

REPAIR

Using Badges to Increase Railway Sustainability



REPAIR supports the Sustainable Development Goals

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INTELLECTUAL OUTPUT 4

REPAIR MAPPING

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Project Partners



France



Spain



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1 SUMMARY

Intellectual output 4 is a part of the final report of the Erasmus + REPAIR project, in which the Consortium was researching, how using Open Badges can improve sustainability and increase the achievement of Sustainable Development Goals in the railway sector.

This document presents the process of identifying communities of practice and their ways of learning, describes the recognition of practices, mapping and exploiting those practices and creating prototypes for the project purposes.

The paper begins with the introduction – brief description of the REPAIR project, its goals, the activities implemented to reach the goals, presentation of the project partner Slovenske železnice, d. o. o. and its Training centre, where the members of the working group, Alenka Dodig and Tjaša Govedič, are employed, and presentation of the project partner Administrador de Infraestructuras Ferroviarias – Adif and its Training centre, where Carlos García works as training coordinator.

Previous research carried out within the REPAIR project has been put into practice through the two railway partners involved in the project, Slovenske železnice and Adif. In this way the particularities of the results of this report will be described as activities carried out within the staff of both companies with specific approaches and contextualized to the situation of each company.

In this sense, the results achieved and the activities carried out will be described independently, offering a greater level of detail that may be of great interest to other companies that want to apply the Open Badges system and have similarities or differences with both project's railway partners.

Output level 1 – Recognizing communities of practice offers a detailed description of communities of practice and the characteristics of their learning, definition of communities of practices in the REPAIR and railways sector context in relation with the Open Badges and description of the workshop, held for the trainers of the Training centre.

Output level 2 – Recognizing practices presents the process of recognizing practices that can be visible when you take a community of practice under the microscope and study it for a while. The research, conducted to get a clear picture of the state of awareness of the sustainability and knowledge about the Sustainable Development goals, showed that a group of Trainers and the employees are two strong communities that share many common practices that make their work and engagement to be sustainable visible and can be translated into digital microcredentials.

Output level 3 - Mapping and exploiting mapped practices provides information on how the results SZ and Adif obtained with the mentioned research can be translated into wider context and how it provided the partners with precious information for implementation of Sustainable Development Goals, Sustainability and Open Badges in the internal learning plans for training of the railway professions. The chapter contains discussion about the importance of Education for Sustainable Development and how it should not be just optional for the company, but become the integral part of every training and/or education.

Output level 4 – Prototyping summarizes the process of creating numerous prototypes of Open badges to prove that they make sustainable practices visible and that they can be the agents of change in the involucration of Sustainable Development Goals at the personal and organizational level.

2 INTRODUCTION

In the Erasmus+ REPAIR project (Recognizing Emerging Practices Anticipating Industry Renewal), the members of the Consortium were constructing a systematic approach to help guide activities which support the rail sector's contribution to the United Nations 2030 Agenda and Sustainable Development Goals (SDGs). Throughout the project the partners in the working group were testing how a new digital method for recognizing skills and activities, through a "badge", can be used to increase railway sustainability. Our goal was to elaborate new approaches to the development of occupational frameworks including Sustainable Development Goals and to make emerging practices visible with »Open Badges«.

Digital open badges are an online standard for recognizing and verifying learning that complies with the Open Badges Specification. They allow recipients to use an image to quickly show off their skills and achievements (for more precise definition and description of the Open Badges please see IO3).

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet and ensure that by 2030 all people enjoy peace and prosperity.

The 17 Sustainable Development Goals are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability.

Slovenske železnice, d. o. o. joined the Consortium of the REPAIR project as partners, because they believe that by joining forces and introducing innovative methods into our daily work, they can have a direct and indirect impact on the Sustainable Development Goals – direct by immediate work with quantifiable evidence and indirect by spreading awareness and passing on knowledge and values to future generations. The last task relates in particular to the mission of the Training centre, where the two representatives of the company work (Alenka Dodig as the Head of Training centre and Tjaša Govedič as the expert associate in adult education).

The group Slovenske železnice, d. o. o. consists of 9 companies and has around 7000 employees. We have one centralized Training centre for all of the companies within the group.

With professionally qualified staff, the Training centre comprehensively perform the tasks of the Driver Training Centre and the Driver Examination Centre for all programmes. In addition, they provide all professional training for employees performing safety-critical tasks, functional training and an in-house academy for formal and informal managers in the group Slovenske železnice.

Adif, on the other hand, is the main manager of the railway infrastructure in Spain, responsible for the construction, maintenance and operation of both passenger and freight rail traffic. The infrastructure comprises a total of 11,872 km of track, 1,450 passenger stations and 38 freight terminals. The Spanish high-speed network managed by Adif is the second largest in the world.

Adif's commitment to the sustainable development objectives identified by the United Nations is reflected in all activities and lines of work, including training managed through the training department. The three training centers through which Adif articulates training throughout the country allow the 12,000 employees that make up Adif's workforce to receive updated information in line with the company's strategic plans.

For this purpose, the training department has a specific team of trainers (100) as well as collaborators from the areas (900) that allow covering the demand identified in the annual training plan. Each year, they all receive specific training in the context of the sustainable development objectives, which enables them to transfer it to the classroom.

3 OUTPUT LEVEL 1 - RECOGNIZING COMMUNITIES OF PRACTICE

3.1 Communities of practice

The term »communities of practice« refers to groups of people who genuinely care about the same real-life problems or hot topics, and who on that basis interact regularly to learn together and from each other (Wenger et al., 2002). Mutual engagement is an essential element of these social structures and they cannot exist without a trans-personal knowing process of *thinking together*. Thinking together is conceptually based on Polanyi's (1962) idea of *indwelling*: when peoples' indwelling is interlocked on the same cue, they can guide each other through their understanding of a mutually recognized real-life problem, and in this way they indirectly 'share' tacit knowledge. Thus, thinking together allows for developing and sustaining an invigorating social practice over time.

Communities of practice are an important social structure in fostering sustainability and Sustainable Development goals. They can be formed inside the company or wider. Their main purpose is to support each member of the community, give them safe space to share ideas, allow them to be creative and search for solution to common problems. It is also important to note that communities of practice have similar ways of working, thinking and use similar symbols. One of those symbols can be digital – for example Open Badges. Members of the community use them - to show their knowledge, values, achievements, - to get recognised by owning a badge in the community and – to support common goals and contribute to the development of a collective consciousness.

It is important to point out that in relation to the process of defining and creating badges, communities of practice are an example of a bottom-up process. That means that people who are a part of this community are working towards achieving the organisational goal – identifying the qualities or competencies to be recognised by Open Badges. It is on them to recognize the problem and set goals and then work towards achieving it and make a change on a higher, organizational level. Later, in the chapter 6 (Prototyping) we will describe an example – creation of the badge Sustainable trainer.

Following is a description of the workshops, held for a small community of practice – the trainers of the Training centre of the companies Slovenske železnice and Adif. They are constantly working together to find answers to various questions, they share a common goal, a similar vision and strive for quality and accessible education for all employees in the company.

3.2 Workshop for the trainers Slovenske železnice

At the Sustainability and Open Badges workshop, which SZ organised on 22nd of December 2022 on the premises of Training centre, there were 15 of their trainers present. The trainers of SZ are experts in different fields: train driving (traction/operation), rail infrastructure management and train preparation. Before they joined the Training centre, they worked as personnel performing safety-critical tasks. They are now responsible for training new staff, regular training and check-ups for existing staff and regular and extraordinary proficiency tests.

3.2.1 Agenda

SZ invited the trainers to the workshop, because they wanted to inform them about the project REPAIR, which they are a part of – what are we doing, what are our short term and long term goals. SZ also wanted to offer them an explanation of the Open badges concept: the use and the purpose of microcredentials and their potential in the railway sector, connecting Open Badges with Sustainability, Sustainable Development Goals and Rail Sustainability index.

3.2.2 Expected outcomes and usability

The main goal of the workshop, prepared for the trainers, was to raise their awareness of the importance of the United Nations Sustainable development goals and the possibilities to include them in the railway sector. The purpose of the workshop was also to introduce the trainers with the concept of an Open Badge and lead them through the process of obtaining one (SDGs Aware badge). SZ also wanted to get some ideas for creating new badges based on their ideas for specific activities that help increase sustainability in railway sector.

The workshop showed us that the trainers are already quite aware of the Sustainable Development goals and they all have open minds about the possibilities of using Open badges in the railway sector. In the next chapter, we are going to describe the survey, that was carried out at the level of Training centre and on the company level. SZ got so much positive feedback at the workshop, that they decided with the partners of the project, that it would be necessary to dig deeper and explore in more details, how a community of trainers can contribute to reaching Sustainable development Goals by using Open Badges.

3.3 Workshop for the trainers Adif

One of the main objectives of the Repair project was to identify a potential group of people who would form a "community of practices" that could help amplify the sustainable development goals within the company's workforce. On this group we would study the potential of Open Badged as a tool to amplify their action.

In this sense, the group of Road Safety trainers met most of the requirements we were looking for. A total of 80 people who had been working closely for the last few years and who shared one of the main pillars of the company ADIF, Safety, as a fundamental pillar.

Adif initiated a conversation with the head responsible for the coordination of this team and they were proposed to be part of an experimental team that would receive extra training on the Sustainable Development Goals, Open Badges and the Repair project itself.

The team of trainers enthusiastically accepted to be part of this pilot project and they agreed to hold the first training action on December 20, 2022, taking advantage of one of the regular sessions that the working group held remotely through the Microsoft Teams tool.

This would be the germ of the workshop for trainers carried out on the group of trainers of Traffic Safety. In this sense, Adif had to prepare different didactic material, among which they would include a video presentation elaborated by the whole REPAIR project consortium and contextualized to the company Adif by its own staff, as well as the different slides of the presentation where the sustainable development goals, the Repair project, and how the Open Badges project offered a tool to enhance their work would be covered in a summarized way.

The workshop established a first contact with the tool that facilitated the management of badges, so that attendees were invited to request the first badge created by the Repair project, we are talking about the SDG aware badge. They were given precise instructions on how to carry out this action in a way that minimized technological problems.

To facilitate this task, the day after the event an email was sent to all participants where the different materials used were provided and a direct link to the page that allowed the request of the mentioned badge was included.

The methodology used allowed Adif to quickly identify the problems that the tool that facilitated the management of badges could cause. A tool with a usability that could be improved and for the time being only available in English limited the expected impact by reducing the responses obtained. This feedback was of great value to the project as it allowed us to identify the need to change or update the tool. In this way, the comments received by the trainers established a line of work that facilitated the subsequent development of the new management tool.

On this occasion the group was much smaller, limited to five members, but their specialization allowed Adif to obtain more precise information directly related to training in the Sustainable Development Goals.

The general perception of the use of Open Badges to incentivize their training activities was very positive, and proposals for integrating the system into the company's own training tools were immediately put forward.

At the same time, they expressed some discomfort when they realized that the different actions carried out by the company in terms of SDGs had not been properly communicated, being

surprised by the discovery of the REPAIR project at this stage. This was interesting feedback to pass on to those responsible for corporate strategy.

4 OUTPUT LEVEL 2 - RECOGNIZING PRACTICES

The next activity on the agenda was recognizing practices that communities of practices form and share. As the Consortium had insufficient information about sustainable practices that the community of trainers and community of railway workers share, we conducted a research to be able to describe those practices, make them visible and decide on our next steps.

4.1 Survey for the trainers of Slovenian Railways

4.1.1 Before the workshop

Before the workshop SZ held for the trainers in december 2022, they asked them to fill out the questionnaire, prepared by the project partners Maria Angerer and Alfons Bauernfeind from the Institut für partizipative Sozialforschung (see Annex 1). SZ wanted to get the idea how conscient the trainers already are and what they know about Sustainable Development Goals. The results of the survey were analyzed by Maria Angerer and Alfons Bauernfeind and will be presented in the Intellectual output 5.

4.1.2 After the workshop

SZ asked their trainers to fill out the same questionnaire (annex 1) a few days after they held the Sustainability and Open Badges Workshop. They wanted to see how the workshop impacted their vision of sustainability and their role in the company – trying to achieve it. For the credibility of the results it was very important that the trainers filled out the same questionnaire both times. The results of the survey and the comparison between before and after were analyzed by Maria Angerer and Alfons Bauernfeind and will be presented in the Intellectual output 5.

4.2 Survey for all the employees of Slovenian Railways

After SZ got the results from the trainers, they tried to include in the research sample all employees of Slovenske železnice who have access to a work e-mail address. They placed the survey (see Annex 1) on the internal web page of the company, asking everyone to fill it out and help with the research, and they also sent the link to the survey to everyone in the database of company e-mail addresses.

The purpose of the company-wide survey was to determine the current state of awareness of the sustainability in the company Slovenian Railways. The survey was sent out to around 2000 employees and 474 of them filled it out. The results will be presented in the Intellectual Output 5.

4.3 Qualitative in-depth interviews with the trainers of Slovenian Railways

SZ conducted qualitative in-depth interviews (prepared by the project partners Maria Angerer and Alfons Bauernfeind from the Institut für partizipative Sozialforschung) with 10 of their trainers in order to get more subjective view of understanding Sustainable Development Goals (see Annex 2). The interviews helped them to discern the deep-seated internal motivators of the trainers to advocate for the Sustainable Development Goals and to internalise them. The methodology they chose was that of the semi-direct interview, because they wanted to be more flexible and adjust the questions to the flow of the answers. As the interviews took place after the trainers have obtained the SDGs Aware badge and the Sustainable trainer badge, their objective was to explore, how »owning« a badge affects their work and if they feel empowered by having it. SZ were especially interested in how the trainers used the badge they obtained – most of them felt that by placing the badge in the e-mail signature would really make their SDGs related activities and practices visible. The goal was also to determine how much of an impact on improving the sustainability of the railway organization Open Badges can have in opinion of the trainers. SZ asked them what badge they would like to see for their organization and how do they see the future of the badges regarding SDGs promoting practices in the future. The analysis of the results will be presented in the Intellectual output 5.

4.4 Qualitative in-depth interviews with the trainers of Adif

After the first experience with the webinar and the surveys sent to the group of trainers Adif was convinced that they could obtain valuable information through individualized personal interviews.

The information received through the first badge application form had been useful, but insufficient to know to what extent the badges could be of interest in the railway sector. The subsequent survey sent to the group of trainers deepened the group's knowledge about the SDGs and their degree of implementation in the company. But Adif was missing more powerful information from each trainer about the possible use that could be made of the badges to support their work in the company.

The IPS project partners had great experience in the elaboration of surveys and interviews, so they were in charge of designing the individual interview plan that would allow Adif to obtain objective information about the potential of linking badges and SDGs.

An individual plan was designed so that at least 10 trainers from each of the project's partner railway companies, i.e. Adif and Slovenian Railways, would be interviewed.

In the case of Adif, and based on the seminar previously conducted for the group of trainers in Traffic Safety, it was decided to expand the target audience to the entire training department, so that the responses would be more enriching. From this group, ten people representative of the group were selected and invited to participate in individual interviews.

The interviews with personnel based in Madrid took place in person at the facilities available at the Circulación Training Center. Staff from outside Madrid were interviewed using the Teams tool in order to optimize their valuable time.

The results were really valuable, obtaining both positive and negative reviews that Adif probably would have missed through an online survey. The format also allowed them to delve deeper into those topics that were of most interest to the respondent, thus facilitating input. This resulted in a multitude of suggestions that would enrich the badge ecosystem and that could be implemented in a second phase in Adif's internal management tools.

Below there are grouped and summarized some of the most valuable contributions.

- Badge management platform: regarding the platform the project partners use to offer badge management, most of the interviewees agreed that the information offered and the procedure were confusing. The main suggestion was to translate the tool into Spanish. On the other hand, the tool should be self-explanatory, offering information about the process and its functions. This information was vital when launching the second version of the management platform, which would improve the above mentioned aspects.
- Commitment on the part of the company: a large number of the interviewees also noted that for the badge system to have adequate value, it should be officially endorsed by the company. Thus, its use should be encouraged through other corporate tools such as the employee portal or the e-learning tool. It was also suggested that the tool should come with prizes or various incentives to promote the different badges.
- Great potential of the SDGs in the railway sector: somehow the railway workers' collective perceive the badge system very positively and consider that it would have a great potential among the group of workers. We must remember that Adif's company values are closely aligned with sustainability and safety, so talking about Adif and SDG is very internalized. Adif makes an important effort to make its strategic plan known among its staff, which means that this type of actions are usually very well received.
- Integration of the badge system with internal tools: each interviewee indicated that it would be very effective if the badge management tool did not work in isolation, but was integrated with the internal tools that employees are already used to working with. This would break the initial effort involved in getting started with a new tool, and would instead add value to the classic and already profitable tools. In this sense, including the system of badges in the Virtual Training Center (elearning platform) was one of the main suggestions, indicating particular cases such as that badges could be awarded when an employee completed a certain number of hours of training in certain subjects related to the corresponding SDGs.
- Suggestions for new badges: finally, the interviewees were encouraged to suggest a multitude of new badges that they would consider would add great value to their subject, facilitating the dissemination of the same and encouraging the participation of new employees. Some of the most interesting ideas could be: Gender violence badge, zero paper offices badge, bicycle to work badge, recycling badge, efficient use of resources in the office badge, green areas badge, artificial intelligence badge,....

4.5 The badge creation workshop – UIC Railway SDG celebration – March 2023

The UIC Rail Sustainability index Celebration event took place the 2nd of March 2023 in Paris at the UIC headquarters. The event was a part of UIC Sustainability Action week, aimed to share and celebrate the sustainability successes of railway companies.

In the first part of the event, Lucie Anderton, UIC head of Sustainability, presented the RSi tool designed to collect data, share best practices and celebrate rail as the leading sustainability solution.

Isabelle De Keyzer, Project Manager, chaired a session where companies having achieved a high score in Environmental, Social, Governance sustainability shared the best practices that allowed them to achieve their high score.

In the second part of the event, the participants were invited to work in small groups in a world café workshops – a collective intelligence process, designed to collect feedback and innovative ideas in an interactive way.

The World Café session on the presentation of the REPAIR project, moderated by Maria Angerer (Institute for Participative Social Research), Andrew Nash (University Sankt Pölten) and Serge Ravet (RECONNAITRE), discussed how the REPAIR project proposes to use digital badges for individual recognition of practices contributing to the achievement of SDGs. This table discussed ways of using badges to increase sustainability at railways and developed several badge prototypes, which the Consortium placed on the Orcapod web page with the other Open Badges created during the project.

5 OUTPUT LEVEL 3 - MAPPING AND EXPLOITING MAPPED PRACTICES

The Consortium of the REPAIR project anticipated an approach to building sustainable occupational frameworks - communities of practice using Open Badges to map occupational/professional practices and test the ability of Open Badges to improve organizational performance on the UIC Railway SDG Index in real communities of practice.

A changing world of work requires new approaches to the development of occupational frameworks, and the need for a sustainable world an opportunity to make SDGs an integral part of those frameworks. The REPAIR (innovative) approach is twofold:

- apply the lessons learned from modern mapping techniques to create lively occupational/practice/competency maps and
- make the reflexion on SDGs an integral part of the process to create forward looking occupational/practice/competency maps.

In order to make that possible, it is crucial that we make Education for Sustainable Development an integral part of every educational system – part of compulsory education and adult education on organizational level.

«Education for Sustainable Development Goals: Learning Objectives»(2017) highlights that educators and trainers are powerful change agents who can deliver the educational response needed to achieve the SDGs. Their knowledge and competencies are essential for restructuring

educational processes and educational institutions towards sustainability. For that reason exactly, the target group of our research and implementation of Open Badges in relation with the Sustainable Development Goals were the trainers. They are the ones that are giving lessons to different groups of railway workers and »raising« new generations of employees, so they have the power to help them understand the need for sustainable practices now and in the future. They are also the innovations carriers in the organization. «Education for Sustainable Development Goals: Learning Objectives»(2017) states that the support of teachers has been a key condition to the successful adoption and implementation of Education for Sustainable Development (ESD). In order for teachers to be prepared to facilitate Education for Sustainable Development, they must develop **key competencies** (including knowledge, skills, attitudes, values, motivation and commitment). But in addition to general sustainability competencies, they also need ESD competencies, which can be described as the teacher`s capacity to help people develop sustainability competencies through a range of innovative teaching and learning practices (ibid). Learning on the basis of real societal challenges in local context requires cooperation with external partners. Modules should thus enable access to external partners (such as communities, non-formal educational institutions and ESD network) and include possibilities for project-oriented collaboration (ibid).

To integrate ESD more fully into teacher education, the content and the organization of teacher education programmes should be developed with the participation of key stakeholders such as students, teachers, local NGOs and ESD experts. To facilitate innovation, it is crucial for the educational institution to have the necessary structural conditions as well as the freedom to engage in organizational learning processes (ibid).

Contrary to the existing practices of recognizing, measuring and rewarding knowledge, Open Digital Badges can contain specific claims of competency, along with web enable evidence supporting those claims – such as completed work and endorsements from individuals and organizations; equally important, badges and the claims and evidence they contain can circulate in social networks where they can gain additional meaning and value (Hickey & Buchem, 2021). Therefore, digital badges can be used to support the digital transformation of sustainable educational ecosystems and education for the achievement of the Sustainable Development Goals. They can also be perceived as an empowering technology, which allows anyone to start a digital transformation from bottom-up (Buchem, Brunn & Orr, 2019).

Hickey & Buchem (2021) emphasize five categories of functions that Open Badges can fulfill, including *finding*, *assessing*, *recognizing*, *motivating* and *credentialing* learning.

- Finding learning: the first transformative function of Open Badges is helping individuals find opportunities to learn.
- Capturing/assessing learning: a second set of potentially transformative functions of Open Badges is capturing evidence of learning – badges contain extensive information about the context in which that badge was earned, and link to additional information for viewers for whom this information is meaningful.
- Recognizing learning: whereas previous badge function refers to obtaining evidence of learning, recognition function concerns displaying that evidence to others.
- Motivating learning and Endorsing learning: traditionally associated with accreditation, in the case of a badge e.g. by a member of the organization , after reviewing the evidence contained in the badge.

6 OUTPUT LEVEL 4 - PROTOTYPING

Beaudouin-Lafon and Mackay (2002) define *prototype* as a concrete representation of part or all of an interactive system. A prototype is a tangible artifact. Not an abstract description that requires interpretation. Designers, as well as managers, developers, customers and end users can use these artifacts to envision and to reflect upon the final system. Prototypes are often created so that the developers can study the feasibility of a technical process.

We can analyze prototypes and prototyping techniques along four dimensions:

- Representation describes the form of the prototype, such as computer simulation etc...,
- precision describes the level of detail at which the prototype is to be evaluated,
- interactivity describes the extent to which the user can actually interact with the prototype and
- evolution describes the expected life cycle of the prototype.

6.1 The »Sustainable trainer« and the »Sustainable trainee« badge



The most important and visible prototype that was created during the project was made by the in-house designer of the Training centre of Slovenske železnice - it is the Open Badge called »Sustainable trainer«. It was made specifically for the trainers, but its applicability is more extensive as it can be awarded to the professionals from different fields, not only from the railway sector. The main prerequisites for obtaining the »Sustainable Trainer« Open Badge are awareness of the Sustainable Development Goals and active integration of the content into educational programmes – being a part of Education for the Sustainable Development Goals campaign.

As the badge is a prototype, SZ have not added criteria yet, because they already knew that all of their trainers are eligible for the award. They are planning to prepare detailed and specific criteria, so the Open Badge will be even more credible, relevant and that it would really mean something – to the trainers claiming it and to their organization. The badge »Sustainable trainer« can be an intrinsic and extrinsic motivator for a person – *intrinsic* because they get inner validation for their work and effort, because they feel a sense of satisfaction that they have passed on their knowledge, because they are motivated to work according to plan and achieve even higher goals in the future, *extrinsic* because they have received recognition for their work from their organization and other professionals, because their achievements are visible to others, and because they can share them with their peers.



The »Sustainable trainee« badge was created in the last month of the project by the SZ Training centre studio. Its goal and applicability was presented by the trainers that already got their »Sustainable trainer« badge and the trainees were encouraged by them to claim the badge and take part in the SDGs activities in the railway sector. 45 of the trainees claimed the badge.

6.2 Badges on the Orcapods web page

During the project duration the Consortium planned and created more badges concerning Sustainable Development goals and Rail Sustainability index:

SDGs Aware: this badge can be claimed by railway professionals aware of the need to address United Nations Sustainable Development Goals (SDGs).

SDGs Rail Community Member: this badge recognizes rail professionals who have made a commitment to supporting practices that address United Nations Sustainable Development Goals (SDGs).

RSi Champion: this badge recognizes railway professionals who have made a significant contribution to the Rail Sustainability Index (RSi). The holders of the RSi CHAMPION badge are contributing to the collection of data leading to the publication of the Rail Sustainability Index (RSi).

RSi Contributor: this badge can be claimed by railway professionals who are contributing to the Rail Sustainability index (RSi) who participate in a UIC workshop. The holders of the RSi CONTRIBUTOR badge are contributing to the collection of data leading to the publication of the Rail Sustainability Index (RSi).

The badges, for which we got ideas at the RSi Celebration Event on 2nd of March 2023 and were designed, created and used on the Orcapods web page and on the dissemination event – 14th of June 2023 at ADIF in Madrid:

Gender Equality Empowerer: work on the rails should be open to and fulfilling for people of all genders. This badge recognizes railway professionals who support gender equality and who support increasing opportunities for women to participate in and lead the rail community.

Green Driving Supporter: this badge recognizes knowledge and support for RSi green driving initiatives, which focus on sustainable energy generation, increasing fuel economy, and reducing emissions.

Catering Lover: Railway Organic Food: this badge recognizes supporters of the RSi organic food program, offering high quality sustainable catered food on the go.

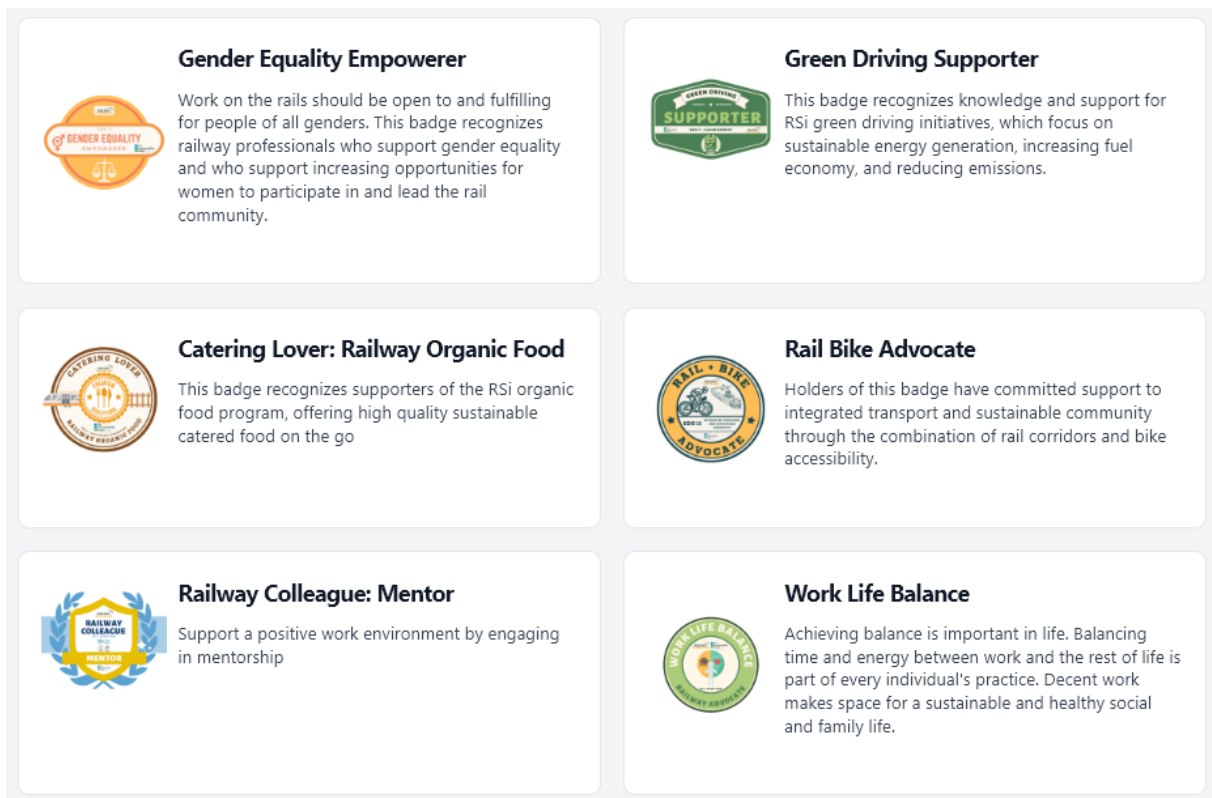
Rail Bike Advocate: holders of this badge have committed support to integrated transport and sustainable community through the combination of rail corridors and bike accessibility.

Railway Colleague: Mentor: holders of this badge support a positive work environment by engaging in mentorship.

Work Life Balance: achieving balance is important in life. Balancing time and energy between work and the rest of life is part of every individual's practice. Decent work makes space for a sustainable and healthy social and family life.

Gardening Champion: this badge recognizes railway professionals who support gardens at rail stations.

In the following image we can see the look&feel of these badges in the new management tool provided by orcapods.org.



A clear sign of the potential of the badge system is the continuous creation of new badges even in the final stages of documentation of the Repair project itself. At the time of writing this document, the project team has generated a new badge with the title SDG Rail Community Member that is being actively promoted by the UIC. As the description states "This badge can be claimed by railway professionals who want to contribute to address United Nations Sustainable Development Goals (SDGs)".



7 SOURCES AND REFERENCES

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8 ANNEXES

Both the questionnaires used to collect information and the design of the script used for the personal interviews are available in the document resulting from the project called Intellectual Output 5.