

WP4 - Quality Control and Monitoring

Quality Control and Monitoring Plan-QCMP

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Review in order to include the QCMB's suggestions and grammar issues

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Contents

1	Executive Summary	4
2	Quality Control and Monitoring Plan requirements.....	4
3	Strategy of the project quality control and monitoring	5
4	The organizational structure of the project quality control and monitoring.....	6
4.1	Quality Control Monitoring Board (QCMB)	6
4.1.1	The Quality Control and Monitoring Board responsibilities.....	7
4.1.2	WP4 Task Leader’s responsibilities.....	8
4.1.3	QCMB Chair Responsibilities	8
5	Internal evaluation	9
5.1	Quality assurance of the deliverables	9
5.1.1	Deliverable layout.....	13
5.1.2	Deliverable production process.....	14
5.1.3	Deliverable quality control process	14
5.2	Assessment and monitoring implementation of Work Packages activities and results	15
5.3	Project Quality Evaluation	16
5.4	Project Impact Assessment	17
6	External evaluation.....	17
7	Control of quality records.....	18
8	Files and archives.....	18
9	Project Guidelines and Key Documents	18
9.1	Documents Control and Abbreviations	19
10	Revision of documents	20
11	Documents for public use.....	20
12	Communication	20
13	The QCMP templates and abbreviations.....	21
	ANNEXES.....	23

1 Executive Summary

The project consortium is deeply committed to assuring high quality results. In order to achieve these high standards, the project consortium has clearly defined the roles and responsibilities for each partner and the processes to be followed by them, creating a Quality Control and Monitoring Plan (QCMP) with realistic objectives achievable through the whole project's lifecycle.

The QCMP of ReCap4.0 ERASMUS+ Project is a deliverable within WP4 of the ReCap4.0 project. The purpose of the QCMP is to provide a single point of reference on the quality that will be governed during the course of the ReCap4.0 project. The contents and structure of the QCMP is developed in line with the ReCap4.0 project structure and work plan. The plan outlines the main definitions related to quality management. In this plan, requirements and processes needed to implement an effective quality assurance and control are proposed, with the aim to ensure smooth and responsible project quality management, in line with the proposed Work Plan, activities and goals of this project. In this context, the main purpose of the QCMP is to define the evaluation criteria and evaluation mechanisms for internal and external Quality Control and Monitoring System (QCMS), as well as the number and structure of Quality and Control Monitoring (QCM) reports. The list of the methods that will be used to ensure the required level of quality, project quality policies and procedures, project standards/checklists for reviews, project metrics to measure deliverable or process quality and project quality goal will also be defined. The QCMP is mandatory reading material for each project team member. Adherence to the processes and procedures set out in this plan are mandatory for all activities carried out within the project.

2 Quality Control and Monitoring Plan requirements

The European Standards & Guidelines (ESG) - standards and guidelines for quality assurance in the European Higher Education Area (EHEA) - provide the basis for quality assurance in the project as well as the key quality assurance principles of continuous improvement. Proactive planning and corrective measures will be employed to help mitigate the identified risks and to monitor/evaluate the progress of the project. The will be continuously perfected, monitored and assured for good quality during the project life cycle.

The QCMP is an integral and important part of the Project Management. The QCMP has been issued in accordance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area.

The QCMP aims to be a guide for the quality requirements to be implemented in the activities carried out in ReCap4.0 project, as well as for the evaluation processes and reviews that guarantee the goals of the project are achieved and the contractual links are adopted in the Grant Agreement too.

The QCMP specifies the measures taken during the project definition, which is of utmost relevance, the quality monitoring and supervising processes, and deliverables for ReCap4.0. The Quality Control and Monitoring Board (QCMB) leads QCM activities in close dialogue and cooperation with the Project Executive Committee (PEC) and the Project Coordinator (PC).

The QCMP will be defined at the beginning of the project and adopted at the first meeting of QCMB. QCMP will define evaluation criteria and evaluation mechanisms for internal and external QCM as well as the number and structure of QCM reports. A list of the methods that will be used to ensure the required level of quality, project quality policies and procedures, project standards/checklists for reviews, project metrics to measure deliverables or process quality and project quality goal are defined. The initial version will be

regularly reviewed, refined, and updated according to the availability of resources and to the feedback from partners, target groups and beneficiaries.

The purpose of the QCMP is to describe the actions and measures that will be taken by ReCap4.0 Consortium to ensure the quality of the project and its full compliance with its contractual requirements. The main quality goals will be there to:

- Provide to all concerned a guide for the actions required by each one involved in terms of quality assurance.
- Exhibit the performance of the project's quality plan in accordance with the contractual requirements.
- Decide how the QCM activities and deliverables realization will be managed.

The QCMP shall be used by Consortium Partners and Third Parties involved in the project who are responsible for preparing and amending the deliverables; assessment and monitoring implementation of Work Package activities and results; quality of the project processes evaluation; project result impact assessment.

The QCMP is applicable to all the activities within the ReCap4.0 project and, hence, the compliance of its execution with this Plan is mandatory for anyone involved in the project. The QCMP focus on the prevention of deviations among each task of the project and the assurance of the contractual quality requirements in the deliverable's submission.

The most relevant requirement for complying with the quality of the project is achieving the results expected in the Grant Agreement.

3 Strategy of the project quality control and monitoring

There are three levels of evaluation and monitoring established in QCMP:

- **Process-evaluation:** Monitoring all the activities and tasks having an influence on the advancement of the project (management, communication, development, testing of outcomes, feedback, reporting, improvement, etc).
- **Product-evaluation:** The quality assurance of the deliverables by evaluating their quality, utilizing different quality tools (reports, feedback on the training program, trainers, materials from the target trainees along with their organizations).
- **Evaluation of the project impact:** Impact quantitative and qualitative analyses on project consortium members, target groups, documentation of dissemination activities, evaluation reports, minutes of the project meetings, selected results from questionnaires, possibly project changes, and measures for sustainability including financial sustainability of the project results.

The following quality measures, benchmarks, and indicators will be established by the WP's Leaders, and controlled and evaluated by the QCMB.

- **Quantitative quality indicators:** number of training modules implemented, number of Thai trainers trained, and number of trainee students, number of publications, number of meetings, number of exchanges and new cooperation established, etc.
- **Qualitative quality indicators:** the advance of the project measured by the outcomes (management framework, digital platform, developed training modules, ETCS conformity, feedback from

questionnaires, meetings, dissemination events, etc.); feedback from the partners about the project impact and feedback from the target groups as well as external stakeholders.

The quality control strategy of ReCap4.0 project will ensure that quality is planned for both the deliverables and processes. This QCMP will consist of the methodology on implementation of the project's internal guidelines for reporting of quality assurance, as well as monitoring and evaluation of project performance. It will review the quality of project outputs in the framework of quality indicators approved by all the partners. The monitoring of project progress and quality of outputs in each WP will ensure high quality of project outcomes and will guarantee compliance of project results with project objectives.

The Quality Control Plan has two levels of evaluation of the Project: *internal and external*.

4 The organizational structure of the project quality control and monitoring

4.1 Quality Control Monitoring Board (QCMB)

In order to achieve the quality objectives of the project, a Quality Control and Monitoring Board (QCMB) was established during the Kick-off Meeting which consist of persons from consortium universities: 5 from the Kingdom of Thailand (AIT, KMUTNB, MU, KKU, PSU) and 3 from UE (UPB, UMinho, and MIC).

The WP4 leader, as defined in the project proposal, University POLITEHNICA of Bucharest (UPB), is the Chair (QCMBC) of the QCMB and responsible for the tasks 4.1 *Quality Control and Monitoring Plan System* and 4.2 *Implementing the internal Quality Control and Monitoring of the project*. KKU is the Co-Work Package Leader and Co-Chair of the QCMB (QCMBCC) and responsible for the tasks 4.3 *External quality control and monitoring* and 4.4. *External financial audit*.

The members of the QCMB (see Table1) are also responsible for internal quality control and monitoring in their respective organizations.

Table 1. Quality Control and Monitoring Board

Partner	Role	Name	Email	WhatsApp
UPB-P7	Chair	Andrei Szuder	szuder@yahoo.com	40747043660
KKU-P3	Co-Chair	Danaipong Chetchotsak	cdanai@kku.ac.th	66819543566
AiT-P1	Member	Huynh Trung Luong	luong@ait.asia	66813422577
KMUTNB-P2	Member	Warapoj Meethorn	tuktuk0178@gmail.com	66894522080
MU-P4	Member	Thananya Wasusri	thananya.was@mahidol.edu	66896663650
MIC-P6	Member	Margaret Murphy	margaret.murphy@mic.ul.ie	+353879647891
PSU-P5	Member	Suriya Jirasatitsin	suriya.j@psu.ac.th	66870148287
UMinho-P8	Member	Rui Sousa	rms@dps.uminho.pt	+351936172530

QCMB will define the Quality Control and Monitor System (QCMS) - the references for all project procedures - to monitor the progress of the work against the deliverables list and the project's objectives and to generate internal QCM reports.

The duty of the QCMB is to monitor and evaluate the progress of the project and to ensure that all its activities are carried out properly according to European Standards and Guidelines for Quality Assurance and ensuring proper execution of the project to achieve its objective. The QCMB will design a proper evaluation process and be responsible for creating a set of indicators.

Seven QCMB meetings will be held during regular PEC meetings and seven QCM reports will be presented to the PEC.

The QCMB will monitor the project execution through monitoring reports which will be edited every 3 months. In addition to the two-annual internal QCM reports elaborated by the QCMB, there will be two external reports delivered by a sub-contracted external expert.

The QCMB will monitor the project also at different points using different types of evaluation practices and tools, such as report analyses, surveys, questionnaires, checklists and QCM visits. Such practices and tools are used 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 levels of satisfaction of beneficiaries of project activities, to evaluate unexpected results, and to control all processes. QCM activities will include evaluation of the new courses offered, improved teaching and lab facilities, training of teaching staffs, trainees' feedback, achievement of objectives, and impact of the project at university and national levels.

These meetings are intended for the monitoring and evaluation of work progress, and the planning of activities and work iterations. During the project lifetime, feedback from all project members will be formally collected and published. The Quality Control and Monitoring Board Chair will ensure the consortium responds to the partners' feedback. To ensure external quality assurance, an external expert will be invited to evaluate the project deliverables. An external audit of the project will also be carried out.

4.1.1 The Quality Control and Monitoring Board responsibilities

- Creation and implementation of the Quality Control and Monitoring System
- Cooperation with the Project Coordinator and Work Package Leaders on general issues related to the level of quality of the project's deliverables.
- Responsibility for the quality control and assurance of deliverables.
- Monitoring periodically the WPs to guarantee the project successful implementation and the timely resolution of any drawback.
- Ensuring adequate implementation, handling, and storing of documentation and deliverables.
- Providing the conditions for external evaluation.

The main outputs of the QCMB are:

- Evaluation and approval of quality of the deliverable's contents.
- Quarterly assessment and monitoring implementation of WP's activities and results



- Quality control and monitoring reports for the PEC meetings concerning the WP's implementation based on the quarterly assessment and monitoring implementation of Work Packages.
- The overall quality of the project evaluation and project member satisfaction through self-evaluation of the consortium performance by the consortium members through questionnaires.
- An impact report of the project activities and deliverables as a part of final project report, on the broader impact and the relevance of the project in the national context towards the needs of major stakeholders, adopted at the end of the project life by the consortium members.

4.1.2 WP4 Task Leader's responsibilities

- Coordinating the development of the deliverable(s) according to the deliverable template and project working plan.
- Assigning parts of the work to other partners involved in the activities, coordinating the work of other partners involved in the activity, providing guidance and feedback when necessary, and aligning the contributions of the other partners involved in the activities.
- Submission of the draft deliverables to the WP Leader (WPL), QCMB, and the PC.
- Implementing the suggestions for improvements of QCMB/WPL/PC, assigning certain amendments as appropriate.
- Sending the amended draft deliverables.
- Reporting to the WP Leader for any problems occurring during the implementation of the activities.
- Cooperating with the WP Leader and other partners in the same WP to ensure the activities' progress in conformity with other activities and that any cross-activity inputs and outputs are being delivered as foreseen by the WP description (respecting any changes approved by the Steering Committee as recorded in the respective minutes).

4.1.3 QCMB Chair Responsibilities

- Coordinating the activity of the QCMB in carrying out tasks according to the QCMP and ensuring that all the activities are contributing to the WP4's objectives.
- Coordinating the evaluations by the QCMB of the ReCap 4.0 deliverables. monitoring of the activities and project impact according to the QCMP and project working plan.
- Controlling quality of outputs prepared by QCMB members and preparing consolidated reports to be send to the WP's leaders and PC.
- Reminding QCMB members about submission deadlines, and the procedures to be followed and provides input and suggestions to the WP's during the development of the relevant deliverables.
- Delivering of up-to-date QCMB reports on the WP's progress .
- Cooperating with the WP's leaders and the Project Coordinator in ensuring that all the contributing partners are smoothly cooperating with a view to accomplish the WP4's objectives.



5 Internal evaluation

The internal evaluation involves consortium members close cooperation and mutual help in overcoming the obstacles and solving the problems that prevent them from achieving the project objectives.

The quality assurance activities will be based on **quantitative data** (i.e., meeting the specified deadlines, achievement of targets and indicators) and on **qualitative data** (i.e., answers to questionnaires and reports). Data will be gathered from all project partners and key stakeholders. PEC will be responsible for the quality of WP6

5.1 Quality assurance of the deliverables

Deliverables are the main project outcomes and therefore, they must be carefully drafted with rich contents, a clear structure and professional presentation.

The deliverables of ReCap4.0 presented in Table 2 may be classified into:

- Tangible deliverables such as reports, publications, manuals, methodology, procedures, plans, printed and electronically available promotional material, and media articles.
- Intangible deliverables in the form of organized events (trainings, study visits, coordination meetings, monitoring visits, conference, etc.).

A common quality expectation for all deliverables is their relevance to reach the overall objective and the specific objectives, with a further focus on their development in an efficient and effective manner. Timely delivery following the project workplan as identified in the Application Form and Project Workplan is expected.

Table 2. Quality assurance of the deliverables

WP	Task no.	Deliverable	Type	Target Groups	Task Leader
1	Task 1.1 Developing a capacity assessment execution plan	Outcome 1.1. A capacity assessment execution plan	Report. Service/ Product	Teaching staff	UMinho
	Task 1.2 Designing a capacity assessment form	Outcome 1.2. A capacity assessment form	Service/ Product	Others	UMinho
	Task 1.3 Conducting non-university capacity assessment			Teaching staff; Trainees. Others	KMUTNB
	Task 1.4 Summarize, interpret results and recommendations	Outcome 1.3 An assessment report on non-university capacity, including recommendations	Report		UMinho

		emphasis areas for the Industry 4.0 competence development training program			
2	Task 2.1 Designing an Industry 4.0 Competence Development Training Program	Outcome 2.1 An Industry 4.0 Competence Development Training Program	Service/ Product	Teaching staff; Trainees	AIT
	Task 2.2 Developing innovative training materials	Outcome 2.2 Innovative training materials for 10 modules	Training materials	Teaching staff; Trainees	AIT
	Task 2.3 Developing a capacity training assessment	Outcome 2.3 A capacity training assessment form	Service/ Product	Others	MIC
	Task 2.4 Training the Thai trainers		Service/ Product	Trainees;	AIT
	Task 2.5 Coaching the Thai trainers	Outcome 2.4 .12 Thai trainers trained in program design (for higher education contexts), and in the use of innovative learner-centered teaching and assessment methods	Report	Teaching staff; Trainees	AIT
	Task 2.6 Assessing the Thai trainers	Outcome 2.5 An assessment report of the Thai trainer's competence in the use of knowledge and skills gained in higher education teaching	Service/ Product	Teaching staff; Trainees. Technical Staff	AIT
	Task 2.7 Setting up an Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry	Outcome 2.6 An Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry			AIT



3	Task 3.1 Developing capacity training execution plan	Outcome 3.1 A capacity training execution plan	Training materials; Report	Teaching staff; Trainees; Technical staff	PSU
	Task 3.2 Conducting capacity training on Industry 4.0 competence development		Service/ Product	Teaching staff; Others	PSU
	Task 3.3 Coaching trained capacity	Outcome 3.2. 60 trained teaching staff from the non-university sector at tertiary level	Service/ Product	Teaching staff; Trainees. Others	AIT
	Task 3.4 Assessing trained capacity	Outcome 3.3 An assessment report on trained teaching staff	Report	Teaching staff; Trainees. Others	AIT
4	Task 4.1 Developing a quality control and monitoring system	Outcome 4.1 A quality control and monitoring plan QCMP	Event Report. Service/ Product	Teaching staff; Trainees; Administrative staff	UPB
	Task 4.2 Implementing the internal quality control and monitoring of the project	Outcome 4.2 Internal quality control and monitoring (on a regular basis until the end of the project)	Event. Report. Service/ Product	Teaching staff; Technical staff; Administrative staff	UPB
	Task 4.3 Inviting independent external evaluation of the project results	Outcome 4.3 External quality control and monitoring	Report; Service/ Product	Teaching staff; Trainees; Technical staff; Administrative staff	KKU
	Task 4.4 Inviting independent external financial audit	Outcome 4.4 External financial audit	Report; Service/ Product	Teaching staff; Administrative staff	KKU
5	Task 5.1 Development of a dissemination, exploitation and sustainable plan	Outcome 5.1.A project dissemination exploitation and sustainability plan(DESP)	Report	Teaching staff	MU



Task 5.2 Creating a project website and maintaining it throughout the project lifetime to support the dissemination strategy, and communication and collaboration among partners	Outcome 5.2 <u>A project website (Public)</u> and <u>Member space (Members only)</u>	Service/ Product	Teaching staff	AIT
Task 5.3 Inviting non-university sector to participate in the training program and preparing for online training registration	Outcome 5.3 A list of registered trainees from the non-university sector at tertiary level in Thailand	Report	Teaching staff; Trainees; Administrative staff; Others	AIT
Task 5.4 Production of dissemination materials	Outcome 5.4 Dissemination materials	Service/ Product	Teaching staff; Trainees; Administrative staff; Technical staff; Others	MU
Task 5.5 Publications in professional journals, newspapers, magazines, brochures and social media	Outcome 5.5 Publications in professional journals, newspapers, magazines, brochures and social media,	Service/ Product	Teaching staff; Students	MU
Task 5.6 Setting up training network among the members of partner universities and of associated partners	Outcome 5.6 A list of the members of the Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry.	Report	Teaching staff; Students; Trainees; Technical staff; Others	AIT
Task 5.7 Organizing dissemination events with relevant stakeholders	Outcome 5.7 Dissemination events	Event	Teaching staff; Students; Trainees; Technical staff	MU
Task 5.8 Organizing the final dissemination-	Outcome 5.8 A dissemination-	Event; Service/ Product	Teaching staff	AIT



	sustainability conference	sustainability conference			
6	Task 6.1 Finalizing management structure	Outcome 6.1 Project management and communication plan	Report	Teaching staff; Technical staff; Others	AIT
	Task 6.2 Organizing kick-off and regular meetings	Outcome 6.2 Kick-off and regular consortium meetings	Event; Report	Teaching staff; Others	AIT
	Task 6.3 Monitoring and controlling the project	Outcome 6.3 Documents on daily project administration and coordination	Report	Others	AIT
	Task 6.4 Closing project	Outcome 6.4 Midterm progress and final reports for the project by M18 and final report	Report	Others	AIT

The quality control of the deliverables is crucial to success of the project, verifying that the objectives are achieved. In the process for the deliverable review, the quality control, the responsibilities, and the tools to proceed with it are explained in a dedicated procedure, Deliverables Quality Control Procedure (DQCP).

The deliverable report aim is to provide information concerning the work carried out, its progress, and the results. All deliverables' reports should be formed according to the Deliverable Template (DT)-ANNEX 2. The template provides a deliverable identity sheet and specifies formatting for the most used elements of deliverable report. The partners responsible for the deliverables are required to ensure that before releasing the first deliverable draft to partners, it is in the correct template and in, a specified format while the identity sheet is completed.

5.1.1 Deliverable layout

Official project deliverables should follow the same structure throughout the project, to be consistent and regular. Furthermore, they should have the following sections:

- Cover Page
- Disclaimer of warranties
- Revision sheet
- List of distribution
- Table of contents
- Executive summary

- Detailed information concerning each deliverable
- Main conclusions
- References when necessary
- Detailed technical information and other in Annexes.

5.1.2 Deliverable production process

The deliverable production and approval process is based on continuous revisions and feedback that will allow the Task Leader to analyse and solve the existing errors.

First level: Deliverable authors, Task and WP Leaders:

The first level of quality assessment refers to the activity level. As soon as the deliverables have been produced, they should be reviewed by the corresponding Task and WP Leaders. This procedure is to guarantee the quality and timeliness of produced deliverables in accordance with the Work Plan. If the deliverables fulfil the quality requirements, the process moves to the next level of control. In case of non-approval, the deliverable authors will redesign it in consultation with Task and WP leaders until the quality requirements are reached.

Second level: Internal review

The next level of deliverable quality control is at the internal level of ReCap4.0. Consortium members will have at least one week to provide their comments and suggestions for potential improvements of the deliverables in question.

Once the period of internal review expires, the deliverable authors will incorporate inputs from both review processes and updated version of the deliverables will be forwarded to the next level.

Third level: QCMB and QCMB Chair

The third level control is carried out by the QCMB and QCMB Chair, who will provide the comments and suggestions so that the deliverables can reach its objective and achieve the desired impact. This version will be forwarded by the WP leader to PC (the final quality control level) for approval.

Fourth level: PEC approval

The PEC is the highest decision-making body of the ReCap4.0 project, consisting of one senior decision-maker from each project partner institution. The PEC is responsible for final approval of major deliverables produced within the ReCap4.0 project. Once approved by this body, the deliverables will be considered as adopted.

5.1.3 Deliverable quality control process

The methodology and communications are explained below following the temporal sequence of the submission process:

- **Task Leader to WP Leader and Task Members.** At the launch of the activities for the realization of deliverables that will be submitted for the evaluation of QCMB, the Task Leader will propose the rest of the partners contributing, a list of content and quality evaluation indicators from the Log frame Matrix of the Project Proposal that covers the whole work and objectives the deliverables are supposed to meet.



- **Task Members to Task Leader.** At least one month before the delivery date to the QCMB, all the partners contributing to one deliverable should send the corresponding Task Leader their contribution. It is the responsibility of the author to ask for these contributions from all the partners in time to check the quality and adequacy and ask for modification or further content under his consideration.
- **Task Leader to WP Leader.** The Task Leader will send the deliverable to the WP Leader who will review them within a period of two weeks.
- **WP Leader to the QCMB Chair and PC.** The WP Leader will send the deliverable utilizing Deliverable Template (DT) as in ANNEX 2 to the QCMB Chair to be reviewed by QCMB and to PC.
- **QCMB Chair to QCMB members** QCMB Chair distributes the deliverables to the other members of the QCMB for evaluation. They will evaluate deliverables according to the established criteria and indicators of the Deliverable Evaluation Template (DET)-ANNEX 3, the Deliverable Quality Evaluation Procedure- (DQEPR)- ANNEX 5 and will give a grade regarding the deliverable quality fulfilment degrees and will make observations and proposals. At the same time, each member of QCMB will assess whether the deliverable can be accepted in its current form without or with additional data or not accepted; and it must be reviewed after changes are implemented.
- **QCMB Chair to the WP Leader and PC.** Based on the evaluations submitted by QCMB members, QCMB Chair will made a consolidated evaluation-- Deliverable Consolidated Evaluation Template (DCET) – ANNEX 4 and either:
 - a) approves the deliverable report and informs WP Leader and PC QCMB's findings, observations, and recommendations for completing / modifying the deliverable report. In this case the WP Leader/ Task manager has the obligation to make the required changes that the QCMB required and submit the deliverable report to PC for approval.
 - b) not accept the deliverable report and send it back to the WP Leader do be reviewed. After the reviewed deliverable report is approved by QCMB and a final version is obtained, the WP leader will submit this version for approval to the PC.
- **PC to PEC.** PC will submit for approval the final form of the deliverables to PEC who is responsible for final approval of major deliverables produced within the ReCap4.0 project. Once approved by this body, the deliverables will be considered as adopted.

5.2 Assessment and monitoring implementation of Work Packages activities and results

An effective assessment and monitoring system throughout the project execution can make the difference between a successful project and a failure.

Implementation refers to a series of steps taken to deliver WP's activities, outputs and results. Monitoring is a quality management tool for improving project performance.

The overview of the assessment will allow to plan smooth implementation of future activities, envisage problems, and suggest/define (if any) changes in planned project execution in order to reach the objectives in the best possible way.

PEC will be responsible for the quality of WP6

The assessment and monitoring implementation of work package activities and results procedure will be done every quarter according to Project management flowchart and involves the following phases:

- **WP Leader to PC.** Each WP Leader will submit a Work Package Quarterly Report (WQR) as in the form of ANNEX 6 to the PC.
- **QCMB to QCMB Chair.** The QCMB members are assigned to monitor the work package with respect to their institutions, as assigned in Table 2; They will collaborate with the corresponding work package leaders or members as well as to monitor the progress and assess execution of particular tasks. Every quarter, each of the QCMB members will submit the Quality Control and Monitoring Report (QCMR) as in ANNEX 7 to the QCMB Chair who will consolidate all the results to form a Quality Control and Monitoring Consolidated Report (QCMCR).
- **QCMB Chair to PC.** In addition to a Work Package Quarterly Report, the QCMB Chair will also submit QCMCR quarterly to the PC.
- The PC will review the Work Package Quarterly Reports from all WP leaders and QCMCR. If there is a contradiction between any quarterly report and the QCMCR, the PC will seek clarification from the WP Leader of the concerned activity and the QCMB Chair to create common understanding of the actual status of the activity. Otherwise, the quarterly reports are accepted and incorporated by the PC into the Project Quarterly Report that will be reported to PEC as well as informed both the WP Leaders and QCMB Chair.

5.3 Project Quality Evaluation

Apart from the procedure to assess the quality of the deliverables and monitoring the WP's, this section deals with the issues related to the general performance, execution of ReCap4.0, and the quality of their work outcomes.

The aim of the evaluation is to support the project coordinator (PC) and WP leaders in ensuring highest quality of project outputs, activities, and results, as well as in improving project performance. It should support decision making by delivering necessary evidence to introduce any significant changes, should they be needed. The evaluation will increase the quality of project activities, outputs, measures to what extent they reach the short-term project goals, and results set in the application.

The internal quality of the project processes and quality assessment will be done through a self-evaluation by project partners using the Project Quality Assessment Template PQAT in ANNEX 8. The members of the ReCap 4.0 consortium participating in the different events (PEC meetings, QCMB meetings, etc ..), organized within the project, will respond to the PQA questions. The results of the PQA questionnaires for each event will be consolidated by the event and sent to QCMB and PC.

ReCap4.0 project includes 'activities in all WP's which may be part of the deliverables that are addressed to people out of the project consortium members. Those activities which form part of each WP are evaluated by stakeholders with regard to their level of satisfaction from participation in project activities...

The stakeholders of these activities are staff that will be trained; staff that will participate in the consultation activities; teaching staff; users of the project website, etc...

The evaluation will be organized by the person responsible for the project activity and completed by those who will participate and benefit from the activities. This will be done by answering specific questions accordingly to specific evaluations forms (questionnaires)and procedures:

The evaluation of the events within the project WP's will be done using the Event Evaluation Template, (EET) – ANNEX 9, according to the Event Evaluation Procedure (EEPR)- ANNEX 10

The training activities evaluation. developed within the project will be done using the Training Evaluation Template, (TET) – ANNEX 11, according to the Training Evaluation Procedure (TEPR)- ANNEX 12

The project website and its content quality will be assessed with Website Evaluation Template (WET)- ANNEX 11.

The QCMB Chair will produce twice a year before the two annual PEC and QCMB meetings a Quality Control and Monitoring Board Report (QCMBR), as provided in ANNEX 12. This report will reflect all the aspects of the QCM of the project and will be based on the documents collected, including the Project Quality Assessment Reports and consolidated answers from project stakeholders and will reflect the views of the consortium and the beneficiaries of the project results on its quality. This QCMBR will be sent to the PC.

The PC will submit the QCMBR to PEC who is responsible for final approval within the ReCap4.0 project. Once approved by this body, the QCMBR will be considered as adopted.

5.4 Project Impact Assessment

Another important area is related to the assessment of the impact of the project results.

In the third year of the Recap4.0, a Project Impact Report completed by the QCMB Chair will show the degree to which the impact indicators have been adhered to, as outlined in chapter G.1, Expected impact of the project proposal.

The Project Impact Report Individual Impact reports of the project to be drawn up on the basis of individual reports of the partners from Partner Country institutions. Those Individual Impact reports will be the responsibility of the QCMB members who have quality and monitoring responsibilities in their respective universities. The individual Project Impact Reports will be made based mainly, but not only, on the indicators presented within the project proposal in the chapter “G- Impact and Sustainability” and F.3.6 - Expected results and impact (only for Partner Country institutions).

They will be used to prepare the Project Impact Report quantitative and qualitative analyses on target groups, , Quality Control and Monitoring Board Reports, Project Quality Assessments, documentation of dissemination activities, minutes of the project meetings, selected results from questionnaires, feedback from the target groups, external stakeholders, possibly project changes, measures for sustainability of the project results.

During the final conference, all project achievements and the foreseen sustainability measures will be presented together with the impact of the project on consortium universities.

6 External evaluation

The Co-Leader of the QCMB (QCMBCC) will be responsible for the external evaluation tasks.

The external evaluation of the Project comprises the following components:

- QCM external evaluation of the entire project. This will be conducted together with a subcontracted evaluator. QCMB will employ an external evaluator to provide an independent opinion on the quality, attainment of objectives, efficiency, and sustainability of the project.



- The external evaluator will be chosen according to his/her experience of Higher Education systems in partner countries, knowledge on cooperation and development programs (Tempus, Erasmus+), QCMB Co-Chair

External quality control and monitoring of the main project results will be assessed by an individual external expert through his insight into project activities and results as well as during his two meetings with members of QCMB. An experienced person in the field of external project quality control and monitoring will be chosen by QCMB on the proposal of WP4 QCMB Co-Chair. Two external QCM reports will be delivered by an external expert, firstly, at the middle of the project (Month 18) and secondly, at the end of the project (Month35). The first external QCM report will be used for the project's interim report and for making improvements in the second half of project timeline. The second external QCM report will be used for the project's final report.

Financial audit as part of WP4 will be conducted once the project has finalized according to EACEA rules.

7 Control of quality records

The quality records are to be maintained by the Consortium and may be available when necessary. All quality records shall be stored and kept confidential within the consortium. The records will be retained under the Grant Agreement.

8 Files and archives

ReCap4.0 provides formats with a standard visual image, to assist clear communication and comprehension. In this way, visual quality is also to be considered in all the documentation generated by ReCap4.0 project. The following are the formats specified for use in partner communication, documentation, reporting, and deliverable production.

9 Project Guidelines and Key Documents

During the implementation period, it is strongly recommended to consult and use following documents:

- EACEA - ReCap4.0 project Grant Agreement.
- ReCap4.0 project Partnership Agreements.
- ReCap4.0 project Budget, Work Plan and Logical Framework Matrix.
- ReCap4.0 Quality Control and Monitoring Plan.
- EACEA - Guidelines for the Use of Grants.
- EACEA - Frequently Asked Questions.

9.1 Documents Control and Abbreviations

This section describes the control system for preparing, reviewing, approving, distributing, revising and updating documents that are required within the ReCap4.0 project. These documents include, but are not limited to the following:

- Plans. For plans, the code will be XXXP (VY)
- Templates. For forms the code will be XXXT(VY)
- Deliverable For forms the code will be XXXD(VY)
- Documents. For documents, the code will be XXXDO (VY)
- Procedures. For procedures, the code will be XXXPR (VY)
- Minutes of the meetings. For minutes, the code will be XXXM (VY)
- Reports. For reports r the code will be XXXR (VY)
- Questionnaires. For questionnaires, the code will be XXXQ (VY)
- External documents † For external documents the code will be XXXED

where:

- XXX - capital letters of the plan/template/ document, respectively
- VY is the version of the document
- The letters "WP" defines the work package:
 - WP1 - documents from WP1: Non-university capacity assessment
 - WP2 - documents from WP2.sustainable development of Industry 4.0 competence development
 - WP3- Documents for WP3 Capacity training for non-university sector at tertiary level in Thailand
 - WP4 - documents from WP4: Quality Control and Monitoring
 - WP5 - documents from WP5: Dissemination and Exploitation of Project Results
 - WP6 - documents from WP6: Project Management

The QCMB Chair with the contribution of the QCMB is responsible for drafting and issuing the QCMP.

The working versions of the documents made by the project partners will be coded as follows:

- [year/month/day- document code-document name- version (VY)-Work Package number-Deliverable number-Partner number].

Example: This document is codified YYYYMMDD-QCMP-Quality Control and Monitoring Plan -V2-WP4-D4.1-P7

Draft versions are numbered with x.1, x.2 ... to be distinguished from the released versions which are numbered with 1, 2 when "x" represents the released version (x=0, for a new document).

The last approved version (controlled copy) of ReCap4.0 documents is uploaded to the intranet of the project website by the QCMB Chair who is also responsible for its substitution in case of revision (new version) and

for informing all the involved members of the consortium by e-mail. QCMB Chair is responsible for updating the Project Documents List accordingly.

A single copy of the obsolete internal documents withdrawn, is maintained in a different location identified as "Obsolete documents", under control of QCMB Chair.

External documents that are not available on the intranet of the project website shall be properly collected and maintained by the Management team.

10 Revision of documents

This first version of QCMP will be additionally updated in consultation with other partners, especially the PC, QCMB members, WP Leaders and Task Leaders and may be adapted during project implementation. New versions will be communicated to all the partners. Already started procedures can be finished in the manner they have started.

Regarding the changes of a document, the following rules apply:

- Any change in the document leads to increasing the version number by one unit (in the document footer and revision sheet).
- The modified text will be highlighted in yellow.
- The revision date, the reviewer and details about the revision will be mentioned in the revision sheet of the document (for itself and/or its annexes).

11 Documents for public use

Documents or other material that is addressed to the public (informative material, brochures, leaflets, posters, presentations, DVDs etc.) must bear:

- The logo of ReCap4.0 project.
- The logo of ERASMUS PLUS.
- The title and reference number of the project.
- The following disclaimer: *"This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. Reproduction is authorized, provided the source is acknowledged. Copyright © ReCap4.0 Consortium, 2020-2023"*

The same logos and disclaimer shall be also mentioned on the website of the project.

12 Communication

Communication between the members of the consortium, between the PC and the National Agency for Erasmus+ and between the PC and the European Commission is crucial for the successful implementation of ReCap4.0 project.

Day by day communication is conducted by e-mail, telephone conversations and Zoom/Skype meetings when deemed necessary. For the avoidance of any confusion, special attention is paid to the clear drafting of the

subject of the e-mail. All the contact details are maintained and updated, if the case, according to Contact Information Details, available on the project intranet.

In general, all information relevant to the project is sent to the PC, who then forwards it to the partners involved in the specific action(s). Also, every WP Leader/ Co-WP Leader has the responsibility to upload the information on <https://sites.google.com/ait.asia/resource-for-recap-4-0?authuser=5>.

Direct partner/partner communications flows will be set up in those cases where an increase in efficiency can be achieved.

If on the documents submitted for analysis and approval sent by the Project Coordinator, QCMB Chair, QCMB Co-Chair, the partners do not respond within 3 working days they are considered to agree with the respective document submitted for approval.

If partners are on annual leave or sick, they should have a back-up plan in place to ensure queries are dealt with in their absence.

An intranet on the project website is secured (access is permitted through username and password) and enables the consortium to have a very efficient diffusion of the information connected to the release of minutes, deliverables, reports and exchanges between partners.

External communication regarding the European Commission is the responsibility of the PC. This communication takes place mainly by e-mail, telephone conversations and face-to-face discussions when it is needed. For electronic dissemination of the project results, the main channels of communication will be (but not limited to these): the project website.

13 The QCMP templates and abbreviations

The templates of the Quality forms that are described in the following table are annexed to this QCMP.

Table.3. List of QCM templates

Abbreviation	Document	Annex
QCMP	Quality Control and Monitoring Plan	
FT	Project Form Template	ANNEX 1
DT	Deliverable Template	ANNEX 2
DET	Deliverable Evaluation Template	ANNEX 3
DCET	Deliverable Consolidated Evaluation Template	ANNEX 4
DQEPR	Deliverable Quality Evaluation Procedure	ANNEX 5
WQR	Work Package Quarterly Report	ANNEX 6
QCMR	Quality Control and Monitoring Report	ANNEX 7
PQAT	Project Quality Assessment Template	ANNEX 8
EET	Event Evaluation Template	ANNEX 9
EEPR	Event Evaluation Procedure	ANNEX 10
TET	Training Evaluation Template	ANNEX 11



TEPR	Training Evaluation Procedure	ANNEX 12
WET	Website Evaluation Template	ANNEX 13
QCMBR	Quality Control and Monitoring Board Report.	ANNEX 14
PDL	Project Documents List	ANNEX 15

Table4. List of main abbreviations

Abbreviation	Full Name
PEC	Project Executive Committee
PC	Project Coordinator
QCMB	Quality Control and Monitoring Board
QCMBM	Quality Control and Monitoring Board Member
QCMBBC	Quality Control and Monitoring Board Chair
QCMBCC	Quality Control and Monitoring Board Co-Chair
PA	Partnership Agreement
PMCP	Project Management and Communication Plan -
QCMP	Quality Control and Monitoring Plan
DESP	Dissemination, Exploitation and Sustainability Plan
WP	Work Package
WP Leader	Work Package Leader
ES	External Stakeholder
EE	External Evaluator
The European Standards & Guidelines	ESG
European Higher Education Area	EHEA
DOC	Documents / Reports / Plans / Guidelines /
DIS	Dissemination material / Website
COM	Curriculum based course material / Repository
EVE	Events, Trainings



ANNEXES



ANNEX 1 – Quality Form Template (QFT)



Quality Form Template-QFT



ANNEX 2- Deliverable Template (DT)

WP4- Quality Control and Monitoring Deliverable Template (DT)

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	4/Quality Control and Monitoring
WP Leader	Andrei Szuder
Deliverable (Task) N°/Title	4.1./ Deliverable Template DT
Author responsible for the Deliverable	Andrei Szuder
Date of Deliverable submission	Dd/mm/yyyy
Status:	Draft/ Final
Dissemination Level:	Internal/Public

Revision Sheet

Version	Date	Author (Partner/Person)	The revision reason

Distribution List

Project Partner	Responsible (for dissemination)
UPB	Andrei Szuder
KKU	Danaipong Chetchotsak
AIT	Huynh Trung Luong
KMUTNB	Warapoj Meethorn
MU	Thananya Wasusri
MIC	Margaret Murphy



PSU	Suriya Jirasatitsin
UMinho	Rui Sousa

The dissemination responsible refers to the team member of each partner involved in the task's deliverable/ outcome, that must disseminate the data within the partner internal team.

Table of Contents

1. Disclaimer

2. Revision Sheet

3. Distribution List

4. Executive Summary.

- a. *This part of the document must contain a summarized version of the document in such a way that readers can quickly become acquainted with the material without having to read it all.*
 - b. *It usually contains a brief statement of the problem or proposal covered in the main document, background information, concise analysis and main conclusions.*
-

5. Introduction

- a. *The chapter includes background information, structure, involved partners, and context of the deliverable*
-

6. Description of the deliverable

The chapters must include, but are not limited to the following:

- a. **Description of the deliverable and a definition of what the project aims to succeed with its fulfilment.**

.....

- b. **Presentation of the responsible and their responsibilities according to the deliverable**

.....

- c. **Description of the methodology used in order to obtain results for this deliverable.**

.....

- d. **Dissemination.**

.....

- e. **Results and conclusions**

.....

7. Specific deliverable template

The templates developed for the purpose of the deliverable are described in the following table and can be found as annexes.



Abbreviation (*)	Full name of document	Annex no.

(*) In conformity with QCMP-Quality Control and Monitoring Plan,

8. Annexes

List of annexed documents *(remove, if not applicable)*

.....

List of tables *(remove, if not applicable)*

.....

List of figures *(remove, if not applicable)*

.....

- ❖ *Use Style for the MAIN Body Text – Normal, Theme font: Calibri, Font size: 11; Line spacing: 1 line with After: 6 pt.; Alignment: Justify)*



ANNEX 3- Deliverable Evaluation Template (DET)

WP Number & Title Deliverable Evaluation Template (DET)

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	4/Quality Control and Monitoring
WP Leader	Andrei Szuder
Deliverable (Task) N°/Title	4.1./ Deliverable Evaluation Template DET
Author responsible for the Deliverable	Andrei Szuder
Date of Deliverable submission	02/3/2021
Status:	V1
Dissemination Level:	Internal

Revision Sheet

Version	Date	Author (Partner/Person)	The revision reason

Assessment of Deliverables

Adequacy with the format

Mark with X the appropriate column (Y: Yes - N: No - NA: Not applicable)

Format	Y	N	NA	Comments
Does the document meet the commitments from Application Form? (<i>answer with Y/ N only</i>)				
Does the document contain: WP number, Deliverable name, Version, Author Name and Date?				
Does the document contain all the necessary official logos of the project and the program?				
Does the document include a Table of Contents?				
Does the document include a list of participants and reviewers (approvals)?				
Does the document use the fonts and paragraphs defined in the official template?				



Does the spelling, grammar etc. of the document is appropriate?				
---	--	--	--	--

Quality evaluation

The following scores will be utilized in delivery review; 1-Poor;2-Average;3-Satisfactory;4-Good;5-Very Good

Mark with X the appropriate column:

Question	1	2	3	4	5	Comments
How deliverable comply with the WP objectives as specified in the WP description?						
How deliverable correspond with the activity description as specified in the Application Form?						
The clarity of the contents of the document is evaluated as...						
How is the treatment of the contents of the document regarding the required depth?						
The quality of the contents of the document is evaluated as						
Does the document need the addition of sections to reach completeness (Yes/No)? Specify which ones						
Are there any sections in the document that should be removed (Yes/No)? Specify which ones						

Observations/ suggestions (add rows as needed)

Page No.	Section	Observations / Suggested Improvement

Reviewer Assessment



(Mark with X the appropriate line)

Document accepted; no changes required	
Document accepted but changes required	
Document not accepted; it must be reviewed after changes are implemented	
Date of Review	
Reviewer's Name & Organization (from QCMB)	

QCMB Consolidated Assessment

Document accepted; no changes required	
Document accepted but changes required	
Document not accepted; it must be reviewed after changes are implemented	
Suggestions for improvement (if applicable)	
Date of Quality assurance performed	
Deadline for submission of amended version of deliverable (if applicable)	

PEC Approval

Document accepted; no changes required	
Document accepted but changes required	
Document not accepted; it must be reviewed after changes are implemented	
Suggestions for improvement (if applicable)	
Date of Quality assurance performed	
Deadline for submission of amended version of deliverable (if applicable)	



ANNEX 4- Deliverable Consolidated Evaluation Template (DCET)



Deliverable Consolidated Evaluation Template (DCET)

WP.....

Outcome

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	
WP Leader	
Deliverable (Task) N°/Title	
Author responsible for the Deliverable	
Date of Deliverable submission	
Status:	
Dissemination Level:	Internal

Revision Sheet

Version	Date	Author (Partner/Person)	The revision reason

Assessment of Deliverable

Adequacy with the format

Mark with X the appropriate column (Y: Yes - N: No - NA: Not applicable)

Format	Y	N	NA	Comments
Does the document meet the commitments from Application Form? <i>(answer with Y/ N only)</i>				
Does the document contain: WP number, Deliverable name, Version, Author Name and Date?				
Does the document contain all the necessary official logos of the project and the program?				
Does the document include a Table of Contents?				
Does the document include a list of participants and reviewers (approvals)?				



Does the document use the fonts and paragraphs defined in the official template?				
Does the spelling, grammar etc. of the document is appropriate?	X			Two small writing problems (Please see the docx file “20210513-Capacity assessment execution plan-P8-Sousa”).

Quality evaluation

The following scores will be utilized in delivery review; 1-Poor;2-Average;3-Satisfactory;4-Good;5-Very Good

Mark with X the appropriate column:

Question	P1	P2	P3	P4	P5	P6	P7	P8	Total	Score	Comments
How deliverable comply with the WP objectives as specified in the WP description?											
How deliverable correspond with the activity description as specified in the Application Form?											
The clarity of the contents of the document is evaluated as...											
How is the treatment of the contents of the document regarding the required depth?											
The quality of the contents of the document is evaluated as											



<p>Does the document need the addition of sections to reach completeness (Yes/No)? Specify which ones</p>	
<p>Are there any sections in the document that should be removed (Yes/No)? Specify which ones</p>	

Observations/ suggestions (add rows as needed)

Partener	Page No.	Section	Observations / Suggested Improvement
P1			
P2			
P3			
P4			
P5			
P6			
P7			
P8			

Reviewers Assessment

(Mark with X the appropriate line)

Document accepted; no changes required	
Document accepted but changes required	
Document not accepted; it must be reviewed after changes are implemented	
Date of Review	
Reviewer's Name & Organization (from QCMB)	

QCMB Chair Consolidated Assessment

Document accepted; no changes required	
Document accepted but changes required	X



Document not accepted; it must be reviewed after changes are implemented	
Suggestions for improvement (if applicable)	Presented above in Observations/ Suggestions
Date of Quality assurance performed	17-05-2021
Deadline for submission of amended version of deliverable (if applicable)	

PEC Approval

Document accepted; no changes required	
Document accepted but changes required	
Document not accepted; it must be reviewed after changes are implemented	
Suggestions for improvement (if applicable)	
Date of Quality assurance performed	
Deadline for submission of amended version of deliverable (if applicable)	



ANNEX 5- Deliverable Quality Evaluation Procedure (DQEPR)

WP4- Quality Control and Monitoring Deliverable Quality Evaluation Procedure (DQCPR)

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	W4/Quality Control and Monitoring
WP Leader	Andrei Szuder
Deliverable (Task) N°/Title	D 4.1./ Deliverable Quality Evaluation Procedure (DQEPR)
Author responsible for the Deliverable	Andrei Szuder
Date of Deliverable submission	12.04.2021
Status:	V1
Dissemination Level:	In conformity with the detailed description of the project, section H1

Revision Sheet

Version	Date	Author (Partner/Person)	The revision reason
V02	16.04.2021	Andrei Szuder	More clarification.
V03	19.04.2021	Danaipong Chetchotsak	Add flow chart as Figure 1.
V1	28.04.2021	Andrei Szuder	Made modification requested by the QCM Members

Distribution List

Project Partner	Responsible (for dissemination)
UPB	Andrei Szuder
KKU	Danaipong Chetchotsak
AIT	Huynh Trung Luong
KMUTNB	Warapoj Meethom
MU	Thananya Wasusri
MIC	Margaret Murphy
PSU	Suriya Jirasatitsin



UMinho	Rui Sousa
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The dissemination responsible refers to the team member of each partner involved in the task’s deliverable/ outcome, that must disseminate the data within the partner internal team.

Table of Contents

Deliverable Quality Evaluation Procedure (DQEPR).....	41
The Deliverable Quality Control Process	42
List of Abbreviations	43
Annex I Deliverable production process – Quality Control and Monitoring Plan QCMP-V1.....	46
Deliverable production process.....	Error! Bookmark not defined.
Deliverable quality control process.....	Error! Bookmark not defined.

Deliverable Quality Evaluation Procedure (DQEPR)

Deliverables are the official and contractual documents between the Consortium and the European Commission. Therefore, deliverables must follow a conveyance process in order to assure their consistency and their quality.

A bottom-up strategy was chosen for quality control of the ReCap4.0 project. This implicates a continuous and gradual process at every phase, starting from the very first stages until the final delivery, in which all partners are involved.

The deliverables (outputs/outcomes) are the essence of the project. upon completion of deliverables according to the Project Milestones, they should be formed according to the Deliverable Template (DT).

The DT template provides a deliverable identity sheet and specifies formatting for the most used elements of deliverable report. The partners responsible for the deliverable are required to ensure that before releasing the first deliverable draft to partners, it is in the correct template, specified format and the identity sheet is complete.

The deliverable DT will be reported to QCMB and PC to assess their compliance and quality with the provisions of the Project Proposal.

They will be check by the QCMB according to QCMP using Deliverable Evaluation Template (DET). The template is based on the standards that the EACEA as funding agency has put forward (check on timeline, consistency, link to project objectives, dissemination outreach etc.). This information will thus be also important to the External Evaluators and to Project Coordinator when reporting to the EACEA. The check will include all deliverables as stated in the project Logical Framework Matrix (LFM).

If there are comments or changes are suggested by QCMB or PC to the deliverable sent by WP Leader, he will have to respond to them until a final deliverable is accepted by QCMB and the PC.

WP leaders are responsible for the timely achievement of the milestones, including for timely reporting to QCMB of completion of work on deliverables and sending to QCMB and PC of report in DT format.



The Project Coordinator will monitor their progress during the duration of the project. The accountable partners will be informed of upcoming milestones one month before the respective due date. In case of potential delays, the Project Coordinator will work with the responsible WP leader to develop a contingency plan.

Once a milestone is reached, the WP Leader should inform the Project Coordinator and the QCMB specifying the delivery date.

Insofar as the confidentiality of deliverables and other documents, including presentations, is concerned, the following four (4) levels of security are considered:

- PU: Public Usage. No restrictions on access (in secured PDF format).
- PP: Restricted to other program participants (including the Commission Services).
- RE: Restricted to a group specified by the consortium (including the Commission Services).
- CO: Confidential, only for members of the consortium (including the Commission Services).

The Deliverable Quality Evaluation Process

Who	Action	To Whom	When (Duration)
Task Leader	<ul style="list-style-type: none"> • Launch of the activities for the realization of deliverables • Prepares Table of Content (ToC) + quality evaluation indicators and circulates • Agreed of all the partners 	Contributing Partners WP Leader	One week from deliverable starting date
Task Leader	<ul style="list-style-type: none"> • Updates ToC according to comments • Proposes Assignments on the ToC and agree with the contributors • Circulates the document to those involved 	Contributing Partners	Two weeks from deliverable starting date
Contributing Partners	<ul style="list-style-type: none"> • Work on the document • Issue intermediate releases 	Task Leader	Ad hoc
Task Leader	<ul style="list-style-type: none"> • Consolidates all input according with the DT • Issue's 1st complete draft Deliverable Template DE • Circulates for comments 	Contributing Partners	One month before submission deadline



Task Leader	<ul style="list-style-type: none"> Updates DT addressing comments received and produces DT final release Forwards DT to WP Leader for review 	WP Leader,	Two weeks before submission deadline
WP Leader	<ul style="list-style-type: none"> Send the DT report to the QCMBC 	QCMBC PC	One week before submission deadline
QCMBC	<ul style="list-style-type: none"> Send the DT report to the QCMB who will review them within a period one week 	QCMB	One week after receiving the deliverables reports from WP Leader
QCMBC	<ul style="list-style-type: none"> Drawn up a consolidated evaluation report If not approved, it returns immediately back to the WP Leader for revision until final version is reached 	WP Leader Task Leader PC	One week after receiving the deliverables reports from QCMB
PC	<ul style="list-style-type: none"> Submits the final version of DT to the PEC Places the submitted PDF version on the Project website under the respective WP folder 	PEC	One week after receiving the deliverable reports from QCMBC

List of Abbreviations

Abbreviation	Full Name
PEC	Project Executive Committee
PC	Project Coordinator
QCMB	Quality Control and Monitoring Board
QCMBM	Quality Control and Monitoring Board Member
QCMBC	Quality Control and Monitoring Board Chair
QCMBCC	Quality Control and Monitoring Board Co-Chair



PA	Partnership Agreement
PMCP	Project Management and Communication Plan -
QCMP	Quality Control and Monitoring Plan
DESP	Dissemination, Exploitation and Sustainability Plan
WP	Work Package
WPL	Work Package Leader
ES	External Stakeholder
EE	External Evaluator
The European Standards & Guidelines	ESG
European Higher Education Area	EHEA

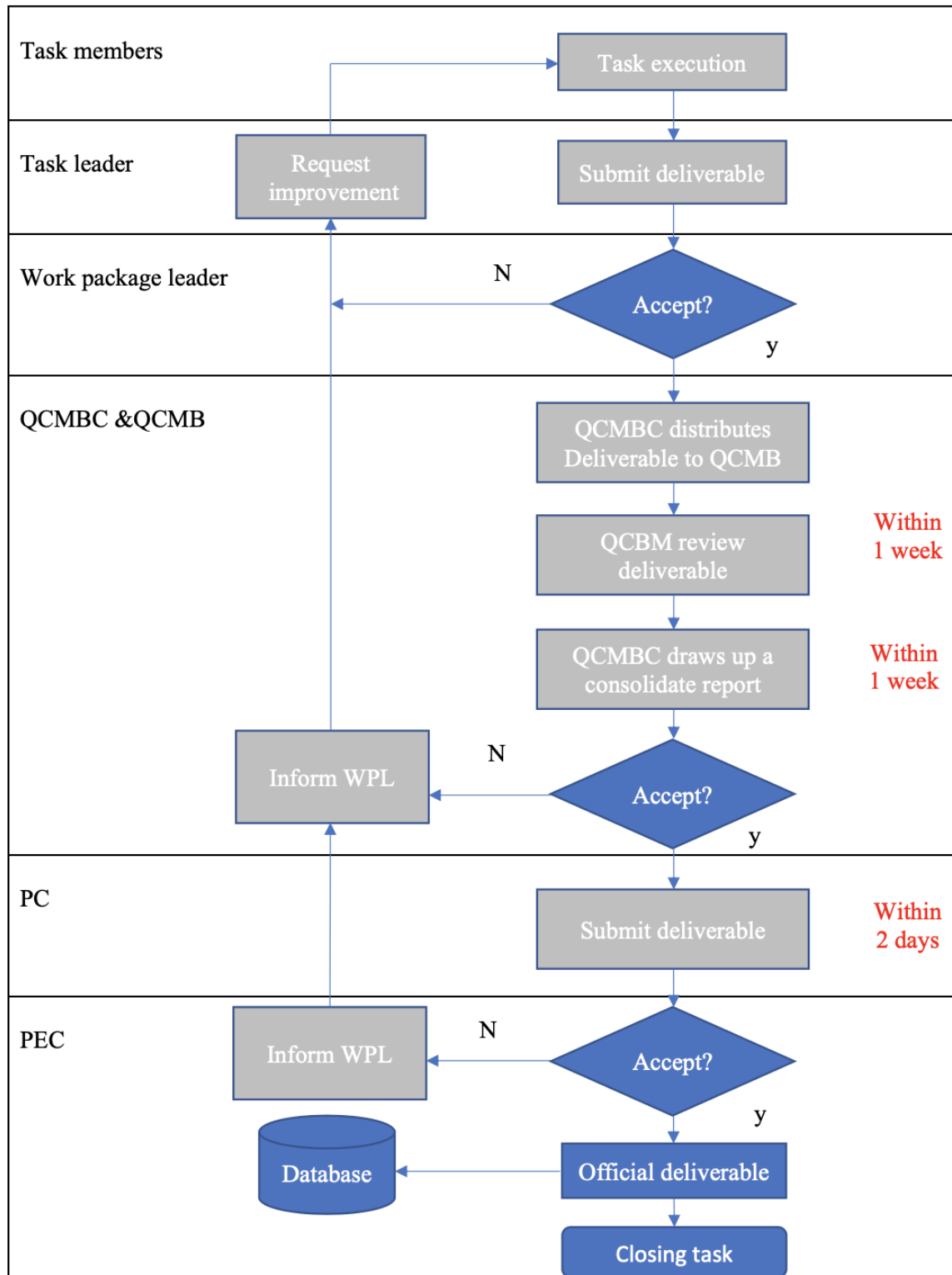


Figure 1 Deliverable Quality Evaluation Procedure (DQEPR)

Annex I Deliverable production process – Quality Control and Monitoring Plan QCMP-V2

Deliverable production process

The deliverable production and approval process is based on continuous revisions and feedback that will allow the Task Leader to analyse and solve the existing errors.

First level: Deliverable authors, Task and WP Leaders:

The first level of quality assessment refers to the activity level. As soon as the deliverables have been produced, they should be reviewed by the corresponding Task and WP Leaders. This procedure is to guarantee the quality and timeliness of produced deliverables in accordance with the Work Plan. If the deliverables fulfil the quality requirements, the process moves to the next level of control. In case of non-approval, the deliverable authors will redesign it in consultation with Task and WP leaders until the quality requirements are reached.

Second level: Internal review

The next level of deliverable quality control is at the internal level of ReCap4.0. Consortium members will have at least one week to provide their comments and suggestions for potential improvements of the deliverables in question.

Once the period of internal review expires, the deliverable authors will incorporate inputs from both review processes and updated version of the deliverables will be forwarded to the next level.

Third level: QCMB and QCMB Chair

The third level control is carried out by the QCMB and QCMB Chair, who will provide the comments and suggestions so that the deliverables can reach its objective and achieve the desired impact. This version will be forwarded by the WPL to PC (the final quality control level) for approval.

Fourth level: PEC approval

The PEC is the highest decision-making body of the ReCap4.0 project, consisting of one senior decision-maker from each project partner institution. The PEC is responsible for final approval of major deliverables produced within the ReCap4.0 project. Once approved by this body, the deliverables will be considered as adopted.

Deliverable quality control process

The methodology and communications are explained below following the temporal sequence of the submission process:

- ***Task Leader to WP Leader and Task Members.*** At the launch of the activities for the realization of deliverables that will be submitted for the evaluation of QCMB, the Task Leader will propose the rest of the partners contributing, a list of content and quality evaluation indicators from the Log frame Matrix of the Project Proposal that covers the whole work and objectives the deliverables are supposed to meet.
- ***Task Members to Task Leader.*** At least one month before the delivery date to the QCMB, all the partners contributing to one deliverable should send the corresponding Task Leader their

contribution. It is the responsibility of the author to ask for these contributions from all the partners in time to check the quality and adequacy and ask for modification or further content under his consideration.

- **Task Leader to WP Leader.** The Task Leader will send the deliverable to the WP Leader who will review them within a period of two weeks.
- **WP Leader to the QCMB Chair and PC.** The WP Leader will send the deliverable utilizing Deliverable Template (DT) to the QCMB Chair to be reviewed by QCMB and to PC.
- **QCMB Chair to QCMB members.** QCMB Chair distributes the deliverables to the other members of the QCMB for evaluation. They will evaluate deliverables according to the established criteria and indicators of the Deliverable Evaluation Template (DET)-ANNEX 3, the Deliverable Quality Evaluation Procedure- (DQEPR)- ANNEX 4 and will give a grade regarding the deliverable quality fulfilment degrees and will make observations and proposals. At the same time, each member of QCMB will assess whether the deliverable can be accepted in its current form without or with additional data or not accepted; and it must be reviewed after changes are implemented.
- **QCMB Chair to the WP Leader and PC.** Based on the evaluations submitted by QCMB members, QCMB Chair will make a consolidated evaluation of the deliverable - Deliverable Consolidated Evaluation Template (DCET) – ANNEX 5 and either:
 - a) approves the deliverable report and informs WP Leader and PC QCMB's findings, observations, and recommendations for completing / modifying the deliverable report. In this case the WP Leader/ Task manager has the obligation to make the required changes that the QCMB required and submit the deliverable report to PC for approval.
 - b) not accept the deliverable report and send it back to the WP Leader do be reviewed. After the reviewed deliverable report is approved by QCMB and a final version is obtained, the WP leader will submit this version for approval to the PC.
- **PC to PEC.** PC will submit for approval the final form of the deliverables to PEC who is responsible for final approval of major deliverables produced within the ReCap4.0 project. Once approved by this body, the deliverables will be considered as adopted.



ANNEX 6- Workpackage Quarterly Report (WQR)

Workpackage –Quality Monitoring and Control Quarterly Report

Title and reference number of the workpackage (WP)	WP4- Quality Monitoring and Control	
WPL:	Co-WPL:	Reporting period:

Indicators of achievement and or/performance as indicated in the project proposal	
--	--

Status of Deliverables*

Deliverable No	Deliverable Title	Status (Y/N/NA)					
		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete

*Please list all deliverables of the WP.

Activities carried out to date to achieve this result:

Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement

** if it is still ongoing, please put “-“.

Activities to be carried out to achieve this outcome (before the end of the project)

Task No	Task Title	Start date	End date#	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement
						•
						•
						•
						•

according to the proposal

Corrective Actions **

Task No	Task Title	Start date	End date*	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement
n/a	n/a				•	

**Only when corrective actions are needed.

Changes that have occurred in this result since the original proposal:



ERASMUS+ CBHE PROJECT

Reinforcing Non-University Sector at the Tertiary Level in Engineering
and Technology to Support Thailand Sustainable Smart Industry

Co-funded by the
Erasmus+ Programme
of the European Union





ANNEX 7- Quality Control and Monitoring Report (QCMR)

WP4 - Quality Control and Monitoring

Quality Control and Monitoring Report (QCMR)

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	4/Quality Control and Monitoring System
WP Leader	Andrei Szuder
Deliverable (Task) N°/Title	4.1./ Quality Control and Monitoring Report Template (QCMR)
Author responsible for the Deliverable	Andrei Szuder
Evaluation period	
Date of Deliverable submission	25/2/2021

Work Package	Task	Deliverables	Planned Start date (*)	Planned End date (*)	Actual Start date	Actual End date	Team members involved	Indicator(s)	Approaches, results	Status (open-draft/ on-going / done-final)	Observations, suggestions



ANNEX 8-Project Quality Assessment Template (PQAT)

WP4 - Quality Control and Monitoring

Project Quality Assessment Template (PQA)

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	4/Quality Control and Monitoring
WP Leader	Andrei Szuder
Deliverable (Task) N°/Title	4.1./ Project Quality Assessment Template PQA
Author responsible for the Deliverable	Andrei Szuder
Date of Deliverable submission	23.02.2021
Status:	V1
Dissemination Level:	Internal

Performance Indicators/Issues to be addressed		1 Very Poor	2 Poor	3 Satisfy	4 Good	5 Very good
How do you evaluate....						
1.	The extent to which the consortium commits time and resources as required by the Work Plan?					
2.	The consortium's efficiency to resolve problems?					
3.	The effectiveness and clarity of the communication among the partners and the PC?					
4.	The effectiveness and clarity of communication with other agencies eg. the National Agency, EEA Grants Managing Authority?					
5.	The commitment and proportionate involvement of all partners?					
6.	The arrangements for the implementation of the work packages and the administration of budgets?					
7.	The effectiveness of the project co-ordination?					
8.	The professional competence and commitment displayed by the PC?					
9.	The quality of the relationship among the partners and team-development?					



Performance Indicators/Issues to be addressed		1 Very Poor	2 Poor	3 Satisfy	4 Good	5 Very good
10.	The quality of the project monitoring and evaluation processes?					
11.	The quality of the project information/results dissemination arrangements?					
12.	The adherence to the Work Plan by all partners?					
13.	The deviations from the Work Plan ? If any, were they based on well-considered reasons and agreement?					
14.	The quality of the project in terms of its short, medium and long-term impact at local/regional/national/European level?					
15.	The quality of materials/guides/reports/products throughout the life-cycle of the project?					
16.	The support from within your partner organization, in terms of managerial support, specialized support or peer support?					
17.	The sufficiency, range and suitability of project resources, including, where appropriate, technology resources?					
18.	The sharing of resources/expertise amongst transnational partners?					
19.	The extent to which technology and other resources are used effectively and innovatively?					
20.	The link between project workplan and cost-effective use of resources?					

Suggested improvements or/ and any other observations: (add rows as needed)

-
-

Conclusions:

.....



ANNEX 9-Event Evaluation Template (EET)



EVENT EVALUATION

Dear Participant,

Thank you for attending this event/ workshop/ infoday etc. In our effort to improve the organization and the impact of these events we invite you to complete the following questionnaire. In most of the questions you will be asked to rate your satisfaction on a scale by ticking the appropriate answer. In some of the questions you will be asked to describe your opinion in a few words and to give suggestions for future improvements of the content and overall organization of the event/ workshop/ infoday etc.

We appreciate your valuable contribution and we thank you in advance!

General information

- a) Sex (Please tick the appropriate option): Female Male
- b) Your Age _____
- c) Country _____
- d) What is your present professional position? _____

OVERALL FEEDBACK

a) Overall, how satisfied were you with:

	Most satisfied	Satisfied	Moderately satisfied	Rather dissatisfied	Not at all satisfied
The event administration	5	4	3	2	1
The structure of the programme	5	4	3	2	1
The venue and facilities	5	4	3	2	1
The presentations	5	4	3	2	1
The discussions	5	4	3	2	1



b) Please indicate your agreement with the following statements by ticking the appropriate number:

	Most satisfied	Satisfied	Moderately satisfied	Rather dissatisfied	Not at all satisfied
The information I got will be of immediate use to me.	5	4	3	2	1
This event covered to a very high extent the topics I have expected.	5	4	3	2	1
I enjoyed the cooperation and interaction with the other participants.	5	4	3	2	1

STRENGTHS AND LIMITATIONS OF THE EVENT

a) Have you participated in similar events before? Yes No

b) Please illustrate any strengths of the event and contributions or activities you enjoyed:

c) Please indicate how you think the event could have been improved:

d) Any further comments? _____

WE THANK YOU FOR YOUR COOPERATION





ANNEX 10- Event Evaluation Procedure (EEPR)



EVENT EVALUATION PROCEDURE

	ACTIVITY	RESPONSIBLE
Preparation (before the event)	Print the Event Evaluation Template – EET, to the participants at their registration	Event's organizer team
	Hand in the form to the participants at their registration	
Data Collection (at the end of the event)	Kindly ask the participants to fill in the forms	Event's organizer team
	Collect the completed forms from the participants	
	Scan and send the collected forms by email to QCMB Chair	
Data Analysis	Starting data analyse	Assigned P7 member
	Develop a short report with the results.	Assigned P7 member
	Submit the report to WP5 Leader, QCMB, PC, with cc to the event organizer – to be analysed and provide feedback, if needed.	Assigned P7 member
	Implement the feedback (if any) and send the final report to QCMB and PC.	Assigned P7 member
	Upload the report on the website.	PC-Pisut Koomsap – AIT



ANNEX 11-Training Evaluation Template (TET)



TRAINING EVALUATION TEMPLATE

Dear Participant,

Thank you for attending the training activities carried out at [University], [local], [date]. In our effort to analyze the impact of the training, we invite you to complete the following questionnaire.

We appreciate your valuable contribution and we thank you in advance!

GENERAL INFORMATION

- a) Sex (Please tick the appropriate option): Female Male
- b) Your Age _____
- c) Teaching experience (in years) _____

OVERALL FEEDBACK

- a) In a scale 1 to 5, please identify for each item your level of accordance.

1

Totally Disagree 2

Disagree 3

I am not sure 4

Agree 5

Totally Agree

- a) The training was useful and relevant for the project activities.
- b) I understood the concepts presented in the training.
- c) The themes / topics developed in the training were relevant for my teaching practice.
- d) I had an active participation during the training activities.
- e) The trainers had an effective approach during the activities developed.
- f) The training materials used were useful for the project activities.
- g) The training was valuable experience for professional growth.
- h) I will recommend this training to somebody else.

- b) In my opinion, the positive aspects of the training were:



c) In my opinion, the less positive aspects of the training were:

d) Suggestions and other comments.

IMPACT OF THE TRAINING

In your opinion, what was the most meaningful experience carried out in the context of the training, taking into account the project activities to be developed and the challenges of your teaching practice? Please, justify your answer (including examples).

ANY FURTHER COMMENTS

Thank you for your cooperation.



ANNEX 12-Training Evaluation Procedure (TEPR)



TRAINING EVALUATION PROCEDURE

	ACTIVITY	RESPONSIBLE
Preparation (before the training)	Set up the google forms - questionnaire.	Assigned QCMB and Training's organizer team
	Send the link to the training organizer team.	Assigned QCMB and Training's organizer team
Data Collection (after the training)	Send the link to the participants.	Training's organizer team
	Monitoring the process (number of replies).	Assigned QCMB
	Send a reminder (if necessary).	
	Close data collection.	
Data Analysis	Starting the data analysis.	QCMB QCMB
	Develop a short report with the results.	QCMB QCMB
	Submit the report to WP3 Leader, QCMB, PC, with cc to the training organizer – to be analysed and provide feedback, if needed.	QCMB QCMB
	Implement the suggestions (if any) and send the final report to PC.	QCMB QCMB
Closing	Upload the report on the website.	Pisut Koomsap – AIT



ANNEX 13-Website Evaluation Template (WET)



RECAP4.0 PROJECT'S WEBSITE EVALUATION

Please find the project website at address:

<http://ise-portal.ait.ac.th/>

After analyzing the website, please answer each question with an evaluation from 1 - 5, where 1 is Poor and 5 is Very Good.

	1	2	3	4	5
What is your opinion of the general user friendliness of the website?					
What is your opinion about the quality and sufficiency of the information provided by the database?					
Did you find the use of the website and the database useful?					
Evaluate the ease of navigation of project's website.					
To which extent did the use of the database and website live up to your expectations?					
Evaluate the website aesthetics (graphics, colors, fonts, etc.).					
Evaluate the uniqueness of the project's website.					
How valuable was your visit to the website for your professional growth?					
Would you recommend visiting the website to somebody else? YES/NO					

Comments and recommendations:

.....

.....

.....

.....

Optional, but recommended:

Name:

Age:

E-mail / tel:

Please send us back the filled form



ANNEX 14- Quality Control and Monitoring Board Report (QCMBR)

WP4 - Quality Control and Monitoring

Quality Control and Monitoring Report

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	4/Quality Control and Monitoring
Work Package title	Quality Control and Monitoring
WP Leader	Andrei Szuder
Deliverable (Task) N°/Title	4.1./ Quality Control and Monitoring Board Report
Author responsible for the Deliverable	Andrei Szuder
Date of Deliverable submission	17.06.2021
Status:	V1
Dissemination Level:	Internal/External

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Revision Sheet

Version	Date	Author (Partner/Person)	The revision reason

Distribution List

Project Partner	Responsible (for dissemination)
UPB-P7	Andrei Szuder
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PSU-P5	Suriya Jirasatitsin
UMinho-P8	Rui Sousa

Table of Contents

- 1. Executive Summary**
- 2. Introduction**
- 3. Process evaluation**
- 4. Product-evaluation**
- 5. Project impact evaluation**
- 6. Conclusions**



ANNEX 15-Project Documents List (PDL)

WP4 - Quality Control and Monitoring Project Document List- PDL

Project Acronym:	ReCap4.0
Project full title:	Reinforcing Non-University Sector at the Tertiary Level in Engineering and Technology to Support Thailand Sustainable Smart Industry
Project No.:	619325-EPP-1-2020-1-TH-EPPKA2-CBHE-JP
Work Package N° and title	WP4/Document List
WP Leader	Andrei Szuder
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Date of Deliverable submission	06/03/2021
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Dissemination level	In conformity with the detailed description of the project, section H1

Revision Sheet

Version	Date	Author (Partner/Person)	The revision reason



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No.	Document title	Abbreviation	WP	EN/TH	Version	Issued by	Valid from	Purpose	Users	Frequency