

Acronym: COLUMBUS

Title: Monitoring, Managing and Transferring Marine and Maritime

Knowledge for Sustainable Blue Growth

Grant agreement n° 652690

## Deliverable D.1.5

# QUALITY AND EVALUATION PLAN

*May 2015*

Lead parties for Deliverable: Innovatec

Due date of deliverable: M2

Actual submission date: M3

Revision: V.1

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)	
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### Acknowledgement

The work described in this report has been funded by the European Commission under the Horizon 2020 Framework Programme.



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## Contents

SUMMARY: MONITORING AND EVALUATION (M&E) PLAN .....	3
1. INTRODUCTION .....	3
2. OBJECTIVES OF THE MONITORING AND EVALUATION .....	5
3. THE COLUMBUS LOGIC MODEL.....	5
SHORT TERM IMPACTS (AS DESCRIBED IN THE DoA).....	7
4. THE EVALUATION QUESTIONS .....	11
MIDTERM EVALUATION (formative evaluation) .....	11
FINAL EVALUATION (summative evaluation) .....	11
5. THE COLUMBUS M&E FRAMEWORK.....	11
THE COLUMBUS M&E MATRIX.....	12
6. M&E FRAMEWORK IMPLEMENTATION .....	19
PROVISIONAL SCHEDULE FOR DATA COLLECTION AND REPORTING.....	19



## SUMMARY: MONITORING AND EVALUATION (M&E) PLAN

This M&E plan provides an overview and the basic principles for the monitoring and internal evaluation of the **COLUMBUS** project, foreseen in WP1 as part of the management and coordination activities. The plan also establishes the actions planned and the actors involved throughout the process.

In order to ensure a sense of ownership of the evaluation, all partners should be aware of the purposes of the M&E exercise. Moreover, in order to achieve meaningful evaluation results, all partners should share a common understanding of the contents and concepts of the M&E work, as well as a full commitment to the evaluation processes. For this, a first draft of the M&E plan will be presented and discussed during the first project meeting (kick-off meeting), and the **evaluation framework** will be agreed by all partners.

## 1. INTRODUCTION

The overall aim of the M&E is to verify whether the project is progressing towards and reaches the planned objectives and, as far as possible, assess its impacts. Informing the Project coordination team, partners and external advisory board about the results will also be a major objective, as a means to provide project management support and facilitate learning and adaptation from results.

Innovatec (P9) will be responsible for the on-going monitoring and evaluation of the project progress as well as its outcomes and effects (impacts). For this, INNOVATEC will try to maintain a twofold role: on one hand, it will be interactive with all WPs and partners; on the other hand, it will try to be as objective as possible.

Monitoring and evaluation is an activity that is embedded in the coordination and project management of COLUMBUS (WP1). It is a complementary activity to the day to day project management, which also includes monitoring the planned activities and controlling the completion of deliverables both on time and in quality.

To better understand the M&E plan, we will define major terms as used for the COLUMBUS M&E strategy.

<b>MONITORING</b>	<p>is the systematic, regular collection and scheduled analysis of information related to the project progress to identify and possibly measure changes over the project duration. It involves watching how the project progresses over time in order to find out if and how efficiently objectives are being met.</p> <p>In COLUMBUS, a monitoring approach will be utilised to facilitate ongoing self-evaluation and project-based monitoring.</p>
<b>EVALUATION</b>	<p>is the analysis of the effectiveness and direction of the project, and it involves making a judgement about progress towards objectives and goals. Effectiveness should be understood as knowing if the planned results been achieved, why, or why not.</p>



<p><b>RESULTS</b> generated by the project</p>	<ul style="list-style-type: none"> <li>• <b>Outputs:</b> direct tangible products of the project, the direct results of the work-packages, including project deliverables. They can be named as intermediate results.</li> <li>• <b>Processes:</b> The methods and approaches used for the project, in our case, the planned activities (tasks) for each Work package.</li> <li>• <b>Outcomes:</b> The final results of the project, which can be attributed entirely to the project process and outputs. They are the project specific objectives.</li> <li>• <b>Impact:</b> Overall changes that may occur in the marine and maritime community to which the project is one of many contributing factors. It is the medium-long term effect of the project on the marine/maritime community (policy and decision-makers, researchers, industry) and the overall European society.</li> </ul>
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As mentioned before, the main purpose of the M&E plan will be to assess project results: to understand whether the COLUMBUS project is moving towards the achievement of its objectives in a timely and efficient manner.

The focus of the monitoring and evaluation will be placed mainly on outputs and outcomes and how this may contribute to the desired impacts.

The plan will describe the M&E activities that will be carried out during the project in order to try to find out whether the specific objectives (expected outcomes) are being reached and if possible, whether or not the expected impacts may be achieved. M&E activities can be seen here as parts of a same action, as information and data gathered during the project at different moments, will be used to assess how the project is progressing towards achieving objectives and how well it has finally performed. In summary, it involves monitoring the overall project process to evaluate results in terms of effectiveness and achievements.

It is essential that evaluation findings should be based on a rigorous and robust data collection and analysis as possible. Without this it is difficult to convince evaluation partners of the validity of the conclusions reached and the lessons learned, especially when the evaluation is critical of project outcomes or impacts, or the way implementation has been undertaken. The need to obtain credible and well supported findings is a major consideration in planning the overall evaluation exercise both in terms of selecting the topics/themes and issues to be examined and deciding on the most appropriate methods of investigating them. The process of identifying factors and methods has also to be balanced with time and resource considerations.

The M&E plan is a working document and will be revised periodically. It may be modified as the project progresses if important changes take place in the project work plan or timing.



## 2. OBJECTIVES OF THE MONITORING AND EVALUATION

The M&E of the COLUMBUS project will provide insight as to:

- how well the project is progressing towards the foreseen objectives (midterm review)
- how far the project has achieved the foreseen objectives and goals (final evaluation).
- what have been the major outcomes and impacts of the project (final evaluation)
- what have been (if any) the major drawbacks in achieving the planned objectives and goal (midterm review and final evaluation).

In order to be able to answer to these questions, the M&E plan will collect, analyse and interpret information and data about the project in order to identify achievements and areas of weakness.

The evaluation methodology will have both formative and summative evaluation features. Through formative evaluation, it will produce information that may assist to some extent the project management at midterm by identifying any unanticipated side effects that may be arising during the project implementation or difficulties in reaching the expected objectives. The final summative evaluation will try to provide information on the effectiveness of the project in terms of objectives and goal achievement, which are normally part of any summative evaluation.

**Scope of the evaluation** The evaluation covers the whole duration of the project – from 1st March of 2015 to 28<sup>th</sup> February 2018, and in principle it will have two specific moments when data will be collected and analysed: Month 17-18 (midterm of the project) and month 34-35 (end of the project).

The **KEY STAKEHOLDERS** of the M&E work will be the project management, the partners and members of the External Advisory Board as well as the European Commission, represented by the project officer. They will be both involved in the process and be the main end users of the results of the M&E work. A second level of stakeholders will be the marine/maritime European community (policy makers and industry, researchers, society), as the main beneficiaries of the project and most probably interested in the evaluation results. Important stakeholders are represented in the consortium.

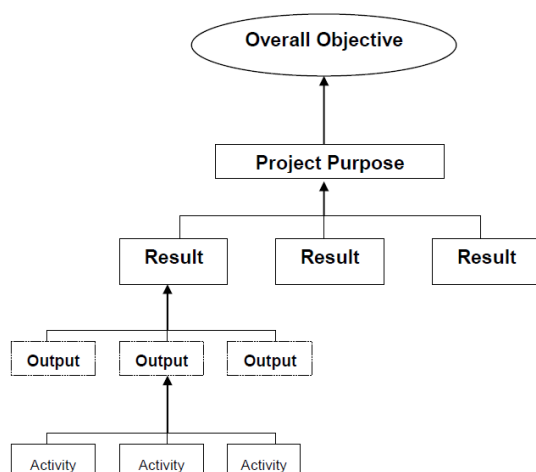
The main use of the results of the evaluation will be to inform internal and external stakeholders about the project achievements (what has been achieved and how) and to learn for the future, by documenting lessons learned (what has worked and what has not, and why).

## 3. THE COLUMBUS LOGIC MODEL

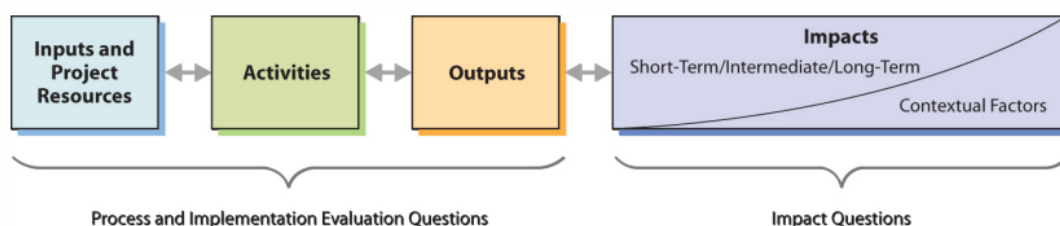
Based on the information of the project proposal (DoA), and following the *Logical Framework Approach* (logframe) methodology, we have prepared what is called a **Project Logic Model**. It presents a picture of how the project is supposed to work, what activities have been planned to produce results which in turn will have effects that may contribute to achieve the final project goal.



In the **Project logic model (Logframe)**, all project planning elements are organized following a hierarchical logic, as shown in the following figure:



The Project Logic Model describes the main elements of the COLUMBUS project and how these elements work together to reach the project goal. It graphically represents the logical progression and relationship of these elements and provides insights into what needs to be monitored and evaluated as the project is implemented.



To prepare the project Logframe we used the project Description of Action (DoA) proposal as included in the Grant Agreement, which main elements are:

**PROJECT TITLE: COLUMBUS** - Monitoring, Managing and Transferring Marine and Maritime Knowledge for Sustainable Blue Growth

#### **SPECIFIC CHALLENGE ADDRESSED**

Specific challenge BG-11-2014: *The EU has been funding a large number of marine and maritime R&I projects spread across different programmes. Recent efforts have been made to monitor and facilitate access to information on these projects or their results. However, key tangible outputs are not always known or exploited when they could be of use to marine and maritime stakeholders, scientists and policy makers.*

**PROJECT GOAL / OVERARCHING OBJECTIVE:** Ensure that applicable knowledge generated through EC-funded science and technology research can be transferred effectively to advance the governance of the marine and maritime sectors while improving competitiveness of



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European companies and unlocking the potential of the oceans to create future jobs and economic growth in Europe (Blue Growth).

#### The specific COLUMBUS objectives are:

1. To obtain a **comprehensive understanding of the knowledge gaps and priority knowledge requirements** to fulfil Blue Growth potential in Europe as well as supporting the implementation of MSFD and other relevant marine policies.
2. To **unlock the potential of past and current knowledge** from EC-funded research projects by using proven innovative methodologies to identify and collect “Knowledge Outputs”, including data.
3. To **analyse Research “Knowledge Outputs” in order to identify key promising results** with potential for application in order to create growth opportunities and social innovation.
4. To **maintain and develop the existing “Marine Knowledge Gate” as a monitoring and access tool** for Research Activity, containing all marine research projects and their respective Knowledge Outputs.
5. To **carry out targeted and customised Knowledge Transfer** activities that result in knowledge **being taken up and applied by various users** (industry, policy, scientific community and wider society).
6. Implement **impact measurement processes** to ensure that **COLUMBUS** has **case studies demonstrating tangible impact**.
7. **Operate a network of Competence Nodes** across Europe covering a wide scope of marine and maritime areas/sectors.
8. Enhance the **visibility and impact of marine/maritime research in society**
9. **Engage and exchange with other related initiatives**, including the JRC Marine Competence Centre and other FP7 and H2020 Initiatives, to ensure cooperation and sharing.
10. **Examine research system change** by working with member state funding agencies and academic networks to explore ways the research system could be **optimised to encourage and reward effective Knowledge Transfer**.
11. **Ensure a COLUMBUS project legacy** by ensuring that activities are sustainable beyond the funded duration of the project.

#### SHORT TERM IMPACTS (AS DESCRIBED IN THE DoA)

**IMPACT 1:** Identify and make available ready-to-use knowledge/results to advance the Blue Growth Agenda and/or support the implementation of the EU Marine Strategy Framework Directive and the revised Common Fisheries Policy

**IMPACT 2:** Demonstrate value creation from research results that are transferred during the project

**IMPACT 3:** Strengthen communication, dissemination and exploitation of knowledge/technological developments between marine and maritime stakeholders.

**IMPACT 4:** Enhance the visibility and impact of marine/maritime research in society

Presented in the following tables is the **logic model** prepared for the **COLUMBUS** project.



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### COLUMBUS LOGIC MODEL

<b>PROBLEM STATEMENT</b>	The EU has been funding a large number of marine and maritime R&I projects spread across different programmes. Recent efforts have been made to monitor and facilitate access to information on these projects or their results. However, key tangible outputs are not always known or exploited when they could be of use to marine and maritime stakeholders, scientists and policy makers.			
<b>PROJECT GOAL</b>	Ensure that applicable knowledge generated through EC-funded science and technology research can be transferred effectively to advance the governance of the marine and maritime sectors while improving competitiveness of European companies and unlocking the potential of the oceans to create future jobs and economic growth in Europe (Blue Growth).			
<b>BENEFICIARIES</b>	Marine and maritime policy makers and industry, researchers, society			
<b>INPUTS</b>	<b>ACTIVITIES (WPs)</b>	<b>OUTPUTS (Intermediate results)</b>	<b>OUTCOMES (final results)</b>	<b>IMPACTS</b>
EC Grant Partners knowledge and technical capacity In-kind contributions	<b>WP2: SUPPORT: methodology, process and capacity building</b> <b>Task 2.1</b> Set up the <b>Competence Node network (CNN)</b> <b>Task 2.2</b> Develop processes, methodologies and ToR for CNN <b>Task 2.3</b> Internal training <b>Task 2.4</b> External training	D2.1 reference guide for competence nodes D2.2 Guidelines for internal KT and Impact measurement D2.3 Report on capacity building	<b>An operative network of Competence Nodes</b> across Europe covering a wide scope of marine and maritime areas/sectors. (objective 7)	1) Advance the Blue Growth Agenda and/or support the implementation of the EU MSFD and the Revised CFP (common Fishery policy)
	<b>WP3: KNOWLEDGE DEMAND: knowledge needs, gaps and challenges</b> <b>Task 3.1</b> Establish an overview of key challenges, bottlenecks, gaps and needs related to B. Growth, MSFD and CFP <b>Task 3.2</b> Carry out a systems analysis of each focus area <b>Task 3.3</b> Compilation of findings	D3.1 Report on knowledge gaps and needs for each Focus area D3.2 Assignment of knowledge needs to CN D3.3 Mapping report D3.4 Compilation report	<b>A comprehensive understanding of the knowledge gaps and priority knowledge requirements</b> to fulfil Blue Growth potential in Europe as well as supporting the implementation of MSFD and other relevant marine policies. (objective 1)	2) Demonstrate value creation from research results that are transferred during the project  3) Strengthen communication, dissemination and exploitation of knowledge/technological developments between marine and
	<b>WP4: KNOWLEDGE SUPPLY : monitor, identify and collect</b> <b>Task 4.1</b> Identify potentially relevant research activity <b>Task 4.2</b> Identify potentially relevant	D 4.1 Inventory of relevant projects by priority focus area D 4.2 Inventory of relevant data/metadata D 4.3 Report on KO identification	<b>Greater visibility of past and current knowledge from EC-funded research projects</b> by using proven innovative methodologies to identify and collect “Knowledge Outputs”, including data.	



	<p>research data</p> <p><b>Task 4.3</b> Collect research knowledge</p> <p>Outputs</p> <p><b>Task 4.4</b> Monitor research activity</p> <p><b>Task 4.5</b> Identify Knowledge gaps per focus area</p>	<p>D 4.4. Upgrade marine knowledge gate</p> <p>D. 4.5 Knowledge gaps per focus area</p>	<p>(objective 2)</p> <p><b>Operative and updated “Marine Knowledge Gate” to be used as a monitoring and access tool</b> for Research Activity, containing all marine research projects and their respective Knowledge Outputs. (objective 4)</p>	<p>maritime stakeholders</p> <p>4) Enhance the visibility and impact of marine/maritime research in society</p>
	<p><b>WP 5: KNOWLEDGE ANALYSIS Position of outputs relevant to Blue Growth and MSFD implementation</b></p> <p><b>Task 5.1</b> Analysis of Knowledge outputs, identify those ready to transfer and provide feedback on unsuccessful Knowledge outputs</p> <p><b>Task 5.2</b> Generate a Knowledge Output Pathway (KOP)</p> <p>Task 5.3 Profile the target users of the knowledge outputs</p>	<p>D 5.1 Knowledge output analysis</p> <p>D 5.2 Progression of knowledge outputs to Knowledge Transfer</p> <p>D 5.3 Insights and experiences in profiling target users</p>	<p><b>Identification of key promising results with potential for application to Blue Growth and MSFD to create growth opportunities and social innovation.</b> (objective 3)</p>	
	<p><b>WP 6: KNOWLEDGE TRANSFER: Customised, tailor-made transfer of specific high potential knowledge outputs</b></p> <p><b>Task 6.1</b> Design of Knowledge transfer Plans</p> <p><b>Task 6.2</b> Carry out knowledge transfer plans</p> <p><b>Task 6.3</b> Performance and impact measurement</p>	<p>D 6.1 Portfolio of Knowledge Transfer Plans</p> <p>D 6.2 Case studies of Knowledge transfer Activities</p> <p>D 6.3 Report on key performance indicators for Knowledge transfer</p>	<p><b>Knowledge being taken up and applied by various users</b> (industry, policy, scientific community and wider society) as result of targeted and customised Knowledge Transfer activities (objective 5)</p> <p><b>Identification of case studies demonstrating tangible impact to Support the impact of the project</b> (Objective 6)</p>	

	<p><b>WP7 Communication, Engagement and knowledge transfer</b></p> <p><b>Task 7.1</b> Project Dissemination &amp; exploitation Plan</p> <p><b>Task 7.2</b> Communication support to Competence Nodes</p> <p><b>Task. 7.3</b> Columbus brokerage events</p> <p><b>Task 7.4</b> Annual Columbus Blue Society KY conference</p> <p><b>Task 7.5</b> Development of Blue Society awards</p> <p><b>Task 7.6</b> Promoting marine research towards a blue society (success stories)</p>	<p>D 7.1 Columbus dissemination and exploitation Plan</p> <p>D 7.2 Collection of Knowledge transfer case studies for promotion of marine science</p> <p>D 7.3 Brokerage events reports.</p> <p>D 7.4 Conference reports</p> <p>D 7.5 Blue Society awards rules</p> <p>D 7.6 report of marine research blue society activities</p>	<p><b>A greater visibility and impact of marine/maritime research in society (objective 8)</b></p> <p><b>Engagement and exchange with other related initiatives</b>, including the JRC Marine Competence Centre and other FP7 and H2020 Initiatives, to ensure cooperation and sharing. (Objective 9)</p>	
	<p><b>WP 8. The COLUMBUS Legacy</b></p> <p><b>Task 8.1</b> Review current metrics for research performance</p> <p><b>Task 8.2</b> Consult Research knowledge users to identify needs in KT</p> <p><b>8.3</b> Develop a pilot initiative where knowledge transfer systems are built into a funding agency</p> <p><b>Task 8.4</b> Set off an International High Level Working group to examine systems barriers to KT</p> <p><b>Task 8.5</b> Develop a Columbus Blue Society</p> <p><b>Task 8. 6</b> Develop a set of recommendations for funding agencies on how to incorporate KT as a priority component of research evaluation</p>	<p>D 8.1 Report on current evaluation of research performance</p> <p>D 8.2 Report on existing KT activities and end users point of view.</p> <p>D 8.3 Pilot initiative on KT in a funding agency</p> <p>D 8.4 Report of high level group findings</p> <p>D 8.5 Columbus Blue Society Knowledge Transfer Handbook</p> <p>D 8.6 Recommendations for European and national funding agencies</p>	<p>Optimised ways for the research system <b>to encourage and reward effective Knowledge Transfer (objective 10).</b></p> <p><b>A COLUMBUS project legacy (project sustainability)</b> (objective 11)</p>	



## 4. THE EVALUATION QUESTIONS

The M&E work will seek to provide enough evidence to be able to answer the following questions:

### MIDTERM EVALUATION (formative evaluation)

- How well the project is progressing towards the foreseen objectives
- To what extent are the project activities achieving the expected results and contributing towards the specific objectives?
- Have there been any major drawbacks or unexpected events that may hinder the achievement of expected objectives? identify any variances with respect to what had been planned;

### FINAL EVALUATION (summative evaluation)

- How far the project has achieved the foreseen objectives?
- What have been the major outcomes and impacts of the project?
- What have been (if any) the major drawbacks in achieving the planned objectives?
- Have there been any unintended (positive or negative) outcomes as results of the project?
- To what extent did the project contribute to the goal of ensuring and facilitating the transfer of knowledge generated through EC-funded science and technology research?
- What recommendations and lessons can be drawn for similar projects in the future?

## 5. THE COLUMBUS M&E FRAMEWORK

With the help of the project logframe, and taking into account the evaluation questions we need to answer, we have built the COLUMBUS M&E Framework. For each of the project elements that we will monitor and evaluate in order to assess progress and final achievements, we will define a set of Performance questions. These questions will help us define the indicators we will use and thus what information we need to determine whether the specific objectives of the project have been accomplished: who can provide the information, when we need to collect it and how.

A **project indicator** can be defined as the specific information that provides evidence about the achievement of planned activities and results. We will use both quantitative and qualitative indicators, complement with description analysis. Several indicators may be required to assess whether a result has been achieved.

As we have seen in the project logframe, the project activities planned will produce a set of intermediate results (deliverables and actions carried out) that will be needed to achieve the project specific objectives (final project results). We will focus the M&E process on collecting information that will help us assess the progress and the final achievement of the specific project objectives, and through the monitoring of activities and intermediate results. This assessment will also facilitate the final project evaluation, which will provide insights as to whether the project has contributed to the expected impacts and how.



## THE COLUMBUS M&E MATRIX

The M&E Matrix is a useful tool for guiding the M&E process, compiling in an easy to follow way the focus of the evaluation, what data and information is needed to address the performance questions, when the data collection will take place and how.

Nº 1. TO OBTAIN A COMPREHENSIVE UNDERSTANDING OF THE KNOWLEDGE GAPS AND PRIORITY KNOWLEDGE REQUIREMENTS TO FULFIL BLUE GROWTH POTENTIAL IN EUROPE, AS WELL AS SUPPORTING THE IMPLEMENTATION OF MSFD AND OTHER RELEVANT MARINE POLICIES.			
SPECIFIC OBJECTIVE			
PERFORMANCE QUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHOD AND TIMING
Have priority knowledge demands been identified and discussed with major stakeholders for each of the focus areas? Have gaps and bottlenecks related to the knowledge gaps been? Can these be overcome or reduced based on results from EU funded projects (Knowledge Outputs)?	Gaps and bottlenecks identified for each of the 4 focus areas (MSFD, CFP, BGA RSBS) Type of gaps and bottlenecks identified Number and type of priority research/knowledge needs, challenges and priorities identified for each focus area. Difficulties in identifying gaps /bottlenecks Number of meetings with stakeholders carried out to validate and the results.	Project documents and reports (deliverables) Coordinator and WP 3 leaders	Coordinator's survey (midterm) Semi-structured Interview with WP3 leader (M12) External Advisory Board (midterm)
2. TO UNLOCK THE POTENTIAL OF PAST AND CURRENT KNOWLEDGE FROM EC-FUNDED RESEARCH PROJECTS BY USING PROVEN INNOVATIVE METHODOLOGIES TO IDENTIFY AND COLLECT "KNOWLEDGE OUTPUTS", INCLUDING DATA.			
SPECIFIC OBJECTIVE			
PERFORMANCE QUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHOD AND TIMING
How many projects have been identified and analysed? Has it been possible to identify and collect Knowledge Outputs (Kos) from EU funded research projects?	% of projects identified which have produced any significant KO (including data) Nº of KOs collected per node for each category Types of KOs collected Number of KOs matching identified gaps per	Project documents and reports (deliverables) Coordination team , WP4 leader Competence Nodes.	Coordinators survey (middle term and final) Competence Node survey (middle term, around M18)

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How many Knowledge Outputs have been identified and collected by each node? What types of KOs have been collected? Have there been major problems in identifying projects and collecting KOs? Is the methodology used successful for identifying KOs? Do the KOs collected match the gaps identified in WP3?	focus area. Problems in identifying projects and collecting KOs		Semi-structured Interview with WP4 leader (M18)
<b>SPECIFIC OBJECTIVE</b>	<b>3. TO ANALYSE RESEARCH “KNOWLEDGE OUTPUTS” IN ORDER TO IDENTIFY KEY PROMISING RESULTS WITH POTENTIAL FOR APPLICATION IN ORDER TO CREATE GROWTH OPPORTUNITIES AND SOCIAL INNOVATION.</b>		
<b>PERFORMANCE QUESTIONS</b>	<b>INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>DATA COLLECTION METHOD AND TIMING</b>
What is the potential value of the KOs collected to address the gaps in Blue Growth agenda and other relevant marine and maritime EU policies? Have KOs identified and selected been discussed with External Advisory Board (EAB) and experts? Have potential end/target users been identified and contacted? Have any problems/difficulties arisen for identifying/contacting target users? How many key promising results have been identified? What is the overall Quality of the KOs collected? What is the overall potential value of research results to create growth opportunities and	Nº of KOs identified for each category: ready to use, requiring further research and scale per NODE. Type of promising KOs identified (to be transferred in WP6) % of KOs selected as potentially valid to transfer. Potential value of the selected KOs to create growth opportunities and social innovation. Number of Knowledge Output Pathways (KOP) generated by each Competence Node Difficulties in preparing KOP and identifying target users. Number of meetings with EAB to discuss and analyze results	Project documents and reports (deliverables) Coordination team , WP5 leader Competence Nodes. External Advisory Board	Coordinators survey (middle term and final) Competence node survey (final) Semi-structured Interview with WP5 leader (M28) External Advisory survey (final)



social innovation?			
<b>SPECIFIC OBJECTIVE</b>	<b>4. TO MAINTAIN AND DEVELOP THE EXISTING “MARINE KNOWLEDGE GATE” AS A MONITORING AND ACCESS TOOL FOR RESEARCH ACTIVITY, CONTAINING ALL MARINE RESEARCH PROJECTS AND THEIR RESPECTIVE KNOWLEDGE OUTPUTS.</b>		
<b>PERFORMANCE QUESTIONS</b>	<b>INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>DATA COLLECTION METHOD AND TIMING</b>
How far has the Marine Knowledge Gate being updated from results of the COLUMBUS project work ?	Nº of new records added to the database (projects and KOs). Type of records added (baseline value: how many records at the beginning of the project. <a href="#">4384 projects and 1803 KOs</a> )	Project documents and reports (deliverables) WP4 leader (EuroOcean)	Semi-structured Interview with WP4 leader (M35)
<b>SPECIFIC OBJECTIVE</b>	<b>5. TO CARRY OUT TARGETED AND CUSTOMISED KNOWLEDGE TRANSFER ACTIVITIES THAT RESULT IN KNOWLEDGE BEING TAKEN UP AND APPLIED BY VARIOUS USERS (INDUSTRY, POLICY, SCIENTIFIC COMMUNITY AND WIDER SOCIETY).</b>		
<b>PERFORMANCE QUESTIONS</b>	<b>INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>DATA COLLECTION METHOD AND TIMING</b>
How many Knowledge Transfer (KT) Plans have been developed? How many KT Activities have been set up? What is a successful KT? How many successful KT activities have been achieved? What are the difficulties to carry out successful KT? What areas have been more successful in transferring knowledge? How successful have KT activities being from the point of view of the project coordination	Nº of Knowledge Plans (KP) developed per competence node Nº of KP implemented Nº of KT activities attended Nº of target and customised Transfer activities planned and implemented per competence node Criteria for successful KT established % of successful KT activities performed per competence node. Nº KT activities carried out per type of user Degree of success achieved in KT activities (per	Project documents and reports (deliverables) WP6 leader (MSE) WP7 leader Competence Nodes External Advisory Board Stakeholders Blue Growth Knowledge Transfer Annual Workshops	Competence node survey (final) Strategic and Operational Leader' survey (final) Stakeholders' survey (end of project) Semi-structured Interview with WP 6 and 7 leaders - MSE and Nausicaa (M32-34)

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team, the competence nodes, the External Advisors and main stakeholders?	node, total) Difficulties identified in KT activities.		
<b>SPECIFIC OBJECTIVE</b>	<b>6. IMPLEMENT IMPACT MEASUREMENT PROCESSES TO ENSURE THAT COLUMBUS HAS CASE STUDIES DEMONSTRATING TANGIBLE IMPACT.</b>		
<b>PERFORMANCE QUESTIONS</b>	<b>INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>DATA COLLECTION METHOD AND TIMING</b>
To what extent have Impact measurement processes being implemented? Have cases studies demonstrating tangible impact being identified as results of the project? Have case studies being disseminated?	Impact measurement processes implemented and type Difficulties in implementing Impact measurement process Number of case studies identified Nº of Cases Studies demonstrating impact	Project documents and reports (deliverables) WP 6 and 7 leader Coordination team and Competence Nodes Blue Growth Knowledge Transfer Annual Workshops	Strategic and Operational Leader's survey (final) Competence Nodes survey (final) Semi-structured Interview with WP7 leader (Nausicaa) (M34)
<b>SPECIFIC OBJECTIVE</b>	<b>Nº 7: OPERATE A NETWORK OF COMPETENCE NODES ACROSS EUROPE COVERING A WIDE SCOPE OF MARINE AND MARITIME AREAS/SECTORS.</b>		
<b>PERFORMANCE QUESTIONS</b>	<b>INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>DATA COLLECTION METHOD AND TIMING</b>
Have all 9 nodes been set up on time? Are all important focus areas covered? Are the node fellows well trained on the methodology? Is the node network operative and capable of implementing the COLUMBUS methodology? Have there been any major problems in setting up the nodes? Have nodes encountered difficulties in implementing the methodology?	Number of nodes operating Number of areas covered by each node Number of training sessions carried out per node Number of KT actions carried out by each node Node operability to implement methodology Major drawbacks in setting up the nodes Visibility of nodes' activity to stakeholders	Project documents and reports (deliverables) Competence nodes Coordination team WP leader (AquaTT) External Advisory Board Stakeholders	Strategic and Operational Leader's survey (midterm and final) Competences' Node survey (midterm and final) External Advisory survey (final) Stakeholders' survey (end of project)



8. ENHANCE THE VISIBILITY AND IMPACT OF MARINE/MARITIME RESEARCH IN SOCIETY			
SPECIFIC OBJECTIVE			
PERFORMANCE QUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHOD AND TIMING
<p>How many activities to promote marine/maritime research to society have taken place throughout the project?</p> <p>How many success stories have been promoted?</p> <p>How successful has been COLUMBUS in promoting marine/maritime research in society?</p> <p>What does society know about marine/maritime research after participating in COLUMBUS activities?</p> <p>How far has the project being successful in engaging with societal actor and promoting marine/maritime research (OUTREACH TO SOCIETY )</p>	<p>Nº of activities attended to promote marine/maritime research in society</p> <p>Nº of events organized by the project to promote marine research to society</p> <p>Nº of success stories disseminated to society</p> <p>Nº of actions engaging societal actors.</p> <p>Number and type of attendees to the different project events.</p>	<p>Project documents and reports (deliverables)</p> <p>Coordination team</p> <p>WP7 leader (Nausicaa)</p> <p>External Experts</p>	<p>Strategic and Operational Leader's survey (midterm and final)</p> <p>Semi-structured Interview with WP7 leader (m18 and M35-36)</p> <p>External A Board survey (final)</p>
9. ENGAGE AND EXCHANGE WITH OTHER RELATED INITIATIVES, INCLUDING THE JRC MARINE COMPETENCE CENTRE AND OTHER FP7 AND H2020 INITIATIVES, TO ENSURE COOPERATION AND SHARING			
SPECIFIC OBJECTIVE			
PERFORMANCE QUESTIONS	INDICATORS	SOURCES OF INFORMATION	DATA COLLECTION METHOD AND TIMING
<p>With how many other related EU initiatives has the project engaged? when? how?</p> <p>What type of engagement has been set up?</p>	<p>Nº of related initiatives identified</p> <p>Nº of related initiatives with which engagement and exchange has been achieved</p> <p>Type of engagement achieved</p>	<p>Project documents and reports (deliverables)</p> <p>Coordinator</p> <p>WP7 leader (Nausicaa)</p>	<p>Strategic and Operational Leader's survey (midterm and final)</p> <p>Semi-structured interview with WP7</p>

			leader (M18 and M35-36)
<b>SPECIFIC OBJECTIVE</b>	<b>10. EXAMINE RESEARCH SYSTEM CHANGE BY WORKING WITH MEMBER STATE FUNDING AGENCIES AND ACADEMIC NETWORKS TO EXPLORE WAYS THE RESEARCH SYSTEM COULD BE OPTIMISED TO ENCOURAGE AND REWARD EFFECTIVE KNOWLEDGE TRANSFER.</b>		
<b>PERFORMANCE QUESTIONS</b>	<b>INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>DATA COLLECTION METHOD AND TIMING</b>
With how many member state funding agencies has the project engaged? What type of engagement? With how many /type of academic networks? How has the project worked towards actively promoting new ways to fund research, based on the results and findings coming out from COLUMBUS? Has the project translated findings and recommendations to funding agencies? How far has the project being successful in advancing new ways of promoting and encouraging KT?	Nº of funding agencies that have participated in the study. Nº of academic networks contacted and engaged Degree of success from the Pilot Initiative (VLIZ p10) Nº of actions taken to transfer the results of the work to funding agencies and related stakeholders Main results of the activities to encourage and rewards effective KT by funding agencies	Project documents and reports (deliverables) Coordination team  External Advisory Board	Strategic and Operational Leader's survey (with input from WP8 leader) (midterm and final)  Stakeholder short survey (final)
<b>SPECIFIC OBJECTIVE</b>	<b>11. ENSURE A COLUMBUS PROJECT LEGACY BY ENSURING THAT ACTIVITIES ARE SUSTAINABLE BEYOND THE FUNDED DURATION OF THE PROJECT.</b>		
<b>PERFORMANCE QUESTIONS</b>	<b>INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>DATA COLLECTION METHOD AND TIMING</b>
What actions have been taken to ensure the sustainability of COLUMBUS results? Have these actions been successful? How will the legacy of the project be achieved?	List of actions taken to ensure project legacy Major results of activities carried out	Project documents and reports (deliverables) Coordinator and WP 8 Leader (AquaTT) External Advisory Group	Semi-structured Interview with Wp8 leader (M34-35) Stakeholder short survey (final)

What has the project left for improving future technology transfer practices of EU funded research results?			External Advisory Board short Survey (Final)
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## 6. M&E FRAMEWORK IMPLEMENTATION

### PROVISIONAL SCHEDULE FOR DATA COLLECTION AND REPORTING

In accordance with the initial project work plan and timing, and as a way to maximize resources and take advantage of project meetings for data collection (including interviews with work package leaders and short survey to stakeholders and members of the External Advisory Board), an initial schedule for data collection and reporting has been prepared.

PLANNED PROJECT ACTIVITY	TIMING (provisional)	M&E ACTION	RESULTS
KICK OFF MEETING	M2	Presentation of the M&E plan and agreement on the M&R framework	<b>M&amp;E plan (D1.4)</b>
PROJECT ANNUAL MEETING	M12	Interview with WP3 leader	
PARTNER MEETING	M18	Strategic and Operational Leader's survey Competence Node survey Interview with WP4 leader Interview with WP7 leader Analysis of project documents and reports	<b>Presentation of findings from midterm review.</b> <b>MIDTERM-REVIEW</b> (internal report)
	M18	External AB survey	
PARTNER MEETING	M28	Interview with WP5 leader	
PARTNER MEETING EXTERNAL ADVISORY BOARD MEETING	M 34-35	Strategic and Operational Leader's survey Competence Node survey External AB survey Interview with WP4 leader Interview with WP6 and WP7 Interview with WP8	
ANNUAL EVENT	M-24/M34	Stakeholders short survey(?)	
PARTNER MEETING EXTERNAL ADVISORY BOARD MEETING	M-35-36	Self evaluation/opinion survey to partners and Adv. Board Analysis of project documents and reports	<b>FINAL EVALUATION - report</b> (Monitoring report D1.4)

### MID-TERM REVIEW (Formative evaluation) (M18-20)

**The Mid-term review** is an internal preliminary evaluation performed towards the middle of the period of implementation of the project, whose principal goal is to measure progress, based on the data captured by the surveys and analysis of project documents and activities carried out.

Based on the information available, results of the WPs and the M&E activities carried out, we will seek to give some suggestions as to:

- How well the project is progressing towards the foreseen objectives.
- What have been (if any) the major drawbacks in achieving the planned objectives
- What activities have been successful and why

### FINAL PROJECT EVALUATION (summative evaluation) (M34-36)

A final evaluation report will be prepared, summarizing all the M&E activities carried out and reporting on the project achievements.

Based on all the information available (project reports, documents and minutes) and data collected (surveys) and observation of project activities, we will inform on:

- how far the project has achieved the foreseen objectives and goals.
- what have been the major outcomes and impacts of the project.
- what have been (if any) the major drawbacks in achieving the planned objectives and goal.
- Was the project methodology suitable and efficient to achieve the proposed objectives and goal?

The report will also include recommendations for future actions related to the capture and transfer of Knowledge generated from EU funded research, based on the project actions and the final results achieved.