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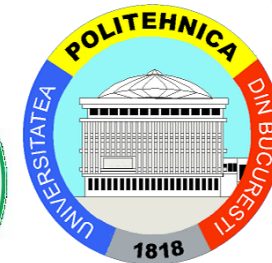


WP4 Report

Livia LAZAR



Universidade do Minho



Curriculum Development
of Master's Degree Program in

Industrial Engineering for Thailand Sustainable Smart Industry



Discussion topics

- External quality audit report
- Deliverables evaluation, according to the evaluation criteria and Work Project Plan
- Internal Quality Controls and Monitoring
- Further external quality and financial audit planning
- WP's final report





External Audit Report (EAR)- Mid-term implementation audit

During the period from 21.10.2019 to 25.10.2019, the first audit process for the evaluation of the project results, was held in Bangkok, according to the [Audit Plan 11.10.2019](#).

The result: Audit report submitted in 9.12.2019- [version 3](#) (final version) after implementing PEC and QCMB's recommendations.





External Audit Report (EAR)- Mid-term implementation audit

- period of the project realization covered: 15.10.2017. to 30.09.2019
- main concern: *tasks 2.1 and 2.2 are behind the schedule.*
- strong points:

good budget distribution between WPs and partners

existing premises for project spin-offs and international further collaborations

well balanced workload distribution between WPs, activities, staff categories

precise developed procedures, that are followed within the project

sustainability of the project results ensured

admiration and gratitude to the Project Coordinator for the ways he is managing this project





Evaluation Criteria Identification and Deliverables Evaluation

WP	Task no.	Description	QCM responsible	YES/NO	Start Time, (PMCP-V2)	Outcomes evaluated (QCMB – last date)
1	1.1	Developing a gap analysis working plan	Wasawat Nakkiew	Yes	Jan, 2018	GD-T1.1_O1.1(V3) Final -21.01.2019
	1.2	Analysing of MSIE curricula being offered, and of learning and teaching methods being applied	Teresa Monteiro	Yes	Mar, 2018	GD-T1.2_O1.2 (V5) 12.11.2018
	1.3	Assessing needs of industry and students	Wasawat Nakkiew	Yes	Apr, 2018	GD-T1.2_O1.3(V4) 13.11.2018 GD-T1.3_O1.4(V5) 14.01.2019
	1.4	Identifying gaps	Teresa Monteiro	Yes	Aug, 2018	GD-T1.4_O1.5(V4) 24.01.2019
	1.5	Identifying competitive factors for the curriculum	Wasawat Nakkiew	Yes	Aug, 2018	GD-T1.5_O1.6 (V4).docx 14.02.2019
	1.6	Developing recommendations for the specifications and areas of specialization for the curriculum	Wasawat Nakkiew	Yes	Sep, 2018	GD-T1.6_O1.7 (V2).docx 06.03.2019





Evaluation Criteria Identification and Deliverables Evaluation

WP	Task no.	Description	QCM responsible	YES/NO	Start Time (PMCP-V2)	Outcomes evaluated
2	2.1	Developing curriculum structure and academic program learning outcomes	Robert ULEWICZ	Yes	jan, 2019	No (draft report)
	2.2	Developing courses and course learning outcomes based on a matrix that maps course learning outcomes with program learning outcomes, and also teaching and learning methods,	Robert ULEWICZ	Yes	Febr, 2019	No (draft report)
	2.3	Conducting pilot test of the key courses	Huynh Trung Luong	Yes	Aug, 2019	No (10?/16 Pilot courses conducted)
	2.4	Assessment of pilot test of the key courses and finalize the curriculum and the courses	Robert ULEWICZ	Yes	May,2020	CUT_evaluation form, developed by Luong
	2.5	Preparation for accreditation of the curriculum	Thitipong Jamrus/ Komkrit Pitiruek	No	Nov, 2019	No
	2.6	Accreditation of the curriculum by the national accreditation institution in Thailand	Thitipong Jamrus/ Komkrit Pitiruek	No	Apr,2020	No



Evaluation Criteria Identification and Deliverables Evaluation

WP	Task no.	Description	QCM responsible	YES/NO	Start Time (PMCP-V2)	Outcomes evaluated
3	3.1	Developing teaching materials	Teresa Monteiro	No	May, 2019	No
	3.2	Translating teaching materials between English and Thai	Anintaya Kumkalya	No	Jun, 2019	No
	3.3	Developing a web-portal for online learning	Huynh Trung Luong	Yes	Apr, 2018	No (CD-T3.3_O3.1 (V1) on going)
	3.4	Training of staff on new tools and best practice exchange on modern teaching techniques	Teresa Monteiro	No	Febr, 2018	No (Project-Based Learning (PBL), 13-15.09.2019)
	3.5	Adapting learning materials developed to the online learning	Huynh Trung Luong	No	Jul, 2019	No
	3.6	Purchasing and installing of teaching equipment	Huynh Trung Luong	No	Jan, 2019	No, Equipments?
	3.7	Developing a laboratory and online remote access of the laboratory works	Huynh Trung Luong	No	Oct,2019	No (VDO clip – 11.04.2019 On going)





Evaluation Criteria Identification and Deliverables Evaluation

WP	Task no.	Description	QCM responsible	YES/NO	Start Time (PMCP-V2)	Outcomes evaluated
4	4.1	Developing a quality control and monitoring system	Livia Veronica Lazar	Yes	Febr,2018	Yes QCMP(V4)
	4.2	Implementing the internal quality control and monitoring of the project	Livia Veronica Lazar	Yes	Sept,2018	A03_QF- QCM - draft - 26.01.19
	4.3	Inviting external evaluation of the project results	Supapan Chaiprapat	Yes	Mar, 2019	Midterm- Audit report_9.1 2.2019
	4.4	Inviting external financial audit	Supapan Chaiprapat	Yes	Aug, 2020	3 potential candidates





Evaluation Criteria Identification and Deliverables Evaluation

WP	Task no.	Description	QCM responsible	YES/NO	Start Time (PMCP-V2)	Outcomes evaluation
5	5.1	Development of a Dissemination, Exploitation and Sustainable plan	Livia Veronica Lazar	Yes	Jan, 2018	DESP(V7) 1.10.2018
	5.2	Creating a project website to support the dissemination strategy, and communication and collaboration among	Huynh Trung Luong	Yes	Jan, 2018	Report for Project's Website Assessment (42 participants) 22.09.2018
	5.3	Production and dissemination of project materials	Thitipong Jamrus/ Komkrit Pitiruek	No	Mar, 2018	Reports on Dissemination of Project Materials/ 10.04.2019
	5.4	Publications in professional journals, newspapers, magazines, brochures, and social media	Teresa Monteiro	No	Feb, 2019	Publications Reports/ 10.04.2019
	5.5	Developing joint short-term courses in the field of Industrial Engineering in cooperation with industry ...	Athakorn Kengpol	No	Oct, 2019	No
	5.6	Organizing dissemination events with relevant stakeholders	Wasawat Nakkiew	No	Sep, 2018	Reports on Organizing Dissemination Events/ 10.04.2019 https://msie4.ait.ac.th/qf-eve-event-evaluation/ (10e)
		Organizing the final dissemination-sustainability				



Evaluation Criteria Identification and Deliverables Evaluation

WP	Task no.	Description	QCM responsible	YES/ NO	Start Time (PMCP-V2)	Outcomes available
6	6.1	Finalizing management structure	PEC-CUT	Yes	Nov, 2017	PMCP(V1), PMCP(V2)
	6.2	Organizing kick-off and regular consortium meetings	PEC-TU	No	Feb, 2018	Agendas Minutes meeting Attendance lists
	6.3	Monitoring and controlling the project	PEC-PSU	No	Dec, 2017	MSIE 4.0 midterm report Financial Report submitted for Midway Assessment
	6.4	Closing the project	PEC-KMUTNB	No	Jul, 2020	





Evaluation Criteria Identification and Deliverables Evaluation

General aspects that must be taken in account:

- Task 2.4 Assessment of pilot test of the key courses – has 2 different forms for assessment: 1 – according to ECI, 1 – developed without informing QCMB
- Task 3.3 Developing a web-portal for online learning – users assessments (teachers and students)
- Task 5.8 Sustainable network- objectives, performance indicators
- The dissemination events (seminars/ workshops) must be evaluated. This shall be done accordingly to [QF-EVE-Event Evaluation](#) – So far there are 10 evaluated events





Internal Quality Controls and Monitoring Team

Partner	Role	Name
UPB	TL	Tom SAVU
AIT	CP	Huynh Trung Luong
CMU	CP	Wichai Chattinnawat
KMUTNB	CP	Athakorn Kengpol
TU	CP	Anintaya Kumkalya
KKU	CP	Sirorat Pattanapairoj
PSU	CP	Supapan Chaiprapat
UMinho	CP	Rui Sousa
CUT	CP	Anna WIŚNIEWSKA-SAŁEK





Internal Quality Controls and Monitoring

A03_QF-QCM-V4 Internal Quality Control and Monitoring 5

Responsible: Tom SAVU

Evaluation period: 01.11.2019 – 31.12.2019

According to MSIE4.0-Project-Management-and-Communication-Plan-PMCP-V1.1.pdf for WP1 and PMCP-V2.0/12.04.2019 for the rest of WPs

Work Package	Task	Deliverables	Planned Start date	Planned End date	Actual Start date	Actual End date			Task leader	Indicator(s)	Results	Status	Observations, suggestions
						WP	QCMB	PEC					
			1.Sep.18	30.Sep.18								NOT YET STARTED	A training sessions took place during the meeting in
			1.Jan.19	31.Jan.19								NOT YET STARTED	
			1.Jun.19	30.Jun.19								NOT YET STARTED	
WP3	T3.5	O3.5	Online learning materials	1.Jul.19	31.May.20							NOT YET STARTED	
WP3	T3.6	O3.6	Installed hardware and software	1.Jan.19	30.Sep.19				A.M. Harsha S. Abeykoon			OPEN-DRAFT	
WP3	T3.7	O3.7	Laboratory equipped with online remote access from partner locations	1.Oct.19	31.Mar.20	18.Feb.19			A.M. Harsha S. Abeykoon			ONGOING	
WP5	T5.1	O5.1	Dissemination, Exploitation and Sustainable Plan	1.Jan.18	31.Mar.18	1.Mar.18	17.Jan.19	1.Oct.18	25.Jun.19	Andrei DUMITRESCU		DONE-FINAL	Some dates from WP1 Leader and from QCMB do not match
WP5	T5.2	O5.2	Project website	1.Jan.18	30.Sep.20	12.Feb.18						ONGOING	
WP5	T5.3	O5.3	Dissemination materials	1.Mar.18	30.Apr.18	30.Mar.18				Thitipong Jamrus		ONGOING	
				1.Sep.18	31.Oct.18	1.Sep.18						ONGOING	
				1.Mar.19	30.Apr.19								
				1.Sep.19	31.Oct.19								
WP5	T5.4	O5.4	Publications in professional journals, newspapers, magazines, brochures and social	1.Feb.19	31.Mar.19	1.Feb.19				Rui Lima		ONGOING	
				1.Aug.19	30.Sep.19								
WP5	T5.5	O5.5	Short-term courses in the field of Industrial Engineering for professionals	1.Oct.19		Not yet started							
WP5	T5.6	O5.6	Dissemination events organized	1.Sep.18	30.Sep.18	19.Sep.18				Wichai Chattinnawat		ONGOING	
				1.Mar.19	31.Mar.19							ONGOING	
				1.Sep.19	30.Sep.19							ONGOING	





Internal Quality Controls and Monitoring

A03_QF-QCM-V4 Internal Quality Control and Monitoring 5

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Evaluation period: 01.11.2019 – 31.12.2019

According to MSIE4.0-Project-Management-and-Communication-Plan-PMCP-V1.1.pdf for WP1 and PMCP-V2.0/12.04.2019 for the rest of WPs

Work Package	Task	Deliverables	Planned Start date	Planned End date	Actual Start date	Actual End date			Task leader	Indicator(s)	Results	Status	Observations, suggestions	
						WP	QCMB	PEC						
WP2	T2.1	O2.1	A modernized curriculum for Master's degree in IE	1.Jan.19	31.Mar.19	29.Jan.19				Robert ULEWICZ	QF-ECI-T2.1		OPEN-DRAFT	Estimated end date: April 2019
WP2	T2.2	O2.2	Syllabuses for all courses in the curriculum	1.Feb.19	30.Jun.19	30.Jan.19				Robert ULEWICZ	QF-ECI-T2.2		OPEN-DRAFT	
WP2	T2.3	O2.3	Pilot teaching in modernized MSc at partner universities	1.Aug.19	31.May.20	8.Aug.19				Huynh Trung Luong			OPEN-DRAFT	
WP2	T2.5		Preparation for accreditation of the curriculum	1.Nov.19	31.May.20					Kanchana Sethanan			OPEN-DRAFT?	





Internal Quality Controls and Monitoring

A03_QF-QCM-V4 Internal Quality Control and Monitoring 5

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Work Package	Task	Deliverables	Planned Start date	Planned End date	Actual Start date	Actual End date			Task leader	Indicator(s)	Results	Status	Observations, suggestions
						WP	QCMB	PEC					
WP3	T3.1	O3.1	Teaching materials for instructors	1.May.19	30.Apr.20	1.Aug.19						ONGOING	
WP3	T3.2	O3.2	Learning materials for students	1.Jun.19	30.Jun.20							NOT YET STARTED	Expected to start in January 2020
WP3	T3.3	O3.3	A platform for online learning	1.Apr.18	31.Jan.19							OPEN-DRAFT	
WP3	T3.4	O3.4	Trained instructors and staffs on new teaching tools and methods.	1.Feb.18	28.Feb.18							NOT YET STARTED	
				1.Sep.18	30.Sep.18							NOT YET STARTED	A training sessions took place during the meeting in Portugal
				1.Jan.19	31.Jan.19							NOT YET STARTED	
				1.Jun.19	30.Jun.19							NOT YET STARTED	
WP3	T3.5	O3.5	Online learning materials	1.Jul.19	31.May.20							NOT YET STARTED	
WP3	T3.6	O3.6	Installed hardware and software	1.Jan.19	30.Sep.19							OPEN-DRAFT	
WP3	T3.7	O3.7	Laboratory equipped with online remote access from partner locations	1.Oct.19	31.Mar.20	18.Feb.19						ONGOING	





Internal Quality Controls and Monitoring

A03_QF-QCM-V4 Internal Quality Control and Monitoring 5

Responsible: Tom SAVU

Evaluation period: 01.11.2019 – 31.12.2019

According to MSIE4.0-Project-Management-and-Communication-Plan-PMCP-V1.1.pdf for WP1 and PMCP-V2.0/12.04.2019 for the rest of WPs

Work Package	Task	Deliverables	Planned Start date	Planned End date	Actual Start date	Actual End date			Task leader	Indicator(s)	Results	Status	Observations, suggestions
						WP	QCMB	PEC					
WPS	T5.1	O5.1	Dissemination, Exploitation and Sustainable Plan	1.Jan.18	31.Mar.18	1.Mar.18	17.Jan.19	1.Oct.18	25.Jun.19	Andrei DUMITRESCU		DONE-FINAL	Some dates from WP1 Leader and from QCMB do not match
WPS	T5.2	O5.2	Project website	1.Jan.18	30.Sep.20	12.Feb.18						ONGOING	
WPS	T5.3	O5.3	Dissemination materials	1.Mar.18	30.Apr.18	30.Mar.18				Thitipong Jamrus		ONGOING	
				1.Sep.18	31.Oct.18	1.Sep.18						ONGOING	
				1.Mar.19	30.Apr.19								
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WPS	T5.4	O5.4	Publications in professional journals, newspapers, magazines, brochures and social media	1.Feb.19	31.Mar.19	1.Feb.19				Rui Lima		ONGOING	
				1.Aug.19	30.Sep.19								
WPS	T5.5	O5.5	Short-term courses in the field of Industrial Engineering for professionals	1.Oct.19		Not yet started							
WPS	T5.6	O5.6	Dissemination events organized	1.Sep.18	30.Sep.18	19.Sep.18				Wichai Chattinnawat		ONGOING	
				1.Mar.19	31.Mar.19							ONGOING	
				1.Sep.19	30.Sep.19							ONGOING	





Internal Quality Controls and Monitoring

General aspects that must be taken in account:

- A greater involvement of QCM team members is in order. The QCM team members as well as each coordinator on partner level and WP leaders need to be aware of the importance of timely and accurate communication.
- The news within the project (reports/ lists/ tables/ events etc.) must be communicated:
 - by the developer within it's own university to the QCM member assigned, **on continually bases;**
 - By WP Leader or coLeader to QCM Task Leader Tom Savu and cc to WP4 Leader Livia Lazar; PC – Pisut Koomsap; WP5 Leader - Kanchana Sethanan, **on monthly bases.**





Task 4.3 -Inviting external evaluation of the project results – final report

The general recommendation is for keeping the collaboration with Prof. Ruzica Nikolic.

- will be submitted to vote in QCMB, and further to PEC

According to work plan- estimated period: aug.2020 (M35)

- Question: Could it be linked to the final dissemination-sustainability conference?





Task 4.4 -Inviting external financial audit

- 3 potential candidates (assessment forms were sent, and financial offers requested)
 - will be discussed in QCMB, and further to PEC

According to work plan- estimated period: aug-sept.2020 (M35-M36)

Proposal: to start earlier and to divide the process in 2 periods (march/ April and September) in order to ensure:

- the necessary time to correct any possible issues and,
- the proper time for delivering the final financial report before October 14th 2020.





WP's final report

WP's final report structure:

- should respect the [QF_DTM – Deliverable template](#)
- the report should present:
 - ❖ *introduction*: the main objective of the WP, the team, the time reference
 - ❖ *for each task within*:
 - the input data according to the requirements from the Project Details;
 - the main results obtained, according to the reports submitted;
 - the evaluation criteria identified for the task, according to the [QF_ECI](#);
 - the QCMB evaluation result, including the observations received;
 - the PEC evaluation result, including the observations received.
 - ❖ *conclusions*.





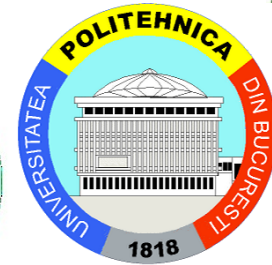
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Thank You



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