

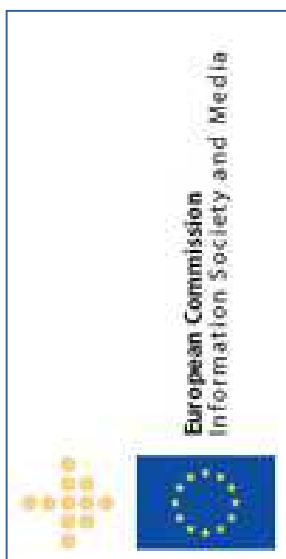


<i>Project Acronym</i>	BlueBRIDGE
<i>Project Title</i>	<i>Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth</i>
<i>Project Number</i>	675680
<i>Deliverable Title</i>	Quality Plan
<i>Deliverable No.</i>	D1.1
<i>Delivery Date</i>	October 2015
<i>Authors</i>	<i>Leonardo Candela, Donatella Castelli, Jessica Michel Assoumou, Pasquale Pagano, Franco Zoppi</i>

DOCUMENT INFORMATION

PROJECT	
Project Acronym	BlueBRIDGE
Project Title	Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth
Project Start	1st September 2015
Project Duration	30 months
Funding	H2020-EINFRA-2014-2015/H2020-EINFRA-2015-1
Grant Agreement No.	675680
DOCUMENT	
Deliverable No.	D1.1
Deliverable Title	Quality Plan
Contractual Delivery Date	October 2015
Actual Delivery Date	5 November 2015
Author(s)	Leonardo Candela (CNR), Donatella Castelli (CNR), Jessica Michel Assoumou (ERCIM), Pasquale Pagano (CNR), Franco Zoppi (CNR)
Editor(s)	Leonardo Candela (CNR)
Reviewer(s)	Donatella Castelli (CNR)
Contributor(s)	Sara Garavelli (Trust-IT)
Work Package No.	WP1
Work Package Title	Project Management
Work Package Leader	CNR
Work Package Participants	ERCIM, FAO
Distribution	Public
Nature	Report
Version / Revision	1.0
Draft / Final	Final
Total No. Pages (including cover)	49
Keywords	Quality Assurance, Project Management, Indicators, Licensing, Procedures, Tools

DISCLAIMER



BlueBRIDGE (675680) is a Research and Innovation Action (RIA) co-funded by the European Commission under the Horizon 2020 research and innovation programme

The goal of BlueBRIDGE, *Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth*, is to support capacity building in interdisciplinary research communities actively involved in increasing the scientific knowledge of the marine environment, its living resources, and its economy with the aim of providing a better ground for informed advice to competent authorities and to enlarge the spectrum of growth opportunities as addressed by the Blue Growth societal challenge.

This document contains information on BlueBRIDGE core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute as BlueBRIDGE Board members. Any reference to content in this document should clearly indicate the authors, source, organisation and publication date.

The document has been produced with the funding of the European Commission. The content of this publication is the sole responsibility of the BlueBRIDGE Consortium and its experts, and it cannot be considered to reflect the views of the European Commission. The authors of this document have taken any available measure in order for its content to be accurate, consistent and lawful. However, neither the project consortium as a whole nor the individual partners that implicitly or explicitly participated the creation and publication of this document hold any sort of responsibility that might occur as a result of using its content.

The European Union (EU) was established in accordance with the Treaty on the European Union (Maastricht). There are currently 27 member states of the European Union. It is based on the European Communities and the member states' cooperation in the fields of Common Foreign and Security Policy and Justice and Home Affairs. The five main institutions of the European Union are the European Parliament, the Council of Ministers, the European Commission, the Court of Justice, and the Court of Auditors (<http://europa.eu.int/>).

Copyright © The BlueBRIDGE Consortium 2015. See <http://www.bluebridge-vres.eu> for details on the copyright holders.

For more information on the project, its partners and contributors please see <http://www.i-marine.eu/>. You are permitted to copy and distribute verbatim copies of this document containing this copyright notice, but modifying this document is not allowed. You are permitted to copy this document in whole or in part into other documents if you attach the following reference to the copied elements: "Copyright © The BlueBRIDGE Consortium 2015."

The information contained in this document represents the views of the BlueBRIDGE Consortium as of the date they are published. The BlueBRIDGE Consortium does not guarantee that any information contained herein is error-free, or up to date. THE BLUEBRIDGE CONSORTIUM MAKES NO WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, BY PUBLISHING THIS DOCUMENT.

GLOSSARY

ABBREVIATION	DEFINITION
CNR	Consiglio Nazionale della Ricerche (National Research Council)
CoP	Community of Practice
EAB	External Advisory Board
EC	European Commission
GA	General Assembly
PC	Project Coordinator
PCO	Project Coordination Office
PEC	Project Executive Committee
PM	Project Manager
PSC	Project Steering Committee
QAO	Quality Assurance Office
TCom	Technical Committee
TD	Technical Director
VRE	Virtual Research Environment
WP	Work Package

TABLE OF CONTENT

Document Information	2
Disclaimer	3
Glossary	4
Table of Content	5
Deliverable summary	7
Executive Summary	8
1 Quality Assurance Office	10
1.1 Mandate	10
1.2 Members.....	10
1.3 Responsibilities	10
2 Project Governing Boards	12
2.1 Project Governance	12
2.2 Project Coordination.....	13
2.3 Project Management	14
3 Collaboration Tools	17
3.1 Virtual Research Environments	17
3.2 BlueBRIDGE Issue Tracking System	18
3.3 BlueBRIDGE Web Site(s).....	18
3.4 BlueBRIDGE Webconference Tool.....	19
3.5 Other tools	19
4 Reviews and Meetings	20
4.1 Review Procedure.....	20
4.2 Review Recommendations.....	21
4.3 Meeting Procedures.....	21
5 Risk Management	24
5.1 Risk Analysis.....	24
5.2 Risk Control	24
6 Conflict Resolution	26
6.1 Document Conflict Resolution.....	26
6.2 Partner Conflict Resolution	26
7 Software License	29
7.1 EUPL.....	30
7.2 Other Licenses	31
8 Activity Reporting	33
8.1 Periodic Reports	33
8.2 Effort Reporting.....	34
8.3 Monthly activity Reports.....	34

8.4 Key Performance Indicators	35
9 Deliverables	36
9.1 Naming	36
9.2 Template.....	36
9.3 Review Procedure.....	36
9.4 Monitoring	38
10 Milestones.....	39
10.1 Naming.....	39
10.2 Template	39
10.3 Announcement Procedure	39
10.4 Monitoring	39
11 Project Publications	40
12 Dissemination.....	42
12.1 Dissemination Strategy	42
12.2 Coordination of WP3 & internal tools	42
12.3 Dissemination to external stakeholders.....	43
12.4 Disclaimer	45
12.5 Acknowledgment of Support.....	46
13 Technical Procedures	47
14 Gender Action Plan	48
References	49

DELIVERABLE SUMMARY

Quality Assurance is an important task within the scope of any IT project. The implementation of such activity is usually defined through a Quality Plan. This deliverable is the BlueBRIDGE Quality Plan.

The objective of this deliverable is to provide the consortium with a practical guide for collaboration within the BlueBRIDGE project. The resulting Quality Plan covers many activities by gathering procedures from the varied managerial and technological aspects of the project. The ultimate objective of this Quality Plan is to ensure the production of concrete and high-quality results in line with the project plans.

EXECUTIVE SUMMARY

The objective of deliverable D1.1 is to document the Quality Plan established for the BlueBRIDGE project. This plan focuses on several activities of the project to ensure the achievement of concrete and efficient results.

The different activities of the project are governed by a number of procedures and guidelines described in different project documents: Annex I to the Grant Agreement (Description of Action), Consortium Agreement, individual Work Package work plans, etc. This deliverable gathers in a single document all this dispersed information which together will facilitate collaboration toward achieving the project's objectives.

The BlueBRIDGE management structure is made up of two **managerial boards**; one focusing on project strategy (Project Steering Committee) and the other focusing on project execution (Project Executive Committee). Working in tandem, the boards will guide the project toward the accomplishment of common objectives. The **Project Steering Committee** will formulate and lead the implementation of the overarching BlueBRIDGE strategy, including the creation of synergies and long-term sustainability within the BlueBRIDGE launched Initiative. The **Project Executive Committee** will lead the diverse networking and technologically-oriented activities encompassing the design, development, implementation and promotion of the BlueBRIDGE Virtual Research Environments and their enabling technology.

A number of procedures are defined for the preparation of **project meetings**. These meetings are organized several weeks in advance following the rules defined for each meeting type. Other procedures exist to prepare the **project reviews** with EC representatives wherein the project's major achievements are presented. These reviews are evaluated, and a number of recommendations are provided to the project in a review report. Such recommendations will be addressed by the project management.

The quality plan defines a **risk management** strategy consisting of two main phases: risk analysis and risk control. A number of possible risks are identified and clear strategies to control them are defined.

The resolution of project conflicts is also controlled. The **conflict resolution** procedure defines which boards are called to intervene when major problems arise.

Concerning **software license**, the default license selected by the project is the European Union Public Licence (EUPL). Other licenses can also be adopted for particular components but must follow a licensing procedure in order to be accepted by the project.

As with any EU funded project, accurate **reporting** is an important task. This reporting is based on (1) internal management reports to be produced every 3 months covering all project work packages and describing the main achievements, KPIs, and risks that have emerged during the quarter, and (2) periodic reports submitted to the EC **every 15 months** summarizing the work of the period and related financial expenditures of the project.

The preparation of project **deliverables** and **milestones** follows a strict procedure to ensure that all official documents (or others) are of high quality and are made available on time. Deliverables must be ready 15 days before their due date. After a period of official review, all deliverables are sent to the Project Steering Committee for approval. At the end of this process they are dispatched to the EC. These procedures also define rules concerning naming, monitoring, and templates.

The project **dissemination** is governed by a number of guidelines to be applied when a member of the consortium writes an article, presents the project in conferences, needs to use the project logo, etc.

The **technical procedures** that guide the daily technical activities of the project are also important. These procedures cover different aspects, from the development of code to its deployment in production.

To support all these procedures and guidelines, the project decided to adopt a number of **collaboration tools**: gCube Virtual Research Environments with (i) their social networking facilities to support the communication among the project members and (ii) a workspace to share documents and files among the project members, an issue tracking system (Redmine) to plan project activities and monitor their implementation. A webconference tool, accessible via the project Internal Area (<http://www.bluebridge-vres.eu/internal-area>), is also available to allow project members to have periodic calls. The system supports both web and phone connections.

1 QUALITY ASSURANCE OFFICE

Quality Assurance is a dedicated task under the Work Package 1 Project Management (T1.3 Quality and Risk management). To implement all the activities related to Quality Assurance, a special task force has been formed. This task force is referred to as the Quality Assurance Office (QAO). Monthly notifications on project specific processes (e.g. deliverable production, milestone, achievement, publication approval) will be posted to the BlueBRIDGE consortium's VRE (cf. Sec. 3) in the form of "Quality Assurance Office Reports". These reports will be produced by a member of the Quality Assurance Office.

The **Quality Assurance Office** will provide support to the project as a whole through the definition and implementation of the BlueBRIDGE Quality Plan (this deliverable). The Quality Assurance Office supports the PEC by communicating procedures for adherence to the Project's Quality Plan; maintaining the Project's VRE; assuring high-level quality of the outputs (e.g., deliverable review); and answering requests for information concerning the BlueBRIDGE project, gCube software or D4Science infrastructure.

Quality and risk management is intended to ensure the production of concrete, timely and high-quality results in line with the project work plan. To achieve this goal, the Quality Assurance Office is appointed to:

- Define and widely distribute the BlueBRIDGE Quality Plan, to be a reference for all project participants;
- Encourage and verify that standards, procedures and metrics are defined, applied and evaluated;
- Adopt a procedure for identifying, estimating, treating and monitoring risks;
- Perform monthly Quality & Risk Reviews communicated to the PEC for appropriate action;
- Ensure the promotion of gender equality within BlueBRIDGE practices and procedures.

1.1 MANDATE

The mandate of the QAO is to ensure that the project processes, services and deliverables are of high quality by continuously monitoring and assessing the progress and results of the project and thereby communicating this information to the relevant members of the consortium.

1.2 MEMBERS

The QAO is composed of the Chair of the Quality Assurance Office and members:

- Chair: Franco Zoppi (CNR);
- Members:
 - CNR: Pasquale Pagano, Leonardo Candela;
 - ERCIM: Jessica Michel Assoumou;

1.3 RESPONSIBILITIES

The main responsibility of the QAO is to manage the BlueBRIDGE Quality Plan. This includes the definition, elaboration, update, and monitoring of such plan.

The project operation is based on a number of management and administrative procedures defined in various official documents, i.e. the project's work plan (Annex I of the Grant Agreement or Description of Action), other *BlueBRIDGE* Grant Agreement Annexes, and the project Consortium Agreement. These procedures are complimented by other more fine-grained procedures defined to regulate other activities of the project. The QAO is responsible for describing such procedures in the Quality Plan and enforcing its execution to guarantee a successful achievement of the project objectives. Moreover, technical procedures and overall project

collaboration practices are also linked to the Quality Plan. The QAO is responsible for describing such procedures in the Quality Plan and enforcing its execution to guarantee a successful achievement of the project objectives.

Project reporting, deviations from the work plan, resources spent, deliverable quality, review preparation and post-review follow-up, activity-specific process, and document management are all examples of the activities belonging to the realm of the QAO.

Finally, the QAO is in charge of promoting principles of gender equality within the BlueBRIDGE project.

2 PROJECT GOVERNING BOARDS

The BlueBRIDGE management structure is designed to handle the challenges associated with a large pan-European consortium engaging different types of organisations and diverse stakeholders. Distinctions between governance issues and management activities are made clear through the creation of three separate boards:

- The **General Assembly** (cf. Sec. 2.1) is the formal decision-making body of the Project, making decisions that will have a direct legal or financial impact on the consortium members;
- The **Project Steering Committee** (cf. Sec. 2.3.1) is the strategic board providing overall managerial direction to the project;
- The **Project Executive Committee** (cf. Sec. 2.3.2) is the operational board ensuring the achievement of the work plan, on time and within budget.

The General Assembly and Project Steering Committee will be supported by an **External Advisory Board** to provide non-binding but informed guidance in the quest for superior project governance.

This management structure combines traditional project management needs with the operation of the VREs and the resources marketplace. In particular, the Project Steering Committee will foster the exploitation of the VREs beyond the project lifetime whereas the Project Executive Committee will ensure the proper and timely implementation of the work plan. The following figure depicts the BlueBRIDGE project management structure.

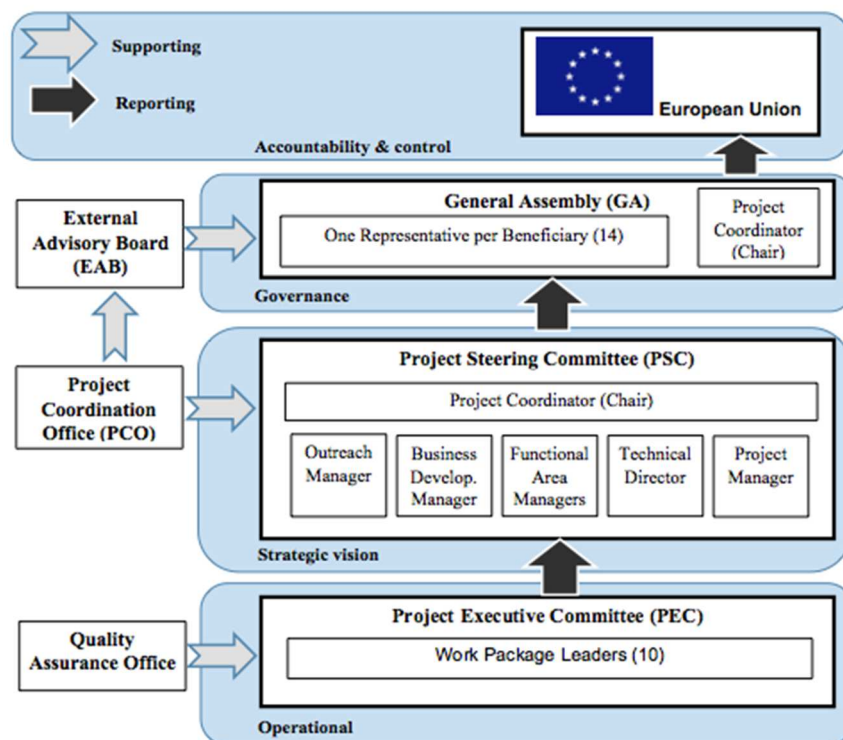


Figure 1. BlueBRIDGE Management Structure

2.1 PROJECT GOVERNANCE

The General Assembly shall consist of one representative of each project beneficiary. Each General Assembly Member shall be deemed to be duly authorised to deliberate, negotiate and decide on all matters listed in Section 6.3.1.2. of the Consortium Agreement and restated below. The Project Coordinator shall chair all

meetings of the General Assembly, unless decided otherwise in a meeting of the General Assembly. The list of the members of the General Assembly is available at <http://www.bluebridge-vres.eu/about/who-is-involved>

The General Assembly is free to act on its own initiative to formulate proposals. In addition, all proposals made by the Project Steering Committee shall also be considered and decided upon by the General Assembly. These decisions include, but are not limited to:

Content, finances and intellectual property rights

- Proposals for changes to Annexes 1 and 2 of the Grant Agreement to be agreed by the Funding Authority;
- Changes to the Consortium Plan;
- Modifications to Attachment 1 (Background Included);
- Additions to Attachment 3 (List of Third Parties for simplified transfer according to Section 8.2.2);

Evolution of the consortium

- Entry of a new Party to the consortium and approval of the settlement on the conditions of the accession of such a new Party;
- Withdrawal of a Party from the consortium and the approval of the settlement on the conditions of the withdrawal;
- Identification of a breach by a Party of its obligations under this Consortium Agreement or the Grant Agreement;
- Declaration of a Party to be a Defaulting Party;
- Remedies to be performed by a Defaulting Party;
- Termination of a Defaulting Party's participation in the consortium and measures relating thereto;
- Proposal to the Funding Authority for a change of the Coordinator;
- Proposal to the Funding Authority for suspension of all or part of the Project;
- Proposal to the Funding Authority for termination of the Project and the Consortium Agreement.

2.2 PROJECT COORDINATION

The **Project Coordinator** is the intermediary between the beneficiaries and the European Commission. The BlueBRIDGE Project Coordinator is Dr. Donatella Castelli (CNR). The Project Coordinator promotes the project's imperatives, assumes ownership of the project on behalf of the project teams, and seeks to deliver a viable outcome while providing high-level supervision and monitoring.

To support the specific responsibilities of the Project Coordinator, a Project Coordination Office (PCO) has been established. The PCO is managed by Jessica Michel Assoumou (ERCIM), who will report directly to Dr. Castelli. The PCO therefore includes project assistants in both Sophia Antipolis (ERCIM-FR) and Pisa (CNR-IT). The PCO has an integral role in supporting the Project Coordinator by translating the project's governance items (i.e., H2020 Grant Agreement, Consortium Agreement, project management boards, the present document) into clear administrative procedures and support mechanisms to assist the project participants. The PCO thereby ensures efficiency of the administrative and financial tasks related to project management. Included in its responsibilities:

- knowledge sharing concerning H2020 participation;
- provision of timely and accurate periodic technical and periodic financial reports;
- support for meeting and event organisation;

- contractual management including, Consortium Agreement, Memorandums of Understanding and subcontracts;
- logistical and financial management of the External Advisory Board;
- innovation management.

With respect to the latter, participants will be assigned the responsibility of “IPR watch” in order to identify potential innovation opportunities. The PCO will call on legal experts (many internal to the consortium) to assist the concerned beneficiary (beneficiaries) in exploiting results while complying with H2020 rules.

2.3 PROJECT MANAGEMENT

Within the project structure there are two *managerial* boards; one focuses on project strategy and the other focuses on project execution. Working in tandem, the boards will guide the project toward the accomplishment of common objectives. The **Project Steering Committee** will formulate and lead the implementation of the overarching BlueBRIDGE strategy, including the creation of synergies and long-term sustainability within the BlueBRIDGE launched Initiative. The **Project Executive Committee** will lead the diverse networking and technologically-oriented activities encompassing the design, development, implementation and promotion of the BlueBRIDGE Virtual Research Environments and the enabling technology. The responsibilities of the two boards are described in the following sections.

2.3.1 PROJECT STEERING COMMITTEE

The BlueBRIDGE Project Steering Committee (PSC) will monitor the effective and efficient implementation of the project. It is responsible for making sure that the expectations set out by the project objectives are met. Therefore, the members of the PSC encompass the project’s main stakeholders and must be empowered to make strategic decisions in the interests of the project. The members possess a sufficient level of expertise in their field to add essential knowledge, skills and experience.

In addition to the **Project Coordinator**, the PSC comprises:

The **Business Development Manager** who works to improve BlueBRIDGE’s position in the scientific and innovation market. This is done by identifying growth opportunities; negotiating and closing the definition and establishment of new use cases; and maintaining extensive knowledge of current market conditions. The role of Business Development Manager is assigned to Nadia Nardi (ENG), whose close collaboration with other PSC members will contribute to the refinement of the Project’s strategic goals over the project lifetime.

The **Outreach Manager** is responsible for the coordination of the communication and outreach activities of *BlueBRIDGE*. This role is assigned to Sara Garavelli (Trust-IT). She is in charge of developing public awareness of the project; planning innovative education tools and engagement activities to stimulate the involvement of targeted communities; coordinating the dissemination activities performed by the individual partners and the synergies with other projects and relevant initiatives; organising community events and building liaisons with media channels to promote the project. The Outreach Manager’s input to the PSC is critical for the formulation of the project strategy in line with the needs of the communities.

A **Functional Area Manager** assumes overall responsibility for the success of the VREs belonging to his or her functional area (i.e., a grouping of activities or processes on the basis of their need in accomplishing the creation of VREs). Four Functional Area Managers have been appointed for the purposes of this Project: **Blue Assessment Manager**, **Blue Economy Manager**, **Blue Environment Manager**, and **Blue Skills Manager**. The Managers oversee all operational aspects of each VRE, driving the contributing tasks towards performance and results. They also monitor and control the served VREs to ensure efficient utilisation of resources. These

roles are assigned to Anton Ellenbroek (FAO), George Kakalettris (UOA), Anton Ellenbroek (FAO), and Anna Davies (ICES) respectively. These persons are also the Work Package leaders of the key WPs called to implement VREs: WP5 Supporting Blue Assessment: VREs Development (Anton Ellenbroek), WP6 Supporting Blue Economy: VREs Development (George Kakalettris), WP7 Supporting Blue Environment: VREs Development (Anton Ellenbroek), and WP8 Supporting Blue Skills: VREs Development (Anna Davies).

The **Technical Director** serves BlueBRIDGE with the responsibility of monitoring the day-by-day progress of the project's technical activities (i.e., technical aspects across the service and joint research activities). The Technical Director collaborates closely with the Project Manager reporting daily updates on resource allocation and progress across all Work Package activities. The role of Technical Director is assigned to Pasquale Pagano (CNR).

The **Project Manager** communicates the activities of the Project Executive Committee (i.e., summarise work package operations) to members of the PSC. As chair of the Project Executive Committee, he must maintain a strong understanding of progress being made in all functional areas and propose adjustments to the work plan as necessary. The Project Manager will liaise closely with the Technical Director. This role is assigned to Leonardo Candela (CNR).

The monthly meetings of the Project Steering Committee are organised and chaired by the Project Coordinator. The PSC will be able to proceed to vote when necessary, with the requirement of a *two-thirds* majority. The PSC will hold monthly telephone conferences and meet in person at least *three times per year*.

The list of the PSC members is available here <http://www.bluebridge-vres.eu/about/who-is-involved>.

2.3.2 PROJECT EXECUTIVE COMMITTEE

The **Project Executive Committee (PEC)** supervises the daily project management processes, including the initiation, planning, execution, control, and closure of project phases. The PEC collects and reports key performance indicators, as well as the impact of the planned and implemented activities to the Project Steering Committee. It comprises the Work Package leaders and it is chaired by the Project Manager.

The Project Executive Committee is responsible for performing the following:

- supporting the Project Manager with the initiation, planning, execution, control, and closure of project phases;
- collecting and reporting key performance indicators;
- assessing progress of work and achievements of the Work Packages;
- reporting progress of work and achievements to the Project Steering Committee;
- reporting risks to the project to the Project Steering Committee;
- providing the Project Steering Committee with detailed technical effort re-planning when proposing deviations to the Consortium Plan.

The PEC is chaired by the **Project Manager**. Voting of the PEC will require a *two-thirds majority*. The PEC will meet most often by teleconference, once per month as a minimum. Electronic voting of the PEC will be authorised.

The list of the PSC members is available here <http://www.bluebridge-vres.eu/about/who-is-involved>.

2.3.2.1 WORK PACKAGE LEADERS

Each **Work Package Leader (10 in total)** will ensure the progress of his or her Work Package (WP) with respect to the overall work plan. He or she must work closely with the task leaders involved in the work package, ensuring the successful completion of objectives and tasks and evaluating progress. The responsibilities of the work package leaders are as follows:

- To monitor the progress of the WP against time and effort allocations, ensure that the work package fulfils the objectives listed as milestones and deliverables;
- To alert the Project Manager in case of delay or default in the performance of the WP.

Task leaders are critical to the implementation of the work plan, however, they report directly to the relevant WP leader and their participation in the PEC meetings will be made optional.

2.3.3 TECHNICAL COMMITTEE

In order to reach the technical objectives characterising the BlueBRIDGE project it is fundamental to properly coordinate the technical activities leading to Virtual Research Environments development and operation as well as the activities leading to the development of the Blue Commons.

The **Technical Committee** (TCom) exists to address the complex technical work required to deploy and operate the BlueBRIDGE Virtual Research Environments, and the development, deployment and integration of the enabling-technologies. For the achievement of these objectives, intense coordination will be required among the developers of the Blue Commons (called to build the technical and operational common ground for VREs development and operation) and the developers and specialists called to develop the Blue Assessment, Blue Economy, Blue Environment and Blue Skills. The Technical Committee is designed to ensure that there is sufficient interaction between the resource providers of the data e-Infrastructure and the thematic practitioners. Thus, the four Functional Area Managers (cf. Sec. 2.3.1) will play a critical role in the Technical Committee and they will be invited to participate fully in these meetings. The Technical Committee provides feedback to the PEC for implementation and alignment actions.

The Technical Director will chair meetings of the Technical Committee, which will always meet in parallel with the PEC (i.e., quarterly).

3 COLLABORATION TOOLS

In order to support the cooperation among the members of a widely distributed consortium such as BlueBRIDGE, a comprehensive and complementary set of tools is offered to project members. These tools range from a series of Virtual Research Environments equipped with proper services to a set of tools supporting the software release lifecycle, an issue tracking system, a set of web sites and a webconference tool.

In particular, Virtual Research Environments are a key element in organising collaboration within the BlueBRIDGE arena since they offer basic facilities including (a) a shared workspace for storing and exchanging files, (b) social networking facilities for supporting the communication among members, (c) user-friendly user management facilities, and (d) integrated access to other services of interest.

3.1 VIRTUAL RESEARCH ENVIRONMENTS

The following Virtual Research Environments have been created to support project activities:

- **AquacultureAtlasGeneration:** to support the activity of project members involved in Aquaculture Atlas Generation VRE development, i.e. T7.1;
- **BlueBRIDGEProject:** to support the activity of any project participant in the scope of the project as a whole;
- **BlueBRIDGE-PSC:** to support the activity of the Project Steering Committee;
- **BlueCommons:** to support the activity of any project participant involved in the Blue Commons development and operation, i.e. WPs 4, 9 and 10;
- **BlueUptake:** to support the activity of project participants involved in BlueUptake activities;
- **KnowledgeBridging:** to support the activity of project participants involved in Blue Skills development and operation, i.e. WP8;
- **PerformanceEvaluationInAquaculture:** to support the activity of project members involved in Performance evaluation, benchmarking and decision making in aquaculture VRE development, i.e. T6.1;
- **ProtectedAreaImpactMaps:** to support the activity of project members involved in Protected Area Impact Maps VRE development, i.e. T7.2;
- **StockAssessment:** to support the activity of project members involved in Stock Assessment VRE development, i.e. T5.1;
- **StocksAndFisheriesDB:** to support the activity of project members involved in Global Record of Stocks and Fisheries VRE development, i.e. T5.2;
- **StrategicInvestmentAnalysis:** to support the activity of project members involved in Strategic Investment Analysis and Scientific Planning/Alerting VRE development, i.e. T6.2;
- **TCom:** to support the collaboration among the members of the Technical Committee (cf. Sec. 2.3.3).

Among the other services, all these VREs are equipped with:

- A **shared workspace** where VRE members can store and share files by organising them in folders. In essence this is a shared file system ;
- **Social networking** facilities allowing VRE members to communicate and be informed of community related happenings (a) by posting rich messages (e.g. links with previews, hashtags, mentions), rating posts and commenting on posts; (b) by having a list of most recent shared files; (c) by having an up-to-date list of the top topics being discussed and the related discussions; and (d) by sending messages to selected VRE members as addressees;
- A **user management** facility where VRE managers can manage requests for membership, remove users and assign roles to VRE members. Moreover, members can easily access the profile of their co-workers in the VRE and contact them.

The BlueBRIDGEProject VRE is also equipped with the BlueBRIDGE issue tracking system (cf. Sec. 3.2) and the BlueBRIDGE Wiki.

3.2 BLUEBRIDGE ISSUE TRACKING SYSTEM

BlueBRIDGE project members are provided with a dedicated issue tracking system available at

<https://support.d4science.org/projects/bluebridge>

This system is also integrated in the BlueBRIDGEProject VRE (cf. Sec. 3.1). This system is based on Redmine technology (www.redmine.org) and operated by the D4Science infrastructure (www.d4science.org).

It has been configured to support a number of project activities. Thus the following trackers, i.e. specific typologies of issues to be tracked, have been created:

- Project WP: to capture the evolution of every BlueBRIDGE Work Package;
- Project Task: to capture the evolution of every BlueBRIDGE Task;
- Project Deliverable: to capture the evolution of every BlueBRIDGE Deliverable (cf. Sec. 9);
- Project Milestone: to capture the evolution of every BlueBRIDGE Milestone (cf. Sec. 10);
- Risk: to support the activity of Risk Management (cf. Sec. 5);
- Key Performance Indicator: to support the activity of collection of KPIs;
- Task: to capture any planned activity and monitor its development;
- Support: to capture any request for support and monitor its resolution;
- Incident: to capture any incident issue and monitor its resolution.

This issue tracking system will work in synergy with two other issue tracking systems hosted by the same platform:

- The D4Science Infrastructure issue tracking system driving the evolution of the D4Science Infrastructure

<https://support.d4science.org/projects/d4science>

- The gCube issue tracking system driving the evolution of the gCube technology

<https://support.d4science.org/projects/gcube>

3.3 BLUEBRIDGE WEB SITE(S)

The project website is available at

<http://www.bluebridge-vres.eu>

The web-based platform is an integrated, interactive and community-centric system serving as a single access-point for information about the project and the VREs. It is developed using Drupal, the free open-source web content management platform and it is oriented both to the general audience and the specific communities targeted by the project.

The project website is complemented by “gateways”, i.e. web portals giving access to Virtual Research Environments. In particular,

- The iMarine Gateway (<https://i-marine.d4science.org>) is oriented to provide the iMarine community with the Virtual Research Environments of their interest (including the BlueBRIDGE VREs).

3.4 BLUEBRIDGE WEBCONFERENCE TOOL

The BlueBRIDGE web conferencing system is based on BigBlueButton solutions. It offers a user-friendly interface with video, desktop sharing and document viewing functionalities.

It is accessed through the “Internal Area” link on the Home Page (<http://www.bluebridge-vres.eu/internal-area>) and it is of exclusive use for the project partners.

3.5 OTHER TOOLS

Besides the project specific tools, BlueBRIDGE relies on established facilities for what concerns the technology development and the infrastructure operation.

3.5.1 TECHNOLOGY DEVELOPMENT

The procedures and tools supporting BlueBRIDGE technology development are captured by D4.1 “Software Release Procedures and Tools” [1].

3.5.2 INFRASTRUCTURE OPERATION

The procedures and tools supporting D4Science.org infrastructure development and operation are described by <https://wiki.d4science.org/>

4 REVIEWS AND MEETINGS

4.1 REVIEW PROCEDURE

The aim of a technical audit or review is to assess the work carried out under the project over a project period (i.e. 15 months) and provide recommendations to the European Commission. Such review covers managerial, scientific, technological, policy development and other aspects relating to the proper execution of the project.

The mandate of the project is to ensure that project's external evaluators can review the degree of fulfilment of the project work plan for the period; the continued relevance of the objectives and breakthrough potential with respect to the scientific and industrial state of the art; the resources planned and utilised in relation to the achieved progress, in a manner consistent with the principles of economy, efficiency and effectiveness; the management procedures and methods of the project; the beneficiaries' contributions and integration within the project; the expected potential impact in scientific and technological terms, and the plans for the use and dissemination of results.

In order to ensure the fulfilment of this mandate at the first review planned at the end of Period 1, the QAO will monitor the quality and prompt delivery of the following achievements:

- Evaluation of the VREs developed for supporting Blue Assessment, Blue Economy, Blue Environment, and Blue Skills;
- Portal for administrating the supported VREs according the established procedures as well as the records of the activity performed for operating them;
- Solutions defined for implementing interoperability with existing infrastructures;
- Updated project website;
- Communication, dissemination and training activity report;
- Software distribution site and documentation about the software components released in the period.

At the end of the project a final review is planned where all envisaged outcomes must be demonstrated to the project's external evaluators.

Review meetings are thus a fundamental conduit to communicate to the European Commission the progresses, the achievements, the added-value, and the plan of the project consortium. As a consequence the preparation of such review meetings is an important activity that is monitored by the QAO according to the following procedure:

1. The Project Coordinator informs the QAO of the planned date for the review and who is expected to attend;
2. Within 5 working days the QAO submits the following suggestions for approval by the Project Steering Committee:
 - a. A schedule of two rehearsal meetings to be held within ten and two days before the official review respectively. The most suitable location where to run such meetings will be identified by considering the needs of all project delegates;
 - b. An agenda of the review meeting with major slots, responsibilities, and time allocation;
3. Upon reaction of the PSC, the QAO accepts the suggestions and requests for changes received by the PSC and within two working days the QAO starts the collaborating with all work package leaders for the preparation of the material to be presented at the review meeting and the monitoring of the quality and prompt delivery of the requested material;
4. The QAO promptly communicates to the PSC and General Assembly any delay in the production of what is expected to be presented at the review meeting together with a recovery plan.

IMPORTANT: Please note that all scheduled presenters are expected to attend the review rehearsals. Usage of the BlueBRIDGE PowerPoint template (cf. Sec. **Error! Reference source not found.**) is mandatory for presentations.

4.2 REVIEW RECOMMENDATIONS

At the end of the review meeting, the external evaluators prepare a report with their findings. This report contains an assessment of the facts as well as suggestions for further actions or changes. These recommendations and requested actions have to be properly addressed by the consortium. This activity is monitored by the QAO according to the following procedure:

1. The QAO in 10 working days prepares an informal and confidential analysis of the reviewers' report. This analysis completes the request prepared for approval of the Project Steering Committee with the following suggestions:
 - a. an assignment of each review recommendation to the most suitable person chosen among Directors, Work Package leaders, and Task leaders;
 - b. a plan including steps and time allocation for the production of a report replying to the reviewers' recommendations and an assessment plan to accommodate their requests;
2. Upon reaction of the PSC, the QAO accepts the suggestions and requests for changes received by the PSC and in 2 working days the QAO starts the collaboration with the identified delegated people for the analysis of the reviewers' recommendations. This process of addressing the reviewers' recommendations will be managed with the BlueBRIDGE issue tracking system. The QAO management activity is expected to avoid incompatibilities among solutions identified by different project delegates;
3. The QAO informs promptly the PSC if the production of what is expected to be delivered by a project delegate is delayed or not compliant with the expected quality together with a recovery plan within the end of the business day following any deadline;
4. A complete assessment report including an analysis of the recommendations, a report to reply to them, and an assessment plan to correct project activities are expected to be delivered within one month's time by the QAO to the PSC for its approval;
5. The PSC can approve, amend, or reject the work managed by the QAO. If needed, the PSC can restart the cycle by asking modification and/or additions to the assessment steps identified by the project delegates. In case the PSC identifies the needs to further improve this assessment report it is a mandate of the QAO to ensure that a new report is elaborated within 10 additional days.

4.3 MEETING PROCEDURES

The procedures described in this section apply to all meetings of the General Assembly, Project Steering Committee and Project Executive Committee. Meetings of project boards can be held by summit in a location identified by the chairperson of the relevant project board, can be held by a teleconference, or can be organized by exploiting any other available telecommunication means (e.g. Skype, Google Hangouts, BlueBRIDGE webconferencing tool).

All board members should be present or represented at any meeting of such project board. If his/her participation cannot be assured, he/she may appoint a substitute or a proxy to attend and vote at any meeting. Moreover, the participation has to be cooperative and aimed to meet the needs of the project.

The meetings of the project boards can be ordinary or extraordinary and are convened by the chairperson of the board who shall give notice in writing of a meeting and prepare and send the final agenda to each member of that project board as soon as possible and within the minimum number of days preceding the meeting as reported in Table 1.

Any agenda item requiring a decision by the members of a board must be identified as such on the agenda. Any member of a board may add an item to the final agenda by written notification to all of the other members of that project board within the minimum number of days preceding the meeting as reported in Table 1. However, during a meeting the members of a project board present or represented can unanimously agree to add a new item to the approved agenda.

Project Board	Frequency	Notice of a meeting	Sending the agenda	Adding agenda items
Ordinary meeting				
General Assembly	At least twice a year	45	21	14
Project Steering Committee	Every month	14	7	2
Project Executive Committee	Every month	14	7	2
Extraordinary meeting				
General Assembly	At any time upon written request of the Project Steering Committee or 1/3 of the members of the General Assembly	15	10	7
Project Steering Committee	At any time, upon written request of any member of the Steering Committee	7	7	2
Project Executive Committee	At any time, upon written request of any member of the Project Executive Committee	7	7	2

Table 1 – Governing and Management Boards Meeting Procedures

Each project board shall not deliberate and decide validly unless a quorum of two-thirds (2/3) of its members is present or represented. Each member of a project board present or represented in the meeting shall have one vote.

The chairperson of a project board shall produce written minutes of each meeting which shall be the formal record of all decisions taken. The minutes must be produced according to the following template:

- Meeting classification (ordinary or extraordinary);
- Meeting location (teleconference or physical location);
- Meeting agenda or objective;
- Meeting start and end date/time;
- Meeting participants' names, organizations, and roles in the meeting. People attending remotely must also be listed;
- Reference to all presentations performed or documents presented;
- Enumeration of all issues raised, either solved or pending with some context (if required). The "opposing" opinions must also be properly summarised;
- All formal decisions taken;
- Actions and their deadlines for further work.

The minutes must be made available within 10 calendar days after the meeting through a dedicated folder in the BlueBRIDGEProject VRE Workspace (3.1) by ensuring the right confidentiality. In the case of PEC monthly meetings, meeting minutes will be part of the specific issue ticket created to schedule the event.

The minutes shall be considered as accepted if, within 15 calendar days from sending, no member has objected in writing to the chairperson with respect to the accuracy of the draft of the minutes. If a party objects in writing to the accuracy of the minutes, and all other parties agree that the minutes are correct, then the objecting party will be overruled.

The accepted minutes shall be sent to all of the members of the project board and the PSC, who shall safeguard them. When requested, the PSC shall provide authenticated duplicates to parties.

A member who can show that its own work, time for performance, costs, liabilities, intellectual property rights or other legitimate interests would be significantly affected by a decision of a project board may exercise a veto with respect to the corresponding decision or relevant part of the decision.

When the decision is foreseen on the original agenda, a member may veto such a decision during the meeting only. When a decision has been taken on a new item added to the agenda before or during the meeting, a member may veto such a decision during the meeting and within 15 days after the minutes of the meeting are sent.

In case of exercise of veto, the members of the related project board shall make every effort to resolve the matter which occasioned the veto to the general satisfaction of all its members.

A party may not veto decisions relating to its identification as a defaulting party. The defaulting party may not veto decisions relating to its participation and termination in the Consortium or the consequences of them. A party requesting to leave the consortium may not veto decisions relating there to.

5 RISK MANAGEMENT

The goal of the Risk Management activity is to provide the consortium with guidelines and instruments for managing the project actual and potential risks that can occur during the project lifetime, in accordance with the Continuous Reporting requirements (see Participant Portal – Grant Management Services – Critical Risks) and with the BlueBRIDGE work plan.

The procedures governing this activity are borrowed from previous experiences, namely iMarine [2]. The following sections introduce the adaptation of the procedure to the BlueBRIDGE case.

5.1 RISK ANALYSIS

Risk Analysis procedure is orchestrated by the QAO.

A first Risk Analysis procedure was preliminarily carried out by the whole BlueBRIDGE Consortium during the preparation of the DoA. This led to the identification of the Foreseen Risks List included in the GA-Annex 1. Within the activity of the task T1.3 – Quality & Risk Management, the QAO will take care of performing monthly Risk Reviews to estimating, treating and monitoring risks, and communicate with the PEC for appropriate action.

Moreover, a procedure for identifying Unforeseen Risks will be adopted and regularly executed as well. The newly identified risks will be added to the Critical Risks section of the Participant Portal – Grant Management Services.

Overall the execution of the risk management activity is accomplished as follows:

- Risk Methodology Development: QAO;
- Risk Analysis: The Risk Identification and Risk Evaluation require the involvement of a large number of persons in the procedure: Directors, Work Package and Task Leaders can support the collection of risks at their source/target. In detail:
 - Risk Identification
 - Collection: QAO, Work Package Leaders, Task Leaders,
 - Homogenization: QAO;
 - Risk Evaluation: QAO, Work Package Leaders, Task Leaders;
 - Risk Classification: QAO;
- Production of the initial Risk Plan.

The result of Risk Classification updates the complete risk list that is placed at the disposal of BlueBRIDGE consortium members for reference and is periodically updated, included, and monitored through the Monthly Activity Reports.

5.2 RISK CONTROL

Risk Control involves three individual steps, starting from Risk Analysis output:

- The Risk Plan Assessment: foresees the involvement of the Technical Director, Work Package and Task Leaders. These members of the project work team closely follow all the activities of their area and they are the best candidates to identify the status of a risk and reduce its probability of occurrence or recover by a damage, by implementing the required countermeasures. The Risk Plan Assessment is performed on a monthly basis and the results are reported to the PEC. The assessment implies that a run of the Risk Analysis procedure is performed to identify Unforeseen Risks. Newly identified risks are evaluated, classified, and added to the Risk Plan.

- The Risk Monitoring: which is performed continuously and formally tracked in the BlueBRIDGE issue tracking system under the following procedure:
 - During the Monthly Activity Report, the QAO launches a request to Work Package Leaders for identifying problems met or concerns that arose during the last period, as these are the main (but not the only) reasons for raising risks' ranking;
 - Work Package Leaders pass this list of potential risks to Task Leaders and this delegation can reach partner representatives, if required for obtaining low/mid level details on risk evolution;
 - Work Package Leaders revise higher level risks according to the input received or their own justified perception of risk evolution;
 - QAO aggregates and homogenizes information received and enriches it with conclusion and higher lever risk evaluation so as the full updated Critical Risks Report is produced on the Participant Portal – Grant Management Services – Critical Risks. It is important that supplied information in the BlueBRIDGE issue tracking system (cf. Sec. 3.2) is adequately linked to the formal Critical Risks List, i.e. risk identification is supplied and valid values are provided for the various measures required;
 - As risks are detected, the respective Work Package Leaders are notified, while beyond a certain threshold – if any – the PEC is informed about a particular risk for appropriate action;
 - Similarly but with the reverse impact, risks that gradually diminish, have their countermeasures relaxed.

Even if otherwise assigned to a different set of actors of the project, the results of this control activity must be reported in the Monthly Report document in order to advise the PEC on potential risks.

The status of the Risk Plan can be monitored via a specific on-line report from the issue tracking system:

https://support.d4science.org/projects/bluebridge/issues?query_id=32

- The Risk Resolution: where proposals are led through the PEC (and possibly the rest of the project's mechanisms), after being pointed out by the QAO through the Monthly Reports. More particularly the steps that are involved in the procedure are the following:
 - The QAO examines the Critical Risks List that is produced as part of the Risk Monitoring Procedure.
 - The QAO evaluates and proposes withdrawal or adoption of measures for Risks of dropping or rising ranks, by consulting the in-project "experts" (e.g. work package leaders) and the associated Risk Plan.
 - The QAO proposes to the PEC the areas of action for risk management and the concrete actions (as described in the Risk Plan) to be taken. In complex cases, indicates that the PEC must take further action to face or recover from a risk.
 - In both cases the PEC is responsible for taking the decision;
 - The QAO proposals for Risk Management are led through the Monthly Reports, unless exceptionally urgent cases rise.

6 CONFLICT RESOLUTION

Conflict resolution in BlueBRIDGE refers to situations that can potentially occur among elements of the project.

Cases of conflict resolution can be found below:

- Partner(s) to partner(s) conflict within the scope of a single activity;
- Partner(s) with project management boards;
- Non-voting board conflict;
- Voting board conflict;
- Document conflict.

The above categories are not exhaustive.

6.1 DOCUMENT CONFLICT RESOLUTION

A completely different type of conflict is the one that can occur among documents of the project. In this case the following order is maintained:

- Grant Agreement;
- Consortium Agreement;
- Other document (deliverable, minutes, internal document exchange).

Unless an error is identified, deliverables approved by the project bodies prevail over all other internal documents. Otherwise meeting minutes formally circulated take precedence.

6.2 PARTNER CONFLICT RESOLUTION

The term “conflicting partners” is used but should be read in the sense of a single partner entering conflict with a governing or management board decision.

As BlueBRIDGE is a collaborative project, its main concern is the maintenance of best relationships among its project’s members as organizations, teams, and individuals. Thus the general policy of conflict resolution is to promote dialogue in order to diffuse tension or disagreement before addressing the top-level project management for definitive action.

As such, voting, when conflictual situations are escalated to the different boards, should be left aside as a last resort for obtaining resolution. Although it is a major concern of the project that even voted decisions should be made unanimously, it is enough that two-thirds approval be obtained for decisions. However, even with non-unanimous voting it is considered that decisions have to be generally welcomed, thus post-voting deliberations are suggested, if they can drive a full agreement under the light of the majority-favoured voted decision.

Within this conflict resolution chain, the General Assembly is the ultimate decision-making body for making a decision within the project’s limits. This board comprises one representative per partner. The Project Steering Committee is the second board usually involved within this escalation procedure.

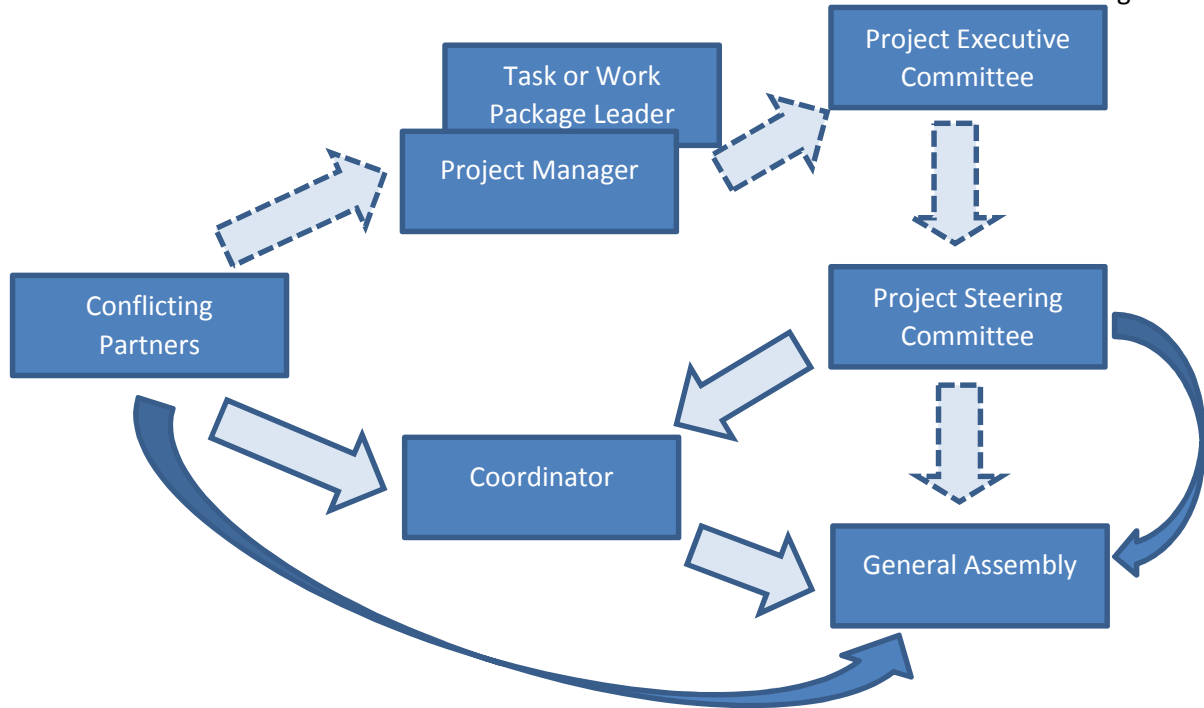


Figure 2 – Conflict Resolution Flow

In Figure 2 there are two main paths of conflict resolution:

- The path made of dashed line arrows is followed for topics concerning conflicts with a major focus on technical or work aspects;
- The path made of solid line arrows is followed for topics that are mainly concerned about administration, bilateral relationships and financial issues.

A third, and exceptional path, is sketched with curved arrows and is described below. It should be noted that the means of communication (email, phone, meetings) are indicative and demonstrate best practices of the past rather than formal rules.

In detail, a need for Conflict Resolution can start at any node of the diagram. In the following, the details of each action are presented:

- **STEP 1:** Conflicting partners attempt to resolve their conflict in a bilateral manner. It is expected that this is done mainly by telecommunication means (phone and email) and the inclusion of a Task leader is welcomed in this procedure;
- **STEP 2 (issue a):** If the conflict is concerned with technical or work decisions, the Work Package leader is involved to assist in achieving a cooperative solution and avoid the escalation of a conflict to formal project managerial board. Notification at this level can be sent by email or other telecommunication means, as well as the resolution itself can follow any type of channel. Formally the Work Package leader is identified as the first project-wide nominated responsible for coordinating work and technical decisions in a particular area, however his/her involvement is in the form of consultancy, as no enforced decision can be made at this level;
- **STEP 2 (issue b):** If the conflict is concerned with financial, administrative or other non-technical/work issues, then the project Coordinator is immediately consulted;
- **STEP 2a.1:** In case of non-resolution at this level, the Project Manager is introduced into the conflict for supporting its resolution. The Project Manager involvement is in the form of consultancy, as no enforced decision can be taken by him/her. However as the Project Manager's opinion is directly

presented to the Project Steering Committee, it is expected that his/her consultancy is more effective than WP leader:

- **STEP 2a.1.1:** As a further step the discussion can be led to the Project Executive Committee instead of a single WP leader, by requesting a special session to a planned event, or by raising an open discussion through the BlueBRIDGE VRE. The PEC is led by the Project Manager, so this step may contribute to the collective resolution of conflicts without further escalation. The related Work Package Leader is responsible for leading the topic to the PEC for this informal first level discussion;
- **STEP 2a.2:** Both a Project Executive Committee member and the Project Manager can introduce the conflict to the Project Steering Committee, if the conflicting parties are not satisfied by his suggestions and the PEC conclusions. No other individual can raise a topic to the PSC. Request to the PSC is sent by email;
 - **STEP 2a.2.1:** If the Project Manager or a PEC member avoids introducing a topic to the PSC, then the conflicting members can decide to bring the topic to the General Assembly, which in turn can instruct the PSC to deliver an opinion on a particular conflict, or even request that the resolution be made by the PSC. Beyond this point escalation will follow the normal path;
- **STEP 2a.3:** Project Steering Committee proposes a formal solution to the conflict:
 - The PSC can call a meeting with the conflicting members for elaborating the details of a potential resolution;
 - Two-thirds participation is required for driving any decision at PSC level;
 - In case of voting in the PSC, two-thirds approval is required for considering a decision as adequately acceptable for resolving the issue and being forwarded to the General Assembly as a solution, in case it is not directly acceptable by the partners;
 - A physical meeting, or at least a teleconference is preferred for voting;
 - It is proposed that in case that the resolution method proposed has clear and major financial impact to a partner, then the Project Coordinator is consulted by the PSC rather than directly the General Assembly;
 - Mail is a valid means of communication;
- **STEP 2b.1:** The Coordinator can consult for the resolution of a conflict of management of financial character after being instructed either by the Project Steering Committee or by an individual partner. The Coordinator is also entitled to bring topics to the General Assembly for resolution if the path of the PSC is not being followed. Notification to the General Assembly can be sent by email;
- **Step 3:** The General Assembly obtains a conflict resolution task normally by the Project Coordinator or the Project Steering Committee, and exceptionally directly by the conflicting partners;
 - During a conflict General Assembly can request consultancy from PSC for sub topics of the conflict, including budgetary issues.
 - The General Assembly attempts to arrive at a collaborative solution before concluding to voting. This can be driven by teleconferences and other exchanges;
 - Two-thirds participation is required for driving any decision at General Assembly level;
 - Voting is the ultimate means for the resolution. Precedence over voting is given only to the formal documents Consortium Agreement and Grant Agreement;
 - In case of voting in the General Assembly, two-thirds approval are required for considering a decision as adequately acceptable for resolving an issue:
 - If voting is required, the preferred means for conflict resolution is conducting a physical meeting, or at least a teleconference;
 - General Assembly instructs PSC for the proper execution and implementation of its decision on a conflict resolution;
 - “Defaulting Parties” can only be identified as such by the General Assembly after considering the breach of the Consortium Agreement and the precise procedure to follow is defined in the Consortium Agreement (Article 6.2).

Software Licence refers to the licence that will be adopted in order to distribute the binaries and source code produced by the project under the gCube name. It is considered that the licensing scheme is crucial not only for the long term sustainability of the technical activities of the project, but also for the mid-term envisaged quality of its artefacts.

It is considered that within the domain of activation of the project, i.e. scientific communities and infrastructure, and under the general rules of e-Infrastructures software development practices, an “open” licence is the most appropriate for adoption.

On the other hand gCube software comes with an existing licensing policy, whose appropriateness is once again examined under the prism of BlueBRIDGE. As gCube system adopts the European Union Public License (EUPL) licensing scheme it is fully in line with the perception obtained within BlueBRIDGE for its enabling software.

It is valuable to understand why this licensing scheme is in line with the project objective, instead of one which is more widely accepted by the worldwide open source development communities. In support of this comes the ‘Report on Open Source Licensing of software developed by The European Commission¹’, released in December 2004. In this report, the Enterprise Directorate General, IDA/GPOSS², aimed at “Encouraging Good Practice in the use of Open Source Software in Public Administrations’ goal”, reported what follows:

The most significant Free / Open Source Software (F/OSS licenses) (BSD, GPL, MPL, OSL and CeCILL) have been compared and analysed according to the European legal framework, demonstrating that none of the existing OSS licences answers to the requirements.

The BSD, Berkeley Software Distribution, license should be put aside given the absence of copyleft clause. This is however a fundamental feature in order to avoid the appropriation of the program by third parties.

The GPL, General Public License V. 2, major problem is that the right of communication to the public is not provided explicitly amongst the granted rights, and that a clause limits furthermore the granted rights to what is explicitly provided by the license. Moreover, the GPL is known for being the most viral license ever, whereas massive spreading through dynamic linkage is not the aim of the European Commission.

The MPL, Mozilla Public Licence 1.1, main problems reside in its applicable law and forum clause, referring to California.

Whereas the CeCILL³ could be deemed the best license given that it is the only one to be drafted according to EU terminology, its liability clause is really insecure and could jeopardize its compatibility with any other F/OSS license. Furthermore, its clause concerning its compatibility

¹ Report on Open Source Licensing of software developed by The European Commission

(applied to the CIRCA solution) is accessible at <http://ec.europa.eu/idabc/servlets/Doc?id=19296>

² Interchange of Data between Administrations/Good Practice in Using Open Source Software

³ CeCILL: (Ce:CEA ; C:CNRS ; I:INRIA ; LL:Logiciel Libre) is supported by the French CEA (Commissariat à l'énergie atomique), the CNRS (Centre National de la Recherche Scientifique) and INRIA (Institut National de Recherche en Informatique et en Automatique). It is available at www.inria.fr/valorisation/logiciels/Licence.CeCILL-V1.pdf

with the GPL is likely to turn rapidly the CIRCA⁴ license into a GPL license and therefore attract the drawbacks of this latter.

The OSL, Open Software Licence 2.1, does not present any major problems, but is drafted using US legal terminology.

Based on the above the possible solutions are:

- 1. To choose the license that fits the best with the European Commission requirements and apply it “as is” (in that case, the OSL is the best choice, but it exists in English only, and uses US terminology).*
- 2. To ask the author of an existing license to modify/translate/adapt according to the EU needs, with the advantage of facilitating recognition by the OSS community.*
- 3. To create a specific OSS license, which is the more open solution, but implies more work, more commitment to promote it as best practice and the risk of non-acceptance by the OSS community.*

Essentially this testifies that the choice of the licence cannot be based on simple considerations or desires but has to take into account the applicable law, the forum clause, the protection of the copyright, and all other aspects that protect the investment of European institutions and companies.

7.1 EUPL

To address the above issues, it is important to know that on 9 January 2007 the European Commission approved the European Union Public Licence (EUPL v.1.0)⁵. The licence was made available in English, French and German. In a second Decision of 9 January 2008, the European Commission validated the EUPL in all the other official languages, in respect of the principle of linguistic diversity of the European Union. At the same time, due account has been taken of the European Union Law as well as of the specificity and diversity of Member States Law.

EUPL has been approved as a licence to be used for the distribution of software developed in the framework of the IDA and IDABC⁶ programmes. Nevertheless, the licence text is drafted in general terms and could therefore be used for other software applications, as explicitly reported in the initial declaration:

This European Union Public Licence (the “EUPL”) applies to the Work or Software (as defined below) which is provided under the terms of this Licence. Any use of the Work, other than as authorised under this Licence is prohibited (to the extent such use is covered by a right of the copyright holder of the Work).

⁴ CIRCA: Communication and Information Resource Centre Administrator, a simple and effective groupware, developed by the European Commission under the IDA Programme. It is a web-based application providing online services that offer a common virtual space for Workgroups, enabling the effective and secure sharing of resources and documents.

⁵ <http://ec.europa.eu/idabc/en/document/7330>

⁶ IDABC stands for ‘European Community programme’. It aims to promote Interoperable Delivery of European eGovernment Services to public Administrations, Business and Citizens. IDABC continues and deepens the previous IDA, ‘Interchange of data between Administrations’, programme.

The Original Work is provided under the terms of this Licence when the Licensor (as defined below) has placed the following notice immediately following the copyright notice for the Original Work:

Licensed under the EUPL V.1.0

or has expressed by any other mean his willingness to license under the EUPL.

By a Decision of 9 January 2009, the European Commission adopted a revised version of the Licence while at the same time validated it in all the official languages (EUPL v.1.1). The changes were minimal:

- Work distributed under the EUPL v.1.0 may be re-distributed under the EUPL v.1.1 or any later version;
- A statement paragraph to declare that all linguistic versions of the licence, approved by the European Commission, have identical value was been added, so that parties can take advantage of the linguistic version of their choice.

EUPL is also intended to be the first open source licence with:

- A compatibility clause that identifies compatible licences;
- An officially sanctioned translation in 23 official languages of the European Union that makes its language clear and largely unambiguous.

Moreover, EUPL includes a ‘copyleft’⁷ clause but it does not present problems for compatibility since it does not create obligations down a stream of distribution. EUPL downstream is compatible with another licence, e.g. GPL, through the compatibility clause that specifically lists licences to be considered compatible. Those licences are considered compatible. In case of conflict, the conditions of the compatible licence will prevail.

Finally, EUPL provides: (i) a full European copyright coverage (communication / moral rights); (ii) EU compatible liability and warranty clauses; (iii) EU compatible applicable law and jurisdiction clauses.

Analysed the above cited sources of information and taking into account the motivation expressed by the European Commission in the preparation and delivery of the EUPL^[8,9], as well as the history and licensing of D4Science and iMarine projects (i.e. BlueBRIDGE predecessors and main contributor to the gCube software) the QAO considers the adoption of EUPL as license for future contribution of the BlueBRIDGE consortium to the gCube system as the only option available. gCube System software comes already licensed under the EUPL scheme and any change in the licensing of the software would severely impact its sustainability.

7.2 OTHER LICENSES

BlueBRIDGE has a different scope than the D4Science infrastructure used to operate the BlueBRIDGE Resources, which involves external infrastructures and tools that are not entirely conceived at the time of

⁷ Copyleft is a play on the word copyright to describe the practice of using copyright law to remove restrictions on distributing copies and modified versions of a work for others and requiring that the same freedoms be preserved in modified versions (text extract from Wikipedia)

⁸ ‘Report on Study of the compatibility mechanism of the EUPL v1.0’ accessible at <http://ec.europa.eu/idabc/servlets/Doc?id=27472>

⁹ ‘EUPL’s Rationale & Drafting Process’ accessing at <http://ossipedia.ipa.go.jp/legalinfo/20071221-5.pdf>

this report, in terms of technology exploited. It is highly probable that interacting with such infrastructures will involve different licenses, as for instance:

- Proprietary licenses for exploiting service APIs of infrastructure wrappers, even in the case they are freely given out;
- Other Open Source licenses for reusing components of the OSS nature;
- Proprietary usage licenses of integrated systems (e.g. applications and components);
- Proprietary development licenses of integrated systems (e.g. development environments).

It is quite important for the project's sustainability that minimal deviation is performed compared to the basic licensing scheme. This deviation should be well justified before followed and should follow a preference towards Open licenses. However, due to the special needs of the project, it is considered that a relative flexibility in licensing has to be obtained by the teams involved in Blue Assessment, Blue Economy, Blue Environment, and Blue Skills development.

This flexibility suggests that satellite systems and components can be potentially covered by other licensing schemes under an informed decision made by the appropriate project boards.

The approval of the individual satellite system licenses requires deep technical knowledge of a domain and should follow a clear path of decision:

- Out of the relevant task, a license deviation request should be forwarded to the Technical Director;
- The Technical Director requests an analysis by the Work Package involved members and introduces the topic to the Project Executive Committee along with his suggestion and reasoning for a decision;
- The PEC can elaborate counter proposals if the reasoning for a decision is not sufficient to suggest a deviation from the common adopted licensing scheme. As result of this activity the PEC produces an evaluation of the impact in terms of sustainability of the software and of the infrastructure and passes it to the Project Steering Committee;
- The PSC evaluates the impact of the licensing deviation as well of the impact of the non-deviation and takes a final decision on the topic;
- In the case of deviation approval, the topic is forwarded to the General Assembly by email for approval. In this case the GA can approve the license with the least overhead imposing means, such as silent approval.

8 ACTIVITY REPORTING

Activity reporting assists project management, and the European Commission, to monitor project progresses, achievements and difficulties encountered. During the course of the project, activity reporting will be conducted in three forms: (i) *Periodic Reports* prepared every 15 months by Work Package Leaders and General Assembly members; (ii) *Effort Reporting* prepared per partner every quarter; and (iii) *Monthly Activity Reporting* prepared by task (with detailed contribution from the involved beneficiaries) and summarized by Work Package leaders every month.

It is possible that beneficiaries will be requested to participate in other types of reporting throughout the project and after its completion. Examples of additional types of obligations include responding to: questionnaires for socio-economic reporting, implementation of gender actions, and impact on science and society; evaluation and monitoring exercises; contribution to standardization activities; and monthly reporting of dissemination activities performed by individual partners.

8.1 PERIODIC REPORTS

Two periodic reports (D1.2-3) will be produced during the course of the project. CNR/PCO must submit the periodic reports within 60 days of the end of each reporting period, thus partners must strictly adhere to the deadlines that will be established for contributing to the production of the periodic reports.

This activity will be implemented by relying on the BlueBRIDGEProject VRE shared workspace (cf. Sec. 3.1).

This deliverable will be produced by following the template provided by the EC.

Deadlines for contributions will be established at least 30 days prior to the end of the reporting period. The production of this report implies actions from work package leaders and beneficiaries.

Every Work Package leader is required to:

- Summarize the progress towards objectives and details for each task;
- Highlight clearly significant results;
- Indicate to what extent identified Key Performance Indicators have been achieved;
- Explain the reasons for deviations from Annex I (Description of Action) and their impact on other tasks as well as on available resources and planning (if applicable);
- Explain the reasons for failing to achieve critical objectives and/or not being on schedule and explain the impact on other tasks as well as on available resources and planning (if applicable and the explanations should be coherent with the declaration by CNR/PCO);
- Provide a statement on the use of resources, in particular highlighting and explaining deviations between actual and planned person months per work package and per beneficiary in Annex I (Description of Action);
- Propose corrective actions (if applicable). The work package contributions as described above will comprise work progress and achievements during the period of the periodic report.

The list of completed deliverables and milestones will be compiled by the PCO based on the reporting in the BlueBRIDGE issue tracking system (cf. Sec. 3.2) and the availability of the corresponding document in BlueBRIDGEProject VRE shared workspace (cf. Sec. 3.1).

Prior to the submission of any periodic report, the Project Steering Committee must validate the Work Package contributions. The Project Steering Committee members reserve the right to edit the contributions of the Work Package leaders, requesting more information as necessary.

Every Beneficiary will be requested to provide a thorough “Explanation of the use of the resources”, including an explanation of personnel costs, subcontracting and any major costs incurred by the partner, such as the purchase of important equipment, travel costs, large consumable items, etc., linking them to Work Packages. Beneficiaries will also provide Financial Statements, or Form Cs.

Templates have been created by the Commission and will be used for both of the above items.

8.2 EFFORT REPORTING

All beneficiaries will be requested to provide a quarterly report on effort spent, per task, in alignment with the production of the monthly reports. One person per beneficiary should be designated to report effort for the quarter.

A dedicated folder has been created on the BlueBRIDGEProject VRE shared workspace (cf. Sec. 3.1) that includes a template for producing the quarterly effort report:

<https://goo.gl/ZFozXd>

It is possible for partners to transfer effort between Work Packages if prior agreement has been obtained from the Project Steering Committee. Transfer of effort between tasks requires prior agreement from the corresponding Work Package leader.

Beneficiaries should download the template for the effort report, enter their contributions and save the file in the folder corresponding to the quarter. The suggested naming procedure should be used:

- Q_n_Effort_PartnerNumber_PartnerName where n is the number of the quarter in which the report is being submitted;
- Example: Q1_Effort_01_CNR.xls

The due date for the completion and posting to the BlueBRIDGEProject VRE shared workspace (cf. Sec. 3.1) of the quarterly effort report is the **first Friday after the end of the quarter**. On the first Monday after the deadline for effort submission, CNR/PCO forwards the consolidated quarterly effort report to the Project Executive Committee, for discussion at the following monthly teleconference if requested.

Note: When additional effort has been contributed by a beneficiary, but not officially charged to the BlueBRIDGE project, a separate email should be sent to the PCO (with Project Director in copy) for the purposes of a contributing to an in-depth cost-benefits analysis that the project is undertaking for long-term sustainability.

8.3 MONTHLY ACTIVITY REPORTS

All beneficiaries and Work Package leaders are required to participate in monthly activity reporting as a contribution to the discussions of the Project Executive Committee concerning the achievement of the project work plan.

In particular, each WP leader must summarize progress, achievements and corrective actions of her/his WP and document them by adding a comment in the corresponding “Project WP” issue in the BlueBRIDGE issue tracking system (cf. Sec. 3.2). Each summary will be based on task activity reports produced by each Task Leader by commenting the corresponding “Project Task” issue in the BlueBRIDGE issue tracking system. Comments reporting on WP activities and comments reporting on Task activities should be annotated with the string “<Month> <Year> Activity report”, e.g. “September 2015 Activity Report”. They should concisely

indicate activities performed in the period, major issues and corrective actions, as well as major achievements produced related to the WP/Task respectively. It is expected that all the reported activities are linked to the relative issues that have been created in the BlueBRIDGE issue tracking system to capture the activity.

The procedure defined for monthly activity reporting is the following:

- At the end of each month (beginning of each month after the reporting period) WP leaders liaise with Task leaders to have the relative tickets updated with the comments documenting the activity performed (as explained above). Issues must be updated in suitable time thus to guarantee that the entire set of commented issues is available by (at least) 2 working days before the PEC monthly conference call;
- Every month, during the PEC monthly conference call, the PEC discusses and either approves or rejects the WP activities report;
- Every during the PSC monthly conference call, the Project Director reports to the Project Steering Board information about the status of the project resulting from the Activity Report;

8.4 KEY PERFORMANCE INDICATORS

Measurable objectives require Key Performance Indicators (KPIs) to ensure project management effectively and efficiently monitor the project evolution and progress towards such objectives. BlueBRIDGE has identified a number of KPIs related to each objective to ensure the highest impact, as well as the quality and success of the expected outputs. These KPI have been described in the GA-Part B.

To effectively manage the monitoring of the KPIs, specific issues have been created in the Issue Tracking System to trace the evolution of the KPIs during the project's lifetime. These issues have been assigned to selected WP Leaders that are in charge of the regular update of those issues (by modifying the value of "achievement" in suitable time).

The trend of the KPIs is reported to the Commission with the Periodic Reports, whilst a constantly updated status of the indicators can be obtained by every project member through a specific on-line report from the Issue Tracking System:

https://support.d4science.org/projects/bluebridge/issues?query_id=30

9 DELIVERABLES

Deliverables are an important channel to communicate to the European Commission the project progresses and results. As a consequence, the preparation of such documents is an important activity that should be properly monitored by the Quality Assurance Office.

This section describes their naming convention, the templates to apply to such documents, the procedure defined to review project deliverables, and how to monitor the deliverables preparation.

9.1 NAMING

Each deliverable must be associated with one unique document identifier to ensure effective version control. This unique identifier is the deliverable filename. The filename of all deliverables must be compliant with the following rules:

- Author Integration:
 - BlueBRIDGE_<deliverable number>_M<delivery month>_V<version>.doc
 - e.g. BlueBRIDGE_D1.1_M2_V1.0.docx
- Editor Contribution:
 - BlueBRIDGE_<deliverable number>_M<delivery month>_V<version>_<partner>.doc
 - e.g. BlueBRIDGE_D1.1_M2_V0.2_CNR.docx

9.2 TEMPLATE

All deliverables must apply the project templates available on the project workspace at:

- Deliverables of type “Report”: <https://goo.gl/FNJ4Z9>
- Deliverables of type “Other”: <https://goo.gl/Ywgmls>

9.3 REVIEW PROCEDURE

For any of the deliverable to be produced, a specific issue is created by the QAO in the Issue Tracking System to trace the status of the deliverable. This record is then constantly updated by the QAO, the Author(s) and the Reviewer(s). Moreover, the QAO creates a dedicated folder in the BlueBRIDGEProject VRE workspace for supporting the production of the deliverable, e.g. store the various versions.

All deliverables prepared by the consortium, before being submitted to the European Commission, must undergo an official review. The deliverable reviewers are nominated by the QAO before any official review. Once informed, deliverable reviewers may refuse a particular assignment, but it is expected that all partners will participate to some extent in the deliverable review process. This review procedure applies to both types of deliverables defined in the project description of work: “Report” and “Other”. The review process is organized in three main phases:

- Preparation and internal review;
- Official review;
- PSC review and approval.

These three phases are further organized in seven steps:

1. The QAO informs the deliverable reviewer and deliverable editor that the review process has started. The QAO makes sure that a folder in the project workspace is available;

2. The reviewer confirms with the editor that everything is ready to start the deliverable editing (e.g. Table of Contents is approved, website is ready, time plan is clear);
3. The editor upload on the project workspace the deliverable for official review, after executing an internal deliverable review done by the work package or the deliverable authors;
4. The reviewer sends its comments and proposal of changes to the editor;
5. The editor provides the reviewer with the final version of the deliverable applying the review comments and, if needed, a textual reply to the comments;
6. The reviewer checks if all comments have been applied and communicates to PCO together with a deliverable approval statement;
7. PCO communicates the availability of the deliverable to the PSC for silent approval. In case of negative comments the editor analyses them and applies possible changes.
8. PCO sends the deliverable to the EC.

For the successful execution of the procedure above, the different steps must strictly follow the deadlines presented in Table 2 – Deliverable Review Process. Step 3 and step 8 are of particular importance and must be followed closely by the QAO.

Who	Step	Date
QAO	1. Starts the review by informing the reviewer and editor	1 of Mx-1
Reviewer	2. Confirms with the editor that everything is ready	15 of Mx-1
Editor	3. Provide the reviewer with the candidate release of the deliverable by uploading this in the dedicated workspace folder;	15 of Mx
Reviewer	4. Provide the Editor with the commented version of the deliverable by uploading it in the dedicated workspace folder;	21 of Mx
Editor	5. Provide the reviewer with the final candidate release of the deliverable by uploading this in the dedicated workspace folder;	23 of Mx
Reviewer	6. Provides the PCO with the final version of the deliverable by sharing a link to the file in the workspace;	25 of Mx
PCO	7. Provides the PSC with the link to the final version of the deliverable for silent approval	26 of Mx
PCO	8. Uploads the deliverable to the continuous reporting system of the EC's Participant Portal	30 of Mx

Table 2 – Deliverable Review Process

If one of the deadlines fall on a weekend or holiday, the deadline is postponed to the first working day following the deadline.

The preparation of any BlueBRIDGE deliverable must use the project workspace in order to store the deliverable and the issue tracking system to manage the transitions between the review steps. For each WP a deliverable folder is created on the project workspace within the corresponding WP folder.

The folders in the project workspace and the records in the issue tracking system must be used for two purposes:

1. To host all versions of the deliverable (from the initial deliverable structure to the final version) and all other associated files (review comments, review reply, review statement, etc.);
2. To manage the transitions between the seven steps of the review procedure. This is executed using the record associated to the deliverable in the issue tracking system. To move from one step to the other, the responsible for the current step must access the corresponding deliverable record and change the “Assignee” of the record. This will complete the current step and automatically send a notification to the responsible for the next step.

9.4 MONITORING

The status of the deliverables can be monitored via a specific on-line report from the issue tracking system:

https://support.d4science.org/projects/bluebridge/issues?query_id=31

Whenever a deliverable is late with respect to the procedure, a red colour in the GANTT monitoring page of the issue tracking system is associated to the deliverable:

<https://support.d4science.org/projects/bluebridge/issues/gantt>

This information is included by the QAO in the Monthly Report and submitted to the PEC for any possibly needed action.

10 MILESTONES

Project milestones are important tools to inspect the status of the project and the achievement of results. These tools are useful to present to the EC the achievement of results but are also useful to internally monitor the evolution of the project or of individual work packages. As a consequence, the achievement of project milestones should be properly monitored by the Quality Assurance Office.

This section provides a link to the template to use for announcing achieved milestones, describes the milestone naming convention, the procedure to announce project milestones, and how the QAO monitors the announcement of milestones.

10.1 NAMING

Each milestone object must follow this naming convention:

- BlueBRIDGE_MS<milestone number>_M<delivery month>.docx
- e.g. BlueBRIDGE_MS1_M1.docx

10.2 TEMPLATE

All milestones must apply the project template:

- <https://goo.gl/37XnOk>

10.3 ANNOUNCEMENT PROCEDURE

For any of the milestones to be achieved, a specific issue is created by the QAO in the issue tracking system to trace the status of the milestone. This issue is then assigned to the lead beneficiary and updated by the “Assignee” to report the achievement of the milestone.

Milestones must be announced by the “Assignee” responsible for the milestone. Such declaration is performed just updating the following field of the milestone record:

- Status;
- % Done.

All milestones must be announced by the last working day of the milestone due month.

10.4 MONITORING

The status of the milestones can be monitored via a specific on-line report from the issue tracking system:

https://support.d4science.org/projects/bluebridge/issues?query_id=29

Whenever a milestone is late with respect to the procedure, a red colour in the GANTT monitoring page of the issue tracking system is associated to the milestone:

<https://support.d4science.org/projects/bluebridge/issues/gantt>

This information is included by the QAO in the Monthly Report and submitted to the PEC for any possibly needed action.

11 PROJECT PUBLICATIONS

According to Article 29 of the Grant Agreement:

“Unless it goes against their legitimate interests, each beneficiary must — as soon as possible ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).”

Results are meant to be the outcomes produced by the project, e.g. data, products, software tools and scientific articles.

The publication of outcomes is governed by a number of rules detailed in subarticles.

Art 29.2 “Open Access to Scientific Publications” establishes that:

“Each beneficiary must ensure open access (free of charge online access for any user) to all peer reviewed scientific publications relating to its results.

In particular, it must:

- a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;
Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.
- b) ensure open access to the deposited publication — via the repository — at the latest:
 - (i) on publication, if an electronic version is available for free via the publisher, or
 - (ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
- c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.”

The BlueBRIDGE project also participates in the Research Data Pilot. This implies that it has also to comply with Art. 29.3 “Open access to research data”:

“Regarding the digital research data generated in the action (‘data’), the beneficiaries must:

- a. deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:
 1. the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;
 2. other data, including associated metadata, as specified and within the deadlines laid down in the 'data management plan' (see Annex 1);

- b. provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves).

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply. As an exception, the beneficiaries do not have to ensure open access to specific parts of their research data if the achievement of the action's main objective, as described in Annex 1, would be jeopardised by making those specific parts of the research data openly accessible. In this case, the data management plan must contain the reasons for not giving access.”

As part of the obligations related to the participation in the Research Data Pilot BlueBRIDGE has to produce a Data Management Plan and follow the policies and procedures that will be specified in this plan. Three subsequent versions of the plan will be produced. These will be documented in Deliverables D2.1, D2.2 a D2.3.

Concerning the communication to the Consortium, prior notice of any planned publication shall be given to the other Parties at least 30 calendar days before the publication by posting a message in the BlueBRIDGEProject VRE. The communication and objection procedures are specified in details in the Consortium Agreement (<https://goo.gl/MjJuSi>).

Any published product must be announced to the consortium by posting a message in the BlueBRIDGEProject VRE (as soon as possible and at the latest on publication). A list of published results is maintained in a dedicated wiki page (cf. Sec. 12.2) as well as made available through the project website.

A budget of 16,020 € is available for supporting Article Processing Charges. It has been estimated that it can be used for supporting 6 publications in Open Access Journals and 5 publications in Hybrid Journals (calculation based on Björk/Solomon estimates for OA Journals at 1,020 € and Hybrid Journals at 1,980 €).

A machine-readable electronic copy of every product is expected to be deposited in suitable Open Access repositories. In particular:

- for **scientific papers**, project partners must deposit the published version or the final peer-reviewed manuscript accepted for publication in at least an “OpenAIRE compliant” repository. Authors may rely on their Institutional Repositories (if any) as well as on Zenodo;
- for **datasets**, project partners are encouraged to publish data products collected and produced as part of the project activities in an open access data repository. Rules governing publication and opt out, if necessary, are specified in the Data Management Plan. Project partners are also encouraged to accompany the published data with a data paper describing specific information on how data are being collected and can be re-used;
- for **software**, project partners are encouraged to publish software packages thus to favour availability and citation. In particular, software packages contributing to gCube are planned to be archived on GitHub repositories and published via Zenodo. Project partners are also encouraged to accompany software packages with data papers describing specific information on these products.

12 DISSEMINATION

The work conducted under the deliverables and all the project results shall be made available to relevant stakeholders within and outside the consortium. WP3 will be contacted in such cases and will coordinate the public dissemination activities in collaboration with the partners of the consortium.

The WP3 “Communication, Stakeholder engagement & Knowledge transfer” is led by Trust-IT, and specifically by Sara Garavelli who is the project Outreach Manager. However, this Work Package will be the result of the convergent effort of all the partners that can contribute to the various dissemination activities by:

- Presenting the project at conferences and reporting about the impact of the activity performed;
- Promoting the benefits of the project to a large community of (potential) users;
- Writing papers and producing documentation;
- Editing and providing source material for press releases;
- Responding to interviews;
- Documenting their work by posting in the project VREs (cf. Sec. 3.1);
- Documenting their work via social networking tools;
- Supporting the BlueBRIDGE social network activities acting as multipliers (re-tweets, sharing of posts, etc.);
- Suggesting relevant web links, resources, and events.

12.1 DISSEMINATION STRATEGY

The BlueBRIDGE Communication & Stakeholder Engagement Plan (D3.1) is the deliverable, due in Month 5 of the project (January 2016), will detail the communication and stakeholder engagement strategy for the project lifetime. It will include the plan of all the communication, training and outreach activities and it will also define the performance indicators that can be used to monitor the effectiveness of the plan. D3.1 will be the reference point for all the members of the Consortium regarding the Communication, Training and Outreach activities, commonly defined in the project as activities related to the “Blue Uptake”.

12.2 COORDINATION OF WP3 & INTERNAL TOOLS

The coordination of the WP3 activities will be ensured through the BlueUptake **VRE internal working area**. All the WP3 members are required to join the VRE. Members participating in the VRE can:

- Post updates on the WP3 activities performed;
- Discuss with other members of the Work Package;
- Share documents & links;
- Collaborate for a timely and efficient writing of the WP3 deliverables.

All the information and updates relevant for all the members of the consortium will be shared also through the BlueBRIDGEProject VRE to ensure a timely communication to all the Consortium members.

Wiki pages dedicated to WP3 activities will be also set up and they will include:

- Events calendar: a wiki page reporting all the past and future events and the BlueBRIDGE involvement;
- Press clippings tracker: reporting the list of BlueBRIDGE articles published on external journals;
- Presentation tracker: reporting the list of all the presentations given at events and conferences by the Consortium members (All the presentations will be also made available on SlideShare <http://www.slideshare.net/BlueBridgeVREs>);
- Scientific Publications tracker including the list of all scientific papers released in the project;

- Synergy tracker: reporting the list and the status of the collaboration activities with other projects.

Any additional wiki page needed will be added at a later point in the project lifetime.

In addition, TRUST-IT (as Work Package leader) will maintain two databased, one on **dissemination contacts** and one on **press and media contacts**. These will include the contact information of the relevant stakeholders and of the media contacts gathered through the project duration. These will be used for all the dissemination and engagement campaigns.

D3.1 will also include guidelines on the usage of the **project branded material and templates**. To ensure the building of a strong branding identity the partners must use the different templates and graphics elements developed by WP3. Namely:

- Official project and partners' logos available via the BlueBRIDGE Workspace:
 - Project Logos - <https://goo.gl/jm2qzS>
 - Virtual Research Environment Logos - <https://goo.gl/2RlcPN>
 - Partner's Logos - <https://goo.gl/e3Gmdp>
- Two MS word "deliverable templates" for 'Report' and 'Other' <https://goo.gl/oSf0TF>
- A MS Word "milestone template" <https://goo.gl/oSf0TF>
- An MS PowerPoint template to be used by all the partners when presenting BlueBRIDGE at events (both internal and external) <https://goo.gl/oSf0TF>

Any other templates made available by WP3 will be shared with the partners.

WP3 monthly meetings are scheduled on the first Monday of every month and are open to all the partners. These meetings will be used to discuss the activities performed during the previous month and to plan the activities for the following one.

Each BlueBRIDGE partner will be asked to assign one or two persons responsible to collect and share communication activities with the WP3 leader to ensure that all the effort of the partners is tracked. The WP3 leader will get in touch with all partners once a month, usually before the WP3 call, to know about ongoing, planned, and new communication activities. The input collected from the Consortium members will be discussed in the WP3 monthly calls and then reported to the PEC.

12.3 DISSEMINATION TO EXTERNAL STAKEHOLDERS

In order to disseminate as widely as possible the work conducted for the deliverables and the BlueBRIDGE results to the external stakeholders, appropriate options for turning the work performed by the partners into a targeted dissemination material will be considered. These could be press releases, articles, brochures, posters, videos, update on the BlueBRIDGE website (<http://www.bluebridge-vres.eu>) and social networks as well as other items that can convey in the most appropriate way the results of the work.

The PSC will be responsible for deciding on the action to take and will organize, in collaboration with the communication manager, the necessary effort and actions. All this material will be disseminated through appropriate channels and tools set up by WP3 and described in D3.1.

External events will be also fundamental for disseminating the project results. Anyone participating in an event where *BlueBRIDGE* is presented, either directly or indirectly, will report all the information related to the event on the Events Wiki page so that everyone participating in the project (including WP3) is informed.

It is recommended to attach all meeting-related information (minutes, slides, agenda, etc.). For external events the following information will be collected:

- Title of the event;
- Date and place;
- Name of presenter;
- Title of presentation/paper;
- Type of audience (Research, Industry, General Public, Policy makers, etc.);
- Number of attendees (rough estimation);
- Main outcomes (number of participants, established synergies, stakeholders engaged, etc.).

Finally, messaging will be a fundamental part to reach the proper stakeholders. For this objective, key messages for external stakeholders, prepared by WP3, will be discussed with the PSC. D3.1 Communication & Stakeholder Engagement Plan, due by January 2016, will include the key target messages for the BlueBRIDGE stakeholders. However, to cover the first five months of the project a message to reference BlueBRIDGE has been already developed in conjunction with the first press release “Innovative BlueBRIDGE data services: New European consortium building data services for fisheries, aquaculture, ecosystem management, livelihoods and food system analysis” (http://cordis.europa.eu/news/rcn/128416_en.html)

Oceans are the world's seventh largest economy and are fundamental to strengthen Europe's competitiveness and labour market. However, poorly managed fisheries and pollution, amongst others, are causing serious damage to its carrying capacity and international intervention is needed. Europe is taking bold steps to address this with Blue Growth, the long-term strategy for sustainable growth in the marine sector. This requires comprehensive and accessible information about Europe's seas and oceans, such as fisheries databases, sea maps, etc., for policy makers to make informed decisions to ensure that a healthy marine environment can sustain growth in Europe. This is where the BlueBRIDGE project comes in.

BlueBRIDGE - Building Research environments fostering Innovation, Decision making, Governance and Education - is funded under H2020 and provides data services to scientists, researchers and data managers delivering a solid foundation for informed advice to competent authorities. A complete set of web-based data and computational resources will enable them to address key challenges related to the Blue Growth long term strategy with a strong focus on sustainable growth.

BlueBRIDGE will specifically target:

- *Stock assessment and a global register for stocks and fisheries, disseminating comprehensive information on the location, status and trend of fish stocks and fisheries.*
- *The analysis of socio-economic performance in aquaculture, also identifying suitable locations for aquaculture.*

The companies running these farms will be able to see how well they are performing, if the business is sustainable and if they are operating in an environmentally sustainable mode.

“These are just a few of the challenges BlueBRIDGE will address”, says Marc Taconet, from FIPS at the Food and Agriculture Organisation and chair of the BlueBRIDGE External Advisory Board, “The development of smart solutions will importantly support decision-makers involved in the ecosystem approach to fisheries and aquaculture management, by facilitating the knowledge production chain from the initial phases of data collection, through to aggregation, analysis and the production of indicators for competent authorities and investors. These solutions will help bridging the work of international organisations and communities of scientists from different disciplines (e.g. fisheries, biology, economics, statistics, environment, etc).”

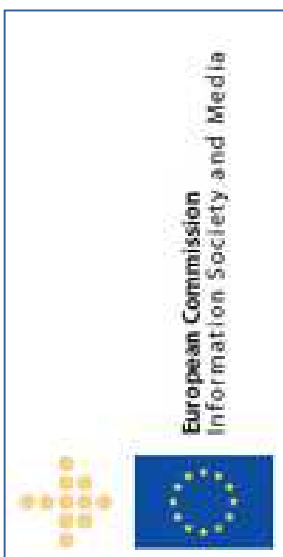
“This knowledge production chain is usually the result of the work of multidisciplinary scientific communities working in silos”, says Donatella Castelli from the National Research Council in Italy and BlueBRIDGE project director, “BlueBRIDGE will radically transform the way they work together by enabling collaboration and alignment. Members from different sectors with specific competences will benefit from data sharing and re-use as well as processing capabilities they cannot typically afford. As a result, users will gain mutual economies of scale.”

BlueBRIDGE services aim to have a measurable impact in Europe and worldwide. Empowering the next generation of scientists through training is fundamental for this as is engaging small and medium enterprises (SMEs) operating in the sector. One of the strongest assets of BlueBRIDGE is indeed its public-private collaboration. Seven of the fourteen partners in BlueBRIDGE are private companies specialising in aquaculture and fisheries management; the French Business and Sea Innovation Clusters with their network of 400 SMEs is also part of the consortium. Having their experience and their knowledge of the real needs will be a key driver for wide uptake of the services and their sustainability.

- *BlueBRIDGE services will be built on top of the iMarine infrastructure (www.i-marine.eu) in order to capitalize on the previous investments made by the European Commission and as a first step towards their sustainability after the end of the project. www.bluebridge-vres.eu | @BlueBridgeVREs*

12.4 DISCLAIMER

The EU cannot be responsible under any circumstances for the contents of communication items prepared by project partners. All items must therefore include the following disclaimer in their publications: “This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of <name of the author/beneficiary/implementing partner/BlueBRIDGE project participants> and can in no way be taken to reflect the views of the European Union.” The following text includes the disclaimer used in deliverables.



BlueBRIDGE (675680) is a Research and Innovation Action (RIA) co-funded by the European Commission under the Horizon 2020 research and innovation programme

The goal of BlueBRIDGE, *Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth*, is to support capacity building in interdisciplinary research communities actively involved in increasing the scientific knowledge of the marine environment, its living resources, and its economy with the aim of providing a better ground for informed advice to competent authorities and to enlarge the spectrum of growth opportunities as addressed by the Blue Growth societal challenge.

This document contains information on BlueBRIDGE core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute as BlueBRIDGE Board members. Any reference to content in this document should clearly indicate the authors, source, organisation and publication date.

The document has been produced with the funding of the European Commission. The content of this publication is the sole responsibility of the BlueBRIDGE Consortium and its experts, and it cannot be considered to reflect the views of the European Commission. The authors of this document have taken any

available measure in order for its content to be accurate, consistent and lawful. However, neither the project consortium as a whole nor the individual partners that implicitly or explicitly participated the creation and publication of this document hold any sort of responsibility that might occur as a result of using its content.

The European Union (EU) was established in accordance with the Treaty on the European Union (Maastricht). There are currently 27 member states of the European Union. It is based on the European Communities and the member states' cooperation in the fields of Common Foreign and Security Policy and Justice and Home Affairs. The five main institutions of the European Union are the European Parliament, the Council of Ministers, the European Commission, the Court of Justice, and the Court of Auditors (<http://europa.eu.int/>).

Copyright © The BlueBRIDGE Consortium 2015. See <http://www.bluebridge-vres.eu> for details on the copyright holders.

For more information on the project, its partners and contributors please see <http://www.i-marine.eu/>. You are permitted to copy and distribute verbatim copies of this document containing this copyright notice, but modifying this document is not allowed. You are permitted to copy this document in whole or in part into other documents if you attach the following reference to the copied elements: "Copyright © The BlueBRIDGE Consortium 2015."

The information contained in this document represents the views of the BlueBRIDGE Consortium as of the date they are published. The BlueBRIDGE Consortium does not guarantee that any information contained herein is error-free, or up to date. THE BlueBRIDGE CONSORTIUM MAKES NO WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, BY PUBLISHING THIS DOCUMENT.

12.5 ACKNOWLEDGMENT OF SUPPORT

Communication items must include an acknowledgement of financial support by the European Union. Thus, all material (including World Wide Web pages) must include a statement such as the following in a highly visible area): *"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 675680."* The items must also include EU emblem displayed in a prominent manner <http://europa.eu/about-eu/basic-information/symbols/flag/>.

13 TECHNICAL PROCEDURES

The project Quality Plan should take in consideration not only administrative and managerial procedures but also the technical procedures to ensure wider project coverage. These procedures are mainly related with Infrastructure Operation and VRE Operation, from the technical perspective.

For Infrastructure Operation and VRE operation, the procedures are those governing the D4Science.org Infrastructure and documented by the specific wiki

<https://wiki.d4science.org/>

The procedures driving the operation of D4Science.org are not subject to approval. However, any partner can raise requests for changes to the WP4 Leader. The WP4 Leader can decide either to revise the policy (in collaboration with D4Science.org) or to add a topic to the first PEC meeting following the partner request. If the PEC approves the request the procedure shall be discussed with D4Science.org.

The participation in D4Science.org is regulated by policies for users, data and computational resources providers and consumers described at the following wiki page:

https://wiki.d4science.org/index.php?title=D4Science_Deployment_and_Operation:_Policies

The Project Steering Committee shall be notified by the QAO any time these policies will be either modified or extended. The changes will then be discussed and approved/rejected at the first Project Executive Committee meeting following the notification. The approval of any D4Science.org policy will be promptly communicated to the Project Steering Committee. In case a policy is not approved by the PEC, the Conflict Resolution procedure will be used and the discussion will be escalated to the PSC.

BlueBRIDGE will strive to:

- Create an inclusive research environment in which men and women, scientists and administrators can combine family and work, children and career;
- Maintain a philosophy that includes the individual needs of all participants.

This principle will be applied to all levels of the project, from development to management, and without regard to the person's level of experience. Members of the Project Executive Committee can influence the length, duration and location of project meetings. When participation in a meeting is not possible due to constraints, personal or professional, the use of certain communication tools will be encouraged in order to facilitate remote participation, e.g. Skype, audio conferencing systems, distribution of minutes and actions. The establishment of this Quality Plan will contribute greatly to an understanding of expectations and functioning at various levels of the project.

However, project management can only guide the project participants. Participants are expected to respect the guidelines established by the project, and in this Quality Plan. PEC must take the lead, and observe these guidelines for BlueBRIDGE participation, bearing in mind the guiding principles of gender equality and mainstreaming.

Guiding actions

Guiding actions will be implemented at the project level, within each partner's team and within the virtual team that comprises the work packages. It is the responsibility of work package leaders and PSC representatives to ensure that the guiding actions are promoted throughout the project duration through:

- Introduction of gender awareness raising activities at the partner level;
- Sharing "best practices" or other model examples with the PSC or PEC;
- Encouragement and support of a work-family balance for project participants, including:
 - Respecting deadlines for contributions to prevent overload at the end of the delivery chain;
 - Reducing the duration of Plenary Sessions by preferring shorter more focused topical meetings;
 - Preferring centrally located meeting venues in order to avoid full days of travel.

REFERENCES

- [1] Giammatteo, G.; Frosini, L.; Laskaris, N. (2015) Software Release Procedure and Tools. BlueBRIDGE Project Deliverable D4.1 October 2015
- [2] Candela, L.; Michel, J.; Nguyen, L.; Pagano, P. (2011) Quality Plan. iMarine Project Deliverable D1.1 December 2011