



WP10. Quality Assurance

QUALITY ASSURANCE & EVALUATION PLAN

September 2021

Document Properties

Project full title & acronym:	Developing Curricula for Artificial Intelligence and Robotics - DeCAIR
WP No & Title	WP10 - Quality Assurance
Task	WP10.1 - Form quality assurance and evaluation plan for the project
Responsible partner for deliverable:	CreThiDev
Contributing partners:	UJ, JUST, TTU, LU, BAU, UNIGE, UGR
Author(s):	Sofia Papakonstantinou
Distribution level:	Internal
Total number of pages:	27

Revision History

Version	Date	Description	Action	Page(s)
1	15/09/2021	Original (base) document	C	26
2	08/03/2022	Correction of Prof. Joumana Farah email address	U	14
		Addition of Pilot Evaluation Survey in chapter 8	U	23

(*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

Disclaimer

This project has been co-funded by the Erasmus+ Programme of the European Union.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Copyright © DeCAIR Consortium, 2021-2024

You are free to share, copy and redistribute the material in any medium or format, as well as adapt, transform, and build upon the material for any purpose, even commercially, provided that you give appropriate credit to the project and the partnership, and indicate if any changes were made. You may do so in any reasonable manner, but not in any way that suggests the partnership, or the European Commission endorses you or your use. You may not apply legal terms or technological measures that legally restrict others from using the material in the same manner that you did.

Contents

1	Introduction.....	6
2	Purpose of this document	6
3	Description of the project	7
3.1	Partners	8
3.2	Duration - Work Packages	8
4	Quality Objectives	11
5	Roles and Responsibilities	11
6	The Quality Management Process.....	14
7	Quality Assurance.....	15
7.1	Project Performance Indicators.....	15
7.2	Project Performance Reviews	15
7.2.1	Internal Project Evaluation	16
7.2.2	Quality of Dissemination Activities.....	16
8	Quality Control	18
8.1	Deliverables Acceptance Indicators and Metrics	18
8.2	Quality Control Reviews	21
8.3	Deliverables Evaluation & Acceptance process.....	21
8.3.1	Partnership Meetings	22
8.3.2	Reports, studies, documents, syllabus	22
8.3.3	Trainings	23
8.3.4	Assessment of two M.Sc. course that utilizes modern teaching methods	23
8.3.5	Dissemination Events	23
9	External Auditor Quality Review	24
10	Quality Reports & Quality Review Meetings.....	24
11	Documentation produced by the partnership	25
11.1	Document Storage, Accessibility and Exchange	25
11.2	Document Format	25
12	Conflict Resolution	26

13	Risk Management.....	26
14	Annexes	27

Tables

Table 1. DeCAIR Consortium	8
Table 2. Work Packages & Subtasks	8
Table 3. Roles and Responsibilities.....	12
Table 4. Members of the Quality Committee.....	14
Table 5. Project Performance Indicators	15
Table 6. Quantitative Dissemination Indicators	17
Table 7. Qualitative Dissemination Indicators.....	18
Table 8. Deliverable Acceptance Criteria, Metrics, Responsibilities	18

Abbreviations and Acronyms

QAEP	Quality Assurance & Evaluation Plan
PStC	Project Steering Committee
PC	Project Coordinator
QC	Quality Committee
QM	Quality Manager
WP	Work Package
WPL	Work Package Leader

1 Introduction

Project Quality Assurance aims to ensure that the current project will meet the expected results in the most efficient way and that deliverables will be reviewed and accepted by the relevant stakeholders. It involves overseeing all activities needed to maintain a desired level of excellence.

This is a priority for all Erasmus+ projects, and for the Capacity Building Projects for Higher Education, specifically, such as the DeCAIR project, its importance is reflected on the fact that a separate Work Package is dedicated to project Quality Assurance. This includes creating and implementing quality planning and assurance, as well as quality control and quality improvement. For these purposes, as a first step towards project Quality Assurance, a Quality Assurance & Evaluation Plan (QAEP) is developed.

The main purpose of the QAEP is to facilitate the project's management and guide all partners on the evaluation and quality issues, by establishing a coherent set of guidelines by which all aspects of the project are managed and measured. It will be the use of these guidelines that will ensure better collaboration among the consortium members, individuals and groups, and will also ensure that the entire consortium is responsible for and engaged in the work that is produced by the project.

2 Purpose of this document

This document is for internal use by the project team and will act as a guide for the internal quality management of the project.

The objectives of the Quality Assurance and Evaluation Plan are:

- To outline the quality strategy, approach and process to be used for the project;
- To identify the roles and responsibilities related to project quality management;
- To identify the major project management results and deliverables;
- To define the quality assurance and control activities and to plan them throughout the project;
- To support the agreement on project quality requirements and metrics, and the method to evaluate them;
- To specify the methodology, standards, tools and techniques used to support quality management.

3 Description of the project

The main aim of the DeCAIR project which is co-funded by the Erasmus+ Capacity Building for Higher Education programme, is to improve existing programs in the areas of AIR and establish new AIR MSc and BSc programs. This will lead to graduating students able to meet the rising labour market demands for experts who can use AIR technologies to develop products and solve various problems facing modern societies. With the help of leading European partners, DeCAIR will give the partner universities opportunities to improve capacities in AIR and learn and adopt best practices to offer AIR courses and programs.

DeCAIR addresses the following two priorities:

1. Engineering and engineering trades (electronics and automation)
2. Information and Communication Technologies (software and applications development and analysis)

The first priority is national priority in both Jordan and Lebanon. The second priority is a regional priority for the South Mediterranean countries.

Hence, DeCAIR aims at achieving the following specific objectives:

- SO1. Qualifying experts in the fields of Artificial Intelligence and Robotics (AIR) who can conduct research and solve problems by utilizing the technologies of AIR through the establishment of new master's and bachelor programs.
- SO2. Building and improving the teaching capacity in AIR at the partner universities of the Partner Countries.
- SO3. Improving the AIR capabilities of graduates from existing bachelor and master's programs in computer, mechatronics, electrical, and mechanical engineering in the areas of AIR.
- SO4. Improving the practical skills of university graduates in the areas of AIR by establishing and developing modern AIR laboratories.
- SO5. Building networks of highly qualified professionals in the areas of AIR among South Mediterranean and European countries.
- SO6. Improving collaboration with the local, regional and European industry and community for applying AIR technologies in solving industry and community problems.
- SO7. Disseminating and implementing modern teaching methods such as flipped learning and project based learning in the developed master programme.

3.1 Partners

The DeCAIR partnership is comprised by a total of 10 partners.

Table 1. DeCAIR Consortium

No	Partner name	Short name	Country	Type
P1	The University of Jordan	UJ	Jordan	Partner Countries
P2	Jordan University of Science and Technology	JUST	Jordan	
P3	Tafila Technical University	TTU	Jordan	
P4	Lebanese University	LU	Lebanon	
P5	Beirut Arab University	BAU	Lebanon	
P6	University of Pisa	UNIPI	Italy	Program Countries
P7	University of Genoa	UNIGE	Italy	
P8	University of Granada	UGR	Spain	
P9	University of Stuttgart	UST	Germany	
P10	Creative Thinking Development	CreThiDev	Greece	

3.2 Duration - Work Packages

The work-plan spans over 36 months (15/01/2021 - 14/01/2024) and foresees the implementation of 13 Work Packages. Each Work Package consists of several tasks and deliverables:

Table 2. Work Packages & Subtasks

WP1	Surveys and Needs Identification
1.1	Identifications of needs for AI and Robotics expertise and professionals in Jordan and Lebanon
1.2	Survey and evaluation of similar AI and robotics master programs
1.3	Survey and evaluation of AI and Robotics courses in similar bachelor programs
1.4	Survey of training needs
1.5	Survey of facilities and equipment
1.6	Surveys report
WP2	Development of new MSc and BSc programs in AI and Robotics

2.1	Defining the structure of the new master and bachelor programs in terms of curricula based on the surveys' results
2.2	Designing and developing syllabi and content for the agreed upon courses in the new programs
2.3	Securing approval for the new programs at the institutional and national levels in Jordan
WP3	Implementing the new MSc Program in UJ
3.1	Advertising and marketing the new master program in Jordan
3.2	Activating the new master program by admitting students and starting the teaching and supervising processes
WP4	Implementing the new BSc program in TTU
4.1	Advertising and marketing the new bachelor program in Jordan
4.2	Activating the new bachelor program by admitting students and starting the teaching and supervising processes
WP5	Improving existing MSc programs in Jordan and Lebanon by implementing or including AI and Robotics courses
5.1	Developing syllabi and content for added/modified courses in existing master programs in universities of partner countries.
5.2	Approval for the modified or added courses to existing master programs from the governing university boards
5.3	Implementing improved/new courses in universities of Partner Countries by scheduling and offering the courses for enrolment
WP6	Improving Existing B.Sc. Programs in Jordan and Lebanon by Implementing or Including AI and Robotics Courses
6.1	Developing syllabi and content for added/modified courses in existing bachelor programs in universities of partner countries.
6.2	Approval for the modified or added courses to existing bachelor programs from the governing university boards
6.3	Implementing improved/new courses in universities of Partner Countries by scheduling and offering the courses for enrolment
WP7	Building capacity in AI and robotics in universities of Partner Countries
7.1	Organizing short training courses in the partner universities of the Program Countries
7.2	Organizing training courses in Jordan and Lebanon by European trainers from the partner universities of the Program Countries
WP8	Establishing AI and Robotics laboratories in universities of Partner Countries
8.1	Preparation of the laboratories equipment specifications and lab requirements
8.2	Purchase and delivery of the laboratories equipment
8.3	Installation of the purchased equipment by a trained engineers who will receive proper training in advance related to the setup, operation and maintenance of the lab equipment

8.4	Design of the lab manuals that includes the experiment that will be conducted by the students enrolled in the labs
WP9	Implementing modern teaching methods in the M.Sc. programs
9.1	Raising team awareness of available modern teaching methods
9.2	Implementing two pilot M.Sc. course that utilizes modern teaching methods
WP10	Quality Assurance
10.1	Form quality assurance and evaluation plan for the project
10.2	Developing selection Criteria for master students who will be enrolled in the new masters program
10.3	National accreditation of the new programs and approval of the new/modified courses for existing programs by the relevant boards
10.4	Monitoring program progress and evaluation of individual courses
10.5	External Evaluation
10.6	Final evaluation report of the project at end of the third year
WP11	Collaboration with industry and community
11.1	Organizing awareness workshops in Jordan and Lebanon in AI and Robotics
11.2	Organizing meetings to streamline problem identification and solution among industry and academia
WP12	Results Dissemination
12.1	Building a website for publishing the project activities results
12.2	Organizing workshops in Jordan to announce the new programs
12.3	Organizing workshops in Jordan and Lebanon to announce the improved graduate and undergraduate programs
12.4	Produce brochure and handbook for the new master and bachelor programs
WP13	Management
13.1	Organising the Kick-off meeting
13.2	Form the project Steering Committee
13.3	Holding monthly meetings
13.4	External financial auditing

4 Quality Objectives

The main project quality objectives are:

- The project's quality characteristics are defined, agreed and achieved throughout the project;
- Quality assurance activities are performed as planned;
- Any non-conformity (or opportunity for quality improvements) is identified and implemented;
- Deliverables are accepted by the relevant stakeholders based on the defined quality/acceptance criteria.

5 Roles and Responsibilities

The structure of the project management is depicted in the following chart:

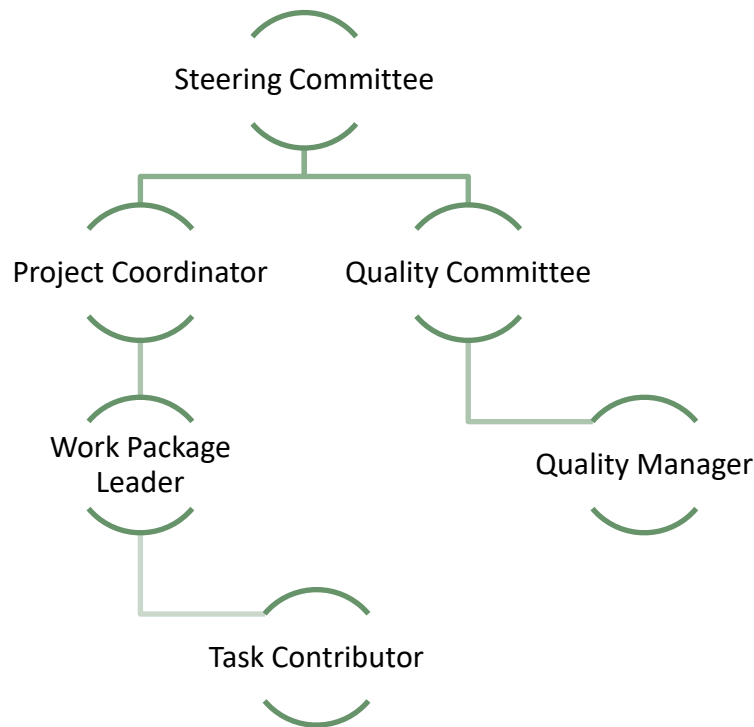


Table 3. Roles and Responsibilities

Roles	Responsibilities	Relevant Partners
Project Coordinator	<p><i>Manages the project on a daily basis and is responsible for the qualitative delivery of results within the imposed constraints (time, budget).</i></p> <p><i>Chairs the Project Steering Committee (PStC).</i></p> <p><i>Monitors project progress regularly.</i></p> <p><i>Coordinates the Project activities.</i></p> <p><i>Ensures that project scope is realised within the quality, time, and cost constraints, taking preventive or corrective measures where necessary.</i></p> <p><i>Reports project outcome and financial progress to the Project Steering Committee (PStC) and the EACEA.</i></p> <p><i>Performs risk management for project related risks.</i></p> <p><i>Coordinates the resolution of issues and conflicts.</i></p> <p><i>Escalates unresolvable project issues to the Project Steering Committee (PStC)</i></p>	P1-UJ
The Project Steering Committee (PStC)	<p><i>The PStC is the project operational decision-making and arbitration body, which will implement the provisions of the Grant Agreement.</i></p>	All partners' representatives
The Quality Committee (QC)	<p><i>The QC will be composed by eight representatives and will supervise the quality assurance activities of the whole project.</i></p> <p><i>The project quality approval body, which will implement the provisions of the Quality Assurance & Evaluation Plan; i.e. to ensure that the project outcomes meet the defined objectives and expectations and to assess on an ongoing basis project relevance, efficiency and impact.</i></p> <p><i>The QC will design a proper evaluation process and be responsible for creating a set of indicators.</i></p> <p><i>The Approving Authority of all deliverables evaluations.</i></p>	P1-UJ P2-JUST P3-TTU P4-LU P5-BAU P7-UNIGE P8-UGR P10-CreThiDev

Roles	Responsibilities	Relevant Partners
The Quality Manager (QM)	<p><i>Chairs the Quality Committee</i></p> <p><i>Responsible for scheduling, monitoring and controlling the quality of the project.</i></p> <p><i>The QM will monitor the project at different points using different types of evaluation practices and tools, such as questionnaires, interview grids and check-lists, devised to assess on an ongoing basis project relevance, efficiency and impact, to measure progress throughout its life cycle, to determine if the project responds to main target groups' needs, to measure the level of satisfaction of beneficiaries of project activities, and to evaluate unexpected results and control all processes.</i></p>	P10-CreThiDev
Work Package Leader (WPL)	<p><i>Responsible for the delivery of the results of a Work Package, within the pre-defined timeframe and quality expectations.</i></p> <p><i>The WPLs report to the Project Coordinator. The Work Package Leader is, in the first instance, the person who will be contacted by the Project Coordinator as part of the monitoring of progress towards completion of the deliverables and of the assigned Work Package.</i></p>	WP1: P2-JUST WP2: P7-UNIGE WP3: P1-UJ WP4: P3-TTU WP5: P9-UST WP6: P8-UGR WP7: P6-UNIFI WP8: P5-BAU WP9: P1-UJ WP10: P10-CreThiDev WP11: P4-LU WP12: P4-LU WP13: P1-UJ
Task Contributors	<p><i>Carries out the work defined in the Work Description, delivers the outcomes of his/her work to the Work Package Leader.</i></p> <p><i>Complies with quality standards and participates in quality control activities.</i></p>	All Partners

The Quality Committee, chaired by the Quality Manager (QM) is composed of representatives from the partners as follows:

Table 4. Members of the Quality Committee

No	Partner	Name of representative	email
P1	The University of Jordan (UJ)	Ramzi Saifan	r.saifan@ju.edu.jo
P2	Jordan Uni. Science & Tech. (JUST)	Ahmad Bataineh	ambataineh2@just.edu.jo
P3	Tafila Technical University (TTU)	Ahmad Al-Jaafreh	a.aljaafreh@ttu.edu.jo
P4	Lebanese University (LU)	Joumana Farah	joumanafarah@ul.edu.lb
P5	Beirut Arab University (BAU)	Adel Elkordi	a.elkordi@bau.edu.lb
P7	University of Genoa (UNIGE)	Stefano Rovetta	stefano.rovetta@unige.it
P8	University of Granada (UGR)	Salvador García	salvagl@decsai.ugr.es
P10	Creative Thinking Development (CreThiDev)	Sofia Papakonstantinou	spapakon@hotmail.com

6 The Quality Management Process

The project quality management process comprises all activities (related both to processes and deliverables) that will increase the ability to meet the project expected results identified in the Project Description.



7 Quality Assurance

Quality assurance is a structured review of the project outcomes and activities performed by the partnership, to assess how the project is using its internal processes to produce the results it will deliver to the target groups/beneficiaries.

7.1 Project Performance Indicators

The criteria for the evaluation of the Project Management performance are the following:

Table 5. Project Performance Indicators

Name	Target	Tolerance
Progress Reports made	<i>6-months</i>	<i>+ 1 month</i>
Internal Project Evaluation done	<i>Yearly</i>	<i>+ 1 month</i>
Internal Evaluation of project performance (satisfaction survey)	<i>>70% weighted average</i>	<i>No tolerance</i>
Dissemination and Communication Report delivered	<i>6-months</i> <i>(according to the quality dissemination indicators)</i>	<i>+ 1 month</i>
External Project Evaluation Report done	<i>Due date: 14 September 2022 and 14 December 2023</i>	<i>+ 1 month</i>

7.2 Project Performance Reviews

Project performance reviews will be carried out every 6 months in order to verify that all project plans and processes defined in the Project Description are executed as planned.

The yearly review will be done by the QC and will be used to assess the project's compliance with the planned activities (and related outputs) in terms of time, quality, project organization, dissemination and communication and stakeholder satisfaction, according to the Indicators set out.

The Project performance Review will be done by the Quality Committee and will use all available information collected through:

- Progress Reports
- Internal Project evaluation Surveys
- Dissemination and Communication Reports
- External Auditor reports

The findings, recommendations and remediation/improvement actions will be consolidated in the Quality Report and reported to the PStC.

7.2.1 Internal Project Evaluation

The efficiency of project management and the adequacy of the communication in the partnership will be evaluated once every year (at each year's end), i.e. 3 times. Standard questionnaires will be used (see [Internal Project Evaluation](#)).

The project performance questionnaire will be delivered to partners within 10 days after the end of the 1st and 2nd year and 1 calendar month before the end of the project. Partners must respond within 1 week after the uploading of the questionnaire.

The QM, within 10 days after the deadline of the surveys, will collect all the answers from the partners, perform a statistical analysis and integrate them into a report which will reflect the views of the consortium on its progress, including any suggestions for changes and improvements.

In case the QC, upon processing the results finds that one or more are below the expected performance, notifies the PC in order to set forth problem-solving procedures.

7.2.2 Quality of Dissemination Activities

The review of the performance of the dissemination activities will be done by the Dissemination WPL every 6 months, in Dissemination Reports. The conclusions of the Dissemination Reports will be integrated in the Project Performance Review.

The indicators that will be used for the evaluation of the effectiveness of the Dissemination and Communication activities will concern both quantitative and qualitative ones, as follows:

Table 6. Quantitative Dissemination Indicators

Quantitative indicators	Target	Tolerance
Number of newsletters issued	<i>Every 6 months (starting January 2022)</i>	<i>+1 month</i>
Social media accounts created	<i>Within 3 months from the start</i>	<i>No tolerance</i>
Number of posts on Social Media	<i>2 per month</i>	<i>±1</i>
Number of followers on Social Media (collective)	<i>500 followers</i>	<i>±50</i>
Project website created	<i>Within 2 months from the start</i>	<i>No tolerance</i>
Visitors' metrics	<i>To be collected</i>	
Number of Hits in the project website	<i>To be collected</i>	
Workshops organised	<i>9 workshops (6 in JO & 3 in LB)</i>	<i>No tolerance</i>
Number of people participating in Workshop	<i>25-40 participants per workshop</i>	<i>±10</i>
Number of non-project events participation and presentation of the project	<i>> 1 per partner in JO & LB</i>	<i>No tolerance</i>
Production and circulation of printed materials	<i>1.000 printed brochures per partner country</i>	<i>No tolerance</i>
Media coverage (articles in specialised press newsletters, press releases, interviews, etc.)	<i>>5 per partner country</i>	<i>No tolerance</i>
Posts about the project on various internet websites and Social Media pages	<i>>5 per partner country</i>	<i>No tolerance</i>
Meetings with stakeholders (target audience) beyond the scheduled networking activities	<i>>1 in each partner country</i>	<i>No tolerance</i>

Table 7. Qualitative Dissemination Indicators

Indicators	Target	Tolerance
Feedback from the target groups in the dissemination workshop events	>70% <i>weighted average</i>	±5%
Feedback from the internal project evaluation regarding dissemination	>70% <i>weighted average</i>	±5%
Outcome of the contacts with stakeholders and policymakers in JO and LB (cooperation agreements, joint projects, etc)	<i>Positive outcome through the contacts made</i>	<i>No tolerance</i>

8 Quality Control

Quality control is the structured review of project results, deliverables, and activities in order to verify that they are produced within scope, according to the project objectives and appropriate for the target audiences. The Quality Control review is the process of verification of deliverables/project activities compliance with the acceptance criteria.

8.1 Deliverables Acceptance Indicators and Metrics

The evaluation of the Deliverables will be done according to the acceptance criteria for deliverables as following:

Table 8. Deliverable Acceptance Criteria, Metrics, Responsibilities

#	Deliverable Name	Category	Criterion	Metric and Tolerances	Responsibilities	Method
D1.6	Concluding Report on Surveying and Identifying the Needs for AI and Robotics in Jordan and Lebanon	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Deliverable Evaluation Form</i>
D2.1	Structure of the new master and bachelor programs	<i>Event</i>	<i>Participant Satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Participants</i>	<i>Event Evaluation Form</i>

#	Deliverable Name	Category	Criterion	Metric and Tolerances	Responsibilities	Method
D2.2	Report on the new developed syllabi and content of the courses in the new programs	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Syllabus Evaluation Form</i>
D5.1	Report on the syllabi and content for added/modified courses in existing master programs	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Deliverable Evaluation Form</i>
D6.1	Report on the syllabi and content for added/modified courses in existing bachelor programs	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Deliverable Evaluation Form</i>
D7.1	5 Intensive training courses delivered by EU experts partners on advanced topics in AIR.	<i>Training</i>	<i>Trainee satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Trainees</i>	<i>Training Evaluation Form</i>
D7.2	14 one week training courses delivered by EU experts partners on advanced topics in AIR.	<i>Training</i>	<i>Trainee satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Trainees</i>	<i>Training Evaluation Form</i>
D9.1	Raising team awareness workshops of available modern teaching methods in higher education	<i>Event</i>	<i>Participant Satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Participants</i>	<i>Event Evaluation Form</i>
D9.2	Two pilot M.Sc. course that utilizes modern teaching methods	<i>Course</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Participants</i>	<i>Pilot Assessment Form</i>
D9.2	Manual of good practices on the application of modern teaching methods	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Deliverable Evaluation Form</i>
D10.4	Monitoring program progress and evaluation of individual courses	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Deliverable Evaluation Form</i>

#	Deliverable Name	Category	Criterion	Metric and Tolerances	Responsibilities	Method
D11.1	2 Awareness workshops in AI and Robotics	<i>Event</i>	<i>Participant Satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Participants</i>	<i>Event Evaluation Form</i>
D11.1	Report on the main needs of industry, commerce and society, as well as the available expertise in AI and robotics.	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Deliverable Evaluation Form</i>
D11.2	Workshop to streamline problem identification and solution among industry and academia	<i>Event</i>	<i>Participant Satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Participants</i>	<i>Event Evaluation Form</i>
D11.2	Manual of good practices for M.Sc. program and a source for generating research ideas that identifies a clear set of steps and guidelines for approaching, communicating and suggesting solutions to stakeholders	<i>Document</i>	<i>Adherence to objectives, completeness, thoroughness</i>	<i>Internal: 100% of partners accept No Tolerance</i>	<i>Partners not involved in the task</i>	<i>Deliverable Evaluation Form</i>
D12.2	Workshops in Jordan to announce the new master and bachelor programs established	<i>Event</i>	<i>Participant Satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Participants</i>	<i>Event Evaluation Form</i>
D12.3	2 workshops in Jordan and Lebanon to announce the improved master and bachelor programs in Universities	<i>Event</i>	<i>Participant Satisfaction</i>	<i>External: >70% weighted average Tolerance: ±5%</i>	<i>Participants</i>	<i>Event Evaluation Form</i>
D13.1	DeCAIR Kick-off meeting	<i>Meeting</i>	<i>Participant Satisfaction</i>	<i>Internal: >70% weighted average Tolerance: ±5%</i>	<i>Participating partners</i>	<i>Meeting Evaluation Form</i>
D13.3	Steering Committee	<i>Meeting</i>	<i>Participant</i>	<i>Internal: >70%</i>	<i>Participating</i>	<i>Meeting Evaluation</i>

#	Deliverable Name	Category	Criterion	Metric and Tolerances	Responsibilities	Method
	meetings		<i>Satisfaction</i>	<i>weighted average</i> <i>Tolerance: ±5%</i>	<i>partners</i>	<i>Form</i>

8.2 Quality Control Reviews

Quality Control Reviews will be performed by the QM and the QC every 6 months in order to verify that all project plans and processes defined in the Project Description are executed as planned.

Every time a Quality Control Review is performed, the effectiveness of previous recommendations and remediation/improvement actions should be assessed.

The Quality Control Review will use all available information collected through:

- Progress Reports
- Partnership meeting Evaluation Surveys
- Deliverable Evaluation Surveys / Syllabus Evaluation Surveys
- Training Evaluation Surveys
- Pilot Evaluation Survey
- Dissemination Events evaluations
- External Auditor reports

For the facilitation of the monitoring, a [Quality Monitoring Table](#) will be used and annexed to the Quality Report.

The findings, recommendations and remediation/improvement actions will be consolidated in the Quality Report and reported to the PStC.

8.3 Deliverables Evaluation & Acceptance process

The deliverables will be reviewed individually by the partnership prior to their release as final versions to the public, based on the criteria of acceptance defined in the [Deliverables Acceptance Table](#), as well as the relevant chapters below.

All forms used for the facilitation of evaluations and the collection of responses are in the Annexes section of this document. All templates of forms will be available in the Quality section of the Filed Share area of the project.

The process of the evaluation of deliverables includes the review of the deliverable/activity by the relevant reviewers (partners, trainees, participants, as required) based on standardised forms/questionnaires. The distribution of the questionnaires and the collection of responses will be the responsibility of the QM and/or the Work Package Leader, depending on the deliverable (see below for details). In all cases, however, the QM will be responsible to perform a suitable statistical analysis and integrate its results into a Quality Report addressed to the Quality Committee, including any suggestions for changes and improvements, who is responsible to approve the deliverable or not.

8.3.1 Partnership Meetings

Meetings' effectiveness will be measured internally, by all participants. Each partner must rate the effectiveness of the meeting in a questionnaire which will be distributed among partners, using an online tool, such as Google Forms or similar, after the end of each partnership meeting. Standard questionnaires will be used (see [Meeting Evaluation](#)).

The questionnaire for the effectiveness of the meetings will be uploaded within 10 days after the conclusion of the meeting works. The QM, within 10 days after the deadline of the surveys, will collect all the answers from the partners, perform a statistical analysis and integrate them into a report including this analysis (statistical, quantitative) of the data, as well as any suggestions for changes and improvements.

The meeting is considered approved if the weighted average for the percentage of agreement is more than equal than 70% of answers. Scores less than this will require corrective actions by the partnership, led by the Project Coordinator (PC).

8.3.2 Reports, studies, documents, syllabus

Document deliverables that are identified as key shall undergo an internal evaluation process by the partners involved in the task. These documents that will undergo evaluation are listed in the [Deliverables Acceptance Table](#).

When a document deliverable is finished, the WPL uploads it in the relevant shared document folder and notifies the partners for the review, after he/she has checked it for its compliance with the [Document Template](#), the provisions laid out in the Quality Plan, the requirements set out in the Deliverables Acceptance Table, and the general objectives of the project.

As a first step, reviewers should use standard communication methods for corrections, additions, and improvements to the deliverable. When the deliverable has reached the final stage, the QM will ask the reviewers to use the standard [Deliverable Evaluation](#) or [Syllabus Evaluation](#) form for the task to be completed.

The reviewers must check the document for its completeness, clarity, and comprehensiveness. The reviewers must verify whether the deliverable satisfies the requirements, description, or objective, identify problems and/or deviations from requirements and suggest improvements to author.

Once the document is approved it takes the status of “final version/version 1.0”, is placed in the relevant section of the OneDrive area and can be distributed, uploaded and promoted for use, as relevant.

8.3.3 Trainings

The effectiveness of the trainings performed during the lifecycle of the project will be measured by all trainees. After the end of the training, each participant will be asked to rate several aspects of the training in a questionnaire; evaluations will be done on the spot using hardcopies or digital versions of the standard document (see [Training Evaluation](#)), or online versions of this document, as convenient.

At least 80% of the registered participants of the training must participate in the survey in order to draw significant conclusions.

The partner hosting/organising the training will be responsible for the collection of the responses by the participants of the training, summarizing the responses into a comprehensive tabulated form which will be sent to the QM for analysis. A template spreadsheet will be provided by the QM for this purpose. The responsible partner must deliver the data to the QM within 10 days after the end of the training for further analysis and reporting.

8.3.4 Assessment of two M.Sc. course that utilizes modern teaching methods

An assessment of the two M.S.c. course that utilizes modern teaching methods is one of the measures of the project success. For this purpose, the project includes piloting testing.

The use of [Pilot Assessment](#) form is foreseen but the exact methodology will be defined during this task. The assessment will be performed prior to the end of the pilots. It will concern the external review of the two Master programs that utilize modern teaching methods, using both qualitative and quantitative methodologies that will provide data which demonstrate how the application of modern teaching methods, foster the objectives set.

8.3.5 Dissemination Events

The effectiveness of events for the dissemination of project results (Awareness & Dissemination Workshops) will be measured by the participants. After the end of each event, the participants will be asked to rate several aspects of the event in a questionnaire; evaluations will be done either on the spot using hardcopies or digital forms of the standard document (see [Event Evaluation Questionnaire](#)).

At least 80% of the registered participants of the event must participate in the survey so as to draw significant conclusions.

Each partner holding an event will be responsible for the distribution of the questionnaires to the participants, in communication with the Quality Manager, as well as the collection of the responses by the participants of the

event, summarizing the responses into a comprehensive tabulated form which will be sent to the Quality Manager for analysis.

The partner-host of the event must deliver the data to the QM within 10 days after the end of the event. The QM, within 10 days from receiving the data will perform a statistical analysis and integrate them into a report including this analysis (statistical, quantitative) of the data, as well as any suggestions for changes and improvements.

9 External Auditor Quality Review

An External Quality Auditor will be selected by the partnership to review the project results and reports stating what is still missing and what needs to be improved, once every year of the project.

Based on data available about the project performance, the External Auditor will verify the quality of the project, the achievement of milestones and objectives, and evaluate the results of each WP.

The review will be performed due to 14 September 2022 and 14 December 2023, as described in the Quality Assurance and Evaluation Plan of the project and the results of the Auditor's analysis will be included in 2 Quality Assessment Reports. The Auditor's Reports will be addressed to the Quality Committee and will be a topic of the next upcoming Quality Review Meeting of the Quality Committee.

10 Quality Reports & Quality Review Meetings

Every six-months, a combined Quality Report will be created and addressed to the Quality Committee to support the quality assurance and quality control process, which will include the Project Performance Reviews and the Quality Control Reviews.

Project Quality Reports will be prepared for all activities of the project and the project [Quality Monitoring Table](#) is updated with the information, which will serve as a Monitoring Tool for the collection of information about the status of processes and deliverables regarding their quality characteristics.

After the delivery of the Quality Report by the Quality Manager to the Quality Committee, a Quality Review Meeting will be held among the Quality Committee members, within one week from the delivery of the Quality Report. The aim of the meeting is the approval of project results and project progress, decisions on improvements/remediations and/or corrective actions. All conclusions of the Quality Meeting will be noted in Quality Meeting Minutes and will be forwarded to the PStC for final approval.

In case of deliverables that are in urgent need to be approved/finalised in order for a subsequent step to take place, ad-hoc meetings of the Quality Committee can take place; discussions for approval will be done based on a relevant report by the QM.

11 Documentation produced by the partnership

11.1 Document Storage, Accessibility and Exchange

A main document repository for visibility and use by all partners when needed will be set.

All partners will have access (for reading) to all documents and the activity/task leads will have access for more advanced tasks (like managing, creating writing, and removing) to the activity folders. The main structure of the repository on the tool is the responsibility of the Project Coordinator.

11.2 Document Format

All documents essential to the progress of the project must be named using their title, version number, status (draft or final) and the relevant code of the deliverable.

Example: DeCAIR-QualityPlan-V1

If there are several editions of a document (eg a newsletter), a reference number at the end of the title is necessary (R1-R2-etc).

Example: DeCAIR-Newsletter-R1-V1

In communication, the documents can simply be referred to with their title and their sequential reference number (if any), for example “Quality Plan” or “Newsletter R3”.

All documents will be saved in MS Word, MS Excel or MS PowerPoint compatible or .pdf file types. A template (including font, built-in header, footer, page numbers, etc.) to be used for the creation of Word documents will be available to all partners, posted as a separate document in the Quality Management folder in the OneDrive area (see [Document Template](#)).

Templates of the documents to be used for the peer evaluation of deliverables, meeting evaluations, event evaluations shall also be placed in the Quality Assurance folder of the OneDrive area.

Only the final versions of documents should be marked as final and uploaded to the OneDrive area in read-only format. Previous versions should be removed.

Documents or other material that is addressed to the public (informative material, brochures, leaflets, posters, presentations, etc) must bear appropriate logos and disclaimers, according to European Commission projects visual identity requirements.

The documents that fall under these rules include all products of the project, such as deliverables, progress reports, minutes, quality plan, management plan, etc.

All produced documents will be assigned a distribution/access level: Partnership (Confidential), Public, or restricted to certain recipients.

All documents and computer data files should be stored as much as possible in the OneDrive area. Partners should notify via e-mail when a file has been added or changed.

12 Conflict Resolution

During the project, partners will have to agree on and develop specific outputs. Usually, agreement is first reached through regular contact, followed by official confirmation via electronic mail, letter or minutes. For important issues, agreement may be a report to be signed by those responsible for decisions. Non-technical factors such as resource allocation and contractual terms also need to be agreed and documented in writing. The Project Coordinator should immediately act if potential conflict situations arise. Technical issues/conflicts within contractual commitments that do not involve a change of contract, a change of budget and/or a change of resources/overall focus will be discussed/solved by the Project Coordinator. Decisions will be normally taken through consensus. However, after a reasonable amount of time has passed for illustration and defence of conflicting positions, in order to avoid deadlock in project operational progress, the approval by a two-third majority of partners will be enough. If the decision being taken is unacceptable to partners found in the minority positions, then the problem is elevated to a higher level at the partners in conflict. If again the problem cannot be resolved the Project Coordinator has to call a management meeting to vote it out and in case of a tie cast the decisive vote or call a new management meeting within 4 weeks.

Major conflicts requiring change of contract will be addressed by the Project Coordinator to the PStC. If no resolution is possible, then the standard Red-Flag procedure will be used as last resort. The Project Coordinator must inform the partners in writing of any decisions to enforce a final solution by majority vote at least one week in advance. In addition, the PC will inform the Executive Agency in writing and discuss the topics with the Agency before a final decision is made. Any changes regarding budget/contractual issues will be reported to the Agency and occur upon approval only.

13 Risk Management

The Project Coordinator and WP leaders are responsible for constantly monitoring and assessing risks related to their respective tasks, paying special attention to the higher-level risks. The determination, management and monitoring of the risks of the project is described in detail in the [Risk Management Plan](#).

14 Annexes

1. [Internal Evaluation Form](#)
2. [Quality Monitoring Table](#)
3. [Meeting Evaluation Form](#)
4. [Document Template](#)
5. [Deliverable Evaluation Form](#)
6. [Syllabus Evaluation Form](#)
7. [Training Evaluation Form](#)
8. [Event Evaluation Form](#)
9. [Risk Management Plan](#)
10. [Simple Sheet Template](#)
11. [PPT Template](#)
12. [Pilot Evaluation Form](#)