented SAFETY4RAILS project under the auspices of the Community of European Research and Innovation for Security (CERIS). The event was organized by the European Commission’s DG HOME under the umbrella of the Disaster Risk Societies (DRS) thematic Working Group and focused on Multihazards Risk Management, including cascading effect. The event was well-attended and brought together policy makers, industry, research centres, academia and consortia of EU projects funded under Horizon 2020.
- On **10 September 2021**, Fraunhofer presented SAFETY4RAILS project in a meeting between DG MOVE SECURITY and EOS (IBS and ST CIP WG).
- On **29 September 2021**, UIC presented SAFETY4RAILS project at the annual meeting of the International Working Group on Land Transport Security: members are transport ministries from 19 countries worldwide. UIC, UITP, EU DG MOVE Security and UN-ECE are affiliated members.
- On **7 July 2022**, UIC presented SAFETY4RAILS at the 34th meeting of the EU expert group on land transport (DG MOVE LANDSEC). The audience composed of Member States and Stakeholders dealing with of land transport security took note of the project achievements and the date of the final conference.
- On **12 July 2022**, SAFETY4RAILS was presented by the Project Coordinator to EC policy makers and further relevant EC officials as well as independent experts invited by the EC and representatives of other relevant European projects at the DG HOME CERIS INFRA event: “How research supports the directive on the resilience of critical entities?”.

- **Events targeting Rail Security experts:**

UIC participated and gave presentation in **8 international meetings** gathering rail security experts:

- On **08 February 2021**: UIC Cyber Security Solutions platform meeting which regroups cybersecurity experts from 12 railways companies.
- On **26 February 2021** and on **30 September 2021**: ER-ISAC General Assembly meeting which regroups around 80 cybersecurity experts from 40 companies (20 Railway companies but also suppliers, European and national bodies and research centres).
- On **06 May 2021**: UIC Security platform - Meeting of the SIA (Sabotage/intrusion/attack) working group which regroups security experts from Railways.
- On **08 June 2021**: SAFETY4RAILS was presented in a workshop gathering rail cyber experts. It was organised by the EU project 4SECURAIL focussing on the Implementation of the EU Rail CSIRT model to the railway sector. More than 40 participants mainly from rail companies attended the workshop.
- On **3 December 2021**: UIC Digital Conference which gathered about 80 representatives from UIC Members and actors from the digital ecosystem to learn more about current digital trends, projects & developments.
- On **15 June 2022**: 17th UIC World Security Congress which gathered about 100 security managers from railways and authorities.
- On **17 June 2022**: UIC Cyber Security Solutions platform meeting which regroups cybersecurity experts from 12 railways companies.

Fraunhofer took part in a “Round table on the relation of physical and cyber security” and was a member of the panel for the session “The impact of physical security on cybersecurity” as part of the IT-TRANS conference organised by the International Association of Public Transportation (UITP) on 10 May 2022.

- **Events targeting security experts**

- On **23/06/2021**, SAFETY4RAILS was presented in a workshop organised by KEMEA to Greek security companies bringing together policy makers, industry and research centres
- On **22/11/2021**, UMH presented a poster (already submitted) about the project in the XIII Spanish Congress of Criminology, organized by the Spanish Society on Criminological Research.
- On **20-21/06/2022**, STAM presented SAFETY4RAILS outcomes in a meeting with CNR (Italian National Research Centre) and Ministry of Research and Education in Marate, in connection with OT4CLIMA national project. Focus was on prevention of damages caused by natural hazards.
- On **01/07/2022**, STAM presented SAFETY4RAILS outcomes in EDF event in Brussels to propose replication of project tools and approaches in the Defence sector.
- On **14-16/09/2022**, Fraunhofer presented SAFETY4RAILS at the 17th International Conference on Critical Information Infrastructures Security (CRITIS2022) to security practitioners and academics.
- On **22/09/2022**, UMH presented a poster (already submitted) about the project in the Eurocrim 2022 Spanish, organized by the European Society on Criminology.

Table 6 lists the international conferences and events where the SAFETY4RAILS project partners have participated.

TABLE 6 PAST EVENTS

Conference Name	Location and date	Audience	Contribution	Partners
UIC Cyber Security Solutions Platform	Online, 08/02/2021	Rail Cybersecurity experts	Presentation	UIC

EU Rail Passenger Security Platform	Online, 16/02/2021	European Transport authorities	Presentation	Fraunhofer
ER-ISAC General Assembly	Online, 26/02/2021	Rail Cybersecurity experts	Presentation	UIC
Project to policy kick off seminar (P2PKOS) for security research organised by REA	Online, 22- 23/03/2021	Policy makers, 33 EU projects representatives	Presentation	UIC
CERIS DRS Workshop Multi hazards disaster risk management organised by DG HOME	Online, 05/05/2021	Policy makers, industry, research centres	Presentation	Fraunhofer
4SECURAIL workshop	Online, 08/06/2021	Rail Cyber security experts	Presentation	UIC
UIC Security platform - Meeting of the SIA (Sabotage/intrusion/attack) working group	Online, 06/05/2021	Rail Security experts	Presentation	UIC
CERIS DRS Synthesis & InfoDay organised by DG HOME	Online, 14/06/2021	Policy makers, industry, research centres	Presentation	Fraunhofer
Workshop organised by KEMEA to Greek security companies	23/06/2021	Policy makers, industry, research centres	Presentation	ICOM
Meeting DG MOVE SECURITY/ EOS (IBS and ST CIP WG)	Online, 10/09/2021	Policy makers, industry	Presentation	Fraunhofer
14th IWGLTS Annual Meeting 2021 (International Working Group on Land Transport Security)	Online, 29/09/2021	Policy makers	Presentation	UIC
ER-ISAC General Assembly	Online, 30/09/2021	Rail Cybersecurity experts	Presentation	UIC
UIC Digital Conference	Online, 03/12/2022	Rail and digital experts	Presentation	UIC
IT-TRANS (IT solutions for Public Transport.) conference	Karlsruhe, 10-12 May 2022	Decision-makers and industry experts in the public transport sector	Round table on the relation on physical and cybersecurity	Fraunhofer
17th UIC World Security Congress	Warsaw, 15/06/2022	Rail security managers and authorities	Presentation	UIC

UIC Cyber Security Solutions platform	Paris, 17 June 2022	Rail Cybersecurity experts	Presentation	UIC
World Congress on Railway Research, WCRR 2022	Birmingham, 4-6 June 2022	Rail, research	Presentation + poster	UIC
OT4CLIMA Final Conference	Maratea, 20-21 June 2022	Policy Makers, Academia	Presentation	STAM
EDF 2022 event and brokerage	Brussels, 1 July 2022	Policy Makers, Security, Research, Military Institutions	Presentation	STAM
CERIS INFRA event: "How research supports the directive on the resilience of critical entities?"	Brussels, 12 July 2022	Policy makers, EU projects representatives	Presentation	Fraunhofer
17th International Conference on Critical Information Infrastructures Security (CRITIS 2022)	Munich, 14-16 Sept. 2022	Security, Research	Presentation	Fraunhofer
Eurocrim 2022 Spanish, organized by the European Society on Criminology.	Malaga, 21-24 Sept. 2022	Security, Research	Poster	UMH

- **Other events where SAFETY4RAILS will be presented:**

Table 7 lists the international conferences and events where the SAFETY4RAILS project partners will participate after the end of the project.

TABLE 7 NEXT PLANNED EVENTS LIST

Conference Name	Location and date	Audience	Contribution	Partners
7th International Conference on observation analysis and prevention of insecurity	Paris, 4-6 October 2022	Security, rail, public transport, authority, research	Presentation	UIC
35th meeting of the EU expert group on land transport (DG MOVE LANDSEC).	Brussels, 19 th October 2022	Policy makers and Stakeholders dealing with of land transport security	Presentation	UIC

5.8 Public relations

5.8.1 Description

The public relations strategy will follow the same strategy as the whole dissemination plan: business oriented, inspiring leaders and sharing knowledge. SAFETY4RAILS will present new possibilities for the railway sector and so the dissemination plan includes a part of public relations to communicate the importance of the project to the main decision-makers. Most of the effort will be concentrated in the countries of the project looking for the regional stakeholders. Each partner is an ambassador of the SAFETY4RAILS project. They will receive the material if they wish to present the project at events or professional activities where they will be involved.

5.8.2 Main achievements during the period

Three articles were published in UIC electronic newsletter (UIC e-News). UIC eNews, focused on projects and activities, is sent weekly to its stakeholders (railway undertakings, international bodies; more than 4,000 addressees).

- On 10/10/2020, “Official launch of SAFETY4RAILS European research project on 5 November 2020 at (<https://uic.org/com/enews/article/official-launch-of-safety4rails-european-research-project-on-5-november-2020>).
- On 23/03/2021, “Second SAFETY4RAILS project workshop with external advisory board experts held on 15 March” (<https://uic.org/com/enews/article/second-safety4rails-project-workshop-with-external-advisory-board-experts-held>).
- On 03/05/2021, “SAFETY4RAILS project held its third workshop with the external experts of the Advisory Board on 29 April 2021” (<https://uic.org/com/enews/article/safety4rails-project-held-its-third-workshop-with-the-external-experts-of-the>).

An article on SAFETY4RAILS for the Fraunhofer EMI yearly report (German language) (available at: https://www.emi.fraunhofer.de/content/dam/emi/de/downloads/aktuelles/presse_aktuelles/EMI-Jahresbericht-2020-2021.pdf, page 30).

Three news stories were published on the RMIT Europe website (47k+ visitors per year) and an article was included in the RMIT Europe e-newsletter (1300+ subscribers).

- News story on the RMIT website on 6 April 2021: <https://www.rmit.edu.au/news/all-news/2021/apr/future-proofing-mass-transit-infrastructure> (website has approx 47K+ visitors per year).
- News story on the RMIT website on 18 December 2020: <https://www.rmit.edu.au/news/all-news/2020/dec/power-of-research-post-pandemic-society> (website has approx 47K+ visitors per year).
- Article in RMIT Europe e-newsletter on 22 December 2020: [https://mailchi.mp/rmit/rmiteuropenewsdecember2020?e=\[UNIQID\]](https://mailchi.mp/rmit/rmiteuropenewsdecember2020?e=[UNIQID]) (industry, research and government audience, 1300+ subscribers).
- News story on the RMIT website on 29 September 2022: <https://www.rmit.edu.au/news/all-news/2022/sep/keeping-railway-infrastructure-resilience-on-track> (website has approx 47K+ visitors per year).

Many partners published the project abstract or articles in their website to give more visibility to the project:

- UIC: <https://uic.org/security/Security-Research-Projects#SAFETY4RAILS>.
- ETRA: <https://www.grupoetra.com/en/portfolio-item/safety4rails/>.
- EOS: <http://www.eos-eu.com/safety4rails>.
- Tree technology: https://www.treetk.com/en/R&D_SAFETY4RAILS.html.
- Leonardo: <https://www.leonardocompany.com/en/news-and-stories-detail/-/detail/leonardo-s-safety4rails-project-leads-the-way-for-public-rail-transport-s-safety>.
- RMIT: <https://www.rmit.eu/research-projects>.
- FGC: <https://www.fgc.cat/en/about-us/rdi-projects/safety4rails-2/>.

- UMH: <https://crimina.umh.es/proyectos-internacionales/>.
- Wings: <https://www.wings-ict-solutions.eu/wingspark-in-safety4rails-project/>.
- ERARGE: <https://www.erarge.com/projects.html>.

5.9 Links with related EU projects

5.9.1 Description

The objective is to inform on the project and liaise with ongoing projects on similar or related topics, and, when possible, promote joint activities/events.

5.9.2 Main achievements during the period

- **PRAETORIAN EU project:** Instantiation of SAFETY4RAILS results and lessons learned in the project deliverable D2.1 at <https://dms-prext.fraunhofer.de/livelink/livelink.exe?func=ll&objId=24404071&objAction=browse&viewType=1>.
- **4SECURAIL EU project:** presentation of SAFETY4RAILS in 4SECURAIL workshop on 08/06/2021.
- **Critical-Chains EU project (H2020):** Presentation of SAFETY4RAILS outputs in Critical-Chains webinars
- **TioCPS EU Project (ITEA3):** joint visionary paper submitted to the 7th Asia-Pacific Conference on Communications (APCC 2022) (accepted to appear)

6. Dissemination and communication materials

SAFETY4RAILS will use different materials for dissemination and communication. These materials will address the target groups and explain the benefits of the SAFETY4RAILS solution and their potential application. The materials raise awareness of the project, its activities and results also visually and build recognition amongst stakeholders.

6.1 Logo

A memorable logo is an essential project communication and dissemination material to raise awareness of the project. The logo must be used in every communication and dissemination of material created during the project. The logo must be used every time the project is presented. The SAFETY4RAILS logo represents the project's key visibility and colour scheme. The rights to use the logo belong to the coordinator and project partners as well as the European Commission. Third parties are expected to ask for permission to use the logo in writing if they wish to use it. In the case of conferences using the logo, this should be included in conference agendas, participant lists, and any promotional materials.

6.2 Templates

Templates are used to bring a coherent visual image to all information produced in the project including official communication to the European Commission and presentations to different audiences. Templates are used on every occasion when SAFETY4RAILS is presented or information on the project is shared. The templates are also provided in order to ease the communication inside the consortium and this ensures coherent and smooth workflow. The templates are provided either in Windows Word Document or PowerPoint Document format.

The templates include three core elements that are always requested to be present when the project is presented: project logo, EU emblem and the official information requested by the European Commission. There are the following main templates in use:

- Deliverable template: a Word document that ensures that deliverables are reported according to same format to the Commission by the project partners and that information on versions is provided in each deliverable before submitting the final version.
- PowerPoint – presentation template: A PowerPoint document to ensure that all the presentations are delivered in a harmonized way internally and externally.

6.3 Newsletter

SAFETY4RAILS Newsletter aims to offer a view of the main activities of the project. It is managed by EOS, with the inputs from the partners, with an online version available on the web. It will have a frequency of twice a year, ideally March and September (although flexible). The Newsletter should include elements such as:

- **News:** Main news during the period covered by the newsletter.
- **Outcomes:** Specific results to share.
- **Past event:** Summary of events attended or organised by the partners.
- **Future events:** Coming remarkable events, where SAFETY4RAILS will participate or not.
- **Do you know?** Partners' presentations in the first Newsletter.

The first SAFETY4RAILS Newsletter is embedded within the 2nd project brochure, which is delivered in month M12 and described in section 6.4.2.

The second newsletter was launched in April 2022 including a report on the first simulation exercise held in Madrid in February 2022. This second newsletter is available on the SAFETY4RAILS website at https://safety4rails.eu/wp-content/uploads/2022/04/SAFETY4RAILS-Newsletter_April2022.pdf.

The third and final newsletter was published on 1st September 2022 and included an overview of the progress made in the S4RIS based on the three simulation exercises held during the last six months of the project. The newsletter also provided information on the final conference and is available on the SAFETY4RAILS website at <https://safety4rails.eu/wp-content/uploads/2022/09/SAFETY4RAILS-Final-Newsletter.pdf>.

6.4 Promotional materials

6.4.1 Description

To contribute to the promotion and communication of the project objectives and its outcomes, a number of brochures, videos, presentations, leaflets, posters, roll-ups, infographics, games, quizzes and other materials will be produced. As leader of Task 10.2, EOS is responsible for these productions. The hard version of the materials has not been yet printed as the COVID-19 crisis does not allow any physical meeting. To communicate the project objectives and expected results, promotional brochures are designed by UIC and made available to be distributed at relevant events and in digital versions

To facilitate the explanation of SAFETY4RAILS, UIC already created two sets of brochures that provide a résumé of the project objectives and approach in an easy way. Whenever it will be possible these documents will be distributed not just at conferences, workshops or other events where consortium members will present and promote the project but also in open days or citizens events. The first brochure has been created in M6 to show the project objective and concepts, the second one to show the progress of the project in M12 and the last one to show the project results and conclusions in M24.

6.4.2 Main achievements during the period

The first version of the SAFETY4RAILS brochure (Figure 8) has been released in December 2020 and then updated with the two new partners who joined the consortium in June 2021. It's an A5 landscape format, composed of 4 pages. It gives the reader a brief but comprehensive overview of the project (scope, goal,

description of the work, timeline, expected results and added value, project partners and advisory board, and contact details).

An electronic version is available on the SAFETY4RAILS website at https://safety4rails.eu/wp-content/uploads/2021/02/SAFETY4RAILS_First-Brochure_Final-upd-july-2021.pdf.



FIGURE 8 SAFETY4RAILS BROCHURE - FIRST VERSION

The second brochure (Figure 9) has been released in September 2021. It's an update of the first version with the addition of the main achievements from the 1st year and the next steps foreseen for the upcoming months. It's an A4 landscape format, composed of 12 pages. It describes:

- The mid-term achievements regarding:
 - The definition of the requirements and specifications.
 - The main development and integration of the tools.
- The next steps:
 - Exercises and evaluation.
 - The exploitation of the results.



FIGURE 9 SAFETY4RAILS BROCHURE - SECOND VERSION

The final brochure has been released in September 2022. It describes the main lessons learnt from the project. Most of the content is extracted from Deliverable 8.6 and has been published in a more attractive design. It's an A4 landscape format, composed of 36 pages. It is available on the SAFETY4RAILS website at https://safety4rails.eu/wp-content/uploads/2022/10/Safety4Rails_Final-brochure_26SEPT22-2.pdf



FIGURE 10 SAFETY4RAILS BROCHURE – FINAL VERSION

6.5 Infographics

Through infographics, graphical representations of information and data of SAFETY4RAILS, complex information could be presented clearly and concisely. Additionally, the use of visual and illustrative forms of communication may open the information to larger and more diverse audiences. Infographics will be a form of visual communication that falls within the encompassing field of information design, often focused upon discrete and contained amounts of information.

6.6 Videos

6.6.1 Description

Throughout the project's lifetime, two videos will be produced (one at the beginning and one at the end). Minimising the technical language will be mandatory in order to reach a wider audience. Besides, partners will explain through videos some complex technical aspects of the project to make them understandable to the public.

6.6.2 Main achievements during the period

The first introductory video was produced and delivered in month M12. It provides a general view of the project's goals, scope and benefits and is targeted to a general audience. The objective was to raise awareness to the project, foster interest and maximise impact. The video is available on the homepage of the website at <https://safety4rails.eu/>.

The second and final video was produced and delivered in M24. The video presents the SAFETY4RAILS Information System platform and briefly explains how its tools are combined to provide decision support and contribute to the resilience of railways and metros in the five phases of identification; protection; detection; response; recover. It is available on the homepage of the website at <https://safety4rails.eu/>.

7. Procedures and protocols for dissemination and communication

The SAFETY4RAILS project partners must be involved as much as possible in making dissemination materials especially presentations, flyers, blogs, newsletters, and press releases. Their contribution will be requested particularly in areas where they will have more opportunities for capacity building. To build a systematic approach to the delivery of publishable material (such as press releases), WP10 Lead partner has prepared the templates to be used when writing the external communication material. All SAFETY4RAILS beneficiaries will be potential contributors for WP10 dissemination.

All press and third-party inquiries are to be directed towards EOS (WP10 lead and crisis manager) and Fraunhofer (as coordinator).

7.1 Dissemination of results

No results should be communicated/disseminated before agreement following the rules of the Grant Agreement (European Commission, 2020)³ and the Consortium Agreement (SAFETY4RAILS consortium)⁴.

The dissemination activities, including but not restricted to scientific publications and presentations are governed by Article 29 of the Grant Agreement and section 8.4 of the Consortium Agreement. All project beneficiaries MUST be familiar with these provisions. In summary, partners will be responsible for: notifying other beneficiaries of the intention to disseminate results, open access, including the EU emblem, acknowledgement of EU funding, and disclaimers.

Article 26.1 of the Grant Agreement states: ““Results” means any (tangible or intangible) output of the action such as data, knowledge or information – whatever its form or nature whether it can be protected or not – that is generated in the action, as well as rights attached to it, including intellectual property rights.”

The reader is referred to the deliverable D1.5 Quality Assurance Plan (SAFETY4RAILS consortium, 2020)⁵, chapter 5. All project beneficiaries MUST also be familiar with these provisions.

In what follows, a summary is provided on content in section 8.4 of the consortium agreement with regards to the steps before the publication of ANY project results:

- During the project and for a period of 1 year after the end of the project, the dissemination of own results by one or several parties including but not restricted to publications and presentations, shall be governed by the procedure of Article 29.1 of the Grant Agreement subject to the provisions in the consortium agreement.
- Prior notice of any planned publication shall be given to the other parties at least 30 calendar days before the publication. For a conference paper, it is recommended to submit for approval the full paper, preferably after the partner has received the notification of acceptance. For a journal paper, it is recommended to submit for approval the paper that has passed the first round of review.
- Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the coordinator and to the party or parties proposing the dissemination within 15 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.
- An objection is justified if (a) the protection of the objecting party's results or background would be adversely affected (b) the objecting party's legitimate interests in relation to the results or background would be significantly harmed.

³ European Commission. SAFETY4RAILS Grant Agreement. version 1.0. dated 21 April 2020.

⁴ SAFETY4RAILS consortium, SAFETY4RAILS Consortium Agreement, version 20200608.

⁵ SAFETY4RAILS consortium, Deliverable D1.5 Quality assurance Plan, version 1.1, 2 December 2020.

- The objection has to include a precise request for necessary modifications.
- If an objection has been raised the involved parties shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting party shall not unreasonably continue the opposition if appropriate measures are taken following the discussion. The objecting party can request a publication delay of not more than 90 calendar days from the time it raises such an objection. After 90 calendar days the publication is permitted, provided that - any objection of the objecting Party has been properly addressed; and/or - Confidential Information of the objecting party has been removed from the publication as indicated by the objecting party.
- A Party shall not include in any dissemination activity another Party's Results or Background without obtaining the owning Party's prior written approval, unless they are already published by or with the written consent of said owning Party.

7.2 Communication of general content which is not a result

For all media (i.e. for other channels such as the website, PowerPoint presentation, brochures etc) except social networks, new content (i.e. not previously released by the consortium) must be agreed for release within the consortium. An exception are announcements that the project will be presented at a specific event and similar non-controversial information which does not potentially touch on results etc. This means providing the other project partners with the proposed content and giving them a reasonable time to notify any concerns. What is a reasonable time period will depend on how far the proposed content is new and extensive as a general rule it should not be less than 10 days.

Communication over social media must be only for non-controversial content unless it has been agreed within the consortium in advance. If a partner is in doubt whether content could be controversial then EOS (and potentially the project coordinator at Fraunhofer) must be contacted for their opinion. A very conservative evaluation is to be used in assessing whether content could or could not be considered controversial. The project's key messages in chapter 4 are to be kept in mind and for social media particularly that the project will carry out its work and develop tools which are legally and ethically compatible with European law and societal values such as the rule of law and civil liberty.

In situations of uncertainty EOS and/or the coordinator should be contacted. Figure 11 provides an overview of internal protocols (to date) for preparing and releasing general communication material and social media content.

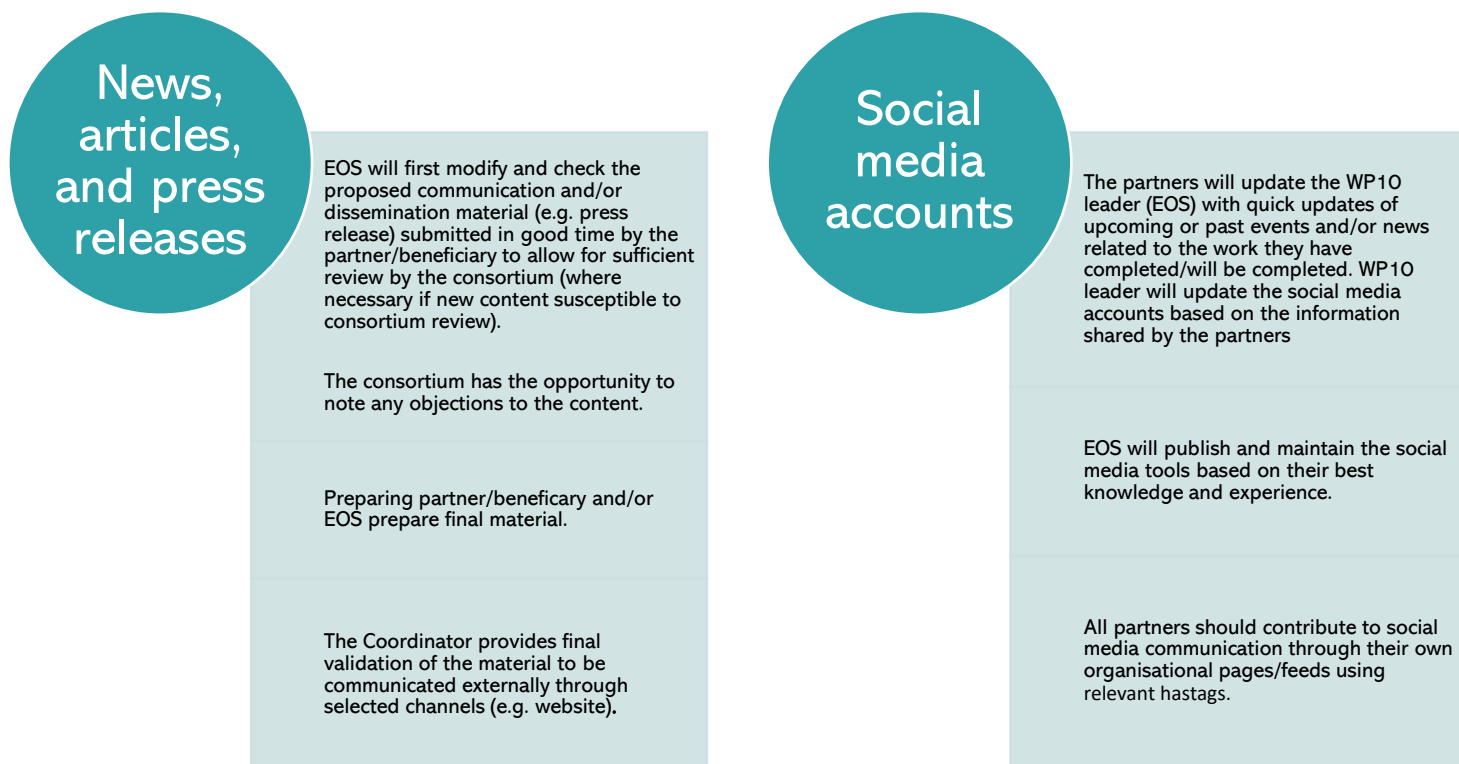


FIGURE 11 SAFETY4RAILS INTERNAL PROTOCOLS FOR PREPARING AND RELEASING MATERIAL AND SOCIAL MEDIA CONTENT

7.3 Notices to include, evidence of activities, points of contact

All project dissemination and communication activities (scientific/technical or not) must include according to the Grant Agreement at least the following notifications and disclaimer (our website added as an addition):



This project has received funding from the
European Union's Horizon 2020 Research and Innovation Programme
under Grant Agreement № 883532.

More information available at <https://safety4rails.eu/>

This [insert type of activity] reflects only the author's views and neither the Research Executive Agency nor the European Commission are responsible for any use that may be made of the information contained therein

The reader is referred once again to the deliverable D1.5 Quality Assurance Plan, chapter 5.

Evidence of dissemination and communication activities must be stored on the project repository (i.e. "Full Paper" version and presentation material) and each partner is responsible to ensure that the activity is counted as part of the dissemination and communication activities in the European Commission Participant Portal as part of the periodic reporting.

Each consortium partner assigns a dissemination and communication Point of Contact (PoC), or preferably two persons, who will be responsible for dissemination and communication activities, as well as for social media liaison and requests.

The PoC will ensure that the SAFETY4RAILS Dissemination and Communication Plan is properly implemented and that the guidelines for dissemination and communication are respected and followed. In addition, the PoC will monitor dissemination and communication activities.

7.4 Crisis communication process

The term crisis is defined by the Cambridge Dictionary as “a time of great disagreement, confusion, or suffering” as well as “an extremely difficult or dangerous point in a situation”.

Like every other organisation of people, our project could face a crisis triggered by bad publicity, misinterpretation, fake news and so on, which could require a well thought-out, co-ordinated and potentially very fast response. The project identified that the greatest communication risk to the project is through social media because of its speed, diverse set of users, anonymity and potential “agendas” behind posts which can include both state and non state actors and groupings.

EOS is managing social media accounts and can react most quickly. For this main reason EOS has been appointed Crisis Manager, but if an actual or potential crisis arises then Fraunhofer as coordinator is to be informed as quickly as possible. Of course, some situations may require at least an initial conciliatory response by EOS before further discussion with Fraunhofer.

EOS will make sure that the below protocol in time of crisis is ensured:

- Step 1: A crisis situation has been detected by a partner and communicated to EOS, EOS determines whether an initial conciliatory response is necessary even before assessment with Fraunhofer and if so makes the response
- Step 2: EOS and the coordinator assess together if the situation can be considered as a Crisis Situation
- Step 3: If this is not the case, the process will be stopped here.

If this is the case, EOS will have 1 week to work on the appropriate Crisis Plan to propose to Fraunhofer which will have 2 days to accept or not the Plan, unless Fraunhofer determines a reaction must follow within a shorter period of time in which case it may take over the responsibility as coordinator to respond to the crisis.

- Step 4: If the Crisis Plan is not accepted, the coordinator is in charge of making clear amendments to be transmitted to EOS within 2 days. EOS has 2 days to reply to them. The process cannot be longer than 10 days.

If the Crisis Plan is accepted, it is immediately applied within SAFETY4RAILS.

7.5 Potential data breaches

Data control falls under the responsibility of the project data controller (MdM) and where relevant individual partner data controllers. This responsibility is primarily content of the tasks T1.4 and T9.4 in the project and it is therefore not a focus of this dissemination and communication plan. However, as such an event would also touch on project communication it is provided here in overview.

Any data breach will be handled according to the provisions of the General Data Protection Regulation. (European Parliament and the Council , 2016)⁶

⁶ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) L 119/1 (hereafter referred to as “GDPR”)

A potential data breach requires urgent corrective measures, normally within 48 hours.

Possible corrective measures include but are not limited to the following:

- Notification of the relevant supervisory authority
- Notify the project coordinator
- Disallow further communication with the affected system by the public.
- Change all passwords and other relevant private data in case there are users involved.
- Investigate logs and audit the severity and potential data loss.
- Inform all participants of the data breach and further details within 72 hours.
- Apply corrective measures and patch vulnerabilities
- Prepare a public announcement.

7.6 Partners' press releases and other media contacts

All partners can send out press releases on their own. Press releases should be done to cover all major milestones of the project. The Dissemination Manager will coordinate the press releases for the milestones. Partners willing to issue their own press releases must contact first with the Dissemination Manager to crosscheck if something is already available on the subject.

For all other public project-related communication, the use of the SAFETY4RAILS logo and design is mandatory. When it comes to Intellectual Property Rights (IPRs), all publication must follow the Grant Agreement and the Consortium Agreement.

7.7 Image rights and quality of images used in publication activities

Notes on image quality and image rights needs to be paid attention to for all publication activities. The general recommendation for the image quality is shown in the following table. In the case of picture rights, the origin of the picture as well as the creator must be mentioned. During the project, the author is always responsible for obtaining appropriate image rights, whether for printing publications or web-based publications. The general recommendations are presented in the following **TABLE 8**:

TABLE 8 RECOMMENDATION FOR IMAGE RIGHTS AND QUALITY

Quality	Images for publications, 300 dpi (Size 100 x 150mm)
	Images for web, 160 dpi (Size 60 x 60mm)

Rights	© Institution/Company or author, origin
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7.8 SAFETY4RAILS Scientific publication process

7.8.1 Open access to SAFETY4RAILS scientific publications

The Data Control and Management Plan (D1.6) established the data management life cycle for the data to be collected, processed and/or generated by SAFETY4RAILS. As part of making research data Findable, Accessible, Interoperable, and re-usable (FAIR), the plan includes:

- The handling of research data during and after the end of the project.
- What data will be collected, processed and/or generated.

- Which methodology and standards will be applied.
- Whether data will be shared/made open access.
- How data will be curated and preserved (including after the end of the project).

7.8.2 SAFETY4RAILS Open Access to publications contractual baseline

The Open Access to publications contractual baseline is provisioned under Article 29.2 of the SAFETY4RAILS Grant Agreement - i.e. scientific publications in the frame of SAFETY4RAILS must comply with Article 29.2's provisions.

All peer-reviewed scientific publications must ensure open access - this can be seen in article 29.2 of the Grant Agreement. Following the publication protocol, all scientific publications can be reviewed by the consortium to assess if there is any conflict with the exploitation roadmap, GDPR compliance and security obligations. Moreover, it is the role of the innovation manager (ETRA) to assure that partners' IPR are correctly protected and this will cover the aforementioned. If the publication discloses information that can be considered subject of patent or copyright declaration, then it would need to be modified or even not published.

7.8.3 SAFETY4RAILS Open Access Publication strategy

Partners will provide Open Access to all scientific publications (free of charge online access for any user) using **Self-archiving ('green') open access**, provided there are no conflicts with the exploitation roadmap, GDPR compliance and security obligations. This is, using one or more 'green' Open Access repositories.

In any case, the 'green' Open Access repositories used must be at least accessible in **openAIRE** (European Commission, 2018)⁷, the **repositories listing** of the European Commission.

D1.6 identified open data will be made available through the project website and/or an open access portal to be determined, which will automatically link to OpenAIRE. As default repository, European Commission's Zenodo (EUROPEAN COMMISSION Directorate-General for Research & Innovation, 2017)⁸ could be used: Zenodo is the "orphan" repository provided by European Commission for this purpose.

In the case that one or more partners publish a scientific publication in 'gold' open access journals, these are journals that offer open access against payment from the authors, such publications shall also be self-archived in one of the above listed 'green' open access repositories.

Misconceptions about open access to scientific publications: In the context of research funding, open access requirements in no way imply an obligation to publish results. The decision on whether or not to publish lays entirely with the project partners. Open Access becomes an issue only if publication is elected as a means of dissemination. Moreover, Open Access does not interfere with the decision to exploit research results commercially, e.g. through patenting. Indeed, the decision on whether to publish open access must come after the more general decision on whether to publish directly or to first seek protection (European Commission, 2018)⁹.

SAFETY4RAILS will ensure Gold or Green Open Access for published papers.

⁷ More information on this issue is available in the European IPR Helpdesk fact sheet "Publishing vs. patenting".
<http://www.iprhelpdesk.eu/Fact-Sheet-Publishing-v-Patenting>

⁸ EUROPEAN COMMISSION Directorate-General for Research & Innovation. H2020 Programme Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020, version 3.1 25 2016
http://ec.europa.eu/research/partici-pants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf

⁹ More information on this issue is available in the European IPR Helpdesk fact sheet "Publishing vs. patenting".
<http://www.iprhelpdesk.eu/Fact-Sheet-Publishing-v-Patenting>

7.8.4 Procedure to ensure Open Access to peer-reviewed scientific publications

Foreword:

This procedure aims to complement, with practical information for researchers, the requirements of the European Commission on Open Access of scientific publications contained in the official European IP Help Desk: publishing vs. patenting (European Commission, 2018)[8].

It also acknowledges the instructions added in the Open Access section of the H2020 online manual¹⁰, from which reference to a model amendment to publishing agreement has been introduced to underline the importance of negotiating embargo periods with publishers to meet the expectation of the EC of maximum 6 months of embargo period in Green Open Access model.

Disclaimer:

This procedure does not substitute the above official guidelines and these must be taken into account during the whole process of publishing (they include details, technical requirements, definitions, further recommendations, that need to be followed and are not contained in this procedure).

This procedure is based on and derived from interpretation of the above referenced official guidelines as published on 25 August 2016 as version 3.1 and the Open Access section of the H2020 online manual up to 08/05/2017; it may need to be updated in further versions of the guidelines or other guiding documents on open Access are provided by the EC in the future.

Scope of the open access obligation:

Peer-reviewed articles are the focus of the open access obligation. Other formats such as monographs, conference proceedings, book chapters, or any other type of outputs are encouraged to be open access, although they are not the main focus of the mandate (European Commission, 2019) [10].

Selecting/negotiating with publishers:

Thus, before submitting a paper to any journal or congress, etc., it is necessary to:

1st: Know if the contract (copyright license agreement) with the publisher permits us to open the publication, immediately or within 6 months and in case there is an embargo period allowing us to open the publication not immediately but in a given time not higher than 6 months, know which is the exact date when the embargo period starts (The OpenAIRE helpdesk team says: “If there is no explicit information from the editor regarding the embargo to the hardcopy, generally and by default the embargo period starts on the 1st online publishing.”

“To provide support concerning compliance with Horizon 2020 embargo periods the Commission offers a **model amendment to publishing agreements**, which are often signed between authors and publishers. This model is not mandatory but reflects the obligations for the beneficiary under the H2020 grant agreements. It can be supplemented by further provisions agreed between the parties, provided they are compatible with the Grant Agreement. The Commission/Agency takes no responsibility for the use of this model” (European Commission, Accessed Dec. 2020)¹¹.

2nd: Know which version of the paper it is allowed to make open:

¹⁰ See annotations to ARTICLE 29 in annotated model GA: European Commission. (2019). Horizon 2020 – AGA – Annotated Model Grant Agreement. Version 5.2.

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

¹¹ European Commission. Horizon 2020 Online Manual – Open access.

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/open-access_en.htm

- “Pre-print” version (it is a draft paper as it is before the peer review). The European Commission does not accept pre-print versions as open-access publications.
- “Accepted” or “post-print” version (final peer-reviewed manuscript accepted for publication). The European Commission accepts it.
- “Published” or “editor’s” version (it is the version as published by the editor, i.e., designed with the layout of the journal or book published). The European Commission accepts it.

3rd: Know if there is any fee (“Article processing charges”) that the author has to pay to the editor to be able to open the publication. This cost is eligible in H2020.

4th: Know if there is any other clause in the contract that may affect in any way Open-Access publishing.

5th: Keep the agreement and make it available to the co-authors as well as the final peer-reviewed version of the publication.

“In all cases, the Commission encourages authors to retain their **copyright** and grant adequate licences to publishers. Creative Commons offers useful licensing solutions. This type of licence is a good legal tool for providing open access in its broadest sense.” (European Commission, 2017)¹²

¹² EUROPEAN COMMISSION Directorate-General for Research & Innovation. H2020 Programme Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020, version 3.1 25 August 2016.
https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf
 PU – Public, D10.3, October 2022

8. Project Internal communication

Good internal communication aims to increase the efficiency of the work of all partners and increase the understanding of the consortium members on the mutual goals of the project whilst decreasing the unintentional duplication of work causing inefficient use of resources.

The primary tool for SAFETY4RAILS internal communication and information sharing is the internal online platform LiveLink (Figure 6) provided and managed by the coordinator. The platform contains a well-structured document library covering all the WPs and dissemination material enhancing the knowledge sharing, project planning and management of the project for all members of the consortium. The platform also serves for complementing all information and document sharing among partners, making them available and possible for comments and revision.

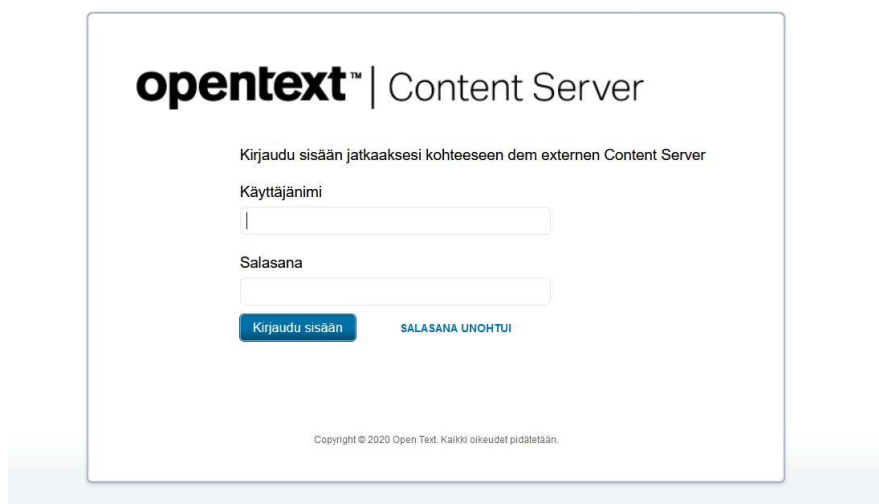


FIGURE 12 SCREEN SHOT OF THE LIVELINK INTRANET LOG-IN

Email is also an essential tool for internal communication. The majority of communication between consortium members occurs via email exchange. Mailing lists have been drawn up and are regularly updated, they include: i) the whole consortium, ii) the Project General Assembly (PGA), iii) the Project Management Team (PMT), iv) each of the WPs 1-11; v) the Advisory Board, vi) all end-users, viii) end-users that are consortium partners. Messages are sent to the relevant list(s) and for specific queries, direct mailing between concerned partners is used.

Timely and steady internal information sharing is supported by Project Management Team (PMT). Details on the PMT are provided in the deliverable D1.1 Project Management Manual (SAFETY4RAILS consortium, 2020)¹³.

A private area for end-users, the so-called “SAFETY4RAILS workspace” or “extranet”, is provided by UIC to facilitate communication among the consortium members e.g. the members of the Advisory Board and the end-users.

¹³ SAFETY4RAILS consortium, Deliverable D1.1 Project Management Manual, version 1.0, 30 October 2020.
PU – Public, D10.3, October 2022

9. Dissemination and communication actions

To ensure successful communication and dissemination of results we have three approximate phases as presented in Figure 13:

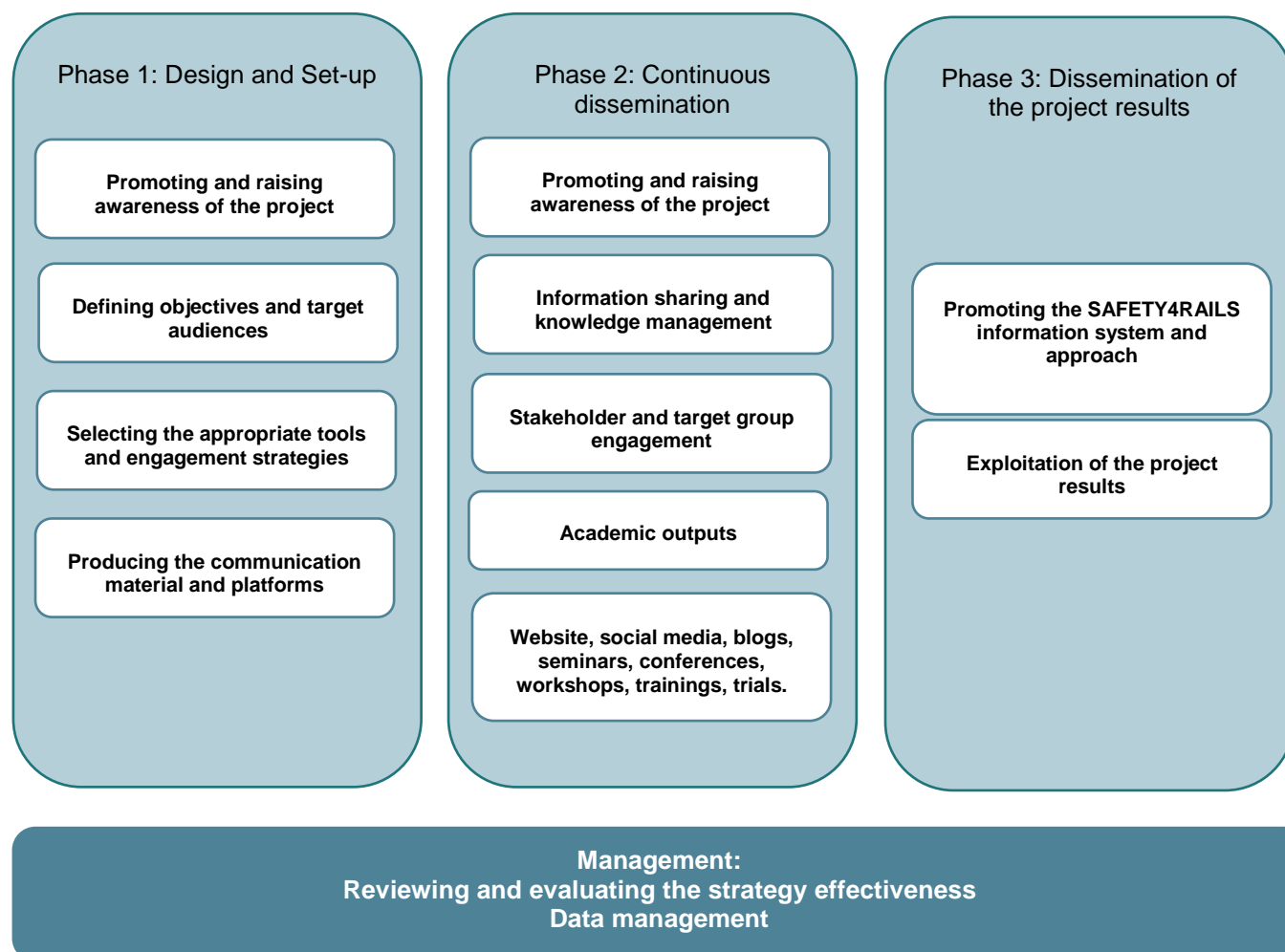


FIGURE 13 IMPLEMENTATION OF DISSEMINATION AND COMMUNICATION ACTIVITIES IN SAFETY4RAILS

The initial dissemination and communication plan with a general timeline (TABLE 9) outlines the dissemination of some of the key outputs of SAFETY4RAILS project.

TABLE 9 SUMMARY OF DISSEMINATION AND COMMUNICATION PLAN WITH A GENERAL TIMELINE

CONTENTS/ RESULTS TO COMMUNICATE AND/OR DISSEMINATE	TO WHOM	WHY	HOW	WHEN
Project idea and approach	Press, general public, scientific community, rail-way authorities	Awareness raising	Project website, opening event, leaflet, brochures, press releases, video, social media	Phase 1 M1-M3
Requirements and initial Designs	End-users and practitioners/ Researchers/ Civil society organizations	Stakeholder engagement; gain early feedback	Workshops, conferences, professional web forums, open review questionnaires	Phase 1 M1- M10

Intermediate individual developments (e.g. simulation and monitoring tools)	End-users and practitioners/ Researchers/ Industry	Attracting customers; stakeholder engagement; knowledge sharing	Prototype demonstrations, demo videos, publications, fairs, workshops, social media	Phase II M11-M16
Evaluation of intermediary results of the S4RIS	End-users / practitioners/ researchers/ civil society	Knowledge sharing	Publications, conferences, social media, trainings	Phase II M11-M16
Demonstrations in Operational Trials and Simulation Exercises	End-users and practitioners/ Researchers/ Industry/ Policy-makers	Attracting customers, build relationships, stakeholder engagement	Fairs, exhibitions, demonstrations, publications, workshops, videos from trials	Phase III M16-M22
Evaluation results, social and economic outcome potential	All stakeholders	Demonstrate benefits; attract customers; info and knowledge sharing	Publications, press releases, workshops, whitepapers, social media, Final conference	Phase IV M22-M24

10. Monitoring and assessment of dissemination and communication

The Dissemination and Communication Strategy (T10.1) will be evaluated by scientifically analysed media evaluation, combined with qualitative research through selected audiences to monitor and maximise the project's impact and to consider its potential legacy once the project has ended. It will:

- Be integrated with the overall evaluation of the project.
- Assess whether the main aim of encouraging adoption of the project approach towards resilience, particularly for rail and metro critical infrastructure across the EU is being taken-up.
- Assess whether continuous relevant and positive exposures across all targeted media sectors is achieved.
- Assess whether the partner organisations are committed, involved and active dissemination activities.
- Assess whether all planned activities have been implemented and measures the results in terms of outreach.

The evaluation also supports the recording of the dissemination and communication strategy implementation and highlights possible needs for changes. The evaluation will be conducted every six months, with the core focus in evaluation being that it is conducted according to European Commission communication reporting needs. The evaluation is an integral part of the overall evaluation of the project.

The dissemination and communication evaluation will be based on quantitative and qualitative data collection and follow up on SAFETY4RAILS dissemination and communication activities and it is followed by scientific analysis of the results. The qualitative and quantitative follow up and assessment of the set key performance indicators is likely to be conducted in the manner which is presented in **TABLE 10**.

TABLE 10 QUALITATIVE AND QUANTITATIVE FOLLOW-UP¹⁴

CHANNEL OR ACTIVITY	QUANTITATIVE	INDICATOR	KPI (target)	KPI (actual)
Project website	<p>The number of unique visitors per month</p> <p>The duration of the visits</p> <p>Does the web page show that core content information page is most visited and this supports sharing the basic information on the project?</p>	Google analytics	<p>Target: average of 400 visits per week in Year 2</p> <p>Target: average of 50 downloads per month in Year 2.</p>	<p>Around 5000 sessions in Year 2.</p> <p>Avg Duration: 1.24 min in Year 2</p> <p>Most popular pages: Home page, news and events and library</p>
Social media	Number of likes and followers (Facebook and LinkedIn)	Facebook analytics	<p>Target: 2 pages/ groups/ discussion forums in selected social networks</p> <p>Target: At least 10</p>	Facebook not considered as the main channel.

¹⁴ As included in the SAFETY4RAILS Grant Agreement, Annex1, description of the Action, Part B, page 52.
PU – Public, D10.3, October 2022

	<p>Number of active discussion forums (all social media channels)</p> <p>Number of views (LinkedIn)</p> <p>Number of tags and followers (Twitter)</p> <p>Do the activities in social media show growing interest in the project?</p>	<p>Twitter analytics</p> <p>LinkedIn analytics</p>	<p>posts per month across social media platforms by year 2 and 150 followers in total</p>	<p>Twitter: 204 posts (around 9 per month), 2647 impressions, 969 likes, 16 clicks.</p> <p>LinkedIn: 224 followers, 2103 views, 46 157 impressions.</p>
SAFETY4RA ILS video	Number of views	YouTube analytics	Target: 1000 views of video material introducing SAFETY4RAILS results	Around 500 views.
Newsletter	<p>Number of readers</p> <p>Number of subscribers</p>	List of newsletter subscribers	Published every 6 months throughout the project. At least 100 subscribers per newsletter	3 newsletters were published on the website with announcement in the social media.
Training	Number of people trained	<p>List of events</p> <p>Number of participants</p>	Target: 80 persons trained	Four simulation exercises and the final conferences. Between 40 and 80 participants for each event.
Publications	Publications in technical, scientific, and academic journals	List of publications	Target: at least 20 academic or scientific articles; of which at least 15 open access publications	14 Scientific peer-reviewed open access articles published.
Press releases & articles	Publications in newspapers (web or printed)	List of press releases	Target: 4 press releases or articles published	Two press releases.
Conferences, events, fairs	Presentations at different conferences, meetings, and events	<p>List of events</p> <p>Number of participants</p>	<p>Target: Presentation of SAFETY4RAILS in 10 European or International events.</p> <p>Distribution of over 100 leaflets.</p>	22 events.
White papers	Papers published	List of papers	Target: 3 papers published	3 papers (Policy Fiche, one-page for CERIS, and Synopsis of anticipated short-term policy feedback-related actions of projects dealing with Security Research).

Brochures	Brochures published	List of brochures	Target: 3 brochures published	3 brochures.
Final stakeholder conference	Participants (by target group)	Reporting by organizers	Target: 100 participants in total	80 participants.
End-user workshops	Participants (by target group)	Reporting by organizers	Over 10 external participants per workshop	Between 20 and 40 participants per workshop.

11. Conclusions

This Dissemination and Communication Plan provides the SAFETY4RAILS project with a framework around communicating project activities and outcomes and disseminating results. The SAFETY4RAILS consortium use this as a strategy.

In this updated dissemination and Communication Plan, the dissemination actions performed during the period M13-M24 have been updated. These actions included arrangements for project workshops and conferences, participation in events thematically related to the project's scope, delivery of scientific papers, sharing information about present activities and results in social media (Facebook, Twitter, blog), website and video. Communication materials create visibility for the project and this supports recognition of the project. The materials such as logo, website, brochure, also ensure that key information on SAFETY4RAILS is coherently communicated.

The dissemination and communication plan was established by defining the objectives of dissemination and communication, the project content to be disseminated, the target groups to be approached, the channels and materials to be used, general acts for the action plan and dissemination methodology.

All project partners are involved with dissemination and communication. This supports network leverage and guarantees that information on each project milestone result is well disseminated and/or communicated. The main dissemination and communication objective is to widely spread the project's goals and results and to reach a variety of target groups according to the project's scope.

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12. ANNEXES

12.1 ANNEX I. GLOSSARY AND ACRONYMS

TABLE 11 GLOSSARY AND ACRONYMS

Term	Definition/description
CFP	Call for Papers
DCP	Dissemination and Communication Plan
EC	European Commission
ICT	Information and Communication Technologies
IPR	Intellectual Property Right
KPIs	Key Performance Indicators
MS	Member State
S4R	SAFETY4RAILS
QM	Quality Manager
WP	Work Package

12.2 ANNEX II. SAFETY4RAILS LOGO



FIGURE 14 SAFETY4RAILS Logo

TABLE 12 SAFETY4RAILS COLOUR CHART

Colour	Codes
light green	R = 46 G = 161 B = 168
dark green	R = 74 G = 135 B = 153

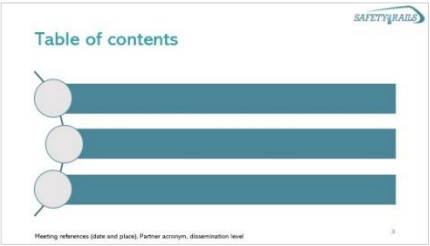
12.3 ANNEX III. SAFETY4RAILS POWERPOINT TEMPLATE



1



2



3



4




5



6

12.4 ANNEX IV. SAFETY4RAILS WORD DOCUMENT TEMPLATE



DELIVERABLE NAME

Deliverable XX

Lead Author : Partner Name

Contributors: Partners' name

Dissemination (X) (Y) (Z) (D) (R) (S) (T) (U)

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DELIVERABLE NAME OF THE DELIVERABLE

Deliverable number: _____

Version: _____

Delivery date:

Classification level:

Nature	Report/Case Study/Summary/Minutes	Partner's acronym
Main author(s)	Name(s) and Surname(s)	Partner's acronym
Contributor(s)	Name(s) and Surname(s)	Partner's acronym
Internal review(s)	Name(s) and Surname(s)	Partner's acronym
External review(s)	Name(s) and Surname(s)	Partner's acronym

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Version	Date	Author(s)	Change(s)

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ABOUT SAFETY4RAILS

Railways and Metros are safe, efficient, reliable and environmentally friendly mass carriers, and they are becoming even more important means of transportation given the need to address climate change. However, being such critical infrastructures turns metro and railway operators as well as related intermodal transport operators into attractive targets for cyber and/or physical attacks. The SAFETY4RAILS project delivers methods and systems to increase the safety and recovery of track-based inter-city railway and intra-city metro transportation. It addresses both cyber-only attacks (such as impact from WannaCry infections), physical-only attacks (such as the Madrid commuter train bombing in 2014) and combined cyber-physical attacks, which an important emerging scenarios are given increasing IoT infrastructure integration.

SAFETY4RAILS concentrates on rush hour rail transport scenarios where many passengers are using metros and railways to commute to work or attend mass events (e.g. large multi-venue sporting events such as the Olympics). When an incident occurs during heavy usage, metro and railway operators have to consider many aspects to ensure passenger safety and security, e.g. carry out a threat analysis, maintain situation awareness, establish crisis communication and response, and they have to ensure that mitigation steps are taken and communicated to travellers and other users. SAFETY4RAILS will improve the handling of such events through a holistic approach. It will analyse the cyber-physical resilience of metro and railway systems and deliver mitigation strategies for an efficient response, and, in order to remain secure given ever-changing novel emerging risks, it will facilitate continuous adaptation of the SAFETY4RAILS solution; this is validated by two rail transport operators and the results supporting the re-design of the final prototype.

Dissemination (X) (Y) (Z) (D) (R) (S) (T) (U)

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Executive summary

Le Lorem Ipsum est simplement du faux texte employé dans la composition et la mise en page avant impression. Le Lorem Ipsum est le faux texte standard de l'imprimerie depuis les années 1500, quand un imprimeur anonyme assembla ensemble des morceaux de texte pour réaliser un livre spécimen de polices de texte.

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Dissemination (X) (Y) (Z) (D) (R) (S) (T) (U)

1. Introduction

1.1 Overview

The DoA describes this deliverable as...

The main objective of this document is to ...

1.2 Structure of the deliverable

This document includes the following sections:

- Section X: In this section ...
- Section Y: In this section ...
- Section Z: In this section ...

Dissemination (X) (Y) (Z) (D) (R) (S) (T) (U)

2. [SECTION TITLE]



FIGURE 1 SAFETY4RAILS LOGO

Le Lorem Ipsum est simplement du faux texte employé dans la composition et la mise en page avant impression. Le Lorem Ipsum est le faux texte standard de l'imprimerie depuis les années 1500, quand un imprimeur anonyme assembla ensemble des morceaux de texte pour réaliser un livre spécimen de polices de texte.

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2.1 [2ND LEVEL HEADER]

TABLE 1 EXAMPLE OF TABLE

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2.1.1 [3RD LEVEL HEADER]

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2.1.1.1 [4TH LEVEL HEADER]

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2.1.1.1.1 [5TH LEVEL HEADER]

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Dissemination D1X.X Month

3. Conclusion

3.1 Summary

Note: Do not summarise the report, even less copy the executive summary, here. If there are no conclusions, focus on next steps, upcoming work, etc.

In this document we have described/showed/demonstrated ...

In Section X we have shown how ...

In Section Y we have shown how ...

In Section Z we have shown how ...

Finally, it is worthy highlighting ...

3.2 Future work

Dissemination D1X.X Month

BIBLIOGRAPHY

1. To be consistent, insert all reference details by clicking references – insert citation – add new source.
2. Select Style on the Citations menu and choose the "ISO690 numeric reference".
3. When you have finished inserting your references, copy them and insert them, in alphabetical order, under this section

Dissemination D1X.X Month

ANNEXES

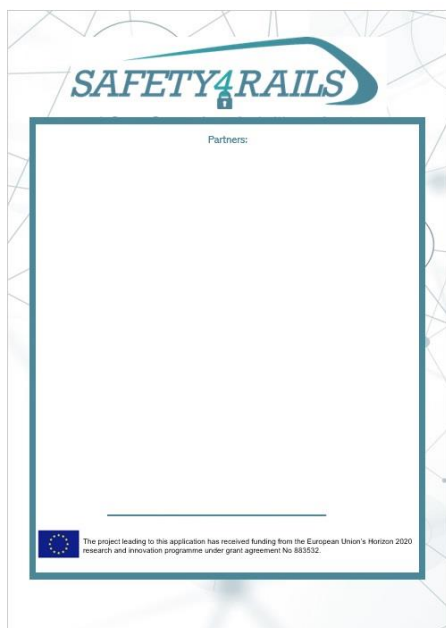
ANNEX 1. GLOSSARY AND ACRONYMS

TABLE 2 GLOSSARY AND ACRONYMS

Term	Definition/description

Dissemination D1X.X Month

11



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avisa partners



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etra I+D



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