Deliverable D 4.1
Project Management and Quality Assurance Plan

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Report contributors

Name	Beneficiary Short Name	Details of contribution
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1. Executive Summary

The purpose of this deliverable is to describe the modus operandi shared amongst all partners for the day-to-day managerial operations of the project, in order to ensure the correct development of the project in terms of compliance with communication and documentation standards, timing and resource management.

To do so, this deliverable establishes the working procedures that will ensure the appropriate quality and timing of the project outcomes and includes the internal reviewers for each deliverable.

2. Abbreviations and acronyms

Abbreviation / Acronym	Description
CA	Consortium Agreement
EC	European Commission
EU	European Union
GA	Grant Agreement
PC	Project Coordinator
SC	Steering Committee
S2R	Shift2Rail
TD	Technology Demonstrator
WP	Work Package
WPLG	Work Package Leaders Group
WA	Work Area

3. Background

The present document constitutes the Deliverable D4.1 "Project management and quality assurance plan" in the framework of WP4, Tasks 4.1 and 4.2.

4. Objective/Aim

This document has been prepared to provide an overview of the work done within Task 4.1 and Task 4.2 of the Ben@Rail project. These tasks concern project coordination activities undertaken by the Project Coordinator (EURNEX) and include overall project strategy implementation, project planning, quality assurance, risk management and contingency planning, as well as administrative and financial management activities.

The present document describes the modus operandi adopted for the day-to-day managerial operations of the project, shared amongst all partners. It aims to establish the working procedures that will ensure the appropriate quality and timing of the project outcomes and it includes the internal reviewers for each deliverable.

Deliverable 4.1 illustrates the work done within WP4, Task 4.1 and Task 4.2.

5. Project organisation and decision-making bodies

The management of Ben@Rail aims to ensure governance and coordination of the whole project, as well as its relations with the European Commission (EC). The corresponding management tasks are grouped in a dedicated Work Package (WP4) and have the following specific objectives:

- Ensure timely and qualitative achievement of project results taking adequate corrective actions where necessary.
- Provide decision making, quality control and conflict resolution mechanisms to support project implementation and evolution.
- Support implementation of changes, in activities and consortium, including new entrants if and when needed.
- Provide timely and efficient contractual, financial and administrative support of the project and amendments where necessary.
- Coordinate, at a consortium level, knowledge management and other innovation-related activities.
- Support preparation of exploitation and dissemination of results.

The organisational structure set up within Ben@Rail consists of one body, the Steering Committee (SC).

The Steering Committee is composed of the Project Coordinator (PC) EURNEX, RWTH Aachen University and KTH Royal Institute of Technology. The members are duly authorised to deliberate, negotiate, and make decisions on all matters, and all partners must abide by all decisions taken by the SC. Figure 1 below shows the organisational structure of the project.
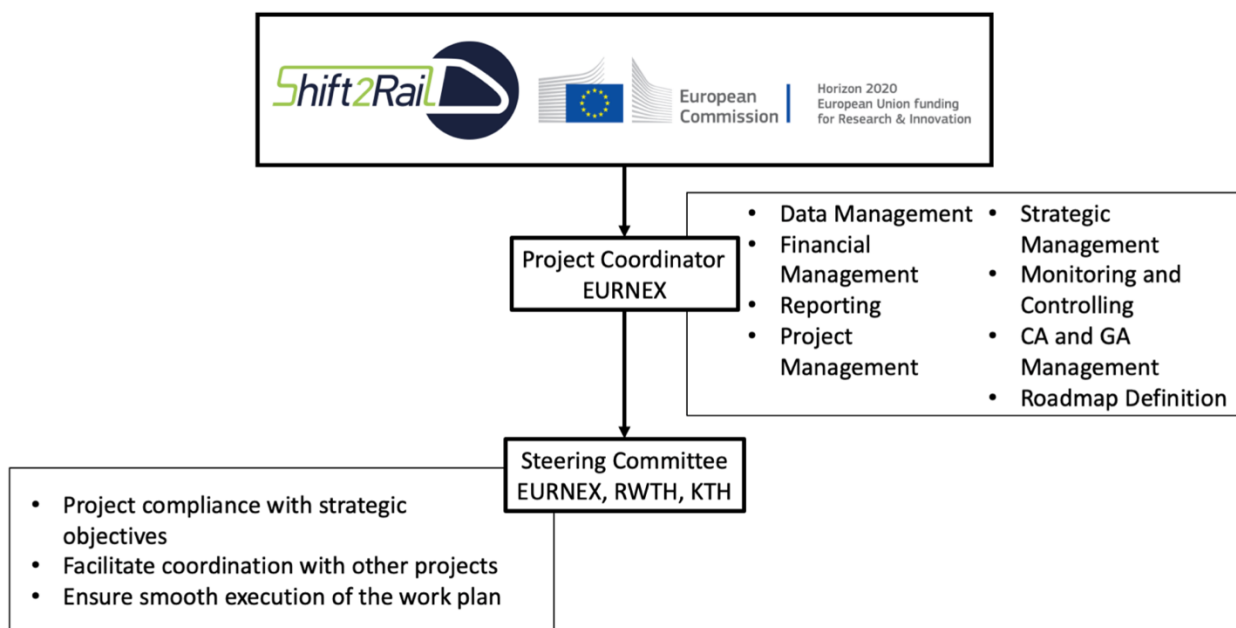

Figure 1. Ben@Rail organisational structure

5.1 Steering Committee

The SC will consider and decide all proposals put forward by the Coordinator and supports the project coordination at the strategic and operative levels. The SC holds regular meetings, either in physical or electronic form, at least once every month.

At the strategic level, the SC is the Consortium's strategic management body, thus ensuring the strategic coordination of Ben@Rail and overseeing the smooth flow of the overall work programme.

At the operative level, the SC supervises the project's overall progress and coordinates the execution of individual Work Packages (WP) in terms of their technical and programmatic contents and according to common engineering consistency and quality guidelines.

The Steering Committee main objectives are:
- Ensure compliance of the project implementation with the strategic objectives.
- Facilitate coordination with other ongoing large-scale projects where relevant.
- Ensure smooth execution of work plans.

5.2 Project Coordinator

The Project Coordinator represents the reference point of contact for the Consortium with the Shift2Rail JU and the project's external stakeholders. In close relation with the partners, the Project Coordinator is responsible for all administrative and financial affairs, communication and reporting to the EC, collection and consolidation of reports, contractual issues of the Grant Agreement (GA) and Consortium Agreement (CA), organisation of meetings, setup of the communication and shared workspace environment. The Consortium entrusts the coordination to EURNEX due to their proven track record as Coordinator in other European collaborative projects.

5.3 WP Leaders

WP leaders have been selected for their qualification to accomplish the objectives of the assigned WPs. The WP leaders (i) coordinate the work among tasks and partners inside the WP, ensuring coherence, usability, compliance of requirements and standards and implements the decisions of the SC affecting the WP; (ii) supervise and assess progress against objectives, handle deviations and support the team members to keep on track, give operative, technical advice, make well-reasoned proposals for adjustments and improvements in the work plan; (iii) arrange short- and medium planning of work in the WP: meetings, milestones, revisions, etc.; (iv) submit the deliverables of the WP in due time, having accomplished all quality assurance procedures to the Coordinator for delivery to S2R; (v) handle conflicts on WP level, report breach of obligations of any team member/party, assist the Coordinator for determining severity and remedy of breach; (vi) are the contact of reference for discussion with the data manager.

6. Communication

6.1 Internal Communication

Ben@Rail extensively uses electronic means to facilitate communication and exchange of information between its project partners.

6.1.1 Intranet

A Microsoft Teams space (password protected internal business communication and file hosting service platform) has been set up and is accessible only to the Project's partners. It is used as:

- Virtual workspace supporting information exchange and collaborative work on documents, such as project reports and deliverables;
- Project archive for all information important or relevant for the project and documents produced by the project;
- Organisation tool for communication and meetings: announcement of meetings, agendas, contact lists.

The Microsoft Teams account is maintained and administrated by the Project Coordinator.

6.1.2 Email and mailing list

The Ben@Rail Intranet includes the Contact list with all participants email addresses. From this file, the Ben@Rail distribution list will be used to distribute project related information and messages.

Partners are asked to:

- Start the subject of all emails by the name "Ben@Rail" followed by a short description of the subject of the email;
- Keep partners well informed about matters that are relevant for them;
- Specifically request the acknowledgement of the email upon its reception if necessary.

6.1.3 Teleconferencing

Teleconferencing is a powerful tool for organising short meetings, in particular:

- to explain a document (distributed prior to the teleconference);
- to briefly discuss a specific technical or management issue;
- to take decisions on issues requiring urgent action.

The following principles should be respected for a successful teleconference meeting:

- the date, time, expected duration, agenda and name of participants should be communicated in advance (typically at least one week before);
- all required documents must be distributed before the meeting (at least the time required for reading those documents plus a couple of days);
- teleconference should be limited in time to ensure the participants' full attention;

- As for a face-to-face meeting, minutes summarising the decisions and actions should be issued after the teleconference and posted on the Microsoft Teams space. The person convening the teleconference shall ensure that meeting minutes are taken. Draft minutes should be made available within 15 calendar days after a meeting and will be subject to approval by all partners concerned. In the absence of comments within the defined deadline, the minutes are deemed to be approved.

The Project Coordinator will provide two platforms to host the Project's meetings:
- Microsoft Teams meeting software, which is integrated into the Project's Intranet platform and can be used by any Partner; and
- Gotomeeting, as an external remote meeting platform which can be used after request to the Project Coordinator.

6.2 Communication with the EC

The Project Coordinator is the official interface to the EC. All formal exchanges of information with the EC shall therefore be handled through the Project Coordinator.

7. Production of deliverables

A deliverable is a significant result of the project often presented in the form of a report. Deliverables are evidence of work done within Ben@Rail and therefore are linked to the release of the payment. The Ben@Rail consortium is contractually bound to submit to the EC the deliverables listed in Part 1.3, Section A of the Grant Agreement "WT2 List of Deliverables". Each deliverable has a reference number, title and leader.

The deliverable process is divided into two main parts:

- The preparation of the first version: under the responsibility of the partner listed as 'Lead beneficiary' in Part 1.3 Section A of the Grant Agreement's Appendix 1 "WT2 List of Deliverables".
- The peer-review process, under the responsibility of the internal reviewers. Additional information can be found in Section 7.3 "The review process".

7.1 Quality management

Quality is an integral part of the work undertaken within Ben@Rail. The continuous progress assessment, close follow-up of work and corporate tools are therefore fundamental for innate quality of work. Another important base is the strict and sincere reviewing process on the project's output, in particular deliverables, regardless of their classification as public or confidential.

The process must follow objective criteria on scientific and technical excellence, namely:

- Completeness. Content must address all aspects related to the purpose but avoid redundancy of information.
- Accuracy. Content must be reliable; conclusions must match results produced and take account of any assumptions made or restrictions imposed.
- Relevance. Content must be focused on the key issues.
- Depth. Content must have adequate depth but must nevertheless be presented in a concise manner.
- Adherence to the template. The project output must be uniform in appearance and structure.
- Scientific acknowledgement: The project output must convey with the suitable scientific citation.

Additionally, quality will be further assessed by examining the coherence with prior and following work as well as value for exploitation. Aspects such as comprehension for non-experts shall be further taken into consideration, in particular for publishable summaries of deliverables.

7.2 structure of deliverables

Ben@Rail deliverables can be divided into nine main parts, following the structure of the deliverable template document provided in the Project's Intranet. Table 1 summarises the deliverable parts.

Introductory pages	Ben@Rail deliverable standard cover page, deliverable characteristics, document history, report contributors, disclaimer and table of contents.
List of abbreviations and acronyms	In this section, one list should be created providing the full term for all abbreviations (shorted word or phrase) or acronyms (abbreviation formed from the initial letters of other words and pronounced as a word) used across the

	deliverable.
Executive summary	The Executive Summary shall not be more than 1 page long, outlining the aim and conclusion of the deliverable. This text should be written in an easy understandable language so that it can also be used in other documentation or public websites to explain the content of the deliverable.
Background	This section should provide the background in which the specific deliverable is produced, necessarily including its number, title and WP number to which it belongs.
Objective/Aim	This section should provide the reason for which the specific deliverable has been produced as well as its objective or aim regarding TD(s)/WA(s) to which it belongs.
Content	This is the main part of the deliverable and should explain clearly how the results were achieved, including diagrams or pictures to illustrate technical/scientific points.
Conclusion	This section should: ▪ Briefly introduce the context of the work; ▪ Re-state the problem; ▪ Describe the objective of the task/deliverable; ▪ Mention the methodology; ▪ Summarise the findings; ▪ Evaluate the results; ▪ Point out the eventual shortcomings/limitations; ▪ Highlight the best solution; ▪ Evaluate the work/deliverable (Have the planned; objectives of the task/deliverable been achieved?); ▪ Propose implications for other tasks/works/projects; and ▪ Propose future work.
References	A list of documents, publications and other key references relevant to the deliverable. References should follow the format: ▪ LastName1 X. Y., LastName2 X. Y. – Title – YEAR, Publication (Vol., Issue)
Appendixes	Documents, publications and other material relevant to the deliverable.

Table 1. The nine parts comprising Ben@Rail deliverables

7.3 The review process

Both the content and the form of each deliverable will be reviewed before its submission to the EC. This process must be done sufficiently in advance to allow for proofreading, feedback and updates.

As shown in Figure 2, the peer review process will commence, at the latest, 15 days before official submission. The designated reviewers may start simultaneously reviewing using the collaborative tool Microsoft Teams before sending it to the Coordinator no more than seven days later for a final check.

Figure 2. Deliverable review process

The following Table 2 illustrates the designated reviewers for each deliverable. In the eventuality the designed reviewers are unable to perform the duty, it is their responsibility to identify a suitable reviewer within the same member of Ben@Rail.

Deliverable leader	Deliverable title	Designated reviewers
RWTH Aachen	D1.1 Simplified stakeholder tree and weighting matrix of requirements	Bastian Schick (KTH), Armando Carrillo (EURNEX)
KTH	D2.1 Structured overview of R&I objectives and their underlying benefits	Andreas Pfeifer (RWTH), Armando Carrillo (EURNEX)
RWTH Aachen	D3.1 Top-down analysis of the railway stakeholders' masterplan goals	Oskar Fröidh (KTH), Armando Carrillo (EURNEX)
EURNEX	D4.1 Project management and quality assurance plan	Anh Hoang (RWTH), Bastian Schick (KTH)
EURNEX	D4.2 Plan for the dissemination, exploitation, and knowledge transfer of the project results	Andreas Pfeifer (RWTH), Sebastian Stichel (KTH)
EURNEX	D4.3 Summary of dissemination and exploitation activities	Nils Jendrny (RWTH), Bastian Schick (KTH)
EURNEX	D4.4 Data Management Plan	Anh Hoang (RWTH), Oskar Fröidh (KTH)

Table 2. Designated reviewers for Ben@Rail deliverables

7.3.1 Criteria for quality control

Reviewers are expected to give their feedback in a structured format, following common rules and agreed scientific and technical criteria discussed by the Work Package Leaders Group (WPLG). They shall provide constructive recommendations for improvement, which the deliverable owner integrates for improvement. As mentioned previously in the Quality Management section above, basic aspects to be addressed by each reviewer are:

- Completeness: Content must address all aspects related to the purpose but avoid redundancy of information.
- Accuracy: Content must be reliable; conclusions must match results produced and take account of any assumptions made or restrictions imposed.
- Relevance: Content must be focused on the key issues.

- Depth: Content must have adequate depth but must nevertheless be presented in a concise manner.
- Adherence to the template: The project output must be uniform in appearance and structure (cooperate image).
- Scientific acknowledgement: The project output must convey with the suitable scientific citation.

7.3.2 milestone reporting

Milestone reports are not subject to review at a higher level than the WP in which they are produced. However, when milestone reports are to be part of future deliverables, there will be an advantage to undertake the appropriate full reviewing process as soon as possible.

7.4 tracking of deliverables

The Project coordinator keeps a spreadsheet for planning and follow-up of deliverables, including deadlines, name of responsible persons, reviewer information, etc. The file is on the Ben@Rail Intranet.

8. Document management

For the duration of the Ben@Rail project, several documents will be produced. To facilitate their management and to ensure consistent presentation, the following rules apply.

English being the official language for Ben@Rail, all documents must be written in English. A careful final revision and English checking is expected, in particular for deliverables and reports which will be submitted to the EC and for documents which will have a wide dissemination.

8.1 Document templates

Ben@Rail partners will use standard document formats (styles, pages layout, basic content structure, definition, etc.) and filing codes for all documents produced in the project.

Templates for paper documents have been prepared by the Coordinator and made available on the Ben@Rail Microsoft Teams Intranet.

The document templates will include the project logo on the cover page and specific sections to be filled to make the document compliant with the Ben@Rail rules and graphic identity. The template defines the layout of the cover page and the internal pages, including required basic information fields and styles to be used.

It is mandatory to use these templates for all Ben@Rail documents.

8.2 computer file formats

To ensure document compatibility, the following file formats should be used:

- WORD version Microsoft Office 2003 or higher (excluding the OOXML-format) for documents;
- EXCEL version Microsoft Office 2003 or higher (excluding the OOXML-format) for spreadsheets;
- PowerPoint version Microsoft Office 2003 or higher (excluding the OOXML-format) for overhead slides;
- PDF for consolidated releases of project documents;
- ZIP for compressed documents;
- JPEG for pictures;
- MP4 for videos.

8.3 document archive

The project archive stores copies of the following final documents:

- Deliverables
- Periodic reports (internal and contractual)
- Minutes of meeting (including reviews)

The Project Coordinator administers the project archive and keeps track of all official releases of the documents produced by the Ben@Rail partners. The partners have the responsibility to send electronic copies of the documents to the Coordinator, or to store the document directly on the Intranet (in this case, this should be notified to the Coordinator).

The archive of datasets and other data types to be shared in Open Access will be addressed in the D4.4 Data Management Plan.

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9. Responsible Research and Innovation (RRI) principles

RRI implies that societal actors work together during the whole research and innovation process in order to better align its outcomes with the values, needs and expectations of society.

The main focus of Ben@Rail regarding RRI principles relies on making the outputs of the project accessible to the public according to the FAIR principle "as open as possible and as closed as necessary". For this, Ben@Rail will promote the publication of scientific results in Open Access journals and/or the new platform "Open Research Europe". In addition to that, a dedicated deliverable (D4.4 Data Management Plan) will be prepared to promote the open access of those datasets produced during the project.

The transfer of knowledge toward formal science education will be facilitated by the nature of the Ben@Rail members, being universities and research centres. Additional information about dissemination and communication of the project results will be developed in D4.2 Plan for dissemination, exploitation and knowledge transfer of the project results to be submitted by M2 and D4.3 Summary of dissemination and exploitation activities to be submitted by M9.

10.   Conclusions

This document has been prepared to provide guidelines on how Ben@Rail will achieve the goals set in the Grant Agreement. To remain effective during the project duration, the document will be updated as often as needed according to the project's development.

This document comprises the main instructions to guarantee the quality of the project results. High standards will be achieved by following a strict and preestablished review process and adhering to the project templates and conventions.

To this objective also contributes a transparent and reliable project management. The main pillar to do this is by following clear procedures for the production of the deliverables and for both the internal communication and the communication with the EC as described in this document.