ERASMUS+ CBHE PROJECT

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

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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:** April 30, 2023

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 able No	Deliverable Title	Status (Y/N/NA)					
		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	Y	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 • https://bit.ly/3FlRc0w
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. https://bit.ly/3TYyao3

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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
					• 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 https://bit.ly/3qrY31V

** 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 No	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:** April 30, 2023

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 able No	Deliverable Title	Status (Y/N/NA)					
		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	N
Dev 2.2	Innovative training materials for 10 modules	Y	Y	N	Y	Y	N
Dev 2.3	A capacity training assessment form	Y	Y	N	Y	Y	N
Dev 2.4	12 Thai trainers trained in program design (for higher education	Y	Y	N	N/A	N/A	N

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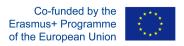Erasmus+ Programme
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	contexts), and in the use of innovative learner-centered teaching and assessment methods						
Dev 2.5	An assessment report of the Thai trainer's competence in the use of knowledge and skills gained in higher education teaching	Y	Y	N	N	N	N
Dev 2.6	An Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry	N	N	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 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	• Overview page on the Industry 4.0 Competence Development Training Program https://bit.ly/3xa1rCv • Presentation material on the concept of the Industry 4.0 Competence Development Training Program https://bit.ly/3U0efFj

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						• Conducted a meeting with the experts on how to use the template for the module development plan
						• Developed a template for a syllabus
						• Completed the module development plans for 9 modules
						  • Learning Experience-Focused Course Design and Development (Module 1)
						  • Communication and People Skills Development (Module 2)
						  • Innovative Teaching and Learning Methods (Module 3)
						  • Project-Based and Problem-Based Learning (Module 4)
						  • Coaching and Mentoring (Module 5)
						  • Applications of Optimization and Technology in Value Chain (Module 7)
						  • Digital Manufacturing (Module 8)
						  • Innovative Product Design and Development (Module 9)
						  • Data Analytics (Module 10)
						
						• Developing the module development plans for
						  • Industrial Management in Industry 4.0 Era (Module 6)
						
						• Completed the syllabuses for 9 modules
							• A list of the experts https://bit.ly/3QOpk9P
							
							• 9 syllabuses completed
							
							Document uploaded on the internal website for assessment for QCMB and PEC approval https://bit.ly/3MRoyHb (Permission is required to access the member space)
							
							• Official syllabuses and training activities plan uploaded in WP2 section on the member space and internal website for the following approved modules (https://bit.ly/3KOI45Y)
							
							  • Communication and People Skills Development (Module 2) Syllabus https://bit.ly/3BG2qgx
							
							  Activities Plan https://bit.ly/3TTaQIe
							
							  • Innovative Teaching and Learning Methods (Module 3) Syllabus

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						- Learning Experience-Focused Course Design and Development (Module 1) - Communication and People Skills Development (Module 2) - Innovative Teaching and Learning Methods (Module 3) - Project-Based and Problem-Based Learning (Module 4) - Coaching and Mentoring (Module 5) - Applications of Optimization and Technology in Value Chain (Module 7) - Digital Manufacturing (Module 8) - Innovative Product Design and Development (Module 9) - Data Analytics (Module 10) - Completed training activities plan for 8 modules - Communication and People Skills Development (Module 2) - Innovative Teaching and Learning Methods (Module 3) - Project-Based and Problem-Based Learning (Module 4) - Coaching and Mentoring (Module 5) - Applications of Optimization and Technology in Value Chain (Module 7)	https://bit.ly/3d7Gf9l Activities Plan https://bit.ly/3xeVswc - Project-Based and Problem-Based Learning (Module 4) Syllabus http://recap4.ait.ac.th/wp-content/uploads/sites/58/2023/04/D1-Syllabus-for-PBL-module-v02.pdf Activities Plan http://recap4.ait.ac.th/wp-content/uploads/sites/58/2023/05/D2-Activities-Plan-for-PBL.pdf - Coaching and Mentoring (Module 5) Syllabus https://bit.ly/3XKKzwq Activities Plan https://bit.ly/3Z06mRX - Applications of Optimization and Technology in Value Chain (Module 7) Syllabus

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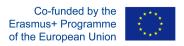|							

					• Digital Manufacturing (Module 8)
					• Innovative Product Design and Development (Module 9)
					• Data Analytics (Module 10)
					
					• Submitted document to QCMB for review and approval for 8 modules
					  • Communication and People Skills Development (Module 2)
					  • Innovative Teaching and Learning Methods (Module 3)
					  • Project-Based and Problem-Based Learning (Module 4)
					  • Coaching and Mentoring (Module 5)
					  • Applications of Optimization and Technology in Value Chain (Module 7)
					  • Digital Manufacturing (Module 8)
					  • Innovative Product Design and Development (Module 9)
					  • Data Analytics (Module 10)
					
					• Submitted document to PEC for review and approval for 8 modules
					  • Communication and People Skills Development (Module 2)
					  • Innovative Teaching and Learning Methods (Module 3)
						https://bit.ly/3RMN27i
						
						Activities Plan
						https://bit.ly/3U0icK9
						
						• Digital Manufacturing (Module 8) Syllabus
						https://bit.ly/3k6ejpN
						
						Activities Plan
						https://bit.ly/3lMEClx
						
						• Innovative Product Design and Development (Module 9) Syllabus
						https://bit.ly/3LjU6Gt
						
						Activities Plan
						https://bit.ly/3d2Y5dw
						
						• Data Analytics (Module 10) Syllabus
						https://bit.ly/3d7d06C
						
						Activities Plan
						https://bit.ly/3BvrtCx

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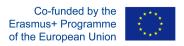of the European Union

					• Project-Based and Problem-Based Learning (Module 4) • Coaching and Mentoring (Module 5) • Applications of Optimization and Technology in Value Chain (Module 7) • Digital Manufacturing (Module 8) • Innovative Product Design and Development (Module 9) • Data Analytics (Module 10)	

Task 2.2	Developing innovative training materials	Apr 27, 2021	-	AIT, KKU, MIC	• Completed training materials for 8 modules
					  • Communication and People Skills Development (Module 2)
					  • Innovative Teaching and Learning Methods (Module 3)
					  • Project-Based and Problem-Based Learning (Module 4)
					  • Coaching and Mentoring (Module 5)
					  • Applications of Optimization and Technology in Value Chain (Module 7)
					  • Digital Manufacturing (Module 8)
					  • Innovative Product Design and Development (Module 9)
					  • Data Analytics (Module 10)
						• Status report on the development of training materials https://bit.ly/3QHWt72
						
						• Document uploaded on the member space for assessment for QCMB and PEC approval https://bit.ly/3MRoyHb (Permission is required to access the member space)
						
						• Official course material uploaded in WP2 section on the member space and internal website for the following approved modules (https://bit.ly/3KOI45Y)

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					Submitted document to QCMB for review and approval for 8 modules • Communication and People Skills Development (Module 2) • Innovative Teaching and Learning Methods (Module 3) • Project-Based and Problem-Based Learning (Module 4) • Coaching and Mentoring (Module 5) • Applications of Optimization and Technology in Value Chain (Module 7) • Digital Manufacturing (Module 8) • Innovative Product Design and Development (Module 9) • Data Analytics (Module 10) Submitted document PEC for review and approval for 8 modules • Communication and People Skills Development (Module 2) • Innovative Teaching and Learning Methods (Module 3) • Project-Based and Problem-Based Learning (Module 4) • Coaching and Mentoring (Module 5)	• Communication and People Skills Development (Module 2) https://bit.ly/3d8Evgc • Innovative Teaching and Learning Methods (Module 3) https://bit.ly/3eGHPiJ • Project-Based and Problem-Based Learning (Module 4) http://recap4.ait.ac.th/wp-content/uploads/sites/58/2023/05/D3-Slides-for-PBL.pdf • Coaching and Mentoring (Module 5) https://bit.ly/3xvSByz • Applications of Optimization and Technology in Value Chain (Module 7) https://bit.ly/3TXo9HI • Digital Manufacturing (Module 8) https://bit.ly/3Edn6NF • Innovative Product Design and Development (Module 9) https://bit.ly/3L2NtrL

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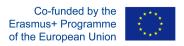|						
					• Applications of Optimization and Technology in Value Chain (Module 7) • Digital Manufacturing (Module 8) • Innovative Product Design and Development (Module 9) • Data Analytics (Module 10) • Developing training materials for • Learning Experience-Focused Course Design and Development (Module 1)	• Data Analytics (Module 10) https://bit.ly/3Bwcdpf

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 9 modules
					  • Learning Experience-Focused Course Design and Development (Module 1)
					  • Communication and People Skills Development (Module 2)
					  • Innovative Teaching and Learning Methods (Module 3)
					  • Project-Based and Problem-Based Learning (Module 4)
					  • Coaching and Mentoring (Module 5)
					  • Applications of Optimization and Technology in Value Chain (Module 7)
					  • Digital Manufacturing (Module 8)
						• Status report page on the assessment forms https://bit.ly/3qqvcey
						
						• Capacity training assessment form
						• 9 capacity training assessment forms for 9 modules
						• Document uploaded on the internal website for assessment for QCMB and PEC approval https://bit.ly/3MRoyHb (Permission is required to access the member space)
						
						• Official Capacity training assessment form uploaded in

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					• Innovative Product Design and Development (Module 9) • Data Analytics (Module 10) • Developing assessment form for • Industrial Management in Industry 4.0 Era (Module 6) • Submitted document to QCMB for review and approval for 8 modules • Communication and People Skills Development (Module 2) • Innovative Teaching and Learning Methods (Module 3) • Project-Based and Problem-Based Learning (Module 4) • Coaching and Mentoring (Module 5) • Applications of Optimization and Technology in Value Chain (Module 7) • Digital Manufacturing (Module 8) • Innovative Product Design and Development (Module 9) • Data Analytics (Module 10) • Submitted document PEC for review and approval for 8 modules	WP2 section on the member space and internal website for the following approved modules (https://bit.ly/3KOI45Y) • Communication and People Skills Development (Module 2) https://bit.ly/3RX4lma • Innovative Teaching and Learning Methods (Module 3) https://bit.ly/3Dlu8Ap • Project-Based and Problem-Based Learning (Module 4) https://drive.google.com/file/d/1_WHuf1T88n4uIDlrCFJAoxBMhewCNta-/view?usp=share_link • Coaching and Mentoring (Module 5) https://bit.ly/3YYIZs2 • Applications of Optimization and Technology in Value Chain (Module 7) https://bit.ly/3DgStau • Digital Manufacturing (Module 8) https://bit.ly/3Iwz6w6

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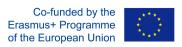|						
					- Communication and People Skills Development (Module 2) - Innovative Teaching and Learning Methods (Module 3) - Project-Based and Problem-Based Learning (Module 4) - Coaching and Mentoring (Module 5) - Applications of Optimization and Technology in Value Chain (Module 7) - Digital Manufacturing (Module 8) - Innovative Product Design and Development (Module 9) - Data Analytics (Module 10)	- Innovative Product Design and Development (Module 9) https://bit.ly/3RT42bL - Data Analytics (Module 10) https://bit.ly/3RX9Bpx
Task 2.4	Training the Thai trainers	Feb 17, 2021	-	AIT, KMUTNB, KKU,MU, PSU, MIC and UMinho	- 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 on - Communication and People Skills Development (Module 2) - Innovative Teaching and Learning Methods (Module 3) - Project-Based and Problem-Based Learning (Module 4) - Coaching and Mentoring (Module 5) - Digital Manufacturing (Module 8) - Data Analytics (Module 10)	- Status report page on Train the Trainer Program https://bit.ly/3qrpfOz - A updated list of the Thai trainers https://bit.ly/3L8Iq99 - Understanding of Thai trainers or their roles and expectation - Training completed for - Communication and People Skills Development (Module 2)

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						• Innovative Teaching and Learning Methods (Module 3) • Project-Based and Problem-Based Learning (Module 4) • Coaching and Mentoring (Module 5) • Digital Manufacturing (Module 8) • Data Analytics (Module 10) • Status of the Train the Trainer Program https://bit.ly/3samMJx • Note: the two trainings in Jan 2022 were postponed due to the emergence of Omicron at the end of December Links to see the ambiance during the training and coaching sessions are available in the status report page.
Task 2.5	Coaching the Thai trainers	Feb 20, 22		AIT, KMUTNB, KKU,MU, and PSU	• Completed Coaching for 4 modules • Communication and People Skills Development (Module 2) • Innovative Teaching and Learning Methods (Module 3) • Project-Based and Problem-Based Learning (Module 4)	• Completed coaching activities for • Communication and People Skills Development (Module 2) • Innovative Teaching and Learning Methods (Module 3) • Project-Based and Problem-Based Learning (Module 4)

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					• Data Analytics (Module 10)
					
					 • Online coaching for 5 modules
					    • Innovative Teaching and Learning Methods (Module 3)
					    • Project-Based and Problem-Based Learning (Module 4)
					    • Coaching and Mentoring (Module 5)
					    • Digital Manufacturing (Module 8)
					    • Data Analytics (Module 10)
					
					 • Onsite coaching sessions for 4 modules
					    • Communication and People Skills Development (Module 2) at Mahidol
					    • Innovative Teaching and Learning Methods (Module 3) at MIC
					    • Project-Based and Problem-Based Learning (Module 4) at KMUTNB
					    • Coaching and Mentoring (Module 5) at PSU
					
					 • Selected teams of four trainers for all 6 modules
						• Data Analytics (Module 10)
						
						 • Ongoing coaching activities for
						    • Coaching and Mentoring (Module 5)
						    • Digital Manufacturing (Module 8)
						
						 • Teams of four trainers for all 6 modules
						 https://bit.ly/3xa1rCv

Task 2.6	Assessing the Thai trainers	Jan 23		AIT, KKU	• Assessment of the performance of the 12 Thai trainers for 2 modules • Communication and People Skills Development (Module 2)	•

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					• Data Analytics (Module 10)	
Task 2.7				AIT, KKU, MU, PSU and Lampang Rajabhat University (Associated Partner)	• Set up Active Learning Classrooms for training activities • A center will be located at AIT	• Active Learning Classrooms have been set up and used for training https://bit.ly/3L8EqWq

** 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 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
					  • Industrial Management in Industry 4.0 Era (Module 6)
					
					• Complete the syllabuses for
					  • Industrial Management in Industry 4.0 Era (Module 6)
					
					• Complete the activities plans for
					  • Learning Experience-Focused Course Design and Development (Module 1)
					  • Industrial Management in Industry 4.0 Era (Module 6)
						• An official curriculum of an Industry 4.0 Competence Development Training Program

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					• Submit the curriculum to QCMB and PEC	

Task 2.2	Developing innovative training materials	Apr 21	Dec 21	AIT, KKU, MIC, UPB, and UMinho	• Complete the training materials for
					  • Learning Experience-Focused Course Design and Development (Module 1)
					  • Industrial Management in Industry 4.0 Era (Module 6)
					
					• Submit the materials to QCMB and PEC
						• Official training materials for the 10 modules

Task 2.3	Developing a capacity training assessment	Feb 21	Apr 21	UPB and UMinho	• Complete the assessment form for • Industrial Management in Industry 4.0 Era (Module 6) • 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 by EU partners on • Industrial Management in Industry 4.0 Era (Module 6)	• Completion of training sessions

Task 2.5	Coaching the Thai trainers	Jun 21	May 23	All partners	• Finish coaching 12 Thai trainers for
					  • Coaching and Mentoring (Module 5)
					  • Industrial Management in Industry 4.0 Era (Module 6)
					  • Digital Manufacturing (Module 8)
						• 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	Nov 22	Jun 23	All partners	• Establish the center	• an Innovative Teaching and Learning Center for Thailand Sustainable Smart Industry

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	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				●		

**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.
- Since the module developers could not completed the tasks at the same time due to their contraints and other obligations during the pandemic, we have decided to proceed by module instead. The module having completed documents for Task 2.1-2.3 are submitted to QCMB and PEC for review and approval.

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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:** April 30, 2023

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 able No	Deliverable Title	Status (Y/N/NA)					
		Preparing	**Executing**	**Execution complete**	**Report to QCMB**	**Report to PEC**	**Officially Complete**
Dev 3.1	A capacity training execution plan	Y	Y	N	Y	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:

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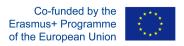| Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement
Task 3.1	Developing capacity training execution plan	Feb 21	-	AIT, KMUTNB, KKU, MU and PSU	• Obtained an initial registration list of trainees 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 for Central region for 6 modules • Communication and People Skills Development (Module 2) • Innovative Teaching and Learning Methods (Module 3) • Project-Based and Problem-Based Learning (Module 4)	• 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) • 7 training activities scheduled for Central region • Module 2 on 13-15 December 2021* • Module 2 on 11-13 March 2022 • Module 2 on 19-21 January 2023** • Module 2 on 26-28 January 2023** • Module 3 on 9-11 June 2023 • Module 4 on 23-25 June 2023 • Module 7 on 18-20 March 2022 • Module 9 on 20-22 December 2022* • Module 9 on 25-27 February 2022

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					• Applications of Optimization and Technology in Value Chain (Module 7) • Innovative Product Design and Development (Module 9) • Data Analytics (Module 10) • Scheduled training for Southern region for 6 modules 　• Communication and People Skills Development (Module 2) 　• Innovative Teaching and Learning Methods (Module 3) 　• Project-Based and Problem-Based Learning (Module 4) 　• Applications of Optimization and Technology in Value Chain (Module 7) 　• Innovative Product Design and Development (Module 9) 　• Data Analytics (Module 10) • Scheduled training program for Northern region for 6 modules 　• Communication and People Skills Development (Module 2) 　• Innovative Teaching and Learning Methods (Module 3)	• Module 10 on 7-9 April 2023*** *Rambhai Barni Rajabhat University ** Silapakorn University ***King Mongkut's University of Technology North Bangkok • Training activities scheduled for Southern region of 　• Module 2 on 18-20 March 2022 　• Module 3 on 27-29 March 2023 　• Module 4 on 8-10 May 2023** 　• Module 7 on 2-4 May 2022 (Note: Module 7 was scheduled on 25-27 March 2022 but the activity has been postponed due to the emergence of Omicron) 　• Module 9 on 1-3 April 2022 　• Module 9 on 19-21 November 2022* 　• Module 10 on 9-11 November 2022 　* Surat Thani Rajabhat University 　**Rajamangala University of Technology Srivijaya • Training activities scheduled for Northern region of 　• Module 2 on 17-19 June 2022

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					• Project-Based and Problem-Based Learning (Module 4)
					• Applications of Optimization and Technology in Value Chain (Module 7)
					• Innovative Product Design and Development (Module 9)
					• Data Analytics (Module 10)
					
					• Scheduled training program for Northeastern region for 6 modules
					   • Communication and People Skills Development (Module 2)
					   • Innovative Teaching and Learning Methods (Module 3)
					   • Project-Based and Problem-Based Learning (Module 4)
					   • Applications of Optimization and Technology in Value Chain (Module 7)
					   • Innovative Product Design and Development (Module 9)
					   • Data Analytics (Module 10)
					
					• Submitted the 1st draft of Deliverable 3.1 report to QCMB
						• Module 3 on 31 May - 2 June 2023*
						• Module 4 on 19-21 May 2023
						• Module 7 on 22-24 July 2022
						• Module 9 on 6-8 May 2022
						• Module 10 on 25-27 November 2022
						   Module 10 on 26-28 April 23*
						   *Rajamangala University of Technology Lanna
						
						• Training activities scheduled for Northeastern region of
						   • Module 2 on 12-14 December 2022[#]
						   • Module 2 on 23-25 February 2023[##]
						   • Module 3 on 29-31 May 2023[###]
						   • Module 4 on 5-7 June 2023[##]
						   • Module 7 on 14-16 November 2022
						   • Module 9 on 30 November – 2 December 2022
						   • Module 10 on 18-20 January 2023[#]
						[#] Chaiyaphum Rajabhat University
						[##] Kalasin University
						[###] Rajamangala University of Technology Isan

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				• Held online meetings with Thai trainers of Innovative Teaching and Learning Methods (Module 3) and Data Analytics (Module 10) • Visited Faculty of Industrial Technology, Songkhla Rajabhat University to promote two upcoming modules; Innovative Teaching and Learning Methods (Module 3) and Data Analytics (Module 10) to be held at PSU training center • Revised the 2nd draft of Deliverable 3.1 report to QCMB	• A tentative capacity training execution plan including a progress of the training activities • Organized and assigned Thai trainers to each training center for modules 3 and 10 training activities and set the tentative training schedule • 14 tentative trainees are expected to attend both modules at PSU training center

Task 3.2	Conducting capacity training on Industry 4.0 competence development	Apr 21	-	AIT, KMUTNB, KKU, MU and PSU	• Preparing for offering the first module in the South
					• Preparing for offering the first module in the Central
					• Conducted 7 capacity training sessions in Central region
					  • Conducted 2 capacity training sessions in Decembers 2021 at Rambhai Barni Rajabhat University (a subgroup)
					    • Communication and People Skills Development (Module 2)
					    • Innovative Product Design and Development (Module 9)
						• A ReCap 4.0 Training Status Report https://bit.ly/3vKOwq7
						
						• Training activities with the total participants 92 in Central region. The participants of 41, 15, 19, and 17 for Modules 2, 7, 9, and 10, respectively
						
						• Training activities with the total participants 119 in Southern region. The participants of 4, 34, 28, 13, 20, and 20 for Modules 2, 3, 4, 7, 9, and 10, respectively

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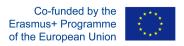|					
				- Conducted 3 capacity training sessions in February and March 2021 at Mahidol University - Communication and People Skills Development (Module 2) - Applications of Optimization and Technology in Value Chain (Module 7) - Innovative Product Design and Development (Module 9) - Conducted 2 capacity training sessions in January 2023 at Silapakorn University (a subgroup) - Communication and People Skills Development (Module 2) - Conducted 9 capacity training sessions for Southern region on - Conducted 4 capacity training sessions in March, April, May, and November 2022 at Prince of Songkla University (PSU) - Communication and People Skills Development (Module 2) - Applications of Optimization and Technology in Value Chain (Module 7) - Innovative Product Design and Development (Module 9)	- Training activities with the total participants 62 in Northern region. The participants of 10, 10, 14, and 28 for Modules 2, 7, 9, and 10, respectively - Training activities with the total participants 58 in Northeast region. The participants of 28, 9, 8, and 13 for Modules 2, 7, 9, and 10, respectively - Example of the ambiance during the trainings https://bit.ly/3kGUKRE

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					- Data Analytics (Module 10) - Conducted 1 capacity training sessions in November 2022 at Surat Thani Rajabhat University (a subgroup) - Innovative Product Design and Development (Module 9) - Conducted 2 capacity training sessions in March, 2023 at Prince of Songkla University (PSU) - Innovative Teaching and Learning Methods (Module 3) - Conducted 2 capacity training sessions in May, 2023 at Rajamangala University of Technology Srivijaya for a subgroup - Project-Based and Problem-Based Learning (Module 4) - Conducted 6 capacity training sessions for Northern region - Conducted 4 capacity training sessions in May, June, July, and November 2022 at Lampang Rajabhat University (LPRU) for Northern region on - Communication and People Skills Development (Module 2)	

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					- Applications of Optimization and Technology in Value Chain (Module 7) - Innovative Product Design and Development (Module 9) - Data Analytics (Module 10) - Conducted 1 capacity training sessions in May, June, July, and November 2022 at Lampang Rajabhat University (LPRU) for Northern region on - Project-Based and Problem-Based Learning (Module 4) - Conducted 1 capacity training sessions in April 2023 at Rajamangala University of Technology Lanna (a subgroup) - Data Analytics (Module 10) - Conducted 4 capacity training sessions for Northeast region - Conducted 2 capacity training sessions in November 2022 at Khon Kaen University (KKU) for Northeastern region on - Applications of Optimization and Technology in Value Chain (Module 7) - Innovative Product Design and Development (Module 9)	

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					• Conducted 2 capacity training sessions in November 2022 at Chaiyaphum Rajabhat University for a subgroup of Northeastern region on
					  • 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 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 • Create tentative schedules for training and coaching of the 10 modules for the 4 regions to form a capacity training execution plan (CTEP) • Revising the the CTEP for PEC 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.
- Scheduling training during the pandemic has been a challenge as it has been depended upon the situation and the availability of the trainees.
- The training has mostly conducted during Friday to Sunday on the weeks that most of them were available.
- There was also a case that some registrants confirmed to attend but could not because of testing positive.

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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:** April 30, 2023

Indicators of achievement and or/performance as indicated in the project proposal	• WP4-4.1 A quality control and monitoring system (M1) • WP4-4.2 Internal quality control and monitoring (on a regular basis until the end of the project) • WP4-4.3 External quality control and monitoring (M13 and M25) • WP4-4.4 External financial audit (M27) (Not necessary)

Status of Deliverables*

Deliverable No	Deliverable Title	Status (Y/N/NA)					
		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	N	N	N	N
4.4	External financial audit	N	N	N	N	N	N

*Please list all deliverables of the WP.

Activities carried out to date to achieve this result:

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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
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"	• Consolidated Quality Control and Monitoring Report (QCMR) https://bit.ly/3Z6sHgP • The consolidated reviewed report (The consolidated deliverable evaluation template) for the deliverable WP1-1.1

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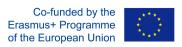|							

						• Reviewed and approved the contents of deliverable, "WP5-5.1 A Dissemination, Exploitation and Sustainable plan (DESP)"
						• 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)
						   • Innovative Teaching and Learning Methods (Module 3)
						   • Project-Based and Problem-Based Learning (Module 4)
						   • Coaching and Mentoring (Module 5)
							• The consolidated reviewed report (The consolidated deliverable evaluation template) for the deliverable WP5-5.1
							https://bit.ly/3IC4Y2v
							
							• 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.
							https://bit.ly/3Z4ssTj
							
							• Consolidated reports for course modules WP2
							https://bit.ly/3KfM4jg
							
							• Consolidated review report for WP3-3.1.

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					• Applications of Optimization and Technology in Value Chain (Module 7)
					• Digital Manufacturing (Module 8)
					• Innovative Product Design and Development (Module 9)
					• Data Analytics (Module 10)
					
					• Prepared training evaluation reports
					  • Vol 1 (Period Dec 2021-Mar 2022)
					  • Vol 2 (Period Apr 2022-Jul 2022)
					  • Vol3 (MIC, Ireland, June-July 2022)
					  • Vol4 (University of Minho, Braga, Portugal, Sep 2022)
					  • Vol.5 (Nov 2022-Jan 2023).
					
					• Reviewed and approved a capacity training execution plan (CTEP), subject to correction
						• Training evaluation report for period Dec 2021-Mar 2022. (QD-TER-V1)
						https://bit.ly/3lMyCJq
						
						• Training Evaluation Report, vol5 https://drive.google.com/file/d/1MDeUgomYKzZyL4WGhXDkdqokRC5ooM7g/view?usp=share_link
						
						• Consolidated review report for Training Evaluation Report, vol5 https://drive.google.com/file/d/1Qq4hGw_m2cGaZRs46GNXDRfYuC6SqZ3d/view?usp=share_link

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 • Facilitated the external evaluation process (handling the questionnaires).	• Consolidated review results of the procedure: https://bit.ly/3901nfu • Procedures for Independent External Evaluation for the Project Results: https://bit.ly/3vLZHz3 • Assessment results

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					Description	Indicators
					• Organized with PC the audit interview for external auditor. • Reviewed the evaluation report • Helped PC to prepare the midterm report.	https://bit.ly/3P09ycc • Contract signed between the legal representative and the external evaluator. • Midway audit conducted by the external evaluator https://bit.ly/3d4NoHr • Midway external quality control and monitoring report.

** 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
4.2	Implementing the internal quality control and monitoring of the project	Dec 2020	Nov 2023	All partners	• Monitor the project activities • Execute quality control of all deliverables according to the proposal until the end of the project.	• Updated quality monitoring report as Link to the file: https://bit.ly/37mCwlu • Consolidated report of QCMB using Deliverable Evaluation Template

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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.

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:

- 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:** April 30, 2023

Indicators of achievement and or/performance as indicated in the project proposal	• Dissemination, Exploitation and Sustainable plan is prepared by M1. • A project website is created and publicly available from M1. • 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*

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

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Deliverable No	Deliverable Title	Status (Y/N/NA)					
		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	N	N	N
Dev5.6	A list of the members of the Innovative Teaching and Learning Centre for Thailand Sustainable Smart Industry	Y	N	N	NA	NA	N
Dev5.7	Dissemination events	Y	Y	N	NA	NA	N
Dev5.8	A dissemination-sustainability conference	Y	N	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 involved	Description of the activity carried out	Specific and measurable indicators of achievement
Task 5.1	Development of a Dissemination, Exploitation and Sustainable plan	Apr 23, 2021	Jan 23, 2022	All partners	• Discussed about activities • Drafted a DESP • Reviewed the plan • Submitted the DESP to QCMB • Revised the DESP according to QCMB's feedback • Submitted the revised DESP to QCMB	An official DESP https://bit.ly/3BvrBC3

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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
					• Revised DESP as per QCMB comments and submitted to PEC for approval • Drafting detailed exploitation plan • Revised detailed exploitation plan as per PEC's comments. • Submitted the revised exploitation plan to PEC.	
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: http://recap4.ait.ac.th/ Member Space: https://bit.ly/3FkQAIT (Permission is required to access the member space) • Facebook: ReCap4Thailand https://bit.ly/3sfMGeJ • YouTube Channel: https://bit.ly/388mdcj

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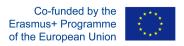of the European Union

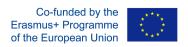| Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement
Task 5.3	Inviting non-university sector to participate in the training program and preparing for online training registration	Dec 22, 2020	-	AIT, 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 • 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	• The report on the visit to promote the project and invite the target teaching staff is available at https://bit.ly/3BweAls • Online registration form available via the project website https://bit.ly/3OZEEk3 • Information Session for Central Region https://bit.ly/38R87vY • Tentative lists of trainees from Rajabhat universities (150 trainees as of 15 June 21 for initial registration) • Some visits were postponed from the previous scheduled at beginning of January 2022 due to the emergence of Omicron at the end of December 2021

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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
					• 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 letters to 36 trainees in the Central region and 12 trainees in the Southern region • Contacting Rajabhat Universities in the North and Northeastern • 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	

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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
					facilities for the training in Northern region • Visited Rajamangala University of Technology Isan Surin Campus, Surindra Rajabhat University, and Ubon Ratchathani Rajabhat University to promote ReCap 4.0 project and invite the faculty members to participate in our competence development training program • Conducted online sessions for Northeastern region as a group as well as for individual universities, including Nakhon Ratchasima Rajabhat University, Rajabhat Maha Sarakham University, Loei Rajabhat University and Kalasin University • Promoting Training Modules: Innovative Teaching and Learning Methods (ITM) and Data Analytics (DA) • Visited Rajamangala University of Technology Krungthep to promote ReCap 4.0 project and invite the faculty members to participate in our competence development training program	

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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
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 • 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 • Created the second issue of E-newsletter • Created ReCap 4.0 Virtual Exhibition • Created the third issue of E-newsletter • Preparing posters with information on each training module that Thai trainers will deliver. • Preparing the forth issue of E-newsletter	• A poster published in Production Engineering Archive Journal (April 2021) A flyer (same format as poster) https://bit.ly/3Dk5Jei • Contents on the project website, Facebook and YouTube Channel • A VDO clip is available on the Virtual Exhibition. • E-newsletter issue1 https://bit.ly/3yhR1lI • E-newsletter issue2 https://bit.ly/3Ogvsa3 • E-newsletter issue 3 https://bit.ly/417WiYO • ReCap 4.0 Virtual Exhibition https://bit.ly/3RPs9YS
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 • Manuscript on a finding from WP1 "Analysis of Teacher's Competences for Industry4.0 subjects" has been published in Applied Science and Engineering Progress, Vol.16, No.4, 2023.	• Report on publications https://bit.ly/3VVN5Ad • "Analysis of Teacher's Competences for Industry4.0 subjects" https://doi.org/10.14416/j.asep.2022.09.005

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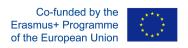| Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement
					• A development of a toolkit for training on course design has been presented at the 29th International Conference on Transdisciplinary Engineering in July 2022. It will appear in the conference proceedings. The extended version has been invited for a journal publication. • The extended version of the toolkit for training manuscript; "Student Learning Journey Map (SLJM): an instructional design process and toolkit to support constructive enhancement" has been published in Product: Management and Development Vol.20, No.1, 2022.	• "Student Learning Journey Map (SLJM)" http://dx.doi.org/10.4322/pmd.2022.019
Task 5.6	Setting up training network among the members of partner universities and of associated partners	Feb 1, 2023	-	All partners	• Planning about the setup of training network among the members at the annual meeting at Prince of Songkla University •	•
Task 5.7	Organizing dissemination events with relevant stakeholders	Mar 1, 2021	-	AIT, MU	• Disseminated the project information and the training program in twenty events. It has been done both in person and online in various occasions. We organized some of the dissemination events and invited to participate in the others.	• The report page on the dissemination events https://bit.ly/3xfv05t Quick links to a few events • The first dissemination event (Online)

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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
					• Contacted speakers and arranged the first dissemination event in March 2021 "Strengthening Rajabhat University, Local Driving Mechanism, to Support Sustainable Growth of Thailand • Organized a public seminar at KMUTNB on Jan 30 , 2023	https://youtu.be/g4gU5GZU8EM • Project presentation at QPI conference https://bit.ly/3vKSb7l • The SHARE 14th Policy Dialogue on "The Contribution of Higher Education Partnerships in Southeast Asia towards the Achievement of the Sustainable Development Goals 2030" https://bit.ly/3yaXNck
5.8	Organizing the final dissemination-sustainability conference	Nov 19, 2021	-	AIT	• Submitted an interest in hosting the 30th International Conference on Transdisciplinary Engineering (TE 2023) in 2023 in Thailand and awarded the right to host the conference. • Surveyed potential venue • Created the web submission platform on EasyChair • Called for papers and workshop sessions • Announced the venue and theme of the conference. • Preparing for hosting TE 2023 in July 2023	• The 30th ISTE International Conference on Transdisciplinary Engineering (TE 2023) http://te2023.ait.ac.th/ • EasyChair for TE2023 paper submission https://bit.ly/3TtDZsR • Call for Papers and Workshop Sessions https://bit.ly/3z9fvNH •Venue for the conference: Dusit Thani Hua Hin •Theme of the conference: "Leveraging Transdisciplinary Engineering in a Changing and Connected World."

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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
						• Current figures: • Number of abstracts: 165 from 32 countries on 6 continents • Number of full paper invitations: 140 • Number of full papers submitted: 117 • Expected number of invitations for oral presentation (accepted full papers): 100 • Expected Number of invitations for poster presentation: 17 • Number of reviewers: more than 90 • ReCap 4.0 Participation • Number of abstracts: 22 • Number of full paper invitations: 19 • Number of full papers submitted: 16 • Expected number of invitations for oral presentation (accepted full papers): 12 • Expected Number of invitations for poster presentation: 4

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

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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)

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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
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 conference • Project presentation

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:

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

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Title and reference number of the workpackage (WP)	WP6- Project Management	
WPL: Pisut Koomsap (AIT)	**Co-WPL:**	**Reporting period: April** 30, 2023

Indicators of achievement and or/performance as indicated in the project proposal	• Approved PMCP by PEC by M1 • 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 M36

Status of Deliverables*

Deliver able No	Deliverable Title	Status (Y/N/NA)					
		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:

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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
Task 6.1	Finalizing management structure	Nov 15, 2020	Sep 30, 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 submitted 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 https://bit.ly/3FhWBGb • Submission of required documents for changing of legal representative

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					• Developed Project Management and Communication Plan (PMCP) • Approved PMCP by PEC • Collected, prepared, and submitted documents for changing of the legal representative •	
Task 6.2	Organizing kick-off and regular meetings	Feb 21	-	All partners	• Organized online PEC meeting on Feb 3, 2021 • Organized online general meeting Mar 10-11, 2021 • Organized Project meeting at MIC during June 27-July 1, 2022 • Organized online PEC meeting on Oct 26, 2022 • Organized online partner leaders meeting on Nov 4, 2022 • Organized online PEC meeting on Dec 14, 2022 • Organized Project meeting at PSU during Jan 31, 2023 – Feb 4, 2023	• PEC Meeting Minutes https://bit.ly/3KH9qe8
Task 6.3	Monitoring and controlling the project	Nov 20	-	All partners	• 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	• Project Quarterly reports https://bit.ly/3VUiUJI • PEC's approval for QCMP • Feedback to QC Chair for the Quality Control and Management Board Report

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					- 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 - 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) - Innovative Teaching and Learning Methods (Module 3) - Project-Based and Problem-Based Learning (Module 4)	- PEC's approval for DESP - PEC's approval for the external evaluator - Purchase order requests - Approved the following training module - Communication and People Skills Development (Module 2) - Innovative Teaching and Learning Methods (Module 3) - Applications of Optimization and Technology in Value Chain (Module 7) - Innovative Product Design and Development (Module 9) - Data Analytics (Module 10) - Official contract for signatures of the legal representative and the external evaluator - Meeting with the external evaluator for midway evaluation - Approval of the midterm audit report

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					• Coaching and Mentoring Skills Development (Module 5) • Applications of Optimization and Technology in Value Chain (Module 7) • Digital Manufacturing (Module 8) • Innovative Product Design and Development (Module 9) • 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 • Facilitated the midway project evaluation by the external evaluator • Reviewed project quarterly reports • Reviewed and gave feedback on partners' financial reports • Reviewed and approved exploitation plan •	
6.4	Closing project	Aug 23			• Prepared and submit midterm progress report	• Submission of the midterm progress report

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

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

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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
Task 6.2	Organizing kick-off and regular meetings	Feb 21	Sep 23	All partners	• Organize 5 regular meetings	• Remaining 5 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

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Corrective Actions **

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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
Task x.x				•		

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

A plan has been revised one time.

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