

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

<sup>\*</sup>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	<ul> <li>Official capacity assessment execution plan</li> <li>https://bit.ly/3FIRcOw</li> </ul>
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. <a href="https://bit.ly/3TYyao3">https://bit.ly/3TYyao3</a>

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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 <a href="https://bit.ly/3qrY31V">https://bit.ly/3qrY31V</a>

<sup>\*\*</sup> 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/	Description of the activity carried out	Specific and measurable indicators of achievement
		date	uate#	Partners involved		acnievement

# 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

<sup>\*\*</sup>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: November 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	Deliverable Title	Status (Y/N/NA)						
able No		Preparing	Executing	Execution complete	Report to QCMB	Report to PEC	Officially Complete	
Dev 2.1	An Industry 4.0	Υ	Υ	N	Υ	Υ	N	
	Competence							
	Development Training							
	Program							
Dev 2.2	Innovative training	Υ	Υ	N	Υ	Υ	N	
	materials for 10 modules							
Dev 2.3	A capacity training	Υ	Υ	N	Υ	Υ	N	
	assessment form							
Dev 2.4	12 Thai trainers trained in	Υ	Υ	N	N/A	N/A	N	
	program design (for							
	higher education							



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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	Υ	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

<sup>\*</sup>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	•	Overview page on the Industry 4.0 Competence Development Training Program <a href="https://bit.ly/3xa1rCv">https://bit.ly/3xa1rCv</a>
					•	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 <a href="https://bit.ly/3U0efFi">https://bit.ly/3U0efFi</a>





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





<ul> <li>Innovative Teaching and Learning Methods (Module 3)</li> <li>Project-Based and Problem-Based Learning (Module 4)</li> <li>Coaching and Mentoring (Module 5)</li> <li>Industrial Management in Industry 4.0 Era (Module 6)</li> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (Module 8)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> <li>Completed training activities plan for 9 modules</li> <li>Communication and People Skills Development (Module 2)</li> <li>Innovative Teaching and Learning Methods (Module 3)</li> <li>Project-Based and Problem-Based Learning (Module 4)</li> <li>Coaching and Mentoring (Module 5)</li> <li>Industrial Management in Industry</li> </ul>	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/58/2023/0 4/D1-Syllabus-for-PBL-module- v02.pdf  Activities Plan http://recap4.ait.ac.th/wp- content/uploads/sites/58/2023/0 5/D2-Activities-Plan-for-PBL.pdf  • Coaching and Mentoring (Module 5) Syllabus https://bit.ly/3XKKzwq  Activities Plan https://bit.ly/3XKKzwq
Coaching and Mentoring (Module 5)	





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

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





<ul> <li>Submitted document to QCMB for review and approval for 8 modules</li> <li>Development (Module 2) <a href="https://bit.ly/3d8Evgc">https://bit.ly/3d8Evgc</a></li> </ul>
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)  https://bit.ly/3xvSByz  Coaching and Mentoring (Module 7) https://bit.ly/3txo9HI  Innovative Teaching and Learning Methods (Module 3) Digital Manufacturing (Module 6) Innovative Product Design and Development (Module 9) https://bit.ly/3L2NtrL

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					•	<ul> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (Module 8)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> <li>Developing training materials for</li> <li>Learning Experience-Focused Course Design and Development (Module 1)</li> </ul>	Data Analytics (Module 10) <a href="https://bit.ly/3Bwcdpf">https://bit.ly/3Bwcdpf</a>
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 10 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)  Industrial Management in Industry 4.0 Era (Module 6)	<ul> <li>Status report page on the assessment forms         https://bit.ly/3qqvcey     </li> <li>Capacity training assessment form</li> <li>9 capacity training assessment forms for 9 modules</li> <li>Document uploaded on the internal website for assessment for QCMB and PEC approval <a href="https://bit.ly/3MRoyHb">https://bit.ly/3MRoyHb</a></li> <li>(Permission is required to access the member space)</li> <li>Official Capacity training assessment form uploaded in</li> </ul>





<ul> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (Module 8)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> </ul>	<ul> <li>WP2 section on the member space and internal website for the following approved modules (<a href="https://bit.ly/3KOI45Y">https://bit.ly/3KOI45Y</a>)</li> <li>Communication and People Skills Development (Module 2) <a href="https://bit.ly/3RX4lma">https://bit.ly/3RX4lma</a></li> </ul>
<ul> <li>Submitted document to QCMB for review and approval for 8 modules</li> <li>Communication and People Skills Development (Module 2)</li> <li>Innovative Teaching and Learning Methods (Module 3)</li> <li>Project-Based and Problem-Based Learning (Module 4)</li> <li>Coaching and Mentoring (Module 5)</li> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (Module 8)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> </ul>	<ul> <li>Innovative Teaching and Learning Methods (Module 3)         https://bit.ly/3Dlu8Ap     </li> <li>Project-Based and Problem-Based Learning (Module 4)         https://drive.google.com/file/d/1</li></ul>
<ul> <li>Submitted document PEC for review and approval for 8 modules</li> </ul>	https://bit.ly/3lwz6w6

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					<ul> <li>Communication and People Skills         Development (Module 2)</li> <li>Innovative Teaching and Learning         Methods (Module 3)</li> <li>Project-Based and Problem-Based         Learning (Module 4)</li> <li>Coaching and Mentoring (Module 5)</li> <li>Applications of Optimization and         Technology in Value Chain (Module         7)</li> <li>Digital Manufacturing (Module 8)</li> <li>Innovative Product Design and         Development (Module 9)</li> <li>Data Analytics (Module 10)</li> </ul>		<ul> <li>Innovative Product Design and Development (Module 9)         <ul> <li>https://bit.ly/3RT42bL</li> </ul> </li> <li>Data Analytics (Module 10)         <ul> <li>https://bit.ly/3RX9Bpx</li> </ul> </li> </ul>
Task 2.4	Training the Thai trainers	Feb 17, 2021	Nov 1, 2023	AIT, KMUTNB, KKU,MU, PSU, MIC, UPB and UMinho	<ul> <li>Identified the 12 Thai trainers</li> <li>Had a meeting with Thai trainers to explain train the trainer program</li> <li>Updated the list of 12 Thai trainers</li> <li>Trained the trainers on</li> <li>Communication and People Skills Development (Module 2)</li> <li>Innovative Teaching and Learning Methods (Module 3)</li> <li>Project-Based and Problem-Based Learning (Module 4)</li> <li>Coaching and Mentoring (Module 5)</li> <li>Industrial Management in Industry 4.0 Era (Module 6)</li> </ul>	•	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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				Digital Manufacturing (Module 8)     Data Analytics (Module 10)	<ul> <li>Innovative Teaching and Learning Methods (Module 3)</li> <li>Project-Based and Problem-Based Learning (Module 4)</li> <li>Coaching and Mentoring (Module 5)</li> <li>Industrial Management in Industry 4.0 Era (Module 6)</li> <li>Digital Manufacturing (Module 8)</li> <li>Data Analytics (Module 10)</li> <li>Status of the Train the Trainer Program https://bit.ly/3samMJx</li> <li>Note: the two trainings in Jan 2022 were postponed due to the emergence of Omicron at the end of December</li> </ul>
					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, UPB and PSU	<ul> <li>Completed Coaching for 6 modules</li> <li>Communication and People Skills         Development (Module 2)     </li> <li>Innovative Teaching and Learning         Methods (Module 3)     </li> </ul>	<ul> <li>Completed coaching activities for</li> <li>Communication and People Skills         Development (Module 2)     </li> <li>Innovative Teaching and Learning         Methods (Module 3)     </li> </ul>





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



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Task 2.6	Assessing the Thai trainers	Jan 23	AIT, KKU	<ul> <li>Assessment of the performance of the 12         Thai trainers for 2 modules         <ul> <li>Communication and People Skills</li> <li>Development (Module 2)</li> </ul> </li> </ul>
				Data Analytics (Module 10)
Task 2.7			AIT, KKU, MU, PSU and Lampang Rajabhat University (Associated Partner)	<ul> <li>Set up Active Learning Classrooms for training activities</li> <li>A center will be located at AIT</li> <li>Active Learning Classrooms have been set up and used for training <a href="https://bit.ly/3L8EqWq">https://bit.ly/3L8EqWq</a></li> </ul>

<sup>\*\*</sup> 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 and UMinho	•	Submit documents to QCMB and PEC for approval  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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Task 2.2	Developing innovative training materials	Apr 21	Dec 21	AIT 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	AIT and UMinho	•	Submit the Materials to QCMB and PEC  • Learning Experience-Focused Course Design and Development (Module 1)  • Industrial Management in Industry 4.0 Era (Module 6)	•	A capacity training assessment form
Task 2.4	Training the Thai trainers	Feb 21	Mar 23	UMinho, KMUTNB, KKU,MU, and PSU	•	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	UMinho, KMUTNB, KKU,MU, and PSU	•	<ul> <li>Finish coaching 12 Thai trainers for</li> <li>Industrial Management in Industry</li> <li>4.0 Era (Module 6)</li> </ul>	•	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



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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
Task x.x					•	

<sup>\*\*</sup>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)	VP3-Capacity training for non-university sector at tertiary level in Thailand		
WPL: Thanate Ratanawilai (PSU)	Co-WPL: Kanchaha Sethanan (KKU)	Reporting period: November 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	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	Υ	Υ	N	Υ	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		

<sup>\*</sup>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 3.1	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 7 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)  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 8 on "30 September – 2 October 2023"***  • Module 9 on 20-22 December 2022*





<ul> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (DM) (Module 8)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> </ul>	<ul> <li>Module 9 on 25-27 February 2022</li> <li>Module 10 on 7-9 April 2023***         *Rambhai Barni Rajabhat University         ** Silapakorn University         ***King Mongkut's University of Technology North Bangkok</li> </ul>
<ul> <li>Scheduled training for Southern region for 7 modules</li> <li>Communication and People Skills Development (Module 2)</li> <li>Innovative Teaching and Learning Methods (Module 3)</li> <li>Project-Based and Problem-Based Learning (Module 4)</li> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (DM) (Module 8)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> <li>Scheduled training program for Northern region for 7 modules</li> </ul>	<ul> <li>Training activities scheduled for Southern region of</li> <li>Module 2 on 18-20 March 2022</li> <li>Module 3 on 27-29 March 2023</li> <li>Module 4 on 8-10 May 2023**</li> <li>Module 7 on 2-4 May 2022         <ul> <li>(Note: Module 7 was scheduled on 25-27 March 2022 but the activity has been postponed due to the emergence of Omicron)</li> <li>Module 8 on 28-30 August 2023</li> <li>Module 9 on 1-3 April 2022</li> <li>Module 9 on 19-21 November 2022*</li> <li>Module 10 on 9-11 November 2022</li> <li>* Surat Thani Rajabhat University **Rajamangala University of Technology Srivijaya</li> </ul> </li> </ul>

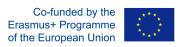




Communication and People Skills Development (Module 2) Innovative Teaching and Learning Methods (Module 3) Project-Based and Problem-Based Learning (Module 4) Applications of Optimization and Technology in Value Chain (Module 7) Digital Manufacturing (DM) (Module 8) Innovative Product Design and Development (Module 9) Data Analytics (Module 10) Scheduled training program for Northeastern region for 7 modules Communication and People Skills Development (Module 2) Innovative Teaching and Learning Methods (Module 3) Project-Based and Problem-Based Learning (Module 4) 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) Digital Manufacturing (DM) (Module 8) 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) Digital Manufacturing (DM) (Module 8) Innovative Teaching and Learning Module 2 on 17-19 July 2023* Module 3 on 16-18 June 2023 Module 4 on 19-21 May 2023 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 Pothodule 3 on 16-18 June 2023 Module 4 on 19-21 May 2023 Module 1 on 26-28 April 23* Rajamangala University of Technology Lanna Training activities scheduled for Northeastern region of Pothodule 3 on 16-18 June 2023* Module 3 on 16-18 June 2023 Module 3 on 16-18 June 2023 Module 4 on 19-21 May 2023 Module 1 on 26-28 April 23* Rajamangala University of Technology Lanna Training activities scheduled for Northeastern region of Pothodule 3 on 16-18 June 2023* Module 1 on 26-28 April 23* Rajamangala University of Technology Lanna Training activities scheduled for Northeastern region of Pothodule 3 on 16-18 June 2023* Module 1 on 26-28 April 23* Rajamangala University of Technology Lanna Training activities scheduled for Northeastern region of Pothodule 3 on 26-28 A

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## **ERASMUS+ CBHE PROJECT**



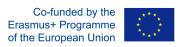
				<ul> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> <li>Submitted the 1<sup>st</sup> draft of Deliverable 3.1 report to QCMB</li> <li>Held online meetings with Thai trainers of Innovative Teaching and Learning Methods (Module 3) and Data Analytics (Module 10)</li> </ul>	<ul> <li>Module 8 of 2023***</li> <li>Module 9 of December 10 2023*</li> <li>*Chaiyaphu**Kalasin L</li> </ul>	on 18-20 January  Im Rajabhat University Iniversity Ingala University of
				<ul> <li>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</li> <li>Revised the 2<sup>nd</sup> draft of Deliverable 3.1 report to QCMB</li> </ul>	<ul> <li>Organized and to each training and 10 training tentative training</li> <li>14 tentative training</li> </ul>	including a progress of ivities assigned Thai trainers center for modules 3 activities and set the
Task 3.2	Conducting capacity training on Industry 4.0 competence development	Apr 21	- AIT, KMUT KKU, N and PS		https://bit.ly/3	hining Status Report VKOwq7 tivities with the total s 79 in Central region.





	<ul> <li>Conducted 12 capacity training sessions in Central region</li> <li>Conducted 2 capacity training sessions in Decembers 2021 at Rambhai Barni Rajabhat University (a subgroup)</li> <li>Communication and People Skills Development (Module 2)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Conducted 3 capacity training sessions in February and March 2022 at Mahidol University</li> <li>Communication and People Skills Development (Module 2)</li> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Conducted 2 capacity training sessions in January 2023 at Silapakorn University (a subgroup)</li> <li>Communication and People Skills Development (Module 2)</li> <li>Conducted 1 capacity training</li> </ul>	<ul> <li>The participants of 58, 10, 14, 15, 13, 20, and 17 for Modules 2, 3, 4, 7, 8, 9, and 10, respectively</li> <li>Training activities with the total participants 80 in Southern region. The participants of 4, 34, 28, 13, 11, 20, and 20 for Modules 2, 3, 4, 7, 8, 9, and 10, respectively</li> <li>Training activities with the total participants 76 in Northern region. The participants of 10, 35, 19, 10, 15, 15, and 29 for Modules 2, 3, 4, 7, 8, 9, and 10, respectively</li> <li>Training activities with the total participants 89 in Northeast region. The participants of 28, 10, 30, 32, 21, 8, and 12 for Modules 2, 3, 4, 7, 8, 9, and 10, respectively</li> </ul>
	sessions in April 2023 at King Mongkut's University of Technology North Bangkok (a subgroup)	Example of the ambiance during the trainings <a href="https://bit.ly/3kGUKRE">https://bit.ly/3kGUKRE</a>





	<ul> <li>Data Analytics (Module 10) Conducted 2 capacity training sessions in June 2023 at Mahidol University</li> <li>Innovative Teaching and Learning Methods (Module 3)</li> <li>Project-Based and Problem- Based Learning (Module 4) Conducted 1 capacity training sessions in September and October 2023 at King Mongkut's University of Technology North Bangkok (a subgroup)</li> <li>Digital Manufacturing (Module 8) Conducted a capacity training sessions in November 2023 at Western Digital</li> <li>Communication and People Skills Development (Module 2)</li> <li>Onducted 10 capacity training sessions in March, April, May, and November 2022 at Prince of Songkla University (PSU)</li> <li>Communication and People Skills Development (Module 2)</li> </ul>
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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 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 ProblemBased Learning (Module 4)     Conducted 1 capacity training session in August 2023 at Prince of Songkla University (PSU)     Digital Manufacturing (Module 8)	
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## ARGP 1

## **ERASMUS+ CBHE PROJECT**



## 4 Pop

## **ERASMUS+ CBHE PROJECT**



Digital Manufacturing (Module 8)
Data Analytics (Module 10)
Conducted 1 capacity training
sessions in December 2023 at
Lampang Rajabhat University (LPRU)
for Northern region on
Digital Manufacturing (Module 8)
Conducted 10 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)
Conducted 1 capacity training
sessions in November 2022 at
Chaiyaphum Rajabhat University for
a subgroup of Northeastern region
on
Communication and People Skills
Development (Module 2)
Conducted 1 capacity training
sessions in January 2023 at
Chaiyaphum Rajabhat University for

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a subgroup of Northeastern region
on
Data Analytics (Module 10)
Conducted 1 capacity training
sessions in May 2023 at Khon Kaen
University (KKU) for Northeastern
region on
Innovative Teaching and Learning
Methods (Module 3)
Conducted 2 capacity training
sessions in February and July 2023 at
Kalasin University for a subgroup of
Northeastern region on
Communication and People Skills
Development (Module 2)
Project-Based and Problem-
Based Learning (Module 4)
Conducted 1 capacity training
sessions in May 2023 at Rajamangala
University of Technology Isan for a
subgroup of Northeastern region on
Applications of Optimization and
Technology in Value Chain
(Module 7)
Conducted 1 capacity training
sessions in June and July 2023 at
Chaiyaphum Rajabhat University for
a subgroup of Northeastern region
on



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



<ul> <li>Project-Based and Problem- Based Learning (Module 4)</li> <li>Conducted 1 capacity training</li> </ul>
sessions in October 2023 at
Rajamangala University of
Technology Isan for a subgroup of
Northeastern region on
Digital Manufacturing (Module 8)
Delivered the certificate of participations for
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)

<sup>\*\*</sup> 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
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

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Task 3.4	Assessing trained capacity	July 21	Oct 23	EU partners	•	Monitor the training and coaching	•	An assessment report on the
				and AIT		activities		performance of the trained teaching
					•	Assess the overall performance of the		staff from non-university sector
						trainees after the completion of		
						coaching sessions		

# according to the proposal

#### **Corrective Actions \*\***

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

<sup>\*\*</sup>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.







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)	WP4- Quality Monitoring and Control	
WPL: Andrei Szuder (UPB)	Co-WPL: Danaipong Chetchotsak (KKU)	Reporting period: November 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\*

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	Υ	Υ	Υ		
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		

<sup>\*</sup>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 achievement	s of
4.1	Developing a quality control and monitoring system	Feb 1, 2021	Sep 13, 2021	All partners	<ul> <li>Developed a QCMP and supporting Quality Management System templates</li> <li>Reviewed and approved the contents of the QCMP by QCMB</li> <li>Revised the QCMP according to the project management flow given by PC., approved Project Proposal and the ReCap 4.0 Erasmus Projects Overview.</li> <li>Submitted to PEC for approval.</li> <li>An official QCMP https://bit.ly/3w1ODN4</li> <li>The Quality Management System templates drafts are available on ReCap4.0 Project Portal: https://bit.ly/38Y0Uud</li> </ul>	
4.2	Implementing the internal quality control and monitoring of the project	Mar 11, 2021	-	All partners	<ul> <li>Updated data of the task deadlines, responsible and the current stage of WP's in the Quality Control and Monitoring Template (QCMR).</li> <li>Reviewed and approved the contents of deliverable, "WP1-1.1 A capacity assessment execution plan"</li> <li>Consolidated Quality Control and Monitoring Report (QCMR) https://bit.ly/3Z6sHgP</li> <li>The consolidated reviewed report (The consolidated deliverable evaluation template) for the deliverable WP1-1.1</li> </ul>	









<ul> <li>Coaching and Mentoring (Module 5)</li> <li>Applications of Optimization and Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (Module 8)</li> <li>Innovative Product Design and Development (Module 9)</li> <li>Data Analytics (Module 10)</li> </ul>	<ul> <li>Training evaluation report for period Dec 2021-Mar 2022. (QD-TER-V1)     <a href="https://bit.ly/3lMyCJq">https://bit.ly/3lMyCJq</a></li> <li>Training Evaluation Report, vol5     <a href="https://drive.google.com/file/d/1MDeUgomYKzZyL4WGhXDkdqokRC5ooM7g/view?usp=share_link">https://drive.google.com/file/d/1MDeUgomYKzZyL4WGhXDkdqokRC5ooM7g/view?usp=share_link</a></li> </ul>
<ul> <li>Prepared training evaluation reports</li> <li>Vol 1 (Period Dec 2021-Mar 2022)</li> <li>Vol 2 (Period Apr 2022-Jul 2022)</li> <li>Vol3 (MIC, Ireland, June-July 2022)</li> <li>Vol4 (University of Minho, Braga, Portugal, Sep 2022)</li> <li>Vol.5 (Nov 2022-Jan 2023)</li> <li>Vol6 (November 2022 – May 2023)</li> <li>Reviewed and approved a capacity training execution plan (CTEP), subject to correction</li> </ul>	<ul> <li>Consolidated review report for Training Evaluation Report, vol5 https://drive.google.com/file/d/1Qq4 hGw m2cGaZRs46GNXDRfYuC6SqZ3d /view?usp=share_link</li> <li>QCMR Report: https://drive.google.com/drive/folder s/185wgj64LzL6- GoZR4lneWLbQ28_8zB1l?usp=drive_link</li> </ul>
<ul> <li>Created and reviewed a form for Project Impact Evaluation (Thai Trainees' Capability and Impact Evaluation Questionnaire).</li> </ul>	<ul> <li>Draft Training Evaluation Report, vol6</li> <li><a href="https://drive.google.com/drive/folders/1E0kURbzZci2Ymdr5A3YkchLsSEYe">https://drive.google.com/drive/folders/1E0kURbzZci2Ymdr5A3YkchLsSEYe</a></li> <li>P T?usp=drive link</li> </ul>
Send out Thai Trainees' Capability and Impact Evaluation Questionnaire.	<ul> <li>https://drive.google.com/drive/folder s/1hMkzkiZJfamr_5iUCEDx3YJMXsI2A Kwm?usp=drive_link</li> </ul>

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4.3	Inviting independent external evaluation of the project results	Oct 2021	All partners and External evaluator	<ul> <li>Prepared a process for selection of an external evaluator</li> <li>Reviewed the candidates proposed by PC</li> <li>Recommended the selected candidate to PEC</li> <li>Invited the selected external auditor</li> <li>Prepared contract for the external audit</li> <li>Facilitated the external evaluation process (handling the questionnaires).</li> <li>Organized with PC the audit interview for external auditor.</li> <li>Reviewed the evaluation report</li> <li>Helped PC to prepare the midterm report.</li> </ul>	•	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 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.

<sup>\*\*</sup> 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
4.2	Implementing the internal quality control and monitoring of the project	Dec 2020	Nov 2023	All partners	<ul> <li>Monitor the project activities</li> <li>Execute quality control of all deliverables according to the proposal until the end of the project.</li> </ul>	<ul> <li>Updated quality monitoring report as Link to the file: <a href="https://bit.ly/37mCwlu">https://bit.ly/37mCwlu</a></li> </ul>
						<ul> <li>Consolidated report of QCMB using Deliverable Evaluation Template</li> </ul>
4.3	Inviting independent external evaluation of the project results	Nov 2021	Nov 2023	All partners and External evaluator	<ul> <li>Draft a contract between the external evaluator and the project</li> <li>Facilitate the external evaluation process</li> </ul>	<ul> <li>Midway external quality control and monitoring report.</li> <li>Final external quality control and monitoring report.</li> </ul>

# 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				•	

<sup>\*\*</sup>Only when corrective actions are needed.

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#### **ERASMUS+ CBHE PROJECT**

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



#### 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.



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)	WP5-Dissemination and Exploitation of Project Results			
WPL: Tuangyot Supeekit (MU)	Co-WPL: Pisut Koomsap (AIT)	Reporting period: November 30, 2023		

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.
	<ul> <li>Public seminars are organised at the beginning of project years; M1, M13, M24.</li> </ul>
	• 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,	Υ	Υ	Υ	Υ	Υ	Υ				
	Exploitation and										
	Sustainable plan (DESP)										
Dev5.2	A project website	Υ	Υ	N	N	N	N				
Dev5.3	A list of registered trainees from the non-university sector at tertiary level in Thailand	Υ	Y	N	NA	NA	N				
Dev5.4	Dissemination materials	Υ	Y	N	N	N	N				



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



Delivera	Deliverable Title						
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	Υ	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	Υ	Y	N	NA	NA	N
Dev5.8	A dissemination- sustainability conference	Y	N	N	NA	NA	N

<sup>\*</sup>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	<ul> <li>Discussed about activities</li> <li>Drafted a DESP</li> <li>Reviewed the plan</li> <li>Submitted the DESP to QCMB</li> <li>Revised the DESP according to QCMB's feedback</li> <li>Submitted the revised DESP to QCMB</li> </ul>	An official DESP https://bit.ly/3BvrBC3





Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out  Specific and measurable indicators of achievement
					<ul> <li>Revised DESP as per QCMB comments and submitted to PEC for approval</li> <li>Drafting detailed exploitation plan</li> <li>Revised detailed exploitation plan as per PEC's comments.</li> <li>Submitted the revised exploitation plan to PEC.</li> </ul>
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	<ul> <li>Designed, created and launched both the project website and Member Space (internal website for the project's members)</li> <li>Transformed MSIE 4.0 Facebook to ReCap 4.0 Facebook and keeping it up to date with the activites of ReCap 4.0</li> <li>Created a YouTube Channel for ReCap 4.0</li> <li>Updating contents to keep these</li> <li>The project website: <a href="http://recap4.ait.ac.th/">http://recap4.ait.ac.th/</a></li> <li>Member Space: <a href="https://bit.ly/3FkQAIT">https://bit.ly/3FkQAIT</a></li> <li>(Permission is required to access the member space)</li> <li>Facebook: <a href="https://bit.ly/3sfMGeJ">ReCap4Thailand</a></li> <li>https://bit.ly/3sfMGeJ</li> </ul>
					<ul> <li>Updating the website with short articles about Industry 4.0 and EU consortium partners</li> <li>YouTube Channel:         <a href="https://bit.ly/388mdcj">https://bit.ly/388mdcj</a></li> </ul>





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	<ul> <li>The report on the visit to promote the project and invite the target teaching staff is available at <a href="https://bit.ly/3BweAls">https://bit.ly/3BweAls</a></li> <li>Online registration form available via the project website <a href="https://bit.ly/3OZEEk3">https://bit.ly/3OZEEk3</a></li> <li>Information Session for Central Region <a href="https://bit.ly/38R87vY">https://bit.ly/38R87vY</a></li> <li>Tentative lists of trainees from Rajabhat universities (150 trainees as of 15 June 21 for initial registration)</li> <li>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</li> </ul>





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





Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement
					<ul> <li>as prepare training room and facilities for the training in Northern region</li> <li>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</li> <li>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</li> <li>Promoting Training Modules: Innovative Teaching and Learning Methods (ITM) and Data Analytics (DA)</li> <li>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</li> </ul>	





Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
					•	Conducted online session for Rajamangala University of Technology Suvarnabhumi, Suphanburi Campus to promote ReCap 4.0 project and invite the faculty members to participate in our competence development training program Conducted online session for College of Logistics and Supply Chain, Suan Sunandha Rajabhat University to promote ReCap 4.0 project and invite the faculty members to participate in our competence development training program. Visited Faculty of Education, Rambhai Barni Rajabhat University (RBRU) to provide further information about the project and invited them to join competence development training program. Promoting Training Module: Digital Manufacturing (DM) Conducted online session for Rajamangala University of Technology Rattanakosin, Salaya Campus to promote ReCap 4.0 project and invite the faculty members to participate in our	





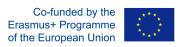
Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Sį	pecific and measurable indicators of achievement
					•	competence development training program Contacting Chandrakasem Rajabhat University (Lopburi province) for ReCap4.0 information session Promoting Training Module: Coaching and Mentoring Skills Development Contacting Thepsatri Rajabhat University (Lopburi province) for ReCap4.0 information session		
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 Created posters for the training programs: Innovative Teaching and Learning, Project-based Learning, Digital Manufacturing.	•	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/3yhR1ll E-newsletter issue2 https://bit.ly/3Ogvsa3 E-newsletter issue 3 https://bit.ly/417WiYO E-newsletter issue4





Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
					•	Created the fourth issue of E-newsletter Created X-stands and posters to present the training programs for the mini exhibition at the 30th International Conference on Transdisciplinary Engineering (TE2023) Drafted the fifth issue of E-newsletter	<ul> <li>http://bit.ly/3rezKZA</li> <li>ReCap 4.0 Virtual Exhibition https://bit.ly/3RPs9YS</li> </ul>
Task 5.5	Publications in professional journals, newspapers, magazines, brochures and social media	Apr 15, 2021		All partners	•	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.  A development of a toolkit for training on course design has been presented at the 29 <sup>th</sup> 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	<ul> <li>Report on publications         <ul> <li>https://bit.ly/3VVN5Ad</li> </ul> </li> <li>"Analysis of Teacher's Competences for Industry4.0 subjects"         <ul> <li>https://doi.org/10.14416/j.asep.202</li> <li>2.09.005</li> </ul> </li> <li>"Student Learning Journey Map (SLJM)"         <ul> <li>http://dx.doi.org/10.4322/pmd.2022.</li> <li>019</li> </ul> </li> <li>Publications in the TE2023         <ul> <li>proceedings</li> <li>http://recap4.ait.ac.th/our-presentations-at-te2023/</li> </ul> </li> </ul>





Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out	Specific and measurable indicators of achievement
					constructive enhancement" has been published in Product: Management and Development Vol.20, No.1, 2022.  Active Learning in Engineering Education: Case Study in Mechanics for Engineering presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July 2023.  Data Analytics for Admission Process: Bachelor of Engineering Program presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July 2023  Development of Collaborative Multi-Robotics Assembly System with Digital Twin Approach presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July 2023  Digital Manufacturing Pilot Study for Stepping Towards Mixed Reality Applications in Tertiary Education presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July 2023  Design and Development of a Tool for	





Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out Specific and measurable indicators of achievement
					Measuring Learning Outcomes in a Manufacturing Engineering Program Based on Outcome-Based Education presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July 2023.  Industrial Management for Industry 4.0 – Simulation System to Support Learning of Opportunities and Challenges of Dealing with Real-Time Data presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July 2023.  In Pursuit of Greater Coherence Between Learning Outcomes and Competence Development for Successful Teaching of Engineering presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July 2023 Investigating the Potential of Mixed Teaching Methods to Enhance Manufacturing Process Learning in Undergraduate Program presented at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering in July





Task No	Task Title	Start date	End date**	Place/ Partners involved	Description of the activity carried out Specific and measurable indicators of achievement
					<ul> <li>Improvement of the Mizusumashi         System in an Electrical Devices         Company: a Case of Transdisciplinary         University-Business Cooperation         presented at the 30<sup>th</sup> International         Conference on Transdisciplinary         Engineering in July 2023</li> <li>Knowing Your Learners to Scaffolding         Their Autonomy: The Perspective of         Learner Capability and Perception         presented at the 30<sup>th</sup> International         Conference on Transdisciplinary         Engineering in July 2023</li> <li>Problem-based Learning in Marketing         Engineer Course: A Case Study from         Industrial Engineering Curriculum         presented at the 30<sup>th</sup> International         Conference on Transdisciplinary         Engineering in July 2023.</li> <li>The design of Machine Learning using         Al model for searching casualty people         in the Gulf of Thailand presented at         the 30<sup>th</sup> International Conference on         Transdisciplinary Engineering in July         2023</li> </ul>





Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
Task 5.6	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	·	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.  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  Organized a ReCap4.0 mini exhibition to disseminate key results and activities of WP1, train the trainers programs and train the capacity at the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering during July 11-14, 2023	<ul> <li>The report page on the dissemination events         https://bit.ly/3xfv05t     </li> <li>Quick links to a few events</li> <li>The first dissemination event (Online)         https://youtu.be/g4gU5GZU8EM     </li> <li>Project presentation at QPI conference         https://bit.ly/3vKSb7I     </li> <li>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     </li> </ul>





Task No	Task Title	Start date	End date**	Place/ Partners involved		Description of the activity carried out	Specific and measurable indicators of achievement
5.8	Organizing the final dissemination-sustainability conference	Nov 19, 2021		AIT	•	Submitted an interest in hosting the 30 <sup>th</sup> 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. Organized the 30 <sup>th</sup> International Conference on Transdisciplinary Engineering (TE2023) at Dusit Thani Hotel in Hua Hin Cha Am, Thailand, during July 11-14, 2023	<ul> <li>The 30<sup>th</sup> ISTE International Conference on Transdisciplinary Engineering (TE 2023)</li> <li>http://te2023.ait.ac.th/</li> <li>EasyChair for TE2023 paper submission https://bit.ly/3TtDZs</li> <li>Call for Papers and Workshop Sessions https://bit.ly/3z9fvNH</li> <li>Venue for the conference:         <ul> <li>Dusit Thani Hua Hin</li> <li>Theme of the conference:</li></ul></li></ul>



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
						presentations: 15  Number of reviewers: more than 90  Number of oral presentations: 93  Number of poster presentations: 10  Number of Workshops: 4  ReCap 4.0 Participation  Number of abstracts: 22  Number of full paper invitations: 19  Number of full papers submitted: 15  Number of oral presentations (accepted full papers): 11  Number of poster presentations:

<sup>\*\*</sup> 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 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)
Task 5.5	Publications in professional journals, newspapers, magazines,	Apr 2022	Oct 2023	All the partners	•	Disseminate project outputs achieved at each stage of the project in relevant professional journals, conference	•	Publications regarding project outputs get published in professional



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
	brochures and social media				•	proceedings, newspapers, magazines, and social media Review the task every 6 months		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

<sup>#</sup> 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
					•	

<sup>\*\*</sup>Only when corrective actions are needed.





Changes that have occurred in this result since the original p	proposal:
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The WP5 plan has been revised once in Mar 2021.

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#### **ERASMUS+ CBHE PROJECT**

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: November 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	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	Υ	Y	Y	N/A	Υ	Y			
Dev 6.2	Kick-off and regular consortium meetings	Υ	Υ	N	N/A	Υ	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			

<sup>\*</sup>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	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





				<ul> <li>Developed Project Management and Communication Plan (PMCP)</li> <li>Approved PMCP by PEC</li> <li>Collected, prepared, and submitted documents for changing of the legal representative</li> </ul>	
Task 6.	Organizing kick-off and regular meetings	Feb 21	- All partners	<ul> <li>Organized online PEC meeting on Feb 3, 2021</li> <li>Organized online general meeting Mar 10-11, 2021</li> <li>Organized Project meeting at MIC during June 27-July 1, 2022</li> <li>Organized online PEC meeting on Oct 26, 2022</li> <li>Organized online partner leaders meeting on Nov 4, 2022</li> <li>Organized online PEC meeting on Dec 14, 2022</li> <li>Organized PEC meeting at PSU during Jan 31, 2023 – Feb 4, 2023</li> <li>Organized PEC meeting on July 15, 2023 at AIT</li> </ul>	PEC Meeting Minutes <a href="https://bit.ly/3KH9qe8">https://bit.ly/3KH9qe8</a>
Task 6.	Monitoring and controlling the project	Nov 20	- All partners	<ul> <li>Followed up with WP leaders on the progress of the project</li> <li>Reminded the WPLs for submission of WP quarterly reports</li> <li>Had meetings with WP leaders</li> </ul>	<ul> <li>Project Quarterly reports         https://bit.ly/3VUiUJI     </li> <li>PEC's approval for QCMP</li> </ul>





## ARGP 1

## **ERASMUS+ CBHE PROJECT**



			<ul> <li>Coaching and Mentoring Skills         Development (Module 5)</li> <li>Applications of Optimization and         Technology in Value Chain (Module 7)</li> <li>Digital Manufacturing (Module 8)</li> <li>Innovative Product Design and         Development (Module 9)</li> <li>Data Analytics (Module 10)</li> <li>Visited Lampang Rajabhat University in         March 2022 to check facilities for         conducting training for participants in the         North</li> <li>Reviewed contract for the first external         audit</li> <li>Facilitated the midway project evaluation         by the external evaluator</li> <li>Reviewed project quarterly reports</li> <li>Reviewed and gave feedback on         partners' financial reports</li> <li>Reviewed and approved exploitation plan</li> </ul>	<ul> <li>Meeting with the external evaluator for midway evaluation</li> <li>Approval of the midterm audit report</li> </ul>
6.4	Closing project	Aug 23	<ul> <li>Prepared and submit midterm progress report</li> <li>Drafted a request for the extension of the project eligible period</li> <li>Submitted a request for the extension of the project eligible period and received approval</li> </ul>	<ul> <li>Submission of the midterm progress report</li> <li>EACEA approval for a request for the extension of the project eligible period</li> </ul>

<sup>\*\*</sup> if it is still ongoing, please put "-".

## ARGP)

#### **ERASMUS+ CBHE PROJECT**

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 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

# according to the proposal



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



#### **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					•	

<sup>\*\*</sup>Only when corrective actions are needed.

Changes that	have occurred	in this	result since t	he original	propos	al
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	A plan has been revised one time.			



