Improving Buildings is Improving EU

D6.1

Project Management Plan including risk management plan, innovation management, quality & standardization management, gender equality plan Report

Disclaimer and acknowledgements

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Glossary of terms and acronyms used

Table 1 Glossary of terms and acronyms used

Acronym/Term	**Description**
AECO	Architects, Engineering, Construction and Operation
BIM	Building Information Modeling
CA	Consortium Agreement
DOA - DOW	Description of Action – Description of Work – Official Proposal to the EU
EB	Executive Board
EC	European Commision
FR	Financial Responsible
FS	Financial Statement
GA	Grant Agreement
PC	Project Coordinator
PO	Project Officer
TM	Technical Manager
WP	Work Package
WPL	Work Package Leader

Executive summary

The subject of the deliverable*:* The Project Management plan, described in this report, defines the general approach to quality assurance and the procedures to be followed for the production of outcomes such as deliverables or reports. It documents the co-ordination and follow-up procedures for monitoring progress and responding to changes.

The purpose of the deliverable: The aim of this deliverable is to form the basis for monitoring and controlling progress throughout the implementation period of the action. The Project Management's analysis and information will cover the following aspects of the Project:

- interim and final targets based on time, cost and technical criteria
- description of the control procedures and processes
- identification of risks, risk analysis, risk-management plan and quality assurance plan
- milestones, in order to identify progress towards and/or deviations from the planned activities
- sources of possible future problems
- information about all planned communication and publicity about the action, etc.

It includes the Quality, the Risk and the Innovation Management Plan.

This document should be used as a reference by the Project Coordinator and all Project partners.

Summary of the work carried out

Some content within this Strategic Action Plan is derived from the Grant Agreement and its annexes, while other sections have been defined and written specifically for this document.

The document is structured into the following Chapters:

Chapter 1: openDBL Project Overview

Chapter 2: Project Management

Chapter 3: Quality Management

Chapter 4: Risk Management

Chapter 5: Innovation Management

Chapter 6: Gender equality plan

The main conclusion(s)

The successful implementation of the openDBL project relies greatly on the timely fulfilment of the reporting obligations of all partners, efficient collaboration facilitated by the project management structures, risks mitigation and efficient information sharing among different team members. The Project Handbook aims to clarify the key roles, procedures and responsibilities related to the internal management of the openDBL project.

Inside this report, all the project's processes and approaches have been included in detail so that participants are fully aware and follow them throughout the whole project execution. Internal processes include the project management structure and related procedures, consortium roles per level in the openDBL structure, project communications and reporting templates/processes, decision making mechanisms, meetings and travel management points, deliverables and internal reports composition as well as openDBL website and social media accounts. This report also includes an updated risk assessment of openDBL indicating the project related.

An analysis of the knowledge management and protection of IPR aspects is also included and gender issue management.

Introduction

openDBL project summary

openDBL intends to integrate multidisciplinary know-how to cover the requirements of the Call and solve the issues of the current situation. The challenge of the project is to allow, through the development of openAPI, the disposal of openDBL in a unique standardized platform and create useful content, to simplify the workload of the AECO industry.

The project pursues 3 objectives: 1) create a DBL with useful content and functionalities, 2) ensure openDBL is usable and simple to use, reducing the time spent to upload, search and process the information and data to facilitate usage and gain wide adoption, 3) ensure attractive economics, through value propositions and convenient pricing. We'll provide any user with an integrated platform for their digitization needs; ensure that information and data conform to the latest trends and needs of our target clients and support the EU's circular economy and green policies; develop automatic classification systems and data standards; facilitate the operation and maintenance activities of the buildings. This will be achieved creating an Information Delivery Manual and a Data Model and further developing our existing platform used to create a DBL for an important Italian Public Contracting Authority. openDBL will support data matching with external databases and will integrate state of-the art technologies (AI, Blockchain, IoT and VR). Our ambition is to make openDBL the platform of reference for the monitoring of building consumption, transparencies of transactions and official documents, and the positive impact on maintenance and environment.

To reach its goals openDBL is divided into 6 WPs with different goals, tasks and deliverables.

The main objective of WP6 is to coordinate the project ensuring the achievement of its objectives within budget and scheduled deadlines. This will be achieved providing effective project management throughout the duration of the project; performing all necessary administrative tasks and delivering regular progress reports to the European Commission; to establish and maintain effective communication between project participants.

Deliverable 6.1 comprehends Task 6.1 (Technical management), Task 6.2 (Financial and administrative management), Task 6.3 (Risk management) and Task 6.4 (Innovation management).

Mapping openDBL outputs

Table 2 openDBL work description

openDBL GA Component Title	openDBL GA Component Outline	Respective Document Chapter(s)	Justification
DELIVERABLE			
D[6.1] [Project Management Plan including risk management plan, innovation management, quality & standardization management, gender equality plan Report]	The main objective of WP6 (led by CETMA) is to coordinate the project ensuring the achievement of its objectives within budget and scheduled deadlines. D6.1 is a project management handbook including management plan, risk management, quality assurance and GEP.	[Chapter 2 section 2.1,2.2, 2.3,2.5 Chapter 3 section 3.1,3.2,3.3]	*[Detailed project plan documented and approved. Project boundaries defined. Project Handbook available by M4 (April 2023)]*
TASKS			
T[6.1] [*Technical management*]	Goal is to monitor through progress meetings all technical activities of the project, establishment of communication and implementation of decisions taken by the decision bodies, coordination and production of relevant technical reports. Lead: CETMA	[Chapter 2 section 2.1, 2.2, 2.3,2.5]	*[Management Structure and Procedures, deriving from Grant Agreement and Consortium Agreement provisions, presented in Chapter 2 Section 2.1, 2.2, 2.3, 2.5]*

T[6.2] [*Financial and administrative management*]	Goal is to manage all contractual and financial issues, including the approval of changes, regarding consortium agreement, budget and fund distribution, quality assurance, consortium structure and confidentiality issues. Lead: CETMA	[Chapter 2 section 2.4]	*[Presentation of the tools and procedures to facilitate the smooth implementation of the project and the internal communication of the project partners, have been set by the coordinator and explained in in Chapter 2 Section 2.4]*
T[6.3] [*Risk management*]	Goal is to define a preliminary set of risk will at the time of the Kickoff meeting and then keep them regularly updated by the coordinator together with WP leaders. Lead: CETMA	[Chapter 4 section 4.1]	*[Presentation of the approach of the project in managing coordination, implementation, execution and technical risks in Chapter 4, Section 4.1]*
T[6.4] [*Innovation management*]	Goal is to initiate and nurture a process among the consortium partner to continuously generate innovation ideas on openDBL and its value propositions. This will be achieved through desk researches, analysis, user's feedback, customer satisfaction reviews and periodic meetings among the consortium partners. Lead: in2it.	[Chapter 5 section 5.1,5.2,5.3, 5.4]	*[Presentation of the innovation management plan to be followed within the project, all guidelines, instruments to be used for the regular innovation management of the project, the activities, the procedures and the roles related to innovation management have been set by the coordinator in Chapter 5, Sections 5.1, 5.2, 5.3, 5.4]*

Deliverable Overview and Report Structure

The Project Management Plan presented in this report is highly suited to ensure a successful initiation, operation and completion of the openDBL Project in terms of project management, high quality deliverables and dissemination material, IPR management, innovation management and risk management. The plan is also in compliance with the Grant Agreement and the Consortium Agreement as well as the decisions made during the Project kick-off. The plan will be communicated to all Project partners and continuous compliance is monitored by the Project Coordinator.

The document is structured into the following Chapters:

Chapter 1: openDBL Project Overview

Chapter 2: Project Management

Chapter 3: Quality Management

Chapter 4: Risk Management

Chapter 5: Innovation Management

Chapter 6: Gender equality plan

1. openDBL Project Overview

This chapter introduces the project characteristics to allow persons new to the openDBL project to familiarize themselves and find the most important information in a single spot. Therefore, this chapter will introduce shortly the main elements of the openDBL project in terms of participants, WPs, and responsibilities.

1.1. Partecipants

The list of Project Participants is included in the Grant Agreement, in the Consortium Agreement, and presented in the next list:

Table 3: List of Participants

	Partecipant organization name	Short name	Country
1	CENTRO DI RICERCHE EUROPEO DI TECNOLOGIE DESIGN E MATERIALI	CETMA	Italy
2	AM TRANS PROGRES SPOLKA ZOO	AMTP	Poland
3	ASOCIATIA DE STANDARDIZARE DIN ROMANIA	ASRO	Romania
4	CENTRO DE ESTUDIOS DE MATERIALES Y CONTROL DE OBRA SA	CEM	Spain
5	DIGIOTOUCH OU	DIGI	Esthonia
6	DORMAKABA DEUTSCHLAND GMBH	DOR	Germany
7	ELEKTRONIKAS UN DATORZINATNU INSTITUTS	EDI	Latvia
8	E-METODI - NUOVE METODOLOGIE PER L'ECONOMIA DIGITALE - S.R.L.	EM	Italy
9	INSTITUT FUR ANGEWANDTE BAUINFORMATIK EV	IABI	Germany
10	in2it Srl	IN	Italy
11	DIMOS KIFISSIA	KIF	Greece
12	AYUNTAMIENTO DE MISLATA	MIS	Spain
13	COMUNE DI RUVO DI PUGLIA	RUV	Italy

1.2. Project Structure

The overall plan of the project follows the tasks and activities and schedule as laid down in the Work Plan (Annex I to the grant agreement). The guiding point of all work and planning will be the Deliverables due to the Commission along the 2 reporting periods of openDBL:

- RP1: from month 1 to month 18
- RP2: from month 19 to month 36

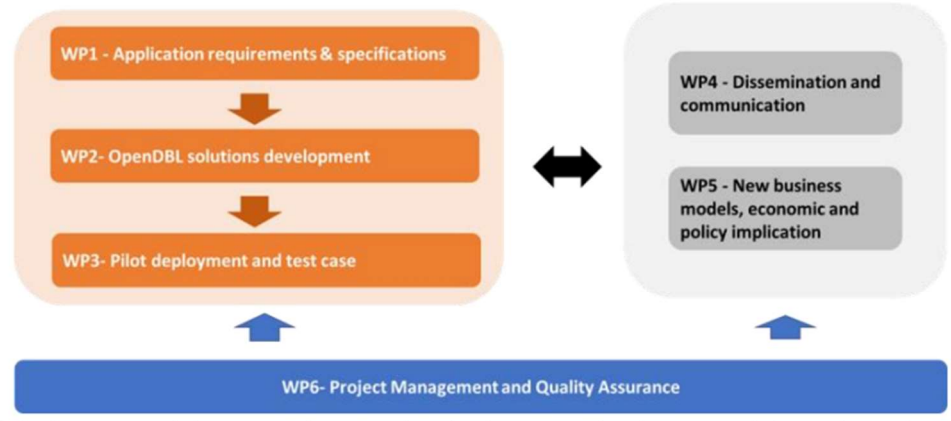
1.2.1 Work packages list/overview

openDBL is a 36 month project organized in the following Work Packages:

WP number	WP Title	Lead Beneficiary	Person month	Start month	End month
WP1	Application Requirements and Specifications	EM	98.00	1	9
WP2	OpenDBL solutions development	IABI	181.50	8	24
WP3	Pilot Deployment and Test Case	IN	236.00	9	36
WP4	Dissemination and communication	DIGI	80.00	1	36
WP5	New business models, economic and policy implication	CEM	66.00	7	36
WP6	Project Management and Quality Assurance	CETMA	59.00	1	6
		Total	**720.50**		

The Work Packages structure and a WP relation, as defined in the Work plan and resources, is the following:

Figure 1 Work Plan



The detailed description of each Work Package's work is described in Annex I to the ECGA, Description of Action (DoA).

Each Work Package has a named WP Leader that is the partner in charge of the leadership and coordination of the technical and economic aspects of the Work Package. This includes responsibility for the preparation of any technical reports, achieving milestones, achieving deliverables and provision of deliverables to the Coordinator on schedule, provision of interim and progress reports to the

Coordinator on schedule. The partners concerned shall appoint a named individual to carry out the role of Work Package Leader.

1.2.2 Deliverables

Each WP will have deliverables associated with it. It is important throughout the course of the openDBL project that all deliverables are rigorously tracked. The list of deliverables for the 36 months of the project is shown next. It is shown in chronological order, in order to facilitate the follow up of deliverable submission.

Table 4: List of Deliverables

WP No	Del Rel. No	Title	Lead Beneficiary	Nature	Dissemination Level	Due Date
WP1	D1.1	Project goals, KPIs, application requirements, sustainability concept and standards analysis report	IN	R	PU	2
WP6	D6.1	Project Management Plan including risk management, innovation management, quality & standardization management, gender equality plan	CETMA	R	PU	4
WP6	D6.2	Data management plan - M4	IABI	DPM	CO	4
WP1	D1.2	IDM and Data Model	IABI	R	CO	5
WP4	D4.1	Communication and Dissemination Plan (CDP) M6	DIGI	R	PU	6
WP4	D4.5	openDBL websites	DIGI	DEC	PU	6
WP4	D4.6	Knowledge Sharing Plan - M6	IABI	R	PU	6
WP4	D4.10	Communication, dissemination and stakeholders' activities report - M6	DIGI	R	PU	6
WP6	D6.6	Short interim management report - M6	CETMA	R	PU	6

WP1	D1.3	System specifications and AI-based mapping concept	EM	R	PU	9
WP4	D4.2	Communication and Dissemination Plan (CDP) M12	DIGI	R	PU	12
WP4	D4.7	Knowledge Sharing Plan - M6	IABI	R	PU	12
WP4	D4.11	Communication, dissemination and stakeholders' activities report - M12	DIGI	R	PU	12
WP6	D6.3	Data management plan - M12	IABI	DPM	CO	12
WP6	D6.7	Short interim management report - M12	CETMA	R	PU	12
WP3	D3.1	Evaluation methodology and planning	KIF	R	PU	15
WP2	D2.1	Front-end application for data collection at the site	DOR	Other	CO	16
WP2	D2.2	AI-based mapping service application	IABI	Other	CO	21
WP2	D2.3	Smart quality control and data verification tool	CEM	Other	CO	21
WP2	D2.4	IoT Platform	EDI	Other	CO	21
WP2	D2.5	openDBL platform	EM	Other	CO	24
WP4	D4.3	Communication and Dissemination Plan (CDP) M24	DIGI	R	PU	24
WP4	D4.8	Knowledge Sharing Plan - M24	IABI	R	PU	24
WP4	D4.12	Communication, dissemination and stakeholders' activities report - M24	DIGI	R	PU	24
WP5	D5.1	Market overview and openDBL business models - M24	CEM	R	PU	24
WP6	D6.4	Data management plan - M24	IABI	DPM	CO	24
WP6	D6.8	Short interim management report - M24	CETMA	R	PU	24

WP3	D3.2	openDBL demonstration in real environments	IN	R	PU	36
WP3	D3.3	Evaluation of openDBL results	IN	R	PU	36
WP4	D4.4	Communication and Dissemination Plan (CDP) M36	DIGI	R	PU	36
WP4	D4.9	Knowledge Sharing Plan - M36	IABI	R	PU	36
WP4	D4.13	Communication, dissemination and stakeholders' activities report - M36	DIGI	R	PU	36
WP5	D5.2	Market overview and openDBL business models - M36	CEM	R	PU	36
WP5	D5.3	Whitepaper and brochure "OPENDBL roadmap for European policy drivers and standardization"	ASRO	R	PU	36
WP5	D5.4	Report on exploitation activities and IPR management	IN	R	PU	36
WP6	D6.5	Data management plan - M36	IABI	DPM	CO	36
WP6	D6.9	Short interim management report - M36	CETMA	R	PU	36

1.2.3 Submission of Deliverables

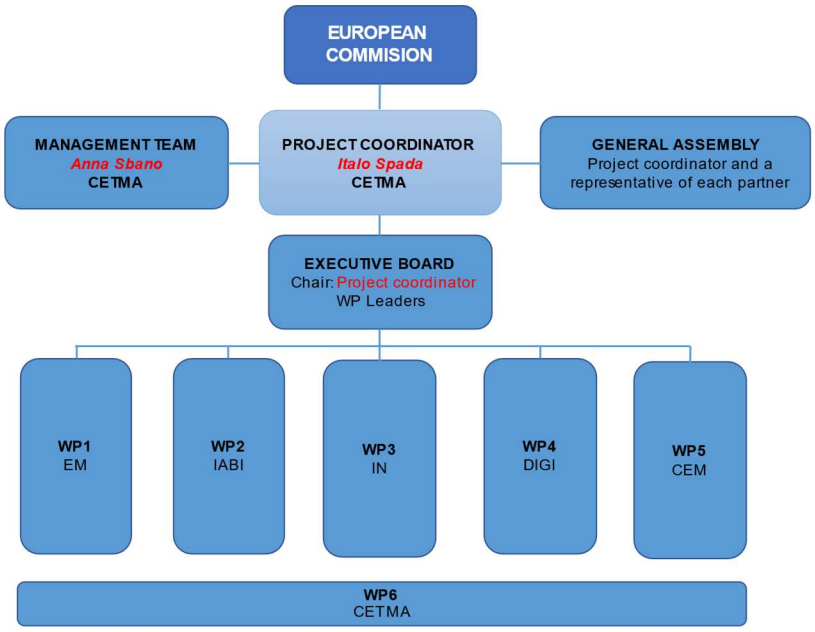
During the course of the Project, the deliverables identified in Annex I to the Grant Agreement have to be finished and submitted to the EC, according to the timetable specified in the Deliverable list. All deliverables have to be submitted electronically via the Participant Portal. In order to verify the correct progress of the Project, apart from uploading the deliverables in the Participant Portal on the due date, the Project Coordinator has to send an email to the Project Officer. In case any kind of delay is detected, this should be reported to the Project Coordinator, so the necessary corrective actions are taken and the EC officer is kept informed. See chapter 2.3.5 Review and Submission of deliverables for more detailed information.

2. Project Management

2.1. Management Structure

The interaction, the responsibilities and the decision-making processes are clearly split between the established project bodies as shown in Figure 3 (Management Structure). The governing culture of the openDBL project is based on mutual agreement, co-determination, and clear leadership. The defined openDBL project bodies, the decision-making process as well as the responsibilities were bindingly described in the Consortium Agreement and in the Grant Agreement.

Figure 2: openDBL Management Structure



General Assembly

A General Assembly as steering and management committee. The aim is to advise and support the decisions of the Project Coordinator on operational and management issues. This board will be responsible for the general decision within the frame of the EC Contract and the Consortium Agreement. Especially the detailed budget allocation, any re-definition of the overall work plan, the coordination of the activities and communication between the subgroups, and the overall project progress assessment will be performed by this committee. The General Assembly is

responsible for all decisions affecting more than one partner, such as contractual matters, financial matters, major technical decisions, preparation of reporting. The detailed responsibilities and tasks are described in the project's Consortium Agreement. The General Assembly is chaired by the Project Coordinator. It will be convened every 12 months in consortium meetings (kick off meeting in month 1 and months 12, 24, 36) and whenever needed (audio conferences).

The General Assembly is the assembly composed of all partners. The following representatives and deputies have been defined to present their organization within the openDBL General Assembly:

Table 5: openDBL General Assembly Representatives

Partner	Main Rapresentative	Deputy
CETMA	Italo Spada	Sonia Saracino
AMTP	Aldona Konopczynska	Marcin Konopczynski
ASRO	Speranta Stomff	Cristina Chirea
CEM	Gloria Calleja-Rodriguez	Juan Jacobo Peralta Escalante
DIGI	Debolina Paul	Soumya Kanti Datta
DOR	Kai Oberste-Ufer	
EDI	Kaspars Ozols	Janis Judvaitis
EM	Andrea Tiveron	Michele Allori
IABI	Rasso Steinmann	Klaus Linhard
IN	Mario Caputi	Tommaso Bortoli
KIF	Angela Gaitani	Giorgos Vrachnos
MIS	Adria Vila Cuco	Fernando Ortolà
RUV	Antonio Mazzone	

The General Assembly shall be free to act on its own initiative to formulate proposals and take decisions in accordance with the procedures set out herein. In addition, all proposals made by the Executive Board (EIEB) shall also be considered and decided upon by the General Assembly.

Executive Board

The Executive Board (EB) will be chaired by CETMA and will be responsible for the dailytechnical work. The EB will be held every 6 months. The Executive Board will exchange the work carried out in the pilots together with the results, in order to support the implementation and running of the WPs and the replication actions. It will also propose the changes of the technical work programme of the project,

evaluate the technical reports and participate in the update of the implementation plan. The Project Executive Board will play a crucial coordination role among partners for the implementation of the different pilot projects in a coherent way, and will also be the main forum for the information exchange between Pilot Leaders and Work Package Leaders.

The Executive Board (EB) consists of the work package leaders and is chaired by the Coordinator.

Table 6: openDBL Excetuve Board Representatives

WP Leaders	Main Rapresentative	Deputy
WP1	Filippo Baldazzi	Michele Allori
WP2	Rasso Steinmann	Klaus Linhard
WP3	Mario Caputi	Tommaso Bortoli
WP4	Debolina Paul	Soumya Kanti Datta
WP5	Gloria Calleja-Rodriguez	Juan Jacobo Peralta Escalante
WP6	Italo Spada	Anna Sbano

Management Team

The Management Team will support the coordinator in all the activities that need representation within the European Commission. The Management Team will be leaded by the **Project Manager Anna Sbano** (CETMA).

The Management Team is in charge of the day to day technical coordination and execution of the project, supported by the Administrative Office, that provides administrative support to the parties. Functions of this team include:

- Perform the pursuit of progress work involved with technical-administrative aspects.
- Assistance and coaching at administrative level to the partners.
- All contract amendments to be presented to the European Commission.
- Quality Assurance Management

Project Coordinator (PC)

Italo Spada (CETMA), will act as openDBL Project Coordinator, being the person responsible for the overall coordination activities.

The responsibilities of the Project Coordinator (PC) are:

- To follow-up the project activities, collecting, reviewing to verify consistency and submitting reports, verifying timing of milestones and other deliverables, assuring their compliance with the project objectives and work plan, as well as specific requested documents to the EC.
- To manage the administrative and financial tasks required by the EC.
- To compile the cost monitoring requested to the partners in months: M6, M12, M18, M24, M30 and M36, according to the provision of deliverables by the partners, which will help the coordinator to have control about the cost expended in periods no longer than 6 months. Occasionally, the PC could freeze the release of the EC annual funding corresponding to a particular Partner if it is detected a lack of commitment to accomplish the tasks and it is considered a risk to the continuation of the Project. In those cases, once the due deliverables have been submitted the deposit will be released.
- To manage the risks and contingency plan of the project, with the support of the Technical Manager, eventually proposing corrective and mitigating measures and strategies to the GA.
- To prepare, convene and chair the Steering Committee meetings, together with GA, produce the meeting agenda and minutes as the formal record of all decisions taken. Then, to assure its implementation.
- To be the interlocutor between the members of the External Board (EB) and the Steering Committee.
- To be the official representative of the project to European Commission, maintaining a permanent contact to the European Commission Project Officer to provide the necessary information that may be requested and deal with any matter, including management of conflicts.
- To follow-up the communication activities, according to the Communication Plan, as well as the exploitation strategies, proposed by the Innovation Manager (IM)
- To control the results generated in the Project and analyse the IPR measures with support of the IM.

Technical Manager (TM), Technical Manager: Mario Luigi Caputi, on behalf of In2IT, will act as Technical Manager (TM), and will be in charge of assisting technically the Project Coordinator during the project execution due to his very good knowledge of the complete technical scope of the project.

The main functions of the Technical Manager are:

- To support the Project Coordinator in the more technical aspects of the project
- To detect during the execution of the project work plan: inconsistencies in the results, appearance of new technical risks, unfulfillment of tasks, inadequate reports or unconvincing results, proposing to the PC in those cases solutions to be taken.

Work Packages Teams and Leaders

The Work Package Leaders will ensure the timely execution of tasks included in each Work Package, stimulating the interaction between the various partners involved. They are also responsible for the consolidation of the specification reports and execution of the tasks that integrate each WP. Each organization involved will appoint a WP Manager, who is responsible for operational decisions, sending quarterly a short progress report to the Project Coordinator supported by the management team, guaranteeing that the partial and total objectives of the WP are accomplished, elaborating the reports of the WP and organizing the presentation or results

2.2. Project Management Procedures

General Management Procedures

OpenDBL partners are responsible for:

- Effective economic management and conduct of the operational work in accordance.
- with the program guidelines and with ethical and legal standards.
- Complying with general terms and conditions governing grants and any terms and
- conditions specific to each grant or granting programme established by the European

- Commission.
- Managing and supervising operational personnel.
- Meeting reporting requirements specific to the call.

Decision taking mechanism

Day-to-day scientific and management decisions are taken by the PC. Strategic decisions and major technical and operational decisions (like any reschedule of deliverables, milestones, tasks, effort) are taken by the GA, which has the highest decision-making responsibility and policy setting power

Each Consortium Body shall not deliberate and decide validly unless a quorum of twothirds (2/3) of its members are present or represented.

Each member of a Consortium Body present or represented in the meeting shall have one vote.

Decisions shall be taken by a majority of two-thirds (2/3) of the votes.

Monitoring and Progress Reporting

Each partner and WP leader will report project progress to the Coordinator on a six-monthly basis. This will cover technical progress, results, deliverables and compliance with the WP schedule, as well as the monitoring and updating of the identified risks. The coordinator will be supported by the management team in all the process and in the revision of legal and administrative aspects. This progress report will be validated by the Executive Board and by General Assembly prior to being sent to the European Commission.

2.3. Information Management

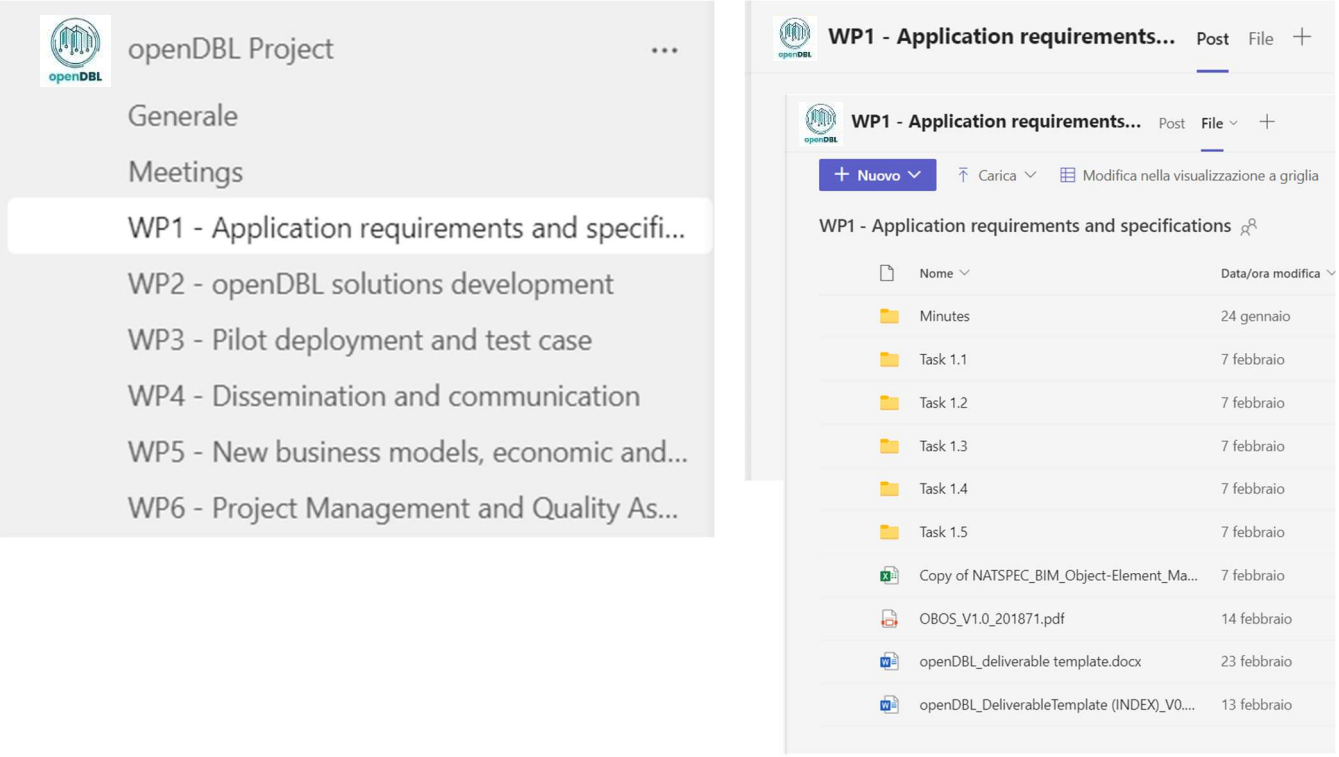
2.3.1 Document Management

The management procedures must guarantee that the documents in the project are produced, updated, distributed and stored correctly and efficiently.

The official documentation repository for openDBL project is accessible through the. Microsoft Teams Platform and the connetted One Drive Cloud access point.

The project Repository on Microsoft Teams contains sections to store the document repository needed by the partners during the project.

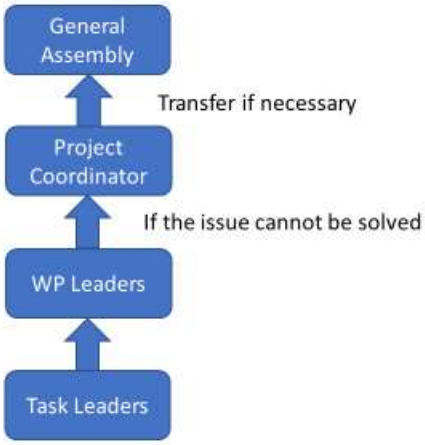
Figure 3: Screenshot of Microsoft Teams repository. Structure of WP1 channel is presented as an example.



2.3.2 Technical information Flow Chart

The WP leaders, as well as the Coordinator are key figures in the management of the technical information within the projectWithin each WP, all the technical issues must be transmitted from each partner to the WP Leader. The Work Package Leader will be responsible for dealing with the issue raised and solving it. In the case that the issue cannot be solved, it will be transmitted to the Project Coordinator The Project Coordinator Coordinator will resolve the issues put up by the WP Leaders or will transmit them to the General Assembly if necessary. All relevant issues with an impact on the work and planning of the project will be discussed with the Management Team without unduly delays.

Figure 4: Technical Information Flow Chart



2.3.3 Administrative Information Flow

By administrative information it is understood any information related to the administrative procedures of the project, including financial issues. Information related to the beneficiaries participating in the project is also part of the administrative information of the project and any changes in this information (legal information, change of name of the organization, change of authorized representatives of each organization, etc.) has to be transmitted as soon as possible to the Project Coordinator in order to take the necessary measures. Administrative information must be submitted directly from each partner to the Project coordinator.

2.3.4 Templates

All the official documents of openDBL project (presentations, deliverables, external communication, meeting minutes, etc.) must use the templates which will be available on the Microsoft Teams. The project logo must also be included in all the documents related to the project.

During the project, the templates could suffer some modifications d, so it is recommended to download the templates from the website each time an official openDBL document is going to be generated.

2.3.5 Review and Submission of Deliverables

All the deliverables must be finalized and submitted within the deadlines defined in Annex I to the Grant Agreement. Please see subsection 1.2.3 of this document.

All deliverables shall be submitted to the European Commission, by electronic means via the Participant Portal.

The tasks leaders (who are in charge of the generation of the deliverable) and the WP leaders are responsible for the technical quality of the deliverables. Please see subsection 3.3 of this document.

2.4. Financial Management

The Coordinator administers the financial contribution of the EC to the Project and transfers payments to the partner's bank accounts without undue delay and in conformity with the rules laid out in the GA. The Cetma's Financial Responsable monitors the submission of Financial Statements - FS (Annex 4 of the GA) and handles with the Project Coordinator and Executive Board any kind of re-allocation of funding within the Consortium.

Table 7: Overview of pre-financing payments to partners

	Short name	Requested EC contribution (€)	5% Contribution to the Guarantee Fund (€)	Total Pre-Financing (€)
1	**CETMA**	390.750,00	19.537,50	293.062,50
2	**AMTP**	143.500,00	7.175,00	107.625,00
3	**ASRO**	120.000,00	6.000,00	90.000,00
4	**CEM**	456.050,00	22.802,50	342.037,50
5	**DIGI**	143.500,00	7.175,00	107.625,00
6	**DOR**	92.750,00	4.637,50	69.562,50
7	**EDI**	442.500,00	22.125,00	331.875,00
8	**EM**	1.316.000,00	65.800,00	987.000,00
9	**IABI**	369.000,00	18.450,00	276.750,00
10	**IN**	308.000,00	15.400,00	231.000,00
11	**KIF**	356.250,00	17.812,50	267.187,50
12	**MIS**	141.250,00	7.062,50	105.937,50
13	**RUV**	121.250,00	6.062,50	90.937,50
	Total	**4.400.800,00**	**220.040,00**	**3.300.600,00**

The Financial Responsable has collected bank details from all partners who are requested to inform about any updates or other changes. They are notified about upcoming payments well in advance with relevant references to the amount of distribution.

When CETMA, as Coordinator, received the pre-financing for the opeDBL project in January, 2023, from the Commission, the partners were informed about the amount of payment and the 5% retention that was directly paid into the Guarantee fund by the EC on behalf of the beneficiaries.

The transfer of the initial pre-financing, the additional pre-financings (if any) and interim payments to Parties will be handled in accordance with Article 22.1. and Article 7 of the Grant Agreement. The total amount of the pre-financing and interim payments must not exceed 90% of the maximum grant amount.

The payment of the balance will be received after the end of the project and will be calculated deducting the total amount of the pre-financing and interim payments already made, from the Final Grant Amount. It will be paid by the Commission within 90 days from receiving the final report and transferred to the partners within 30 days since the date in which the balance payment has been received from the Funding Authority by the Coordinator.

The interim and balance payments are subject to the approval of the periodic and final reports.

During the cost reporting the Financial Responsable will especially give guidance in the following ways:

- by facilitating the collection of financial figures for the relevant reporting period, by informing about required documents such as Certificates of the Financial Statement (i.e. CFS, Annex 4 of the GA)
- by clarifying how to enter figures into SyGMa and by reviewing the cost explanations for consistency and completeness
- advice will be offered via email and/or Microsoft Teams. When finalized, each beneficiary enters their financial information into SyGMa as well as electronically signs their FS and submits them to the Coordinator.

Revisions requested by the EC will be organized and submitted without delay via the Coordinator.

2.4.1 Monitoring of Resource Expenditure

In addition to the technical activities monitoring, the allocation of resources is controlled every 6 months by the Financial Responsable. Partners are asked to document the distribution of PMs for their organisation, which is reviewed by the Financial Responsable mainly to see whether efforts are in line with the DoA.

In order to monitor and run properly the budget during the project lifetime, it is foreseen a "Project Cost monitoring" excel template. The template is composed of the following 8 spreadsheets:

1) **Total Eligible Costs**
2) **WP Distribution**
3) **A - Direct Personnel Costs**
4) **B - Direct costs of Subcontracting**
5) **D1 - Other costs (Travels costs and related subsistence allowances)**
6) **D2 - Other costs (Equipment)**
7) **D3 - Other costs for goods and services**
8) **E – Indirect costs**

Table 8: Project Cost monitoring procedure

Frequency	M6, 12, 18, 24, 30, 36
Responsible	Financial Responsable
Level of details	WP
Procedure & schedule	Financial Responsable sends the Project Cost Monitoring template at the end of the period to all Administrative and Financial Responsible persons.
	Administrative and Financial Responsible of each Partner sends back the template completed in two weeks.
	Financial Responsable consolidates and analyzes the Project Cost Monitoring template in one week and gives advice or requests explanations (if any).

2.5. Amendments Management

A Project of the size, complexity and duration of openDBL cannot exist without adapting to changes from within or from outside of the Project.

Changes might go from members leaving the Consortium, modifications in the DoA, adaptations of the CA and, last but not least, in the various deliverable documents that are the base for the activities in individual projects. The following paragraphs

describe the procedure to request and implement changes in openDBL for each of the different cases (GA and CA).

2.5.1 Grant Agreement (GA)

The GA can be changed under the following circumstances:

- Changes to its terms & conditions (e.g. data or options specific to that agreement)
- Changes to its annexes.

The Project Coordinator, on behalf of the Consortium, or one of the Partners, can request an amendment, in accordance with the Executive Board final evaluation.

Depending on the nature of the changes, it is helpful to discuss the request for an amendment with the Project Officer in charge of the grant.

Two main categories of changes of the GA can be considered:

- **Changes without effect on the results or other contracted items**
  The procedure can be summarized as follow:
  - Change request is prepared by the Partner / Task Leader and has to be consolidated with the WP leader and submitted to the Project Coordinator.
  - The Project Coordinator checks and proposes the change to the Executive Board for approval.
  - The changes are integrated into the next DoA amendment.

- **Changes with effect**
  Changes with effect on the overall results and objectives need the approval of the PO and possibly require a more formal cycle after agreed within the Project.
  The change process is the following:
  - Change requests prepared by the owner / Partners / Task leaders have to be consolidated with the WP leader and submitted to the Project Coordinator
  - The Project Coordinator

- checks and proposes to the Executive Board for approval
- The changes are communicated to the PO at the EC for approval/acceptance
- After approval formally modifications are integrated and submitted.

2.5.2 Consortium Agreement (CA)

A Consortium Agreement (CA) has been signed off by all members of the project consortium, based on a DESCA model (V4, November 2022).

The purpose of the CA is to specify with respect to the Project the relationship among the Parties, concerning the organization of the work between the Parties, the management of the Project and the rights and obligations of the Parties concerning interalia liability, Access Rights and dispute resolution.

Any request for changes to the CA must follow this process:

- The Party requesting the change must contact the Project Coordinator.
- The Project Coordinator calls for an extraordinary Executive Board meeting where the proposal for changes will be discussed under the rules stated in the current agreed version of the CA.

2.6. IPR and Access Right Management

The purpose of the Consortium Agreement is to establish a legal framework for the project in order to provide clear regulations for issues within the consortium related to the work, IP-Ownership, Confidential Information, Access Rights to Background and Foreground IP for the duration of the project and any other matters of the consortium interest.

All provisions regarding Intellectual Property Rights of foreground developed in openDBL Project are subject to Section 2 art. 16 of the Grant Agreement and to the provisions laid out in openDBL Consortium Agreement. Therefore, any issue related to IPR must be discussed in the General Assembly.

3. Quality Management

Quality is the degree to which the project results fulfil the project's requirements. To fulfil and exceed the project requirements, a Quality Management Strategy has been defined within the openDBL project through three key processes, namely:

- Quality Planning
- Quality Assurance
- Quality Control

These three processes are interdependent and guarantee efficient and high-quality work.

3.1. Quality Planning

Quality management planning determines quality policies and procedures relevant to the project for both project deliverables and project processes. It defines who is responsible for what, and documents compliance with guidelines.

3.1.1 Visual Identity

The creation of a project visual identity plays a significant role in the way the openDBL project presents itself to both internal and external stakeholders. A project "corporate" visual identity expresses the values and ambitions of our project and its characteristics. The project's "corporate" visual identity provides the project with visibility and "recognisability".

3.1.2 Project Policies

Internal project guidelines, or so-called project policies, were established to organize internal and external processes in terms of meetings, deliverables and publications, to ensure quality.

3.1.3 General Assembly Meetings

Project partners could plan General Assembly in-person, virtual meetings. Could still use the option to participate remotely, depending on travel schedules, thus creating "hybrid" meetings with a portion of the participants on-site (i.e., in-person meeting) and virtual participation by the rest of the participants. The following requirements for hosting virtual and hybrid meetings have been defined:

a) Virtual Meetings

For fully virtual meetings the Coordinator CETMA will be the host of the web conference and will ensure good audio and video quality from the host's side. If it is

planned to record the meeting, meeting participants will be informed about the recording according to GDPR principles. Recordings will not be distributed outside of the Consortium.

b) Hybrid Meetings

Infrastructure/Equipment for in-person/hybrid meetings to be provided by the meeting host:

- Free WiFi at the meeting
- Projector in each room
- Camera and microphone in each room to guarantee good video and audio quality for remote attendees
- If needed: digital whiteboard software

c) Meeting minutes

The chairperson of the meeting and/or web conference is also responsible that meeting minutes are produced and circulated to the members. These meeting minutes shall be considered as accepted if, within 15 calendar days from receipt, no member has sent an objection to the chairperson. Afterwards.

The accepted minutes shall be sent to all members and will also be stored on the Microsoft Teams repository.

3.1.4 Deliverables

In openDBL, two types of deliverables are foreseen:

- Reports
- Technical and technological outputs (e.g., algorithms, control strategies, Edge Node and Cluster Node prototypes, data sharing platform, data bases) – classified as “OTHER”

Technical and technological output deliverables (marked with nature “OTHER” and “ORDP” in the DoA) will be accompanied by a short-written report describing the deliverable and the degree of alignment with the expected results and/or technical functionalities as outlined in the DoA. As deliverables are important outputs of the project, excellent quality needs to be ensured. Therefore, an internal review process has been defined, which is described in detail in section 3.3.

3.1.5 Policy for publishing scientific papers and scientific dissemination

The scientific results of openDBL will be disseminated through different channels, which are:

i. publishing in relevant journals, such as Nature Energy, Nature Climate Change, Applied Energy, Energy and Buildings, Building and Environment, Journal of Building Performance Simulation; Energy; Automation in Construction and Buildings; IEEE Transactions on Smart Grid, Sustainable Cities and Society;
ii. presenting results in relevant conferences, such as IBPSA Building Simulation; International Building Physics Conference (IBPC); IEEE International Energy Conference (ENERGYCon); International Conference on Applied Energy (ICAE); Nordic Symposium on Building Physics (NSB);
iii. sharing results with the scientific community with a relevant interest such as IEA EBC Annex 60 & 82;
iv. publishing popular science articles, aiming a wider range of audience and using platform such as the openDBL webpage, LinkedIn, partners webpages and technical newspapers and blogs (e.g. NyTeknik.com, cosmosmagazine.com, eenews.net);
v. setting events such as seminars to present the results to stakeholders, municipalities, policy, and decision makers (led by CETMA). The results of the publication activities will be summarized in D7.5, Report on scientific publications (ULUND, R, PU, M48).

Prior notice of any planned publication shall be given to the other parties concerned at least 45 days before the publication in accordance with the CA (8.4.2) and Article 17 of the GA. Any objection to the planned publication shall be made in accordance with the GA in writing to the coordinator and to any party concerned within 30 days after receipt of the notice. If no objection is made within the time limit stated, the publication is permitted. (CA 8.4.2) The beneficiaries may agree in writing on different time limits to those set above, which may include a deadline for determining the appropriate steps to be taken. Furthermore, the paper/article, or the link to it will be published on our official openDBL project website. The coordinator (CETMA) has to be informed as soon as a link or document in pdf format is available. The Commission will then be informed about the scientific publication via the Coordinator. In addition, to comply with GA Article 17.1 which requires providing open access

to scientific publications, these papers will be uploaded partners' repositories. All publications and any other dissemination relating to foreground that was generated with the financial support of the European Union shall follow the requirements regarding information on EU funding and disclaimer excluding Commission/Agency responsibility as stated in the articles 17.4 and 17.5 of the Grant Agreement.

Authorship "Rules of Thumb": A person should be author and the person may veto a publication if the following criteria apply1
The person in question must have made a substantial contribution to the conception or design of the work; or to the acquisition, analysis, or interpretation of data for the work.
She or he must have been involved in drafting the work or revising it critically for important intellectual content.
She or he must have approved the version of the manuscript to be published.
She or he must agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work.

All other contributors/ influencers should be mentioned broadly in the acknowledgements.

As prior notice needs to be given 45 days before the publication, all partners have sufficient time to review the planned publication. This additional review process further contributes to high quality publications.

3.2. Quality Assurance

3.2.1 Dissemination and Communication Reporting

Templates supporting dissemination activities tracking process were developed by dissemination leader at the very beginning of the openDBL Project. Each partner is required every three months to provide updated

information about dissemination events and activities performed and planned by his organization. Partners need to provide to dissemination leader proofs about event participation (photos, agendas, presentations, videos, etc.) and also detailed information about the event (date, place, target audience, size of audience, type of dissemination such as ppt, brochure, poster, booth, etc.).

3.2.2 Web conferences and meetings

Communication is one of the most essential foundations of successful project collaborations. Therefore, the consortium established regular web conferences (e.g. monthly Project Coordinator – WP Leaders web conferences, bimonthly Executive Board web conferences requesting WP status reports and several WP-internal/ cross-WP web conferences).

Meeting minutes will support the quality assurance within the openDBL project and will help monitor.

the project's process along and towards its objectives. To ensure the project success it is necessary to implement an efficient meeting structure. At the beginning of the openDBL project, the Kick-off meeting took place together with the first General Assembly meeting on 17th January and 18th of January 2023. During this meeting joint decisions were taken on administrative topics.

It is planned to have monthly Project Coordinator – WP Leaders, bimonthly Executive Board meetings, and two General Assembly meetings per year. In addition, there will be WP-internal/ cross-WP meetings on request, normally in the format of web conferences, but if the circumstances require it, in-person meetings can also be scheduled. At the end of the openDBL project, there will be a Project Final meeting with the main purpose of preparing the final reports for the project and to properly adjourn the partners.

3.3. Quality Control

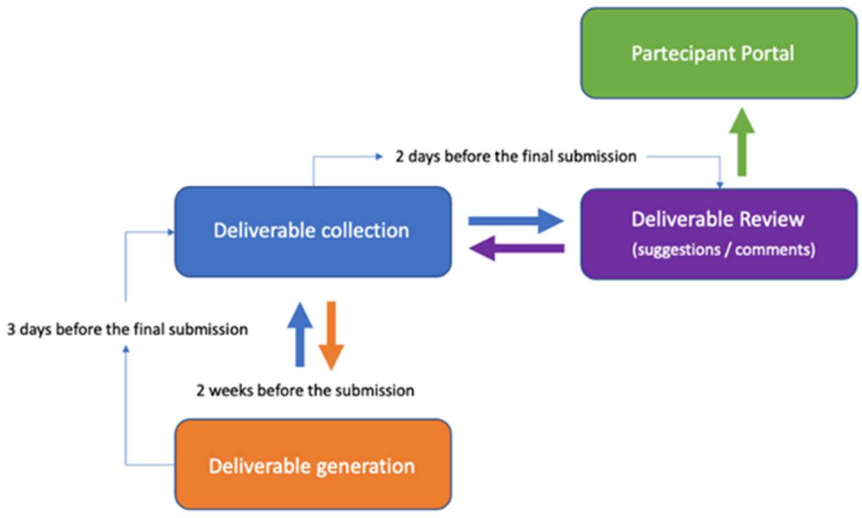
The focus of quality control is on feedback and deviation management in the project. Quality control ensures that feedback from internal as well as from external advisors is taken into account and therefore positively influences the work towards project objectives. Risk Management is an integral element of quality control as the proactive notice of deviations from the DoA allows the consortium to control the consequences

and prepare contingency measures, or even transform those consequences to opportunities. To ensure the quality of Deliverables, an internal review process has been defined. The main goal of this process is to establish internal feedback by partners who did not directly participate as editors to the Deliverable before submitting it to the European Commission.

In order to ensure the quality of the delivery to be submitted, the following procedure to review each deliverable has been defined:

1. **2 weeks** before the submission of the deliverable, the task leader responsible for the generation of the deliverable will send the deliverable to the WP leader.
2. The WP leader will review the document and he will send the deliverable to the project coordinator. Once the deliverable is sent, there is **1 week for collecting comments/suggestions from the project coordinator.** These comments will be included in the deliverable review sheet. The WP leader will send the review to the Task leader in charge of the deliverable that has been reviewed;
3. **3 days before the submission,** the partner responsible for the deliverable concerned will send the final version to the WP leader. The WP leader will send the document to the project Coordinator at least **2 days before the due delivery date.** The Project Coordinator will be responsible for uploading the document in the participant portal and submit it to the Commission by electronic means and he will send an email with the deliverable to the Project Officer.

Figure 5: Deliverables Submission Flow Chart



4. Risk Management Plan

Due to the complexity of the Project, in terms of activities to be carried out, number of partners and duration of the Project, presenting a risk analysis of the planned activities is particularly important.

Risk management will be performed under the supervision of the Project Coordinator, who will be responsible for the following tasks:

- Allocating the required resources and time to execute D6.1 Management and Quality Plan
- within the scope of the project budget and schedule.
- Developing, distributing, and implementing D6.1 Management and Quality Plan.
- Monitoring the project to identify and avoid any new or changing risks.
- Updating the initial risk registry with the support of the Consortium.
- Contributing to risk mitigation and contingency planning.
- Developing and/or updating the risk response strategy.
- Coordinating with the Consortium to monitor risks and implement risk response strategies.
- Managing quality control procedures on deliverables.
- Monitoring the effectiveness of the risk management strategies.
- Reporting regularly to the Consortium.

Making the final decision on risk actions, in co-ordination with the WP Leaders

Executive Board responsibilities include:

- Monitoring the assigned risks and informing the Project Coordinator of any threats or opportunities to the project.
- Jointly Assessing the probability that a risk will occur and specifying the criteria used to assess the probability.
- Jointly Assessing the impact of risks on project cost, time, scope, and quality of activities, and specifying the criteria used to assess the impact.
- Consulting on the risk response strategy.

Work Package (WP) Leaders are responsible for the following tasks within their work package(s):

- Identifying and describing any risk.
- Helping to identify the risk owners and assisting in developing the risk response strategies.
- Performing the risk response steps assigned.
- Reporting on the progress of the risk response to the Project Coordinator.
- Assisting the Project Coordinator in activities associated with risk monitoring and control.

The monitoring of the foreseen and potential new risks will be conducted also through the regular meetings of the Executive Board and of the General Assembly and though the internal project progress reporting process set in the WP6.

4.1. Risk Management Procedure

The risk management procedure includes the following steps: risk identification, analysis, response planning, and monitoring and control. In the beginning of the project a table of risks is forecasted. This table will be completed and updated during the project progress. This Risk Management Register (See Annex I) will be maintained and will be used to record all possible risks of the project and any subsequent measures or actions required.

Figure 6: Scheme of Risk Management for the project

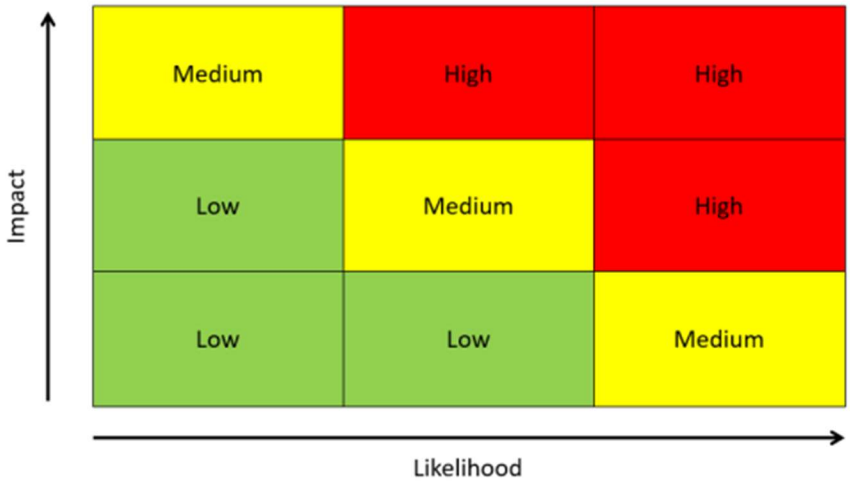
4.1.1 Risk Identification

Risk identification will be done throughout the life cycle of the openDBL project, with an emphasis on identifying risks as early as possible in order to enable effective response planning and subsequent monitoring. A Risk Identification will be performed within the work packages. WP leaders will report the risks and suggestions for the risk priority to the Executive Board, which will agree on the final risk priority as well as on the respective response strategy. Identified risks will be included into the Risk Registry. This registry will be accessible to the consortium through the Microsoft Teams platform.

4.1.2 Risk Analysis

Risks which have been identified and documented are analysed by the probability that the risk may occur and, if it occurs, the size of the possible impact. The exposure to a given risk is estimated using a risk matrix which includes the two dimensions: likelihood and impact.

Figure 7: Risk Matrix



The levels of risk can be defined as followed:

- Low: very unlikely to occur
- Medium: quite possible to occur

High: more likely to happen

4.1.3 Response Planning

The response planning allows to develop strategies and plans to minimize the effects of risks in order to enable sufficient control and management. Higher priority risks receive more attention than lower priority risks to ensure that the risk will not occur. The following strategies will be taken (depending on the risk category):

- Very high risks: Avoidance – Eliminate the threat by eliminating the cause.
- High and medium risks: Mitigation – Identify ways to reduce the probability or the impact of the risk.
- Low risks: Acceptance – Monitor the risks but no other action will be taken.

Every registered risk is followed by a mitigation plan including actions to avoid the risk from occurrence, and a contingency plan that is executed if the risk occurs. For each major risk, a course of action will be outlined in order to minimize its impact. Ways to prevent the risk from occurring, reducing its impact, or probability of occurring will be identified. This may include adding tasks to the project schedule or adding resources.

4.1.4 Risk Monitoring and Control

The level of risk on a project will be tracked, monitored, and reported throughout the project lifetime. The project management will report the risks as a component of the project status process for this project. All project change requests will be analysed for their possible impacts to the project. Each Work Package Leader is responsible for the Risk Management within their Work Package. Each project partner is highly encouraged to communicate and discuss any (possible) risks and response planning with their Work Package Leader. It is the responsibility of all openDBL partners to communicate to the Project Coordinator about the status and effectiveness of each risk and mitigation plan in order to update the Risk Management Register and assess the relevance of the tools. Risk exposure will be continuously re-evaluated and modified accordingly and the results of monitoring and control will be documented.

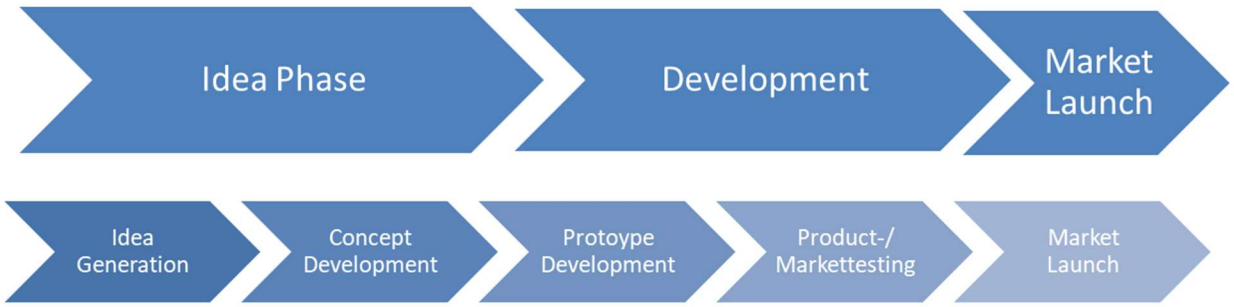
5. Innovation Management

OpenDBL's Innovation management process is outlined in this innovation management plan. This section details the process it takes for capturing results to disseminating and exploiting results.

5.1. Innovation Process

According to an innovation definition provided by the European Commission, innovation is generated not only through research and technology development, but also through new marketing and management solutions. In simple words, innovation can be defined as the process of producing something new that can contribute to increase life quality. The identification of business needs can be seen as the first step of every innovation process. In order to identify potential solution ideas, the precise understanding of market needs and opportunities is a crucial step. In theory, an innovation process can be separated into three phases. The idea phase is the first one and includes the generation of ideas and a concept development. Collection of innovation potentials, derivation of ideas and their respective evaluation and release are steps that are done within this phase as well as an extensive analysis and derivation of concepts for the solution, implementation and marketing. The development phase is the 2nd phase and includes development and testing of the solutions to the finished product. Market launch is the last phase of innovation process and captures every step until to control of market success. The illustrated process can be seen as an ideal-typical innovation process in the figure below (c.f., Figure 8).

Figure 8: Phases of an ideal-typical Innovation Process



Type of Innovation

Generally speaking, four types of innovation are essentially defined which group innovations into product, process, marketing, and organizational:

- **Product Innovation**: creation or improvement of a product or service
- **Process Innovation**: creation or improvement of production or delivery method
- **Marketing Innovation**: new marketing methods
- **Organizational Innovation**: introduce a new organisational method into the firm's business practices, workplace organisation or external relations

openDBL focuses mostly on the 1st type of innovation, namely product and service innovation, as it is mainly committed to delivering novel technical solutions for the platform of reference for the monitoring of building consumption, transparencies of transactions and official documents, and the positive impact on maintenance and environment. Accordingly, the effective coordination and management of the various technical innovations produced in openDBL by the different consortium members is one of the important key parts of the project. Such coordination is supposed to enable a successful monitoring of the work being done under the light of the market and the respective business cases which openDBL defines and targets. Following this, Innovation Management is necessary in order to enable a systematic and successful conversion of new ideas into the developments of new products and services. The openDBL Innovation Management approach will be presented in the Section 5.4.

5.2. Innovation Method

On pillar of the openDBL innovation system is the concept of Open Innovation. Open Innovation describes an innovation approach that is shifted from so-called closed innovation processes (c.f. Figure 9), which takes place traditionally within the company or project team boundaries, towards a more open way of innovating (see Figure 10). Where Open Innovation permits innovations to leave and potentially re-enter the innovation cycle, Closed Innovations only consider internal innovation approaches which stay only internally as they are targeting the market. In simple words, Open Innovation strives to integrate the environment to improve marketable product and process of innovation as more actors are involved in the innovation process. As defined by the European commission, Open Innovation can be

understood as a premise "to open up the innovation process to all active players so that knowledge can circulate more freely and be transformed into products and services that create new markets, fostering a stronger culture of entrepreneurship".

Figure 9: Closed Innovation Model

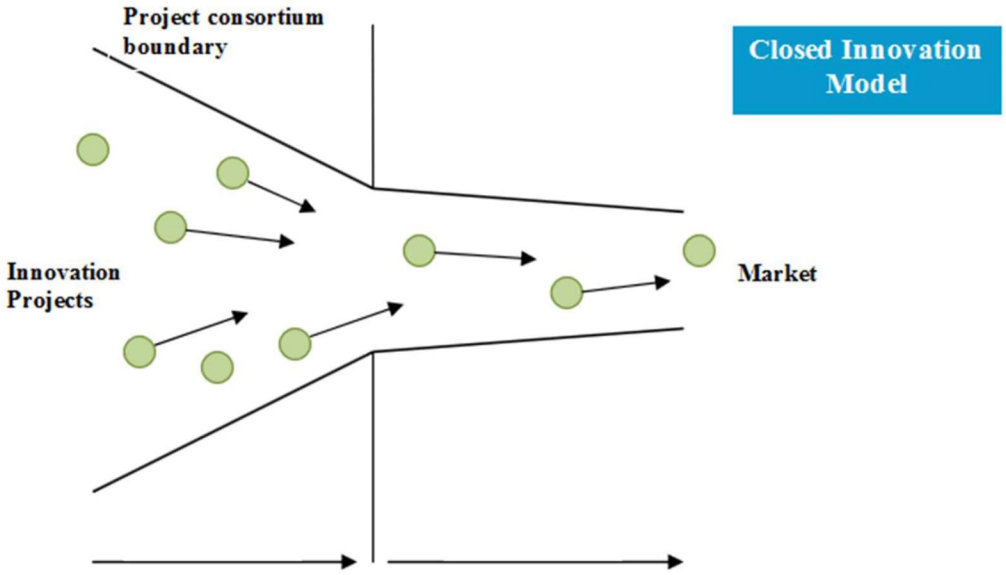
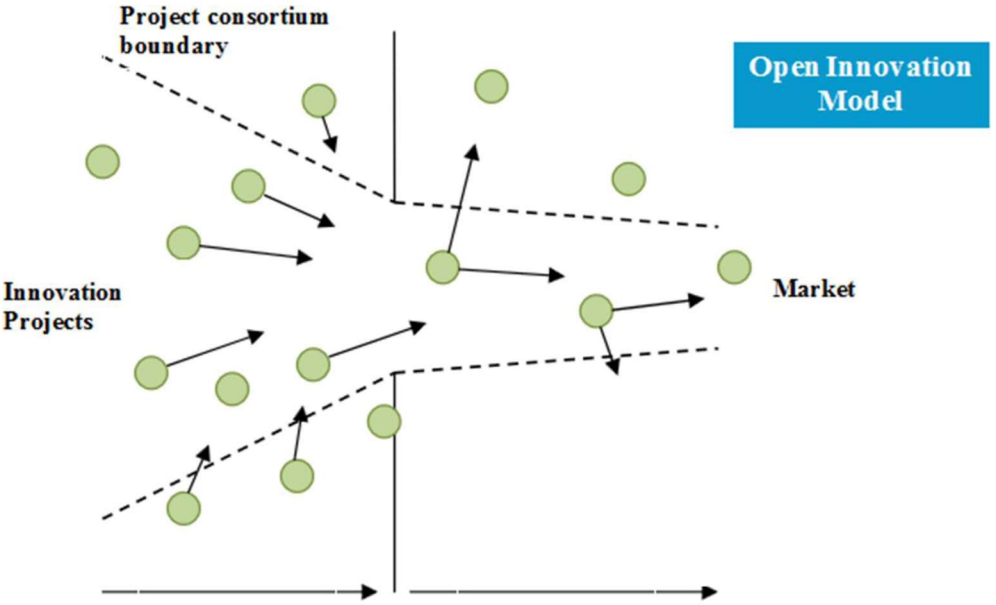
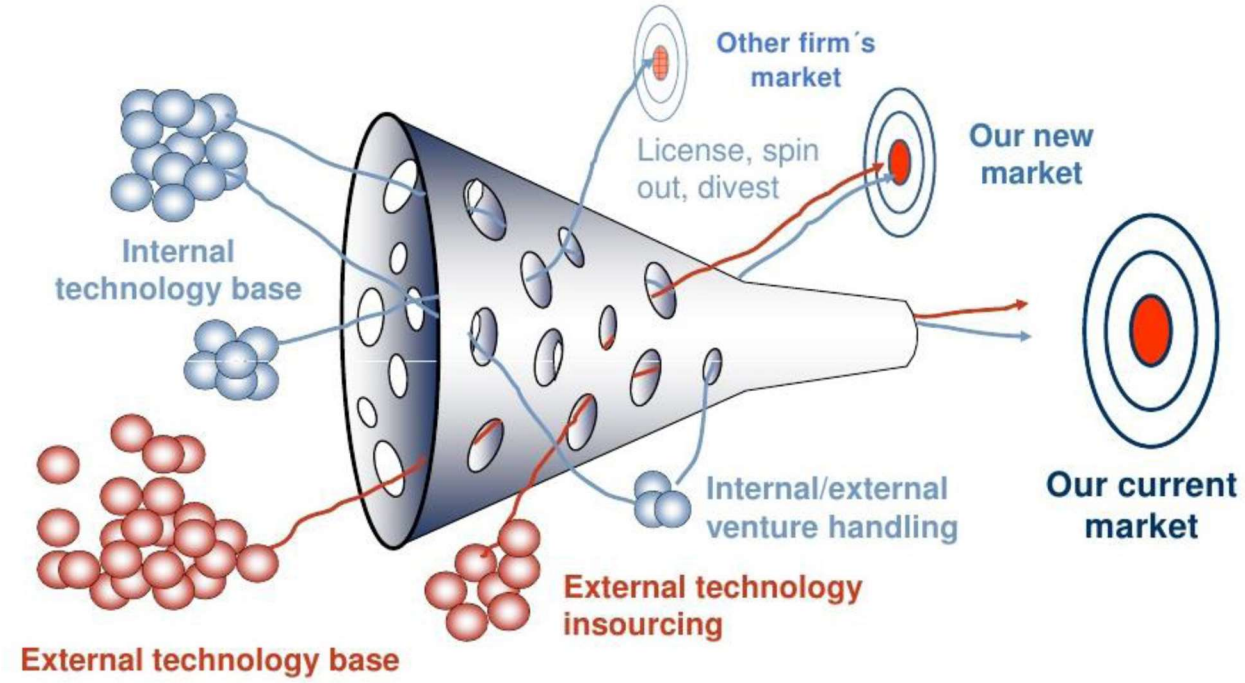


Figure 10: Open Innovation Model



Furthermore, Open Innovation assumes to amplify interactions between internal and external actors for information and knowledge sharing [8]. Following this, the openDBL consortium aims to combine internal and external ideas into openDBL architectures and systems. Purposive inflows (external knowledge going into the openDBL consortium) and outflows (internal knowledge going out of the openDBL consortium) of knowledge will be used by the consortium to accelerate innovation within the openDBL project and to expand the markets for external use of innovative openDBL outputs. Knowledge inflows are characterized as an outside-in-process, where external knowledge is acquired to strengthen internal competencies and improve the innovation process in the openDBL consortium. Such knowledge inflows improve the development of new products and business within the openDBL project. There are basically three different channels within the process of knowledge inflow. The business-to-business channel describes the involvement of supplier and development partner. The business-to-customer channel describes the involvement of customers, allowing the consortium to determine customer needs and trends more accurately. Moreover, there is a business-to-academia channel, capturing the openDBL collaboration with academic institutions like universities or research institutes. Knowledge outflows can be seen as an inside-out-process, where in-house knowledge is released to the public. By doing so, internal knowledge is supposed to be monetized through external paths to market. For example, new technologies developed within the openDBL project can be provided for use within other business sectors than primarily targeted by the openDBL solution. Wherever possible, ideas and technologies within the openDBL project will be made public in order to generate possibilities of external collaborative work or crowdsourcing. The strategic, managed exchange of information with actors outside of the project consortium is supposed to enable an integration of external resources and knowledge into the openDBL innovative process. By doing so, the consortium aims to enhance innovation and thus deliver additional value for customers. Besides including external information, technology insourcing might be seen as another important aspect of Open Innovation, leading to the potentially to develop technology Spin-offs and accordingly to the serving of new markets, as it is illustrated in Figure 11.

Figure 11: Open Innovation



5.3. openDBL Innovation Management

Innovation Management is the capability to manage an idea of new products, services, processes or an improvement of already existing business systems up to its successful realization. Referring to a definition of the European Commission, innovation management "starts at the point of capturing the creative works and finishes when a product or service is deployed". Following this, innovation management is a process that requires an understanding of both markets and technologies. Both competences are needed if creative ideas should be transformed successfully into new products. The openDBL consortium will refer to the European standard on innovation management.

5.4. openDBL Innovation Management Plan

5.4.1 Roles and Responsibilities

The table below outlines the key roles in the innovation management of the openDBL project.

Table 9: Innovation management roles and responsibilities

Role	Responsibilities
Key Result Proponent	Register information on each project result in the results catalogue, including exploitation and dissemination activities
Project Coordinator	• Validation of the information in the catalogue • Provide recommendations to result proponents on Intellectual Properties (IPs) protection best practices • Validation of individual result's dissemination and exploitation activities • Handle escalations from T6.4 Innovation Management Task Leader in case of insufficient information provided by WP leaders or key result proponents or lack of collaboration • Delivery of the Innovation Management Plan (D6.1)
T6.4 Innovation Management Task Leader	• Set-up and maintenance of the openDBL Results Catalogue • Preparation and sending of the Result Identification template • Liaising with WP managers to update their respective results • Escalate and raise issues to the Project Coordinator and Executive Board
WP managers	• Insert and update project results in the openDBL Results Catalogue (or the delegation of this task to Key Result Proponents or Task Leaders in their WP) • Ensure complete and updated information in the catalogue • Ensure that Key Result Proponents have defined the dissemination and exploitation plans
WP4 team	Provide support in validating result dissemination and exploitation activities results

5.4.2 Processes

This section provides a procedural guide on implementing the Innovation Management Plan.

1. Capturing and handling Project Results

The first step in the openDBL Results Catalogue is for the technical manager to list all potential project results, and their key proponent in the catalogue.

A Result Identification template will be provided by the T6.4 Innovation Management Task Leader to all WP managers. WP managers will then fill or assign their key result proponent to fill the template and submit to the T6.4 Task Leader and the Project Coordinator and link to the openDBL Results Catalogue.

Upon linking in the catalogue, the Project Coordinator will then verify that the project results have been described and analysed satisfactorily. Any requests for edits or changes can be reverted by the Project Coordinator back to the key result proponent.

Table 10: Result Identification template

Result Name	
Author	
WP	
Description	
Type	
URL	
Innovation	(In what way can this result be used to deliver benefits)
Impact	
INTELLECTUAL PROPERTY	
IP Background	(List all IP components sourced from partners that were used to produce the result i.e. software code, reports, know-how) • [Component name] (IP Owner): [Description]- [Protection or licensing action used and type]
Third party Ips	(List all IP components that are owner by organizatios outside the project) • [Component name] (IP Owner): [Description]- [Protection or licensing action used and type]
IP Foreground	(List all the IP created during the project including those related to the components of this results) [Name]: [Description, owner during the project, owner after the end of the project, confidentiality level]- [Protection or licensing action used and type]
EXPLOITATION & DISSEMINATION	
Target Beneficiary	(Describe who will benefit or use this result)
Main Benefits	(Describe how each target beneficiary will use or benefit from this result)
Exploitation Action	(Recommend how best to exploit the result for target beneficiaries)
Channels	(Identify the best channels that can be used to ensure the messages reach the right target beneficiaries)

2. Exploitation Management

Exploitation management is covered in the openDBL Results Catalogue within each Result Identification template and allows the consortium to

- Identify each result's exploitation opportunities for foreground IP, and developing an appropriate strategy for its exploitation and protection
- Maintain and elaborate the dissemination and exploitation strategy plan, to promote the project results and their use to maximize the expected impacts.

3. Dissemination

As part of each "Result Identification" template, dissemination actions will be proposed by either the proponent or the concerned WP manager. This allows the consortium, especially for the WP4, to

- Coordinate and monitor dissemination activities for each result
- Ensure that all results achieve the necessary visibility and ensure the best chances for exploitation.

5.4.3 Definitions

This table defines the terminology and concepts used by the consortium in the exploitation and dissemination plans of the project.

Table 11: Definitions for dissemination and exploitation

Project Result	Includes a tangible or intangible project output (i.e. data, knowledge or information) generated through activities of the project, in whatever form or nature
Exploitable Result	These are the most relevant results of the project. Can also be a group of project results
Type of result	• Software and services • Technical specifications • Policies and procedures • Documents and reports • Business models • Other, not listed above
Exploitation	Utilization of results in: • Creating and providing a service • Further research activities • Input to policy actions • Standardisation activities
Dissemination	Public disclosure of the results by any appropriate means

Innovation	A new (or improved) entity (or creation), which when used can produce tangible benefits, satisfying user needs and wants. Types of Innovation: • Business • Marketing • Strategy • Organizational • Product • Service • Process • Technology
Impact	Benefits derived from the innovation
Intellectual Property (IP)	A product of the mind generated through activities such as research and experimentation, or creativity. An intellectual property can be traded, sold, bought, leased, used as collateral, or given away. Examples: software, designs, databases, reports, roadmaps
Intellectual Property Right (IPR)	Legal "rights" to protect your Intellectual Property • Patents (technical inventions) • Copyright (e.g., software, written works, engineering drawings) • Database rights (creation and arrangement of data) • Trade marks • Non-disclosure agreements
IP Background	IP asset owned by the consortium partners brought into the project
Third party IPs	IP assets owned by the organizations not directly involved in the project
IP Foreground	All IP assets created during the project duration
Target audience	Main users of the result
Potential Early adopters	Who will start using the result as soon as it is available
openDBL Catalogue of Results	List of all collected openDBL project results and related information

6. Gender Equality Plan

In order to ensure that Article 14 is fulfilled, the Consortium has already defined the plan set out below. Gender monitoring will be carried out through a dedicated section of the Continuous reporting data Area of SyGMa, in the "Gender of R&D participants involved in the project" section.

Gender equality will be pursued at two levels:

1) at the solutions development level, assuring balance between women and men in the research teams who will implement the project actions and in the content by means of analyzing and taking into account the possible differences between men and women, boys and girls, or males and females, in the research and innovation content of the project;
2) at project's management level, gender balance implies that both genders participate in research & development on an equal footing.

The overall target is for an equal number of women and men to be active in all areas and at all levels. Nevertheless, gender balance is ensured at the apical level of project's management in fact, between 13 partners, 3 of them have selected woman as leader for their organization.

In order to address the gender gap, openDBL will ensure:

a) An open and impartial selection procedure, as well as fair working conditions, to researchers recruited for work, in line with the Commission Recommendation of 11 March 2005 on the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

b) Women will be encouraged to take on decision-making roles. This is in order to address the absence of diversity at management and policy-making levels, which has broad implications which the project will examine. This will also tackle the 'generation effect', by supporting women to take on leading roles, as a career development incentive.

7. Annex I: openDBL Risk Management Register

Annex I:
Risk Management Register

Risk N.ro	Risk	WPs	Migration Plan	Likelihood (1-3)	Impact (1-3)	Risk Category	Contingency Plan	Risk Owner	Progress on action	Status (open-waiting-closed)
R1	One of the partners leaves the consortium	all	Partner's expectations will be continuously verified in order to ensure their commitment to the project	1	3	medium	Depending on project progress, finish project with remaining partners or add new partner			
R2	Requirements are insufficient or unclear to deploy development activities	1,2	Collaborative working methods and continuous monitoring will reduce the likelihood of this risk	1	3	medium	Restatement tasks (period) aim to mitigate potential issues and allow the refinement during the project lifetime			
R3	Interoperability or data processing failure	2	Colaborative working process in order to analyze the state of art of BIM DATA MODEL and standars	2	3	hight	"Testing and early assessment of the technical field conditions will allow consortium experts to investigate the issues early in the project and find proper solutions to satisfy the objectives in the project			
R4	The cost of the IoT platform, as the target is to get it as cheap as possible to increase the chances of practical use of it, but the chip shortage might get this difficult	2,3	Market analyisys concerning IOT components prices and performances	1	3	medium	The cost of the IoT platform, as the target is to get it as cheap as possible to increase the chances of practical use of it, but the chip shortage might get this difficult			
R5	Insufficient accuracy of the sensor measurements for the IoT platform	2,3	IOT sensors performance analisys and accuracy tests	1	3	medium	We will perform an extensive analysis of the needs as well as develop dedicated calibration methods as well as signal processing algorithms to acquire an accuracy that satisfies the needs of the application if the available sensors will not ensure it.			
R6	The quality of the data is not sufficient. Data is not reliable or missing (data gaps)	3	Data post processing and collection procedures definition	2	2	medium	Data Quality will be assessed at the beginning of the project defining procedures and algorithms to ensure the data is of good quality			
R7	Demo site not willing to integrate the project's solutions	3	Definition of Facilities conditions in order to allow easy access to the site dimostrators	1	3	medium	The owners of the demo-sites are partners of the consortium of this project in order to facilitate the direct access to the building facilities			
R8	Demonstration scenarios are unavailable	3	New Scenarios possible integration	2	2	medium	Partners providing real scale demonstration sites have assured alternative solutions at the beginning of the project. General Assembly decides about refined scenarios. In case another partner provides a new scenario, budget will be reallocated accordingly in the General Assembly			
R9	Lack of impact of the Communication & Awareness activities on the target audiences	4	A Dissemination and Communication Plan will be defined at the beginning of the project, project website, promotional material & promotion, communication & dissemination activities will be carried, involving all the partners to ensure	1	2	low	Increasing dissemination & communication efforts addressed by DIGI, and involving all partners			
R10	Not engaging key stakeholders that are key for a successful dissemination & communication of open DBL	4	WP4 includes specific activities to engage Stakeholders and Executive Board operation	1	2	low	Increasing Stakeholders engagement by defining new activities & strategies, lead byDIGI, and involving all partners			
R11	Further developments of similar solutions to open DBL	5	A qualified person is in charge of exploitation related activities. Within WP5 we will closely monitor the market and envision future evolution of our solution and we will carry out IP protection activities . There are plannned actions to engage with other initiatives that will open our opportunities	1	2	low	After project, we will continue investing in innovation, improving our solution and studying new ones			
R12	Not reaching an agreement for the exploitation of key results.	5	The Exploitation Manager will be in charge that open DBL strategies will be aligned to perspectives of the industrial partners	1	2	low	The decision-making mechanism established will be activated			
R13	Delays in the execution of tasks/WP or deliverables cause delays in project expected progress	6	Work package leaders and tasks leaders have been selected based on a wide experience in relation to the project activities. Project Management and decision mechanisms in Consortium Agreement (task 6.1)	2	2	medium	If is necessary the Project Coordinator will reallocate some tasks to avoid delays			