

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



Workpackage Quarterly Report

Title and reference number of the workpackage (WP)	WP1- Non-University Capacity Assessment	
WPL: Rui Lima (UMinho)	Co-WPL: Athakorn Kengpol (KMUTNB)	Reporting period: Mar 31, 2022

Indicators of achievement and or/performance as indicated in the project proposal	 The capacity assessment execution plan is ready by M1 The capacity assessment form is available by M2 The assessment results are available by M6
	 Recommendations are available by M6

Status of Deliverables*

Deliver	Deliverable Title			Status	s (Y/N/NA)		
able No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete
Dev 1.1	A capacity assessment execution plan	Y	Y	Y	Y	Y	Y
Dev 1.2	A capacity assessment form	Y	Y	Y	N/A	N/A	Y
Dev 1.3	An assessment report on non-university capacity, including recommendations emphasis areas for the Industry 4.0 competence development training program	Y	Y	Y	Ŷ	Y	Y

*Please list all deliverables of the WP.



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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
Task 1.1	Developing a capacity assessment execution plan	Feb 1, 2021	Aug 3, 2021	All partners	• • •	Explored the knowledge needed for the assessment form. Developed a capacity assessment execution plan. Reviewed and approved the plan by WP1 team Submitted the plan to QCMB for approval Revised the plan Resubmitted the plan to QCMB for approval Submitted the plan to PEC for approval	 Official capacity assessment execution plan <u>https://bit.ly/3FIRcOw</u>
Task 1.2	Designing capacity assessment	Mar 1, 2021	June 1, 2021	All partners	•	Analysed knowledge areas and sources required for the assessment form. Developed items for the questionnaire. Reviewed and approved the questionnaire's items by WP1 team. Developed a think-aloud procedure with 6 Thai teachers to improve understanding of the questionnaire. Improved the questionnaire.	 An official questionnaire for the capacity assessment available in a Google forms. <u>https://bit.ly/3FksvSb</u>



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					•	Tested and retested to validate the questionnaire with 43 participants Reviewed the results Adjusted the questionnaire Obtained the final version of the questionnaire for the capacity assessment available in a Google forms.		
Task 1.3	Conducting non-university capacity assessment	June 1, 2021	June 30, 2021	Thai partners and UMinho	•	Sent out the invitation to the target groups to participate on the survey. Monitored the number of responses and took action to ensure the number was reached.	•	The survey results from 200 participants
Task 1.4	Summarize, interpret results and recommendations	July 1, 2021	Jan 20, 2022	All partners	•	Analyzed the data. Developed the final report with a summary and interpretation of the results, and recommendations. Reviewed the report internally among the WP1 members.	•	An official non-university capacity assessment report <u>https://bit.ly/3sdwNW8</u>

** 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



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Corrective Actions **

Task N	o Task Title	Start date	End date*	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement

**Only when corrective actions are needed.

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

The project was kicked-off in Feb 2021.

The workplan was revised one time in Feb 2021.

Tasks 1.1 to 1.3 were executed according to the plan.

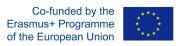
Additional time was needed to ensure the quality of the analysis of the results.

Consequently, an official report on the capacity assessment is expected to be delayed by a couple months.

The WP1 team approved the final result in the beginning of October, and we initiated the preparation of the process for evaluation of the final deliverable by QCMB and after that by PEC.



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Title and reference number of the workpackage (WP)	WP2- Sustainable Development of Industry 4.0 Competence Development Training Program				
WPL: Pisut Koomsap (AIT)	Co-WPL: Cathal de Paor (MIC)	Reporting period: Mar 31, 2022			

Indicators of achievement and or/performance as indicated in the project proposal	 Approval of an Industry 4.0 Competence Development Training Program by PEC by M7 10 modules complete with innovative training materials are ready by M9 A capacity training assessment form is approved by WP2 members by M3 Completion of training sessions for the 12 Thai trainers by M29
	 Completion of coaching sessions for the 12 Thai trainers by M30 An assessment report by M31 An Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry

Status of Deliverables*

Deliver	Deliverable Title			Statu	s (Y/N/NA)		
able No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete
Dev 2.1	An Industry 4.0 Competence Development Training Program	Y	Y	N	Y	Y	Ν
Dev 2.2	Innovative training materials for 10 modules	Y	Y	N	Y	Y	Ν
Dev 2.3	A capacity training assessment form	Y	Y	N	Y	Y	Ν
Dev 2.4	12 Thai trainers trained in program design (for higher education	Y	Y	N	N/A	N/A	Ν

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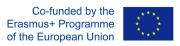
	contexts), and in the use of innovative learner- centered teaching and assessment methods						
Dev 2.5	An assessment report of the Thai trainer's competence in the use of knowledge and skills gained in higher education teaching	N	Ν	Ν	N	Ν	Ν
Dev 2.6	An Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry	N	N	Ν	N	Ν	N

*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
Task 2.1	Designing an Industry 4.0 Competence Development Training Program	Feb 10, 2021	-	AIT, KKU, MIC,UPB and UMinho	•	Prepared for the development of the Industry 4.0 Competence Development Training Program Identified the experts who will develop and offer the 10 training modules Developed a template for the development plan of the 10 training modules	 Presentation material on the concept of the Industry 4.0 Competence Development Training Program <u>https://bit.ly/3sex2jV</u> A list of the experts <u>https://bit.ly/3M0DXF2</u>





 Conducted a meeting with the experts on how to use the template for the module development plan Developed a template for a syllabus 	 7 module development plans completed 7 syllabuses completed
 Completed the module development plans for Learning Experience-Focused Course Design and Development (Module 1) Communication and People Skills Development (Module 2) Innovative Teaching and Learning Methods (Module 3) Coaching and Mentoring (Module 5) Applications of Optimization and 	 Document uploaded on the internal website for assessment for QCMB and PEC approval <u>https://bit.ly/3MRoyHb</u> Official syllabuses and training activities plan uploaded in WP2 section on the member space for the following approved modules (<u>https://bit.ly/3KOI45Y</u>)
 Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Data Analytics (Module 10) 	 Communication and People Skills Development (Module 2) Syllabus <u>https://bit.ly/3KNmMW8</u>
 Developing the module development plans for Project-Based and Problem-Based Learning (Module 4) Digital Manufacturing (Module 8) 	Activities Plan <u>https://bit.ly/3824MKD</u> • Applications of Optimization and Technology in Value Chain (Module 7)
 Completed the syllabuses for Learning Experience-Focused Course Design and Development (Module 1) 	Syllabus <u>https://bit.ly/3vLxgB4</u> Activities Plan

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 Applications of C Technology in Va 7) Innovative Produce Development (N Data Analytics (N Completed training a Communication Development (N Applications of C Technology in Va 7) Innovative Produce Development (N Data Analytics (N Data Analytics (N Submitted document and approval Communication Development (N Applications of C 	 Innovative Product Design and Development (Module 9) Syllabus https://bit.ly/3OXEDgt Activities Plan https://bit.ly/3kIXVs5
	alue Chain (Module





				 Innovative Product Design and Development (Module 9) Data Analytics (Module 10) 	
Task 2.2	 Developing innovative training materials 	Apr 27, 2021	- AIT, KKU, MIC	 Started forming materials for a module on Course Design and development Started forming materials for a module on Communication and People Skills Development Completed training materials for Completed training materials for Communication and People Skills Development (Module 2) Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Data Analytics (Module 10) Developing training material for Innovative Teaching and Learning Methods (Module 3) Submitted document to PEC for review and approval Communication and People Skills Development (Module 2) 	 Document uploaded on the internal website for assessment for QCMB and PEC approval https://bit.ly/3MRoyHb Official course material uploaded in WP2 section on the member space for the following approved modules (https://bit.ly/3MRoyHb Official course material uploaded in WP2 section on the member space for the following approved modules (https://bit.ly/3MRoyHb Official course material uploaded in WP2 section on the member space for the following approved modules (https://bit.ly/3MRoyHb Official course material uploaded in WP2 section on the member space for the following approved modules (https://bit.ly/3KO145Y) Communication and People Skills Development (Module 2) https://bit.ly/3Fij4CA Applications of Optimization and Technology in Value Chain (Module 7) https://bit.ly/3LQGEJx Innovative Product Design and Development (Module 9) https://bit.ly/39ywtLb





				 Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Data Analytics (Module 10)
Task 2.3	Developing a capacity training assessment	Feb 10, 2021	AIT, KKU, MIC, UPB and UMinho	 Developed a capacity training assessment system Completed assessment forms for Learning Experience-Focused Course Design and Development (Module 1) Communication and People Skills Development (Module 2) Innovative Teaching and Learning Methods (Module 3) Coaching and Mentoring (Module 5) Applications of Optimization and Technology in Value Chain (Module 7) Digital Manufacturing (with reservation due to a concern on covering three main topics in depth in 15 hours) Innovative Product Design and Development (Module 9) Data Analytics (Module 10) Capacity training assessment form so a covering three main topics in depth in 15 hours) Innovative Product Design and Development (Module 10) Capacity training assessment form for Capacity training assessment forms for 8 modules Document uploaded on the internal website for assessment for QCMB and PEC approval https://bit.ly/3MRoyHb Official Capacity training assessment for muploaded in WP2 section on the member space for the following approved modules (https://bit.ly/3KOI45Y) Communication and People Skills Development (Module 2) https://bit.ly/38R49DA Applications of Optimization and Technology in Value Chain (Module 7) https://bit.ly/3POm2An



					 Project-Based and Problem-Based Learning (Module 4) Industrial Management in Industry 4.0 Era (Module 6) Digital Manufacturing (Module 8) Submitted document to PEC for review and approval Communication and People Skills Development (Module 2) Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Data Analytics (Module 10)
Task 2.4	Training the Thai trainers	Feb 17, 2021	-	AIT, KMUTNB, KKU,MU, PSU and MIC	 Identified the 12 Thai trainers Had a meeting with Thai trainers to explain train the trainer program Updated the list of 12 Thai trainers Trained the trainers for Communication and People Skills Development (Module 2) Data Analytics (Module 10) Scheduled the training for Innovative Teaching and Learning Methods (Module 3) Identified the 12 Thai trainers A updated list of the Thai trainers https://bit.ly/3kLFtPl Understanding of Thai trainers or their roles and expectation Training completed for Communication and People Skills Development (Module 2) Data Analytics (Module 10)



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					 Innovative Teaching and Learning Methods (Module 3) Status of the Train the Trainer Program <u>https://bit.ly/3samMJx</u>
					 Note: the two trainings in Jan 2022 were postponed due to the emergence of Omicron at the end of December
Task 2.5	Coaching the Thai trainers	Feb 20, 22	AIT, KMUTNB, KKU,MU, and PSU	 Coaching for Communication and People Skills Development (Module 2) Data Analytics (Module 10) 	 Ongoing coaching activities for Communication and People Skills Development (Module 2) Data Analytics (Module 10)

** 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	End	Place/	Description of the activity carried out	Specific and measurable indicators of
		date	date#	Partners		achievement
				involved		
Task 2.1	Designing an Industry 4.0 Competence Development Training Program	Feb 21	Aug 21	AIT, KKU, MIC, UPB, and UMinho	 Complete the module development plans for Project-Based and Problem-Based Learning (Module 4) Industrial Management in Industry 4.0 Era (Module 6) 	 An official curriculum of an Industry 4.0 Competence Development Training Program





					•	 Digital Manufacturing (Module 8) Complete the syllabuses for Project-Based and Problem-Based Learning (Module 4) Industrial Management in Industry 4.0 Era (Module 6) Digital Manufacturing (Module 8) 		
					•	 Complete the activities plans for Learning Experience-Focused Course Design and Development (Module 1) Project-Based and Problem-Based Learning (Module 4) Coaching and Mentoring (Module 5) Industrial Management in Industry 4.0 Era (Module 6) Digital Manufacturing (Module 8) 		
Task 2.2	Developing innovative training materials	Apr 21	Dec 21	AIT, KKU, MIC, UPB, and UMinho	•	 Submit the curriculum to QCMB and PEC Complete the training materials for Learning Experience-Focused Course Design and Development (Module 1) Innovative Teaching and Learning Methods (Module 3) Project-Based and Problem-Based Learning (Module 4) Coaching and Mentoring (Module 5) 	•	Official training materials for the 10 modules



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Task 2.3	Developing a capacity training assessment	Feb 21	Apr 21	UPB and UMinho	•	 Industrial Management in Industry 4.0 Era (Module 6) Digital Manufacturing (Module 8) Submit the materials to QCMB and PEC Complete the assessment form for Project-Based and Problem-Based Learning (Module 4) Industrial Management in Industry 4.0 Era (Module 6) Digital Manufacturing (Module 8) Submit the forms to QCMB and PEC 	• A capacity training assessment form
Task 2.4	Training the Thai trainers	Feb 21	Mar 23	All partners	•	Train 12 Thai trainers	Completion of training sessions
Task 2.5	Coaching the Thai trainers	Jun 21	May 23	All partners	•	12 Thai trainers do assigned tasks Experts advise the Thai trainers	Completion of coaching sessions
Task 2.6	Assessing the Thai trainers	Jul 21	Jun 23	All partners	•	Assess the performance of the 12 Thai trainers	• An assessment report on the performance of the 12 Thai trainers
Task 2.7	Setting up an Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry	Nov 22	Jun 23	All partners	•	Establish the center	 an Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry

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
Task x.x					•	



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**Only when corrective actions are needed.

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

A plan has been revised one time in Feb 21.



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



Title and reference number of the workpackage (WP)	WP3-Capacity training for non-university sector at tertiary level in Thailand			
WPL: Thanate Ratanawilai (PSU)	Co-WPL: Kanchaha Sethanan (KKU)	Reporting period: Mar 31, 2022		

Indicators of achievement and or/performance as indicated in the project proposal	 The capacity training execution plan is ready by M4 Completion of the capacity training sessions by M31 Completion of the capacity coaching sessions by M33 An assessment report on the trained capacity by M35

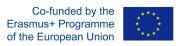
Status of Deliverables*

Deliver	Deliverable Title	Status (Y/N/NA)								
able No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete			
Dev 3.1	A capacity training execution plan	Y	Y	N	Ν	N	N			
Dev 3.2	60 trained teaching staff from non-university sector at tertiary level	Y	Y	N	N/A	N/A	N			
Dev 3.3	An assessment report of trained teaching staff from non-university sector at tertiary level	Y	Y	N	N	N	N			

*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
Task 3.3	Developing capacity training execution plan	Feb 21		KKU, M U, and PSU	•	 Obtained an initial registration list of trainees and their interested modules from WP5 Checked availability of registered trainees in the Southern region (the largest group according to the list) for attending the first module Explained about the training program to prospective trainees in the Central, Eastern, and Western region in the online information session Explained about the training program to prospective trainees in the Southern region in the online information session Scheduled training program for Central region for Communication and People Skills Development (Module 2) Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Scheduled training program for Southern region for Communication and People Skills Development (Module 2) 	 A tentative list of trainees and their interested modules Training activities scheduled for December 2021 and January 2022 (Note: the activities for January have been postponed due to the emergence of Omicron at the end of December 2021) Training activities scheduled for Central region of Module 2 on 11-13 March 2022 Module 7 on 18-20 March 2022 Module 9 on 25-27 February 2022 Training activities scheduled for Southern region of Module 2 on 18-20 March 2022 Module 9 on 2-4 May 2022 (Note: Module 7 was scheduled on 1-3 April 2022 but the activity has been postponed due to the emergence of Omicron)





				 Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9)
Task 3.2	Conducting capacity training on Industry 4.0 competence development	Apr 21	AIT, KKU, M U, and PSU	 Preparing for offering the first module in the South Preparing for offering the first module in the Central Conducted 2 capacity training sessions in Decembers 2021 at Rambhai Barni Rajabhat University for a subgroup of Central region on Communication and People Skills Development (Module 2) Innovative Product Design and Development (Module 9) Conducted 3 capacity training sessions in February and March 2021 at Mahidol University for Central region on Communication and People Skills Development (Module 2) Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 2)



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	 Conducted 2 capacity training sessions in March and April 2021 at Prince of Songkla University (PSU) for Southern region on Communication and People Skills Development (Module 2) Innovative Product Design and Development (Module 9)
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** 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
Task 3.1	Developing capacity training execution plan	Feb 21	July 21	All partners	•	Obtain a complete registration list of trainees and their interested modules, registered for 4 regions of Thailand from WP5 Collect a name list of 12 Thai trainers for each module from WP2 Create tentative schedules for training and coaching of the 10 modules for the 4 regions to form a capacity training execution plan (CTEP) Submit the CTEP to QCMB and PEC for approval	• An official capacity training execution plan



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Task 3.2	Conducting capacity training on Industry 4.0 competence development	Apr 21	Sept 23	Thai partners	•	Prepare for the implementation of the training sessions of CTEP in all 4 regions Conduct the training sessions for teaching staffs of non-university sector at tertiary level Assess the trainees after the completion of each training module	•	Completion of capacity training sessions
Task 3.3	Coaching trained capacity	July 21	Oct 23	Thai partners	•	Prepare for the implementation of the coaching sessions of CTEP in all 4 regions Conduct the coaching sessions for teaching staffs of non-university sector at tertiary level Assess the trainees after the completion of each coaching module	•	Completion of coaching sessions
Task 3.4	Assessing trained capacity	July 21	Oct 23	EU partners and AIT	•	Monitor the training and coaching activities Assess the overall performance of the trainees after the completion of coaching sessions	•	An assessment report on the performance of the trained teaching staff from non-university sector

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



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**Only when corrective actions are needed.

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

A plan has been revised one time in March 21.



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Title and reference number of the workpackage (WP)	WP4- Quality Monitoring and Control	
WPL: Andrei Szuder (UPB)	Co-WPL: Danaipong Chetchotsak (KKU)	Reporting period: Mar 31, 2022

Indicators of achievement and	WP4-4.1 A quality control and monitoring system (M1)
or/performance as indicated in the	 WP4-4.2 Internal quality control and monitoring (on a regular basis until the end of the project)
project proposal	 WP4-4.3 External quality control and monitoring (M13 and M25)
	WP4-4.4 External financial audit (M27)

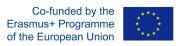
Status of Deliverables*

Deliver	Deliverable Title	Status (Y/N/NA)							
able No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete		
4.1	Developing a quality control and monitoring system -	Y	Y	Y	Y	Y	Y		
4.2	Internal quality control and monitoring (on a regular basis until the end of the project)	Y	Y	N	Y	N	N		
4.3	External quality control and monitoring	Y	Y	Ν	Ν	N	N		
4.4	External financial audit	Ν	Ν	Ν	Ν	Ν	Ν		

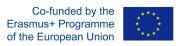
*Please list all deliverables of the WP.

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
4.1	Developing a quality control and monitoring system	Feb 1, 2021	Sep 13, 2021	All partners	•	Developed a QCMP and supporting Quality Management System templates Reviewed and approved the contents of the QCMP by QCMB Revised the QCMP according to the project management flow given by PC., approved Project Proposal and the ReCap 4.0 Erasmus Projects Overview. Submitted to PEC for approval. Revised QCMP per PEC comments Submitted to PEC for approval	•	An official QCMP https://bit.ly/3w1ODN4 The Quality Management System templates drafts are available on the ReCap4.0 Project Portal: https://bit.ly/38Y0Uud
4.2	Implementing the internal quality control and monitoring of the project	Mar 11, 2021	-	All partners	•	Updated data of the task deadlines, responsible and the current stage of WP's in the Quality Control and Monitoring Template Reviewed and approved the contents of deliverable, "WP1-1.1 A capacity assessment execution plan" Reviewed and approved the contents of deliverable, "WP5-5.1 A Dissemination, Exploitation and Sustainable plan (DESP)"	•	The quality monitoring report is available on the ReCap4.0 Project Portal: <u>https://bit.ly/3waQrnb</u> Consolidated Quality Control and Monitoring Report (QCMR): <u>https://bit.ly/38OUDkl</u> The consolidated reviewed report (The consolidated reviewed report (The consolidated deliverable evaluation template) for the deliverable WP1-1.1



	 Reviewed and approved the contents of deliverable, "WP4-4.1 A quality control and monitoring system." Set up QCMB tasks for the end of the first 6 months of the ReCap 4.0 project monitoring activities and adapting the necessary templates. Data collection and work for drafting the second consolidated QCMR- Quality Control and Monitoring Report Prepare Quality Control and Monitoring Board Report (QCMBR) Reviewed and approved the revised version of "WP5-5.1 A Dissemination, Exploitation and Sustainable plan (DESP)" Reviewed and approved the non-university capacity assessment report (WP1-D1.4) Evaluated document for the following course modules Communication and People Skills Development (Module 2) Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Data Analytics (Module 10) 	 The consolidated reviewed report (The consolidated deliverable evaluation template) for the deliverable WP5-5.1 The consolidated reviewed report (The consolidated deliverable evaluation template) for the deliverable WP4-4.1 and Revised QCMP per PEC comments. Tasks, templates and QCMR reports. Quality Control and Monitoring Board Report (QCMBR) for the period January 2021 to July 2021: https://bit.ly/3LN2xZX Consolidated review report for WP1- D1.4. Consolidated reports for course modules WP2 -2.2-M2, M7, M9 and M10
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				 Prepared training evaluation report (Period Dec 2021-Mar 2022). 	
4.3	Inviting independent external evaluation of the project results	Oct 2021	All partners and External evaluator	 Prepared a process for selection of an external evaluator Reviewed the candidates proposed by PC Recommended the selected candidate to PEC Invited the selected external auditor Prepared contract for the external audit 	 Consolidated review results of the procedure: <u>https://bit.ly/3901nfu</u> Procedures for Independent External Evaluation for the Project Results: <u>https://bit.ly/3vLZHz3</u> Assessment results <u>https://bit.ly/3P09ycc</u> Contract signed between the legal representative and the external evaluator.

** 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	End	Place/	Description of the activity carried out	Specific and measurable indicators of
		date	date#	Partners		achievement
				involved		
4.2	Implementing the internal	Dec	Nov	All partners	 Monitor the project activities 	• Updated quality monitoring report as
	quality control and	2020	2023			Link to the file:
	monitoring of the project					https://bit.ly/37mCwlu



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					•	Execute quality control of all deliverables according to the proposal until the end of the project.	
4.3	Inviting independent external evaluation of the project results	Nov 2021	Nov 2023	All partners and External evaluator	•	Draft a contract between the external evaluator and the project Facilitate the external evaluation process	 Midway external quality control and monitoring report. Final external quality control and monitoring report.
4.4	Inviting independent external financial audit	Jan 2023	Nov 2023	All partners and External auditor	•	Prepare a process for selection of an external auditor Contact candidates for proposals Conduct a process to select an external financial auditor Contact the external financial auditor Draft a contract between the external financial auditor and the project Facilitate the external financial audit process	External financial audit report.

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				•	



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**Only when corrective actions are needed.

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

For WP4 a revision was proposed compared to the initial plan. WP 4. Task 4.1 Quality Control and Monitoring System, start date. 4.1 -Feb 1, 2021and closing date June 30, 2021

External financial audit will be no longer required. All partners will be ask to provide internal audits.



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Title and reference number of the workpackage (WP)	WP5-Dissemination and Exploitation of Project Results				
WPL: Tuangyot Supeekit (MU)	Co-WPL: Pisut Koomsap (AIT)	Reporting period: Mar 31, 2022			

Indicators of achievement and	• Dissemination, Exploitation and Sustainable plan is prepared by M1.
or/performance as indicated in the	 A project website is created and publicly available from M1.
project proposal	 Online registration form for trianees is created by M2.
	 A complete list of registered trainees from Rajabhat Universities is finalised by M4.
	 Dissemination materials will be available from M1.
	 Availability of publications regarding project outputs in professional journals, conference proceedings and social media from M18.
	 Training centres and training networks with 80 members are established by M36.
	 Public seminars are organised at the beginning of project years; M1, M13, M24.
	 Final conference with project presentation from partners is arranged in M35.

Status of Deliverables*

Delivera	Deliverable Title		Status (Y/N/NA)							
ble No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete			
Dev5.1	A Dissemination,	Y	Y	Y	Y	Y	Y			
	Exploitation and									
	Sustainable plan (DESP)									
Dev5.2	A project website	Y	Y	Ν	Ν	Ν	N			
Dev5.3	A list of registered trainees	Y	Y	Ν	NA	NA	N			
	from the non-university									
	sector at tertiary level in									
	Thailand									
Dev5.4	Dissemination materials	Y	Y	N	Ν	Ν	N			



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



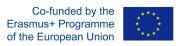
Delivera	Deliverable Title			Status	(Y/N/NA)		
ble No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete
Dev5.5	Publications in professional journals, newspapers, magazines, brochures and social media	Y	Y	N	Ν	N	N
Dev5.6	A list of the members of the Innovative Teaching and Learning Centre for Thailand Sustainable Smart Industry	Y	Ν	N	NA	NA	N
Dev5.7	Dissemination events	Y	Y	N	NA	NA	N
Dev5.8	A dissemination- sustainability conference	Ν	Ν	N	NA	NA	N

*Please list all deliverables of the WP.

Activities carried out to date to achieve this result:

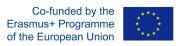
Task No	Task Title	Start date	End date**	Place/ Partners		Description of the activity carried out	Specific and measurable indicators of achievement
				involved			
Task 5.1	Development of a	Apr	Jan 23,	All partners	•	Discussed about activities	An official DESP
	Dissemination,	23,	2022		•	Drafted a DESP	https://bit.ly/3FhUfqP
	Exploitation and	2021			٠	Reviewed the plan	
	Sustainable plan				•	Submitted the DESP to QCMB	
					•	Revised the DESP according to QCMB's	
						feedback	
					•	Submitted the revised DESP to QCMB	





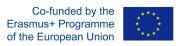
Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
					•	Revised DESP as per QCMB comments and submitted to PEC for approval	
Task 5.2	Creating a project website and maintaining it throughout the project lifetime to support the dissemination strategy, and communication and collaboration among partners	Jan 12, 2021	-	AIT	•	Designed, created and launched both the project website and Member Space (internal website for the project's members) Transformed MSIE 4.0 Facebook to ReCap 4.0 Facebook and keeping it up to date with the activites of ReCap 4.0 Created a YouTube Channel for ReCap 4.0 Updating contents to keep these communication channels up to date. Updating the website with short articles about Industry 4.0 and EU consortium partners	 The project website: <u>http://recap4.ait.ac.th/</u> Member Space: <u>https://bit.ly/3FkQAIT</u> Facebook: <u>ReCap4Thailand</u> <u>https://bit.ly/3sfMGeJ</u> YouTube Channel: <u>https://bit.ly/388mdcj</u>
Task 5.3	Inviting non-university sector to participate in the training program and preparing for online training registration	Dec 22, 2020	-	AIT, PSU	•	Visited Nakorn Pathom Rajabhat University in December 2020 to introduce the project to the administration of the Faculty of Science and Technology and invite them to send their faculty members to participate in the competence development training program	 The 31st meeting of the Council of the Industrial Technology Deans of Rajabhat Universities <u>https://bit.ly/3OWLCX0</u> Rajabhat visits <u>https://bit.ly/39035NW</u>





Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
					•	Attended the 31st meeting of the Council of the Industrial Technology Deans of Rajabhat Universities in March 2021 to introduce the project and invite them to send their faculty members to participate in the training program Visited Nakorn Si Thammarat Rajabhat University, Songkla Rajabhat University and Suratthani Rajabhat University to introduce the project to the faculty members of the Faculty of Industrial Technology and the Faculty of Science and Technology and invite them to participate in the training program Created an online registration for the teaching staff to register for training Monitoring, responding, and updating the registration Organized two meetings and presented the ReCap 4.0 Competence Development program to trainees in the Central and Southern regions. The activity has been on hold for the other two regions due to the third wave of the COVID-19 pandemic. Prepared and sent official invitation	 <u>https://bit.ly/3vN0Y8Z</u> <u>https://bit.ly/3883DB8</u> Online registration form available via the project website <u>https://bit.ly/30ZEEk3</u> Information Session for Central Region <u>https://bit.ly/38R87vY</u> Tentative lists of trainees from Rajabhat universities (150 trainees as of 15 June 21 for initial registration) 36 confirmed trainees in the Central region 12 confirmed trainees in the Southern region Visits to two Rajabhat Universities in the North In March 2022 (Postponed from the previous scheduled at beginning of January 2022 due to the

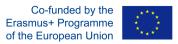




Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out Specific and measurable indicators of achievement
					 region and 12 trainees in the Southern region Contacting Rajabhat Universities in the North and Northestern Scheduled a visit to the Rajabhat Universities in the North for promotion Visited Nakhon Sawan Rajabhat University to promote ReCap 4.0 project and invite the faculty members to participate in our competence development training program. Visited Lampang Rajabhat University to promote ReCap 4.0 project and invite the faculty members to participate in our competence development training program as well as prepare training room and facilities for the training in Northern region
Task 5.4	Production of dissemination materials	Jan 12, 2021	-	All partners	 Created a poster and distributed to WP5 members for dissemination and post on their universities' websites. Created a flyer and distributed to visited Rajabhat Universities A poster published in Production Engineering Archive Journal (April 2021) A flyer (same format as poster) Contents on the project website, Facebook and YouTube Channel



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Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
					•	Created contents about the project's activities for the project website, Facebook and YouTube Channel Created a project introduction video Created the first issue of E-newsletter Finalizing a second issue for RISE E- newsletter	 A VDO clip to be introduced after the COVID situation is alleviated. E-newsletter issue1 <u>https://bit.ly/3yhR1II</u>
Task 5.5	Publications in professional journals, newspapers, magazines, brochures and social media	Apr 15, 2021		MIC, AIT, KMUTNB	•	introduced the project on the university website (MIC), and local newspapers Delivered a presentation at 15 th International Conference Quality Production Improvement – QPI 2021 Delivered a presentation @Embassy of Finland Bangkok by Prof. Athakorn Deliverd a presentation at XXVIII SIMPEP Production Engineering Symposium: Teaching in Production Engineering by Dr. Rui M. Lima	 Project introduction in local newspapers in Limerick available at <u>https://bit.ly/3KMsgRg</u> Project presentation at QPI conference <u>https://bit.ly/3vKSb7I</u>
Task 5.7	Organizing dissemination events with relevant stakeholders	Mar 1, 2021	-	AIT, MU	•	Contacted speakers and arranged the first dissemination event in March 2021 "Strengthening Rajabhat University, Local Driving Mechanism, to Support Sustainable Growth of Thailand	The first dissemination event (Online) <u>https://youtu.be/g4gU5GZU8EM</u>

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



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

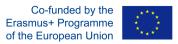


Activities to be carried out to achieve this outcome (before the end of the project)

Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
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	Nov 2020	Nov 2023	AIT and MU	•	Keep the website, Facebook as well as YouTube regrading activities and results up to date	 Up to date project website, Facebook and YouTube
Task 5.3	Inviting non-university sector to participate in the training program and preparing for online training registration	Nov 2020	Feb 2021	AIT and all Thai partners	•	Contact the administration and teaching staff of the non-university sector at tertiary education level in Thailand to introduce the Industry 4.0 competence development training program Invite teaching staff to participate in the training program Short list the registered trainees and submit to WP3 leader.	A list of registered trainees
Task 5.4	Production of dissemination materials	Jan 2021	Nov 2023	All the members	•	Create promotional materials. Create contents for the website, Facebook and YouTube Issue newsletter twice a year providing key project results, information regarding the project process and the training sessions as main messages	 Poster Leaflet Newsletters (Half-yearly)



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



Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
Task 5.5	Publications in professional journals, newspapers, magazines, brochures and social media	Apr 2022	Oct 2023	All the partners	•	Disseminate project outputs achieved at each stage of the project in relevant professional journals, conference proceedings, newspapers, magazines, and social media Review the task every 6 months	 Publications regarding project outputs get published in professional journals, conference proceedings and social media.
Task 5.6	Setting up training network among the members of partner universities and of associated partners	Apr 2023	Oct 2023	All the partners	•	Setup training network among the members and associated partners Share information about the activities of the center	• A list of the members of the training center
Task 5.7	Organizing dissemination events with relevant stakeholders	Nov 2020	Sep 2023	All the partners	•	Organise dissemination events such as public seminar and info days to disseminate key results of some work packages/ training programmes	Public seminars
Task 5.8	Organizing the final dissemination- sustainability conference	Jul 2023	Sep 2023	All the partners	•	Organise a conference Present project results, achievements, and sustainability measures	A conferenceProject presentation

according to the proposal

Corrective Actions **

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



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



**Only when corrective actions are needed.

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

• The WP5 plan has been revised once in Mar 2021.

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



Title and reference number of the workpackage (WP)	WP6- Project Management	
WPL: Pisut Koomsap (AIT)	Co-WPL:	Reporting period: Mar 31, 2022

Indicators of achievement and	
or/performance as indicated in the	Approved PMCP by PEC by M1
project proposal	• 7 PEC meetings are organized and decisions are implemented
	• Project is implemented according to the plan. Efficient and successful project and financial management by M36
	 Submission of midterm progress report by M18 and final report by M3

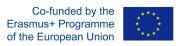
Status of Deliverables*

Deliver	Deliverable Title		Status (Y/N/NA)								
able No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete				
Dev 6.1	Project management and communication plan	Y	Y	Y	N/A	Y	Y				
Dev 6.2	Kick-off and regular consortium meetings	Y	Y	N	N/A	Y	N				
Dev 6.3	Documents on daily project administration and coordination	Y	Y	N	N/A	N/A	N				
Dev 6.4	Midterm progress and final reports for the project	N	N	N	N/A	N	N				

*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
Task 6.1	Finalizing management structure	Nov 15, 2020	Jan 21, 2022	All partners	• • • • • • • •	Processed a request to change consortium members Established Project Executive Committee (PEC) Prepared 7 bilateral partnership agreements (PAs) between AIT and other seven partners Sent the PAs to all partners to review and sign Structured MSIE 4.0 consortium Identified roles and responsibilities of members Created project management flow Revised workplan for entire project after the kick-off meeting on February 2021 Established project financial management Established internal communication channels Created document templates for managing the project Completed all 7 PA and submited to EACEA Developing Project Management and Communication Plan (PMCP)	 Official approval from EACEA on changing of consortium members PEC and QCMB Submission of 7 completely signed PAs to EACEA An official PMCP <u>https://bit.ly/3FhWBGb</u>





Task 6.2	Organizing kick-off and regular meetings	Feb 21	- All partner	 Developed Project Management and Communication Plan (PMCP) Approved PMCP by PEC Organized online PEC meeting Organized online general meeting 	PEC Meeting Minutes <u>https://bit.ly/3KH9qe8</u>
Task 6.3	Monitoring and controlling the project	Nov 20	- All partner	 Followed up with WP leaders on the progress of the project Reminded the WPLs for submission of WP quarterly reports Had meetings with WP leaders Reviewed and gave feedback on QCMP Had a meeting with MU team on financial report Reviewed, approved and uploaded the capacity assessment execution plan on the project website Reviewed, approved and uploaded the quality control and monitoring plan on the project website Reviewed and gave feedback on Quality Control and Management Board Report Reviewed timesheets for partners Reviewed, approved and uploaded the dissemination, exploitation and sustainability plan (DESP) on the project website 	 Project Quarterly report for April 2021 https://bit.ly/3Ll82cx Project Quarterly report for July 2021 https://bit.ly/3MNKYck Project Quarterly report for October 2021 https://bit.ly/3OYGC4e Project Quarterly report for January 2022 https://bit.ly/3LTEed1 PEC's approval for QCMP Feedback to QC Chair for the Quality Control and Management Board Report PEC's approval for DESP



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	 Reviewed and approved the candidate for the external evaluator Processed the purchase of equipment to setup training facilities Reviewed and approved the following modules Communication and People Skills Development (Module 2) Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Reviewing the following modules Data Analytics (Module 10) Visited Lampang Rajabhat University in March 2022 to check facilities for conducting training for participants in the North Reviewed contract for the first external audit 	 PEC's approval for the external evaluator Purchase order requests Approved the following training module Communication and People Skills Development (Module 2) Applications of Optimization and Technology in Value Chain (Module 7) Innovative Product Design and Development (Module 9) Official contract for signatures of the legal representative and the external evaluator
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** if it is still ongoing, please put "-".

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



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



Task No	Task Title	Start date	End date#	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
Task 6.2	Organizing kick-off and regular meetings	Feb 21	Sep 23	All partners	•	Organize 6 regular meetings	Remaining 6 meetings are organized
Task 6.3	Monitoring and controlling the project	Nov 20	Nov 23	All partners	•	Monitor, assess and give feedback to related WPLs on the progress of tasks under their supervisions Review and give feedback on financial statement and related financial documents to the partner leaders. Remind the WPLs and partner leaders for submission of WP monthly reports and financial statements respectively Make final reviews of the remaining project outcomes approved by QCMB Update PMCP if it is necessary Upload official reports approved by PEC and financial documents passed the screen of PC on the website	WP Quarterly reports
Task 6.4	Closing project	Aug 23	Nov 23	All partners	• • •	Collect all documents Prepare a draft of the final report Review and finalize the report Submit the final report	Submission of final report

according to the proposal

Corrective Actions **



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



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

**Only when corrective actions are needed.

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

A plan has been revised one time.



