



**SEM-SEM**



**Smart Control Systems for Energy Management**

Erasmus + #: 561703-EPP-1-2015-1-UK-EPPKA2-CBHE-JP

## **Quality Assurance Report**

### **2<sup>nd</sup> Semester**

**(15<sup>th</sup> April 2016 – 14<sup>th</sup> October 2016)**



|                                     |   |
|-------------------------------------|---|
| <b>Project Acronym:</b>             | SEM-SEM                                     |
| <b>Full Project Title:</b>          | Smart Control Systems for Energy Management |
| <b>Project No.:</b>                 | 561703-EPP-1-2015-1-UK-EPPKA2-CBHE-JP       |
| <b>Funding Scheme:</b>              | ERASMUS+                                    |
| <b>Project Coordinator:</b>         | STAFFORDSHIRE UNIVERSITY (SU)               |
| <b>Project Quality Coordinator:</b> | Eurotraining                                |

|                              |  |
|------------------------------|--|
| <b>Title of Work Package</b> | Monitoring and Quality Control   |
| <b>Work Package</b>          | WP12   |
| <b>Work Package Leader</b>   | EUROTraining   |
| <b>Target Group</b>          | <ul style="list-style-type: none"><li>✓ All project partners</li><li>✓ Students, teachers, engineers and industry management</li></ul> |
| <b>Starting Date</b>         | 15-10-2015   |
| <b>Activity Duration</b>     | 3 years  |
| <b>Document Compiled by</b>  | Eurotraining   |
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## 1. Introduction – Purpose of this Document

Monitoring and Quality Control is an integrated process to the implementation of every successful project, as it is necessary in order to ensure and improve the quality of its respective activities and results. In SEM SEM, the quality assurance is continuous, thus implemented throughout the project's lifetime.

In this framework, the Quality Assurance Report for the 2<sup>nd</sup> Semester summarizes the results of the evaluation process that was implemented during that period of project, based on the established Quality Assurance Plan. It includes evaluation results on the progress of project implementation as reported by all partners, and specifically by WP leaders. During the 2<sup>nd</sup> semester, no major events (meetings, training, workshops, conferences, etc.) were held.

## 2. Monitoring Results of General Aspects of Project Implementation

In this section of the Quality and Monitoring Rubric, all partners, regardless if they led a WP or not, were asked to evaluate some general aspects of the implementation process so far. Questions referred to the following categories:

- Progress and Direction
- Management and Communication
- Team and Roles
- Lessons Learned
- Opportunities and Risks
- Difficulties and Challenges

The results of the internal evaluation of those aspects for the second semester of the project are analysed in the next chapters. *It should be highlighted that even though detailed Quality and Monitoring Rubrics have been gathered by all partners of the project, it was decided that this report's objective is to refer only to the most significant aspects of the evaluation that will ensure its substantiality*



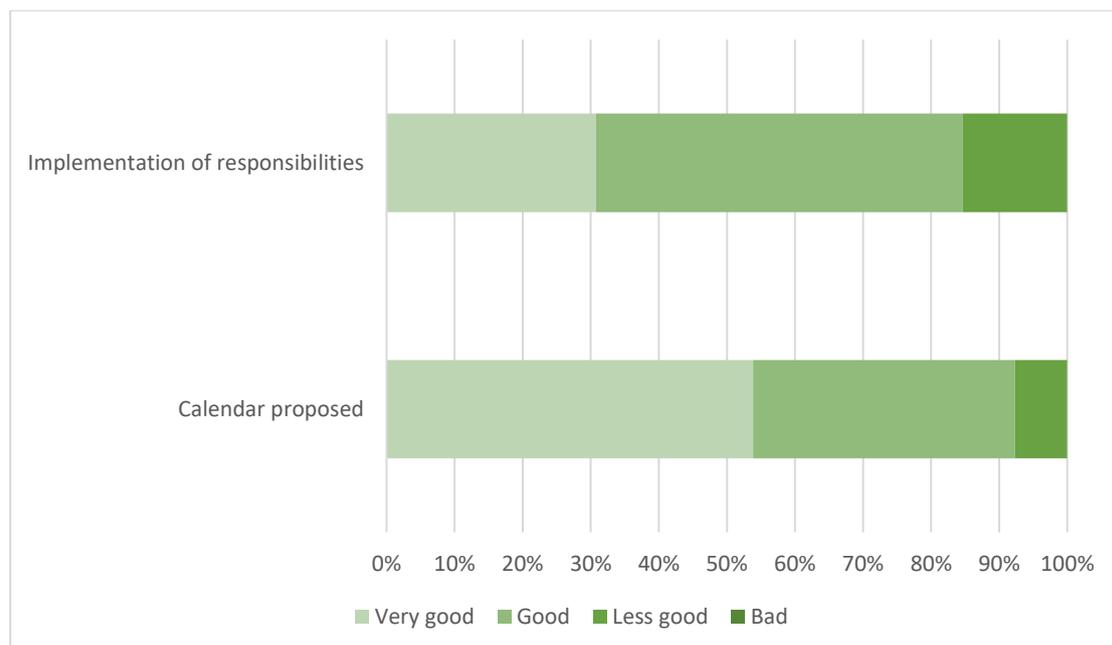
*and provide the appropriate feedback for improving the project's progress and results. All relevant evaluation documentation is available to Eurotraining, as leader of WP12: Monitoring and Quality Control.*

## 2.1 Progress and Direction

In that part of the evaluation process, partners expressed their opinions about the progress of the project implementation.

At first, partners were asked to identify any deviation in outcomes from the initial plans. No major deviations were reported for that period.

Regarding the progress and direction of the project, partners were asked to evaluate, among others, the calendar proposed for carrying out the foreseen activities, as well as the actual implementation of the distribution of responsibilities among the partners.



As the below graph indicates, in general partners are satisfied by these aspects of the project's implementation. However, there are some less favourable opinions, especially regarding the actual implementation of the distributed responsibilities among the partners. The partnership should try to figure out the source of this slight dissatisfaction on behalf of some partners, and find a way

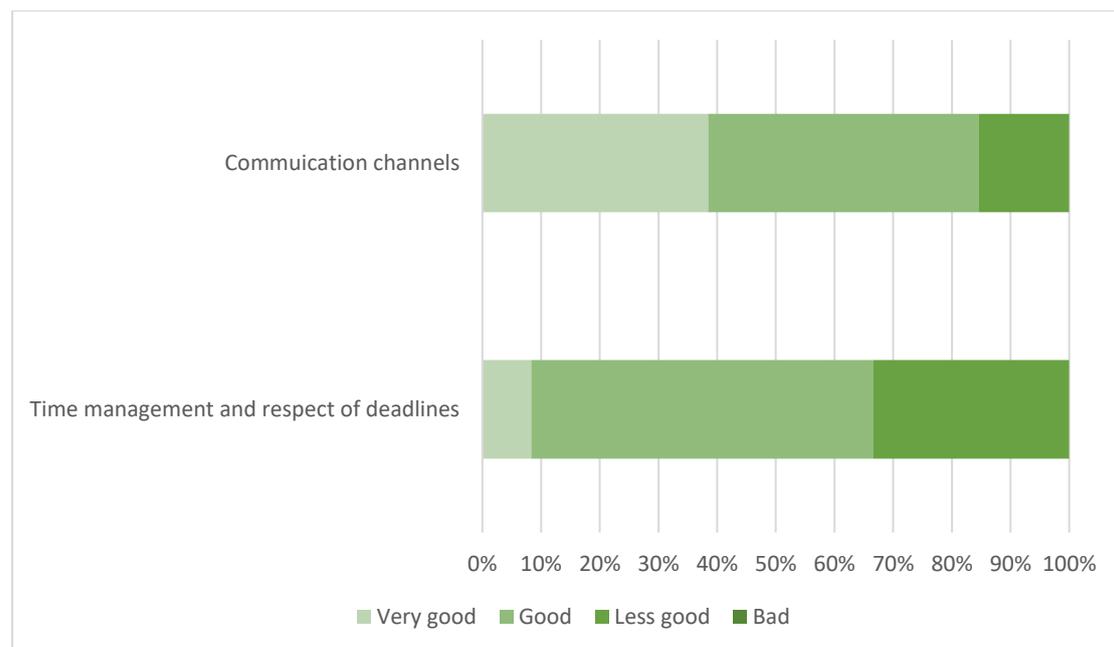


to improve this aspect as soon as possible, while still at an early stage of the project.

In addition, partners responded that, as extra support, they would have needed “*More meetings and workshops*”, “*Transferring the money earlier to purchase the equipment*”, “*A clear roadmap to be defined*”, and “*Coordination of activities*”.

## 2.2 Management and Communication

This section of the evaluation process included questions regarding the management of the project activities as well as communication among the partnership. Partners were asked to evaluate the time management and the respect of deadlines, as well as the communication channels used (e-mails, Skype meetings, in-presence meetings, etc.).



*Note: Regarding the time management and respect of deadlines, one partner responded that “It is hard to judge this very early stage of the WP”.*

Partners’ responses indicate that time management and respect of deadlines are not satisfactory for all. The partnership should find more effective ways to manage time, as this can surely affect the overall implementation of the project. Moreover, respecting the agreed deadlines is more than important for the timely achievement of the project’s objectives. Communication channels used within

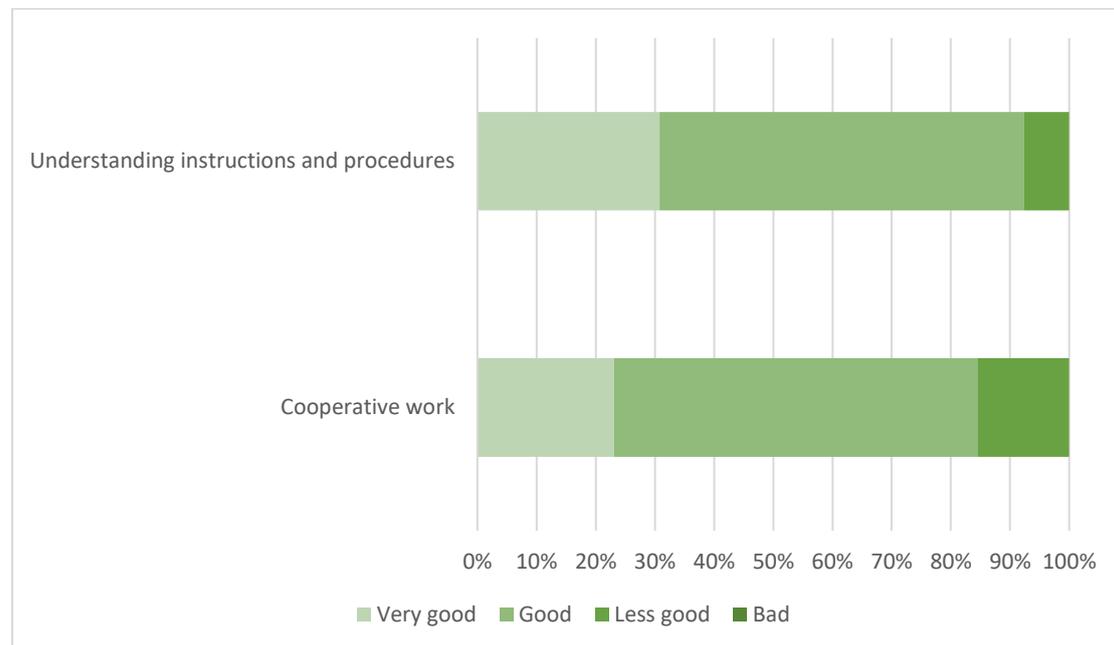


the partnership were evaluated as quite positive, even though there were some neutral opinions that should be taken into consideration for future improvement.

Partners added that *“More effective communication methods and regular virtual meetings”* would have been useful, *“Google hangout sessions were quite chaotic”*, *“More face-to-face meetings”* and *“Closer coordination of activities”* were needed, *“A clear roadmap should be defined”*, *“More time-frame consideration for the completion of tasks with respect to deadlines”* and *“Setting a clear communication plan that would ensure regular interaction among the partnership”* could have been helpful.

### 2.3 Team and Roles

The efficient implementation of the project’s tasks and activities depends greatly on the quality of the teamwork and cooperation among the partnership. Partners evaluated the cooperative work being implemented and their ability to understand the instructions and the procedure, as follows:



In general, partners seem to be satisfied by both these aspects of the evaluation. Some minor concerns have been raised regarding the cooperative work of partners, and it might be beneficial to look into these opinions as soon as possible in order to avoid future consequences.



In this section of the evaluation, partners were, also, asked to mention what worked and what didn't work well in the partnership up until now. These are the answers of those who opted to respond:

| What worked well   | What didn't work well   |
|--|---|
| <i>Partners share a common goal</i>  | <i>Budget flow</i>  |
| <i>Exchange experience</i>   | <i>Meetings</i>   |
| <i>Most of the WP</i>  | <i>Overall communication and allocation of tasks</i>                |
| <i>Trainings</i>   | <i>Financial Management and the delay in transferring the money</i> |
| <i>The communication with AASTMT</i>   | <i>Nothing – it is very early stage</i>                             |
| <i>Development of the courses and training workshops</i>   | <i>Some unclear deadlines</i>                                       |
| <i>In this stage everything went well as we just starting to assign the tasks</i>  |   |
| <i>Attending meetings with partners opened new horizons for academic/industry collaborations</i>                             |   |
| <i>In general, the objectives of the project are realized by the partners, who work towards them</i>                         |   |
| What support would you have needed?  |   |
| <i>Better budget flow</i>  |   |
| <i>More trainings and meetings</i>   |   |
| <i>Better co-ordination in sharing the workload</i>  |   |
| <i>More management meetings are needed</i>   |   |
| <i>More support in explaining how to fill in project reports. However, partners were very helpful in that issue later on</i> |   |
| <i>Coordination of activities</i>  |   |

## 2.4 Lessons Learned

Most partners reported that thought their involvement to the SEM SEM project they have acquired some knowledge or skills, either on personal or organisational level. These are their answers:



| Personal level   | Organisational level  |
|--|---|
| <i>The criteria of developing an engineering course</i>  | <i>Best practice in energy management</i>   |
| <i>The idea of the project</i>   | <i>New programs for PG</i>  |
| <i>Increased knowledge in energy management systems.</i>   | <i>Training and the new programme</i>   |
| <i>Yes [I've learned something], because of the training workshops and the visits of EU partners to MENA</i> | <i>General aspects of energy management.</i>  |
| <i>Cooperation between many partners</i>   | <i>Courses developed<br/>Capacity building for staff</i>  |
| <i>It is very difficult to work without guidelines</i>   | <i>Working with partners from different countries and cultures and realizing different ways of thinking and working</i> |

Regarding the success of the project in demonstrating a transnational approach, partners reported the following:

- *“Quite successful due to a shared interest in energy management approaches in both Egypt and Jordan”*
- *“Moderate as HU had some good EU projects before”*
- *“Very successful”*
- *“Very good”*
- *“Quite successful despite the cultural and working approach differences”*
- *“Little”*
- *“As mentioned before the tasks of this work packages has been organized to be shared between European and non-European partners which allowed the exchange of different expertise”*

Ann *“What actions could be taken to improve the transnationality of the project?”*

- *“Budget transfer should be processed better”*
- *“Better co-ordination and allocation of tasks”*
- *“Joint master program with EU partners”*
- *“Local working meetings”*



- *“I believe increasing the number of face to face meeting will be very useful, as I noticed that we achieved very good progress during the meeting as all to partners have been working together. These meetings could be between 2 or 3 partners only, (partners who are working in one task)”*

## 2.5 Opportunities and Risks

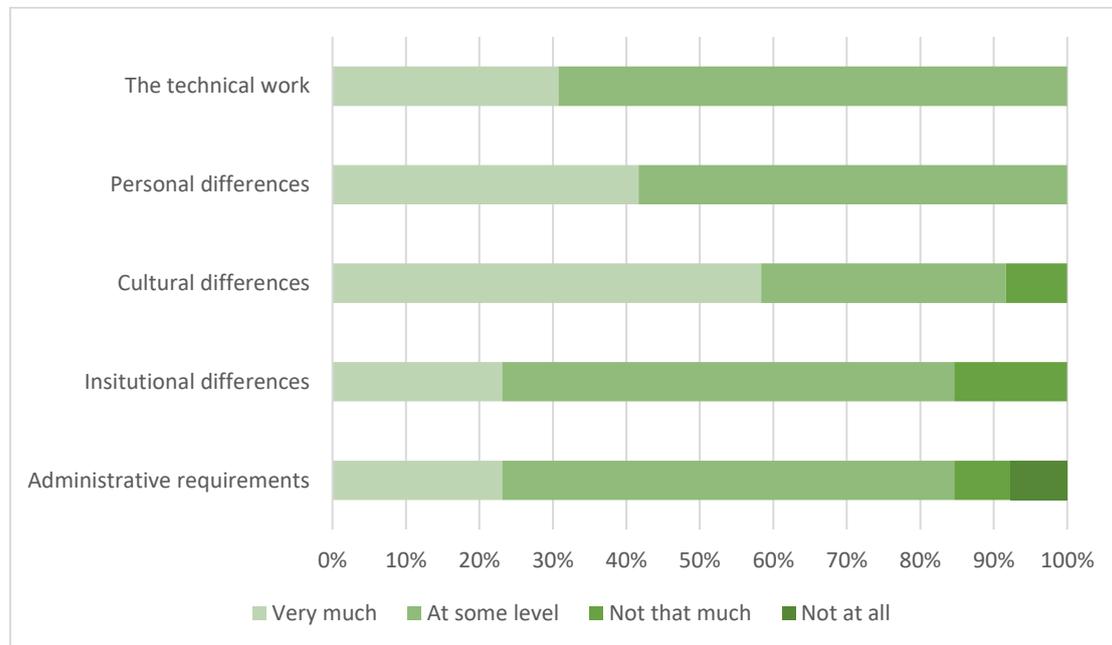
In this section of the evaluation, partners were asked to report on opportunities and risks that they faced or expect to face in the near future, in the framework of the project. More precisely, in what needs improvement and what challenges they expect in the next period, partners responded the following:

| Need for improvement                                  | Expected challenges   |
|---|---|
| <i>Budget flow</i>                                    | <i>More tough competition</i>   |
| <i>More effective coordination</i>                    | <i>Better interaction among the partnership will be needed</i>  |
| <i>Communication and sharing the workload</i>         | <i>Starting the master courses on time</i>  |
| <i>More meetings</i>                                  | <i>To finalize purchasing the equipment within the life period of the project</i>   |
| <i>Time management and deadlines appreciation</i>     | <i>Implementation of the project's main results</i>   |
| <i>Clarification of specific tasks and activities</i> | <i>Building the program structure according to the industrial needs concluded for adverting of the program</i>  |
|   | <i>Courses to reflect practical, up to date issues</i>  |
|   | <i>Meeting deadlines</i>  |
|   | <ul style="list-style-type: none"> <li>- <i>Delay of regular meetings due unexpected political situations.</i></li> <li>- <i>A coordinator will not attend and will send a representative.</i></li> <li>- <i>A partner did not execute his tasks; accordingly, the group leader is obliged to conduct the task and report to SU and the leaders in Egypt (AASTMT) and Jordan (Jordan).</i></li> </ul> |



## 2.6 Difficulties and Challenges

In the final part of this evaluation's section, partners were asked to identify the roots of the difficulties and/or challenges they faced during the second semester of the project.



*Note: Not all partners responded to all questions.*

According to the results depicted in the above graph, it is evident that difficulties and/or challenges identified during the reporting period, were mainly rooted in cultural differences. The partnership should ensure that different cultural backgrounds and ways of working won't affect neither the quality nor the progress of the project's implementation. On the other hand, institutional differences and administrative requirements, even though existent, seem to be under control by the partnership.

## 3. Monitoring Results of Progress and WP Completion

According to the established quality assurance procedure, leaders of active WPs have to report on the progress of implementation. During the second semester, the following WPs were active:

- WP3: Development and establishment of new master courses (Leader: Staffordshire University)



- WP5: Development of manuals for training and labs (Leader: Staffordshire University)
- WP9: Administrative work of the Double Degree (Leader: IST)
- WP10: Dissemination of the project (Leader: AASTMT)
- WP11: Project Sustainability (Leader: ALEXSEEDS)
- WP12: Monitoring and Quality Control (Leader: Eurotraining)
- WP13: Project Management (Leader: Staffordshire University)

### 3.1 Progress of WP3

| Deliverable n. | Deliverable title                                | % Achieved | Delivery date (according to application) | Actual delivery date |
|----------------|--|------------|--|----------------------|
| 3.1            | Establish phase 1 of the developed M.Sc. courses | 80%        | 14/12/2016                               | N/A                  |
| 3.2            | Establish phase 2 of the new M.Sc. courses       | 80%        | 14/12/2016                               | N/A                  |
| 3.3            | Synergetic to omit redundancies between courses  | 0%         | 14/4/2017                                | N/A                  |

| WP Outputs  | Performance Indicators                    | % Achieved | Number reached so far | COMMENTS  |
|---|---|------------|-----------------------|---|
| <b>3.1. Establish phase 1 of the developed MSc courses</b>  | Preparing teaching and learning materials | 80%        | 10 courses            | The EU partners with the help of EG/JOR partners worked on the already developed existing courses which will be included in the MS programs |
| <b>3.2. Establish phase 2 of the new MSc courses</b>        | Preparing teaching and learning materials | 80%        | 8 courses             | The EU partners with the help of EG/JOR partners worked the new courses, modifying some of the proposed courses                             |
| <b>3.3. Synergetic to omit redundancies between courses</b> | Complete Program Structure                | 0%         | 0                     | N/A   |

### 3.2 Progress of WP5

| Deliverable n. | Deliverable title                                 | % Achieved           | Delivery date (according to application) | Actual delivery date |
|----------------|---|----------------------|--|----------------------|
| 5.1            | Preparation of laboratories                       | The Task was delayed | 14/08/2016                               |                      |
| 5.2            | Mounting of experimental rigs and lab development | The Task was delayed | 14/01/2017                               |                      |
| 5.3            | Development of the training setup                 | The Task was delayed | 14/04/2017                               |                      |



|     |   |                      |            |
|-----|---|----------------------|------------|
| 5.4 | Development of the training documentation       | The Task was delayed | 14/04/2017 |
| 5.5 | Development of e-learning training docs courses | The Task was delayed | 14/10/2017 |

| WP Outputs   | Performance Indicators                        | % Achieved | Number reached so far | COMMENTS  |
|--|---|------------|-----------------------|---|
| 5.1. Preparation of laboratories                       | Tenders and purchasing orders for EG          | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |
|  | Tenders and purchasing orders for JOR         | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |
|  |   | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |
|  |   | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |
| 5.2. Mounting of experimental rigs and lab development | Working equipment's with experiments booklets | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |
| 5.3. Development of training setup                     | Training for the operating staff              | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |
| 5.4. Development of the training documentation         | Booklets ad reports                           | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |
| 5.5. Development of the e-learning docs courses        | Training courses materials                    | 0          |                       | The task was delayed to the delay of funds and delay of partnership agreement |

### 3.3 Progress of WP9

| Deliverable n. | Deliverable title                                      | % Achieved | Delivery date (according to application) | Actual delivery date |
|----------------|--|------------|--|----------------------|
| 9.1            | Preparing necessary doc for double degree              | 40%        | M12                                      |                      |
| 9.2            | Official Meetings between AASTMT and IST Double Degree | 25%        | M12                                      |                      |
| 9.3            | Official Meetings between AASTMT and IST Double Degree | NA         | M12                                      |                      |
| 9.4            | Signing the agreement                                  | NA         | M12                                      |                      |

#### WP 9 – Administrative work of the Double Degree

| WP Outputs                                      | Performance Indicators                              | % Achieved | Number reached so far | COMMENTS  |
|---|---|------------|-----------------------|---|
| 9.1. Preparing necessary docs for double degree | Mapping the different degrees in a common structure | 50%        |                       | There are so many differences between the countries, that it takes time to understand the differences |



|   |                    |     |   |
|---|--------------------|-----|---|
| <b>9.2. Official Meetings between AASTMT and IST Double Deg</b> | Number of meetings | 20% | Many more meetings are required to design the process |
| <b>9.3. Official Meetings between MU and IST Double Deg</b>     | Number of meetings | 20% |   |
| <b>9.4. Signing the agreement</b>                               |                    | 0%  |   |

### 3.4 Progress of WP10

| Deliverable n. | Deliverable title         | % Achieved | Delivery date (according to application) | Actual delivery date |
|----------------|---------------------------|------------|--|----------------------|
| <b>10.1</b>    | Advertising Campaign      | 10%        | 14/10/2018                               |                      |
| <b>10.2</b>    | Workshops and conferences | 0%         | 14/10/2018                               |                      |

| WP Outputs                             | Performance Indicators                     | % Achieved | Number reached so far | COMMENTS  |
|--|--|------------|-----------------------|---|
| <b>10.1. Advertising campaign</b>      | Advertising for EG industrial sectors      | 10%        | N/A                   | During the industrial council for training in AASTMT, the idea about the project had been proposed. |
|  | Advertising for the JOR industrial sectors | 10%        | N/A                   | The UJ had advertised for the Idea of SEM -SEM during workshops of other projects.                  |
| <b>10.2. Workshops and conferences</b> | 2 regional workshops in Egypt and Jordan   | N/A        | N/A                   |   |
|  | 1 final conference                         | N/A        | N/A                   |   |

### 3.5 Progress of WP11

| Deliverable n. | Deliverable title                                   | % Achieved | Delivery date (according to application) | Actual delivery date |
|----------------|---|------------|--|----------------------|
| <b>11.1</b>    | Strengthening relationships with the industry       | ~20%       | 14/10/2018                               |                      |
| <b>11.2</b>    | Marketing of the programme to ensure sustainability | ~20%       | 14/10/2018                               |                      |

| WP Outputs   | Performance Indicators  | % Achieved | Number reached so far | COMMENTS  |
|--|---|------------|-----------------------|---|
| <b>11.1. Strengthening relationships with the industry</b> | Prepare the proper documentation for marketing of the programme | 20%        | N/A                   | The choice of performance indicator as preparing marketing documentation does not match well the WP outputs at this stage. However, major strengthening has been taking place from meetings, skype and projects kickoffs. |



|  |                               |     |     |   |
|--|-------------------------------|-----|-----|---|
| <b>11.2. Marketing of the programme to ensure sustainability</b> | Conducting marketing campaign | 20% | N/A | Marketing of the program is still at its early stage and is only done locally at Alexseeds personnel. |
|--|-------------------------------|-----|-----|---|

### 3.6 Progress of WP12

| Deliverable n. | Deliverable title   | % Achieved | Delivery date (according to application) | Actual delivery date |
|----------------|---|------------|--|----------------------|
| 12.1           | Monitoring by Eurotraining on EG/JOR partners' management | ~33%       | 14/10/2018                               |                      |
| 12.2           | Monitoring by Eurotraining on EU partners' management     | ~33%       | 14/10/2018                               |                      |

| WP Outputs  | Performance Indicators  | % Achieved | Number reached so far | COMMENTS   |
|---|---|------------|-----------------------|--|
| <b>12.1 Monitoring by Eurotraining on EG/JOR partners' management</b> | Feedback surveys for trainings (16), workshops (2), meetings (4), conferences (2) | 4%         | 1/25                  | Evaluation report of the KOM, held in Cairo, Egypt               |
|   | Semiannual reports (6)  | ~33%       | 2/6                   | Quality report for the first and second semesters of the project |
| <b>12.2 Monitoring by Eurotraining on EU partners' management</b>     | Feedback surveys for trainings (6) and meetings (1)                               | N/A yet    | N/A yet               | N/A yet  |
|   | Semiannual reports (6)  | ~33%       | 2/6                   | Quality report for the first and second semesters of the project |

### 3.7 Progress of WP13

| Deliverable n. | Deliverable title                                | % Achieved | Delivery date (according to application) | Actual delivery date    |
|----------------|--|------------|--|-------------------------|
| 13.1           | Regional and International Coordination Meetings | 20%        | 14/10/2018                               | Till end of the project |
| 13.2           | EG/JOR Institutional Management                  | 30%        | 14/10/2018                               | Till end of the project |
| 13.3           | Coordination Meetings with group leaders         | 30%        | 14/10/2018                               | Till end of the project |

| WP Outputs  | Performance Indicators   | % Achieved | Number reached so far | COMMENTS  |
|---|--|------------|-----------------------|---|
| <b>13.1. Regional and International Coordination Meetings</b> | The kick off meeting was held in Alexandria Egypt, January 2016. | 20%        | <b>1</b>              | Should continue till end of the project                                     |
| <b>13.2.EG/JOR Institutional Management</b>                   |  |            |                       | There are 2 sub-coordinators for the project (AASMTT-Egypt and JUST Jordan) |



|   |                                |  |      |     |   |
|---|--------------------------------|--|------|-----|---|
| <b>13.3. Meetings with group leaders</b>              | <b>Coordination with group</b> | Online meetings and one to one meetings                                  | N/A  | N/A | Group leaders' meetings have been arranged over the project life in regular bases and when is required. Some group leaders meeting happened during the training and workshop events |
| <b>Horizontal Project Management Indicators</b>       |                                |  |      |     |   |
| <b>Effective and concerted project implementation</b> |                                | Timely signing the consortium agreement                                  |      |     | Most of the partners promptly responded and some suffered from some delays. It is planned to exchange the signed agreements documents during Jordan coordination meeting            |
|   |                                | A minimum of two teleconferences will be organized                       | 100% | 3   | Online meetings and one to one meetings have been organized   |
|   |                                | No more than five adjustment decisions                                   |      |     | N/A till now  |
| <b>External relations</b>                             |                                | Positive management board relationships                                  | N/A  | N/A |   |
|   |                                | Exchanges with stakeholders through the platform and/or the social media | N/A  | N/A | It is planned to the VOIP communication facilities and have a project presence in Research Gate. In addition to the project website.  |
| <b>Conflict resolution</b>                            |                                | No conflicts between partners  |      |     | N/A   |
| <b>Risk management</b>                                |                                | Corrective measures applied  |      |     | N/A   |

## Conclusions

The overall feedback on the implementation of the project's tasks and activities for the second semester, can be considered positive. Even though no major events were held during the reporting period, partners evaluated the progress of the project's implementation in general. Except for some delays in WP5, no other major delays were reported in the implementation of foreseen activities.

Some dissatisfaction was reported regarding the actual implementation of the distributed responsibilities among the partners, an issue that could potentially affect the implementation of the project's activities, thus needs to be taken into consideration.



The time management and the respect of deadlines were, also, among the aspects of the project's implementation that were not that favorably reviewed. These issues could also influence the progress of the project, and it would be advisable for the partnership to decide on specific measures or actions to handle them.

Partners proposed, in general, that better coordination and management of the project could be very useful for the next phases of the implementation, and communication among the partnership should be improved to ensure efficient cooperation.

It should be highlighted that partners should consider their participation in the quality assurance process as of great importance for the project in overall, as through this process the achievement of high-quality results will be ensured. Relevant deadlines should be respected by all, and partners should feel confident to express their own opinions, regardless if these are favorable to the project's progress or not.