

Erasmus+ project: Qualification, Validation and Certification of Maintenance Personnel

Goto meeting, 15th March 2021

Present:

Guðmundur Jón Bjarnason
Svein V. Ólafsson
Ásmundur Jónsson
Torsten Ekström
Ilkka Palsola
Páll István
Ingemar Andreason
Damjan Maletič
Tomáš Hladík
Jan Skarka

Absent:

Maria Malmrud
József Csiba
Jaakko Tennilä
Silvia Stepanova
Mikaela Malmrud
Zsolt Nyeste
Attila Kiss

1) A general status update (Erasmus+ Follow up of MCQ)

As noted last time: *The project should deliver 1000 MCQ and 200 OQ for maintenance manager (EQF 7) and the same for engineers/supervisors (EQF 6), in total 2000 MCQ and 400 OQ. There are no further numerical minimum project requirements / targets.*

We also have the following question from the last meeting: *How will we handle questions that can be used for both EQF levels, such as for managers and engineers/supervisors? The intention is to be able to make use of such questions for all levels where applicable.*

We have already met the MCQ target and will take all the questions that have not yet been imported and import them to the MZ database. The focus will be set on the CMCQ.

The following numbers are for EQF 6 and 7 today, March 15th

MCQ:

	CS	FI	HU	IS	SL	SV	Total
Total	290	314	277	300	130	1029	2340

OQ (some will/may be changed to CMCQ, including numerical questions):

	CS	FI	HU	IS	SL	SV	Total
Total	73	0	72	19	10	0	174

CMCQ:

	CS	FI	HU	IS	SL	SV	Total
Total	0	0	15	14	6	4	39

2) Review of the previous protocol

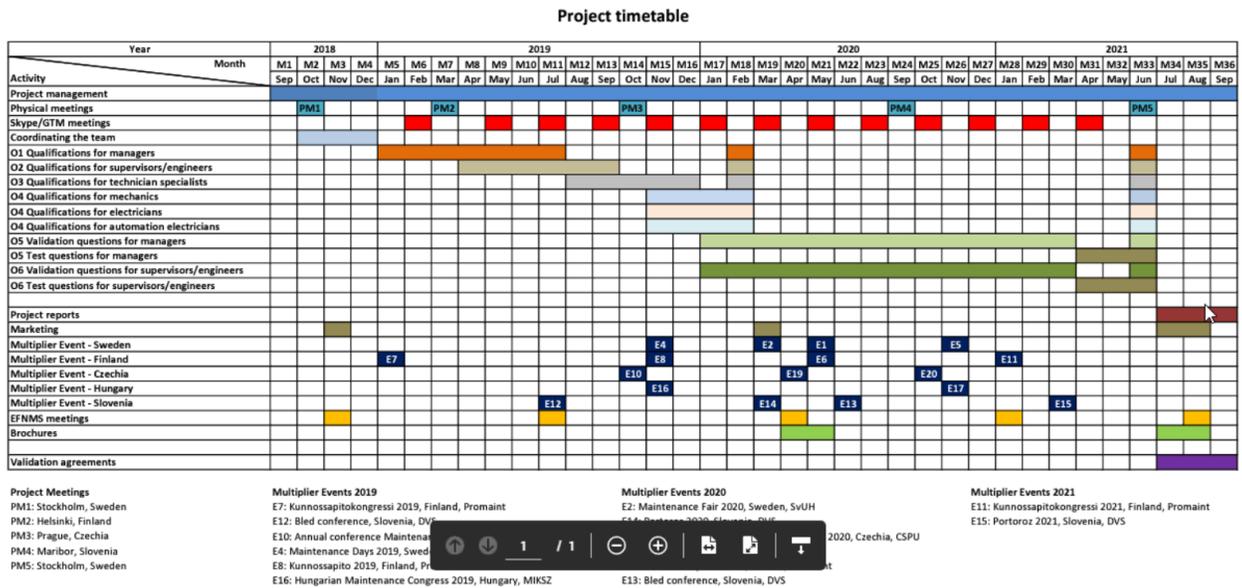
Not discussed.

3) Time plan and time distribution for the rest of the project

It has been approved to prolong the project to 31.08.2021

Invoices have been sent in by most for payment 3. The last payment, payment 4 (20%), will be handled after the project has finished and the end - report delivered.

Torsten showed the Project timetable:



Regarding the multiplier event: They can be done digitally, which will give 15% of the original sum per participant. The participants can now come from your own NMS and/or from the NMS's belonging to the group. Only project group members are excluded. Make sure you have the documentation and participant list. Torsten will send out an e-mail containing the rules for these digital multiplier events.

4) Updated qualifications - Proposal and decisions

Some work has been done on the qualification for each level and subject, see example below. It is rather detailed, intended for trainers and trainees. It is based on the Excel sheet we have been using, but has been put into Word format. It is in line with the EFNMS BoK, same structure for all levels. The format has been approved by the Swedish authorities.

Torsten will compile this and send a notice when the documents are ready, one document per level, four documents. The fourth level will be the recruiting level for maintenance technicians, for mechanics, electricians and automation workers. This is new.

1.0 MAINTENANCE WITHIN PHYSICAL ASSET MANAGEMENT

1.1 PHYSICAL ASSET MANAGEMENT			
OVERVIEW			
<ul style="list-style-type: none"> – Relations between maintenance and other processes – Relevant company procedures (EN 15628 C.1:a) – Relevant business and company strategies, targets and business processes (EN 15628 C.1:b) – Industrial relations (EN 15628 C.1:j) – Fundamentals of processes and projects management (EN 15628 C.2:d) – Maintenance within physical asset management (EN 15628 C.2:i) – Procedures and business processes (EN 15628 C.4:a) – Quality management system (EN 15628 C.4:c) – Corporate objectives (EN 15628 C.5:e) 		<ul style="list-style-type: none"> – Targets of other departments that interact with maintenance (EN 15628 C.6:e) – Interpret the company policy – Break down the company policy into a maintenance policy – Follow the development of the relationships with technical organizations, institutes and associations for the issues concerning the area of maintenance (EN 15628 C.1:f) – Ensure the implementation of company policies for the organization, management and training of employees (EN 15628 C.3:b) – Ensure the communication between different organizational levels and business processes (EN 15628 C.3:d) 	
SUBJECT	KNOWLEDGE	SKILLS	RESPONSIBILITY AND AUTONOMY
1.1.1	A maintenance manager should be able to:	A maintenance manager should be able to:	A maintenance manager should be able to:

SUBJECT	KNOWLEDGE	SKILLS	RESPONSIBILITY AND AUTONOMY
1.1.1 Physical Asset Management	A maintenance manager should be able to: - Describe Physical Asset Management and its effects on the maintenance processes	A maintenance manager should be able to: - Implement a maintenance organisation according to the Physical Asset Management	A maintenance manager should be able to: - Manage the work for planning maintenance in a total project
1.1.2 Company processes	A maintenance manager should be able to: - Describe company strategies, targets and business processes - Mention legislation, technical standards, management system for safety, health, environment and quality, company's and external specialist resources - Describe processes and projects management	A maintenance manager should be able to: - Adapt maintenance strategies, targets and business to the company's processes	A maintenance manager should be able to: - In a total project carry out maintenance planning as a part of total investment

gement	Maintenance within physical asset management - Explain the relations between maintenance and other processes - Mention systems for production planning, account system, maintenance planning and CMMS, and the relation between them	- Communicate with different organizational levels and business processes	
REFERENCES AND STANDARDS			
ISO 55000: – This standard gives an overview of asset management, its principles and terminology, and the expected benefits from adopting asset management. It can be applied to all types of assets and by all types and sizes of organizations.			
EN 16646: – This European standard introduces physical asset management as a framework for maintenance activities. It also introduces the relationship between organizational strategic plan and maintenance management system and describes the interrelations between maintenance process and all the other physical asset management			

5) Discussions about the questions, guidelines, the MZ system and exams

Torsten has created a new template for Calculations Questions, correct answers to be given with one decimal

Template for new Calculation Questions (CQ)			
Question	Answers	Status	Solution proposal
[Write the English question here. Please observe that the answer shall be given with one decimal]	[Write the numerical answer with one decimal 1 here]	Correct	[Write the Solution proposal here]
	[Write the numerical answer with one decimal 2 here]	Correct	
	[Write the numerical answer with one decimal 3 here]	Correct	
	[Write the numerical answer with one decimal 4 here]	Correct	
	[Write the numerical answer with one decimal 5 here]	Correct	
	[Write the numerical answer with one decimal 6 here]	Correct	
Picture Filename: Example Picture.jpg		Points: 1	
Question Group: Add the subject here	Randomize the order of the answers	No level	
Question	Answers	Status	Solution proposal

Torsten will send this to us. Torsten has also updated Guidelines for questions.

As discussed before, the idea is to have two exams per year for the second part, the certification level, executed at the same time in all countries. This is for ECC to take further.

6) Feedback from ongoing pilot test

Everyone asked to take the tests and comment. Torsten has sent updated instructions, introducing a new feature for giving comment per questions within the MZ system.

7) The evaluation process and Quality Assurance for questions

We now have participants from all in the QA group: Sweden (Mikela, will lead the group), Finland, Iceland (Asmundur), Hungary, Slovenia (Damjan) and Czech Republic (Tomas)

From our last meeting:

- *We need to review all questions from English language point of view, spelling, grammar and phrasing. It was suggested that this should be done by a small group and Torsten was asked to follow up on this.*
- *Mikaela is for the moment in charge of quality assurance, Torsten will ask Mikaela to review a few questions, maybe 20 questions, and see how much time it will take. If a question needs a rewrite, it should be sent back to the author and the author kindly asked to rewrite it.*

The group will have web meetings, most likely following the weekly monthly project status meetings.

8) The QVCMP web page

From our last meeting: *Everyone asked to send Zsolt material for the web page, we can also do it ourselves.*

To be looked at closer at our next monthly meeting.

9) Other issues